DES Waste Management Division 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095

Standard Permit for Solid Waste Collection/Storage/Transfer Facility

Greater Waste Solutions, LLC 426 Fitchburg Road Greenville, NH 03048

NHDES Site Code #: 123456789 NHDES Permit #: _____ Activity/Application #: 2020-51165

Prepared For: Greater Waste Solutions 124 Old Wilton Road Greenville, NH 03048 Phone Number (603) 878-4108 Contact Name: Julie Shaw Contact Email: Julie@gwshawandson.com

Prepared By: Fieldstone Land Consultants, PLLC 206 Elm Street Milford, NH 03055 Phone Number: (603) 672-5456 Contact Name: Chad E. Branon Contact Email: cebranon@fieldstonelandconsultants.com

> Date of Report: August 28, 2020 Revised: September 14, 2021



Chad E. Branor

PERMIT APPLICATION



Application for Standard Permit for Solid Waste Collection/Storage/Transfer Facility

Greater Waste Solutions, LLC.

SECTION I IDENTIFICATION



Application for Standard Permit for Solid Waste Collection/Storage/Transfer Facility

Greater Waste Solutions, LLC.



For Office Use (Only:
WMD Log #:	
Date Rec'd.:	
No. of Copies:	
Fee: \$	/Check #

STANDARD PERMIT FOR SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY

pursuant to

RSA 149-M and New Hampshire Solid Waste Administrative Rules Env-Sw 314 and Env-Sw 400

SECTION I. IDENTIFICATION

(1)	FACI	ILITY STATUS (check which ONE of the following applies):			
		Proposed Facility (Not yet constructed or operating)			
		(Provide date Interim Status Operating Approval was			
		granted:)			
	\bowtie	Existing Facility holding a Temperary Permit By Notification Unauthorized Facility			
		(Provide permit #: DES-SW- PN - 17 - 002 (Attach related DES order or approved compliance			
(2)	EACI				
(2)	FAU	LIT TIDENTIFICATION (complete each of the following):			
	(a) (b)	Facinity name: Greater Waste Solutions, LLC			
	(0)	Location, by street address and municipality: 426 Fitchburg Road, Greenville, NH 03048			
	(C)	Mailing address: 124 Old Wilton Road, Greenville, NH U3048			
	(a)	Local tax map and lot numbers: Map 2: Lots1/-1,1/-2, 3/-1			
	(e)	Deed reference by county, volume and page numbers: HCRD BK 8948 PG 935			
	(†)	Latitude and longitude of a known fixed point on the site: 42-45-36.74N 71-48-10.39W			
	(g)	Written directions from a known point of reference in the vicinity of the facility site:			
		1,300 feet North of the junction of Route 31 and 123 on the East side of NH Route 31			
	(h)	Plot the facility site on a United States Geological Survey (USGS) topographic map, or copy thereof, prepared at a scale of			
		1:24,000 or 1:25,000. Mark as "Attachment I(h)."			
(3)	APPL	ICANT/PERMITTEE IDENTIFICATION:			
	(a)	Name: Greater Waste Solutions, LLC			
_	(b)	Mailing address: 124 Old Wilton Road, Greenville, NH 03048			
	(c)	Telephone number: 603-878-4108 (c.a) E-mail: julie@gwshawandson.com			
	(d)	If different than above, identify the individual associated with and designated by the applicant/permittee to be the contact			
		individual for matters concerning this application:			
		(i) Name: Julie A. Shaw (ii) Title: Member, Greater Waste Solutions, LLC			
[(iii) Mailing address: 124 Old Wilton Road, Greenville, NH 03048			
_		(iv) Telephone number: 603-878-4108 (v) E-mail: julie@gwshawandson.com			
	(e)	If the applicant is an individual, provide date of birth and go to question (4):			
	(f)	If the applicant is a corporation, partnership or other association, provide the following information as specified:			
	Ļ	(i) The applicant is a: 🗌 corporation 🗌 partnership 🖾 other association			
	ļ	(ii) State of incorporation/formation: NH			
		(iii) Principal business address: 124 Old Wilton Road, Greenville, NH 03048			
	1	(iv) Provide on separate paper and attach/mark as "Attachment I(3)(f)(iv)," the names and addresses of all directors,			
		officers and shareholders (*), if for a corporation; all partners (whether general or limited), if for a partnership; or all			
		principals, members or participants, if for another type of association.			
		(*) For a privately held corporation, identify all shareholders. For a publicly traded corporation, identify all shareholders owning			
	<u>.</u>	10% or more of the corporation's equity or debt.			

(4)	FACI	ILITY OWNER IDENTIFICATION [If same as applicant/permittee, check here] and go to question (5)]:				
	(a)	Name: GMB Leasing, LLC				
	(b)	Mailing address: 124 Old Wilton Road, GReenville, NH 03048				
	(c)	Telephone number: 603-878-4108 (c.a) E-mail: julie@gwshawandson.com				
	(d)	If different than above, identify the individual associated with and designated by the facility owner to be the contact				
		individual for matters concerning this application:				
		(i) Name: Glen W. Shaw, Jr (ii) Title: Member				
		(iii) Mailing address: 124 Old Wilton Road, Greenville, NH 03048				
		(iv) Telephone number: 603-878-4108 (v) E-mail: julie@gwshawandson.com				
	(e)	If the facility owner is an individual, provide date of birth and go to question (5):				
	(f)	If the facility owner is a corporation, partnership or other association, provide the following information as specified:				
]		(i) The facility is owned by a: 📋 corporation 📋 partnership 🔯 other association				
		(ii) State of incorporation/formation: NH				
		(iii) Principal business address: 124 Old Wilton Road, Greenville, NH 03048				
		(iv) Provide on separate paper and attach/mark as "Attachment I(4)(f)(iv)," the names and addresses of all directors,				
		officers and shareholders (*), if for a corporation; all partners (whether general or limited), if for a partnership; or all				
		principals, members or participants, if for another type of association.				
		(#) The enducted balance with the state of t				
		(*) For a privately nello corporation, identity all snareholders. For a publicity traded corporation, identity all snareholders owning 10% or more of the corporation's equity or debt				
(5)	FAC	ITY OPERATOR IDENTIFICATION [If same as facility owner, check here] and go to Section []]:				
	(a)	Name: Greater Waste Solutions, LLC				
	(b)	Mailing address: 124 Old Wilton Road, Greenville, NH 03048				
	(C)	Telephone number: 603-878-4108 (c.a) E-mail: julie@gwshawandson.com				
	(d)	If different than above, identify the individual associated with and designated by the facility operator to be the contact				
		individual for matters concerning this application:				
		(i) Name: Julie A. Shaw (ii) Title: Member/Mngr., Greater Waste Solutions, LLC				
		(iii) Mailing address: 124 Old Wilton Road, Greenville, NH 03048				
		(iv) Telephone number: 603-878-4108 (v) E-mail: Julie@gwshawandson.com				
	(e)	If the facility operator is an individual, provide date of birth and go to Section II:				
	(f)	If the facility operator is a corporation, partnership or other association, provide the following information as specified:				
		(i) The facility is operated by a: Corporation partnership dother association				
		(ii) State of incorporation/formation: NH				
		(iii) Principal business address: 124 Old Wilton Road, Greenville, NH 03048				
		(iv) Provide on separate paper and attach/mark as "Attachment I(5)(f)(iv)," the names and addresses of all directors,				
		officers and shareholders (*), if for a corporation; all partners (whether general or limited), if for a partnership; or all				
		principals, members or participants, if for another type of association.				
		(*) For a privately hold corporation identify all charabelders. For a publicly traded corporation identify all shareholders				
		10% or more of the corrections during an shareholders. For a publicity traded corporation, identity all shareholders owning				

SECTION II. FACILITY DESCRIPTION Provide a brief description of the facility. Note that more detailed information pertaining to facility operations will be provided in the Operation Plan required under Section VII of this form.

(1)	The type of constion/storage/transfer activity(s):			
ļ	☐ Transfer state ☐ Recycling center			
	Temporary stockphol			
(2)	Facility ownership (check one):oublicly owned 🛛 privately owned			
(3)	Facility service type: 🔲 limited service rea facility (i.e., will receive waste from only specified sources/locations)			
	unlimited service are facility (i.e., will potentially receive waste from any source/location)			
(4)	Facility service area:			
	Note: If the "facility service type," provided in response to (3) serve, is a "limited service area facility," then identify the precise geographic area(s)			
	and/or generator(s) that the facility shall be limited to serving. If the service type, as provided in response to (3) above, is an "unlimited			
	service area facility," then identify the geographic region and/or generators the facility will most likely serve.			
	New Hampshire and Massachusetts			
(5)	Type(s) of waste to be received by the facility (be specific):			
	Municipal Solid Waste (MSW); Recyclable Materials, including: glass, aluminum, serves & non-ferrous metals, paper, tires,			
	plastics and corrugated cardboard; White Goods; Construction & Demolition Debris (Contex Bulky Waste; Electronic Waste, Yard			
	Waste			
(6)	Type(s) of waste to be prohibited by the facility (be specific):			
	Hazardous waste; Sludge or Septage; Liquid Waste; Asbestos Waste; Infectious Waste; Animal Carcass, Contaminated Soil;			
	Universal Waste except in strict conformance with Universal Waste Rule Env-Hw 1100; Explosives.			
(7)	Capacity for each of the following:			
	(a) Storing non-recyclable waste: 710 tons or 2764 cubic yards			
	(b) Storing unprocessed recyclable waste: 554 tons or 2177 cubic yards			

Section I List of Attachments

Attachment I(1)	Solid Waste Management Permit by Notification for Scrap Metal Recycling Facility
Attachment I(2)(A)	Greater Waste Solutions, LLC State of NH Certificate of Formation
Attachment I(2)(E)	Warranty Deed
Attachment I(2)(H)	USGS Topographic Map
Attachment I(3)(F)(IV	7) Greater Waste Solutions, LLC Members & NH 2020 Annual Report
Attachment I(4)(A)	GMB Leasing, LLC State of NH Certificate of Formation
Attachment I(4)(D)	GMB Leasing Letter of Authorization
Attachment I(4)(F)(IV	(7) GMB Leasing, LLC Members & NH 2020 Annual Report
Attachment I(5)(F)(IV	7) Greater Waste Solutions, LLC Members
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SOLID WASTE MANAGEMENT PERMIT-BY-NOTIFICATION FOR SCRAP METAL RECYCLING FACILITY

Issued by the NH Department of Environmental Services (NHDES), Waste Management Division pursuant to RSA 149-M and the New Hampshire Solid Waste Rules, Env-Sw 100 – 2000 (Rules)

I. <u>PERMIT/FACILITY IDENTIFICATION</u>:

Permit No.: DES-SW-PN-17-002 Permittee: Greater Waste Solutions, LLC Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Facility Type: Scrap Metal Collection and Recycling Center per Env-Sw 407.04 Service Type & Area: Commercial Facility / Unlimited Service Area

- II. <u>FILE REFERENCE/RECORD OF APPLICATION</u>: Date(s) Received: March 13, 2017 WMD Document Log #(s): 2017-26329-01
- III. TERMS AND CONDITIONS: Eight (8) conditions are attached on page 2.
- IV. <u>AUTHORIZATION</u>: Pursuant to RSA 149-M and Part Env-Sw 311 of the Rules, this permit is hereby issued to the permittee identified in Section I above to operate the solid waste management facility identified in Section I above, subject to the terms and conditions in Section III above. This authorization is based on information provided to the NHDES by the permittee in documents referenced in Section II above. The information is subject to audit pursuant to Env-Sw 311.06. If the information is false, misleading or incomplete, the permit may be revoked or suspended in accordance with Part Env-Sw 306 of the Rules. The meaning of specific terms in this authorization is as defined in the Rules. The Rules and statute are available for reference on the NHDES's website at <u>www.des.nh.gov</u>.

This permit is effective on the date of signature, below, and is subject to modification or termination and reissuance by the NHDES as necessary to assure the terms and conditions remain current with the Rules, as amended. BY EXERCISING ANY RIGHTS UNDER THIS PERMIT, THE PERMITTEE HAS AGREED TO ALL TERMS AND CONDITIONS OF THE PERMIT. Failure to comply with these terms and conditions could result in administrative, civil or criminal penalties, and suspension or revocation of the permit.

No liability is incurred by the State of New Hampshire by reason of any approval of this solid waste facility. No warranty/guarantee is intended or implied by reason of any advice given by the Department or its staff.

Issuance of this permit shall not be construed in any way as authorization of any activity which occurred prior to the effective date of the permit; or authorization of any activity that does comply with RSA 149-M, the Rules, and the permit; or a waiver of any cause of action for violation(s) of RSA 149-M or the Rules. This permit shall not eliminate the permittee' s obligation to obtain all requisite federal, state or local permits, licenses or approvals, or to comply with all other applicable federal, state, district and local permits, ordinances, laws, approvals or conditions relating to the facility.

Environmental Services Digitally signed by Environmental Services DN: cr≕Environmental Services, o, ou=Waste Management, email⇔pamela.Werner@des.nh.gov, c≅US.

Date: 2017.04.19 11:41:54 -04'00' April 19, 2017 Date

Michael J: Wimsatt, P.G., Director Date Waste Management Division Refer questions to Waste Management Division, PO Box 95, 29 Hazen Drive, Concord, NH 03302; (606) 271-2925; solidwasteinfo@des.nh.gov Page 1 of 7 Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 2 of 7



Section III: Terms and Conditions

(1) Authorized Waste: This permit authorizes the facility to collect and temporarily store non-hazardous ferrous and non-ferrous scrap metal for recycling, provided the materials are not mixed with other types of waste and are not a prohibited waste listed in condition (2) below.

(2) Prohibited Waste: This permit does not authorize the facility to receive any of the following types of solid wastes or materials:

- a. Asbestos waste;
- b. Ash:
- c. Explosive waste;
- d. Contained gaseous waste;
- e. Liquid waste;
- f. Infectious waste;
- g. Animal carcasses;
- h. Contaminated soils and other absorbent media:
- Out-of-state waste, unless the waste is ì. received for recycling;
- Lead acid batteries; Ĭ.

- k. Motor vehicle parts that contain or have contained fluids or lubricants;
- Free draining oil or lubricants, including metal ١. shavings coated or mixed with the same;
- m. Tanks, drums or other containers unless emptied and properly cleaned of residues prior to receipt;
- n. Construction or demolition debris;
- o. Household trash and garbage or other putrescible waste;
- Tires: and **p**.
- q. Any other waste not listed in (1) above.

(3) Facility Capacity: Pursuant to Env-Sw 1204.04, the rate of incoming authorized waste shall be limited to 30 tons per day, but in no case shall the rate exceed the quantity of waste the facility is able to actively manage¹ and properly handle and process in accordance with this permit.

(4) Location Restrictions: The location of the facility shall comply with siting requirements provided in Env-Sw 1203.

(5) Operating Requirements:

a. The Permitee shall operate the facility in accordance with RSA 149-M, as amended, the Rules, as amended, specifically including Env-Sw 407.04², and a written up-to-date Operating Plan prepared by the Permittee in conformance with Env-Sw 1105.11³ and kept at the facility for reference by facility operators and inspection by the NHDES.

b. Scrap metal and residual waste shall be actively managed.¹

c. Facility operators shall be trained and certified as required by RSA 149-M, as amended, and the Rules, as amended.

d. Annual facility reports shall be filed with the NHDES in accordance with the Rules.

(6) Closure Requirements: The Permitee shall close the facility in accordance with RSA 149-M, as amended, the Rules, as amended, specifically including Env-Sw 407.04², and a written up-to-date Closure Plan prepared by the Permittee in conformance with Env-Sw 1106.04⁴ and kept at the facility for reference by facility operators and inspection by the NHDES.

(7) Permit Transfer and Modification Limitations: This permit is non-transferable. Modification shall be limited to the scope of operations allowed by the Rules for this type of facility and permit.

(8) Compliance Verification: The Department may inspect the facility pursuant to Env-Sw 2000 and audit the facility pursuant to Env-Sw 311.06 to verify compliance.

¹ Pursuant to Env-Sw 102.04 effective July 1, 2014, the term "actively manage" means to handle a waste or material, including waste-derived products and recyclable materials, in a controlled manner without causing: (a) a nuisance; (b) an adverse effect to the environment, public health and safety; (c) accumulations which have no identifiable destination or value; and (d) a loss of material value in the market place due to material damage, degradation and/or contamination. ² See Appendix A, attached hereto. See page 3.

³ See Appendix B, attached hereto. See pages 4 - 5

⁴ See Appendix C, attached hereto. See pages 6-7.

Attachment I(1)

Appendix A

Reprinted below for convenience is a copy Env-Sw 407.04 in effect on the issue date of this permit. A complete and current certified copy of the Solid Waste Rules, Env-Sw 100 – Env-Sw 2000, is available at www.des.nh.gov.

Env-Sw 407.04 Scrap Metal Collection and Recycling Centers. Facilities that only collect and temporarily store ferrous or non-ferrous scrap metal, or a combination thereof, and that transfer said scrap metal to authorized facilities or markets for recycling, shall be eligible for a permit-by-notification pursuant to Env-Sw 311, provided that:

(a) The facility does not receive any:

(1) Parts of a motor vehicle that contain or have contained fluids or lubricants, excluding lead acid batteries;

(2) Waste listed in Env-Sw 900, including asbestos, ash, contaminated soils and other absorbent media, infectious waste, and tires; and

(3) Free-draining oil or lubricants, including cutting oils mixed with or coating metal shavings;

(b) The scrap metal goods, as received by the facility, are not mixed with other types of waste, including municipal solid waste, and construction and demolition debris;

(c) The permittee identifies whether the scrap metal goods include any of the following substances or devices, and subsequently assures that such substances, if present, are managed in accordance with applicable state and federal rules and regulations, either at the facility or by transfer to another facility that provides such proper management:

(1) CFCs;

(2) PCBs;

(3) Mercury-containing switches and other devices;

(4) Batteries; and

(5) Other regulated substances, materials, and wastes;

(d) All tanks, drums and other containers received by the facility have been emptied and cleaned of residues in accordance with applicable state and federal rules and regulations;

(e) The scrap metal processing activities conducted at the facility are limited to sorting, cutting, crushing, baling, or smelting, or a combination thereof, provided the latter is done in units not requiring a permit under Env-A 600;

(f) The scrap metal is actively managed;

(g) All residual waste at the facility is:

(1) Directly attributable to the allowable scrap metal processing activities;

(2) Segregated from the recyclable scrap metal and stored in accordance with Env-Sw 405;

(3) Actively managed; and

(4) Not accumulated in excess of 30 cubic yards, unless the permittee establishes and maintains an approved financial assurance plan pursuant to Env-Sw 1400 to guarantee the cost of disposing of the residual waste; and

(h) All other applicable permit-by-notification facility requirements are met as specified in Env-Sw 1200.

Source. #7225, eff 3-31-00; (See Revision Note at chapter heading for Env-Sw 400); ss by #8459, eff 10-28-05 (formerly Env-Wm 2107.04); ss by #10596, eff 7-1-14

Refer questions to Waste Management Division, PO Box 95, 29 Hazen Drive, Concord, NH 03302; (606) 271-2925; solidwasteinfo@des.nh.gov Page 3 of 7 Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 4 of 7

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Appendix B

Reprinted below for convenience is a copy Env-Sw 1105.11 in effect on the issue date of this permit. A complete certified and current copy of the Solid Waste Rules, Env-Sw 100 – Env-Sw 2000, is available at <u>www.des.nh.gov</u>.

Env-Sw 1105.11 Operating Plan Content and Format.

(a) A facility operating plan shall provide sufficient detail to allow the certified operator and other trained facility personnel to operate the facility in compliance with RSA 149-M, the permit and the solid waste rules without further explanation or guidance.

(b) The operating plan shall be prepared as a loose leaf document to facilitate amendment as specified in Env-Sw 315.

(c) Each page of the operating plan shall bear the date of preparation or last revision, as applicable, and the facility name, location and permit number, if a permit is issued for the facility at the time that the operating plan or a modification thereto is prepared.

(d) The content and organizational format of the operating plan shall be as follows:

(1) Section 1, titled "facility identification," shall identify:

a. The facility name, mailing address, location by street address and municipality, and permit number;

- b. The type of the facility;
- c. The capacity of the facility;
- d. The facility service type;
- e. The facility service area; and
- f. The name, address and telephone number of the permittee, property owner, and operator;

(2) Section 2, titled "authorized and prohibited waste," shall provide a list of:

- a. The specific waste types the facility which shall be authorized to receive; and
- b. The specific waste types the facility shall not be authorized to receive;

(3) Section 3, titled "routine operations plan," shall provide a detailed description of how the daily operations of the facility will be conducted to assure that the facility will be operated in accordance with the solid waste rules, including a description of:

a. Hours of operations;

b. Facility access control and on-site traffic patterns;

c. Waste acceptance and rejection procedures, including unloading, sorting and inspection procedures;

d. The procedure by which the quantity and source(s) of all wastes received by the facility shall be determined and recorded;

e. The procedure by which the quantity and destination of all outgoing waste and certified wastederived products shall be determined and recorded;

f. The storage time and capacity limits for all wastes received by the facility and the procedures by which the limits shall be monitored to assure compliance therewith;

g. All collection, storage, transfer, processing, treatment and disposal methods and procedures employed by the facility for managing waste following receipt; and

h. For facilities that process or treat waste, the methods or procedures for managing bypass waste and the quality assurance/quality control procedures relating to the management of processed or treated waste;

(4) Section 4, titled "residual waste management plan," shall provide a detailed description of how all

Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 5 of 7



residual waste, if any, shall be managed by the facility, including the information specified in a. through d. below, or if the facility will not generate any residual waste, a statement so indicating:

- a. The type and estimated quantity of all residual wastes to be generated by the facility;
- b. How such wastes shall be managed at the facility prior to removal;
- c. Information to demonstrate how the provisions of Env-Sw 1105.10 shall be met; and

d. Quality assurance/quality control provisions, to assure that the wastes to be transferred shall be acceptable to the receiving facility;

(5) Section 5, titled "facility maintenance, inspection and monitoring plan," shall identify all routine maintenance, inspection and monitoring requirements necessary to assure the integrity of facility operations, including a description of the measures to be undertaken to monitor and inhibit the following:

- a. Spontaneous combustion;
- b. Other fire hazards;
- c. Vector production;
- d. Generation of methane, hazardous, or explosive gases;
- e. Odors;
- f. Dust;
- g. Windblown litter;
- h Leachate; and
- i. Spills;

(6) Section 6, titled "contingency plan," shall:

a. Identify all reasonably foreseeable emergencies, such as fire, explosion, operator injury, and the like, based on the type of facility and wastes being handled;

b. Describe the appropriate response of facility personnel for each emergency identified in a. above; and

c. Include identification of and telephone numbers for all local and state officials to be notified in the event of an emergency;

(7) Section 7, titled "employee training program," shall provide a description of employee training program(s); and

(8) Section 8, titled "recordkeeping and reporting," shall provide a description of record keeping procedures as necessary to comply with Env-Sw 1105.06 and Env-Sw 1105.07.

Source. #6619-B, eff 10-29-97; (See Revision Note at chapter heading for Env-Sw 1100); ss by #8459, eff 10-28-05 (formerly Env-Wm 2805.11); ss by #10598, eff 7-1-14

Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 6 of 7

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Appendix C

Reprinted below for convenience is a copy Env-Sw 1106.04 in effect on the issue date of this permit. A complete and current certified copy of the Solid Waste Rules, Env-Sw 100 – Env-Sw 2000, is available at <u>www.des.nh.gov</u>.

Env-Sw 1106.04 Closure Plan, Content and Format.

(a) A facility closure plan shall provide sufficient detail to allow a third party to implement and complete all required facility closure tasks in compliance with RSA 149-M, the permit and the solid waste rules without further explanation or guidance or as provided by (b) below.

(b) For a landfill closure plan prepared before the facility reaches final grades, the design plans and specifications for the capping system and related appurtenances shall be considered preliminary and need not provide final design detail sufficient to allow third party implementation without further explanation or guidance. However, any closure plan approved on the basis of preliminary plans shall include, in the list of closure tasks, provisions for preparing final design plans and specifications for the capping system and related appurtenances, as specified in Env-Sw 807.

(c) The closure plan shall be prepared as a loose leaf document to facilitate amendment as specified in Env-Sw 315.

(d) Each page of the closure plan shall bear the date of preparation or revision, as applicable, and the facility name and permit number.

(e) The closure plan shall be organized and prepared as follows:

(1) Section 1, titled "facility identification," shall provide the facility name, mailing address, location and permit number;

(2) Section 2, titled "closure schedule," shall provide the anticipated date of closure and a closure schedule that sets forth each discrete activity that will be undertaken to complete facility closure, the order in which the activities will be undertaken and the estimated length of time the activity will take;

(3) Section 3, titled "waste identification," shall identify all types of waste received or intended to be received by the facility during its active life;

(4) Section 4, titled "notifications," shall provide a description of how notice shall be given to facility users prior to terminating receipt of waste;

(5) Section 5, titled "closure requirements," shall provide:

a. A list of each major closure work task required to implement and complete closure of the facility:

b. A description of the procedures for completing all required closure work tasks;

c. Design plans and specifications for construction of required closure systems;

(6) Section 6, titled "post-closure requirements," shall identify and describe all required postclosure testing, inspection, maintenance or monitoring that will be performed at the facility pursuant to the provisions of the solid waste rules and the permit;

(7) Section 7, titled "recordkeeping and reporting," shall identify and describe: a. All recordkeeping and reporting obligations required of the facility following completion of the Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 7 of 7 Environmental Services

closure work identified in section 5 of the closure plan; and

b. Locations and provisions for storing facility records, including the operating records, following facility closure;

(8) Section 8, titled "other permits," shall:

a. Identify all other local, state and federal permits and approvals required to implement facility closure, including the implementation of all post-closure monitoring and maintenance requirements;

b. Identify the status of each permit and approval identified pursuant to a. above; and
c. For a landfill located on property not owned by the permittee, include a copy of the written executed access agreement required by Env-Sw 1003.03; and

(9) Section 9, titled "closure cost estimate," shall provide a closure cost estimate prepared in

accordance with the criteria in Env-Sw 1403.02.

Source. #6619-B, eff 10-29-97; (See Revision Note at chapter heading for Env-Sw 1100); ss by #8459, eff 10-28-05 (formerly Env-Wm 2806.04); ss by #10598, eff 7-1-14



State of New Hampshire

Department of State

Filed Date Filed: 02/14/2017 Effective Date: 02/14/2017 Business ID: 764530 William M.Gardner Secretary of State

Form LLC-1 RSA 304-C:31

CERTIFICATE OF FORMATION NEW HAMPSHIRE LIMITED LIABILITY COMPANY

THE UNDERSIGNED, UNDER THE NEW HAMPSHIRE LIMITED LIABILITY COMPANY LAWS SUBMITS THE FOLLOWING CERTIFICATE OF FORMATION:

FIRST: The name of the limited liability company is

GREATER WASTE SOLUTIONS, LLC

SECOND: The nature of the primary business or purposes are:

NAICS CODE	NAICS SUB CODE
Administrative and Support and Waste Management and Remediation Services	Materials Recovery Facilities

THIRD: The name of it's registered agent **IN NEW HAMPSHIRE** is Shaw Julie Anne

and the physical address, of its initial registered office IN NEW HAMPSHIRE is

184 Mason Road, New Ipswich, NH, 03071, USA

FOURTH: The latest date on which the limited liability company is to dissolve is Perpetual

FIFTH:The management of the limited liability company is not vested in a manager or managers.

SIXTH: The sale or offer for sale of membership interests of the limited liability company will comply with the requirements of the New Hampshire Uniform Securities Act (RSA 421-B).

PRINCIPAL OFFICE ADDRESS:

PRINCIPAL OFFICE BUSINESS ADDRESS	PRINCIPAL OFFICE MAILING ADDRESS
124 Old Wilton Road, Greenville, NH, 03048, USA	124 Old Wilton Road, Greenville, NH, 03048, USA

CERTIFICATE OF FORMATION NEW HAMPSHIRE LIMITED LIABILITY COMPANY

Form LLC-1 (Cont.)

GREATER WASTE SOLUTIONS, LLC

CERTIFY:

By checking this box and continuing, each signatory certifies that the information provided herein is true, accurate, and complete to the best of his/her knowledge and belief, and that he/she has authorized the affixing of his/her electronic signature in accordance with the Electronic Signatures in Global and National Commerce Act (e-Sign) and N.H. RSA § 294-E. Further, each signatory understands that his/her electronic signature has full legal effect and enforceability and he/she intends this form, as signed, to be filed with the office of the New Hampshire Secretary of State.

EFFECTIVE DATE:

This statement shall be effective from: 02/14/2017

*Signature: Julie Anne Shaw

Title: Member

Date signed: 02/14/2017

Notice: The membership interests of the limited liability company: 1) have been registered or when offered will be registered under RSA 421-B; 2) are exempted or when offered will be exempted under RSA 421-B; 3) are or will be offered in a transaction exempted from registration under RSA 421-B; 4) are not securities under RSA 421-B; OR 5) are federal covered securities under RSA 421-B. The statement above shall not by itself constitute a registration or a notice of exemption from registration of securities within the meaning of sections 448 and 461(i)(3) of the United States Internal revenue Code and the regulation promulgated thereunder.

DISCLAIMER: All documents filed with the Corporation Division become public records and will be available for public inspection in either tangible or electronic form.

Attachment I(2)(E)

Return to: G.W. Shaw & Son, Inc. 124 Old Wilton Road Greenville, NH 03048 Doc # 7009448 Mar 1, 2017 8:56 AM Book 8948 Page 0935 Page 1 of 5 Register of Deeds, Hillsborough County Carmiela O Caughlin



DEFAILMENT OF REVENUE ADHSESTRATION		REAL ESTATE TRANSFER TAX
****6 Thousa	ind 4 Hundre	d 58 Dollars
03/01/2017	HI085418	5 ****6458.00

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS:

That, We Martin G. Pelletier and Maria Pelletier, husband and wife, both of New Ipswich, New Hampshire (the "<u>Grantor</u>"),

for consideration paid,

grant to **GMB Leasing, LLC, a** New Hampshire limited liability company, with an address of 184 Mason Road, New Ipswich, New Hampshire 03071 (the "<u>Grantee</u>"),

with WARRANTY COVENANTS:

Land, with the buildings and improvements thereon, including a mobile home, located in the Town of Greenville, County of Hillsborough and State of New Hampshire, more particularly bounded and described as follows:

TRACT I:

A certain tract or parcel of land with the buildings thereon situated in the Town of Greenville, County of Hillsborough and State of New Hampshire being shown as Lot 2-37-1 on a certain plan of land entitled "Consolidation & Subdivision Plan Prepared for: Martin G. & Maria B. Pelletier Tax Map Parcels 2-37-1, 2-37-2, 2-37-3 and 2-37-4 Greenville, New Hampshire," scale: $1^{"} = 40^{"}$, dated February 10, 2011, prepared by Fieldstone Land Consultants, PLLC and recorded in the Hillsborough County Registry of Deeds (the "<u>Registry</u>"), Plan #37368, reference to said plan may be had for a more complete description of said lot.

Containing 5.562 acres, more or less, as shown on said plan.

TRACT II:

A certain tract or parcel of land, with the buildings thereon, situated in the Town of Greenville, County of Hillsborough and State of New Hampshire being show as Lot 2-37-2 on a certain plan of land entitled "Consolidation & Subdivision Plan Prepared for: Martin G. & Maria B. Pelletier Tax Map Parcels 2-37-1, 2-37-2, 2-37-3 & 2-37-4 Greenville, New Hampshire" scale: 1" = 40', dated February 10, 2011, prepared by Fieldstone Land Consultants, PLLC and recorded in the Registry, Plan #37368, reference to said plan may be had for a more complete description of said lot. Containing 2.108 acres, more or less, as shown on said plan.

Tract I and Tract II are subject to all matters and notes recited on said Plan #37368.

Subject to limitation as to access to New Hampshire Route 31 as recited in deed to the within mortgagors recorded at the Registry, Volume 5760, Page 1040.

Meaning and intending to describe and covey the same premises as conveyed to Martin G. Pelletier and Maria B. Pelletier by Warranty Deed of George S. Fournier and Eugenia M. Fournier dated October 15, 1996, recorded at the Registry, Volume 5760, page 1040.

TRACT III:

Two (2) parcels of land situated in the Town of Greenville, County of Hillsborough, State of New Hampshire, bounded and described as follows:

Parcel Number 1:

All that land belonging to the Grantor that lies Easterly of the Easterly NH Route 31 Controlled Access Right-of-Way that measured fifty (50) feet Easterly of and parallel to said NH Route 31 center line as shown on a Plan of Greenville, S 52(4), SE-2833, on file in the records of the New Hampshire Department of Transportation. Said parcel being situated between land now or formerly of Arsene Emond on the South near NH Route 31 Construction Center Line Station 226+75 and land now or formerly of Annie C. Lee on the North near NH Route 31 Construction center Line Station 229+35 as shown on said plan.

Excepting and reserving from the above-described parcel all rights of access, light, air and view over, from NH Route 31 along the following line:

Beginning at a point in the Easterly Controlled Access Right-Of-Way line of NH Route 31, as now travelled, said point being fifty (50) feet Easterly of and nearly opposite NH Route 31 Construction Center Line Station 226+75, said point also located in the said division line between land now or formerly of Arsene and Celina Emond and land now of the State of New Hampshire formerly of Joseph Bernier, thence Northerly along said side line to a point fifty (50) feet Easterly of and nearly opposite Station 229+35, said point also located in the division line between land now or formerly of Annie C. Lee and land now of the State of new Hampshire formerly of Joseph Bernier.

Also excepting and reserving from the above-described parcel any and all easements of record.

Containing one and four tenths (1.4) acres, more or less, and being all the real estate described in a deed from Joseph Bernier to the State of New Hampshire recorded October 13, 1955 at the Registry, Volume 1445, Page 39.

Parcel Number 2:

All that land belonging to the Grantor that lies Easterly of the Easterly NH Route 31 Controlled Access Right-of-Way side line measured fifty (50) feet Easterly of and parallel to said NH Route 31 center line as shown on a Plan of Greenville, S 52(4), S-2833, on file in the records of the

New Hampshire Department of Transportation. Said parcel being situated between land now or formerly of Clyde Eaton on the South near NH Route 31 Construction Center Line Station 222+00 and land now or formerly of Joseph Bernier on the North near NH Route 31 Construction Center Line Station 229+35 as shown on said plan.

Excepting and reserving from the above-described parcel all rights of access, light, air and view over, from NH Route 31 along the following line:

Beginning at a point in the Easterly Controlled Access Right-of-Way line of NH Route 31, as now travelled, said point being fifty (50) feet Easterly of and nearly opposite NH Route 31 Construction Center Line Station 222+00, said point also located in the said division line between land now or formerly of Clyde Eaton and land now of the State of New Hampshire formerly of Arsene and Celina Emond, thence Northerly along said side line to a point fifty (50) feet Easterly of and nearly opposite Station 227+00, said point also located in the division line between land now or formerly of Joseph Bernier and land now of the State of New Hampshire formerly of Arsene and Celina Emond.

Also excepting and reserving from the above-described parcel any and all easements of record.

Containing two and five-tenths (2.5) acres, more or less, and being all the real estate described in a deed from Arsene and Celina Emond to the State of New Hampshire recorded October 13, 1955 at the Registry, Volume 1445, Page 39.

Containing in all three and nine-tenths (3.9) acres, more or less.

Meaning and intending to describe and convey the same premises as conveyed to Martin G. Pelletier and Maria B. Pelletier by Deed of The State of New Hampshire dated June 7, 2003 and recorded at the Registry, Volume 7014, Page 2422.

Also conveying the 2004 manufactured home located on the premises and further described as follows:

One 2004, Skyline, 13x56 mobile home, with serial number B7-16-0152-T, as situated on the premises conveyed herein at 426 Fitchburg Road, Greenville, Hillsborough County, New Hampshire.

This is not the homestead property of the Grantors, who are husband and wife.

[SIGNATURES TO FOLLOW]

ATKINS CALLAHAN, PLLC atkinscallahan.com Dated this 🖸 day of February, 2017.

Maria Pelletier

STATE OF NEW HAMPSHIRE COUNTY OF HILLSBOROUGH, ss.

The foregoing instrument was acknowledged before me, the undersigned officer, this $\underline{3}$ day of February, 2017, by Maria Pelletier, known to me or satisfactorily proven to be the same, and stated that she executed this instrument as her free and voluntary act for the purposes therein expressed.

00 Notary Public/Justice of the Peace Multimum My Commission Expires: COMMISSION EXPIRES T. 26, 202

Dated this ____ day of February, 2017.

Martin G. Pelletier

STATE OF NEW HAMPSHIRE COUNTY OF HILLSBOROUGH, ss.

The foregoing instrument was acknowledged before me, the undersigned officer, this <u>1</u> day of February, 2017, by Martin G. Pelletier, known to me or satisfactorily proven to be the same, and stated that he executed this instrument as his free and voluntary act for the purposes therein expressed.

Chunning ARA J. Solling
Cha On Colymission
Notary Public/Justice of the Peaces
My Commission Expires 20
AMPSHIR MININ

ATKINS CALLAHAN, PLLC atkinscallahan.com ATTACHMENT I (2)(H)



USGS LOCUS PLAN TAX MAP 2, LOTS 17-1, 17-2 & 37-1 GREENVILLE, NH



FIELDSTONE LAND CONSULTANTS, PLLC 206 ELM STREET, MILFORD, NEW HAMPSHIRE 03055

PHONE (603) 672-5456 FAX (603) 413-5456

Attachment I(3)(f)(iv)

Names/Addresses of Members of:

Greater Waste Solutions, LLC

Julie Ann Shaw, Member

Glen W. Shaw, Jr.

<u>Physical / Personal Mailing Address:</u> 184 Mason Road

New Ipswich, NH 03071

Physical / Personal Mailing Address:

184 Mason Road

New Ipswich, NH 03071

Business Mailing Address: 124 Old Wilton Road Greenville, NH 03048 **Business Mailing Address:**

124 Old Wilton Road

Greenville, NH 03048



Attachment I(3)(F)(IV)

State of New Hampshire Department of State 2020 ANNUAL REPORT

Filed Date Filed : 03/23/2020 04:30:00 PM Effective Date : 03/23/2020 04:30:00 PM Filing # : 4902360 Pages : 1 Business ID : 764530 William M. Gardner Secretary of State State of New Hampshire

Fee before April 1st : \$100.00	· · · · · · · · · · · · · · · · · · ·	······································	Fee after April 1st : \$150.00
BUSINESS NAME	: GREATER WASTE SOLUTION	√S, LLC	
BUSINESS TYPE: Domestic Limited Liability Company			
BUSINESS ID	764530		
STATE OF FORMATION	: New Hampshire	<u> </u>	·····
CURRENT PRINCI	AL-OFFICE ADDRESS	CURRENT M	AILING ADDRESS
124 Old Wilton Road Greenville, NH, 03048, USA	in and the second second second	124 Old Wilton Road Greenville, NH, 03048, USA	<u>an ann an ann ann ann ann ann ann ann a</u>
NEW PRINCIPAL	OFFICE ADDRESS	NEW MAI	LING ADDRESS
REGISTERED AGENT OFFICE	CURRENT REGISTERE ED AGENT: Shaw,Julie Ann ADDRESS: 184 Mason Road Ney	DAGENT AND OFFICE	
REGISTER REGISTERED AGENT OFFICE	NEW AGENT AND OF ED AGENT: ADDRESS:	FICE(IF APPLICABLE)	
	PRINCIPAL	PURPOSE(S)	
NAIC	S CODE	NAICS	SUB CODE
Administrative and Support and Waste Management and Remediation Services		Materials R	ecovery Facilities
	MANAGER / MEME	SER INFORMATION	
NAME .	BUSINESS	ADDRESS	TITLE
Julie Ann Shaw	124 Old Wilton Road, Greenville, NH 03048 USA		Member
Glen W. Shaw, Jr.	124 Old Wilton Road, Greenville, NH 03048 USA		Member
I, the undersigned, do hereby cer	tify that the statements on this report	t are true to the best of my inform	nation, knowledge and belief.

Mailing Address - Corporation Division, NH Department of State, 107 North Main Street, Room 204, Concord, NH 03301-4989 Physical Location - State House Annex, 3rd Floor, Room 317, 25 Capitol Street, Concord, NH Phone: (603)271-3246 | Fax: (603)271-3247 | Email: corporate@sos.nh.gov | Website: sos.nh.gov - Page 1 of 1 -

Attachment I(4)(A)

State of New Hampshire

Filing fee: Fee for Form SRA: \$50.00 Total fees Use black print or type.

.

Form LLC-1 RSA 304-C:31

CERTIFICATE OF FORMATION NEW HAMPSHIRE LIMITED LIABILITY COMPANY

THE UNDERSIGNED, under the New Hampshire Limited Liability Company Laws submits the following certificate of formation:

FIRST: The name of the limited liability company is _GMB Leasing, LLC

\$50.00

\$100.00

SECOND: The nature of the primary business or purposes are to buy, sell, lease, hold, own vehicles.

The LLC may also do any and all things necessary, convenient of incidential to that purpose or any other purpose allowed by law.

THIRD: The name of the limited liability company's registered agent is Julie Shaw

and the street address, town/city (including zip code and post office box, if any) of its registered office is (agent's business address) 184 Mason Road, New Ipswich, NH 03071

FOURTH: The latest date on which the limited liability company is to dissolve is _____ ongoing

FIFTH: The management of the limited liability company ____ is not vested in a manager or managers.

SIXTH: The sale or offer for sale of any ownership interests in this business will comply with the requirements of the New Hampshire Uniform Securities Act (RSA 421-B).

*Signature:	Henry She Jr		
Print or type name:	Glen Shaw, Jr.		
Title:	Member		
Date signed:	(Enter "manager" or "member") 5113115		

To receive your ANNUAL REPORT REMINDER NOTICE by email, please enter your email address here: Julie@GWŚhawandSon.com

State of New Hampshire Form LLC 1 - Certificate of Formation 2 Page(s)



ned by a member.

sion become public records and will be available for

A to: Corporation Division, Department of State, 107 ion: 25 Capitol Street, 3rd Floor, Concord, NH 03301.

Form LLC-1 (1/2013)

Form SRA – Addendum to Business Organization and Registration Forms Statement of Compliance with New Hampshire Securities Laws

Part I – Business Identification and Contact Information

Business Name:	GMB Leasing, LLC		
Business Address	(include city, state, zip): _	124 Old Wilton I	Road, Greenville, NH 03048
Telephone Numbe	r:(603) 878-4108	E-mail:	Julie@GWShawandSon.com
Contact Person: _	Glen Shaw, Jr. Alternal	te: Julie Shaw	

Contact Person Address (if different):

Part II – Check <u>ONE</u> of the following items in Part II. If more than one item is checked, the form will be rejected. [*PLEASE NOTE:* Most small businesses registering in New Hampshire qualify for the exemption in Part II, Item 1 below. *However*, you must insure that your business meets all of the requirements spelled out in A), B), and C)]:

- 1. Ownership interests in this business are exempt from the registration requirements of the state of New Hampshire because the business meets <u>ALL</u> of the following three requirements:
 - A) This business has 10 or fewer owners; and
 - B) Advertising relating to the sale of ownership interests has not been circulated; and
 - C) Sales of ownership interests if any will be *completed within 60 days* of the formation of this business.
- 2. ____ This business will offer securities in New Hampshire under another exemption from registration or will notice file for federal covered securities. Enter the citation for the exemption or notice filing claimed -
- 3. _____ This business has registered or will register its securities for sale in New Hampshire. Enter the date the registration statement was or will be filed with the Bureau of Securities Regulation _____.
- 4. ____ This business was formed in a state other than New Hampshire and will not offer or sell securities in New Hampshire.

Part III - Check ONE of the following items in Part III:

1. _____ This business *is not being* formed in New Hampshire.

2. This business *is* being formed in New Hampshire and the registration document states that any sale or offer for sale of ownership interests in the business will comply with the requirements of the New Hampshire Uniform Securities Act.

Part IV – Certification of Accuracy

(NOTE: The information in Part IV must be certified by: 1) <u>all</u> of the incorporators of a corporation to be formed; or 2) <u>an</u> executive officer of an existing corporation; or 3) <u>all</u> of the general partners or intended general partners of a limited partnership; or 4) <u>one or more</u> authorized members or managers of a limited liability company; or 5) <u>one or more</u> authorized partnership or foreign registered limited liability partnership.)

(We) certify that the	information provided in this fo	rm is true and complete. (Original signatures <u>only</u>)
Name (print):	Glen Shaw, Jr.	Signature: Men 2. Show
		Date signed: 51315
Name (print):		Signature:
		Date signed:
Name (print):		Signature:
		Date signed:

GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

> 603-878-4108 800-649-7419

Julie@gwshawandson.com

June 15, 2020

To Whom It May Concern:

RE: Map 2, Lot#: 17-1, 17-2, 37-1 Greater Waste Solutions, LLC 426 Fitchburg Road, Greenville NH

Dear Sir/Madam:

I, Glen Shaw, Jr., owner of GMB Leasing, LLC hereby authorize Greater Waste Solutions, LLC full authority to design, license, construct and operate a solid waste collection, storage, transfer facility and scrap metal collection and recycling center at the above referenced property.

More specifically, Julie Shaw, Greater Waste Solutions, LLC, Chad Branon, and Fieldstone Land Consultants, PLLC, are granted full power to act on the company's behalf to manage and conduct affairs and exercise legal rights and powers related to conducting business with Federal, State and local governments in relation to the design, licensing, permitting, construction and operation of a solid waste collection, storage, transfer facility and scrap metal collection and recycling center at the above referenced property.

This authorization remains in effect unless revoked in writing by me.

Glen W. Shaw, Jr., Owner GMB Leasing, LLC

State of New Hampshire County of Aulsbarouge Subscribed and sworn before me this / day of /// , 2024 obbin

CC: Julie Shaw Greater Waste Solutions, LLC Chad Branon Fieldstone Land Consultants, PLLC

TINA M DOBBINS Notary Public - New Hampshire My Commission Expires Apr 5, 2022

Attachment I(4)(f)(iv)

Names/Addresses of Members of: GMB Leasing, LLC

Glen W. Shaw, Jr., Member

Julie A. Shaw, Member

<u>Physical / Personal Mailing Address:</u> 184 Mason Road New Ipswich, NH 03071 Physical / Personal Mailing Address:

184 Mason Road

New Ipswich, NH 03071

Business Mailing Address: 124 Old Wilton Road Greenville, NH 03048 Business Mailing Address: 124 Old Wilton Road Greenville, NH 03048



State of New Hampshire

Department of State

2020 ANNUAL REPORT

Filed Date Filed : 03/30/2020 04:30:00 PM Effective Date : 03/30/2020 04:30:00 PM Filing # : 4905857 Pages : 1 Business ID : 726457 William M. Gardner Secretary of State State of New Hampshire

Fee before April 1st : \$100.00				Fee after April 1st : \$150.00
BUSINESS NAME:	GMB LEASING, LLC			
BUSINESS TYPE:	Domestic Limited Liability Co.	mpany		
BUSINESS ID:	726457		· · · · · · · · · · · · · · · · · · ·	
STATE OF FORMATION:	New Hampshire	<u> </u>		······································
CURRENT PRINCIPA	L OFFICE ADDRESS		CURRENT MA	ILING ADDRESS
124 Old Wilton Road Greenville, NH, 03048, USA		NGINEX 124 Old Wilton Road Greenville, NH, 03048		
NEW PRINCIPAL (OFFICE ADDRESS	NEW MAILING ADDRESS		
DECICIEDEI	CURRENT REGISTERE	 ED AGENT A	ND OFFICE	
REGISTERED AGENT OFFICE A	DDRESS: 184 Mason Road, Nev	v Ipswich, N	H, 03071, USA	
	NEW AGENT AND OF	FICE(IF APP	LICABLE)	
REGISTEREI) AGENT:			
REGISTERED AGENT OFFICE A	DDRESS:			
	PRINCIPAL	PURPOSE(S)	
NAICS	CODE	NAICS SUB CODE		
OTHER / to buy, sell, lease, hold purp	l, own vehicles. all other lawful oses			
	MANAGER / MEME	BER INFORM	IATION	2. 2.
NAME	BUSINESS	ADDRESS		TITLE
Glen W. Shaw, Jr.	124 Old Wilton Road, Greenville	e, NH 03048, USA		Member
Julie A. Shaw	124 Old Wilton Road, Greenville, NH 03048,		USA	Member
I, the undersigned, do hereby certi	fy that the statements on this repor Her W. Are Je -	t are true to t	he best of my inform	ation, knowledge and belief.
	en W. Shaw, J	r.	TITLE	

Mailing Address - Corporation Division, NH Department of State, 107 North Main Street, Room 204, Concord, NH 03301-4989 Physical Location - State House Annex, 3rd Floor, Room 317, 25 Capitol Street, Concord, NH Phone: (603)271-3246 | Fax: (603)271-3247 | Email: corporate@sos.nh.gov | Website: sos.nh.gov - Page 1 of 1 -

Attachment I(5)(f)(iv)

Names/Addresses of:

Greater Waste Solutions, LLC

Julie Ann Shaw, Member

Glen W. Shaw, Jr.

Physical / Personal Mailing Address: 184 Mason Road

New Ipswich, NH 03071

Physical / Personal Mailing Address:

184 Mason Road

New Ipswich, NH 03071

Business Mailing Address: 124 Old Wilton Road Greenville, NH 03048 **Business Mailing Address:**

124 Old Wilton Road Greenville, NH 03048

SECTION II FACILITY DESCRIPTION



REVISED: SEPTEMBER 14, 2021 - Revised Facility Capacity Amounts

Application for Standard Permit for Solid Waste Collection/Storage/Transfer Facility

Greater Waste Solutions, LLC.

(4)	EACI						
	(a)	Name: GMR Leasing ALC					
	(a) (b)	Name, Gwid Leasing, ELC Mailing address: 124 Old Wilton Bood, C Doonwillo, NLL 02048					
		Tolonhono number: 602.979.4109					
		(c.a) E-mail: julie@gwshawandson.com					
	(a)	in an above, identify the individual associated with and designated by the facility owner to be the contact					
Ì		individual for matters concerning this application:					
		(i) The: Glen VV. Snaw, Jr (ii) Litle: Member					
		(iii) Man 9 address: 124 Old Wilton Road, Greenville, NH 03048					
}	(0)	(iv) releptions number: 603-678-4708 (v) E-mail: juli@gwshawandson.com					
		If the facility owner is an individual, provide date of birth and go to question (5):					
	Ψ.	(i) The facility is experimentally of other association, provide the following information as specified:					
		(i) The facility is owner by a: corporation partnership 🔀 other association					
		(ii) State of incorporations, chatton, NH					
		(iii) Principal business address 124 Old Wilton Road, Greenville, NH 05048					
		(iv) Provue on separate paper an anachimark as Anachiment ((4)()((v), the names and addresses of an directors,					
		principals, members or participants, for another type of association					
		principals, members of paracipants, tobi another type of association.					
		(*) For a privately held corporation, identify all a reholders. For a publicly traded corporation, identify all shareholders owning					
		10% or more of the corporation's equity or debt.					
(5)	FAC	CILITY OPERATOR IDENTIFICATION [If same as facility of per, check here] and go to Section II]:					
	(a)	Name: Greater Waste Solutions, LLC					
	(b)	Mailing address: 124 Old Wilton Road, Greenville, NH 03048					
	(c)	Telephone number: 603-878-4108 (c.a. E-mail: julie@gwshawandson.com					
	(d)	If different than above, identify the individual associated with and designated by the facility operator to be the contact					
		individual for matters concerning this application:					
		(i) Name: Julie A. Shaw (ii) Title: Member/Mngr., Greater Waste Solutions, LLC					
		(iii) Mailing address: 124 Old Wilton Road, Greenville, NH 03048					
		(iv) Telephone number: 603-878-4108 (v) E-mail: Julie Ogwshawandson.com					
	(e)	If the facility operator is an individual, provide date of birth and go to Section II:					
	(†)	If the facility operator is a corporation, partnership or other association, provide the following formation as specified:					
		(i) The facility is operated by a: 📋 corporation 📋 partnership 🖄 other association					
		(ii) State of incorporation/formation: NH					
		(III) Principal business address: 124 Old Wilton Road, Greenville, NH 03048					
		(iv) Provide on separate paper and attach/mark as "Attachment 1(5)(1)(iv)," the names and addresses of 1 directors,					
		officers and shareholders ("), if for a corporation; all partners (whether general or limited), if for a partner hip; or all					
		principals, members or participants, if for another type of association.					
		(*) For a privately hold corporation identify all charabelders. For a sublicity to ded corporation identify all the states in the					
		10% or more of the corporation's equity or debt					
I		Trave of more of the dolpoint of debt.					

SECTION II. FACILITY DESCRIPTION Provide a brief description of the facility. Note that more detailed information pertaining to facility operations will be provided in the Operating Plan required under Section VII of this form.

(1)	The type of collection/storage/transfer activity(s):						
ļ	☑ Transfer station ☑ Recycling center						
	Temporary stockpile(s)						
(2)	Facility ownership (check one): 🗌 publicly owned 🛛 privately owned						
(3)	Facility service type: 🔲 limited service area facility (i.e., will receive waste from only specified sources/locations)						
	unlimited service area facility (i.e., will potentially receive waste from any source/location)						
(4)	Facility service area:						
	Note: If the "facility service type," provided in response to (3) above, is a "limited service area facility," then identify the precise geographic area(s)						
	and/or generator(s) that the facility shall be limited to serving. If the facility service type, as provided in response to (3) above, is an "unlimited						
	service area facility," then identify the geographic region and/or generators the facility will most likely serve.						
	New Hampshire and Massachusetts						
(5)	Type(s) of waste to be received by the facility (be specific):						
	Municipal Solid Waste (MSW); Recyclable Materials, including: glass, aluminum, ferrous & non-ferrous metals, paper, tires,						
	plastics and corrugated cardboard; White Goods; Construction & Demolition Debris (C&D); Bulky Waste; Electronic Waste, Yard						
	Waste						
(6)	Type(s) of waste to be prohibited by the facility (be specific):						
	Hazardous waste; Sludge or Septage; Liquid Waste; Asbestos Waste; Infectious Waste; Animal Carcasses: Contaminated Soil:						
	Universal Waste except in strict conformance with Universal Waste Rule Env-Hw 1100; Explosives.						
(7)	Capacity for each of the following:						
	(a) Storing non-recyclable waste: 710 tons or 2764 cubic yards						
	(b) Storing unprocessed recyclable waste: 554 tons or 2177 cubic yards						

(C)	Storing processed (market ready) recyclable waste: 0 tons or 0 cubic yards
(d)	Collection rate: 600 tons or 2340 cubic yards per day on average annually

(8)	Identify other waste management activities at the site. Check all of the below which apply. If none apply, check here 🗋 and g								
	You must respond to this question to fulfill the reporting requirements in Env-Sw 1105.07(d) and (f). However, the information provided by your response shall not become part of any permit issued pursuant to this application; it is merely intended to identify whether other types of waste management activities, not covered by the requested permit, are or will be conducted at the subject site.								
	Theref locatio the abi	ore, if a n of ea lity to p	any of the below listed activities are or will be occurring at this site, place a check mark in the corresponding box and show the ch such activity on the site plans prepared pursuant to Section VI of this form. Also, be certain the activities do not adversely affect properly manage the facility for which a permit is being sought.						
	Also no permits determ	ote: Al s or app nining p	though the below listed activities do not require issuance of a solid waste management facility permit, other local, state or federal provals may apply. Contact the DES Public Information & Permitting Office [(603) 271-2975], if necessary, for assistance in permitting requirements.						
Γ	(a)	ACTI	VITIES INVOLVING WASTES THAT ARE NOT REGULATED AS SOLID WASTE (Ref. Env-Sw 101.03):						
	~		Management of yard waste (leaves, grass clippings, garden debris, and small or chipped branches)						
		L	Burial of stumps at the waste generation site, which have been cut or uprooted from the site, at least 75 feet from						
			Operation of a "swap shop," collecting and distributing salvaged materials/items for reuse in-kind, pursuant to Env- Sw 1500, including:						
			Collection and distribution of non-hazardous paint for use as paint						
			Collection and distribution of other used furniture, equipment, clothing, etc. for reuse in-kind						
	-		U Other (specify):						
(Ļ	<u> </u>	Management of septage, as defined in RSA 485-A:2,IX-a, by a method not involving disposal with a solid waste						
	ŀ		Management of hazardous waste as defined in RSA 147-A-2 as follows:						
			Management of hazardous waste, as defined in KSA 147-A.2, as follows. X Collection of used oil for recycling						
			Collection of household hazardous waste						
			Collection of universal waste, as follows:						
			Batteries D Antifreeze Mercury containing lamps						
			Pesticides						
1			Cher (specify):						
			Operation of a permitted hazardous waste transfer facility (Provide permit #):						
			Operation of a permitted hazardous waste treatment, storage or disposal (TSD) facility						
			(Provide permit #):						
	-		Uner (specify): Management of solid or dissolved materials in irrigation return flows						
	F		Management of municipal and industrial discharges which are point sources subject to permits under Section 402 of						
			the Federal Water Pollution Control Act, as amended						
			Management of radioactive materials as defined and regulated by the New Hampshire Rules for the Control of Rediation, Ha B 2000 and Ha B 4000						
	(h)	SOLI	D WASTE MANAGEMENT ACTIVITIES WHICH ARE PERMIT-EXEMPT. AS FOLLOWS:						
	Management of stumps by above-ground methods, not including composting, pursuant to Env-Sw 302.								
			Temporary stockpiling until transfer off-site for further management						
			Chipping/shredding and use of resulting chips as fuel, mulch, animal bedding and/or composting bulking						
	-	X	Collection, storage and transfer of the following:						
		الأسيكا	Solid waste collected from highway rights-of-way by a local or state highway agency (note: permit exemption						
			applies only if the collection site is owned/operated by the highway agency); [Ref. Env-Sw 408.07]						
			Concrete, brick, other inert masonry debris or asphalt [Ref. Env-Sw 302.03(b)(9)]						
	Processed (i.e., market ready, baled/packaged) select recyclables; (note: permit exemption app select recyclables (i.e., paper, cardboard, glass, plastic, metals, textiles) which are received in a condition): [Ref. Env-Sw 408.04]								
1	l.		Open burning of clean wood, limited to brush and slash measuring ≤ 5 inches in diameter and clean, untreated wood						
			with a cross-sectional area \leq 24 square inches; (note: permit exemption applies only when a permit to stockpile the						
			wood for burning is issued by the DES Air Resources Division and the district forest ranger/local fire authorities have						
	-		Issued a permit to kindle the wood, and when stockplling conforms to Env-SW 404.05); [Ket. Env-SW 508.05]						
	Env-Sw 1500; (identify the type of processed select recyclable:) ar the type of certified waste-derived product:) [Ref. Env-Sw 508.06								
	Γ		Collection and use of a processed non-select recyclable material to produce a waste-derived product certified						
	pursuant to Env-Sw 1503.04, Env-Sw 1503.05 or Env-Sw 1503.07; (Identify the type of processed non-select								
			recyclable. and the type of certilied waste-derived product:) [Ref.]						
	-		Burial of animal carcasses pursuant to Env-Sw 810.07 or Env-Sw 810.08						
	Landspreading wood ash pursuant to Env-Sw 1704								

			Conducting bench scale research and development projects pursuant to Env-Sw 302.03(b)(7)				
	ļ		Management of boiler slag from the combustion of	f coal, pursuant to Env-Sv	t to Env-Sw 302.03(b)(8)		
]						
		At the waste generation site pursuant to Env-Sw 810.04					
From off-site locations pursuant to Env-Sw 302.03(b)(9)							
	(C)		Collection, storage and processing of wooden pall	ets and crates into wood	chips, pursuant to Env-Sw 302.03(b)(10)		
			Management of a solid waste that has been forma	lly declared by the genera	ator, in accordance with Hazardous		
			Waste Rule Env-Hw 502.01(c)(2), to be a hazardo	us waste, pursuant to En	v-Sw 302.03(b)(5)		
Ì			Other (specify: and	provide rule cite: Env-Wn	n:)		
			IDENTIFY ALL OTHER SOLID WASTE M	ANAGEMENT PERMITS	ISSUED FOR THIS SITE:		
PERMIT NUMBER DATE ISSUED FACILITY TYPE/AC							
			. DES-SW-PN-17-002	04/19/2017	Unlimited Service/Scrap Metal Recycling		
				[

SECTION III STATUS OF OTHER PERMITS/APPROVALS



SECTION III. STATUS OF OTHER PERMITS/APPROVALS

Using the chart below, provide a list of all local and other state or federal permits or approvals that are or may be required for the proposed facility. Some of the most commonly required permits have been listed for you. Indicate whether they apply and supply information relevant to their status, as shown. Add to the list as necessary. Use separate paper as necessary. Please print or type.

If no such permits or approvals are needed, please check here: \Box

CHECK IF PERMIT IDENTIFICATION CHECK IF REQUIRED DATE APPLICATION FILED/TO BE FILED DATE ISSUED/APPROVED (Attach a copy if issued) Permit from the DES Air Resources Division for open burning; combustion and incineration; other process emissions; and/or landfill gas control per the requirements of RSA 125-C, RSA 125-1 and/or Env-A 100-1300. Image: Comparison of the process emissions; and/or landfill gas control per the requirements of RSA 485-A, RSA 485-A, GM 485-A, SM 485-A, GM 485-A, IT and Env-Ws 415. Image:				
Permit from the DES Air Resources Division for open burning; combustion and incineration; other process emissions; and/or landfill gas control per the requirements of RSA 125-C, RSA 125-1 and/or Env-4 100-1300. Image: Control Permit From the DES Groundwater Protection Bureau, per the requirements of RSA 485-A, RSA 485-C and/or Env-4 1043. Permit from the DES Water Division to dredge, fill or significantly alter the terrain per the requirements of RSA 485-A, RSA 485-C and/or Env-4 1043. Image: Control Permit From the DES Weter Division to dredge, fill or significantly alter the terrain per the requirements of RSA 485-A, 17 and Env-4Ws 415. Permit from the DES Weter Division to dredge and fill in or adjacent to the surface waters of the state, per the requirements of RSA 482-A and Wt 100-800. Image: Control Permit From the DES Vetlands Bureau to dredge and fill in or adjacent to the surface waters of the state, per the requirements of RSA 482-A and Wt 100-800. Permit from the DES Vetlands Bureau to dredge and fill in or adjacent to the surface waters of the state, per the requirements of RSA 482-A and Wt 100-800. Image: Control Permit From the NH Department of Transportation (NHDOT), per the requirements of RSA 236:13. Permit from NHDOT to operate and maintain a junkyard within 1000 feet of, or visible from, the main traveled way of the interstate, federal aid primary, or tumpike systems, per the requirements of RSA 236:90-110. Image: Control Permit Sec: Control	PERMIT IDENTIFICATION	CHECK IF PERMIT IS REQUIRED	DATE APPLICATION FILED/TO BE FILED	DATE ISSUED/APPROVED (Attach a copy if issued)
Groundwater Permit from the DES Groundwater Protection Bureau, per the Image: Constraint of the constraint of	Permit from the DES Air Resources Division for open burning; combustion and incineration; other process emissions; and/or landfill gas control per the requirements of RSA 125-C, RSA 125-I and/or Env-A 100-1300.			
Permit from the DES Water Division to dredge, fill or significantly alter the terrain per the requirements of RSA 485-A:17 and Env-Ws 415. I/12/2018 Permit from the DES Wetlands Bureau to dredge and fill in or adjacent to the surface waters of the state, per the requirements of RSA 482-A and Wt 100-800. Image: Comparison of Class I or Class I or Class I or Class I I highway or state maintained portion of a Class II highway, from the NH Department of Transportation (NHDOT), per the requirements of RSA 236:13. 3/29/2018 Permit from NHDOT to operate and maintain a junkyard within 1000 feet of, or visible from, the main traveled way of the interstate, federal aid primary, or tumpike systems, per the requirements of RSA 236:90-110. Image: Comparison of Class I I adjustration of I adjustratin adjustration of I adjustration of I adjustration of	Groundwater Permit from the DES Groundwater Protection Bureau, per the requirements of RSA 485-A, RSA 485-C and/or Env-Wm 1403.			
Permit from the DES Wetlands Bureau to dredge and fill in or adjacent to the surface waters of the state, per the requirements of RSA 482-A and Wt 100-800. Image: Constraint of the state, per the requirements of RSA 482-A and Wt 100-800. Permit for driveway access onto any Class I or Class II highway or state maintained portion of a Class II highway, from the NH Department of Transportation (NHDOT), per the requirements of RSA 236:13. 3/29/2018 Permit from NHDOT to operate and maintain a junkyard within 1000 feet of, or visible from, the main traveled way of the interstate, federal aid primary, or tumpike systems, per the requirements of RSA 236:90-110. Image: Constraint of RSA 236:90-110. Local zoning approval or zoning variance. Image: Constraint of RSA 236:90-110. Image: Constraint RSA 236:90-110. Local building permits and site plan approval(s). Image: Constraint RSA 236:90-110. Image: Constraint RSA 236:90-110. Core are straint constraint or constrain	Permit from the DES Water Division to dredge, fill or significantly alter the terrain per the requirements of RSA 485-A:17 and Env-Ws 415.	X		1/12/2018
Permit for driveway access onto any Class I or Class III highway or state maintained portion of a Class II highway, from the NH Department of Transportation (NHDOT), per the requirements of RSA 236:13. 3/29/2018 Permit from NHDOT to operate and maintain a junkyard within 1000 feet of, or visible from, the main traveled way of the interstate, federal aid primary, or turnpike systems, per the requirements of RSA 236:90-110. Image: Class II highway approval or zoning variance. Image: Class II highway appro	Permit from the DES Wetlands Bureau to dredge and fill in or adjacent to the surface waters of the state, per the requirements of RSA 482-A and Wt 100-800.			
Permit from NHDOT to operate and maintain a junkyard within 1000 feet of, or visible Image: Constraint of the interstate, federal aid primary, or turnpike systems, per the requirements of RSA 236:90-110. Local zoning approval or zoning variance. Image: Constraint of the interstate, federal aid primary, or turnpike systems, per the requirements of RSA 236:90-110. Local zoning approval or zoning variance. Image: Constraint of the interstate, federal aid primary, or turnpike systems, per the requirements of RSA 236:90-110. Local zoning approval or zoning variance. Image: Constraint of the interstate, federal aid primary, or turnpike systems, per the requirements and site plan approval(s). X Other (specify): X 7/27/2017 Other (specify): X See Below Greenville Fire Department Approval Letter 6/22/2020 Town of Greenville Junkyard License Renewal 5/29/2019 NHDES Solid Waste Management Permit-By-Notification for Scrap Metal Recycling Facility 4/19/2017	Permit for driveway access onto any Class I or Class III highway or state maintained portion of a Class II highway, from the NH Department of Transportation (NHDOT), per the requirements of RSA 236:13.	x		3/29/2018
Local zoning approval or zoning variance. Image: Constraint of the second s	Permit from NHDOT to operate and maintain a junkyard within 1000 feet of, or visible from, the main traveled way of the interstate, federal aid primary, or turnpike systems, per the requirements of RSA 236:90-110.			
Local building permits and site plan approval(s). x 7/27/2017 Other (specify): x See Below Greenville Fire Department Approval Letter 6/22/2020 Town of Greenville Junkyard License Renewal 5/29/2019 NHDES Solid Waste Management Permit-By-Notification for Scrap Metal Recycling Facility 4/19/2017	Local zoning approval or zoning variance.			
Other (specify): x See Below Greenville Fire Department Approval Letter 6/22/2020 Town of Greenville Junkyard License Renewal 5/29/2019 NHDES Solid Waste Management Permit-By-Notification for Scrap Metal Recycling Facility 4/19/2017	Local building permits and site plan approval(s).	X		7/27/2017
Greenville Fire Department Approval Letter6/22/2020Town of Greenville Junkyard License Renewal5/29/2019NHDES Solid Waste Management Permit-By-Notification for Scrap Metal Recycling Facility4/19/2017EDA F. de 18 from the Premit	Other (specify):	See Below		
HVA Hederal Stormwater Permit Allowed and the Allowed A	Greenville Fire Department Approval Letter Town of Greenville Junkyard License Renewal NHDES Solid Waste Management Permit-By-Notification for Scrap Meta EPA Federal Stormwater Permit	6/22/2020 5/29/2019 4/19/2017 Pending		
Section III List of Attachments

Attachment III(1)	Town of Greenville Fire Department Approval Letter
Attachment III(2)	Town of Greenville Junkyard License Renewal
Attachment III(3)	NHDES Solid Waste Management Permit-By-Notification For Scrap Metal Recycling Facility
Attachment III(4)	NHDES Alteration of Terrain Permit
Attachment III(5)	NHDOT Access Permit
Attachment III(6)	Town of Greenville Planning Board Approval
•	

GTDGreenville Fire Rescue

7 River Street PO Box 361 Greenville, NH 03048

Phone: (603) 878-1242 Fax: (603) 878-1242

- TO: Greater Waste Solutions, Attn.: Julie Shaw GMB Leasing, Attn: Glen Shaw
- FROM: Greenville Fire Rescue
- DATE: June 22, 2020
- Plot Plan for Greater Waste Solutions Re: 426 Fitchburg Road

Dear Mr. and Mrs. Shaw:

After reviewing the plot plan for Greater Waste Solutions on Fitchburg Road, Greenville Fire approves the plans. Greenville Fire reserves the right to require further modification.

Thank you,

Batting fire Chief Town of Greenwille

Charles Buttrick Fire Chief, GPD

TOWN OF GREENVILLE JUNKYARD LICENSE RENEWAL

Pursuant to RSA 236:121, junkyard licenses expire on **June 30th** of each year. This renewal form must be filed a minimum of ten (10) working days prior to the expiration date to be considered for renewal. An application filed after expiration of the existing junkyard license shall be treated as an original application.

The renewal fee is \$250.00

Existing Junkyard License:

Name on the license: Greater Waste Solutions, LLC

Property location: 426 Fitchburg Road, Greenville, NH 03048

This license will be renewed without a hearing if all of the following items are in place:

1. The applicant certifies it has not been convicted of larceny or of receiving stolen property during the license period.

Is any criminal action for larceny or receiving stolen property pending, or has any such action been threatened? <u>No</u>

2. The applicant certifies that all of the conditions placed upon the grant of the original license have been met

Has the applicant received any complaint, or has any notice been provided of a claimed violation of any condition of license? No

 The applicant certifies that it is in compliance with best management practices established by the Department of Environmental Services, if the application deals with an automotive recycling yard or motor vehicle junkyard.

Has the applicant been notified of any aspect of the junkyard operation that fails to comply with the above noted best management practices? No

- 4. At any time during the licensing period, did the area occupied by junk material:
 - Exceed by more than 10% the area occupied by junk on the date of the last license issued by the governing body? No If yes, explain
 - Exceed 10 fee in height? No If yes, explain______
 - Lack screening from any highway, or from abutting premises, or lack of security from unauthorized entry? <u>No</u> If yes, explain_____

JUN 2 3 ZUZU

This application is not a license. Based upon the information contained in this application, the governing body reserves the right to:

- A. Refer the application to planning, zoning, code enforcement, fire, and police officials for comment;
- B. Conduct appropriate investigations of the licensee or the junkyard location prior to the issuance of a renewed junkyard license, but not limited to, the testing of surface and subsurface water for contamination by hazardous or toxic substances; and
- C. Schedule the matter for a hearing to obtain further information regarding the performance of the junkyard during the license period.

- Applicant Signature Date: 10 19 20 For Office Use Only Application received (date) Application accepted (date) Junkyard Renewal License granted (date) Junkyard Renewal License denied (date) For reasons/conditions: Inspected & Approved: Approved by Board of Selectmen

Daté

Building Official

Approval Date: 7/22/2020



SOLID WASTE MANAGEMENT PERMIT-BY-NOTIFICATION FOR SCRAP METAL RECYCLING FACILITY

Issued by the NH Department of Environmental Services (NHDES), Waste Management Division pursuant to RSA 149-M and the New Hampshire Solid Waste Rules, Env-Sw 100 – 2000 (Rules)

I. <u>PERMIT/FACILITY IDENTIFICATION</u>:

Permit No.: DES-SW-PN-17-002 Permittee: Greater Waste Solutions, LLC Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Facility Type: Scrap Metal Collection and Recycling Center per Env-Sw 407.04 Service Type & Area: Commercial Facility / Unlimited Service Area

- II. FILE REFERENCE/RECORD OF APPLICATION: Date(s) Received: March 13, 2017 WMD Document Log #(s): 2017-26329-01
- III. TERMS AND CONDITIONS: Eight (8) conditions are attached on page 2.
- IV. <u>AUTHORIZATION</u>: Pursuant to RSA 149-M and Part Env-Sw 311 of the Rules, this permit is hereby issued to the permittee identified in Section I above to operate the solid waste management facility identified in Section I above, subject to the terms and conditions in Section III above. This authorization is based on information provided to the NHDES by the permittee in documents referenced in Section II above. The information is subject to audit pursuant to Env-Sw 311.06. If the information is false, misleading or incomplete, the permit may be revoked or suspended in accordance with Part Env-Sw 306 of the Rules. The meaning of specific terms in this authorization is as defined in the Rules. The Rules and statute are available for reference on the NHDES's website at <u>www.des.nh.gov</u>.

This permit is effective on the date of signature, below, and is subject to modification or termination and reissuance by the NHDES as necessary to assure the terms and conditions remain current with the Rules, as amended. BY EXERCISING ANY RIGHTS UNDER THIS PERMIT, THE PERMITTEE HAS AGREED TO ALL TERMS AND CONDITIONS OF THE PERMIT. Failure to comply with these terms and conditions could result in administrative, civil or criminal penalties, and suspension or revocation of the permit.

No liability is incurred by the State of New Hampshire by reason of any approval of this solid waste facility. No warranty/guarantee is intended or implied by reason of any advice given by the Department or its staff.

Issuance of this permit shall not be construed in any way as authorization of any activity which occurred prior to the effective date of the permit; or authorization of any activity that does comply with RSA 149-M, the Rules, and the permit; or a waiver of any cause of action for violation(s) of RSA 149-M or the Rules. This permit shall not eliminate the permittee' s obligation to obtain all requisite federal, state or local permits, licenses or approvals, or to comply with all other applicable federal, state, district and local permits, ordinances, laws, approvals or conditions relating to the facility.

Environmental Services Digitally signed by Environmental Services DN: cn=Environmental Services, o, ou=Waste Management, email=pamela.Werner@des.nh.gov, c=US

Date: 2017.04.19 11:41:54 -04'00' April 19, 2017

Michael J.: Wimsatt, P.G., Director Date Waste Management Division Refer questions to Waste Management Division, PO Box 95, 29 Hazen Drive, Concord, NH 03302; (606) 271-2925; solidwasteinfo@des.nh.gov Page 1 of 7 Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 2 of 7



Section III: Terms and Conditions

(1) Authorized Waste: This permit authorizes the facility to collect and temporarily store non-hazardous ferrous and non-ferrous scrap metal for recycling, provided the materials are not mixed with other types of waste and are not a prohibited waste listed in condition (2) below.

(2) **Prohibited Waste:** This permit does not authorize the facility to receive any of the following types of solid wastes or materials:

- a. Asbestos waste;
- b. Ash;
- c. Explosive waste;
- d. Contained gaseous waste;
- e. Liquid waste;
- f. Infectious waste;
- g. Animal carcasses;
- h. Contaminated soils and other absorbent media;
- i. Out-of-state waste, unless the waste is received for recycling;
- j. Lead acid batteries;

- k. Motor vehicle parts that contain or have contained fluids or lubricants;
- Free draining oil or lubricants, including metal shavings coated or mixed with the same;
- m. Tanks, drums or other containers unless emptied and properly cleaned of residues prior to receipt;
- n. Construction or demolition debris;
- Household trash and garbage or other putrescible waste;
- p. Tires; and
- q. Any other waste not listed in (1) above.

(3) Facility Capacity: Pursuant to Env-Sw 1204.04, the rate of incoming authorized waste shall be limited to 30 tons per day, but in no case shall the rate exceed the quantity of waste the facility is able to actively manage¹ and properly handle and process in accordance with this permit.

(4) **Location Restrictions:** The location of the facility shall comply with siting requirements provided in Env-Sw 1203.

(5) Operating Requirements:

a. The Permitee shall operate the facility in accordance with RSA 149-M, as amended, the Rules, as amended, specifically including Env-Sw 407.04², and a written up-to-date Operating Plan prepared by the Permittee in conformance with Env-Sw 1105.11³ and kept at the facility for reference by facility operators and inspection by the NHDES.

b. Scrap metal and residual waste shall be actively managed.¹

c. Facility operators shall be trained and certified as required by RSA 149-M, as amended, and the Rules, as amended.

d. Annual facility reports shall be filed with the NHDES in accordance with the Rules.

(6) **Closure Requirements:** The Permitee shall close the facility in accordance with RSA 149-M, as amended, the Rules, as amended, specifically including Env-Sw 407.04², and a written up-to-date Closure Plan prepared by the Permittee in conformance with Env-Sw 1106.04⁴ and kept at the facility for reference by facility operators and inspection by the NHDES.

(7) **Permit Transfer and Modification Limitations:** This permit is non-transferable. Modification shall be limited to the scope of operations allowed by the Rules for this type of facility and permit.

(8) **Compliance Verification:** The Department may inspect the facility pursuant to Env-Sw 2000 and audit the facility pursuant to Env-Sw 311.06 to verify compliance.

¹ Pursuant to Env-Sw 102.04 effective July 1, 2014, the term "actively manage" means to handle a waste or material, including waste-derived products and recyclable materials, in a controlled manner without causing: (a) a nuisance; (b) an adverse effect to the environment, public health and safety; (c) accumulations which have no identifiable destination or value; and (d) a loss of material value in the market place due to material damage, degradation and/or contamination.

² See Appendix A, attached hereto. See page 3.

³ See Appendix B, attached hereto. See pages 4 - 5

⁴ See Appendix C, attached hereto. See pages 6-7.

Appendix A

Reprinted below for convenience is a copy Env-Sw 407.04 in effect on the issue date of this permit. A complete and current certified copy of the Solid Waste Rules, Env-Sw 100 – Env-Sw 2000, is available at www.des.nh.gov.

Env-Sw 407.04 Scrap Metal Collection and Recycling Centers. Facilities that only collect and temporarily store ferrous or non-ferrous scrap metal, or a combination thereof, and that transfer said scrap metal to authorized facilities or markets for recycling, shall be eligible for a permit-by-notification pursuant to Env-Sw 311, provided that:

(a) The facility does not receive any:

(1) Parts of a motor vehicle that contain or have contained fluids or lubricants, excluding lead acid batteries;

(2) Waste listed in Env-Sw 900, including asbestos, ash, contaminated soils and other absorbent media, infectious waste, and tires; and

(3) Free-draining oil or lubricants, including cutting oils mixed with or coating metal shavings;

(b) The scrap metal goods, as received by the facility, are not mixed with other types of waste, including municipal solid waste, and construction and demolition debris;

(c) The permittee identifies whether the scrap metal goods include any of the following substances or devices, and subsequently assures that such substances, if present, are managed in accordance with applicable state and federal rules and regulations, either at the facility or by transfer to another facility that provides such proper management:

(1) CFCs;

(2) PCBs;

(3) Mercury-containing switches and other devices;

(4) Batteries; and

(5) Other regulated substances, materials, and wastes;

(d) All tanks, drums and other containers received by the facility have been emptied and cleaned of residues in accordance with applicable state and federal rules and regulations;

(e) The scrap metal processing activities conducted at the facility are limited to sorting, cutting, crushing, baling, or smelting, or a combination thereof, provided the latter is done in units not requiring a permit under Env-A 600;

(f) The scrap metal is actively managed;

(g) All residual waste at the facility is:

(1) Directly attributable to the allowable scrap metal processing activities;

(2) Segregated from the recyclable scrap metal and stored in accordance with Env-Sw 405;

(3) Actively managed; and

(4) Not accumulated in excess of 30 cubic yards, unless the permittee establishes and maintains an approved financial assurance plan pursuant to Env-Sw 1400 to guarantee the cost of disposing of the residual waste; and

(h) All other applicable permit-by-notification facility requirements are met as specified in Env-Sw 1200.

Source. #7225, eff 3-31-00; (See Revision Note at chapter heading for Env-Sw 400); ss by #8459, eff 10-28-05 (formerly Env-Wm 2107.04); ss by #10596, eff 7-1-14

Refer questions to Waste Management Division, PO Box 95, 29 Hazen Drive, Concord, NH 03302; (606) 271-2925; solidwasteinfo@des.nh.gov Page 3 of 7 Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 4 of 7

Environmental Services

Appendix B

Reprinted below for convenience is a copy Env-Sw 1105.11 in effect on the issue date of this permit. A complete certified and current copy of the Solid Waste Rules, Env-Sw 100 – Env-Sw 2000, is available at <u>www.des.nh.gov</u>.

Env-Sw 1105.11 Operating Plan Content and Format.

(a) A facility operating plan shall provide sufficient detail to allow the certified operator and other trained facility personnel to operate the facility in compliance with RSA 149-M, the permit and the solid waste rules without further explanation or guidance.

(b) The operating plan shall be prepared as a loose leaf document to facilitate amendment as specified in Env-Sw 315.

(c) Each page of the operating plan shall bear the date of preparation or last revision, as applicable, and the facility name, location and permit number, if a permit is issued for the facility at the time that the operating plan or a modification thereto is prepared.

(d) The content and organizational format of the operating plan shall be as follows:

- (1) Section 1, titled "facility identification," shall identify:
- a. The facility name, mailing address, location by street address and municipality, and permit number;
- b. The type of the facility;
- c. The capacity of the facility;
- d. The facility service type;
- e. The facility service area; and
- f. The name, address and telephone number of the permittee, property owner, and operator;

(2) Section 2, titled "authorized and prohibited waste," shall provide a list of:

- a. The specific waste types the facility which shall be authorized to receive; and
- b. The specific waste types the facility shall not be authorized to receive;

(3) Section 3, titled "routine operations plan," shall provide a detailed description of how the daily operations of the facility will be conducted to assure that the facility will be operated in accordance with the solid waste rules, including a description of:

- a. Hours of operations;
- b. Facility access control and on-site traffic patterns;

c. Waste acceptance and rejection procedures, including unloading, sorting and inspection procedures;

d. The procedure by which the quantity and source(s) of all wastes received by the facility shall be determined and recorded;

e. The procedure by which the quantity and destination of all outgoing waste and certified wastederived products shall be determined and recorded;

f. The storage time and capacity limits for all wastes received by the facility and the procedures by which the limits shall be monitored to assure compliance therewith;

g. All collection, storage, transfer, processing, treatment and disposal methods and procedures employed by the facility for managing waste following receipt; and

h. For facilities that process or treat waste, the methods or procedures for managing bypass waste and the quality assurance/quality control procedures relating to the management of processed or treated waste;

(4) Section 4, titled "residual waste management plan," shall provide a detailed description of how all

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Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 5 of 7



residual waste, if any, shall be managed by the facility, including the information specified in a. through d. below, or if the facility will not generate any residual waste, a statement so indicating:

a. The type and estimated quantity of all residual wastes to be generated by the facility;

b. How such wastes shall be managed at the facility prior to removal;

c. Information to demonstrate how the provisions of Env-Sw 1105.10 shall be met; and

d. Quality assurance/quality control provisions, to assure that the wastes to be transferred shall be acceptable to the receiving facility;

(5) Section 5, titled "facility maintenance, inspection and monitoring plan," shall identify all routine maintenance, inspection and monitoring requirements necessary to assure the integrity of facility operations, including a description of the measures to be undertaken to monitor and inhibit the following:

a. Spontaneous combustion;

b. Other fire hazards;

c. Vector production;

d. Generation of methane, hazardous, or explosive gases;

e. Odors;

f. Dust;

g. Windblown litter;

h Leachate; and

i. Spills;

(6) Section 6, titled "contingency plan," shall:

a. Identify all reasonably foreseeable emergencies, such as fire, explosion, operator injury, and the like, based on the type of facility and wastes being handled;

b. Describe the appropriate response of facility personnel for each emergency identified in a. above; and

c. Include identification of and telephone numbers for all local and state officials to be notified in the event of an emergency;

(7) Section 7, titled "employee training program," shall provide a description of employee training program(s); and

(8) Section 8, titled "recordkeeping and reporting," shall provide a description of record keeping procedures as necessary to comply with Env-Sw 1105.06 and Env-Sw 1105.07.

Source. #6619-B, eff 10-29-97; (See Revision Note at chapter heading for Env-Sw 1100); ss by #8459, eff 10-28-05 (formerly Env-Wm 2805.11); ss by #10598, eff 7-1-14

Environmental

Services

Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 6 of 7

Appendix C

Reprinted below for convenience is a copy Env-Sw 1106.04 in effect on the issue date of this permit. A complete and current certified copy of the Solid Waste Rules, Env-Sw 100 – Env-Sw 2000, is available at www.des.nh.gov.

Env-Sw 1106.04 Closure Plan, Content and Format.

(a) A facility closure plan shall provide sufficient detail to allow a third party to implement and complete all required facility closure tasks in compliance with RSA 149-M, the permit and the solid waste rules without further explanation or guidance or as provided by (b) below.

(b) For a landfill closure plan prepared before the facility reaches final grades, the design plans and specifications for the capping system and related appurtenances shall be considered preliminary and need not provide final design detail sufficient to allow third party implementation without further explanation or guidance. However, any closure plan approved on the basis of preliminary plans shall include, in the list of closure tasks, provisions for preparing final design plans and specifications for the capping system and related appurtenances, as specified in Env-Sw 807.

(c) The closure plan shall be prepared as a loose leaf document to facilitate amendment as specified in Env-Sw 315.

(d) Each page of the closure plan shall bear the date of preparation or revision, as applicable, and the facility name and permit number.

(e) The closure plan shall be organized and prepared as follows:

(1) Section 1, titled "facility identification," shall provide the facility name, mailing address, location and permit number;

(2) Section 2, titled "closure schedule," shall provide the anticipated date of closure and a closure schedule that sets forth each discrete activity that will be undertaken to complete facility closure, the order in which the activities will be undertaken and the estimated length of time the activity will take;

(3) Section 3, titled "waste identification," shall identify all types of waste received or intended to be received by the facility during its active life;

(4) Section 4, titled "notifications," shall provide a description of how notice shall be given to facility users prior to terminating receipt of waste;

(5) Section 5, titled "closure requirements," shall provide:

a. A list of each major closure work task required to implement and complete closure of the facility:

b. A description of the procedures for completing all required closure work tasks;

c. Design plans and specifications for construction of required closure systems;

(6) Section 6, titled "post-closure requirements," shall identify and describe all required postclosure testing, inspection, maintenance or monitoring that will be performed at the facility pursuant to the provisions of the solid waste rules and the permit;

(7) Section 7, titled "recordkeeping and reporting," shall identify and describe:

a. All recordkeeping and reporting obligations required of the facility following completion of the

Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 5 of 7



residual waste, if any, shall be managed by the facility, including the information specified in a. through d. below, or if the facility will not generate any residual waste, a statement so indicating:

- a. The type and estimated quantity of all residual wastes to be generated by the facility;
- b. How such wastes shall be managed at the facility prior to removal;
- c. Information to demonstrate how the provisions of Env-Sw 1105.10 shall be met; and

d. Quality assurance/quality control provisions, to assure that the wastes to be transferred shall be acceptable to the receiving facility;

(5) Section 5, titled "facility maintenance, inspection and monitoring plan," shall identify all routine maintenance, inspection and monitoring requirements necessary to assure the integrity of facility operations, including a description of the measures to be undertaken to monitor and inhibit the following:

- a. Spontaneous combustion;
- b. Other fire hazards;
- c. Vector production;
- d. Generation of methane, hazardous, or explosive gases;
- e. Odors;
- f. Dust;
- g. Windblown litter;
- h Leachate; and
- i. Spills;

(6) Section 6, titled "contingency plan," shall:

a. Identify all reasonably foreseeable emergencies, such as fire, explosion, operator injury, and the like, based on the type of facility and wastes being handled;

b. Describe the appropriate response of facility personnel for each emergency identified in a. above; and

c. Include identification of and telephone numbers for all local and state officials to be notified in the event of an emergency;

(7) Section 7, titled "employee training program," shall provide a description of employee training program(s); and

(8) Section 8, titled "recordkeeping and reporting," shall provide a description of record keeping procedures as necessary to comply with Env-Sw 1105.06 and Env-Sw 1105.07.

,

Source. #6619-B, eff 10-29-97; (See Revision Note at chapter heading for Env-Sw 1100); ss by #8459, eff 10-28-05 (formerly Env-Wm 2805.11); ss by #10598, eff 7-1-14

Permit No.: DES-SW-PN-17-002 Facility Name: Greater Waste Solutions, LLC Facility Location: 426 Fitchburg Road, Greenville, NH Issue Date: April 19, 2017 Page 7 of 7



closure work identified in section 5 of the closure plan; and

b. Locations and provisions for storing facility records, including the operating records, following facility closure;

(8) Section 8, titled "other permits," shall:

a. Identify all other local, state and federal permits and approvals required to implement facility closure, including the implementation of all post-closure monitoring and maintenance requirements;

b. Identify the status of each permit and approval identified pursuant to a. above; and

c. For a landfill located on property not owned by the permittee, include a copy of the written executed access agreement required by Env-Sw 1003.03; and

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(9) Section 9, titled "closure cost estimate," shall provide a closure cost estimate prepared in accordance with the criteria in Env-Sw 1403.02.

Source. #6619-B, eff 10-29-97; (See Revision Note at chapter heading for Env-Sw 1100); ss by #8459, eff 10-28-05 (formerly Env-Wm 2806.04); ss by #10598, eff 7-1-14



The State of New Hampshire Department of Environmental Services

Robert R. Scott, Commissioner



January 12, 2018

Attachment III(4)

Julie Shaw Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048

Re: Greater Waste Solutions Tax Map 2, Lots 17-1, 17-2 & 37-1, Greenville, NH Permit: AoT-1361

Dear Applicant:

Based upon the plans and application, approved on January 12, 2018, we are hereby issuing RSA 485-A:17 Alteration of Terrain Permit AoT-1361. The permit is subject to the following conditions:

PROJECT SPECIFIC CONDITIONS:

- 1. The approved plans, latest revision dated January 12, 2018, and supporting documentation in the permit file are a part of this approval.
- 2. This permit expires on January 12, 2023. No earth moving activities shall occur on the project after this expiration date unless the permit has been extended by the Department. If requesting an extension, the request must be received by the department <u>before the permit expires</u>. The Amendment Request form is available at: http://des.nh.gov/organization/divisions/water/aot/categories/forms.htm
- 3. As part of the processing of this application, DES waived specific requirements of Rule Env-Wq 1507.04 requiring the applicant to capture and infiltrate the groundwater recharge volume (GRV) in accordance with Env-Wq 1508.16. Based upon Site Specific Soil mapping and test pits performed throughout the site, the property contains a majority of poorlydrained, hydrologic group 'C" soils with shallow depths to groundwater. Granting this waiver will not have an adverse impact on the environment, public health, public safety, or abutting properties, and granting the request is consistent with the intent and purpose of the rules waived. Additional documentation relative to the waiver is contained within the file.

GENERAL CONDITIONS:

- 1. Activities shall not cause or contribute to any violations of the surface water quality standards established in Administrative Rule Env-Wq 1700.
- 2. You must submit revised plans for permit amendment prior to any changes in construction details or sequences. You must notify the Department in writing within ten days of a change in ownership.

- 3. You must notify the Department in writing prior to the start of construction and upon completion of construction. Forms can be submitted electronically at: https://forms.nh.gov/onlineforms/. Paper forms are available at that same web page.
- 4. All stormwater practices shall be inspected and maintained in accordance with Env-Wq 1507.07 and the project Inspection and Maintenance (I&M) Manual. All record keeping required by the I&M Manual shall be maintained by the identified responsible party, and be made available to the department upon request. Photographs of the site and BMPs must accompany the I&M submittals.
- 5. This permit does not relieve the applicant from the obligation to obtain other local, state or federal permits that may be required (e.g., from US EPA, US Army Corps of Engineers, etc.). <u>Projects disturbing over 1 acre may require a federal stormwater permit from EPA</u>. Information regarding this permitting process can be obtained at: <u>http://des.nh.gov/organization/divisions/water/stormwater/construction.htm</u>.
- 6. If applicable, no activity shall occur in wetland areas until a Wetlands Permit is obtained from the Department. Issuance of this permit does not obligate the Department to approve a Wetlands Permit for this project.
- 7. This project has been screened for potential impact to known occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or have not been surveyed in detail, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species.

Sincerely

Gloria S. Andrews, PE Alteration of Terrain Bureau

cc: Greenville Planning Board

ec: Chad Brannon, PE (Email: cebrannon@fieldstonelandconsultants.com)

Attachment III(5)



Victoria F. Sheehan Commissioner

To:

GMB Leasing LLC 124 Old Wilton Rd Greenville, NH 03048 THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

District 4 Office, 19 Base Hill Road, Swanzey, NH 03446

DRIVEWAY PERMIT

City/Town:	Greenville	Pern
Route/Road:	NH 31 (S0000031)	Dist
Patrol Section:	415	Pern
Tax Map:	2	
Lot:	37-1	
Development:	Commercial Waste	Solution



William Cass, P.E. Assistant Commissioner

nit #: **04-191-0016** rict: 04 nit Date 3/29/2018

Development: Commercial, Waste Solutions Permission is hereby granted to construct (alter) a driveway, entrance, exit or approach adjoining NH 31 (S0000031), pursuant to the location and specifications as described below. Failure to adhere to the sta

(S000031), pursuant to the location and specifications as described below. Failure to adhere to the standards and engineering drawings previously approved shall render this instrument null and void. Failure to start or complete construction of said facility within one calendar year of the date of this permit shall require application for permit extension or renewal in accordance with the Driveway Access Rules. Facilities constructed in violation of the permit specifications or the rules, shall be corrected immediately upon notification by a Department representative. Any cost by the State to correct deficiencies shall be fully borne by the landowner. The landowner shall defend, indemnify and hold harmless the Department and its duly appointed agents and employees against any action for personal injury and/or property damage sustained by reason of the exercise of this permit.

Drive 1

Location: Approximately 0.25 miles north of NH 123 on the east side of NH 31 (S0000031). SLD Station: 13294 (right) GPS: 42.760948 N 71.803009 W.

Specifications: This permit authorizes a paved access to be used as a Commercial drive. Any change in use, increase in use or reconstruction of the driveway requires reapplication.

The right-of-way line is located 50' from centerline.

The driveway shall not exceed 30 feet in width. The entrance of the drive may be flared; typically the flare radius is one half the driveway width.

Other Conditions:

No structures, including buildings, permanent or portable signs, lights, displays, fences, walls, etc. shall be permitted on, over or under the Highway Right of Way.

No parking, catering or servicing shall be conducted within the Highway Right of Way.

The applicant shall comply with all applicable ordinances and regulations of the municipality or other State Agencies.

The Department has relied on the title and subdivision information provided by the landowner. The Department has not performed additional title research and makes no warranty or representation concerning landowner's legal right to access. In the event of a dispute about the landowner's legal right to the access provided herein, the landowner will defend and indemnify the Department.

1. Driveway and related roadway modifications are to be constructed as shown on plans prepared by Chad E. Branon, PE with Fieldstone Land Consultants, PLLC dated 3/22/18 for Greater Waste Solutions, LLC provided that they do not conflict with other provisions of this permit and are approved by the Town.

2. Driveway to be 90° to the State highway, from the edge of roadway pavement to the right of way line.

3. The roadside embankment and vegetation must be appropriately modified and maintained to insure a minimum, all season safe sight distance of 400' by the applicant, the owner, and the owner's successor and assignees during construction and as long as this entrance is in use.

4. All slopes to be 4:1 - 6:1 preferred or match existing. Loam, seed, fertilize, and mulch any disturbed areas within the State right of way.

5. Drive shall be paved full width with hot Bituminous Pavement machine method. The drive shall be paved a minimum of 20 feet in length.

6. Traffic must be maintained during the performance of the work as described in the USDOT Manual on Uniform Traffic Control Devices Latest Edition. Traffic shall be protected by suitable barricades, standard warning and advance warning signs, and proper lighting at night. Properly trained flag persons with vests and using stop/slow paddles shall be provided whenever two-way traffic cannot be maintained.

See Previous Permit #04-191-0006.

Copies: District, Town, Patrolman Fieldstone Land Consultants PLLC Chad E Branon 206 Elm Street Milford, NH 03055 Approved K. A.

Assistant District Engineer For Director of Administration

Date: 3/29/2018

TOWN OF GREENVILLE, NEW HAMPSHIRE Planning Board

July 31, 2017

Mr. Chad Branon, P.E. Fieldstone Land Consultants PLLC 206 Elm Street Milford, NH 03055

RE: Notice of Decision – Case #: PB002-062217 – Greater Waste Solutions LLC (Applicant), Route 31, Fitchburg Road, Greenville, NH – Assessors Map: 2-17-1, 2-17-2, 2-37-1

Dear Chad:

At its meeting on July 27, 2017, the Greenville Planning Board voted unanimously to conditionally approve your request for a Non-Residential Site Plan for Greater Waste Solutions LLC pending approval from Underwood Engineering, the Department of Environmental Services, final approval from the Fire Department and incorporation of all the comments addressed in the Planning Board's internal review work session.

Should you have any questions or concerns, please contact us.

Sincerely.
FOR THE GREENVILLE PLANNING BOARD

Leara a Butcher

Debra A. Butcher Planning Board Administrator

SECTION IV LEGAL NOTIFICATIONS AND AGREEMENTS



REVISED; SEPTEMBER 14, 2021 - Renoticed all parties due to COVID-19 to obtain delivery receipts

Application for Standard Permit for Solid Waste Collection/Storage/Transfer Facility

Greater Waste Solutions, LLC.

SECTION IV. LEGAL NOTIFICATIONS AND AGREEMENTS

(1) "NOTICE OF FILING" REQUIREMENTS: The permit applicant must notify certain parties that this permit application is being filed with DES and provide proof thereof with this application. The notice is referred to as a "notice of filing." Read the following instructions to determine how to properly complete this requirement. See also attached template for preparing the required letters.

What information must the "notice of filing" contain?

As a minimum, the "notice of filing" must contain all of the "core" information, shown in the checklist below. In addition to providing the "core" information, there are instances where additional information must be included. The additional information is identified in Table IV-1 (see page 9 of this form).

A statement that an application for a standard solid waste management facility permit is scheduled to be filed with DES, including the anticipated filing date;

- S Facility identification and location, including facility name, street address and municipality;
- The name(s) and mailing address(es) of the applicant, facility owner, facility operator and property owner;
- A description of the activity(s) for which a permit is being sought, including, but not necessarily limited to:
 - The type(s) of waste management activities to be undertaken at the facility.
 - The quantity and type(s) of waste to be received by the facility.
 - The quantity and type(s) of waste to be stored at the facility.
 - The quantity and type(s) of waste to be processed or treated at the facility.
 - The facility service area.
 - I The facility service type.
 - M The facility life expectancy.
 - Other information required to accurately describe the scope and nature of the proposed activity(s).
 - In the estimated date of facility construction and operation.

Identification of the locally accessible place where a complete copy of the application will be placed by the applicant, on or before the date the application is actually filed with DES, for review by abutters and other interested persons during the application review process.

Name, title, mailing address and telephone number of the individual associated with the applicant who will respond to inquiries about the application during the application review process.

Name, title, mailing address and telephone number of the individual at DES who may be contacted regarding the application (call the DES-P&DRS at 603 271-2925 to obtain this information).

Description of the application processing provisions as specified by the Solid Waste Rules, Env-Sw 304. (The description must be detailed sufficiently as to inform the notice recipient of the basic process steps and schedule. To satisfy this requirement, you may provide a "permit application process flow chart," available from the DES-P&DRS by request).

If the application includes a request for a waiver to any rule, a statement so indicating and specifically citing the rule(s).

Who must be notified?

Notification must be provided to the host municipality, the host solid waste management district, and all abutters. In some cases, certain other entities must also be notified. Use Table IV-1 (see page 9) to determine whom you must notify. Use the columns at the far right-hand side of the table to track the requirements.

How do I supply notice?

Each notice of filing must be sent by certified mail, return receipt requested, or delivered in hand, in which case the recipient's signature must be obtained on a statement that acknowledges receipt.

Send or deliver the notice no more than 30 days prior to the date you will file the application with DES.

What do I submit with this application?

To show proof of providing notification, you must submit the following with this application:

- List of persons/parties requiring notification (use Table IV-1 on page 9)
- Copy(s) of the notification letter(s)
- Signed receipts by the recipients

(2) REQUIREMENTS RELATING TO LEGAL AGREEMENTS: If the applicant and the property owner are not the same at the time you file this application, you must submit information in this section of the application demonstrating that the applicant has the legal right to occupy and use the property for the purposes stated in this application. If the applicant already owns the property, check here:

TEMPLATE for preparing NOTICES OF FILING for STANDARD PERMIT APPLICATIONS for SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITIES

The following is a suggested format and text for preparing notices of filing, as required to complete an application to obtain a standard permit for a solid waste processing/treatment facility. This template is provided as a convenience to the permit applicant. If the applicant prefers, she/he may compose and use a different notice of filing, provided that it contains all of the required information.

date

Dear addressee:

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on **[specify date]**.

The solid waste collection/storage/transfer facility to which this permit applies is **specify facility name**, located at **specify street address** in **specify city/town**, New Hampshire. The facility (select one) \Box is not yet constructed or operating; **OR** \Box is currently operating under a temporary permit; **OR** \Box is currently operating under interim status; **OR** \Box is currently without a permit and has been directed by DES to come into compliance, in part by obtaining a permit.

If, per Table IV-1, the notice of filing must contain information additional to the "core" information listed on page IV-1 of the application form, insert the additional information here.

The involved parties are:

Permit Applicant: **specify name & mailing address** Facility Owner: **specify name & mailing address** Facility Operator: **specify name & mailing address** Property Owner: **specify name & mailing address**

The subject facility will manage the following types of solid waste:

list the types of solid waste the facility will manage.

The permit application requests approval to manage the following quantity of waste:

Maximum quantity to be received daily, on average annually: tons Maximum quantity to be stored at the facility: tons

The facility will receive waste from the following sources **specify service area**, **by geographic region and/or specific generator(s)**. The permit application requests DES to grant a permit which (select one) \Box will limit the facility to receiving waste from these sources only **OR** \Box will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is **specify length of time the facility will operate**. The projected date of facility construction is **specify date** and the projected date the facility will commence operation is **specify date**.

Other details concerning the subject facility are as follows: **Provide additional detail to accurately describe the** scope & nature of waste management activities to be conducted at the facility. If the application includes any request to grant a waiver to a rule, so state this and provide the rule citation.

For additional information about the facility, you may contact the permit applicant's representative, as follows:

specify name, mailing address and telephone number

In addition, a copy of the permit application will be available at the following location for public review throughout the permit application process.

specify local place where a copy of the application will be available for public review

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

specify name, mailing address and telephone number of individual designated by DES

Sincerely,

permit applicant name & signature

cc: DES

encl: Permit Process Flowchart Copy of Permit Application, if required per Table IV-1 instructions

TABLE IV-1			TRACKING CHECKLIST (for use by applicant)		
Send "Notice of Filing" to	When	Include	Check Here if Applicable	Date Sent	Date Rec'd
Host Municipality If a town, address to town clerk and selectmen If a city, address to city clerk and mayor and city council If an unincorporated place, address to county commissioners	Required for every application. Send within 30 days before filing application with DES.	All "core" information listed on page IV-1 of this application form and provide copy of permit application with the notice.			
Host Solid Waste Management District Address to the District Chairperson For assistance in identifying the correct district and mailing address, contact the DES P&DRS at (603) 271-2925	Required for every application. Send within 30 days before filing application with DES.	All "core" information listed on page IV-1 of this application form and provide copy of permit application with the notice.			
Affected local entity, as defined by RSA 485-C:2,X Contact the DES Water Division at (603) 271-0688 to identify the correct "local entity" and mailing address	Required when a facility is located in a groundwater protection area classified as GAA or GA-1 pursuant to RSA 485-C. Send notice within 30 days before filing application with DES.	Provide copy of permit application with the notice. Include the following statement in the notice in addition to all of the "core" information listed on page IV-1 of this application form: "The subject facility is located in a groundwater protection area classified as GAA or GA-1 pursuant to RSA 485-C. Therefore, as required by RSA 485-C:14, DES will suspend action on the application for 30 days following the filing to allow the municipality and the affected local entity to submit written recommendations concerning the proposed project. A copy of the application is enclosed for review and comment. Please send written comments to DES-WMD, PO Box 95, Concord, NH 03302-0095".			
NH Fish & Game Dept. Endangered Species Coordinator 11 Hazen Drive Concord, NH 03302 Telephone: (603) 271-3017 NH Dept. of Resources & Economic Development Natural Heritage Inventory 172 Pembroke Road P.O. Box 1856 Concord, NH 03302-1856 Telephone: (603) 271-3623	When siting a facility within an area of threatened or endangered species. Send notice within 30 days before filing application with DES.	Provide a copy of permit application with the notice. Include the following statement in the notice in addition to all of the "core" information listed on page 7 of this application form: "The subject facility has a potential effect on a threatened or endangered species. Therefore, as required by NH Solid Waste Rule Env-Sw 303.09, you are hereby requested to provide written comments concerning the adequacy of the application relative to protecting threatened and endangered species. A copy of the permit application is enclosed for review and comment. To assure proper consideration of your concerns, if any, please submit written comments direct to the DES-WMD, P.O. Box 95, Concord, NH 03302-0095 within the next 30 days."			

TABLE IV-1			TRACKING CHECKLIST (For use by applicant)		CKLIST cant)
Send "Notice of Filing" to	When	Include	Check Here if Applicable	Date Sent	Date Rec'd
Federal Aviation Administration NE Region, ANE-600 12 New England Executive Park Burlington, MA 01803 Telephone: (781) 238-7612	Required when siting a facility which will manage putrescible waste within the protective radius of an airport, as follows: ➤ Within 10,000 feet (3,048 meters) of any airport runway used by turbojet aircraft -or- ➤ Within 5,000 feet (1,524 meters) of any airport runway used by only piston-type aircraft Send notice within 30 days before filing application with DES.	All "core" information listed on page IV-1 of this application form and a copy of permit application with the notice. Include the following statement in the notice: "The subject facility proposes to manage putrescible waste within the protective radius of an airport, as specified by NH Solid Waste Rule Env-Sw 1002.04(c). Therefore, as required by NH Solid Waste Rule Env-Sw 303.10, you are hereby requested to provide written comments concerning the adequacy of the application relative to minimizing the risk of attracting birds that may be hazardous to aircraft. A copy of the permit application is enclosed for review and comment. To assure proper consideration of your concerns, if any, please submit written comments direct to the DES-WMD, PO Box 95, Concord, NH 03302-0095 within the next 30 days."			
Rivers Coordinator NH Dept. of Environmental Services 29 Hazen Drive/PO Box 95 Concord, NH 03302-0095 Telephone: (603) 271-3503 and <u>Chairman of the applicable Local River Managemen</u> <u>Advisory Committee</u> established pursuant to RSA 483:8. Contact the P&DRS at (603) 271-2925 to obtain name and mailing address of the appropriate chairman or find on the Internet at www.des.nh.gov/rivers	Required when the facility may affect any river or segment designated under RSA 483. Send notice within 30 days before filing the application with DES.	All "core" information listed on page IV-1 of this application form and a copy of permit application with the notice. Include the following statement in the notice: "The subject facility has a potential effect on a designated river. Therefore, as required by NH Solid Waste Rule Env-Sw 303.11 and RSA 483, you are hereby requested to provide written comments concerning the adequacy of the application relative to satisfying the requirements of RSA 483. A copy of the permit application is enclosed for review and comment. To assure proper consideration of your concerns, if any, please submit written comments direct to the DES-WMD, PO Box 95, Concord, NH 03302-0095 within the next 30 days."			
NH Dept. of Justice/Office of Attorney General Environmental Protection Bureau 33 Capitol Street Concord, NH 03301 Telephone: (603) 271-3679	Required when filing an application that subjects the applicant to a background/performance history investigation pursuant to Env-Sw 316. Does not apply to applicants that are public entities, such as a municipality, a solid waste management district, or state agency. Send notice before filing application with DES.	Provide completed Business Concern Disclosure and Personal History Disclosure Forms with the notice, as required by Env-Sw 316. See also Section X of this form. Include the following statement in the notice in addition to all of the "core" information listed on page IV-1 of this application form: "As specified by New Hampshire Solid Waste Rule Env-Sw 316, the required Business Concern and Personal History Disclosure Forms have been completed for the subject permit application and are transmitted herewith to your office for processing as part of the subject permit application."			

TABLE IV-1			TRACKING CHECKLIST (For use by applicant)		
Send "Notice of Filing" to	When	Include	Check Here if Applicable	Date Sent	Date Rec'd
<u>Abutters</u> , meaning any person who owns property adjacent to, or across a road, or stream from the property on which a solid waste facility may be permitted. In addition, if the applicant or owner of the facility site owns any abutting parcel of land, a "notice of filing" must be sent to the owner(s) of the next parcel(s) not owned by the applicant or facility site owner.	Required for every application. Send notice within 30 days before filing application with DES.	All "core" information listed on page IV-1 of this application form.			
For your convenience, list all such parties below and use the "tracking/checklist" columns at the far right- hand side of this table to document the dates the notice was sent and received.					
TAX MAP & LOT NUMBERS	ABUTTER NAME & MAILIN	ABUTTER NAME & MAILING ADDRESS			
Map 2 Lots 17-1, 17-2, 37-1	GMB Leasing, LLC	124 Old Wilton Road, Greenville, NH 03048	NA Owner		
Map 2 Lot 17	Hans & Karen Chemello	60 Payson Hill Road Apt. 101, Rindge, NH 03461			
Map 2 Lot 18	148 Pleasant Street, LLC	148 Pleasant Street, Greenville, NH 03048			
Map 2 Lot 19	Tony Zina Jr. & Kristine Zina	142 Pleasant Street, Greenville, NH 03048			
Map 2 Lot 20-1	Robert J. Barger	130 Pleasant Street, Greenville, NH 03048			
Map 2 Lot 20-2	148 Pleasant Street, LLC	129 Campbell Mill Road, Mason, NH 03048			
Map 2 Lot 20A & Map 4 Lot 35	Town of Greenville	P.O. Box 343, Greenville, NH 03048			
Map 2 Lot 22	Nancy S. Brooks	58 Pleasant Street, Greenville, NH, 03048			
Map 2 Lots 37A, & 37C	Michael Lamarre	P.O. Box 495, Greenville, NH 03048			
Map 2 Lot 51	Timothy & Susan Washburn	66 Mason Road Greenville, NH 03048	·		
Map 2 Lot 37B	Hillside Holdings	P.O. Box 495, Greenville, NH 03048			



NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



September 14, 2021

Tara Sousa, Town Administrator Town of Greenville P.O. Box 343 Greenville, NH 03048

Dear Mrs. Sousa:

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below.

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 1,264 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Massachusetts, primarily Northern locations

E-mail: Jaime.Colby@des.nh.gov

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is December 1, 2021.

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

The facility will provide increased convenience for area residential and non-residential haulers who might otherwise have to travel greater distances to reach disposal sites and includes sufficient flexibility to respond to changes in area population, economic growth and behavior of waste generators. (The public's willingness to participate in drop-off, source-separated recyclable, collection programs are directly affected by the convenience of facility and services.)

For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw603-878-4108Julie@GWShawAndSon.com124 Old Wilton RoadGreenville, NH 03048

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville603-878-415546 Main St.Greenville, NH 03048

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

NHDES Public Information603-271-8876info@des.nh.govand Permitting Unit29 Hazen Drive; PO Box 95concord, NH 03302-0095

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely,

Julie a. Shaw

Julie A. Shaw

Applicant

cc: DES

NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



September 14, 2021

Wilton Recycling Center Board of Selectmen Town of Wilton P.O. Box 83 Wilton, NH 03056

To Whom it May Concern:

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

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Concrete/Brick/Asphalt/Inert Masonry	Processed Select Rec	yclables

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons Maximum quantity to be stored at the facility: 1,264 tons Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

The facility will receive waste from the following sources:

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E-mail: Jaime.Colby@des.nh.gov

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Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville603-878-415546 Main St.Greenville, NH 03048

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NHDES Public Information	603-271- 8876	info@des.nh.gov
and Permitting Unit		
29 Hazen Drive; PO Box 95		
Concord, NH 03302-0095		

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, Julie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Copy of Permit Application (Previously Submitted)

NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



September 14, 2021

Has & Karen Chemello 60 Payson Hill Road, Apt. 101 Rindge, NH 03461

Dear. Mr. and Mrs. Chemello,

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

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The involved parties are:

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The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

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Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 1,264 tons

The facility will receive waste from the following sources:

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Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

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Town of Greenville603-878-415546 Main St.Greenville, NH 03048

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NHDES Public Information603-271-8876info@des.nh.govand Permitting Unit29 Hazen Drive; PO Box 955Concord, NH 03302-00955

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, Julie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted) E-mail: Jaime.Colby@des.nh.gov

NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



September 14, 2021

148 Pleasant Street, LLC 148 Pleasant Street Greenville, NH 03048

To Whom it May Concern,

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

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The permit application requests approval to manage the following quantity of solid waste:

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The facility will receive waste from the following sources:

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Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

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Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

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Sincerely, Julie a. Show

Julie A. Shaw

Applicant

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NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



September 14, 2021

Tony & Kristine Zina 142 Pleasant Street Greenville, NH 03048

Dear Mr. and Mrs. Zina,

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Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

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Maximum quantity to be stored at the facility: 1,264 tons

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124 Old Wilton Road		
Greenville, NH 03048		

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NHDES Public Information603-271-8876info@des.nh.govand Permitting Unit29 Hazen Drive; PO Box 955Concord, NH 03302-00955

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, lie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted) E-mail: Jaime.Colby@des.nh.gov

NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



September 14, 2021

Robert Barger 130 Pleasant Street Greenville, NH 03048

Dear Mr. Barger,

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124 Old Wilton Road		
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Town of Greenville603-878-415546 Main St.Greenville, NH 03048

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NHDES Public Information603-271-8876info@des.nh.govand Permitting Unit29 Hazen Drive; PO Box 955Concord, NH 03302-00955

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, ie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted) E-mail: Jaime.Colby@des.nh.gov



September 14, 2021

148 Peasant Street 129 Campbell Mill Road Mason, NH 03048

To Whom it May Concern,

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Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

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Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

603-271-8876

NHDES Public Information and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095 info@des.nh.gov

E-mail: Jaime.Colby@des.nh.gov

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Sincerely, ulie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted)



September 14, 2021

Town of Greenville P.O. Box 343 Greenville, NH 03048

To Whom it May Concern,

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below.

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 1,264 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

The facility will provide increased convenience for area residential and non-residential haulers who might otherwise have to travel greater distances to reach disposal sites and includes sufficient flexibility to respond to changes in area population, economic growth and behavior of waste generators. (The public's willingness to participate in drop-off, source-separated recyclable, collection programs are directly affected by the convenience of facility and services.)

For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

NHDES Public Information 603-271- 8876 and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely,

Julie a. Shaw Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flowchart (Previously Submitted) E-mail: Jaime.Colby@des.nh.gov

info@des.nh.gov



September 14, 2021

Nancy S. Brooks 58 Pleasant Street Greenville, NH 03048

Dear Ms. Brooks,

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below.

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Construction & Demolition DebrisGlassWhite GoodsLimbs and Yard WasteTiresCorrugated Cardboard'Do-It-Yourself' Used Motor OilsTreesElectronicsProcessed Select RecyclablesStumpsBulky ItemsFluorescent LampsTinBatteriesAluminum CansCeramicsPlasticsConcrete/Brick/Asphalt/Inert MasonryProcessed Select RecyclablesProcessed Select Recyclables	Municipal Solid Waste	Metals	Mixed Paper & News Paper
Limbs and Yard WasteTiresCorrugated Cardboard'Do-It-Yourself' Used Motor OilsTreesElectronicsProcessed Select RecyclablesStumpsBulky ItemsFluorescent LampsTinBatteriesAluminum CansCeramicsPlasticsConcrete/Brick/Asphalt/Inert MasonryProcessed Select RecyclablesProcessed Select Recyclables	Construction & Demolition Debris	Glass	White Goods
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Aluminum CansCeramicsPlasticsConcrete/Brick/Asphalt/Inert MasonryProcessed Select Recyclables	Fluorescent Lamps	Tin	Batteries
Concrete/Brick/Asphalt/Inert Masonry Processed Select Recyclables	Aluminum Cans	Ceramics	Plastics
	Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 1,264 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Town of Greenville

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is December 1, 2021.

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

603-271-8876

NHDES Public Information and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095 info@des.nh.gov

E-mail: Jaime.Colby@des.nh.gov

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, ulie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted)



September 14, 2021

Michael Lamarre P.O. Box 495 Greenville, NH 03048

Dear Mr. Lamarre,

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

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The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

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'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select R	ecyclables

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 1,264 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

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603-271-8876

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, ulie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted) E-mail: Jaime.Colby@des.nh.gov



September 14, 2021

Timothy & Claire Washburn 66 Mason Road Greenville, NH 03048

Dear Mr. and Mrs. Washburn,

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below.

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 1,264 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

603-271-8876

NHDES Public Information and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095 info@des.nh.gov

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, ulie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted) E-mail: Jaime.Colby@des.nh.gov



September 14, 2021

Michael Lamarre Hillside Holdings P.O. Box 495 Greenville, NH 03048

Dear Mr. Lamarre,

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

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The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclable	S

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 1,264 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

The facility will provide increased convenience for area residential and non-residential haulers who might otherwise have to travel greater distances to reach disposal sites and includes sufficient flexibility to respond to changes in area population, economic growth and behavior of waste generators. (The public's willingness to participate in drop-off, source-separated recyclable, collection programs are directly affected by the convenience of facility and services.)

For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

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603-271-8876

NHDES Public Information and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095 info@des.nh.gov

E-mail: Jaime.Colby@des.nh.gov

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, ulie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted)



September 14, 2021

NH Dept. of Justice / Office of Attorney General Environmental Protection Bureau 33 Capital Street Concord, NH 03301

Dear Sir or Madam:

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below.

As specified by the NH Solid Waste Rule Env-Wm 316, the required Business Concern and Personal History Disclosure Forms have been completed for the subject permit application and are transmitted herewith to your office for processing as part of the subject permit application.

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
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'Do-lt-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

NOTICE of FILING

Maximum quantity to be stored at the facility: 1,264 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Massachusetts, primarily Northern locations

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is December 1, 2021.

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

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Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville603-878-415546 Main St.Greenville, NH 03048

Additionally, an electronic copy will be available at <u>des.state.nh.us/DESOnestop/BasicSearch.aspx.</u>

NHDES Public Information and Permitting Unit	603-271- 8876	info@des.nh.gov
29 Hazen Drive; PO Box 95		
Concord, NH 03302-0095		

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Jaime M. Colby, P.E. Tel: 603-27 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Tel: 603-271-5185 E-

E-mail: Jaime.Colby@des.nh.gov

Sincerely, Julie a. Shaw

Julie A. Shaw, Applicant

cc: DES

Encl: Permit Process Flow Chart, Copy of Permit Application, Personal History Disclosures and Business Concerns Disclosures (All Previously Submitted)



September 14, 2021

GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

Dear Julie,

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

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The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

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The permit application requests approval to manage the following quantity of solid waste:

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Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

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46 Main St.	
Greenville, NH 03048	

Additionally, an electronic copy will be available at <u>des.state.nh.us/DESOnestop/BasicSearch.aspx.</u>

NHDES Public Information603-271-8876info@des.nh.govand Permitting Unit29 Hazen Drive; PO Box 95Concord, NH 03302-0095

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, ie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted) E-mail: Jaime.Colby@des.nh.gov



September 14, 2021

Timothy & Susan Washburn 66 Mason Road Greenville, NH 03048

Dear Mr. and Mrs. Washburn,

This application was filed with the State back on September 17, 2020 and notifications were sent out and delivered to your attention back on August 28, 2020. Unfortunately, due to COVID-19 return receipts were not processed by the post office and these are required as part of the permitting process so we are hereby sending this additional notice.

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below.

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 1,264 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

The facility will provide increased convenience for area residential and non-residential haulers who might otherwise have to travel greater distances to reach disposal sites and includes sufficient flexibility to respond to changes in area population, economic growth and behavior of waste generators. (The public's willingness to participate in drop-off, source-separated recyclable, collection programs are directly affected by the convenience of facility and services.)

For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

NHDES Public Information	603-271- 8876	info@des.nh.gov
and Permitting Unit		
29 Hazen Drive; PO Box 95		
Concord, NH 03302-0095		

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, lie a. Shaw 111

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flow Chart (Previously Submitted) E-mail: Jaime.Colby@des.nh.gov

OLD LEGAL NOTIFICATIONS



August 24, 2020

Tara Sousa, Town Administrator Town of Greenville P.O. Box 343 Greenville, NH 03048

Dear Mrs. Sousa:

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048

Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municip	al Solid Waste	Metals	Mixed Paper & News Paper
Constru	ction & Demolition Debris	Glass	White Goods
Limbs a	nd Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yo	ourself' Used Motor Oils	Trees	Electronics
Processe	ed Select Recyclables	Stumps	Bulky Items
Fluoresc	ent Lamps	Tin	Batteries
Aluminu	m Cans	Ceramics	Plastics
Concrete	e/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 738 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Town of Greenville NOTICE of FILING Greater Waste Solutions, LLC pg. 2/2

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

NHDES Public Information 603-271- 8876 info@des.nh.gov and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely,

Julie a. Shaw Julie A. Shaw

Applicant

cc: DES

Copy of Permit Application

E-mail: Jaime.Colby@des.nh.gov

Encl:



August 24, 2020

Wilton Recycling Center Board of Selectmen Town of Wilton P.O. Box 83 Wilton, NH 03056

To Whom it May Concern:

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 738 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Town of Greenville NOTICE of FILING Greater Waste Solutions, LLC pg. 2/2

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville	603-878-4155
46 Main St.	
Greenville, NH 03048	

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

NHDES Public Information 603-271-8876 info@des.nh.gov and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, Julie a Shaw Julie A. Shaw

Applicant

cc: DES Encl: Copy of Permit Application E-mail: Jaime.Colby@des.nh.gov



August 24, 2020

Has & Karen Chemello 60 Payson Hill Road, Apt. 101 Rindge, NH 03461

Dear Mr. and Mrs. Chemello,

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048

Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 738 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Massachusetts, primarily Northern locations

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is November 1, 2020.

Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

The facility will provide increased convenience for area residential and non-residential haulers who might otherwise have to travel greater distances to reach disposal sites and includes sufficient flexibility to respond to changes in area population, economic growth and behavior of waste generators. (The public's willingness to participate in drop-off, source-separated recyclable, collection programs are directly affected by the convenience of facility and services.)

For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville 603-878-4155 46 Main St. Greenville, NH 03048

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

603-271-8876 **NHDES Public Information** info@des.nh.gov and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division **NH Department of Environmental Services** PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, Tulie a shaw Julie A. Shaw

Applicant

CC: DFS Encl: **Permit Process Flowchart**

E-mail: Jaime.Colby@des.nh.gov



August 24, 2020

148 Pleasant Street, LLC 148 Pleasant Street Greenville, NH 03048

To Whom it May Concern,

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

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The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

M	unicipal Solid Waste	Metals	Mixed Paper & News Paper
Со	nstruction & Demolition Debris	Glass	White Goods
Lir	nbs and Yard Waste	Tires	Corrugated Cardboard
'D	o-It-Yourself' Used Motor Oils	Trees	Electronics
Pro	ocessed Select Recyclables	Stumps	Bulky Items
Flu	iorescent Lamps	Tin	Batteries
Alu	uminum Cans	Ceramics	Plastics
Со	ncrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 738 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Massachusetts, primarily Northern locations

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is November 1, 2020.

Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville 603-878-4155 46 Main St. Greenville, NH 03048

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

NHDES Public Information603-271-8876and Permitting Unit29 Hazen Drive; PO Box 95Concord, NH 03302-0095300

info@des.nh.gov

E-mail: Jaime.Colby@des.nh.gov

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely,

Julie a. Shaw

Applicant

cc: DES Encl: Permit Process Flowchart



August 24, 2020

Tony & Kristine Zina 142 Pleasant Street Greenville, NH 03048

Dear Mr. and Mrs. Zina,

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 738 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Massachusetts, primarily Northern locations

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is November 1, 2020.

Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oll for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville603-878-415546 Main St.Greenville, NH 03048

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

NHDES Public Information603-271-8876and Permitting Unit29 Hazen Drive; PO Box 95Concord, NH 03302-0095

info@des.nh.gov

E-mail: Jaime.Colby@des.nh.gov

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, 11)10 Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flowchart



August 24, 2020

Robert Barger 130 Pleasant Street Greenville, NH 03048

Dear Mr. Barger,

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

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The involved parties are:

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The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 738 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Massachusetts, primarily Northern locations

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is November 1, 2020.

Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

603-878-4155 Town of Greenville 46 Main St. Greenville, NH 03048

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

603-271-8876

NHDES Public Information and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095

info@des.nh.gov

E-mail: Jaime.Colby@des.nh.gov

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Tel: 603-271-5185 Jaime M. Colby, P.E. Solid Waste Management Bureau Waste Management Division **NH Department of Environmental Services** PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely,

a Shaw Tulie Julie A. Shaw

Applicant

DES cc: **Permit Process Flowchart** Encl:



August 24, 2020

148 Pleasant Street, LLC 129 Campbell Mill Road Mason, NH 03048

To Whom it May Concern,

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

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The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
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Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

Maximum quantity to be stored at the facility: 738 tons

The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations

Massachusetts, primarily Northern locations

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is November 1, 2020.

Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville603-878-415546 Main St.Greenville, NH 03048

Additionally, an electronic copy will be available at <u>des.state.nh.us/DESOnestop/BasicSearch.aspx.</u>

NHDES Public Information603-271-8876info@des.nh.govand Permitting Unit29 Hazen Drive; PO Box 955Concord, NH 03302-00955

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

E-mail: Jaime.Colby@des.nh.gov

Sincerely,

e a Shaw 11 Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flowchart



August 24, 2020

Town of Greenville P.O. Box 343 Greenville, NH 03048

To Whom it May Concern,

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

Municipal Solid Waste	Metals	Mixed Paper & News Paper
Construction & Demolition Debris	Glass	White Goods
Limbs and Yard Waste	Tires	Corrugated Cardboard
'Do-It-Yourself' Used Motor Oils	Trees	Electronics
Processed Select Recyclables	Stumps	Bulky Items
Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
Concrete/Brick/Asphalt/Inert Masonry	Processed Select Recyclables	

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Massachusetts, primarily Northern locations

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is November 1, 2020.

Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

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Town of Greenville603-878-415546 Main St.Greenville, NH 03048

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

NHDES Public Information603-271-8876and Permitting Unit29 Hazen Drive; PO Box 95Concord, NH 03302-0095

info@des.nh.gov

E-mail: Jaime.Colby@des.nh.gov

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely,

Julie a. Shaw

Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flowchart
NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



August 24, 2020

Nancy S. Brooks 58 Pleasant Street Greenville, NH 03048

Dear Ms. Brooks,

Pursuant to the requirements of RSA 149-M.and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

The subject facility will manage the following types of solid waste, authorized waste, and wastes accepted under another permit or authority:

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Fluorescent Lamps	Tin	Batteries
Aluminum Cans	Ceramics	Plastics
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The permit application requests approval to manage the following quantity of solid waste:

Maximum quantity to be received daily, on average annually: 600 tons

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The facility will receive waste from the following sources:

New Hampshire, primarily Southern locations Massachusetts, primarily Northern locations

The permit application requests DES to grant a permit for an unlimited service area which will allow the facility to receive waste from other sources as well. The projected life expectancy of the facility is indefinite. The projected date the facility will commence operation as a solid waste collection/storage/transfer facility is November 1, 2020.

Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

The facility will collect and sort non-hazardous solid waste for recycling and disposal, collect used DIY oil for use in on-site used oil furnace, and manage certain universal waste items. Commercial waste handling operations will be conducted within the proposed transfer station building. Putrescible waste storage will not exceed 188 tons and will be transferred off site within 24-72 hours. Building setback and placement, distance to neighbors and roads, and natural topography and vegetation provides effective shielding and, as a result, there should be few problems with noise, odors, dust, and windblown litter.

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw 603-878-4108 Julie@GWShawAndSon.com 124 Old Wilton Road Greenville, NH 03048

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville603-878-415546 Main St.Greenville, NH 03048

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

NHDES Public Information603-271-8876and Permitting Unit29 Hazen Drive; PO Box 95Concord, NH 03302-0095300

info@des.nh.gov

E-mail: Jaime.Colby@des.nh.gov

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Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely, Julie a. Shaw

Applicant

cc: DES Encl: Permit Process Flowchart

NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



August 24, 2020

Michael Lamarre P.O. Box 495 Greenville, NH 03048

Dear Mr. Lamarre,

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

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Fluorescent Lamps	Tin	Batteries
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Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville603-878-415546 Main St.Greenville, NH 03048

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

603-271-8876

NHDES Public Information and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095 info@des.nh.gov

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Jaime M. Colby, P.E. Tel: 603-271-5185 Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302 E-mail: Jaime.Colby@des.nh.gov

Sincerely,

a. Shaw 0 Julie A. Shaw

Applicant

cc: DES Encl: Permit Process Flowchart

NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



August 24, 2020

Timothy & Claire Washburn 66 Mason Road Greenville, NH 03048

Dear Mr. and Mrs. Washburn,

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on August 28, 2020

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

The involved parties are:

Permit Applicant/Facility Operator: Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048 Facility Owner/Property Owner: GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048

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Town of Greenville

NOTICE of FILING

Greater Waste Solutions, LLC pg. 2/2

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For additional information about the facility, you may contact the permit applicant's representative, as follows:

Julie Shaw	603-878-4108	Julie@GWShawAndSon.com
124 Old Wilton Road		
Greenville, NH 03048		

A copy of the permit application will be available at the following location for public review throughout the permit application process.

Town of Greenville 603-878-4155 46 Main St. Greenville, NH 03048

Additionally, an electronic copy will be available at <u>des.state.nh.us/DESOnestop/BasicSearch.aspx.</u>

NHDES Public Information 603-271-8876 and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095

info@des.nh.gov

E-mail: Jaime.Colby@des.nh.gov

The New Hampshire Solid Waste Rules specify specific procedures for review and issuance/denial of a permit application. The procedures involve a series of steps, which are depicted on the enclosed flow-chart. If you have questions about the permit application review process, or wish to comment on the subject application, please contact the following person at DES:

Tel: 603-271-5185 Jaime M. Colby, P.E. **Solid Waste Management Bureau** Waste Management Division **NH Department of Environmental Services** PO Box 95, 29 Hazen Drive Concord, NH, 03302

Sincerely,

Julie a. Shaw Julie A. Shaw

Applicant

cc: DES Encl: **Permit Process Flowchart**





See Reverse for Instructions

ereenville, NH 03048

PS Form 3800, April 2015 PSN 7530-02-000-9047

NOTICE OF FILING For STANDARD PERMIT APPLICATION For SOLID WASTE COLLECTION/STORAGE/TRANSFER FACILITY



August 31, 2020

NH Dept. of Justice / Office of Attorney General Environmental Protection Bureau 33 Capitol Street CONCORD, NH 03301

Dear Sir or Madam:

Pursuant to the requirements of RSA 149-M and the New Hampshire Solid Waste Rules, you are hereby notified that application is being made to the New Hampshire Department of Environmental Services (DES) to obtain a standard permit to construct and operate a solid waste collection/storage/transfer facility, as further described below. The application is scheduled to be filed on September 2, 2020.

As specified by New Hampshire Solid Waste Rule Env-Wm 316, the required Business Concern and Personal History Disclosure Forms have been completed for the subject permit application and are transmitted herewith to your office for processing as part of the subject permit application.

The solid waste collection/storage/transfer facility to which this permit applies is Greater Waste Solutions, LLC, located at 426 Fitchburg Road in Greenville, New Hampshire. The facility is currently operating as a Permit-By-Notification Scrap Metal Collection and Recycling Center, holding permit #: DES-SW-PN-002.

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124 Old Wilton Road				
Greenville, NH 03048				

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Town of Greenville603-878-415546 Main St.Greenville, NH 03048

Additionally, an electronic copy will be available at des.state.nh.us/DESOnestop/BasicSearch.aspx.

603-271-8876

NHDES Public Information and Permitting Unit 29 Hazen Drive; PO Box 95 Concord, NH 03302-0095 info@des.nh.gov

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Jaime M. Colby, P.E. Tel: 603-271-5185 E-mail: Jaime.Colby@des.nh.gov Solid Waste Management Bureau Waste Management Division NH Department of Environmental Services PO Box 95, 29 Hazen Drive Concord, NH, 03302

Julie Shaw

Sincerely,

Julie A. Shaw Applicant

cc: DES

Encl: Permit Process Flowchart Copy of Permit Application Personal History Disclosures

Business Concern Disclosures





GREENVILLE 15 MAIN ST GREENVILLE, NH 03048-9998 (800)275-8777

09/02/2020			03:24 PM
Product	Qty	Unit	Price
PM 1-Day Concord, NH 0 Weight:1 Lb 1. Expected Deliv	1 3301 90 Oz ery Day	PL106	\$8.25
Thursday 09/03 Certified USPS Certified	/2020 Mail #		\$3.55
70150640000682 Return Receipt USPS Return Re	eceipt #	12	\$2.85
95909403066451 Total	10340929	2	\$14.65
First-Class Mail® Large Envelope Lunenburg, MA Weight:0 Lb 2 Estimated Del Saturday 09/05 Total	1 01462 .70 0z ivery Da 5/2020	ate	\$1.40 \$1.40
First-Class Mail@ Large Envelope Tyngsboro, MA Weight:O Lb 3 Estimated Del Saturday 09/0 Total	1 01879 30 0z ivery D 5/2020	ate	\$1.60 \$1.60
Grand Total:			\$17.65
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SECTION V SITE REPORT



REVISED: SEPTEMBER 14, 2021 - Revised Report to better address stormwater design

Application for Standard Permit for Solid Waste Collection/Storage/Transfer Facility

Greater Waste Solutions, LLC.

SECTION V. SITE REPORT

- (1) Prepare and submit a Site Report which demonstrates that:
 - The location of the facility complies with all applicable siting requirements, as noted in:
 - X Env-Sw 400.
 - Env-Sw 900, if the facility will manage asbestos, ash, contaminated soils or other media, infectious waste or tires.
 - X Env-Sw 1000.
 - Env-Sw 1100, if the facility has an active life longer than 90 days.
 - I The facility site is, in all other respects, a suitable location for the facility.
- (2) To support the demonstration required by (1) above, the Site Report must include, as a minimum:
 - A copy of the local tax map(s) which shows the property on which the facility will be sited and which identifies all abutters required to be notified pursuant to Env-Sw 303 (see also Section IV of this form).
 - Map(s) identifying surrounding land use and zoning.
 - A narrative description of the site, including:
 - A physical description.
 - A 50-year history of the use(s) of the site.
 - A discussion of any known or suspected conditions at the site which are or should be of environmental, public health or safety concern.
 - Map(s) and narrative discussion of the facility's proximity to and potential impact on sensitive environments, including, but not limited to:
 - S Flood hazard zones.
 - Wetlands.
 - Habitat for endangered or threatened species.
 - Designated rivers and protected shorelands.
 - I Other surface waters.
 - Water supplies.
 - Airports, if the facility will manage putrescible waste.
 - A hydrogeological report/study of the site.
 - Discussion of the impacts the facility will have on traffic.
 - Other information as required to make the demonstration required by (1) above.

SECTION VI. PRELIMINARY FACILITY DESIGN PLANS AND SPECIFICATIONS

Prepare preliminary losign plans and specifications for the facility, according to the enumerated instructions below.

- (1) The facility location and design must meet all permitting requirements as provided in:
 - Env-Sw 400.
 - Env-Sw 900, if the facility wind page asbestos, ash, contaminated soil and/or other media, infectious waste and/or tires.
 - Env-Sw 1000.
 - Env-Sw 1100, for facilities having an active life long. than 90 days.
- (2) Include the following on each page of the plans and specifications:
 - Date of preparation.
 - Facility name and location.
 - For a facility holding a temporary permit, the facility permit number.
- (3) Be certain the plans and specifications are:

Site Report

Part (1)

Env-Sw 400

COLLECTION, STORAGE, AND, TRANSFER FACILITY REQUIREMENTS

The applicant is preparing the application in accordance with Env-Sw for a standard Permit. A distance of 50 feet has been maintained around the property line as specified in Env-Sw 403.02. There are no new proposed buildings within the setback area.

The site was previously used as an existing firewood processing facility and a scrap metal collection and recycling center. The scrap metal collection and recycling center will remain operational after the proposed solid waste processing facility is constructed.

Env-Sw 404.03 Design Features and Appurtenances.

(a) The design of a C/S/T facility shall include each of the following features and appurtenances, except as provided in (b) below: We have addressed each item below and additional comments are typed in bold following the requirement specified. See enclosed plans and operating plan which also address many of these requirements.

X (1) Waste receiving and inspection area(s);

Waste receiving and inspection areas will be at the scale area, inside the solid waste processing building and at the scrap metal area as depicted on the plans and in the operating plan.

 $X_(2)$ Waste sorting area(s), if facility operations involve the sorting of waste; In the middle section of the solid waste processing building.

 $X_{(3)}$ Hot load segregation and control area(s);

The hot load segregation area is designated in the back section of the lot away from the building, road, and general public as depicted on the plans.

 X_4 (4) Waste storage areas and devices including, as appropriate for the type of waste being stored, transfer containers, bins, concrete bunkers, covered pallets, buildings and storage pads for stockpiles.

All waste storage areas and devices are appropriate for the waste being stored.

X(5) Equipment required to operate the facility in conformance with the solid waste rules including, as applicable to the size and scope of operations, scales, balers, compactors, mechanical sorting devices, fork lifts, trucks and other vehicles;

X(6) Equipment storage and cleaning areas;

Located on the north and south side of the site and on the existing concrete pad as depicted on the plans

 $X_(7)$ A closed drainage system or functionally equivalent operating system to manage the discharge of liquids, if any, from waste handling and storage areas and from equipment cleaning area(s);

The external drainage has been designed to be entirely self-contained and will be managed by two stormwater management systems as depicted on the plans. The stormwater management system does include a small closed drainage systems to ensure that all stormwater is collected and conveyed appropriately.

There is no internal closed drainage system proposed. All waste handling, tipping and loading areas will be sloped, as shown on the plans, to maintain the flow of liquids internally to a low point so that it can be picked up and disposed of. The operations of the site will minimize material exposure to rainfall thereby minimizing the impacts to stormwater.

$X_{(8)}$ Lighting;

All existing and proposed lighting have been shown on the site plans. Exterior lighting on-site shall be provided by wall mounted and pole mounted lights. All lighting shall be downcast to prevent light pollution.

X (9) Active or passive ventilation systems for enclosed areas;

A passive ventilation system for the enclosed building area is proposed. The proposal is to export all materials as soon as possible thus keeping odors to a minimum. No mechanical air systems are proposed due to the amount and nature of the material being accepted and handled. Opening the doors and windows will allow natural airflow circulation.

 $X_{(10)}$ Fire control devices or systems, including smoke detectors, alarms, fire extinguishers, and sprinkler systems as appropriate;

There are areas within each of the buildings, as depicted on Page 16 of the plan set, where these items are detailed. Municipal water has been extended to the site and there will be two hydrants located on-site for fire suppression. The solid waste processing building will have a sprinkler system and this building will be equipped with fire alarms and fire extinguishers as shown on the plans. The solid waste processing building will have a first aid station, emergency communications, an eye wash station and fire extinguishers in the utility room and other areas as shown on the plan. The soft metal warehouse building will have these items located in the restrooms and other areas as shown on the plans.

X (11) Shelter for facility operators;

There will be a meeting room in the soft metal warehouse building and the utility room will have an area for the operators, see Page 16 of the plan set.

X(12) Sanitation facilities for facility operators;

This will be located in the utility room for the solid waste processing building and as depicted on the plan for the soft metal warehousing building.

X (13) First aid station for facility operators;

These are located in the utility room for the solid waste processing building and in the restrooms of the soft metals processing building as shown on Page 16 of the plan set.

X(14) Emergency communication for facility operators; This is located in the utility room for the solid waste processing building and in the office area of the soft metals processing building as shown on Page 16 of the plan set.

 $_X$ (15) Office or other area for maintaining and storing facility records; and **This is located in the office area of the soft metals processing building as shown on Page 16 of the plan set.**

 $_X$ (16) Access control devices such as fencing, gates and bars, locked buildings, and signs.

See plan sheets and operating plan.

Env-Sw 404.04 Waste Handling and Storage Area Design Requirements.

X (a) A waste handling and storage area shall be designed to collect and contain waste in a manner that is protective of the environment, public health and safety. Waste handling will be performed inside the solid waste processing building and the floors will be sloped away from the entrances and towards a central depressed area designed to collect and contain any liquid waste. The storage areas will all be covered and contained within the building, covered roll offs, bins, and some items shall be compacted to collect and contain the wastes. See Operating Plan.

X (b) Storage areas for waste being managed as a recyclable material shall be designed to preserve the market value of the material. For instance, waste paper destined for recycling shall be stored indoors, protected from rain and moisture. See the Floor Plans on Page 16 of the plan set for designated storage areas.

X (c) A waste handling and storage area shall be delineated and signed to control and assure proper use of the area by facility users and operators, as appropriate based on the following factors:

(1) Whether public access to the area will be allowed;

(2) Whether a full time operator will be present to monitor and control use of the area;

(3) Whether the area will be used to handle wastes requiring segregation from other waste types;

(4) Whether the area will be used to handle wastes requiring no public contact in order to protect the environment, public health or safety; and

(5)Whether the method of assuring the facility receives no excess waste will be based on visually monitoring the extent to which the designated storage area is filled.

The general public will have limited access inside the buildings restricting them from collection, storage, tipping and waste inspection areas. The public will be allowed to access the main office portion of the soft metal warehouse building which is adjacent to the scale and parking area. The public drop off area (transfer station and scrap metal yard) has been designed to allow for inspection and depositing of materials into the appropriate container or bin. Once these containers and bins are full, a staff member will remove them and replace them with an empty one.

X(d) A waste handling and storage area shall be designed to manage and store waste in a manner that controls to the greatest extent practicable dust, litter, insects, odors, vectors, spills, the production of leachate, fire hazards including spontaneous combustion, the generation of methane and other hazardous or explosive gases, noise and nuisances.

See the Operations Plan.

X (e) A waste storage and handling area shall be designed to prohibit public access to any area used for storing or handling a waste that requires special handling to assure protection of the environment, public health and safety. This will be accomplished through the use of proper signage outside the prohibited area.

 $X_(f) \wedge C/S/T$ facility shall be designed to allow year round access by facility operators to all waste storage areas for the purposes of: (1)Inspection;

(2)Monitoring; (3) Maintenance; and (4)The removal of waste as necessary to comply with Env-Sw 405.04 and to protect the environment, public health and safety.

The design allows for the facility to operate year round. Snow storage areas can be seen on the site plans to allow winter accessibility.

 $X_(g)$ Stockpiles shall be designed in conformance with the requirements of Env-Sw 404.05.

There will be no stockpiling of waste but the scrap metal portion of the facility will consist of stockpiles of metal materials.

X(h) Storage areas for a waste listed in Env-Sw 900 shall be designed in conformance with the applicable collection, storage and transfer requirements specified in Env-Sw 900.

Tires are the only materials affected by Env-Sw 900

X(i) Putrescible waste shall not be collected or stored on the ground.

The public's general household waste will be deposited within a compactor or brought inside the solid waste processing building for transportation off site.

X(j) Mixed municipal solid waste, including mixed refuse, shall not be collected or stored on the ground.

Once brought to the site, municipal solid waste will be deposited, inspected, handled and stored within the building only. No exterior dumping, collecting or storing of mixed municipal solid waste will be allowed.

Env-Sw 404.05 Waste Stockpiles:

The only stock piles on-site will be associated with the scrap metal recycling operation and they will be on the north side of the site as depicted on the plans.

 $X_(a)$ Stockpiles of waste shall be positioned within a footprint identified on the facility site plan.

X(b) If a stockpile will be open to precipitation, the footprint of the stockpile shall be:

(1) Underlain by an asphalt, concrete or packed soil surface; and

(2) Graded to prohibit precipitation and surface drainage from surrounding areas from draining through or collecting in the stockpile area.

 X_{c} (c) A waste stockpile shall be located, sized and configured in accordance with (d) below and as required by local fire authorities in order to assure that available local firefighting equipment and resources will be able to effectively respond to a fire at the facility.

X(d) At a minimum, a C/S/T facility shall be designed to:

(1) Provide access to all waste stockpiles for fire control purposes, including the placement and maintenance of fire lanes between and around all stockpiles of combustible waste;

(2) Limit the height of the stockpiles to a height compatible with local firefighting equipment response capabilities; and

(3) Provide a water supply within a distance and in a quantity sufficient for local firefighting needs.

X (e) A stockpile shall be sized and configured to be physically stable against slides, collapse or other conditions that might result in personal injury or destruction of property.

 $N/A_(f)$ A stockpile shall be covered when required to protect the environment, public health or safety. This will be a scrap metal pile so covering is not required.

X (g) A stockpile of a waste listed in Env-Sw 900 shall conform to the applicable stockpiling requirements specified in Env-Sw 900, if any.

 $N/A_(h)$ If a waste exhibits a characteristic which has the potential to cause groundwater or surface water contamination when placed in contact with the ground surface, the waste shall be stockpiled in a manner as to prevent the contamination by means of a leachate collection system or functionally equivalent control system.

 $_N/A_(i)$ If a waste exhibits a characteristic which has the potential to cause air pollution or a respiratory hazard, the waste shall be stockpiled in a manner as to prevent the air pollution and respiratory hazard in conformance with state and federal regulations for the control of air pollution, including RSA 125-C.

Env-Sw 900 MANAGEMENT OF CERTAIN WASTES

Env-Sw 905.02 Collection, Storage and Transfer Requirements.

 X_{400} (a) Tires shall be collected, stored and transferred in accordance with Env-Sw 400 and this section.

No inside storage of tires is planned. Tires will be stored outside within a covered trailer or covered roll-off bin.

(b) Outdoor storage of tires shall be in:

X(1) Covered trailers;

X(2) Transfer containers; or

N/A (3) In stockpiles as follows:

a. The diameter of the piles shall not exceed 25 feet;

b. The height of the piles shall not exceed 15 feet;

c. Fire lanes no less than 25 feet in width shall be maintained around each pile;

d. Each pile shall have a berm with a minimum height of 12 inches constructed around its perimeter capable of containing any pyrolitic oils or other liquids generated by fire; and

e. The stockpiling facility shall have equipment, cover material and other supplies, including water, sufficient to control a fire until the nearest fire company capable of extinguishing the fire arrives.

There will be no stockpiles of tires on the exterior of the building.

N/A (c) Indoor storage shall conform to the applicable requirements of Saf-C 6000.

There will be no indoor storage of tires.

Env-Sw 905.03 Processing and Treatment Requirements

 $N/A_(a)$ Chipping, shredding and other physical processing of tires shall comply with the requirements in Env-Sw 500 and this section.

There will be no shredding, chipping or other physical processing of tires on site.

 $N/A_(b)$ Collection and storage of tires by facilities that process or treat tires shall conform to Env-Sw 905.02.

Tires will be stored outside within a covered trailer or a covered roll off bin. Tires will be collected within the designated collection container and shipped off site for proper disposal.

N/A(c) Processing of tires shall be done in a manner to limit noise, odor and fugitive dust emissions to the greatest extent possible.

There will be no chipping, shredding or other physical processing of tires on site. This will prevent noise, odor and fugitive dust emissions.

Env-Sw 905.04 Disposal Requirements

X(a) Waste tires shall be disposed at authorized facilities only.

N/A (b) Tires shall be landfilled only in a manner that shall preclude movement of the tires after burial, such as by shredding, splitting or quartering the tires prior to landfilling or by filling the tires during landfilling. **There are no proposed landfills on site.**

Env-Sw 905.05 Reuse Requirements and Limitations

N/A (a) Waste tires, if reused, shall be certified for distribution and use in accordance with Env-Sw 1500.

N/A (b) Tires shall not be certified for distribution and use if distribution and use:

- (1) Constitutes a fire hazard;
- (2) Provides a habitat for breeding mosquito populations;
- (3) Constitutes a safety hazard;
- (4) Constitutes a nuisance; or
- (5) Violates any federal regulation or state rule.

Env-Sw 905.06 Transportation Requirements

_X_Tires, either whole or processed, shall be transported in a manner to prevent blowing or falling debris.

Blowing and falling debris will be prevented by transporting the tires in appropriate containers.

Env-Sw 905.07 Testing and Reporting Requirements

_X_Facilities managing tires shall comply with the reporting requirements specified in Env-Sw 400 through Env-Sw 1200, as applicable.

Env-Sw 905.08 Other Requirements

 $N/A_(a)$ The open burning of tires or processed tires shall be prohibited. There will be no on site burning or processing of tires.

 $N/A_(b)$ Tires shall be managed in a manner as to avoid establishing habitat for breeding mosquito populations.

To prevent mosquitos from breeding, tires will be covered to avoid water collection.

Env-Sw 1000 UNIVERSAL FACILITY REQUIREMENTS

Env-Sw 1002.01 Environmental Conservation and Protection

_X_Facilities shall be located, designed, constructed, operated and closed in a manner that conserves natural resources and is protective of the natural environment, human health and safety.

The proposed facility is located on a lot that has been used for commercial and industrial purposes for years. The site has been designed to be self-contained and to meet all applicable setbacks to jurisdictional areas. As such, this project will conserve and preserve natural resources and protect the natural environment, human health and safety. This is further supported by the existing permitting that has been secured on the local and state levels for this project.

Env-Sw 1002.02 Discharge of Pollutants Prohibited

X (a) Facilities and practices shall not cause a discharge of pollutants into surface waters of the United States or the state in violation of Section 402 of the Clean Water Act, 33 U.S.C. 1342.

The facility has been designed to be self-contained and not to discharge any pollutants into surface waters.

X (b) Facilities and practices shall not cause a discharge of dredged material to waters of the United States in violation of RSA 482-A or Section 404 of the Clean Water Act, 33 U.S.C. 1344.

The construction and operation of the facility will not discharge any dredged materials into the surface waters.

X (c) Facilities and practices shall not cause a non-point source of pollution that contravenes the requirements of an area wide or statewide water quality management plan under Section 319 of the Clean Water Act, 33 U.S.C. 1329. The construction and operation of the facility will not be a non-point source of pollution into surface waters. The site will be used for the collection, storage, and transportation of materials, no materials shall be buried or remain on the site. The facility has been designed to process and store all solid wastes under cover or inside. The stormwater system will handle runoff from the site and will treat the qualitative and quantitative stormwater features in accordance with the Alteration of Terrain treatment standards.

X(d) Facilities and practices shall not contaminate surface water or groundwater in violation of federal or state law, any rules implemented by the department or any administratively-attached board, or the conditions of any permit issued by the department or any administratively-attached board.

The construction and operation of the facility will employ the use of the Best Management Practices so as not to contaminate the surface waters or the groundwater. Waste separation will be performed indoors and waste located outdoors will be protected by using appropriate containers that will rest on top of paved surfaces. The Operations Plan for the facility will minimize stormwater exposure and all stormwater management practices have been designed to meet Alteration of Terrain standards for qualitative and quantitative stormwater mitigation.

X (e) Facilities and practices shall not cause air pollution in violation of federal or state law, any air quality rules implemented by the department or the conditions of any air quality permit issued by department, or the New Hampshire Clean Air Act state implementation plan filed pursuant to 42 U.S.C. 7410.

To eliminate air pollution, there will be no on site burning.

Env-Sw 1002.03 Protection of Wildlife

_X_Facilities or practices shall not adversely affect endangered or threatened species.

The New Hampshire Natural Heritage Bureau has been contacted and a letter received stating there are no sensitive species near the project area, see attached copy.

Env-Sw 1002.04 Safety

 $_X$ (a) Facilities and practices shall not cause concentrations of explosive gases such as methane to exceed 25% of the lower explosive limit of the gases in any structure, excluding facility-related gas recovery equipment, or to exceed 50% of the lower explosive limit of the gases at the property boundary.

X (b) Facilities shall be designed, constructed, operated and closed in a manner that minimizes the risk of fires and provides the ability to deal with them effectively if they occur.

 $N/A_(c)$ Facilities that manage putrescible waste and are located within 10,000 feet (3,048 meters) of any airport runway used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway used by only piston-type aircraft shall be designed, constructed, operated and closed in a manner that minimizes the risk of attracting birds that may be hazardous to aircraft.

X (d) Facilities and practices shall comply with the rules adopted by the New Hampshire department of labor relative to employee safety and health, Lab 1400.

Env-Sw 1002.05 Dams, Flowage and Flood Provisions

X (a) Facilities and practices shall comply with RSA 482 relative to dams and flowage.

The proposed facility and construction will comply with RSA 482 and will not have an effect on dams or flowage on the Souhegan River.

X (b) Facilities and practices shall protect all waste storage, handling and disposal areas against impact from the 100-year flood. **The 100 year flood boundary is not located within property lines.**

PART Env-Sw 1003 UNIVERSAL SITING REQUIREMENTS

Env-Sw 1003.01 Distance to Other Facilities

_X_A facility or practice shall not physically interfere with the proper operation or closure of any other facility.

This proposed facility will not physically interfere with the proper operation or closure of any other facility. The proposed facility is located 7.4 miles from the Town of Wilton Recycling Center.

Env-Sw 1003.02 Easements and Rights-of-Way

X The location of a facility shall be outside the limits of any right-of-way or easement, except as provided by Env-Sw 1003.03.

The entire facility will be situated, operated, and maintained on existing lots of record and not within the Public Right of Way.

Env-Sw 1003.03 Property Ownership and Access Rights

X (a) The location of a facility shall be on property owned by the permittee or on property for which the property owner has granted a lease, easement or other legal right to the permittee for use of the property for said purpose, including access to the property when required by the permittee and department for closure and post-closure monitoring of the facility and site.

The property is currently owned by GMB Leasing, LLC. See the letter of authorization in Section I Attachment I(4)(D). If there is any change in ownership or operation then appropriate lease, easement or other legal rights shall be recorded. Access shall not be interrupted for the permittee and/or the NH Department of Environmental Services for access to the property, for closure, and post-closure monitoring etc.

NA (b) The location of a facility may be on property where a right-of-way, easement or other legal right for use of the property is granted to a third party, provided that the grant shall not adversely affect the permittee's ability to meet all facility requirements pursuant to RSA 149-M, the solid waste rules and the terms and conditions of the permit.

There are no known easements that would have any impact the permittee's ability to meet all facility requirements.

Env-Sw 1003.04 Groundwater and Surface Waters

X(a) No facility shall be located in violation of RSA 483, relative to management and protection of rivers

The proposed facility will not affect the quality, quantity, scenic beauty, recreational potential, or any riparian interests of the Souhegan River.

X(b) No facility shall be located in violation of RSA 485, RSA 485-A and RSA 485-C, relative to protection of groundwater.

The facility will not be in violation of the protection of groundwater. The facility will not construct or operate and unlined wastewater, septage or sludge lagoon on the property. There will not be any land treatment of wastewater from the facility. There will be no discharge onto or into the ground of non-domestic wastewater that contains any regulated contaminant and has received treatment by BAT before discharge. The facility is tied to the existing Town municipal sewage treatment plant for the disposal of the domestic wastewater. The facility

will not construct or operate a reclaimed wastewater distribution and disposal system or an aquifer storage and recovery system.

The stormwater conveyance and treatment system has been designed to capture all stormwater runoff from the site and route the stormwater to stormwater management areas where qualitative and quantitative mitigation and treatment will occur in accordance with the NHDES Alteration of Terrain Bureau standards.

Env-Sw 1003.05 Wetlands

_X_No facility shall be located in violation of RSA 482-A, relative to protection of wetlands.

The development of this site into a solid waste facility will not require an impacts to jurisdictional wetlands. There is no proposed dredging or filling activities for the proposed facility as stated in RSA 482-A.

Env-Sw 1003.06 Shoreland Protection

_X_No facility shall be located in violation of RSA 483-B, relative to protection of shorelands.

The proposed facility will not be in violation of the protection of shorelands as stated in RSA 483-B.

Env-Sw 1003.07 Designated Rivers

_X_No facility shall be sited in violation of RSA 483, relative to protection of designated rivers.

The proposed facility will not be in violation of the protection of designated rivers as stated in RSA 483.

PART Env-Sw 1004 UNIVERSAL DESIGN REQUIRMENTS

Env-Sw 1004.01 Basic Design Requirements

The design of a facility shall be compatible with achieving the universal environmental performance requirements in Env-Sw 1002. The design, construction and operation of the facility shall be in accordance with the universal operation standards in Env-Sw 1002 in regards to conservation and protection of natural resources, there will be no discharge of pollutants, protection of wildlife, will comply with dams, flowage and flood provisions and for the human health and safety. _X_ (b) The design of a facility shall facilitate operations in accordance with the universal operating standards in Env-Sw 1005 and all other requirements of the solid waste rules, as applicable.

The design, construction and operation of the facility shall be in accordance with the general operating requirements established in Env-Sw 1005

Env-Sw 1004.02 Roads and Traffic Control

X (a) The design of the facility as it relates to the management of traffic on roads leading to and from the facility's entrance and exit points shall meet all applicable local standards if the roads are municipal streets or roads or, if the roads are state roads, shall meet the requirements of the New Hampshire department of transportation. The facility will access onto NH Route 31 which is a state maintained highway. The NH Department of Transportation has reviewed and approved in the location shown for the proposed use. This location meets all local and state regulations for safe sight distance and turning movements.

X (b) A facility shall be designed to prevent entering and exiting vehicles from obstructing the safe flow of traffic on any public road leading to or from facility. The entrance to the facility allows for safe ingress and egress from the property for all vehicles including the public and any trucks utilizing the facility. The turning radius for the entrance allows for the safe ingress and egress of vehicles coming from both directions and will not obstruct the flow of the general traffic.

X(c) Adequate on-site area at the facility's entrance and exit points shall be provided to allow the number and types of waiting vehicles expected to use the facility during peak times to safely queue off the public road(s) and right-of-way. The proposed traffic flow allows for significant stacking for all vehicles on-site. The public and commercial traffic will be separated immediately on site as shown on Page 3 of the plan set. The public area will be isolated and the truck traffic will circle on-site to maximize the stacking of vehicles and to prevent congestion at the entrance.

 $X_(d)$ A facility shall be designed to accommodate on-site traffic flow in a safe and efficient manner in all weather conditions.

The layout and design of the site provides for safe on-site traffic flow by separating the public and commercial traffic and eliminating traffic conflicts. The site grades are also very favorable so there are no issues with slopes presenting unsafe conditions during inclement weather.

 X_{e} (e) Separate on-site access for passenger vehicles shall be provided at facilities where public drop-off is allowed

All vehicles will enter the site by one common entrance as required by NH Department of Transportation. The public passengers will immediately be routed to the left into the public area and this area will be isolated and secured by jersey barriers. The commercial trucks will go straight and drive past the scale house and circle clockwise around the site by the solid waste processing building back to the entrance where they will take a right onto the scale. Trucks will go over the scale unload, get back on the scale and then exit the site. The site has been designed with a one directional traffic flow to eliminate conflicts and maintain a simple traffic pattern for all visitors and users of the site. Traffic signage and traffic barriers will be used along with signage to maintain traffic control, separation and safety on-site.

X(f) A facility shall be designed to assure that traffic conflicts shall not occur between bulk transport vehicles, passenger vehicles and pedestrians at the facility site. As previously mentioned the traffic flow and layout of the site has been designed to separate traffic streams (public and commercial) immediately when they enter the site. This separation along with the one directional traffic flow on-site eliminates traffic conflicts, eliminates confusion and will maintain a control and safe operations.

X(g) The on-site road surface and the road base shall be suitable for heavy vehicles and capable of withstanding expected loads.

The road surface and base materials have been designed for heavy vehicles as detailed in the plan set. The site has been used for heavy traffic for many years with no reported issues.

Env-Sw 1004.03 Drainage

X (a) Site drainage features shall be designed in accordance with the requirements of RSA 485-A:17.

The existing method of handling storm water runoff from the site is by sheet flow. The existing drainage patterns will not be changed significantly for this development. The proposed methods in handling the storm water runoff will still be via sheet flow to a combination of open and closed drainage which will convey the stormwater to stormwater management basins where qualitative and quantitative mitigation and treatment will occur in accordance with local and state standards.

 $X_(b)$ Detention basins and other drainage structures shall be located and designed to minimize the potential to adversely impact any landfill closure system located at or near the site.

Stormwater management basins have been designed to meet and exceed local and state permitting requirements for stormwater mitigation. The stormwater system has been designed to address the qualitative and quantitative stormwater components. There will not be any landfills designed for the site thus there won't be any impact. The drainage design for this project did receive approval through the NHDES Alteration of Terrain Bureau.

X (c) Surface drainage shall be collected and directed to discharge points having no potential to affect the performance of any groundwater or surface water monitoring system, leachate collection and removal system, or any other component of a landfill closure system. No landfill closure system is designed for this site. The site is broken into two distinct drainage areas to follow the existing topography. The proposed drainage has been designed for a 25 year storm and will not increase the peak rates of runoff leaving the site.

Env-Sw 1004.04 Protection of Landfill Closure Systems

The proposed facility has not been designed for a landfill closure system

N/A The design of a facility shall include measures or features to avoid damage during construction and operation of the facility to any component of a landfill closure system, including:

- (a) Ground control markers;
- (b) The capping system;
- (c) Leachate collection system risers and clean-outs;
- (d) Groundwater monitoring wells; and
- (e) Decomposition gas control devices.

Env-Sw 1004.05 Wastewater Systems

X_All wastewater collection, transmission and treatment features which are part of or specifically serve a facility shall be designed in accordance with RSA 485-A. The proposed facility will not collect, transmit, or treat any wastewater on site. The facility will be serviced by the Town of Greenville municipal sewage treatment facility for its domestic wastes. Any wastewater on site will be collected and disposed of properly.

Env-Sw 1004.06 Motor Vehicle Waste Collection

_X_Pursuant to RSA 149-M:9, IV, a facility which receives motor vehicle wastes shall be designed to provide for separation of such wastes.

Pursuant to RSA 149-M:9, IV, the proposed facility will receive motor vehicle wastes in a separate collection area.

Env-Sw 1004.07 Equipment

X (a) Equipment shall be installed at a facility in conformance with the manufacturer's specifications and recommendations for installation, unless otherwise allowed by the solid waste rules.

X (b) Pursuant to RSA 149-M:10, II, municipalities and waste haulers shall affix ownership identification or facility or company logo to all waste containers used in conjunction with the operation of a facility.

Env-Sw 1100 ADDITIONAL FACILITY REQUIREMENTS

PART Env-Sw 1102 ADDITIONAL SITING REQUIREMENTS

Env-Sw 1102.01 General Siting Requirements

X The location of a facility shall be compatible with meeting all design, construction, operating and closure requirements specified for the facility in the solid waste rules, including requirements noted in Env-Sw 1101.02(c), as applicable.

Env-Sw 1102.02 Co-existence with Other Activities

X The property on which the facility is proposed to be located shall not also be the site of any activity not specifically authorized in the facility permit, either because it is an activity not regulated by the solid waste rules such as the collection of used oil for recycling or the operation of a non-waste related business, or because it is a permit-exempt activity such as the operation of a burn pile pursuant to Env-Sw 508.05, unless:

The operations on-site currently consist of a scrap metal collection and recycling center. This operation will remain on-site but will be relocated to allow for the expansion and operation of other portions (public transfer station and solid waste processing)

 $X_(a)$ The activity will not interfere with operating the permitted facility in compliance with the solid waste rules and the permit; and

 $X_(b)$ When required by Env-Sw 1105.07(d), notice of the activity is provided to the department as specified in Env-Sw 1105.07(e) and (f).

There will be no activity that will adversely affect the operating of the permitted facility and notice shall be given to the department for any change in use.

Part Env-Sw 1103 ADDITIONAL DESIGN REQUIREMENTS

Env-Sw 1103.02 Equipment Installation

_X_The installation and use of manufactured equipment at a facility shall conform to the manufacturer's specifications and recommendations, unless the permittee provides a written statement by a qualified professional engineer certifying that the non-conforming installation and use shall not adversely affect the environment, public health or safety.

Env-Sw 1103.03 Access Control

X (a) The perimeter of a facility site shall be fenced in a manner as to restrict unauthorized access to the facility, except no fence shall be required if natural site features restrict access to the site, or all waste handling, storage and disposal areas at the facility are wholly contained within locked structures or devices when the facility operator is not present.

There is a gate at the entrance of the facility and the natural features along the state right-of-way restrict access to the site. The existing topography, highway drainage and jurisdictional wetlands restrict access along the highway and the area to the north, east and west are undeveloped properties with natural site features that would restrict access from those directions as well as shown on the plans.

X (b) Weather-resistant signs, which state that access is restricted, shall be posted around the perimeter of a facility site wherever fencing is not required by (a) above.

Weather-resistant no trespassing signs will be posted around the perimeter of the facility.

X(c) The lawful access points to the facility shall be secured by locked gates or the equivalent during times when the facility operator is not be present. **The facility's access gate shall be locked when the facility operator is not present.**

Env-Sw 1103.04 Surrounding Properties

X_The design of a facility shall incorporate features to minimize adverse impacts, if any, to surrounding properties, such as the use of stockade fencing where appropriate to shield waste storage and handling areas from view and to control the off-site transport of dust and windblown litter, and the use of landscaping berms or other vegetation for similar purposes.

The site has been designed to minimize adverse impact to the surrounding properties by the placement of the parking, loading and public areas on the site and the use of the building to handle and store the wastes. The waste handling and storage areas will be within the building or in containers. The orientation and layout of the site has been designed to prevent windblown litter with the doors facing to the south. The site will be primarily surrounded by woodland areas to the north, east and south with drainage improvements that will be inspected routinely located along the perimeter. This inspection will include an inspection for any trash.

Env-Sw 1103.05 Design Plans and Specifications, Content and Format

X (a) Plans and specifications shall bear the date of preparation and, for a facility already permitted, the facility permit number;

X (b) Plans and specifications shall be clearly readable;

X(c) Plans and specifications shall be prepared in accordance with standard engineering practices, including dimensions, labels, details and other graphic elements;

X (d) Plans and specifications shall be stamped by a qualified professional engineer as required by RSA 310-A;

X (e) Except as provided by (f) below, plans shall:

- (1) Be prepared at a scale of no less than
- one inch equals 50 feet;
- (2) Be presented on paper no larger than 24 inches by 36 inches;
- (3) Show profiles drawn to standard scales with a ratio of 10 horizontal
- to 1 vertical (10:1), such as 40:4 and 50:5;

(4) Show elevations of the surface to the nearest 0.1 foot;

(5) Show elevations of the piping, sewer, and manhole inverts to the nearest 0.01 foot;

(6) Report all elevations in feet and tenths and reference all elevations to a standard datum, which shall be indicated on the plans, based on mean sea level; and

(7) Show contours at a minimum interval of 2 feet on all plan views.

X (f) Alternatives to (e) above shall be accepted if, prior to submitting the plans, the applicant requests approval of the alternative(s) and shows in the request that, based on the size of the land area being shown, the size of the detail being shown or the margin of error acceptable, the information to be presented on the plans will be as clear and understandable prepared according to the alternative(s) as it would be prepared according to (e) above.

X(g) Plans and specifications submitted for construction approval shall include the intended methods for sequencing facility construction, consistent with:

(1) The seasonal restrictions specified in Env-Sw 1104.04;

(2) The construction schedule required by Env-Sw 1104.02; and

(3) For landfills constructed in phases over time, the requirements in Env-Sw 805.11(d).

X (h) Plans and specifications shall be submitted with all calculations and design related documentation required to support and verify the adequacy of the proposed design and construction.

The plan set and operations plan details the construction work to be completed and the associated phasing.

Part (2)

Tax Maps and Abutters:

A copy of the Town Tax Map for the site has been attached and all direct abutters have been labeled. Additional notifications pursuant to Env-Sw 303 have been completed with this application.

Surrounding land use and zoning:

The zoning for the properties surrounding this project is Commercial. The uses surrounding the property consists of vacant commercial land to the south, east and north. On the other side of NH Route 31 (Fitchburg Road) there is vacant municipal land to the northwest, a cemetery and a residential property to the west and then residential properties to the southwest.

A narrative description of the site:

The subject property is situated on the east side of NH Route 31 and is comprised of 9.344 acres of land. The property generally has modest topography. The majority of the site drains to the east towards a jurisdictional wetlands area that runs along the eastern boundary of the property. Soils on-site consist primarily of Marlow Stony Loam. The property consists of a mixture of open active commercial/industrial space surrounded by forested areas along the perimeter.

The subject property has historically been used for commercial and industrial purposes. In recent years it has been the home of Money for Metals which is a Scrap Metal Recycling Facility. Prior to that it was occupied by a logging operation, an automotive shop, a wood mill and the property was utilized as a staging area for improvement to NH Route 31 and the extension of the municipal sewer and water.

There's no known or suspected conditions on site that would be of environmental, public health or safety concern.

Map(s) and narrative discussion of the facilities proximity to and potential impact on sensitive environments, including but not limited to:

FLOOD HAZARD ZONES: The subject property is not located in a Flood Hazard Zone. This is stated in Note #9 on Page 2 of the Attached Plan Set. This plan is entitled the Existing Conditions & Consolidation Plan.

WETLANDS: The subject site does have some jurisdictional wetlands located along its perimeter as depicted on Page 2 of the Attached Plan Set. This plan is entitled the Existing Conditions & Consolidation Plan. This project does not propose any impacts to jurisdictional wetlands and the design plans incorporate erosion and sedimentation controls to prevent any impacts to these areas.

HABITAT FOR ENDANGERED OR THREATENED SPECIES: The New Hampshire Natural Heritage Bureau has been contacted and a letter received stating there are no sensitive species near the project area, see attached copy.

DESIGNATED RIVERS AND PROTECTED SHORELANDS: The proposed facility will not be in violation of the protection of designated rivers as stated in RSA 483. No portion of the subject property lies within 250 feet of protected shorelands.

OTHER SURFACE WATERS: There are no other surface waters located on site or within close proximity to the site. All of these details are depicted on Page 2 of the Attached Plan Set. This plan is entitled the Existing Conditions & Consolidation Plan.

WATER SUPPLIES: There is no abutting private or community wells in close proximity to the subject property. The site and surrounding area is serviced by municipal water.

AIRPORTS, IF THE FACILITY WILL MANAGE PUTRESCIBLE WASTE: Not Applicable.

Hydrogeological Report/Study of the Site:

The design and permitting of this site has included the completion of a geotechnical report and a stormwater management report. Both of these reports evaluate the subsurface conditions of the property. This includes soil testing and logging. The stormwater management design has been reviewed and approved by the NHDES Alteration of Terrain Bureau. Both of these studies are included in this package for review.

Discussion of the impacts the facility will have on traffic:

The facility will access directly onto NH Route 31 which is a state maintained highway. The driveway entrance has been designed to provide for the safe ingress and egress to and from the property for all vehicles including the public, commercial trucks and emergency response personnel. The turning radii for the entrance and all internal movements have been evaluated to ensure that all movements are safe and will not obstruct the flow of the general traffic.

The design allows for ample stacking of vehicles on-site along with the traffic flow as shown on Page 3 of the plan set. This layout will provide stacking internally for commercial and public traffic and will result in no impacts to the state highway system.

The grades and slopes of the entrance and the site in general are mild and as such there will be no issues with safe travel at the entrance or on-site during year round operations.

The public will only have access to the front of the facility. This may consist of accessing the office area in the soft metals warehousing building or accessing the general public drop off area. Commercial traffic will favor the south side of the site as depicted on Page 3 of the plan set.

All vehicles will enter the site by one common entrance as this is a requirement of the NH Department of Transportation. The public and commercial traffic will be separated immediately when you enter the facility to prevent any conflicts. All portion of the site have been designed to have adequate signage to ensure safe travel through the site.

NH Route 31 along this section is under utilized with low traffic volumes. The existing traffic through this area can certainly accommodate this proposal which is why we were able to secure a DOT permit for the project.
Section V List of Attachments

- Attachment V(2)-1 Town of Greenville Tax Map
- Attachment V(2)-2 Town of Greenville Tax Map Detail Showing Surrounding Land Uses
- Attachment V(2)-3 Town of Greenville Zoning Map
- Attachment V(2)-4 Natural Heritage Bureau Inventory Letter
- Attachment V(2)-5 NHDOT Access Permit
- Attachment V(2)-6 Photos of the Site
- Attachment V(2)-7 Aerial Photo of Property









To: Phillip Houston Date: 6/7/2017 206 Elm Street Milford, NH 03055 From: NH Natural Heritage Bureau Re: Review by NH Natural Heritage Bureau of request dated 6/7/2017 NHB File ID: NHB17-1796 Applicant: Phillip Houston Tax Map(s)/Lot(s): Tax Map 2, Lots 17-1, 17-2 & 37-1 Location: Greenville Proposed modifications to the layout of the existing Project Description: firewood processing facility and the scrap metal collection & recycling center (money for metals) and to establish a solid waste collection/storage/transfer facility on-site.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

This report is valid through 6/6/2018.





MAP OF PROJECT BOUNDARIES FOR NHB FILE ID: NHB17-1796



Victoria F. Sheehan Commissioner

To:

GMB Leasing LLC 124 Old Wilton Rd Greenville, NH 03048 THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

District 4 Office, 19 Base Hill Road, Swanzey, NH 03446

DRIVEWAY PERMIT

City/Town:	Greenville	Permi
Route/Road:	NH 31 (S0000031)	Distric
Patrol Section	: 415	Permi
Tax Map:	2	
Lot:	37-1	
Development:	Commercial, Waste	Solutions



William Cass, P.E. Assistant Commissioner

nit #: 04-191-0016 rict: 04 nit Date 3/29/2018

Permission is hereby granted to construct (alter) a driveway, entrance, exit or approach adjoining NH 31 (S0000031), pursuant to the location and specifications as described below. Failure to adhere to the standards and engineering drawings previously approved shall render this instrument null and void. Failure to start or complete construction of said facility within one calendar year of the date of this permit shall require application for permit extension or renewal in accordance with the Driveway Access Rules. Facilities constructed in violation of the permit specifications or the rules, shall be corrected immediately upon notification by a Department representative. Any cost by the State to correct deficiencies shall be fully borne by the landowner. The landowner shall defend, indemnify and hold harmless the Department and its duly appointed agents and employees against any action for personal injury and/or property damage sustained by reason of the exercise of this permit.

Drive 1

Location: Approximately 0.25 miles north of NH 123 on the east side of NH 31 (S0000031). SLD Station: 13294 (right) GPS: 42.760948 N 71.803009 W.

Specifications: This permit authorizes a paved access to be used as a Commercial drive. Any change in use, increase in use or reconstruction of the driveway requires reapplication.

The right-of-way line is located 50' from centerline.

The driveway shall not exceed 30 feet in width. The entrance of the drive may be flared; typically the flare radius is one half the driveway width.

Other Conditions:

No structures, including buildings, permanent or portable signs, lights, displays, fences, walls, etc. shall be permitted on, over or under the Highway Right of Way.

No parking, catering or servicing shall be conducted within the Highway Right of Way.

The applicant shall comply with all applicable ordinances and regulations of the municipality or other State Agencies.

The Department has relied on the title and subdivision information provided by the landowner. The Department has not performed additional title research and makes no warranty or representation concerning landowner's legal right to access. In the event of a dispute about the landowner's legal right to the access provided herein, the landowner will defend and indemnify the Department.

1. Driveway and related roadway modifications are to be constructed as shown on plans prepared by Chad E. Branon, PE with Fieldstone Land Consultants, PLLC dated 3/22/18 for Greater Waste Solutions, LLC provided that they do not conflict with other provisions of this permit and are approved by the Town.

2. Driveway to be 90° to the State highway, from the edge of roadway pavement to the right of way line.

3. The roadside embankment and vegetation must be appropriately modified and maintained to insure a minimum, all season safe sight distance of 400' by the applicant, the owner, and the owner's successor and assignees during construction and as long as this entrance is in use.

4. All slopes to be 4:1 - 6:1 preferred or match existing. Loam, seed, fertilize, and mulch any disturbed areas within the State right of way.

5. Drive shall be paved full width with hot Bituminous Pavement machine method. The drive shall be paved a minimum of 20 feet in length.

6. Traffic must be maintained during the performance of the work as described in the USDOT Manual on Uniform Traffic Control Devices Latest Edition. Traffic shall be protected by suitable barricades, standard warning and advance warning signs, and proper lighting at night. Properly trained flag persons with vests and using stop/slow paddles shall be provided whenever two-way traffic cannot be maintained.

See Previous Permit #04-191-0006.

Copies: District, Town, Patrolman Fieldstone Land Consultants PLLC Chad E Branon 206 Elm Street Milford, NH 03055 Approved K. A.

Assistant District Engineer For Director of Administration

Date: 3/29/2018



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Photo 1 Site Entrance Facing East



Photo 2 From Entrance Facing Northeast

Greater Waste Solutions, LLC Greenville, New Hampshire



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Greater Waste Solutions, LLC Greenville, New Hampshire

204.02 SITE-PHOTOS.docx

Photo 3 Scale & Scale House Facing West

Photo 4 Scale Area Facing South



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AND CONSULTANTS, PLLC

Photo 5 Metal Processing Area Facing Northeast



Greater Waste Solutions, LLC Greenville, New Hampshire Photo 6 Looking South from Exist. Metal Processing Area



FIELDSTONE LAND CONSULTANTS, PLLC

> Photo 7 Front of Scale House Facing North



Greater Waste Solutions, LLC Greenville, New Hampshire Photo 8 Looking at Site from Opposite Site Drive Facing Southeast



AERIAL PHOTO TAX MAP 2, LOTS 17-1, 17-2 & 37-1 GREENVILLE, NH



FIELDSTONE LAND CONSULTANTS, PLLC

206 ELM STREET, MILFORD, NEW HAMPSHIRE 03055 PHONE (603) 672-5456 FAX (603) 413-5456

June 26, 2020 FLC-204.02

SECTION VI PRELIMINARY FACILITY DESIGN PLANS AND SPECIFICATIONS



ECTION V. SITE REPORT

Prepare and submit a Site Report which demonstrates that:

The location of the facility complies with all applicable siting requirements, as noted in:

- Env-Sw 400.
- Dev-Sw 900, if the facility will manage asbestos, ash, contaminated soils or other media, infectious waste or tires.
- I En Sw 1000.
- Env-S. 1100, if the facility has an active life longer than 90 days.
- I The facility site is, in another respects, a suitable location for the facility.
- (2) To support the demonstration required by (1) above, the Site Report must include, as a minimum:
 - A copy of the local tax map(s) which shows the property on which the facility will be sited and which identifies all abutters required to be notified pursuant to Environ 303 (see also Section IV of this form).
 - Map(s) identifying surrounding land use and zero
 - A narrative description of the site, including:
 - A physical description.
 - \square A 50-year history of the use(s) of the site.
 - A discussion of any known or suspected conditions at the ite which are or should be of environmental, public health or safety concern.
 - Map(s) and narrative discussion of the facility's proximity to and potential impact on sensitive environments, including, but not limited to:
 - S Flood hazard zones.
 - Wetlands.
 - Habitat for endangered or threatened species.
 - Designated rivers and protected shorelands.
 - I Other surface waters.
 - Water supplies.
 - Airports, if the facility will manage putrescible waste.
 - A hydrogeological report/study of the site.
 - Discussion of the impacts the facility will have on traffic.
 - Other information as required to make the demonstration required by (1) above.

SECTION VI. PRELIMINARY FACILITY DESIGN PLANS AND SPECIFICATIONS

Prepare preliminary design plans and specifications for the facility, according to the enumerated instructions below.

- (1) The facility location and design must meet all permitting requirements as provided in:
 - 🖾 Env-Sw 400.
 - Env-Sw 900, if the facility will manage asbestos, ash, contaminated soil and/or other media, infectious waste and/or tires.
 - Env-Sw 1000.
 - Discrete Sw 1100, for facilities having an active life longer than 90 days.
- (2) Include the following on each page of the plans and specifications:
 - Date of preparation.
 - S Facility name and location.
 - For a facility holding a temporary permit, the facility permit number.
- (3) Be certain the plans and specifications are:

SECTION VI. PRELIMINARY FACILITY DESIGN PLANS AND SPECIFICATIONS (CONTINUED)

- Clearly readable.
- Prepared in accordance with standard engineering practices, including dimensions, labels, details and other graphic elements.
- Stamped by a qualified professional engineer.
- (4) Unless other arrangements are approved in advance pursuant to Env-Sw 1103.05(f), the plans must:
 - Be prepared at a scale of no less than 1 inch = 50 feet.
 - Be presented on paper no larger than 24 inches by 36 inches.
 - Show profiles drawn to standard scales with a ratio of 10 horizontal to 1 vertical, such as 40:4 and 50:5.
 - Show elevations of the surface to the nearest 0.1 foot.
 - Show elevations of the piping, sewer, and manhole inverts to the nearest 0.01 foot.
 - Report all elevations in feet and tenths and reference all elevations to a standard datum, which shall be indicated on the plans, based on mean sea level.
 - Show contours at a minimum interval of 2 feet on all plan views.
- (5) Show all existing site features, including, but not necessarily limited to:
 - All structures within 1000 ft of the facility.
 - Wetlands and drainage ways or statement that none exists.
 - Ledge outcroppings.
 - Soil types (SCS survey is acceptable).
 - I Flood hazard zones.
 - All waters under the jurisdiction of the Comprehensive Shoreland Protection Act on the property and/or at the 250 ft setback to the facility, or statement that none exist.
 - Departs lines established by a land surveyor licensed in New Hampshire.
 - Locations of permanent benchmarks.
 - Prevailing wind direction.
- (6) Show the facility and all related appurtenances, including, but not necessarily limited to:
 - Access roads and parking areas.
 - Fences, gates and other access control devices.
 - Buildings.
 - Scales.
 - Tipping and waste inspection area(s) and equipment.
 - Waste storage areas and devices.
 - Hot load segregation area(s) and other fire prevention/control features.
 - Sanitation facilities.
 - Storm water drainage systems.
 - Leachate collection and storage systems.
 - Screening and landscaping.
 - Proposed clearing lines.
 - D Litter control appurtenances, if the facility manages waste having the potential to become windblown.
 - Other features as required by Env-Sw 404.03.
- Delineate/dimension all relevant setback distances.

SECTION VII. OPERATING PLAN

Prepare and submit an Operation Plan, according to the following instructions. See also Env-Sw 1105.11.

- (1) A facility Operating Plan shall provide a fisient detail to allow the certified operator and other trained facility personnel to operate the facility in compliance with RSA 149-w, the permit and the Solid Waste Rules without further explanation or guidance. See Env-Sw 405; Env-Sw 900 (if for asbestos, ash, contaminated soil and/or other media, infectious waste, or tires); Env-Sw 1005; and Env-Sw 1105 (if operated longer than 90 days).
- (2) The Operating Plan shall be prepared as a loose leaf, stand-alone document to facilitate future and timent, as specified in Env-Sw 315. Submit the stand-alone document with this application, in its own binder.

Section VI List of Attachments

Attachment VI - 1	Design Features and Appurtenances - Facility Signs (3 Phases)
Attachment VI - 2	Concrete Mix Design Submittal
Attachment VI - 3	Stormwater Management Report, Prepared By Fieldstone Land Consultants
Attachment VI - 4	Geotechnical Report, Prepared By Geotechnical Services, LLC
Attachment VI - 5	Site Development Plan Set (Pages 1-16), Prepared By Fieldstone Land Consultants
Attachment VI - 6	Foundation Design Plans (Pages 1-4) Prepared By McBrie, LLC
Attachment VI - 7	Building Design Plans (Pages 1-9) Prepared By Kirby Building Systems



Office: Greater Waste Solutions, LLC. 124 Old Wilton Road, Greenville, NH 03048 (603) 878-1170

PERMIT NO. DES-SW-PN-17-002

UNLAWFUL DUMPING WILL BE SUBJECT TO FINE AND PROSECUTION





Office: Greater Waste Solutions, LLC. 124 Old Wilton Road, Greenville, NH 03048 (603) 878-1170

PERMIT NO. TBD

UNLAWFUL DUMPING WILL BE SUBJECT TO FINE AND PROSECUTION PURSUANT TO RSA 149-M:15

Solid Waste Collection/Storage/Transfer Facility

HOURS OF OPERATION - PLEASE ARRIVE 15 MINUTES BEFORE CLOSING

		PU R	BLIC S	CRAP N NG CE	VETAL NTER			COMMERO WASTE F	CIAL SOLID ACILITIES
CLOSED SUNDAYS		Μ	Т	W	TH	F	S	MON	SAT.
	1,000 LB MINIMUM	7a-8a	8a-4p	Х	7a-8a	Х	7a-2p	6 AM -	– 6 PM
	NO MIMIMUM	8a-4p	Х	8a-4p	Х	8a-4p	Х	NO OUT-BOUI	ND TRANSFER
	NO CO	MMER			NETAL	TRANS	FER	OR INBOUND	SCRAP METAL
	TUE.	& THU	•			SAT.		<u>TUE. & THU.</u>	SAT.
	8 AN	I – 4 PN	1		7 AN	<u>/ – 2 PN</u>	N	7 AM – 4 PM	7 AM – 2 PM

ACCEPTING NON-HAZARDOUS: FERROUS & NON-FERROUS SCRAP METALS; MIXED MUNICIPAL SOLID WASTE; WHITE GOODS; CONSTRUCTION & DEMOLITION DEBRIS; BULKY WASTE; ELECTRONIC WASTE; YARD WASTE; RECYCLABE MATERIALS, Including: Glass, Aluminum, Ferrous and Non-Ferrous Metals, Paper, Tires, Plastics, Corrugated Cardboard MUST SEE ATTENDANT



Office: Greater Waste Solutions, LLC. 124 Old Wilton Road, Greenville, NH 03048 (603) 878-1170

PERMIT NO. TBD

UNLAWFUL DUMPING WILL BE SUBJECT TO FINE AND PROSECUTION PURSUANT TO RSA 149-M:15

Solid Waste Collection/Storage/Transfer Facility

HOURS OF OPERATION - PLEASE ARRIVE 15 MINUTES BEFORE CLOSING

RESIDENTS'	PUBLIC SCRAP METAL						COMMERCIAL SOLID	
RECYCLE CENTER		RECYCLING CENTER					WASTE FACILITIES	
TUE./THU.		Μ	Т	W	TH	F	S	MONSAT.
7 AM – 4 PM	1,000 LB MINIMUM	7a-8a	8a-4p	Х	7a-8a	Х	7a-2p	6 AM – 6 PM
<u>SAT.</u> 7 AM – 2 PM	NO MIMIMUM	8a-4p	Х	8a-4p	Х	8a-4p	Х	NO OUT-BOUND TRANSFER
CLOSED	NO CO	MMER			JETAL	TRANS	FER	OR INBOUND SCRAP METAL
SUNDAYS	TUE.	& THU				SAT.		<u>TUE. & THU.</u> <u>SAT.</u>
	7 AM	- 4 PN	1		7 A N	$\sqrt{1-2}$ PN	N	7 AM – 4 PM 7 AM – 2 PM

ACCEPTING NON-HAZARDOUS: FERROUS & NON-FERROUS SCRAP METALS; MIXED MUNICIPAL SOLID WASTE; WHITE GOODS; CONSTRUCTION & DEMOLITION DEBRIS; BULKY WASTE; ELECTRONIC WASTE; YARD WASTE; USED OIL (DIY ONLY); RECYCLABE MATERIALS, Including: Glass, Aluminum, Ferrous and Non-Ferrous Metals, Paper, Tires, Plastics, Corrugated Cardboard MUST SEE ATTENDANT

1 Sundial Ave., Suite 310 Mancester, NH 03103 Phone: 603-296-6500 Fax: 603-296-6520 Toll Free: 1-800-400-9474

Concrete Mix Design Submittal

Date : 06/26/2020	No. 2020-OM0012 Version 4			
Mix Code : 50740162	Description : 5000,COMM,CMT,AIR,1-1/2"			
Customer			Design	Tolerance
Contact	BEN KROOK	Air Content	2	+/-1%
Office Phone	000-000-0000	Slump	4.0	+/-1"
Project Name	GREENVILLE TRANSFER STATION	Design Strength	5000	psi
Project Contact	BEN KROOK	Unit Weight	148.7	lb/ ft3
Usage/ Placement	INTERIOR SLAB ON GRADE	W/C Ratio	0.42	

Material	Description	Source Supplier	ASTM	Design Quantity	Specific	Volume
Туре	Description	Source Supplier	ASTM	Design quantity	Gravity	(ft3)
Cement	CEMENT QUEBEC TYPE VII	CIMENTQUEBEC-Quebec, Ca.	C-150	600 lb	3.15	3.05
Slag	SLAG	LAFARGE CEMENT-SPAROWS POIL	C-989	105 lb	2.88	0.58
Fine Aggregate	SAND	PIKE TILTON-Tilton, NH	C-33F	1190 lb	2.67	7.14
Coarse Aggregate	1 1/2" STONE			590 lb	2.70	3.50
Coarse Aggregate	3/4" STONE	LITCHFIELD S&G	C-33	802 lb	2.70	4.76
Coarse Aggregate	3/8" STONE	LITCHFIELD S&G	C-33	460 lb	2.70	2.73
Admixture	MULTI-RANGE WATER REDUCER (BASF ADMIX-BASF	C-494	2.0 /cwt		-
Water	WATER	POTABLE WATER	C-1602	35.5 gal	1.00	4.75
			Air Content	2.50 %	-	0.68
			Yield	4043 lb	-	27.20

NOTES

Placement by chute or pump.

Admixtures and aggregates to be adjusted to maintain yield and consistency.

COMPANIES, INC.

A CRH COMPANY

If a mid-range water reducing dose is used, target slump is 5" with a range of 4" to 6" at point of truck discharge. If mid-range is ordered, it must be ordered by name to insure its addition.

MasterBuilders Mac360FF Structural Fibers will be added to this placement at a dosage rate of 4.0 lbs/ cuft

Non-Chloride Accelerator, MasterSet FP 20, can be added at contractors request without increasing the submitted water cement ratio.

Retarder MasterSet R 100 can be added at contractors request without increasing the submitted water cement ratio

This mix design may be batched at Manchester or Amherst Plant Utilizing Continental Coarse Aggregate and Tilton Fine Aggregate. Material Gradations attached to this submittal

Prepared By :

OWEN MACKINNON

QC Manager

Storm Water Management Report

GREATER WASTE SOLUTIONS, LLC

NON-RESIDENTIAL SITE PLAN

Project Location: Tax Map2, Lots 17–1, 17–2 & 37–1 Fitchburg Road (NH Route 31) Greenville, NH

<u>Prepared for:</u> Greater Waste Solutions, LLC 124 Old Wilton Road Greenville, NH 03048

Date: June 21, 2017 Revised: NA



Surveying \Rightarrow Engineering \Rightarrow Land Planning \Rightarrow Permitting \Rightarrow Septic Designs



206 Elm Street, Milford NH 03055 Phone: (603)-672-5456 Fax: (603)-413-5456 www.FieldstoneLandConsultants.com

Index

USGS Locus Map Narrative with Summary Tables Web Soil Survey Extreme Precipitation Tables

Drainage Analysis / Storm Water Management Report:

Section 1.1	Existing Conditions – 2, 10, 50 & 100 Year Storm Node List
Section 1.2	Existing Conditions – 25 Year Storm Full Summary
Section 2.1	Proposed Conditions – 2, 10, 50 & 100 Year Storm Node List
Section 2.2	Proposed Conditions – 25 Year Storm Full Summary

Supplemental Data:

Section 3.1	Rip Rap Apron Design
Section 3.2	Drainage Area Plans



USGS LOCUS PLAN TAX MAP 2, LOTS 17-1, 17-2, & 37-1 GREENVILLE, NH



SCALE: 1:24,000

FIELDSTONE LAND CONSULTANTS, PLLC 206 ELM ST. MILFORD, NEW HAMPSHIRE 03055 PHONE (603) 672-5456 FAX (603) 413-5456 206 Elm Street, Milford, NH 03055 - Phone: 603-672-5456 - Fax: 603-413-5456 www.FieldstoneLandConsultants.com

 $\Box \Box$

STORM WATER MANAGEMENT REPORT TAX MAP 2, LOTS 17-1, 17-2, & 37-1 GREENVILLE, NEW HAMPSHIRE

LAND CONSULTANTS, PL

Prepared for: Greater Waste Solutions, LLC 124 Old Wilton Road, Greenville, NH

June 21, 2017

I) INTRODUCTION

The following are storm water drainage calculations for the redevelopment of Tax Lots 2-17-1, 2-17-2, and 2-37-1. The parcels encompass a total of approximately 11.6 acres on the east side of NH Route 31. This project will consist of consolidating the Lots 2-17-2 and 2-37-1 into one parcel (2-37-1) and redeveloping the newly created lot into a solid waste collection and processing facility as well as a recycling and transfer station with associated site improvements (see design plans prepared by this office). The existing Scrap Metal Collection and Recycling Facility (Money for Metals) will also continue to operate on the site. Lot 2-17-1 will remain undeveloped at this time. The site is currently serviced by municipal sewer and the plans specify a 1,300± linear foot water main extension from Pleasant Street to provide municipal water and fire suppression to the site.

II) SITE DESCRIPTION

The topography of the site is composed of mainly mild slopes throughout with small hills and upland areas draining to a large wetland complex which surrounds the east side of the site. The northern portion of the site (Lot 2-37-1) has been developed as a metal recycling facility. This portion of the site is predominantly open (gravel surface) with wooded areas along its perimeter and is composed of soils from hydrologic soil groups "C". The southern portion of the site (Lots 2-17-1) is primarily wooded and comprised of HSG "D" soils.

The site is divided in to two primary drainage areas discharging to two observation points (see Pre-Development Drainage Area Plan). Two subcatchments drain to the existing 24" RCP culvert under Route 31 which discharges to the west and is designated as Observation Point 1 (OP1). A portion of the site area drains in the Northwestern direction and eventually outlets to an existing wetlands complex located to the North off the subject property. The remainder of the site drains to the large wetland complex. Both drainage areas eventually converge off the subject property as both wetland areas drain into Blood's Brook (OP2). Both observation points eventually discharge to the Souhegan River northwest of the site.

FIELDSTONE

Greater Waste Solutions, LLC Map 2, Lots 17-1, 17-2, & 37-1 – Storm Water Management Report

Page 2

III) METHODOLOGY

The quantity of runoff and the conveyance of that flow through the site are determined using the software package HydroCAD R 10.0-19 by HydroCAD Software Solutions, LLC. HydroCAD is a computer aided design program for modeling storm water hydrology based on the Soil Conservation Service (SCS) TR-20 method combined with standard hydraulics calculations used to model detention basins and culverts.

Stormwater management systems and erosion control are designed in accordance with the methodology for the "Best Management Practices" (BMP's), as outlined in the New Hampshire Storm Water Manual, Volume 2.

IV) DRAINAGE DESIGN

The Two (2), ten (10) and fifty (50) year frequency storm events have been evaluated in accordance with NHDES Alteration of Terrain regulations. These design storms have therefore been analyzed to compare the pre and post-development peak flow rates for the site (see attached comparison tables). The Twenty-Five (25), and one hundred (100) year frequency storm events have been evaluated in accordance with Section 7.G of the Town of Greenville's Non-Residential Site Plan Regulations.

Pre-Development Drainage Conditions:

As can be seen on the Pre-Development Drainage Plans, the site is divided into five subcatchments. These subcatchments flow west, east and north. Subcatchment E1S drains to the large wetland complex east of the site. Subcatchment E2S drains to a low area on Lot 17-2-1 which overtops to the existing 24" RCP culvert under Route 31. Subcatchment E3S also drains to the existing 24" RCP culvert under Route 31. Subcatchment E3S also drains to the existing 24" RCP culvert under Route 31 which discharges to the west and is designated as Observation Point 1 (OP1). Subcatchment E4S drains to an existing catch basin on-site. This catch basin outlets to an existing stormwater management area that was constructed for the existing development. This area was not constructed per plan and has not been included in this analysis. A portion of Subcatchment E5S drains in the Northwestern direction and eventually outlets to an existing wetlands complex located to the North off the subject property. The remainder of Subcatchment E5S, and Subcatchments E1S and E4S, eventually drain into Blood's Brook, Observation Point 2.

Post-Development Drainage Conditions:

As can be seen on the attached Plans, the applicant is proposing to expand the existing development and convert a significant portion of the site from gravel to pavement. The proposed processing facility will be situated on the high point of the property with the ground sloping away in all directions. A closed drainage system is proposed south and east of the processing facility. This system will discharge to a proposed wet pond located in the northeast corner of the property (WB1). The northern portion of the site will sheet flow to a swale proposed along the perimeter of

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Greater Waste Solutions, LLC Map 2, Lots 17-1, 17-2, & 37-1 – Storm Water Management Report

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the of the existing gravel area. This swale will also discharge to WB1. The east side of the development will sheet flow to an open drainage system that will discharge to a second wet pond identified as WB2 on the plans. The two "wet" detention basins are proposed to provide stormwater treatment and mitigate the increase in Stormwater runoff resulting from the proposed development. The proposed detention basins have been designed to mitigated the peak rate of runoff and runoff volume as well as provide Stormwater treatment in accordance with **Env-Wq 1508.03 Stormwater Treatment Practices: Stormwater Ponds**.

V) SUMMARY

The intent of the stormwater management system for this project is to address the qualitative and quantitative aspects of the stormwater runoff so that there are no downstream adverse impacts created by the project. The proposed detention basins effectively mitigate any increases in Stormwater runoff resulting from the proposed development.

The net result is that new gravel/dirt and building areas will receive qualitative treatment and that due to the detention/retention capabilities of the proposed Stormwater basins and there will be no increase in the peak rates of runoff leaving the site.

The following table is a summary of the attached calculations and shows a comparison of the peak flow rates at the outlet point for the site. The values presented are based on pre- and post-development conditions.

STORM FREQUENCY	PRE-DEV. RUNOFF (CFS/AF)	POST-DEV. RUNOFF (CFS/AF)	CHANGE (CFS/AF)
2-YEAR	4.14/0.406	2.99/0.312	-1.15/-0.094
10-YEAR	9.11/0.818	6.64/0.629	-2.47/-0.189
25-YEAR	13.48/1.167	9.88/0.899	-3.60/-0.268
50-YEAR	17.75/1.503	13.07/1.158	-4.68/-0.345
100-YEAR	23.02/1.918	17.07/1.478	-5.95/-0.440

Table 1: Peak Flow Rates & Volume to Existing 24" RCP - OP1 - with Post-Development Detention

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25-YEAR

50-YEAR

100-YEAR

Greater Waste Solutions, LLC Map 2, Lots 17-1, 17-2, & 37-1 – Storm Water Management Report

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-13.15/+0.200

-6.77/+0.265

-3.50/+0.347

	PRE-DEV. RUNOFF	POST-DEV. RUNOFF	CHANGE
STORINI FREQUENCY	(CFS/AF)	(CFS/AF)	(CFS/AF)
2-YEAR	12.01/0.974	3.10/1.052	-8.91/+0.078
10-YEAR	22.53/1.806	8.87/1.942	-13.66/+0.136

17.72/2.688

31.83/3.397

44.35/4.265

30.87/2.488

38.60/3.132

47.85/3.918

Table 2: Peak Flow Rates & Volume to Bloods Brook – OP2 - with Post-Development Detention



USDA

Hydrologic Soil Group—Hillsborough County, New Hampshire, Western Part



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Web Soil Survey National Cooperative Soil Survey



Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Hillsborough County, New Hampshire, Western Part (NH602)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
77B	Marlow fine sandy loam, 0 to 8 percent slopes, very stony	С	17.2	36.8%
77D	Marlow fine sandy loam, 15 to 35 percent slopes, very stony	С	2.5	5.4%
142C	Monadnock fine sandy loam, 8 to 15 percent slopes	В	1.6	3.4%
143B	Monadnock fine sandy loam, 0 to 8 percent slopes, very stony	В	1.5	3.3%
161C	Lyman-Tunbridge-Rock outcrop complex, 3 to 15 percent slopes	D	2.0	4.4%
197	Borohemists, ponded	A/D	2.6	5.5%
247B	Lyme fine sandy loam, 0 to 8 percent slopes, very stony	B/D	12.5	26.7%
299	Udorthents, smoothed		0.1	0.2%
549	Peacham mucky peat, 0 to 8 percent slopes, very stony	D	6.7	14.3%
Totals for Area of Intere	est		46.7	100.0%

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	71.800 degrees West
Latitude	42.742 degrees North
Elevation	0 feet
Date/Time	Tue, 22 Sep 2015 07:58:41 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.54	0.70	0.88	1.10	1yr	0.76	1.02	1.27	1.60	2.00	2.51	2.79	1yr	2.23	2.68	3.09	3.82	4.41	1yr
2yr	0.34	0.52	0.65	0.86	1.08	1.35	2yr	0.93	1.23	1.56	1.94	2.41	<mark>3.00</mark>	3.36	2yr	2.66	3.23	3.74	4.46	5.08	2yr
5yr	0.40	0.62	0.78	1.05	1.34	1.70	5yr	1.16	1.54	1.96	2.45	3.03	3.75	4.25	5yr	3.32	4.08	4.73	5.59	6.27	5yr
10yr	0.45	0.71	0.89	1.21	1.58	2.02	10yr	1.36	1.82	2.34	2.92	3.61	<mark>4.44</mark>	5.07	10yr	3.93	4.88	5.64	6.62	7.35	10yr
25yr	0.53	0.85	1.08	1.48	1.97	2.53	25yr	1.70	2.27	2.95	3.68	4.54	<mark>5.55</mark>	6.42	25yr	4.91	6.18	7.14	8.30	9.08	25yr
50yr	0.60	0.96	1.23	1.73	2.33	3.02	50yr	2.01	2.69	3.53	4.40	5.40	<mark>6.57</mark>	7.68	50yr	5.82	7.39	8.54	9.85	10.66	50yr
100yr	0.68	1.11	1.43	2.02	2.75	3.59	100yr	2.38	3.19	4.20	5.24	6.43	<mark>7.79</mark>	9.20	100yr	6.90	8.85	10.21	11.69	12.51	100yr
200yr	0.78	1.27	1.64	2.36	3.26	4.28	200yr	2.81	3.78	5.01	6.25	7.65	9.24	11.02	200yr	8.18	10.60	12.21	13.88	14.69	200yr
500yr	0.93	1.53	2.00	2.91	4.08	5.39	500yr	3.52	4.74	6.32	7.88	9.63	11.60	14.00	500yr	10.26	13.47	15.49	17.43	18.18	500yr

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.20	0.31	0.37	0.50	0.62	0.80	1yr	0.53	0.78	1.01	1.40	1.69	2.15	2.54	1yr	1.90	2.44	2.52	3.49	4.05	1yr
2yr	0.32	0.50	0.62	0.83	1.03	1.21	2yr	0.89	1.18	1.36	1.76	2.25	2.91	3.28	2yr	2.58	3.16	3.61	4.36	4.97	2yr
5yr	0.36	0.56	0.69	0.95	1.21	1.41	5yr	1.05	1.38	1.64	2.12	2.70	3.47	3.97	5yr	3.07	3.82	4.37	5.20	5.90	5yr
10yr	0.40	0.62	0.76	1.07	1.38	1.58	10yr	1.19	1.55	1.76	2.40	3.05	4.05	4.59	10yr	3.59	4.42	5.02	5.96	6.73	10yr
25yr	0.45	0.69	0.86	1.23	1.61	1.83	25yr	1.39	1.79	2.03	2.86	3.58	4.63	5.57	25yr	4.09	5.36	6.04	7.12	8.00	25yr
50yr	0.49	0.75	0.93	1.34	1.80	2.06	50yr	1.55	2.02	2.26	3.26	4.04	5.23	6.46	50yr	4.63	6.22	6.94	8.15	9.12	50yr
100yr	0.53	0.80	1.00	1.45	1.98	2.31	100yr	1.71	2.26	2.53	3.11	4.57	5.91	7.51	100yr	5.23	7.22	8.00	9.33	10.42	100yr
200yr	0.57	0.86	1.09	1.58	2.21	2.59	200yr	1.90	2.53	2.81	3.43	5.20	6.66	8.74	200yr	5.90	8.40	9.22	10.68	11.90	200yr
500yr	0.64	0.96	1.23	1.79	2.54	3.02	500yr	2.19	2.95	3.25	3.90	6.17	7.82	10.72	500yr	6.92	10.31	11.13	12.77	14.21	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.32	0.49	0.60	0.81	1.00	1.19	1yr	0.86	1.17	1.32	1.72	2.12	2.70	3.01	1yr	2.39	2.90	3.33	4.20	4.79	1yr
2yr	0.36	0.56	0.69	0.94	1.15	1.33	2yr	1.00	1.30	1.50	1.94	2.48	3.14	3.47	2yr	2.78	3.33	3.87	4.60	5.23	2yr
5yr	0.44	0.67	0.84	1.15	1.46	1.73	5yr	1.26	1.69	1.90	2.42	3.02	4.04	4.55	5yr	3.58	4.38	5.11	5.98	6.68	5yr
10yr	0.51	0.79	0.98	1.37	1.77	2.13	10yr	1.52	2.08	2.40	2.91	3.59	4.87	5.60	10yr	4.31	5.38	6.31	7.30	8.06	10yr
25yr	0.65	0.98	1.22	1.75	2.30	2.80	25yr	1.99	2.74	3.16	3.69	4.50	6.43	7.36	25yr	5.69	7.08	8.36	9.52	10.33	25yr
50yr	0.77	1.17	1.46	2.09	2.82	3.46	50yr	2.43	3.38	3.88	4.44	5.34	7.86	9.06	50yr	6.96	8.71	10.33	11.64	12.46	50yr
100yr	0.92	1.39	1.74	2.51	3.44	4.27	100yr	2.97	4.17	4.77	6.19	6.34	9.64	11.16	100yr	8.53	10.73	12.78	14.24	15.04	100yr
200yr	1.09	1.65	2.09	3.02	4.21	5.26	200yr	3.64	5.14	5.87	7.62	7.53	11.81	13.72	200yr	10.45	13.20	15.81	17.44	18.14	200yr
500yr	1.39	2.07	2.67	3.88	5.51	6.91	500yr	4.76	6.76	7.71	10.07	9.44	15.48	18.05	500yr	13.70	17.36	20.94	22.80	23.26	500yr



Section 1.1

Existing Conditions 2, 10, 50, 100 Year Storm Node List



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Area Listing (all nodes)

Area	CN	Description
 (acres)		(subcatchment-numbers)
3.470	74	>75% Grass cover, Good, HSG C (E2, E3, E4, E5)
1.702	80	>75% Grass cover, Good, HSG D (E1, E2, E3)
0.800	65	Brush, Good, HSG C (E3, E5)
0.445	73	Brush, Good, HSG D (E2, E3)
2.808	96	Gravel surface, HSG C (E4, E5)
0.581	98	Paved parking, HSG C (E3, E4, E5)
0.241	98	Paved parking, HSG D (E1, E3)
1.446	70	Woods, Good, HSG C (E3, E5)
1.217	77	Woods, Good, HSG D (E1, E2, E3)
12.710	80	TOTAL AREA

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Soil Listing (all nodes)

Area	Soil	Subcatchment
(acres)	Group	Numbers
0.000	HSG A	
0.000	HSG B	
9.105	HSG C	E2, E3, E4, E5
3.605	HSG D	E1, E2, E3
0.000	Other	
12.710		TOTAL AREA
Type III 24-hr 2 Year Storm Rainfall=3.00"

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Flow to SE	Wetland Runoff Area=0.648 ac 7.56% Impervious Runoff Depth>1.31" Tc=6.0 min CN=81 Runoff=0.97 cfs 0.071 af
Subcatchment E2: To Low Ar	ea On-Site Runoff Area=1.627 ac 0.00% Impervious Runoff Depth>1.01" Flow Length=282' Tc=9.3 min CN=76 Runoff=1.62 cfs 0.137 af
Subcatchment E3: Flow to 24	RCP Runoff Area=2.891 ac7.89% ImperviousRunoff Depth>1.13"Flow Length=196'Tc=6.0 minCN=78Runoff=3.66 cfs0.272 af
Subcatchment E4: To Exist. C	B Runoff Area=0.448 ac 7.37% Impervious Runoff Depth>1.31" Tc=6.0 min CN=81 Runoff=0.67 cfs 0.049 af
Subcatchment E5: Flow to We	etlands (NE) Runoff Area=7.096 ac 7.22% Impervious Runoff Depth>1.44" Flow Length=517' Tc=9.2 min CN=83 Runoff=10.55 cfs 0.854 af
Reach E1R: Bloods Brook	Inflow=0.97 cfs 0.071 af Outflow=0.97 cfs 0.071 af
Pond E1P: Low Area	Peak Elev=902.43' Storage=5,255 cf Inflow=1.62 cfs 0.137 af Outflow=1.03 cfs 0.135 af
Pond E2P: Exist. 24" RCP	Peak Elev=895.18' Inflow=4.14 cfs 0.406 af 24.0" Round Culvert n=0.012 L=109.0' S=0.0046 '/' Outflow=4.14 cfs 0.406 af
Pond E3P: Exist. CB	Peak Elev=896.41' Inflow=0.67 cfs 0.049 af 12.0" Round Culvert n=0.013 L=252.0' S=0.0202 '/' Outflow=0.67 cfs 0.049 af
Link OP1: EXIST. 24" RCP	Inflow=4.14 cfs 0.406 af Primary=4.14 cfs 0.406 af
Link OP2: BLOODS BROOK	Inflow=12.01 cfs 0.974 af Primary=12.01 cfs 0.974 af
Total Runoff Are	ea = 12.710 ac Runoff Volume = 1.383 af Average Runoff Depth = 1.31"

Type III 24-hr 10 Year Storm Rainfall=4.44"

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Flow to SE	WetlandRunoff Area=0.648 ac7.56% ImperviousRunoff Depth>2.49"Tc=6.0 minCN=81Runoff=1.86 cfs0.135 af
Subcatchment E2: To Low Are	ea On-Site Runoff Area=1.627 ac 0.00% Impervious Runoff Depth>2.08" Flow Length=282' Tc=9.3 min CN=76 Runoff=3.47 cfs 0.282 af
Subcatchment E3: Flow to 24	RCP Runoff Area=2.891 ac7.89% ImperviousRunoff Depth>2.24"Flow Length=196'Tc=6.0 minCN=78Runoff=7.45 cfs0.540 af
Subcatchment E4: To Exist. C	B Runoff Area=0.448 ac 7.37% Impervious Runoff Depth>2.49" Tc=6.0 min CN=81 Runoff=1.29 cfs 0.093 af
Subcatchment E5: Flow to We	etlands (NE) Runoff Area=7.096 ac 7.22% Impervious Runoff Depth>2.67" Flow Length=517' Tc=9.2 min CN=83 Runoff=19.54 cfs 1.578 af
Reach E1R: Bloods Brook	Inflow=1.86 cfs 0.135 af Outflow=1.86 cfs 0.135 af
Pond E1P: Low Area	Peak Elev=902.61' Storage=5,972 cf Inflow=3.47 cfs 0.282 af Outflow=2.71 cfs 0.278 af
Pond E2P: Exist. 24" RCP	Peak Elev=895.76' Inflow=9.11 cfs 0.818 af 24.0" Round Culvert n=0.012 L=109.0' S=0.0046 '/' Outflow=9.11 cfs 0.818 af
Pond E3P: Exist. CB	Peak Elev=896.60' Inflow=1.29 cfs 0.093 af 12.0" Round Culvert n=0.013 L=252.0' S=0.0202 '/' Outflow=1.29 cfs 0.093 af
Link OP1: EXIST. 24" RCP	Inflow=9.11 cfs 0.818 af Primary=9.11 cfs 0.818 af
Link OP2: BLOODS BROOK	Inflow=22.53 cfs 1.806 af Primary=22.53 cfs 1.806 af
Total Runoff Are	ea = 12.710 ac Runoff Volume = 2.627 af Average Runoff Depth = 2.48"

Type III 24-hr 50 Year Storm Rainfall=6.57"

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Flow to SE Wetland	Runoff Area=0.648 ac 7.56% Impervious Runoff Depth>4.40" Tc=6.0 min CN=81 Runoff=3.24 cfs 0.238 af
Subcatchment E2: To Low Area On-Site	Runoff Area=1.627 ac 0.00% Impervious Runoff Depth>3.87" Flow Length=282' Tc=9.3 min CN=76 Runoff=6.49 cfs 0.525 af
Subcatchment E3: Flow to 24" RCP	Runoff Area=2.891 ac 7.89% Impervious Runoff Depth>4.08" Flow Length=196' Tc=6.0 min CN=78 Runoff=13.52 cfs 0.984 af
Subcatchment E4: To Exist. CB	Runoff Area=0.448 ac 7.37% Impervious Runoff Depth>4.40" Tc=6.0 min CN=81 Runoff=2.24 cfs 0.164 af
Subcatchment E5: Flow to Wetlands (NE) Runoff Area=7.096 ac 7.22% Impervious Runoff Depth>4.62" Flow Length=517' Tc=9.2 min CN=83 Runoff=33.34 cfs 2.730 af
Reach E1R: Bloods Brook	Inflow=3.24 cfs 0.238 af Outflow=3.24 cfs 0.238 af
Pond E1P: Low Area	Peak Elev=902.86' Storage=6,689 cf Inflow=6.49 cfs 0.525 af Outflow=5.82 cfs 0.520 af
Pond E2P: Exist. 24" RCP 24.0" Round	Peak Elev=897.02' Inflow=17.75 cfs 1.503 af Culvert n=0.012 L=109.0' S=0.0046 '/' Outflow=17.75 cfs 1.503 af
Pond E3P: Exist. CB 12.0" Round	Peak Elev=896.85' Inflow=2.24 cfs 0.164 af d Culvert n=0.013 L=252.0' S=0.0202 '/' Outflow=2.24 cfs 0.164 af
Link OP1: EXIST. 24" RCP	Inflow=17.75 cfs 1.503 af Primary=17.75 cfs 1.503 af
Link OP2: BLOODS BROOK	Inflow=38.60 cfs 3.132 af Primary=38.60 cfs 3.132 af
Total Runoff Area = 12.710	ac Runoff Volume = 4.641 af Average Runoff Depth = 4.38"

Type III 24-hr 100 Year Storm Rainfall=7.79"

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Flow to SE Wetland	Runoff Area=0.648 ac 7.56% Impervious Runoff Depth>5.54" Tc=6.0 min CN=81 Runoff=4.05 cfs 0.299 af
Subcatchment E2: To Low Area On-Site	Runoff Area=1.627 ac 0.00% Impervious Runoff Depth>4.96" Flow Length=282' Tc=9.3 min CN=76 Runoff=8.28 cfs 0.672 af
Subcatchment E3: Flow to 24" RCP	Runoff Area=2.891 ac 7.89% Impervious Runoff Depth>5.19" Flow Length=196' Tc=6.0 min CN=78 Runoff=17.08 cfs 1.251 af
Subcatchment E4: To Exist. CB	Runoff Area=0.448 ac 7.37% Impervious Runoff Depth>5.54" Tc=6.0 min CN=81 Runoff=2.80 cfs 0.207 af
Subcatchment E5: Flow to Wetlands (NE)	Runoff Area=7.096 ac 7.22% Impervious Runoff Depth>5.77" Flow Length=517' Tc=9.2 min CN=83 Runoff=41.27 cfs 3.412 af
Reach E1R: Bloods Brook	Inflow=4.05 cfs 0.299 af Outflow=4.05 cfs 0.299 af
Pond E1P: Low Area	Peak Elev=903.01' Storage=6,960 cf Inflow=8.28 cfs 0.672 af Outflow=7.78 cfs 0.667 af
Pond E2P: Exist. 24" RCP 24.0" Round 0	Peak Elev=897.91' Inflow=23.02 cfs 1.918 af Culvert n=0.012 L=109.0' S=0.0046 '/' Outflow=23.02 cfs 1.918 af
Pond E3P: Exist. CB 12.0" Round	Peak Elev=897.05' Inflow=2.80 cfs 0.207 af Culvert n=0.013 L=252.0' S=0.0202 '/' Outflow=2.80 cfs 0.207 af
Link OP1: EXIST. 24" RCP	Inflow=23.02 cfs 1.918 af Primary=23.02 cfs 1.918 af
Link OP2: BLOODS BROOK	Inflow=47.85 cfs 3.918 af Primary=47.85 cfs 3.918 af
Total Runoff Area = 12.710	ac Runoff Volume = 5.841 af Average Runoff Depth = 5.52"

Section 1.2

Existing Conditions 25 Year Storm Full Summary



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Area Listing (all nodes)

Area	CN	Description
 (acres)		(subcatchment-numbers)
3.470	74	>75% Grass cover, Good, HSG C (E2, E3, E4, E5)
1.702	80	>75% Grass cover, Good, HSG D (E1, E2, E3)
0.800	65	Brush, Good, HSG C (E3, E5)
0.445	73	Brush, Good, HSG D (E2, E3)
2.808	96	Gravel surface, HSG C (E4, E5)
0.581	98	Paved parking, HSG C (E3, E4, E5)
0.241	98	Paved parking, HSG D (E1, E3)
1.446	70	Woods, Good, HSG C (E3, E5)
1.217	77	Woods, Good, HSG D (E1, E2, E3)
12.710	80	TOTAL AREA

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Soil Listing (all nodes)

Area	Soil	Subcatchment
(acres)	Group	Numbers
0.000	HSG A	
0.000	HSG B	
9.105	HSG C	E2, E3, E4, E5
3.605	HSG D	E1, E2, E3
0.000	Other	
12.710		TOTAL AREA

Type III 24-hr 25 Year Storm Rainfall=5.55"

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E1: Flow to SE Wetland	Runoff Area=0.648 ac 7.56% Impervious Runoff Depth>3.47" Tc=6.0 min CN=81 Runoff=2.58 cfs 0.188 af
Subcatchment E2: To Low Area On-Site	Runoff Area=1.627 ac 0.00% Impervious Runoff Depth>2.99" Flow Length=282' Tc=9.3 min CN=76 Runoff=5.02 cfs 0.405 af
Subcatchment E3: Flow to 24" RCP	Runoff Area=2.891 ac 7.89% Impervious Runoff Depth>3.18" Flow Length=196' Tc=6.0 min CN=78 Runoff=10.58 cfs 0.767 af
Subcatchment E4: To Exist. CB	Runoff Area=0.448 ac 7.37% Impervious Runoff Depth>3.47" Tc=6.0 min CN=81 Runoff=1.78 cfs 0.130 af
Subcatchment E5: Flow to Wetlands (NE)	Runoff Area=7.096 ac 7.22% Impervious Runoff Depth>3.67" Flow Length=517' Tc=9.2 min CN=83 Runoff=26.71 cfs 2.171 af
Reach E1R: Bloods Brook	Inflow=2.58 cfs 0.188 af Outflow=2.58 cfs 0.188 af
Pond E1P: Low Area	Peak Elev=902.75' Storage=6,394 cf Inflow=5.02 cfs 0.405 af Outflow=4.31 cfs 0.401 af
Pond E2P: Exist. 24" RCP 24.0" Round C	Peak Elev=896.25' Inflow=13.48 cfs 1.167 af ulvert n=0.012 L=109.0' S=0.0046 '/' Outflow=13.48 cfs 1.167 af
Pond E3P: Exist. CB 12.0" Round	Peak Elev=896.73' Inflow=1.78 cfs 0.130 af Culvert n=0.013 L=252.0' S=0.0202 '/' Outflow=1.78 cfs 0.130 af
Link OP1: EXIST. 24" RCP	Inflow=13.48 cfs 1.167 af Primary=13.48 cfs 1.167 af
Link OP2: BLOODS BROOK	Inflow=30.87 cfs 2.488 af Primary=30.87 cfs 2.488 af
Total Runoff Area = 12.710 a	c Runoff Volume = 3.660 af Average Runoff Depth = 3.46" 93.53% Pervious = 11.888 ac 6.47% Impervious = 0.822 ac

Type III 24-hr 25 Year Storm Rainfall=5.55"

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Summary for Subcatchment E1: Flow to SE Wetland

Runoff = 2.58 cfs @ 12.09 hrs, Volume= 0.188 af, Depth> 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

A	vrea (ac)	CN	Desc	cription		
	0.049	98	Pave	ed parking,	HSG D	
	0.432	80	>75%	% Grass co	over, Good	I, HSG D
	0.167	77	Woo	ds, Good,	HSG D	
	0.648	81	Weig	phted Aver	age	
	0.599		92.4	4% Pervio	us Area	
	0.049		7.56	% Impervie	ous Area	
(n	Tc Lenç nin) (fe	gth et)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	6.0					Direct Entry,

Summary for Subcatchment E2: To Low Area On-Site

Runoff = 5.02 cfs @ 12.14 hrs, Volume= 0.405 af, Depth> 2.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

Area (a	c) C	N Des	cription		
0.39	93 7	′4 >75′	% Grass co	over, Good,	, HSG C
0.37	70 8	0 >75	% Grass co	over, Good,	, HSG D
0.56	64 7	7 Woo	ods, Good,	HSG D	
0.30	00 7	3 Brus	sh, Good, H	ISG D	
1.62	27 7	6 Wei	ghted Aver	age	
1.62	27	100	00% Pervi	ous Area	
Tc L (min)	ength (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	82	0.0730	0.30		Sheet Flow, A=>B
4.7	200	0.0200	0.71		Range n= 0.130 P2= 3.00" Shallow Concentrated Flow, B=>C Woodland Kv= 5.0 fps
9.3	282	Total			

Summary for Subcatchment E3: Flow to 24" RCP

Runoff = 10.58 cfs @ 12.09 hrs, Volume= 0.767 af, Depth> 3.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

Type III 24-hr 25 Year Storm Rainfall=5.55"

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Area (ac	c) C	N Des	cription		
0.19	29	8 Pave	ed parking	HSG D	
0.03	69	8 Pave	ed parking	HSG C	
0.87	07	4 >759	% Grass co	over, Good,	HSG C
0.90	08	0 >75	% Grass co	over, Good,	HSG D
0.06	27	0 Woo	ds, Good,	HSG C	
0.48	67	7 Woo	ds, Good,	HSG D	
0.14	57	3 Brus	h, Good, H	ISG D	
0.20	06	5 Brus	h, Good, H	ISG C	
2.89	1 7	8 Weig	phted Aver	age	
2.66	3	92.1	1% Pervio	us Area	
0.22	8	7.89	% Impervi	ous Area	
			-		
Tc Le	ength	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
4.0	80	0.1000	0.34		Sheet Flow, A=>B
					Range n= 0.130 P2= 3.00"
1.9	80	0.0100	0.70		Shallow Concentrated Flow, B=>C
					Short Grass Pasture Kv= 7.0 fps
0.1	36	0.0190	4.27	17.08	Parabolic Channel, C=>D
					W=6.00' D=1.00' Area=4.0 sf Perim=6.4'
					n= 0.035 High grass
6.0	196	Total			

Summary for Subcatchment E4: To Exist. CB

Runoff = 1.78 cfs @ 12.09 hrs, Volume= 0.130 af, Depth>	າ> 3.47	7"
---	---------	----

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

Area	(ac)	CN	Desc	ription		
0.	033	98	Pave	d parking	HSG C	
0.	108	96	Grav	el surface	, HSG C	
0.	307	74	>75%	6 Grass co	over, Good,	I, HSG C
0.	448	81	Weig	hted Aver	age	
0.	415		92.6	3% Pervio	us Area	
0.	033		7.379	% Impervi	ous Area	
_						
Tc	Leng	th	Slope	Velocity	Capacity	Description
<u>(min)</u>	(fee	et)	(ft/ft)	(ft/sec)	(cfs)	
6.0						Direct Entry,

Summary for Subcatchment E5: Flow to Wetlands (NE)

Runoff = 26.71 cfs @ 12.13 hrs, Volume= 2.171 af, Depth> 3.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

Type III 24-hr 25 Year Storm Rainfall=5.55"

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Area (ac) C	N Des	cription		
0.5	512 9	8 Pav	ed parking	, HSG C	
2.7	700 9	6 Grav	vel surface	, HSG C	
1.9	900 7	′4 >75°	% Grass co	over, Good	, HSG C
1.3	384 7	'0 Woo	ods, Good,	HSG C	
0.6	600 6	5 Brus	sh, Good, F	ISG C	
7.0	96 8	3 Wei	ghted Aver	age	
6.5	584	92.7	8% Pervio	us Area	
0.5	512	7.22	% Impervi	ous Area	
Тс	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
6.3	97	0.0470	0.26		Sheet Flow, A=>B
					Range n= 0.130 P2= 3.00"
0.8	220	0.4500	4.70		Shallow Concentrated Flow, B=>C
					Short Grass Pasture Kv= 7.0 fps
2.1	200	0.0500	1.57		Shallow Concentrated Flow, C=>D
					Short Grass Pasture Kv= 7.0 fps
9.2	517	Total			

Summary for Reach E1R: Bloods Brook

Inflow /	Area	=	0.648 ac,	7.56% Impervious,	Inflow Depth >	3.47"	for 25 Y	ear Storm event
Inflow	:	=	2.58 cfs @	12.09 hrs, Volume	= 0.188	af		
Outflov	v :	=	2.58 cfs @	12.09 hrs, Volume	= 0.188	af, Atte	n= 0%,	Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Summary for Pond E1P: Low Area

Inflow Area	a =	1.627 ac,	0.00% Impervious,	Inflow Depth > 2	.99" for 25 Year Storm even
Inflow	=	5.02 cfs @	12.14 hrs, Volume	= 0.405 af	
Outflow	=	4.31 cfs @	12.21 hrs, Volume	= 0.401 af	, Atten= 14%, Lag= 4.2 min
Primary	=	4.31 cfs @	12.21 hrs, Volume	= 0.401 af	

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs Starting Elev= 902.20' Surf.Area= 5,228 sf Storage= 4,189 cf Peak Elev= 902.75' @ 12.21 hrs Surf.Area= 2,807 sf Storage= 6,394 cf (2,205 cf above start)

Plug-Flow detention time= 145.8 min calculated for 0.305 af (75% of inflow) Center-of-Mass det. time= 14.9 min (844.5 - 829.6)

Volume	Invert	Avail	.Storage	Storage	Description	
#1	901.00'		6,960 cf	Custom	Stage Data (Pr	ismatic)Listed below (Recalc)
Elevation (feet)	Surf. (.Area sq-ft)	Inc (cubio	.Store c-feet)	Cum.Store (cubic-feet)	
901.00		0		0	0	
902.00	6	6,110		3,055	3,055	
903.00		1,700		3,905	6,960	

Type III 24-hr 25 Year Storm Rainfall=5.55"

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Device	Routing	Invert	Outlet Devices
#1	Primary	902.20'	4.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=4.28 cfs @ 12.21 hrs HW=902.75' (Free Discharge) **1=Broad-Crested Rectangular Weir** (Weir Controls 4.28 cfs @ 1.96 fps)

Summary for Pond E2P: Exist. 24" RCP

Inflow Ar	ea =	4.518 ac,	5.05% Impervious, Ir	nflow Depth > 3.1	0" for 25 Year Storm event
Inflow	=	13.48 cfs @	12.11 hrs, Volume=	1.167 af	
Outflow	=	13.48 cfs @	12.11 hrs, Volume=	1.167 af,	Atten= 0%, Lag= 0.0 min
Primary	=	13.48 cfs @	12.11 hrs, Volume=	1.167 af	

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs Peak Elev= 896.25' @ 12.11 hrs Flood Elev= 903.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	894.20'	24.0" Round Culvert L= 109.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 894.20' / 893.70' S= 0.0046 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=13.28 cfs @ 12.11 hrs HW=896.22' (Free Discharge) -1=Culvert (Barrel Controls 13.28 cfs @ 5.20 fps)

Summary for Pond E3P: Exist. CB

Inflow Area =0.448 ac, 7.37% Impervious, Inflow Depth > 3.47" for 25 Year Storm eventInflow =1.78 cfs @12.09 hrs, Volume=0.130 afOutflow =1.78 cfs @12.09 hrs, Volume=0.130 afPrimary =1.78 cfs @12.09 hrs, Volume=0.130 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs Peak Elev= 896.73' @ 12.09 hrs Flood Elev= 897.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	896.00'	12.0" Round Culvert L= 252.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= $896.00' / 890.90'$ S= $0.0202' /'$ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.74 cfs @ 12.09 hrs HW=896.72' (Free Discharge) -1=Culvert (Inlet Controls 1.74 cfs @ 2.89 fps)

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Summary for Link OP1: EXIST. 24" RCP

Inflow Area =4.518 ac, 5.05% Impervious, Inflow Depth > $3.10^{"}$ for 25 Year Storm eventInflow =13.48 cfs @12.11 hrs, Volume=1.167 afPrimary =13.48 cfs @12.11 hrs, Volume=1.167 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Summary for Link OP2: BLOODS BROOK

Inflow A	Area =	8.192 ac,	7.25% Impervious,	Inflow Depth >	3.64" f	or 25 Y	ear Storm event
Inflow	=	30.87 cfs @	12.12 hrs, Volume	= 2.488 a	af		
Primary	y =	30.87 cfs @	12.12 hrs, Volume	= 2.488 a	af, Atten	i= 0%,	Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Section 2.1

Proposed Conditions 2, 10, 50, 100 Year Storm Node List



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Area Listing (all nodes)

Area	CN	Description
icres)		(subcatchment-numbers)
2.401	74	>75% Grass cover, Good, HSG C (201, 301, 401, 402, 502, 503, 504, 505, 506,
		507, 508, 509, 510)
1.542	80	>75% Grass cover, Good, HSG D (101, 201, 301)
1.175	65	Brush, Good, HSG C (301, 504, 505, 506, 507, 509, 510)
0.544	73	Brush, Good, HSG D (201, 301)
0.867	96	Gravel surface, HSG C (505, 507, 508)
3.057	98	Paved parking, HSG C (301, 401, 402, 501, 502, 503, 504, 505, 507, 508, 509)
0.300	98	Paved parking, HSG D (101, 301, 501)
0.680	98	Roofs, HSG C (401, 402, 502, 504, 507, 508)
0.925	70	Woods, Good, HSG C (301, 504, 506, 510)
1.219	77	Woods, Good, HSG D (101, 201, 301)
2.710	83	TOTAL AREA
	Area cres) 2.401 1.542 1.175 0.544 0.867 3.057 0.300 0.680 0.925 1.219 2.710	Area CN cres) 2.401 74 1.542 80 1.175 65 0.544 73 0.867 96 3.057 98 0.300 98 0.680 98 0.925 70 1.219 77 2.710 83

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Soil Listing (all nodes)

Area	Soil	Subcatchment
(acres)	Group	Numbers
0.000	HSG A	
0.000	HSG B	
9.105	HSG C	201, 301, 401, 402, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510
3.605	HSG D	101, 201, 301, 501
0.000	Other	
12.710		TOTAL AREA

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	401P	895.70	895.30	40.0	0.0100	0.013	12.0	0.0	0.0
2	501P	903.90	900.70	160.0	0.0200	0.013	12.0	0.0	0.0
3	502P	900.40	894.00	160.0	0.0400	0.013	15.0	0.0	0.0
4	503P	893.70	887.70	120.0	0.0500	0.013	12.0	0.0	0.0
5	505P	870.70	870.00	35.0	0.0200	0.013	18.0	0.0	0.0
6	506P	888.62	881.80	124.0	0.0550	0.013	12.0	0.0	0.0
7	508P	878.80	878.00	40.0	0.0200	0.013	18.0	0.0	0.0
8	E2P	894.20	893.70	109.0	0.0046	0.012	24.0	0.0	0.0
9	E3P	896.00	890.90	252.0	0.0202	0.013	12.0	0.0	0.0

204.02_POST-DEV	Type III 24-hr 2 Year Storm	Rainfall=3.00"
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Time span=1.00-2 Runoff by SCS TR-2 Reach routing by Stor-Ind+Tra	4.00 hrs, dt=0.02 hrs, 1151 points 20 method, UH=SCS, Weighted-CN ns method - Pond routing by Stor-Ind metho	d
Subcatchment 101: Flow to SE Wetland	Runoff Area=0.648 ac 7.56% Impervious Ru Tc=6.0 min CN=81 Runoff=	noff Depth>1.31" 0.99 cfs 0.071 af
Subcatchment 201: To Low Area On-Site	Runoff Area=1.444 ac 0.00% Impervious Ru ow Length=282' Tc=10.0 min CN=76 Runoff=	noff Depth>1.01" 1.43 cfs 0.122 af
Subcatchment 301: Flow to 24" RCP	Runoff Area=2.050 ac 11.12% Impervious Ru Flow Length=196' Tc=6.0 min CN=78 Runoff=	inoff Depth>1.13" 2.63 cfs 0.193 af
Subcatchment 401: TO CB4	Runoff Area=0.480 ac 58.33% Impervious Ru Tc=6.0 min CN=88 Runoff=	unoff Depth>1.82" 1.02 cfs 0.073 af
Subcatchment 402: To Exist. CB	Runoff Area=0.084 ac 88.10% Impervious Ru Tc=6.0 min CN=95 Runoff=	unoff Depth>2.45" 0.23 cfs 0.017 af
Subcatchment 501: TO CB1	Runoff Area=0.325 ac 100.00% Impervious Ru Tc=6.0 min CN=98 Runoff=	noff Depth>2.77" 0.94 cfs 0.075 af
Subcatchment 502: TO CB2	Runoff Area=0.394 ac 82.23% Impervious Ru Tc=6.0 min CN=94 Runoff=	noff Depth>2.35" 1.04 cfs 0.077 af
Subcatchment 503: TO CB3	Runoff Area=0.205 ac 48.78% Impervious Ru Tc=6.0 min CN=86 Runoff=	noff Depth>1.66" 0.40 cfs 0.028 af
Subcatchment 504: TO FOREBAY	Runoff Area=1.334 ac 38.98% Impervious Ru Tc=0.0 min CN=81 Runoff=	noff Depth>1.31" 2.45 cfs 0.146 af
Subcatchment 505: TO COLLECTOR	Runoff Area=0.977 ac 33.78% Impervious Ru Tc=6.0 min CN=90 Runoff=	Inoff Depth>1.98" 2.25 cfs 0.161 af
Subcatchment 506: TO WB1	Runoff Area=0.231 ac 0.00% Impervious Ru Tc=6.0 min CN=70 Runoff=	Inoff Depth>0.71" 0.17 cfs 0.014 af
Subcatchment 507: FLOW TO SWALE/FB2	Runoff Area=2.150 ac 70.70% Impervious Ru Tc=6.0 min CN=91 Runoff=	Inoff Depth>2.07" 5.14 cfs 0.371 af
Subcatchment 508: TO CB5	Runoff Area=0.586 ac 29.01% Impervious Ru Tc=6.0 min CN=93 Runoff=	Inoff Depth>2.25" 1.50 cfs 0.110 af
Subcatchment 509: TO WB2	Runoff Area=0.367 ac 31.88% Impervious Ru Tc=6.0 min CN=79 Runoff=	unoff Depth>1.19" 0.50 cfs 0.036 af
Subcatchment 510: Flow to Wetlands (NE) F	Runoff Area=1.435 ac 0.00% Impervious Ru Flow Length=170' Tc=8.3 min CN=70 Runoff=	unoff Depth>0.71" 0.96 cfs 0.085 af
Reach 501R: CONVEYANCE SWALE Av n=0.040 L=150	/g. Flow Depth=0.25' Max Vel=3.48 fps Inflow= 0.0' S=0.0800 '/' Capacity=37.40 cfs Outflow=	2.38 cfs 0.180 af 2.35 cfs 0.180 af

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Reach 502R: COLLECTOR S	WALE Avg. Flow Depth=0.47' Max Vel=1.46 fps Inflow=2.25 cfs n=0.035 L=320.0' S=0.0050 '/' Capacity=15.02 cfs Outflow=2.03 cfs	0.161 af 0.161 af
Reach 503R: ROAD DITCH	Avg. Flow Depth=0.50' Max Vel=2.92 fps Inflow=5.14 cfs n=0.035 L=100.0' S=0.0200 '/' Capacity=38.03 cfs Outflow=5.09 cfs	0.371 af 0.371 af
Reach E1R: Bloods Brook	Inflow=0.99 cfs Outflow=0.99 cfs	0.071 af 0.071 af
Pond 401P: CB4	Peak Elev=896.24' Inflow=1.02 cfs 12.0" Round Culvert n=0.013 L=40.0' S=0.0100 '/' Outflow=1.02 cfs	0.073 af 0.073 af
Pond 501P: CB1	Peak Elev=904.40' Inflow=0.94 cfs 12.0" Round Culvert n=0.013 L=160.0' S=0.0200 '/' Outflow=0.94 cfs	0.075 af 0.075 af
Pond 502P: CB2	Peak Elev=901.09' Inflow=1.99 cfs 15.0" Round Culvert n=0.013 L=160.0' S=0.0400 '/' Outflow=1.99 cfs	0.152 af 0.152 af
Pond 503P: CB3	Peak Elev=894.59' Inflow=2.38 cfs 12.0" Round Culvert n=0.013 L=120.0' S=0.0500 '/' Outflow=2.38 cfs	0.180 af 0.180 af
Pond 504P: FB1	Peak Elev=877.46' Storage=2,030 cf Inflow=5.02 cfs Outflow=4.98 cfs	0.487 af 0.487 af
Pond 505P: WB1	Peak Elev=875.30' Storage=19,109 cf Inflow=5.13 cfs Outflow=0.29 cfs	0.500 af 0.297 af
Pond 506P: CB5	Peak Elev=889.28' Inflow=1.50 cfs 12.0" Round Culvert n=0.013 L=124.0' S=0.0550 '/' Outflow=1.50 cfs	0.110 af 0.110 af
Pond 507P: FB2	Peak Elev=883.60' Storage=3,306 cf Inflow=7.80 cfs Outflow=7.60 cfs	0.570 af 0.570 af
Pond 508P: WB2	Peak Elev=884.01' Storage=18,265 cf Inflow=8.08 cfs Outflow=1.29 cfs	0.606 af 0.599 af
Pond E1P: Low Area	Peak Elev=902.40' Storage=5,164 cf Inflow=1.43 cfs Outflow=0.88 cfs	0.122 af 0.119 af
Pond E2P: Exist. 24" RCP	Peak Elev=895.02' Inflow=2.99 cfs 24.0" Round Culvert n=0.012 L=109.0' S=0.0046 '/' Outflow=2.99 cfs	0.312 af 0.312 af
Pond E3P: Exist. CB	Peak Elev=896.59' Inflow=1.25 cfs 12.0" Round Culvert n=0.013 L=252.0' S=0.0202 '/' Outflow=1.25 cfs	0.090 af 0.090 af
Link OP1: EXIST. 24" RCP	Inflow=2.99 cfs Primary=2.99 cfs	0.312 af 0.312 af
Link OP2: BLOODS BROOK	Inflow=3.10 cfs Primary=3.10 cfs	1.052 af 1.052 af

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Type III 24-hr 2 Year Storm Rainfall=3.00"

204.02_POST-DEV

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Total Runoff Area = 12.710 ac Runoff Volume = 1.579 af Average Runoff Depth = 1.49" 68.24% Pervious = 8.673 ac 31.76% Impervious = 4.037 ac

204.02_POST-DEV	Type III 24-hr 10 Year Storm Rainfall=4.44
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Time span=1.00-2	24.00 hrs, dt=0.02 hrs, 1151 points
Runoff by SCS TR-2 Reach routing by Stor-Ind+Tra	20 method, UH=SCS, Weighted-CN
Subcatchment101: Flow to SE Wetland	Runoff Area=0.648 ac 7.56% Impervious Runoff Depth>2.49"
	1C=6.0 min CN=81 Runoff=1.89 cfs 0.135 at
Subcatchment 201: To Low Area On-Site	Runoff Area=1.444 ac 0.00% Impervious Runoff Depth>2.08
Fl	low Length=282' Tc=10.0 min CN=76 Runoff=3.06 cfs 0.250 af
Subcatchment 301: Flow to 24" RCP	Runoff Area=2.050 ac 11.12% Impervious Runoff Depth>2.24
F	Flow Length=196' Tc=6.0 min CN=78 Runoff=5.38 cfs 0.383 at
Subcatchment 401: TO CB4	Runoff Area=0 480 ac 58 33% Impervious Runoff Depth>3 14"
Subcatchinent 401. 10 OD4	Tc=6.0 min CN=88 Runoff=1.73 cfs 0.125 af
Subsetshment 402: To Evist CD	Bunoff Araa-0.094 aa. 99.100/ Imporizioua, Bunoff Donthe 2.96
Subcatchment 402: 10 Exist. CB	Tc= 6.0 min CN= $95 \text{ Runoff}=0.35 \text{ cfs}$ 0.027 af
Subcatchment 501: TO CB1	Runoff Area=0.325 ac 100.00% Impervious Runoff Depth>4.20"
Subcatchment 502: TO CB2	Runoff Area=0.394 ac 82.23% Impervious Runoff Depth>3.75
	I C=6.0 min CN=94 Runoff=1.62 cfs 0.123 at
Subcatchment 503: TO CB3	Runoff Area=0.205 ac 48.78% Impervious Runoff Depth>2.95
	Tc=6.0 min CN=86 Runoff=0.70 cfs 0.050 af
Subcatchment 504: TO FOREBAY	Runoff Area=1.334 ac 38.98% Impervious Runoff Depth>2.50"
	Tc=0.0 min CN=81 Runoff=4.71 cfs 0.278 af
Subcatchment 505: TO COLLECTOR	Runoff Area=0 977 ac 33 78% Impervious Runoff Depth>3 34"
	Tc=6.0 min CN=90 Runoff=3.71 cfs 0.272 af
	Dunoff Area 0.221 ca. 0.000/ Imparisiona Dunoff Danth 1.62
Subcatchment 506: TO WB1	Tc=6.0 min CN=70 Runoff=0.43 cfs 0.031 af
Subcatchment 507: FLOW TO SWALE/FB2	Runoff Area=2.150 ac 70.70% Impervious Runoff Depth>3.44"
Subcatchment 508: TO CB5	Runoff Area=0.586 ac 29.01% Impervious Runoff Depth>3.65
	1C=6.0 min CN=93 Runon=2.37 cis 0.178 ai
Subcatchment 509: TO WB2	Runoff Area=0.367 ac 31.88% Impervious Runoff Depth>2.32
	Tc=6.0 min CN=79 Runoff=1.00 cfs 0.071 af
Subcatchment 510: Flow to Wetlands (NE)	Runoff Area=1.435 ac 0.00% Impervious Runoff Depth>1.63
ŕ	Flow Length=170' Tc=8.3 min CN=70 Runoff=2.45 cfs 0.195 af
Reach 501R: CONVEYANCE SWALE	vg. Flow Depth=0.32' Max Vel=3.98 fps Inflow=3.73 cfs 0.287 af
n=0.040 L=150	50.0' S=0.0800 '/' Capacity=37.40 cfs Outflow=3.69 cfs 0.287 af

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204.02_POST-DEV	Type III 24-hr 10 Year Storm Rainfall=	=4.44"
Prepared by Fieldstone Lan	d Consultants, PLLC	
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Reach 502R: COLLECTOR S	WALE Avg. Flow Depth=0.62' Max Vel=1.69 fps Inflow=3.71 cfs 0. n=0.035 L=320.0' S=0.0050 '/' Capacity=15.02 cfs Outflow=3.40 cfs 0.	.272 af .271 af
Reach 503R: ROAD DITCH	Avg. Flow Depth=0.64' Max Vel=3.33 fps Inflow=8.35 cfs 0. n=0.035 L=100.0' S=0.0200 '/' Capacity=38.03 cfs Outflow=8.27 cfs 0.	.616 af .616 af
Reach E1R: Bloods Brook	Inflow=1.89 cfs 0. Outflow=1.89 cfs 0.	.135 af .135 af
Pond 401P: CB4	Peak Elev=896.45' Inflow=1.73 cfs 0. 12.0" Round Culvert n=0.013 L=40.0' S=0.0100 '/' Outflow=1.73 cfs 0.	.125 af .125 af
Pond 501P: CB1	Peak Elev=904.53' Inflow=1.41 cfs 0. 12.0" Round Culvert n=0.013 L=160.0' S=0.0200 '/' Outflow=1.41 cfs 0.	.114 af .114 af
Pond 502P: CB2	Peak Elev=901.30' Inflow=3.03 cfs 0. 15.0" Round Culvert n=0.013 L=160.0' S=0.0400 '/' Outflow=3.03 cfs 0.	.237 af .237 af
Pond 503P: CB3	Peak Elev=895.17' Inflow=3.73 cfs 0. 12.0" Round Culvert n=0.013 L=120.0' S=0.0500 '/' Outflow=3.73 cfs 0.	.287 af .287 af
Pond 504P: FB1	Peak Elev=877.65' Storage=2,233 cf Inflow=8.49 cfs 0. Outflow=8.44 cfs 0.	.835 af .835 af
Pond 505P: WB1	Peak Elev=876.39' Storage=25,636 cf Inflow=8.82 cfs 0. Outflow=1.21 cfs 0.	.866 af .607 af
Pond 506P: CB5	Peak Elev=889.51' Inflow=2.37 cfs 0. 12.0" Round Culvert n=0.013 L=124.0' S=0.0550 '/' Outflow=2.37 cfs 0.	.178 af .178 af
Pond 507P: FB2	Peak Elev=883.84' Storage=3,652 cf Inflow=12.67 cfs 0. Outflow=12.35 cfs 0.	.946 af .945 af
Pond 508P: WB2	Peak Elev=884.59' Storage=22,464 cf Inflow=13.31 cfs 1. Outflow=5.80 cfs 1.	.016 af .005 af
Pond E1P: Low Area	Peak Elev=902.58' Storage=5,843 cf Inflow=3.06 cfs 0. Outflow=2.33 cfs 0.	.250 af .247 af
Pond E2P: Exist. 24" RCP	Peak Elev=895.49' Inflow=6.64 cfs 0. 24.0" Round Culvert n=0.012 L=109.0' S=0.0046 '/' Outflow=6.64 cfs 0.	.629 af .629 af
Pond E3P: Exist. CB	Peak Elev=896.81' Inflow=2.09 cfs 0. 12.0" Round Culvert n=0.013 L=252.0' S=0.0202 '/' Outflow=2.09 cfs 0.	.153 af .153 af
Link OP1: EXIST. 24" RCP	Inflow=6.64 cfs 0. Primary=6.64 cfs 0.	.629 af .629 af
Link OP2: BLOODS BROOK	Inflow=8.87 cfs 1. Primary=8.87 cfs 1.	.942 af .942 af

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Greater Waste Solutions, LLC204.02_POST-DEVType III 24-hr10 Year Storm Rainfall=4.44"Prepared by Fieldstone Land Consultants, PLLCHydroCAD® 10.00-19 s/n 06037 © 2016 HydroCAD Software Solutions LLCPage 26

Total Runoff Area = 12.710 ac Runoff Volume = 2.847 af Average Runoff Depth = 2.69" 68.24% Pervious = 8.673 ac 31.76% Impervious = 4.037 ac

204.02_POST-DEV	Type III 24-hr 50 Year Storm R	ainfall=6.57"
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Time span=1.00-2 Rupoff by SCS TR-2	4.00 hrs, dt=0.02 hrs, 1151 points	
Reach routing by Stor-Ind+Tra	ns method - Pond routing by Stor-Ind method	
Subcatchment 101: Flow to SE Wetland	Runoff Area=0.648 ac 7.56% Impervious Runo	off Depth>4.40"
	Tc=6.0 min CN=81 Runoff=3.3	31 cfs 0.238 af
Subcatchment 201: To Low Area On-Site	Runoff Area=1.444 ac 0.00% Impervious Runo	off Depth>3.87"
FI	ow Length=282' Tc=10.0 min CN=76 Runoff=5.7	73 cfs 0.466 af
Subcatchment 301: Flow to 24" RCP	Runoff Area=2.050 ac 11.12% Impervious Runo	off Depth>4.08"
F	Flow Length=196' Tc=6.0 min CN=78 Runoff=9.7	78 cfs 0.697 af
Subcatchment 401: TO CB4	Runoff Area=0.480 ac 58.33% Impervious Runo	off Depth>5.17"
	1 C=6.0 min CN=88 Runoff=2.7	'9 cfs 0.207 af
Subcatchment 402: To Exist. CB	Runoff Area=0.084 ac 88.10% Impervious Runo	off Depth>5.97"
		JU CIU U.U42 AI
Subcatchment 501: TO CB1	Runoff Area=0.325 ac 100.00% Impervious Runo Tc=6.0 min CN=98 Runoff=2.0	off Depth>6.33")9 cfs_0.171 af
		# Danth 5 00
Subcatchment 502: TO CB2	Tc=6.0 min CN=94 Runoff=2.4	17 cfs 0.192 af
Subcatchment 503: TO CB3	Runoff Area-0 205 ac 48 78% Impervious Runo	off Denth>4 95"
	Tc=6.0 min CN=86 Runoff=1.1	15 cfs 0.085 af
Subcatchment 504: TO FOREBAY	Runoff Area=1.334 ac 38.98% Impervious Runo	off Depth>4.41"
	Tc=0.0 min CN=81 Runoff=8.2	22 cfs 0.490 af
Subcatchment 505: TO COLLECTOR	Runoff Area=0.977 ac 33.78% Impervious Runo	off Depth>5.40"
	Tc=6.0 min CN=90 Runoff=5.8	35 cfs 0.439 af
Subcatchment 506: TO WB1	Runoff Area=0.231 ac 0.00% Impervious Runo	off Depth>3.26"
	I c=6.0 min CN=70 Runoff=0.8	38 cfs 0.063 af
Subcatchment 507: FLOW TO SWALE/FB2	Runoff Area=2.150 ac 70.70% Impervious Runo	off Depth>5.51"
		JU CIS 0.907 al
Subcatchment 508: TO CB5	Runoff Area=0.586 ac 29.01% Impervious Runo Tc=6.0 min CN=93 Runoff=3.6	off Depth>5.74" 64 cfs_0.280 af
Subcatchment 509: TO WB2	Tc=6.0 min CN=79 Runoff=1.7	79 cfs 0.128 af
Subcatchment 510: Flow to Wotlands (NE)	Runoff Area-1 435 ac 0.00% Impervious Pupe	off Denth-3 26"
For the rest of th	Flow Length=170' Tc= 8.3 min CN= 70 Runoff= 5.0)5 cfs 0.390 af
Reach 501R: CONVEYANCE SWALE	vg. Flow Depth=0.40' Max Vel=4.50 fps Inflow=5.7	72 cfs 0.448 af
n=0.040 L=150	0.0' S=0.0800 '/' Capacity=37.40 cfs Outflow=5.6	65 cfs 0.448 af

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Reach 502R: COLLECTOR S	WALE Avg. Flow Depth=0.79' Max Vel=1.92 fps Inflow=5.85 cfs n=0.035 L=320.0' S=0.0050 '/' Capacity=15.02 cfs Outflow=5.44 cfs	0.439 af 0.438 af
Reach 503R: ROAD DITCH	Avg. Flow Depth=0.79' Max Vel=3.75 fps Inflow=13.05 cfs n=0.035 L=100.0' S=0.0200 '/' Capacity=38.03 cfs Outflow=12.92 cfs	0.987 af 0.987 af
Reach E1R: Bloods Brook	Inflow=3.31 cfs Outflow=3.31 cfs	0.238 af 0.238 af
Pond 401P: CB4	Peak Elev=896.76' Inflow=2.79 cfs 12.0" Round Culvert n=0.013 L=40.0' S=0.0100 '/' Outflow=2.79 cfs	0.207 af 0.207 af
Pond 501P: CB1	Peak Elev=904.71' Inflow=2.09 cfs 12.0" Round Culvert n=0.013 L=160.0' S=0.0200 '/' Outflow=2.09 cfs	0.171 af 0.171 af
Pond 502P: CB2	Peak Elev=901.61' Inflow=4.56 cfs 15.0" Round Culvert n=0.013 L=160.0' S=0.0400 '/' Outflow=4.56 cfs	0.364 af 0.364 af
Pond 503P: CB3	Peak Elev=896.48' Inflow=5.72 cfs 12.0" Round Culvert n=0.013 L=120.0' S=0.0500 '/' Outflow=5.72 cfs	0.448 af 0.448 af
Pond 504P: FB1	Peak Elev=877.90' Storage=2,530 cf Inflow=13.76 cfs Outflow=13.75 cfs	1.376 af 1.375 af
Pond 505P: WB1	Peak Elev=876.98' Storage=29,974 cf Inflow=14.61 cfs Outflow=10.50 cfs	1.438 af 1.143 af
Pond 506P: CB5	Peak Elev=890.05' Inflow=3.64 cfs 12.0" Round Culvert n=0.013 L=124.0' S=0.0550 '/' Outflow=3.64 cfs	0.280 af 0.280 af
Pond 507P: FB2	Peak Elev=884.14' Storage=4,116 cf Inflow=19.81 cfs Outflow=19.37 cfs	1.516 af 1.515 af
Pond 508P: WB2	Peak Elev=884.98' Storage=25,478 cf Inflow=21.11 cfs Outflow=16.59 cfs	1.643 af 1.627 af
Pond E1P: Low Area	Peak Elev=902.80' Storage=6,542 cf Inflow=5.73 cfs Outflow=5.05 cfs	0.466 af 0.461 af
Pond E2P: Exist. 24" RCP	Peak Elev=896.20' Inflow=13.07 cfs 24.0" Round Culvert n=0.012 L=109.0' S=0.0046 '/' Outflow=13.07 cfs	1.158 af 1.158 af
Pond E3P: Exist. CB	Peak Elev=897.27' Inflow=3.32 cfs 12.0" Round Culvert n=0.013 L=252.0' S=0.0202 '/' Outflow=3.32 cfs	0.249 af 0.249 af
Link OP1: EXIST. 24" RCP	Inflow=13.07 cfs Primary=13.07 cfs	1.158 af 1.158 af
Link OP2: BLOODS BROOK	Inflow=31.83 cfs Primary=31.83 cfs	3.397 af 3.397 af

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Total Runoff Area = 12.710 ac Runoff Volume = 4.875 af Average Runoff Depth = 4.60" 68.24% Pervious = 8.673 ac 31.76% Impervious = 4.037 ac

	Tv	no III 21-hr	Great	er Waste So	olutions, LLC
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Time span=1.00-2 Runoff by SCS TR-2 Reach routing by Stor-Ind+Trai	4.00 hrs, dt=0. 20 method, UH ns method - F	02 hrs, 1151 SCS, Weig Pond routing l	points hted-CN by Stor-In	nd method	
Subcatchment 101: Flow to SE Wetland	Runoff Area=	0.648 ac 7.5 Tc=6.0 mir	6% Imperv 0 CN=81	vious Runoff Runoff=4.13	f Depth>5.54" 3 cfs 0.299 af
Subcatchment 201: To Low Area On-Site	Runoff Area= ow Length=282'	1.444 ac 0.0 Tc=10.0 mir	0% Imper CN=76	vious Runof Runoff=7.31	f Depth>4.96" I cfs_0.597 af
Subcatchment 301: Flow to 24" RCP	Runoff Area=2 ow Length=196'	.050 ac 11.1 Tc=6.0 min	2% Imper CN=78	vious Runof Runoff=12.36	f Depth>5.19" 5 cfs 0.887 af
Subcatchment 401: TO CB4	Runoff Area=0	.480 ac 58.3 Tc=6.0 mir	3% Imperv 0 CN=88	vious Runof Runoff=3.40	f Depth>6.36") cfs 0.254 af
Subcatchment 402: To Exist. CB	Runoff Area=0	.084 ac 88.1 Tc=6.0 mir	0% Imper 0 CN=95	vious Runof Runoff=0.63	f Depth>7.19" 3 cfs 0.050 af
Subcatchment 501: TO CB1	Runoff Area=0.3	325 ac 100.0 Tc=6.0 mir	0% Imperv 0 CN=98	vious Runof Runoff=2.48	f Depth>7.54" 3 cfs 0.204 af
Subcatchment 502: TO CB2	Runoff Area=0	.394 ac 82.2 Tc=6.0 mir	3% Imper 0 CN=94	vious Runof Runoff=2.95	f Depth>7.07" 5 cfs_0.232 af
Subcatchment 503: TO CB3	Runoff Area=0	.205 ac 48.7 Tc=6.0 mir	8% Imperv 0 CN=86	vious Runof Runoff=1.41	f Depth>6.12" I cfs_0.105 af
Subcatchment 504: TO FOREBAY	Runoff Area=1	.334 ac 38.9 Tc=0.0 min	8% Imper CN=81	vious Runof Runoff=10.26	f Depth>5.54" 5 cfs 0.616 af
Subcatchment 505: TO COLLECTOR	Runoff Area=0	.977 ac 33.7 Tc=6.0 mir	8% Imperv 0 CN=90	vious Runof Runoff=7.07	f Depth>6.59" 7 cfs 0.537 af
Subcatchment 506: TO WB1	Runoff Area=	0.231 ac 0.0 Tc=6.0 mir	0% Imper CN=70	vious Runof Runoff=1.16	f Depth>4.28" 5 cfs 0.082 af
Subcatchment 507: FLOW TO SWALE/FB2	Runoff Area=2	.150 ac 70.7 Tc=6.0 min	0% Imper CN=91	vious Runof Runoff=15.71	f Depth>6.71" I cfs 1.203 af
Subcatchment 508: TO CB5	Runoff Area=0	.586 ac 29.0 Tc=6.0 mir	1% Imperv CN=93	vious Runof Runoff=4.36	f Depth>6.95" 5 cfs 0.339 af
Subcatchment 509: TO WB2	Runoff Area=0	.367 ac 31.8 Tc=6.0 mir	8% Imperv 0 CN=79	vious Runof Runoff=2.26	f Depth>5.31" 5 cfs 0.162 af
Subcatchment 510: Flow to Wetlands (NE)	Runoff Area= Flow Length=170	1.435 ac 0.0)' Tc=8.3 mir	0% Imper CN=70	vious Runof Runoff=6.65	f Depth>4.28" 5 cfs 0.512 af
Reach 501R: CONVEYANCE SWALE Av n=0.040 L=150	/g. Flow Depth= 0.0' S=0.0800 '	0.44' Max Ve /' Capacity=3	l=4.73 fps 7.40 cfs	o Inflow=6.85 Outflow=6.77	5 cfs 0.541 af 7 cfs 0.541 af

204.02_POST-DEV	Type III 24-hr 100 Year Storm Rainfa	ll=7.79"
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Reach 502R: COLLECTOR S	SWALE Avg. Flow Depth=0.87' Max Vel=2.02 fps Inflow=7.07 cfs n=0.035 L=320.0' S=0.0050 '/' Capacity=15.02 cfs Outflow=6.61 cfs	0.537 af 0.536 af
Reach 503R: ROAD DITCH	Avg. Flow Depth=0.87' Max Vel=3.94 fps Inflow=15.71 cfs n=0.035 L=100.0' S=0.0200 '/' Capacity=38.03 cfs Outflow=15.56 cfs	1.203 af 1.202 af
Reach E1R: Bloods Brook	Inflow=4.13 cfs Outflow=4.13 cfs	0.299 af 0.299 af
Pond 401P: CB4	Peak Elev=897.11' Inflow=3.40 cfs 12.0" Round Culvert n=0.013 L=40.0' S=0.0100 '/' Outflow=3.40 cfs	0.254 af 0.254 af
Pond 501P: CB1	Peak Elev=904.82' Inflow=2.48 cfs 12.0" Round Culvert n=0.013 L=160.0' S=0.0200 '/' Outflow=2.48 cfs	0.204 af 0.204 af
Pond 502P: CB2	Peak Elev=901.87' Inflow=5.43 cfs 15.0" Round Culvert n=0.013 L=160.0' S=0.0400 '/' Outflow=5.43 cfs	0.436 af 0.436 af
Pond 503P: CB3	Peak Elev=897.48' Inflow=6.85 cfs 12.0" Round Culvert n=0.013 L=120.0' S=0.0500 '/' Outflow=6.85 cfs	0.541 af 0.541 af
Pond 504P: FB1	Peak Elev=878.04' Storage=2,694 cf Inflow=16.97 cfs Outflow=16.89 cfs	1.693 af 1.691 af
Pond 505P: WB1	Peak Elev=877.15' Storage=31,356 cf Inflow=18.02 cfs Outflow=15.79 cfs	1.774 af 1.467 af
Pond 506P: CB5	Peak Elev=890.45' Inflow=4.36 cfs 12.0" Round Culvert n=0.013 L=124.0' S=0.0550 '/' Outflow=4.36 cfs	0.339 af 0.339 af
Pond 507P: FB2	Peak Elev=884.29' Storage=4,371 cf Inflow=23.87 cfs Outflow=23.38 cfs	1.846 af 1.844 af
Pond 508P: WB2	Peak Elev=885.16' Storage=26,984 cf Inflow=25.55 cfs Outflow=19.86 cfs	2.007 af 1.987 af
Pond E1P: Low Area	Peak Elev=902.93' Storage=6,832 cf Inflow=7.31 cfs Outflow=6.70 cfs	0.597 af 0.591 af
Pond E2P: Exist. 24" RCP	Peak Elev=896.89' Inflow=17.07 cfs 24.0" Round Culvert n=0.012 L=109.0' S=0.0046 '/' Outflow=17.07 cfs	1.478 af 1.478 af
Pond E3P: Exist. CB	Peak Elev=897.63' Inflow=4.03 cfs 12.0" Round Culvert n=0.013 L=252.0' S=0.0202 '/' Outflow=4.03 cfs	0.305 af 0.305 af
Link OP1: EXIST. 24" RCP	Inflow=17.07 cfs Primary=17.07 cfs	1.478 af 1.478 af
Link OP2: BLOODS BROOK	Inflow=44.35 cfs Primary=44.35 cfs	4.265 af 4.265 af

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Total Runoff Area = 12.710 ac Runoff Volume = 6.080 af Average Runoff Depth = 5.74" 68.24% Pervious = 8.673 ac 31.76% Impervious = 4.037 ac

Section 2.2

Proposed Conditions 25 Year Storm Full Summary



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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.401	74	>75% Grass cover, Good, HSG C (201, 301, 401, 402, 502, 503, 504, 505, 506,
		507, 508, 509, 510)
1.542	80	>75% Grass cover, Good, HSG D (101, 201, 301)
1.175	65	Brush, Good, HSG C (301, 504, 505, 506, 507, 509, 510)
0.544	73	Brush, Good, HSG D (201, 301)
0.867	96	Gravel surface, HSG C (505, 507, 508)
3.057	98	Paved parking, HSG C (301, 401, 402, 501, 502, 503, 504, 505, 507, 508, 509)
0.300	98	Paved parking, HSG D (101, 301, 501)
0.680	98	Roofs, HSG C (401, 402, 502, 504, 507, 508)
0.925	70	Woods, Good, HSG C (301, 504, 506, 510)
1.219	77	Woods, Good, HSG D (101, 201, 301)
12.710	83	TOTAL AREA

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Soil Listing (all nodes)

Area	Soil	Subcatchment
(acres)	Group	Numbers
0.000	HSG A	
0.000	HSG B	
9.105	HSG C	201, 301, 401, 402, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510
3.605	HSG D	101, 201, 301, 501
0.000	Other	
12.710		TOTAL AREA

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	401P	895.70	895.30	40.0	0.0100	0.013	12.0	0.0	0.0
2	501P	903.90	900.70	160.0	0.0200	0.013	12.0	0.0	0.0
3	502P	900.40	894.00	160.0	0.0400	0.013	15.0	0.0	0.0
4	503P	893.70	887.70	120.0	0.0500	0.013	12.0	0.0	0.0
5	505P	870.70	870.00	35.0	0.0200	0.013	18.0	0.0	0.0
6	506P	888.62	881.80	124.0	0.0550	0.013	12.0	0.0	0.0
7	508P	878.80	878.00	40.0	0.0200	0.013	18.0	0.0	0.0
8	E2P	894.20	893.70	109.0	0.0046	0.012	24.0	0.0	0.0
9	E3P	896.00	890.90	252.0	0.0202	0.013	12.0	0.0	0.0
204.02_POST-DEV	Type III 24-hr 25 Year Storm Rair	nfall=5.55"							
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Prepared by Fieldstone Land Consultants	s, PLLC	Dago 27							
<u>nyalocAD© 10.00-19 Sil 00057 © 2010 nyaloc</u>		Page 37							
Time span=1.00-2	24.00 hrs, dt=0.02 hrs, 1151 points								
Runoff by SCS TR-2 Reach routing by Stor-Ind+Tra	ns method - Pond routing by Stor-Ind method								
· · · · · · · · · · · · · · · · · · ·									
Subcatchment101: Flow to SE Wetland	Runoff Area=0.648 ac 7.56% Impervious Runoff E Tc=6.0 min CN=81 Runoff=2.63 c	Depth>3.47" ofs_0_188.af							
Subcatchment 201: To Low Area On-Site	Runoff Area=1.444 ac 0.00% Impervious Runoff E	Depth>2.99"							
	low Length-202 10-10.0 min -01-70 10000-4.42 0	13 0.000 ai							
Subcatchment 301: Flow to 24" RCP	Runoff Area=2.050 ac 11.12% Impervious Runoff E	Depth>3.18"							
F	Flow Length=196 TC=6.0 min CN=78 Runoff=7.64 c	cts 0.543 at							
Subcatchment 401: TO CB4	Runoff Area=0.480 ac 58.33% Impervious Runoff D	Depth>4.19"							
	Tc=6.0 min CN=88 Runoff=2.29 c	ofs 0.168 af							
Subcatchment 402: To Exist. CB	Runoff Area=0.084 ac 88.10% Impervious Runoff E	Depth>4.96"							
	Tc=6.0 min CN=95 Runoff=0.45 c	ofs 0.035 af							
Subcatchment 501: TO CB1	Runoff Area=0.325 ac 100.00% Impervious Runoff E	Depth>5.31"							
	Tc=6.0 min CN=98 Runoff=1.76 c	cfs 0.144 af							
Subcatchment 502: TO CB2	Runoff Area=0.394 ac 82.23% Impervious Runoff D	Depth>4.85"							
	Tc=6.0 min CN=94 Runoff=2.07 c	ofs 0.159 af							
Subcatchment 503: TO CB3	Runoff Area-0 205 ac 48 78% Impervious Runoff F)enth>3 98"							
	Tc=6.0 min CN=86 Runoff=0.94 c	ofs 0.068 af							
Subactabrant 504, TO EODEDAV	Pupoff Aroa-1 334 ac 38 08% Imporvious Pupoff F)onth>3 /8"							
Subcatchinent 504: TO FOREBAT	Tc=0.0 min CN=81 Runoff=6.53 c	ofs 0.386 af							
		Denth: 4.40"							
Subcatchment 505: TO COLLECTOR	Tc=6.0 min CN=90 Runoff=4.83 c	ofs 0.359 af							
Subcatchment 506: TO WB1	Runoff Area=0.231 ac 0.00% Impervious Runoff L Tc=6.0 min CN=70 Runoff=0.66 c	peptn>2.45 ofs 0.047 af							
Subcatchment 507: FLOW TO SWALE/FB2	Runoff Area=2.150 ac 70.70% Impervious Runoff E	Depth>4.51" Sts_0 809 af							
		10 0.000 ai							
Subcatchment 508: TO CB5	Runoff Area=0.586 ac 29.01% Impervious Runoff E	Depth>4.73"							
	1C=0.0 min CN=93 Kunon=3.03 C	15 U.251 al							
Subcatchment 509: TO WB2	Runoff Area=0.367 ac 31.88% Impervious Runoff E	Depth>3.28"							
	1C=6.0 min CN=79 Runon=1.41 C	rs 0.100 ar							
Subcatchment 510: Flow to Wetlands (NE)	Runoff Area=1.435 ac 0.00% Impervious Runoff E	Depth>2.45							
F	Flow Length=170′ Tc=8.3 min CN=70 Runoff=3.77 c	ots 0.293 af							
Reach 501R: CONVEYANCE SWALE Av	vg. Flow Depth=0.36' Max Vel=4.27 fps Inflow=4.77 c	cfs 0.371 af							
n=0.040 L=150	0.0' S=0.0800 '/' Capacity=37.40 cfs Outflow=4.71 c	ofs 0.371 af							

204.02_POST-DEV Prepared by Fieldstone Lan	Great <i>Type III 24-hr 25 Yea</i> d Consultants. PLLC	er Waste Solutions, LLC ar Storm Rainfall=5.55"
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Reach 502R: COLLECTOR S	WALE Avg. Flow Depth=0.72' Max Vel=1.82 fps n=0.035 L=320.0' S=0.0050 '/' Capacity=15.02 cfs	Inflow=4.83 cfs 0.359 af Outflow=4.46 cfs 0.358 af
Reach 503R: ROAD DITCH	Avg. Flow Depth=0.72' Max Vel=3.57 fps n=0.035 L=100.0' S=0.0200 '/' Capacity=38.03 cfs C	Inflow=10.81 cfs 0.809 af Outflow=10.70 cfs 0.808 af
Reach E1R: Bloods Brook		Inflow=2.63 cfs 0.188 af Outflow=2.63 cfs 0.188 af
Pond 401P: CB4	Peak Elev=896.61' 12.0" Round Culvert n=0.013 L=40.0' S=0.0100 '/'	Inflow=2.29 cfs 0.168 af Outflow=2.29 cfs 0.168 af
Pond 501P: CB1	Peak Elev=904.62' 12.0" Round Culvert n=0.013 L=160.0' S=0.0200 '/'	Inflow=1.76 cfs 0.144 af Outflow=1.76 cfs 0.144 af
Pond 502P: CB2	Peak Elev=901.45' 15.0" Round Culvert n=0.013 L=160.0' S=0.0400 '/'	Inflow=3.83 cfs 0.303 af Outflow=3.83 cfs 0.303 af
Pond 503P: CB3	Peak Elev=895.79' 12.0" Round Culvert n=0.013 L=120.0' S=0.0500 '/'	Inflow=4.77 cfs 0.371 af Outflow=4.77 cfs 0.371 af
Pond 504P: FB1	Peak Elev=877.78' Storage=2,389 cf	Inflow=11.21 cfs 1.115 af Outflow=11.16 cfs 1.114 af
Pond 505P: WB1	Peak Elev=876.78' Storage=28,463 cf	Inflow=11.79 cfs 1.161 af Outflow=5.53 cfs 0.880 af
Pond 506P: CB5	Peak Elev=889.76' 12.0" Round Culvert n=0.013 L=124.0' S=0.0550 '/'	Inflow=3.03 cfs 0.231 af Outflow=3.03 cfs 0.231 af
Pond 507P: FB2	Peak Elev=884.00' Storage=3,897 cf C	Inflow=16.40 cfs 1.242 af Outflow=16.03 cfs 1.240 af
Pond 508P: WB2	Peak Elev=884.81' Storage=24,159 cf C	Inflow=17.40 cfs 1.341 af Dutflow=11.45 cfs 1.327 af
Pond E1P: Low Area	Peak Elev=902.70' Storage=6,249 cf	Inflow=4.42 cfs 0.360 af Outflow=3.69 cfs 0.356 af
Pond E2P: Exist. 24" RCP	Peak Elev=895.85' 24.0" Round Culvert n=0.012 L=109.0' S=0.0046 '/'	Inflow=9.88 cfs 0.899 af Outflow=9.88 cfs 0.899 af
Pond E3P: Exist. CB	Peak Elev=897.02' 12.0" Round Culvert n=0.013 L=252.0' S=0.0202 '/'	Inflow=2.73 cfs 0.202 af Outflow=2.73 cfs 0.202 af
Link OP1: EXIST. 24" RCP		Inflow=9.88 cfs 0.899 af Primary=9.88 cfs 0.899 af
Link OP2: BLOODS BROOK	F	Inflow=17.72 cfs 2.688 af primary=17.72 cfs 2.688 af

Greater Waste Solutions, LLC204.02_POST-DEVType III 24-hr25 Year Storm Rainfall=5.55"Prepared by Fieldstone Land Consultants, PLLCHydroCAD® 10.00-19 s/n 06037 © 2016 HydroCAD Software Solutions LLCPage 39

Total Runoff Area = 12.710 ac Runoff Volume = 3.889 af Average Runoff Depth = 3.67" 68.24% Pervious = 8.673 ac 31.76% Impervious = 4.037 ac

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Summary for Subcatchment 101: Flow to SE Wetland

Runoff = 2.63 cfs @ 12.09 hrs, Volume= 0.188 af, Depth> 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

Area (a	ic) (CN	Desc	ription		
0.04	49	98	Pave	d parking	HSG D	
0.43	32	80	>75%	6 Grass co	over, Good	I, HSG D
0.10	67	77	Wood	ds, Good,	HSG D	
0.64	48	81	Weig	hted Aver	age	
0.59	99		92.44	1% Pervio	us Area	
0.04	49		7.56%	% Impervi	ous Area	
Tc L	_ength	S	Slope	Velocity	Capacity	Description
<u>(min)</u>	(feet)		(ft/ft)	(ft/sec)	(cfs)	
6.0						Direct Entry,
						-

Summary for Subcatchment 201: To Low Area On-Site

Runoff = 4.42 cfs @ 12.14 hrs, Volume= 0.360 af, Depth> 2.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

	Area	(ac) (CN	Desc	cription		
	0.	230	74	>75%	6 Grass co	over, Good	, HSG C
	0.	350	80	>75%	6 Grass co	over, Good	, HSG D
	0.	564	77	Woo	ds, Good,	HSG D	
_	0.	300	73	Brus	h, Good, H	ISG D	
	1.	444	76	Weig	hted Aver	age	
	1.	444		100.0	00% Pervi	ous Area	
	Tc (min)	Length (feet)	SI (lope ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.3	82	0.0	500	0.26		Sheet Flow, A=>B
	4.7	200	0.0	200	0.71		Range n= 0.130 P2= 3.00" Shallow Concentrated Flow, B=>C Woodland Kv= 5.0 fps
	10.0	202	Tat	6			

10.0 282 Total

Summary for Subcatchment 301: Flow to 24" RCP

Runoff = 7.64 cfs @ 12.09 hrs, Volume= 0.543 af, Depth> 3.18"

Type III 24-hr 25 Year Storm Rainfall=5.55"

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Area	(ac)	CN	Desc	ription						
0	.191	98	Paved parking, HSG D							
0	.037	98	Pave	aved parking, HSG C						
0	.070	74	>75%	6 Grass co	over, Good,	HSG C				
0	.760	80	>75%	6 Grass co	over, Good,	HSG D				
0	.060	70	Woo	ds, Good,	HSG C					
0	.488	77	Woo	ds, Good,	HSG D					
0	.244	73	Brus	h, Good, H	ISG D					
0	.200	65	Brus	h, Good, H	ISG C					
2	.050	78	Weig	hted Aver	age					
1	.822		88.88	8% Pervio	us Area					
0	.228		11.12	2% Imperv	vious Area					
Тс	Length	n Sle	ope	Velocity	Capacity	Description				
(min)	(feet) (f	ft/ft)	(ft/sec)	(cfs)					
4.0	80	0.10	000	0.34		Sheet Flow, A=>B				
						Range n= 0.130 P2= 3.00"				
1.9	80	0.0	100	0.70		Shallow Concentrated Flow, B=>C				
						Short Grass Pasture Kv= 7.0 fps				
0.1	36	6 0.0 [°]	190	4.27	17.08	Parabolic Channel, C=>D				
						W=6.00' D=1.00' Area=4.0 sf Perim=6.4'				
						n= 0.035 High grass				
6.0	196	5 Tota	al							

Summary for Subcatchment 401: TO CB4

Runoff = 2.29 cfs @ 12.09 hrs, Volume= 0.168 af, Depth> 4.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

Area	(ac)	CN	Desc	cription				
0.	180	98	Roof	s, HSG C				
0.	100	98	Pave	ed parking,	, HSG C			
0.	200	74	>75%	6 Grass co	over, Good,	HSG C		
0.	480	180 88 Weighted Average						
0.	200		41.6	7% Pervio	us Area			
0.	280		58.3	3% Imperv	vious Area			
Тс	Leng	th	Slope	Velocity	Capacity	Description		
(min)	(fee	et)	(ft/ft)	(ft/sec)	(cfs)			
6.0						Direct Entry,		

Summary for Subcatchment 402: To Exist. CB

Runoff = 0.45 cfs @ 12.08 hrs, Volume= 0.035 af, Depth> 4.96"

Type III 24-hr 25 Year Storm Rainfall=5.55"

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Area (a	ac)	CN	Desc	cription		
0.0)10	98	Roof	s, HSG C		
0.0)64	98	Pave	ed parking	, HSG C	
0.0	010	74	>75%	% Grass co	over, Good	, HSG C
0.0)84	95	Weig	phted Aver	age	
0.0	010		11.9	0% Pervio	us Area	
0.0)74		88.1	0% Imperv	/ious Area	
Тс	Lengt	h	Slope	Velocity	Capacity	Description
<u>(min)</u>	(feet	t)	(ft/ft)	(ft/sec)	(cfs)	
6.0	6.0 Direct Entry,					
Summary for Subcatchment 501: TO CB1						

Runoff = 1.76 cfs @ 12.08 hrs, Volume= 0.144 af, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

Area	(ac)	CN	Desc	cription		
0.	060	98	Pave	ed parking	, HSG D	
0.	265	98	Pave	ed parking	, HSG C	
0.	325	98	Weig	phted Aver	age	
0.	325		100.	00% Impe	rvious Area	à
Тс	Leng	th	Slope	Velocity	Capacity	Description
(min)	(fee	et)	(ft/ft)	(ft/sec)	(cfs)	
6.0						Direct Entry,
						• •

Summary for Subcatchment 502: TO CB2

Runoff = 2.07 cfs @ 12.08 hrs, Volume= 0.159 af, Depth> 4.85"

Area	(ac)	CN	Desc	ription				
0.	100	98	Roof	s, HSG C				
0.	224	98	Pave	ed parking,	HSG C			
0.	070	74	>75%	6 Grass co	over, Good,	HSG C		
0.	394	394 94 Weighted Average						
0.	0.070 17.77% Pervious Area							
0.	324		82.23	3% Imperv	vious Area			
Тс	Lena	th	Slope	Velocitv	Capacity	Description		
(min)	(fee	et)	(ft/ft)	(ft/sec)	(cfs)	·		
6.0						Direct Entry,		

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Summary for Subcatchment 503: TO CB3

Runoff = 0.94 cfs @ 12.09 hrs, Volume= 0.068 af, Depth> 3.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

Area	(ac)	CN	Desc	cription			
0.	100	98	Pave	ed parking,	HSG C		
0.	105	74	>75%	% Grass co	over, Good,	, HSG C	
0.	205	86	Weig	phted Aver	age		
0.).105 51.22% Pervious Area						
0.	100		48.7	8% Imperv	vious Area		
Tc (min)	Leng (fee	th et)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
6.0						Direct Entry,	

Summary for Subcatchment 504: TO FOREBAY

Runoff = 6.53 cfs @ 12.00 hrs, Volume= 0.386 af, Depth> 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

A	vrea (ac)	CN	Description
	0.450	98	Paved parking, HSG C
	0.070	98	Roofs, HSG C
	0.034	70	Woods, Good, HSG C
	0.500	74	>75% Grass cover, Good, HSG C
	0.280	65	Brush, Good, HSG C
	1.334	81	Weighted Average
	0.814		61.02% Pervious Area
	0.520		38.98% Impervious Area

Summary for Subcatchment 505: TO COLLECTOR SWALE

Runoff = 4.83 cfs @ 12.08 hrs, Volume= 0.359 af, Depth> 4.40"

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Type III 24-hr 25 Year Storm Rainfall=5.55"

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CN Description Area (ac) 0.330 Paved parking, HSG C 98 0.407 Gravel surface, HSG C 96 0.150 >75% Grass cover, Good, HSG C 74 0.090 65 Brush, Good, HSG C Weighted Average 0.977 90 66.22% Pervious Area 0.647 0.330 33.78% Impervious Area Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs) 6.0 Direct Entry,

Summary for Subcatchment 506: TO WB1

Runoff = 0.66 cfs @ 12.09 hrs, Volume= 0.047 af, Depth> 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

Area	(ac)	CN	Desc	cription		
0.	046	70	Woo	ds, Good,	HSG C	
0.	085	65	Brus	h, Good, F	ISG C	
0.	100	74	>75%	6 Grass co	over, Good	, HSG C
0.	231	70	Weig	hted Aver	age	
0.	231		100.0	00% Pervi	ous Area	
Тс	Leng	th	Slope	Velocity	Capacity	Description
(min)	(fee	et)	(ft/ft)	(ft/sec)	(cfs)	
6.0						Direct Entry,

Summary for Subcatchment 507: FLOW TO SWALE/FB2

Runoff = 10.81 cfs @ 12.08 hrs, Volume= 0.809 af, Depth> 4.51"

Area (ac)	CN	Description
0.250	98	Roofs, HSG C
1.270	98	Paved parking, HSG C
0.130	96	Gravel surface, HSG C
0.300	74	>75% Grass cover, Good, HSG C
0.200	65	Brush, Good, HSG C
2.150	91	Weighted Average
0.630		29.30% Pervious Area
1.520		70.70% Impervious Area

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TIJUIOOA	00 10.00	10 3/11 00	001 @201				·	<u>1 aye 4</u>
Тс	Length	Slope	Velocity	Capacity	Description			
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
6.0					Direct Ent	ſ y ,		
			Summa	ary for Su	ıbcatchme	nt 508: 1	ГО СВ5	
Runoff	=	3.03 cf	s@ 12.0	8 hrs, Volu	ıme=	0.231 af,	Depth> 4.73"	
Runoff b Type III :	y SCS T 24-hr 25	R-20 metl Year Sto	nod, UH=S rm Rainfal	SCS, Weigh I=5.55"	ited-CN, Tim	e Span= 1	.00-24.00 hrs, dt= 0.02 hrs	3
Area	(ac) (CN Des	cription					
0.	.070	98 Roo	fs, HSG C					
0.	.100	98 Pave	ed parking	, HSG C				
0.	.330	96 Grav	vel surface	, HSG C				
0	.086	74 >75	% Grass c	over, Good	, HSG C			
0.	.586	93 Weig	ghted Ave	rage				
0.	.416	70.9	9% Pervio	us Area				
0.	.170	29.0	1% Imperv	vious Area				
Тс	l enath	Slope	Velocity	Canacity	Description			
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	200011011			
6.0				()	Direct Ent	ry,		

Summary for Subcatchment 509: TO WB2

Runoff = 1.41 cfs @ 12.09 hrs, Volume= 0.100 af, Depth> 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

 Area	(ac)	CN	Desc	ription			
0.	117	98	Pave	d parking	, HSG C		
0.	150	74	>75%	6 Grass co	over, Good	, HSG C	
 0.	100	65	Brus	h, Good, F	ISG C		
0.	367	79	Weig	hted Aver	age		
0.	250		68.1	2% Pervio	us Area		
0.	117		31.88	8% Imperv	vious Area		
Тс	Leng	h :	Slope	Velocity	Capacity	Description	
 (min)	(fee	t)	(ft/ft)	(ft/sec)	(cfs)		
6.0						Direct Entry,	
						-	
Commence for Code actalement F40, Flow to Matlenda (NF)							

Summary for Subcatchment 510: Flow to Wetlands (NE)

Runoff 3.77 cfs @ 12.12 hrs, Volume= 0.293 af, Depth> 2.45" =

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Type III 24-hr 25 Year Storm Rainfall=5.55"

204.02 POST-DEV

Greater Waste Solutions, LLC Type III 24-hr 25 Year Storm Rainfall=5.55"

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Greater Waste Solutions, LLC Type III 24-hr 25 Year Storm Rainfall=5.55"

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Area (ac) C	N Des	cription			
0.4	430	74 >75	% Grass co	over, Good,	HSG C	
0.7	785	70 Woo	ods, Good,	HSG C		
0.2	220 (65 Brus	sh, Good, H	HSG C		
1.4	435	70 Wei	ghted Aver	rage		
1.4	435	100	.00% Pervi	ious Area		
-		<u></u>		o		
IC	Length	Slope	Velocity	Capacity	Description	
<u>(min)</u>	(feet)	(ft/ft)	(ft/sec)	(CIS)		
7.5	80	0.0200	0.18		Sheet Flow, A=>B	
					Range n= 0.130 P2= 3.00"	
0.8	90	0.0670	1.81		Shallow Concentrated Flow, B=>C	
					Short Grass Pasture Kv= 7.0 fps	
8.3	170	Total				

Summary for Reach 501R: CONVEYANCE SWALE

Inflow Ar	ea =	0.924 ac, 81.06% Impervious, Ir	flow Depth > 4.82 " for 25	Year Storm event
Inflow	=	4.77 cfs @ 12.08 hrs, Volume=	0.371 af	
Outflow	=	4.71 cfs @ 12.10 hrs, Volume=	0.371 af, Atten= 1%,	Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Max. Velocity= 4.27 fps, Min. Travel Time= 0.6 min Avg. Velocity = 1.21 fps, Avg. Travel Time= 2.1 min

Peak Storage= 167 cf @ 12.09 hrs Average Depth at Peak Storage= 0.36' Bank-Full Depth= 1.00' Flow Area= 5.0 sf, Capacity= 37.40 cfs

2.00' x 1.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides Side Slope Z-value= 3.0 '/' Top Width= 8.00' Length= 150.0' Slope= 0.0800 '/' Inlet Invert= 887.70', Outlet Invert= 875.70'



Summary for Reach 502R: COLLECTOR SWALE

Inflow Are	ea =	0.977 ac, 🕻	33.78% Impervious,	Inflow Depth > 4.	40" for 25	Year Storm event
Inflow	=	4.83 cfs @	12.08 hrs, Volume	= 0.359 af		
Outflow	=	4.46 cfs @	12.17 hrs, Volume	= 0.358 af,	Atten= 8%,	Lag= 4.9 min

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Greater Waste Solutions, LLC Type III 24-hr 25 Year Storm Rainfall=5.55"

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Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Max. Velocity= 1.82 fps, Min. Travel Time= 2.9 min Avg. Velocity = 0.57 fps, Avg. Travel Time= 9.3 min

Peak Storage= 788 cf @ 12.12 hrs Average Depth at Peak Storage= 0.72' Bank-Full Depth= 1.30' Flow Area= 6.0 sf, Capacity= 15.02 cfs

2.00' x 1.30' deep channel, n= 0.035 High grass Side Slope Z-value= 2.0 '/' Top Width= 7.20' Length= 320.0' Slope= 0.0050 '/' Inlet Invert= 887.50', Outlet Invert= 885.90'

Summary for Reach 503R: ROAD DITCH

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Max. Velocity= 3.57 fps, Min. Travel Time= 0.5 min Avg. Velocity = 1.15 fps, Avg. Travel Time= 1.4 min

Peak Storage= 302 cf @ 12.09 hrs Average Depth at Peak Storage= 0.72' Bank-Full Depth= 1.30' Flow Area= 7.7 sf, Capacity= 38.03 cfs

2.00' x 1.30' deep channel, n= 0.035 High grass Side Slope Z-value= 3.0 '/' Top Width= 9.80' Length= 100.0' Slope= 0.0200 '/' Inlet Invert= 0.00', Outlet Invert= -2.00'

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Summary for Reach E1R: Bloods Brook

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs

Summary for Pond 401P: CB4

Inflow /	Area =	0.480 ac, 58.33% Impervious, Inflow D	epth > 4.19"	for 25 Year Storm event
Inflow	=	2.29 cfs @ 12.09 hrs, Volume=	0.168 af	
Outflov	v =	2.29 cfs @ 12.09 hrs, Volume=	0.168 af, Atte	en= 0%, Lag= 0.0 min
Primar	y =	2.29 cfs @ 12.09 hrs, Volume=	0.168 af	-

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Peak Elev= 896.61' @ 12.09 hrs Flood Elev= 898.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	895.70'	12.0" Round Culvert L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 895.70' / 895.30' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE smooth interior. Flow Area= 0.79 sf
			n=0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.27 cfs @ 12.09 hrs HW=896.61' (Free Discharge) -1=Culvert (Barrel Controls 2.27 cfs @ 4.00 fps)

Summary for Pond 501P: CB1

Inflow Area	I =	0.325 ac,10	0.00% Impervi	ious, Inflow De	pth > 5.31"	for 25 Year Storm event
Inflow	=	1.76 cfs @	12.08 hrs, Vo	olume=	0.144 af	
Outflow	=	1.76 cfs @	12.08 hrs, Vo	olume=	0.144 af, Atte	en= 0%, Lag= 0.0 min
Primary	=	1.76 cfs @	12.08 hrs, Vo	olume=	0.144 af	-

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Peak Elev= 904.62' @ 12.08 hrs Flood Elev= 907.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	903.90'	12.0" Round Culvert L= 160.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 903.90' / 900.70' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.76 cfs @ 12.08 hrs HW=904.62' (Free Discharge) -1=Culvert (Inlet Controls 1.76 cfs @ 2.89 fps)

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Greater Waste Solutions, LLC Type III 24-hr 25 Year Storm Rainfall=5.55"

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Summary for Pond 502P: CB2

Inflow Area =0.719 ac, 90.26% Impervious, Inflow Depth > 5.06" for 25 Year Storm eventInflow =3.83 cfs @12.08 hrs, Volume=0.303 afOutflow =3.83 cfs @12.08 hrs, Volume=0.303 af, Atten= 0%, Lag= 0.0 minPrimary =3.83 cfs @12.08 hrs, Volume=0.303 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Peak Elev= 901.45' @ 12.08 hrs Flood Elev= 904.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	900.40'	15.0" Round Culvert L= 160.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= $900.40' / 894.00'$ S= $0.0400'/$ ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=3.81 cfs @ 12.08 hrs HW=901.44' (Free Discharge) —1=Culvert (Inlet Controls 3.81 cfs @ 3.48 fps)

Summary for Pond 503P: CB3

Inflow Area	a =	0.924 ac, 8	31.06% Imper	rvious,	Inflow Depth >	4.82"	for 25	Year Storm event
Inflow	=	4.77 cfs @	12.08 hrs, \	/olume:	= 0.371	af		
Outflow	=	4.77 cfs @	12.08 hrs, \	/olume:	= 0.371	af, At	ten= 0%,	Lag= 0.0 min
Primary	=	4.77 cfs @	12.08 hrs, \	/olume	= 0.371	af		

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Peak Elev= 895.79' @ 12.08 hrs Flood Elev= 897.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	893.70'	12.0" Round Culvert L= 120.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= $893.70' / 887.70' = 0.0500 '/ Cc= 0.900$ n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.74 cfs @ 12.08 hrs HW=895.77' (Free Discharge) ←1=Culvert (Inlet Controls 4.74 cfs @ 6.04 fps)

Summary for Pond 504P: FB1

Inflow Area	a =	3.235 ac, 4	19.43% Impervious,	Inflow Depth >	4.13" fo	or 25 Yea	r Storm event
Inflow	=	11.21 cfs @	12.12 hrs, Volume	÷= 1.115	af		
Outflow	=	11.16 cfs @	12.13 hrs, Volume)= 1.114	af, Atten	= 0%, Lag	g= 0.6 min
Primary	=	11.16 cfs @	12.13 hrs, Volume)= 1.114	af		

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs

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Type III 24-hr 25 Year Storm Rainfall=5.55"

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Starting Elev= 877.00' Surf.Area= 925 sf Storage= 1,568 cf Peak Elev= 877.78' @ 12.13 hrs Surf.Area= 1,172 sf Storage= 2,389 cf (821 cf above start)

Plug-Flow detention time= 34.2 min calculated for 1.078 af (97% of inflow) Center-of-Mass det. time= 1.8 min (792.3 - 790.5)

Volume	Inv	ert Avail.St	orage Stora	ge Description	
#1	874.	00' 4,0	090 cf Cust	om Stage Data (P	rismatic)Listed below (Recalc)
Elevatio	on et)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
874.0	0	190	0	0	
876.0	0	610	800	800	
878.0	0	1,240	1,850	2,650	
879.0	00	1,640	1,440	4,090	
Device	Routing	Invert	Outlet Dev	ices	
#1	Primary	877.00	6.0' long	x 11.0' breadth Br	oad-Crested Rectangular Weir
	-		Head (feet	0.20 0.40 0.60	0.80 1.00 1.20 1.40 1.60
			Coef. (Eng	lish) 2.53 2.59 2	.70 2.68 2.67 2.68 2.66 2.64

Primary OutFlow Max=11.14 cfs @ 12.13 hrs HW=877.78' (Free Discharge) **1=Broad-Crested Rectangular Weir** (Weir Controls 11.14 cfs @ 2.37 fps)

Summary for Pond 505P: WB1

Inflow	Area	=	3.466 ac, 4	46.13% Imperviou	us, Inflow	Depth >	4.02" f	or 25 Y	ear Storm even	۱t
Inflow		=	11.79 cfs @	12.08 hrs, Volu	me=	1.161 a	af			
Outflow	W	=	5.53 cfs @	12.38 hrs, Volu	me=	0.880 a	af, Atten	= 53%,	Lag= 18.1 min	
Primar	у	=	5.53 cfs @	12.38 hrs, Volu	me=	0.880 a	af			

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Starting Elev= 872.00' Surf.Area= 2,650 sf Storage= 5,990 cf Peak Elev= 876.78' @ 12.38 hrs Surf.Area= 7,531 sf Storage= 28,463 cf (22,473 cf above start)

Plug-Flow detention time= 255.9 min calculated for 0.742 af (64% of inflow) Center-of-Mass det. time= 112.3 min (906.6 - 794.3)

Volume	Invert	Ava	il.Storage	Storage	e Description	
#1	868.00'		39,020 cf	Custor	n Stage Data (Pr	ismatic)Listed below (Recalc)
Elevation (feet)	Surf. (Area sq-ft)	Inc. (cubic	Store -feet)	Cum.Store (cubic-feet)	
868.00 870.00	1	500 420		0 1 920	0 1 920	
872.00 874.00	2	2,650		4,070	5,990 12 870	
876.00 878.00	6	5,040 5,840	1	0,270 5,880	23,140 39,020	

Type III 24-hr 25 Year Storm Rainfall=5.55"

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Device	Routing	Invert	Outlet Devices					
#1	Primary	870.70'	18.0" Round Culvert L= 35.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 870.70' / 870.00' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf					
#2 #3 #4	Device 1 Device 1 Device 1	872.00' 875.30' 876.50'	 2.5" Vert. Orifice/Grate C= 0.600 6.0" Vert. Orifice/Grate C= 0.600 20.0" x 29.5" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads 					
Primary	Primary OutFlow Max=5.49 cfs @ 12.38 hrs HW=876.78' (Free Discharge)							

__1=Culvert (Passes 5.49 cfs of 19.65 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.36 cfs @ 10.42 fps)

-3=Orifice/Grate (Orifice Controls 1.05 cfs @ 5.35 fps)

-4=Orifice/Grate (Weir Controls 4.09 cfs @ 1.74 fps)

Summary for Pond 506P: CB5

Inflow Area	1 =	0.586 ac, 2	29.01% Impe	ervious,	Inflow	Depth >	4.73	3" for	25	Year Storm	event
Inflow	=	3.03 cfs @	12.08 hrs,	Volume	=	0.231	af				
Outflow	=	3.03 cfs @	12.08 hrs,	Volume	=	0.231	af, /	Atten= ()%,	Lag= 0.0 m	nin
Primary	=	3.03 cfs @	12.08 hrs,	Volume	=	0.231	af				

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Peak Elev= 889.76' @ 12.08 hrs Flood Elev= 891.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	888.62'	12.0" Round Culvert L= 124.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 888.62' / 881.80' S= 0.0550 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.02 cfs @ 12.08 hrs HW=889.76' (Free Discharge) -1=Culvert (Inlet Controls 3.02 cfs @ 3.84 fps)

Summary for Pond 507P: FB2

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Starting Elev= 883.00' Surf.Area= 1,250 sf Storage= 2,495 cf Peak Elev= 884.00' @ 12.11 hrs Surf.Area= 1,559 sf Storage= 3,897 cf (1,402 cf above start)

Plug-Flow detention time= 45.6 min calculated for 1.182 af (95% of inflow) Center-of-Mass det. time= 2.4 min (785.5 - 783.1)

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Type III 24-hr 25 Year Storm Rainfall=5.55"

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Volume	١n	vert Avail.	Storage	Storage	Description	
#1	880.	00' 5	5,660 cf	Custom	Stage Data (Pr	rismatic)Listed below (Recalc)
Elevatio	on et)	Surf.Area (sq-ft)	Inc (cubic	Store -feet)	Cum.Store (cubic-feet)	
880.0	00	460		0	0	
882.0	00	940		1,400	1,400	
884.0	00	1,560		2,500	3,900	
885.0	00	1,960		1,760	5,660	
Device	Routing	Inve	ert Outle	et Device	S	
#1	Primary	883.0	0' 6.0' I Head 2.50 Coef 2.65	ong x 5 d (feet) 0 3.00 3.4 . (English 2.67 2.4	.0' breadth Broa .20 0.40 0.60 50 4.00 4.50 5 h) 2.34 2.50 2. 56 2.68 2.70 2	ad-Crested Rectangular Weir 0.80 1.00 1.20 1.40 1.60 1.80 2.00 .00 5.50 70 2.68 2.68 2.66 2.65 2.65 2.65 .74 2.79 2.88

Primary OutFlow Max=15.93 cfs @ 12.11 hrs HW=883.99' (Free Discharge) **1=Broad-Crested Rectangular Weir** (Weir Controls 15.93 cfs @ 2.67 fps)

Summary for Pond 508P: WB2

Inflow Area	a =	3.667 ac, 5	8.93% Impervious	, Inflow Depth >	4.39" for	25 Year Storm event
Inflow	=	17.40 cfs @	12.11 hrs, Volum	e= 1.341	af	
Outflow	=	11.45 cfs @	12.21 hrs, Volum	e= 1.327	af, Atten=	34%, Lag= 6.0 min
Primary	=	11.45 cfs @	12.21 hrs, Volum	e= 1.327	af	

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Starting Elev= 882.00' Surf.Area= 3,320 sf Storage= 8,070 cf Peak Elev= 884.81' @ 12.21 hrs Surf.Area= 7,897 sf Storage= 24,159 cf (16,089 cf above start)

Plug-Flow detention time= 175.5 min calculated for 1.142 af (85% of inflow) Center-of-Mass det. time= 70.6 min (858.6 - 788.0)

Volume	Inv	ert Avail.Sto	orage Storage	e Description	
#1	878.	00' 34,4	190 cf Custor	n Stage Data (Pr	rismatic)Listed below (Recalc)
Elevatio	on et)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
878.0	00	890	0	0	
880.0	00	1,930	2,820	2,820	
882.0	00	3,320	5,250	8,070	
884.0	00	6,800	10,120	18,190	
886.0	00	9,500	16,300	34,490	
Device	Routing	Invert	Outlet Device	es	
#1	Primary	878.80'	18.0" Roun	d Culvert	
			L= 40.0' CF Inlet / Outlet n= 0.013 Cc	PP, square edge h Invert= 878.80' / prrugated PE, smo	neadwall, Ke= 0.500 878.00' S= 0.0200 '/' Cc= 0.900 ooth interior, Flow Area= 1.77 sf

Greater Waste Solutions, LLC Type III 24-hr 25 Year Storm Rainfall=5.55"

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#2	Device 1	881.90'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	884.30'	20.0" x 29.5" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#4	Primary	885.20'	4.0' long x 9.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.46 2.55 2.70 2.69 2.68 2.68 2.67 2.64 2.64
			2.64 2.65 2.64 2.65 2.65 2.66 2.67 2.69

Primary OutFlow Max=11.38 cfs @ 12.21 hrs HW=884.81' (Free Discharge)

1=Culvert (Passes 11.38 cfs of 19.52 cfs potential flow)

2=Orifice/Grate (Orifice Controls 1.54 cfs @ 7.85 fps)

3=Orifice/Grate (Weir Controls 9.84 cfs @ 2.34 fps)

4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond E1P: Low Area

Inflow Are	a =	1.444 ac,	0.00% Impervious, Inflow	Depth > 2.99"	for 25 Year Storm event
Inflow	=	4.42 cfs @	12.14 hrs, Volume=	0.360 af	
Outflow	=	3.69 cfs @	12.21 hrs, Volume=	0.356 af, Atte	en= 17%, Lag= 4.4 min
Primary	=	3.69 cfs @	12.21 hrs, Volume=	0.356 af	-

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Starting Elev= 902.20' Surf.Area= 5,228 sf Storage= 4,189 cf Peak Elev= 902.70' @ 12.21 hrs Surf.Area= 3,027 sf Storage= 6,249 cf (2,060 cf above start)

Plug-Flow detention time= 158.0 min calculated for 0.259 af (72% of inflow) Center-of-Mass det. time= 15.7 min (845.7 - 830.0)

Volume	Inv	ert Avail.St	orage Storage	e Description	
#1	901.0	00' 6,9	960 cf Custor	n Stage Data (Pr	r ismatic) Listed below (Recalc)
Elevatio (fee	on et)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
901.0 902.0 903.0)0)0)0	0 6,110 1,700	0 3,055 3,905	0 3,055 6,960	
Device	Routing	Invert	Outlet Device	es	
#1	Primary	902.20'	4.0' long x 4 Head (feet) 2.50 3.00 3 Coef. (Englis 2.68 2.72 2	4.0' breadth Broa 0.20 0.40 0.60 .50 4.00 4.50 5 h) 2.38 2.54 2.0 .73 2.76 2.79 2	ad-Crested Rectangular Weir 0.80 1.00 1.20 1.40 1.60 1.80 2.00 .00 5.50 69 2.68 2.67 2.67 2.65 2.66 2.66 .88 3.07 3.32

Primary OutFlow Max=3.68 cfs @ 12.21 hrs HW=902.70' (Free Discharge) **1=Broad-Crested Rectangular Weir** (Weir Controls 3.68 cfs @ 1.85 fps) Prepared by Fieldstone Land Consultants, PLLC HydroCAD® 10.00-19 s/n 06037 © 2016 HydroCAD Software Solutions LLC

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Summary for Pond E2P: Exist. 24" RCP

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Peak Elev= 895.85' @ 12.11 hrs Flood Elev= 903.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	894.20'	24.0" Round Culvert L= 109.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 894.20' / 893.70' S= 0.0046 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=9.84 cfs @ 12.11 hrs HW=895.84' (Free Discharge) -1=Culvert (Barrel Controls 9.84 cfs @ 4.85 fps)

Summary for Pond E3P: Exist. CB

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs Peak Elev= 897.02' @ 12.09 hrs Flood Elev= 897.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	896.00'	12.0" Round Culvert L= 252.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= $896.00' / 890.90'$ S= $0.0202 '/$ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.72 cfs @ 12.09 hrs HW=897.02' (Free Discharge) ←1=Culvert (Inlet Controls 2.72 cfs @ 3.46 fps)

Summary for Link OP1: EXIST. 24" RCP

 Inflow Area =
 3.494 ac,
 6.53% Impervious, Inflow Depth > 3.09" for 25 Year Storm event

 Inflow =
 9.88 cfs @
 12.11 hrs, Volume=
 0.899 af

 Primary =
 9.88 cfs @
 12.11 hrs, Volume=
 0.899 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs

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Summary for Link OP2: BLOODS BROOK

 Inflow Area =
 9.216 ac, 41.33% Impervious, Inflow Depth > 3.50" for 25 Year Storm event

 Inflow =
 17.72 cfs @ 12.29 hrs, Volume=
 2.688 af

 Primary =
 17.72 cfs @ 12.29 hrs, Volume=
 2.688 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.02 hrs

Section 3.1

Rip Rap Apron Design

LAND CONSULTANTS | C

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RIPRAP APRON DESIGN

DESIGN CRITERIA Project: 204.02 File: 204.02_Riprap.xls Design Storm: 10 Year **Riprap Apron Length:** 05/05/17 Date: $L=1.8Q/D_0^{1.5}+7D_0$ (when TW<D_0/2) Design Eng: NRC $L=3.0Q/D_0^{1.5}+7D_0$ (when TW>D_0/2) Revised: Revised By: Riprap Apron Width @ Culvert Outlet: W_{in}=3D₀ Riprap Apron Width @ End of Apron (no defined channel): This spreadsheet is based on the Dec. 2008 "New $W_{out}=3D_0+L_a$ (when TW $< D_0/2$) $W_{out}=3D_0+0.4L_a$ (when TW>D₀/2)

Riprap Apron Width @ End of Apron (defined channel): W_{out}>D₀, Structural lining shall extend a min. of 1Ft. above the TW elevation but no lower than 2/3 the vertical conduit dimension above the conduit.

Riprap Diameter:

 $D_{50} = [0.02Q^{1.3}/(TW^*D_0)]^*12$ 50% of stone by weight should be smaller than D_{50} . The

largest stone size in the mixture shall be 1.5 times D₅₀.

30		-			OUTLI	ET APRON D	ESIGN	
Location	Q	D ₀	TW	L _a	Widt	h (FT)	D ₅₀	Thickness
(STRUCT.)	(CFS)	(FT.)	(FT.)	(FT.)	W _{in}	Wout	(Dia INCHES)	(INCHES)
HW1	3.7	1.3	0.5	14	4	17	4	12
HW2	1.2	1.5	0.7	12	5	16	4	12
HW3	2.4	1.0	0.5	14	3	9	4	12
HW4	5.8	1.5	0.7	16	5	21	4	12

Hampshire Stormwater Management Manual, Volume 2, Post-Construction Best Management Practices: Selection And Design"

Nomenclature:

L = length of the apron (ft) $D_0 = max$. inside width of outlet pipe or channel (ft) Q = outlet discharge (cfs) TW = tailwater depth (ft) W_{in} = width of the apron at culvert outlet (ft)

 W_{out} = width of the apron at the end of apron (ft)

 D_{50} = median stone diameter (inches)

Section 3.2

Drainage Area Plans





·	PROPERTY LINE
	ABUTTING LOT LINE
	BUILDING SETBACK I
	EDGE OF PAVEMENT
	EDGE OF GRAVEL
	EDGE OF WETLAND
	SCS SOIL LINE
OH	EXISTING OVERHEAD
<i>W</i>	EXISTING WATER LIN
S	EXISTING SEWER LIN
=======	Existing drain line
	10' CONTOUR INTER

Attachment VI - 4

GEOTECHNICAL REPORT

GREATER WASTE SOLUTIONS TRANSFER STATION 426 FITCHBURG ROAD GREENVILLE, NEW HAMPSHIRE

January 31, 2018

GSI Project No. 218105

Prepared for:

Ms. Gina Hotaling GMB Leasing, LLC. 124 Old Wilton Road Greenville, NH 03048

Prepared by:

Harry K. Wetherbee, P.E. Geotechnical Services, Inc. 55 North Stark Highway Weare, NH 03281

Geotechnical Services Inc.

Geotechnical Engineering Lenvironmental Studies Lenvironmental Studi



🔺 Geotechnical Engineering 🔺 Environmental Studies 🔺 Materials Testing 🔺 Construction Monitoring 🔺

February 1, 2018

Ms. Gina Hotaling GMB Leasing, LLC. 124 Old Wilton Road Greenville, NH 03048

RE: Geotechnical Report Greater Waste Solutions Transfer Station 426 Fitchburg Road Greenville, New Hampshire

GSI Project No. 218105

Dear Ms. Hotaling,

This report presents the results of a geotechnical investigation completed by Geotechnical Services, Inc. (GSI) for the construction of the proposed transfer station building at Greater Waste Solutions in Greenville, New Hampshire. The objective of the geotechnical investigation was to explore subsurface conditions within the proposed development area and develop geotechnical engineering recommendations for the design and construction of foundations, and floor slabs. Included are the findings of our subsurface exploration program and an engineering evaluation of the subsurface conditions encountered. The contents of this report are subject to the Limitations included in Appendix A.

PURPOSE AND SCOPE

The scope of services performed by GSI to meet the above-stated objectives for geotechnical engineering services included the following:

- 1. Coordination and observation of four (4) test pits at the locations illustrated on the attached Figure 2.
- 2. Preparation of recommendations for spread footing foundation and slab-on-grade support of the proposed structures, including estimated bearing capacities and settlement values.
- 3. Preparation of general recommendations for earthwork and foundation construction procedures to be followed during the construction phase of this project.
- 4. Preparation of this geotechnical engineering report which summarizes our findings and recommendations.

∠ 55 North Stark Highway Weare NH ∠ 603/529/7766 ∠ FAX 603/529/7080

SITE AND PROJECT INFORMATION

The project site is located at 426 Fitchburg Road in Greenville, New Hampshire. The subject property is abutted by Fitchburg Road (New Hampshire Route 31) to the west and woodland to the north, east, and south. Site topography in the area of development is higher than the northern half of the property and is separated from the currently developed area by a concrete block retaining wall. The building pad area was previously wooded. Trees and topsoil were removed and a crushed concrete and gravel blend was imported as fill over the native soils.

The proposed development will include the construction of a new approximately 20,000 square foot, single-story transfer station building. The majority of the new building will be founded upon shallow strip footings with a concrete slab-on-grade supported by fill or bedrock. The design of the building includes a loading pit set 12 feet below the floor slab elevation which will require the construction of interior retaining walls. Site details were obtained from a sketch provided to GSI by GWS.

SUBSURFACE INVESTIGATION

A series of four (4) test pits were excavated by Greater Waste Solutions utilizing a Volvo EC210B LC excavator. The test pits were advanced within the proposed building footprint. The subsurface explorations classified the on-site soils according to their color, grain size, and other material properties. Field descriptions of the soils encountered, observed depth to groundwater while drilling when observed, and other pertinent observations are contained in the attached test pit logs. The test pit locations are illustrated on Figure 2 of this report. GSI test pit logs are presented within Appendix B.

SUBSURFACE CONDITIONS

FILL

At test pit locations TP-1 through TP-3, a crushed concrete fill material consisting of gray crushed concrete and gravel, some coarse to fine Sand, trace to little Silt was present from ground surface to a depth of 2 to 5 feet. The fill was noted to be very dense and difficult to excavate. Fill at test pit was classified as gold brown or gray coarse to fine Sand and Gravel, trace to little Silt and was observed from existing grade to a depth of 5.5 feet below grade.

SAND AND GRAVEL

Dense sand and gravel was encountered below the fill consisting of brown Gravel and coarse to fine Sand, trace to little Silt. The fill contained a number of large cobbles and boulders, some between 2 and 3 feet in diameter.

BEDROCK

Bedrock was encountered at test pit TP-2 at a depth of 5 feet below existing grade. Ledge was observed at the surface near the northwest corner of the proposed building. Excavation of the new foundation may encounter bedrock in this area.



GROUNDWATER

Groundwater was not observed during the excavation of the test pits. Groundwater observations should not be considered long-term, equilibrated groundwater levels, but rather an approximate indication of the likely groundwater elevation during construction. Groundwater levels should be anticipated to fluctuate from those measured during drilling operations in response to differences in equilibrated time, rainfall, snowmelt, and seasonal changes.

DYNAMIC CONE PENETROMETER TESTING

The GSI representative conducted dynamic cone penetrometer testing at test pit TP-2 to further evaluate the subgrade soils and confirm the stated bearing capacity on the project plan set. The dynamic cone penetrometer test consists of a 1½-inch base width cone at the tip of 1% o.d. steel rods. The cone and rods are driven by successively raising and dropping a 15-lb steel ring weight falling 20 inches. The number of blows required to drive the dynamic cone for successive increments of 1¾ inches is then recorded. Dynamic cone penetrometer testing resulted in blow counts varying between 7 and 38 blows per increment, and averaging 22 blows per increment. The cone penetration resistance is correlated to standard penetration resistance using the penetration relationships contained in ASTM Technical Publication No. 399 "Dynamic Cone for Shallow In-Situ Penetration Testing". The in-situ subgrade soils at this location therefore are considered medium dense.

FOUNDATION DESIGN RECOMMENDATIONS

The dynamic cone penetrometer testing and visual observations indicated that the subgrade soils are capable of supporting 2 tons per square foot (4,000psf). GSI recommends that building walls, columns and other structural elements be supported by reinforced concrete spread or strip footings bearing directly native soils, bedrock, or dense fill soils within the footing zone of influence as depicted upon the attached Figure 3. With regards to footing geometry, the minimum footing width of column and strip footings should be 4 feet and 2 feet, respectively.

At the recommended bearing pressures, we anticipate that the total settlement of individual footings under static loading conditions and constructed as recommended herein, will not exceed 1 in., with differential settlements between adjacent footings not exceeding ³/₄ in. Most of the settlement will likely occur elastically during construction as structure dead loads are placed on the foundations. The live load contribution to foundation settlement is expected to be less than 50% of the dead load thus post construction settlements are not expected to be problematic.

The spread footings should be founded at least 4 feet below exterior grade to obviate frost action in the bearing strata. If the construction occurs during the winter months it will be necessary to provide temporary insulation and/or heat application to the foundations. GSI recommends that the transition zones be provided where the foundation bearing will transition from soil to rock to provide a consistent, level bearing surface for the proposed foundation. Transition zones consist of leveled crushed stone placed from the point along the footing alignment where bearing will transition from soil to rock and vice versa. Bedrock or loose boulders shall not protrude above footing subgrade.



ENGINEERING PARAMETERS OF ON-SITE SOILS

Based on results of our subsurface exploration program and recommended fill material requirements, the following engineering properties of soils that will be supporting foundation elements are estimated as follows:

TABLE ONE SOIL ENGINEERING DESIGN PARAMETERS				
Soil Type	Friction Angle φ, (degrees)	Cohesion c, (psf)	Unit Weight γ, (pcf)	Coeff. of Sliding Friction Soil to Concrete (tan δ)
Crushed Concrete Fil	35	0	130	0.50
Structural Fill	35	0	125	0.50

LATERAL EARTH PRESSURE

Lateral earth pressure recommendations are provided for design and construction of basements and retaining walls which will support lateral soil pressures. These walls should be designed to resist lateral earth loads resulting from earth pressures, as well as those imparted by any surcharge loadings adjacent to the wall. A diagram of the effects of lateral earth pressures is provided as Figure 4.

Lateral earth forces are computed by the general formula $P = \frac{1}{2}K\gamma H^2$.

Where: P = lateral earth force (pounds per linear foot of wall) K = lateral earth pressure coefficient $\gamma =$ unit weight of soil (pounds per cubic foot) H = height of wall (feet)

The lateral earth pressure coefficient is based on Rankine lateral earth pressure theory for the active (K_A), passive (K_P), and at-rest (K_0) conditions. The active condition exists when the top of the wall is free to deflect, reducing the lateral earth pressure. The at-rest condition exists when the wall is restrained from deflecting by lateral bracing such as a basement wall. The passive condition exists when the wall deflects against a soil, and the soil mass resists wall deflection. It is recommended to compute lateral earth pressures based on an equivalent fluid weight equal to K γ .

The following equivalent fluid weights should be utilized for design: 40 pounds per cubic foot (pcf) equivalent fluid weight (efw) (active), 375 pcf efw (passive), 60 pcf efw (at-rest). Lateral pressures exerted from surcharge pressures such as traffic, floor loads, etc. should be applied as a uniform pressure equal in magnitude to 0.3q and 0.5q for the active and at-rest conditions respectively. These equivalent fluid pressures do not include hydrostatic forces, as it is presumed that drainage will be provided behind the wall.



Lateral loads imposed from seismic ground acceleration should be computed as 0.045γ H². Assuming a unit weight of 125 pcf, this translates to 6H² psf. The lateral seismic load should be applied as an inverted triangle over the height of the wall.

For sliding stability analyses, GSI recommends that a static friction coefficient of 0.50 be used for the foundation/soil interface. The free-draining soil will obviate any hydrostatic pressures. The sub drainage system should consist of a by a 2-foot wide "chimney drain" of free draining fill (NHDOT 304.1 sand) draining to a perforated 4-inch polyethylene pipe within a 12-inch envelope of peastone (ASTM C-33 #57). The pipe should be wrapped with a non-woven geotextile (Mirafi 140N or equivalent) and should be placed behind the wall. The wall sub drains should discharge by gravity to the nearest drainage structure or daylight.

SEISMIC DESIGN PARAMETERS

The seismic design parameters have been reviewed with respect to the 2009 International Building Code. Due to the presence of shallow bedrock on site and upon review of the subsurface soils data, the site may be associated with Site Class "C" and the design of structural elements should reflect this distinction. The subsurface conditions are also not deemed susceptible to earthquake induced "liquefaction." A Summary of USGS Design Maps are included as Appendix D.

CONCRETE FLOOR SLAB

GSI recommends that ground floor slabs be designed as slabs-on-grade designed in accordance with ACI 360R-92. The slab should bear directly upon a 6-inch (minimum) layer of compacted Base Course Soil. The subgrade will consist of compacted structural fill or proof-compacted undisturbed soil. The floor slab may thus be designed following the ACI "elastic support" approach, using a modulus of subgrade reaction value, k = 250 pci.

Slabs should be designed to act independent of foundation walls and column footings with isolation joints. Shrinkage cracking may be controlled with welded wire fabric, reinforcing steel, or contraction joints. Contraction joints in plain concrete should not be spaced a distance greater than 30 times the slab thickness. Saw cuts should be made within 12 hours of slab finishing and penetrate at least 1/4 the slab thickness or a minimum of 1 inch. Welded wire fabric or reinforcing steel may also be used to widen the control joint spacing.

EARTHWORK RECOMMENDATIONS

Foundation Subgrade Preparation

Prior to foundation construction, any topsoil, subsoil, or loose fill soils encountered within the building footprint and foundation zone of influence should be removed. Foundation and floor slab subgrades should be proof compacted using a heavy vibratory plate or drum roller, as described below, prior to foundation construction or placing additional fill in order to densify disturbed soils resulting from excavation and preload the subgrade.



Recommended proof compaction should include 8 coverages (4 in each orthogonal direction) with a minimum of a 10-ton vibratory roller. During the proof rolling process, the subgrade should be observed by a qualified Geotechnical Engineer to identify areas exhibiting weaving or excessive reaction. Any soils exhibiting excessive reaction should be locally excavated and replaced with free-draining structural fill or crushed stone. The foundation subgrade should be observed by a qualified Geotechnical Engineer to verify competency.

A minimum of 1 foot of an approved structural fill should be utilized as structural support for the building subgrade and to raise the grade to foundation subgrade elevation following overexcavation of fill or unsuitable soils. Structural Fill should be placed in maximum loose lifts of 8 inches and be compacted to 95 percent of maximum dry density as determined by the modified proctor test (ASTM D1557). The loose lift thickness may be increased to 12 inches if a minimum 10-ton vibratory roller is used for soil compaction. The adequacy of the compaction efforts should be verified by field density testing.

Protection of Foundation Subgrades

The contractor should be required to maintain stable, dewatered subgrades for foundations, pavement areas, and utility trenches. Subgrades may be disturbed by improper excavation methods, moisture, precipitation, groundwater control, and construction activities. The contractor should take precautions to protect the bearing subgrade against disturbance from construction traffic and weathering. If necessary, dewatering can be accomplished via open pumping utilizing submersible pumps and temporary stone-lined sump pits.

A lift of compacted crushed stone is recommended to protect the subgrade surface from wear and disturbance should water be present within the excavation. The subgrade must still be verified for competency prior to the placement of concrete or backfill materials within the building footprint. If construction activities are to take place during winter months, the contractor should protect the work area from freezing, which may necessitate the use of soil blankets or tents and heaters to protect the subgrade surface.

Construction Dewatering

The site contractor should be prepared to remove any standing water from foundation excavations. If the sumps are unable to control the development of groundwater within the excavation, supplemental dewatering in the form of deep wells or wellpoints may be required.

Stormwater runoff developed from storm events should be diverted away from excavation areas to minimize any impoundment in the excavation or disturbance to the foundation subgrades. It is anticipated that groundwater and stormwater may be controlled by localized dewatering efforts employing sumps and pumps. The groundwater elevation should be maintained at least 12 inches below the foundation grade until backfilling is complete. A lift of crushed stone or free draining structural fill at foundation grade may be utilized to facilitate dewatering and provide a dry and stable subgrade during construction.



Backfilling

Backfill in the building area should be placed and compacted in lifts immediately after final excavation to limit disturbance to the subgrade surface. Except for zones requiring special backfill, such as directly beneath pavements or exterior slabs, the exterior of foundation walls and other site areas may be backfilled with Common Fill. Placement of compacted fills should not be conducted when air temperatures are low enough (approximately 30°F, or below) to cause freezing of the moisture in the fill during or before placement. Fill materials should not be placed on snow, ice, or uncompacted frozen soil. Compacted fill should not be placed on frozen soil.

No fill should be allowed to freeze prior to compaction. At the end of each day's operations, the last lift of fill, after compaction, should be rolled by a smooth-wheeled roller to eliminate ridges of uncompacted soil.

Minimum compaction requirements for all fill materials are as follows:

TABLE TWO MINIMUM COMPACTION REQUIREMENTS					
Location or Area	Standard Proctor Density ASTM698	Modified Proctor Density ASTM D1557	Testing Frequency One Test Per Lift Per		
Structures and	05%	02%	2 000 ft ²		
Retaining Walls	95%	92%	1,000 ft ²		
Pavements below 18 inches of Subgrade	95%	92%	5,000 ft ²		
Trenches	95%	92%	150 lineal feet		
Lawns and Unimproved Areas	92%	90%	20,000 ft ²		
Building and Pavement Subgrades (Uppermost 18 inches)	100%	95%	1,000 ft ²		



Structural Fill

Structural Fill should consist of clean sand and gravel free of organic material, snow, ice, or other objectionable materials and should be well-graded within the following limits:

Sieve Size	Percent Finer by Weight
6 in.	100
No. 4	30-70
No. 40	10-50
No. 200	0-12

Structural Fill should be placed in lift thickness not exceeding 12 inches loose measure. Cobbles and boulders having a size exceeding 2/3 of the loose lift thickness should be removed prior to compaction. Compaction in open areas should consist of self-propelled vibratory rollers such as a BoMag BW-60S or equivalent. In confined areas, hand-guided equipment, such as a large vibratory plate compactor, should be used and the loose lift thickness should not exceed 6 inches. A minimum of four systematic passes of the compaction equipment should be used to compact each lift. Compaction effort should be verified by field density testing.

Common Fill

Common fill may be used to raise grades in paved and landscaped areas, subject to pavement design criteria and landscape planting or drainage requirements. Common fill should be granular mineral soil free from organic materials, loam, wood, trash, snow, ice, frozen soil, and other compressible materials. Common fill should not contain stones larger than 2/3 of the placement lift thickness, and have a maximum 80 percent passing the No. 40 sieve, and a maximum of 30 percent passing the No. 200 sieve. These soils typically would require moisture control during placement and compaction.

Slab Base Course

Slab Base Course beneath building slabs should consist of bank-run sand and gravel, free of organic material, snow, ice, or other unsuitable materials, and should be well-graded within the following limits:

Sieve Size	Percent Finer by Weight
4 in.	100
No. 4	40-70
No. 40	25-45
No. 200	0-12

Other materials could be acceptable for compacted Slab Base Course and should be evaluated by the Geotechnical Engineer on a case-by-case basis if proposed by the Contractor.

Slab Base Course should be placed in lift thicknesses not exceeding 8 inches loose measure. In confined areas, hand-guided equipment such as a vibratory plate compactor should be used and the loose lift thickness should not exceed 6 inches. A minimum of four systematic passes of the compaction equipment should be used to compact each lift.



FOUNDATION DRAINAGE AND SLAB-ON-GRADE DAMP PROOFING RECOMMENDATIONS

Foundation drains are recommended for this project as below grade space will be incorporated into the design of the proposed structure. GSI recommends that a sub-slab vapor retardant barrier be placed beneath the proposed slab-on-grade. The recommended retarder should be a minimum 8-mil polyethylene with joints lapped a minimum of 12 inches with taped seams, edges, and penetrations. Retarders should be selected in accordance with ASTM E 1745 and E 1993 and installed in accordance with ASTM E 1643. Along with the measures noted above, the ground surface immediately adjacent to the foundation should be sloped away from the building to allow for positive drainage.

CONSTRUCTION MONITORING

It is recommended that a qualified Geotechnical Engineer be retained to observe subgrade preparation and that foundation construction, backfilling, and compaction are inspected in conformance with the requirements of local building codes.

CLOSURE

We trust that you find this report consistent with your needs. Should you have any questions with regard to this report, please do not hesitate to contact our office.

Very truly yours,

GEOTECHNICAL SERVICES, INC.

Harry K. Wetherbee, P.E. *Principal Engineer*

Attachments: Figure 1: Locus Plan Figure 2: Exploration Location Plan Figure 3: Foundation Zone of Influence Figure 4: Lateral Earth Pressures

Appendix A: Limitations Appendix B: Exploration Logs Appendix C: Subsurface Exploration Key Appendix D: Site Seismic Design Maps Appendix E: Draft Earthwork Specification












LIMITATIONS



LIMITATIONS

Explorations

- 1. The analyses, recommendations, and designs submitted in this report are based in part upon the data obtained from preliminary subsurface explorations. The nature and extent of variations between these explorations may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.
- 2. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretation of widely spaced explorations and samples; actual soil transitions are probably more gradual. For specific information, refer to the individual test pit and/or boring logs.
- 3. Water level readings have been made in the test pits and/or test borings under conditions stated on the logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, and other factors differing from the time the measurements were made.

<u>Review</u>

- 4. It is recommended that this firm be given the opportunity to review final design drawings and specifications to evaluate the appropriate implementation of the recommendations provided herein.
- 5. In the event that any changes in the nature, design, or location of the proposed areas are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of the report modified or verified in writing by Geotechnical Services, Inc.

Construction

6. It is recommended that this firm be retained to provide geotechnical engineering services during the earthwork phases of the work. This is to observe compliance with the design concepts, specifications, and recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

Use of Report

- 7. This report has been prepared for the exclusive use of the above and their assigns, in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.
- 8. This report has been prepared for this project by Geotechnical Services, Inc. This report was completed for preliminary design purposes and may be limited in its scope to complete an accurate bid. Contractors wishing a copy of the report may secure it with the understanding that its scope is limited to evaluation considerations only.





EXPLORATION LOGS





	SI		IESI PII FIE	LD LOG			TP-1
80	Project	GWS Transfer Station	GSI Project No.	218105	Date Star	ted	1/31/2018
5-4	Location	Greenvile, NH	Project Mgr.	HKW	Time Star	ted	-
174	Client	GWS Realty, LLC.	Inspector	KJM	Time Fini	shed	
61	Contractor	GWS	Checked By	нкш	Elevation		Existing Grade
Fax	Operator	GWS	Equipment Used	Volvo EC210B LC	Groundw	ater	N/A
248	Test Pit Location	Proposed northeast bu	ilding corner				
5-42	Approx. Dimension	ns: Length: 5 ft.	Width:	5 ft. Depth: 8 ft.			
7/45	GPS Coordinates:	Lat.	42.760552 Lon	g: -71.801942			
one 617	Depth		Soil Description		Excav. Effort	Bo	ulder Class
Phone 603/529-7766 Fax 603/5297080 - 30 Newbury St. , Boston, MA Pho	0-4.5' 4.5'-8'+	Gray crushed concre trace to little Silt Brown Gravel and co large cobbles and bo Dynamic Cone Pene 8,10,17,18,18,20,18,	te and Gravel, some o barse to fine Sand, tra- ulders, some 2 to 3 fe trometer testing at 4': 27,27,29,31: Average	coarse to fine Sand, ce to little Silt, many et in diameter : 20	D		None A-B
re, NH			Test Pit Pho	tograph			
Geotechnical Services, Inc. 55 North Stark Highway, Wea							·
	Excavation Effe	ort: E: Easy M: Moderate D: Difficult	Boulder Count: (0	Classification / Designa 6"-18" - A 18"-36" - B ger than 36" - C	ation)	٦	[P-1



_							
1308	Project	GWS Transfer Station	GSI Project No.	218105	Date Start	ted	1/31/2018
45-4	Location	Greenvile, NH	Project Mgr.	HKW	Time Star	ted	-
LLL	Client	GWS Realty, LLC.	Inspector	KJM	Time Finis	shed	-
x 61	Contractor	GWS	Checked By	НКМ	Elevation		Existing Grade
Fa	Operator	GWS	Equipment Used	Volvo EC210B LC	Groundwa	ater	N/A
-248	Test Pit Location	Proposed northwest bu	ilding corner	- T			
22-7	Approx. Dimension	ns: Length: 5 ft.	Width: 5	ft. Depth: 1.5 ft.			
17/4	GPS Coordinates:	Lat.	42.760539 Long:	-/1.802137	Evoav	Anti-conferences	
one 6	Depth		Soil Description		Effort	Во	ulder Class
² hone 603/529-7766 Fax 603/5297080 - 30 Newbury St. , Boston, MA Pho	0-1.5'+	Gray crushed concre trace to little Silt. Te penetrate the frost	te and Gravel, some co st pit terminated as the	arse to fine Sand, machine could not	D		None
e, NH			Test Pit Photo	ograph	l		
Geotechnical Services, Inc. 55 North Stark Highway, Wea							
	Excavation Effo	Drt: E: Easy M: Moderate D: Difficult	Boulder Count: (Cla 6 18 Large	assification / Designa "-18" - A 3"-36" - B [•] than 36" - C	tion)	Т	P-2



			IESI PII FIE	LDLOG			TP-3
308	Project	GWS Transfer Station	GSI Project No.	218105	Date Star	ted	1/31/2018
5-4	Location	Greenvile, NH	Project Mgr.	НКШ	Time Star	ted	-
174	Client	GWS Realty, LLC.	Inspector	КЈМ	Time Fini	shed	_
617	Contractor	GWS	Checked By	НКШ	Elevation		Existing Grade
ax	Operator	GWS	Equipment Used	Volvo EC210B LC	Groundwa	ater	N/A
48 F	Test Pit Location	Proposed northeast bu	ilding corner				
-42	Approx, Dimension	ns: Lenath: 5 ft.	Width:	5 ft. Depth: 5 ft.			
455	GPS Coordinates:	Lat.	42.760442 Lond	-71.802176			
317/			0.110		Excav.		
ne 6	Depth		Soil Description		Effort	Bo	ulder Class
603/529-7766 Fax 603/5297080 - 30 Newbury St., Boston, MA Pho	0-2' 2'-5' 5'	Gray crushed concre trace to little Silt Brown Gravel and co large cobbles and bo Bedrock Dynamic Cone Pene 11,7,19,19,15,18,22,	te and Gravel, some c arse to fine Sand, trac ulders, some 2 to 3 fee trometer testing at 4': 25,21,26,34: Average:	oarse to fine Sand, e to little Silt, many et in diameter 20	D D		None A-B -
, NH Phone			Test Pit Phot	ograph			
eare				THE CONTRACT OF			
Geotechnical Services, Inc. 55 North Stark Highway, M							
	Excavation Effo	Drt: E: Easy M: Moderate D: Difficult	Boulder Count: (C 6 1 Large	assification / Designat S"-18" - A 8"-36" - B er than 36" - C	ion)	Т	'P-3



			IESI PII FIEI	LDLOG			TP-4
8	Project	GWS Transfer Station	GSI Project No.	218105	Date Star	ted	1/31/2018
3	Location	Greenvile, NH	Project Mar.	HKW	Time Star	rted	-
14	Client	GWS Realty, LLC.	Inspector	KJM	Time Fini	shed	-
617	Contractor	GWS	Checked By	HKW	Flevation		Existing Grade
ax	Operator	GWS	Equipment Used	Volvo FC210B LC	Groundw	ater	N/A
₩ E	Test Pit Location	Proposed northeast bu	ilding corner	VOIVOLOLIUDIC			
-42	Approx. Dimensior	ns: Lenath: 5 ft.	Width: 5	ft. Depth: 10 ft.			
455	GPS Coordinates:	Lat.	42.760371 Long	-71.802012			
111	Denth				Excav.		
le	Depth		Soll Description		Effort	BO	ulder Class
Phone 603/529-7766 Fax 603/5297080 - 30 Newbury St. , Boston, MA Phon	0-3' 3'-5.5' 5.5'-10'+	Gold brown coarse to Gray coarse to fine S Gray brown Gravel at Silt,many large cobbl diameter Dynamic Cone Penet Average: 28	fine Sand and Gravel, and and Gravel, trace nd coarse to fine Sand, es and boulders, some rometer testing at 4': 1	trace Silt (fill) to little Silt (fill) trace to little 2 to 3 feet in 5,23,29,27,34,31,38:	M D D		None A-B A-B
Ire, NH			Test Pit Photo	ograph			
Geotechnical Services, Inc. 55 North Stark Highway, We							
	Excavation Effo	rt: E: Easy M: Moderate D: Difficult	Boulder Count: (Cla 6 11 Large	assification / Designa "-18" - A 8"-36" - B r than 36" - C	tion)	т	' P-4

APPENDIX C

SUBSURFACE EXPLORATION KEY

FIELD DESCRIPTION AND CLASSIFICATION OF SOIL - Burmister System

Soil descriptions indicated on the test boring logs are based on Standard Penetration Test (SPT) results and observation of the soil samples obtained. Soil samples generally described and classified as illustrated in the following example:



1.0 <u>DENSITY OR CONSISTENCY</u> – The density or consistency is determined from the Standard Penetration Test (ASTM 1586), which corresponds to the number of blows required to drive a standard 2-inch outside diameter split-spoon sampler from the 6 to 18-inch depth of a 24-inch sample using a 140-pound weight falling freely for 30 inches.

Density of Granular Soil	Penetration (N-blo	Resistance bws/ft)	Consistency of Composite Clay Soil
Very Loose	0 - 4	< 2	Very soft
Loose	4 - 10	2 - 4	Soft
Medium Dense	10 - 30	4 - 8	Medium soft
Dense	30 - 50	8 - 15	Stiff
Very Dense	> 50	15 - 30	Very stiff
		> 30	Hard

- 2.0 <u>COLOR</u> Visual
- 3.0 <u>SOIL COMPONENTS</u> The description and classification is based on the following criteria.
 - 3.1 <u>DESCRIPTION</u> The components of a soil sample are described by visually estimating the percentage of each component by weight of the total sample.

<u>Major Component</u> – The major component (>50%) is written with upper case letters for granular soil (SAND, GRAVEL), and a combination of upper and lower case letters for composite soil (Silty CLAY, Clayey SILT).

<u>Minor Component</u> – The minor soil components (<50%) are written with the first letter of each material in upper case, and the remaining letters in lower case (Gravel, Silt). The minor components are identified and prefaced in the description based on the following percentages:

<u>Description</u>	<u>Percentage</u>
and	35 - 50%
some	20 - 35%
little	10 - 20%
trace	0 - 10%

<u>Other Components</u> – The other components within the soil which may be encountered include glass, bricks, trash, etc. The other components are identified and follow the major and minor soil components.

3.2 CLASSIFICATION

Granular Soil by Sieve Size – A granular soil sample is classified by visually estimating the particle size as referenced to a Standard Sieve.

			Standard Sieve Limit			<u>nit</u>
<u>Material*</u>			Upper		<u>Lower</u>	
GRAVEL	-	coarse		3-inch		3/4-inch
	-	fine		3/4-inch		No. 4
SAND	-	coarse		No. 4		No. 10
		medium		No. 10		No. 40
	-	fine		No. 40		No. 200
SILT				No. 200		

Granular Soil by Visual Identification

Material	<u>Visual ID</u>
Silts and Clays	Too small to see.
Fine Sand	Finest visible grain.
Medium Sand	1/64" to 1/16"
Coarse Sand	1/16" to 1/4"
Fine Gravel	1/4" to 3/4"
Coarse Gravel	3/4" to 3"
Cobbles	3" to 6"
Boulders	Greater than 6"

*The Gravel/Sand portions of a granular soil are further divided based on the following proportions:

Gravel/Sand	Proportion
fine to coarse	> 10% all factions
coarse	< 10% fine and medium
medium to coarse	< 10% fine
medium	< 10% fine and coarse
fine to medium	< 10% coarse
fine	< 10% medium and coarse

<u>Composite Clay Soil</u> – A composite clay soil sample is classified by determining the smallest diameter thread that can be rolled manually.

Material	<u>Smallest Thread</u> <u>Diameter</u>	Degree of Plasticity
SILT	None	Nonplastic
Clayey SILT	1/4-inch	Slight
SILT & CLAY	1/8-inch	Low
CLAY & SILT	1/16-inch	Medium
Silty CLAY	1/32-inch	High
CLAY	1/64-inch	Very High

Organic Soil - An organic soil sample is classified by observation of the sample structure.

<u>Material</u>		
Topsoil	-	surficial soils that support plant life and which contain a high percentage of organic matter.
Fibrous Peat	-	deposits of plant remains in which the original plant fibers are still visible.
Amorphous Peat	-	deposits of plant remains in which the original plant fibers have been destroyed. Usually found underlying fibrous peat.
Organic Silt	-	fine grained marine soils which have been transported due to erosion and deposited in still water below the zone of wave action. May contain shell fragments, organic odor, high sand content, nonplastic.
Clayey Organic Silt	-	similar to Organic Silt, low sand content, plastic.

4.0 ADDITIONAL DETAILS AND DISCRIPTIVE TERMS

SOIL STRUCTURE - produced by deposition of sediments.

Stratified - random soil deposits of varying component	its or color.
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- Varved alternating soil deposits of varying thickness (i.e. clays or silts).
- Stratum soil deposit greater than 12 inches thick.
- Layer soil deposit 3 inches to 12 inches thick.
- Seam soil deposit 1/8 inch to 3 inches thick.
- Parting/lens soil deposit less than 1/8 inch thick.

MOISTURE CONTENT

Dry	-	moisture not apparent, dusty, dry to the touch.
Moist	-	damp, but no visible water.
Wet	-	visible free water.

5.0 UNIFIED SOIL CLASSIFICATION SYMBOL AND DISCRIPTION

CL	Lean Clay	GW	Well Graded Gravel
ML	Silt	GP	Poorly Graded Gravel
OL	Organic Silt/ Clay Low Plasticity	GM	Silty Gravel
СН	Fat Clay	GC	Clayey Gravel
МН	Plastic Silt	SW	Well Graded Sand
ОН	Organic Silt/Clay High Plasticity	SP	Poorly Graded Sand
PT	Peat	SM	Silty Sand
		SC	Clayey Sand

GUIDELINES TO CLASSIFICATION AND IDENTIFICATION OF ROCK

A. WEATHERING

Fresh	Fresh rock, crystals bright, few joints, may show slight staining. Rock rings under hammer if crystalline.
Slightly Weathered	Rock generally fresh, joints stained and discoloration extends into rock up to 1 inch. Joints may contain clay or gouge. In granitoid rocks some occasional feldspar crystals are dull and discolored. Crystalline rocks ring under hammer.
Moderatelv	Significant portions of rock show discoloration and weathering effects. In
Weathered	granitoid rocks, most feldspars are dull and discolored; some look clayey. Rock has dull sound under hammer and shows significant loss of strength as compared with fresh rock.
Highly Weathered	All rock is discolored or stained. In granitoid rocks all feldspars are dull and discolored and majority shows kaolinization. Rock shows severe loss of strength and can be excavated with a geologists pick. A clunking sound when struck with a hammer.
Disintegrate Rock	Rock texture clear and evident, but reduced in strength to strong soil. Some fragments of strong rock usually left.

B. FRACTURING AND BEDDING

Spacing	Fracturing	Bedding and Foliation
More than 3 feet 1 foot – 3 feet 2 inches – 1 foot Less than 2 inches	Massive Slightly Fractured Moderately Fractured Highly fractured	Thick Medium Thin Very Thin
C. <u>GRAIN SIZE</u>		

FineVisible to naked eye to 1/16-inch diameter.Medium1/16-inch to 1/4-inch diameter.CoarseGreater than 1/4-inch diameter.

D. HARDNESS

Very Hard	Cannot be scratched with a knife or sharp pick. Breaking of hand specimens requires several hard blows with a geologists pick.
Hard	Can be scratched with a knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.
Moderately	Can be scratched with a knife or pick. Gouges or grooves to ¼ inch deep can be
Hard	excavated with hard blows of a geologists pick. Hand specimens can be detached by a moderate blow.
Medium	Can be grooved to a 1/16-inch deep by firm pressure on a knife or pick point. Can be excavated in small chips to pieces approximately 1-inch maximum size by hard blows of the point of a geologists pick.
Soft	Can be gouged or grooved easily with a knife or pick point. Can be excavated in chips to pieces several inches in size. Small thin pieces can be broken by finger pressure.
Very Soft	Can be carved with a knife. Can be excavated easily with the point of a pick. Pieces 1 inch or more in thickness can be broken with finger pressure.

E. ROCK QUALITY DESIGNATION (RQD)

RQD (Percent)	Diagnostic Description
Exceeding 90 75 – 90	Excellent Good
50 - 75	Fair
25 – 50	Poor
0 – 25	Very Poor

Comments: RQD is applicable to NX core only. The diameter of an NX core is 2.16 inches. RQD is expressed as a percentage and is determined by dividing the length of the run by the total length of the recovered cores pieces measuring 4-inches or greater. Core recovery is reported as a percentage and is determined by dividing the length of the core recovered (all pieces) by the length of the run.



USGS SEISMIC DESIGN MAPS

WINGS Design Maps Summary Report

User-Specified Input

Report Title	GWS Transfer Station Wed January 31, 2018 19:02:19 UTC
Building Code Reference Document	2006/2009 International Building Code (which utilizes USGS hazard data available in 2002)
Site Coordinates	42.76086°N, 71.80297°W
Site Soil Classification	Site Class C – "Very Dense Soil and Soft Rock"
Occupancy Category	I/II/III



USGS-Provided Output



Although this information is a product of the U.S. Geological Survey, we provide no warranty, expressed or implied, as to the accuracy of the data contained therein. This tool is not a substitute for technical subject-matter knowledge.

2006/2009 International Building Code (42.76086°N, 71.80297°W)

Site Class C – "Very Dense Soil and Soft Rock", Occupancy Category I/II/III

Section 1613.5.1 — Mapped acceleration parameters

Note: Maps in the 2006 and 2009 International Building Code are provided for Site Class B. Adjustments for other Site Classes are made, as needed, in Section 1613.5.3.

From <u>Figure 1613.5(1)</u> ^[1]	S _s = 0.285 g
From <u>Figure 1613.5(2)</u> ^[2]	S ₁ = 0.073 g

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Section 1613.5.2 — Site class definitions

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SITE CLASS	SOIL PROFILE NAME	Soil shear wave velocity, v _s , (ft/s)	Standard penetration resistance, <i>N</i>	Soil undrained shear strength, s _u , (psf)
А	Hard rock	$\bar{v}_{s} > 5,000$	N/A	N/A
В	Rock	$2,500 < v_{s} \le 5,000$	N/A	N/A
С	Very dense soil and soft rock	$1,200 < v_{s} \le 2,500$	$\overline{N} > 50$	>2,000 psf
D	Stiff soil profile	$600 \le \overline{v}_{s} < 1,200$	$15 \le \overline{N} \le 50$	1,000 to 2,000 psf
Е	Stiff soil profile	$\bar{v}_{s} < 600$	\overline{N} < 15	<1,000 psf
E	-	 Any profile with more the second se	han 10 ft of soil having the > 20, > 40%, and rength $\overline{s_u} < 500$ psf	characteristics:
F	_	 Any profile containing s characteristics: 1. Soils vulnerable to as liquefiable soils, cemented soils. 2. Peats and/or highly organic clay where 3. Very high plasticity 4. Very thick soft/med 	coils having one or more of t potential failure or collapse quick and highly sensitive of organic clays ($H > 10$ feet H = thickness of soil) clays ($H > 25$ feet with place lium stiff clays ($H > 120$ feet	the following under seismic loading such clays, collapsible weakly of peat and/or highly sticity index <i>PI</i> > 75) st)
	For	SI: 1ft/s = 0.3048 m/s 1	lb/ft ² = 0.0479 kN/m ²	

Section 1613.5.3 — Site coefficients and adjusted maximum considered earthquake spectral response acceleration parameters

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Site Class	Mapped Spectral Response Acceleration at Short Period				
	S _S ≤ 0.25	$S_{s} = 0.50$	S _s = 0.75	S _S = 1.00	S _s ≥ 1.25
Α	0.8	0.8	0.8	0.8	0.8
В	1.0	1.0	1.0	1.0	1.0
С	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
Е	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

TABLE 1613.5.3(1) VALUES OF SITE COEFFICIENT F_a

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Note: Use straight-line interpolation for intermediate values of Ss

For Site Class = C and $S_{\rm s}$ = 0.285 g, $F_{\rm a}$ = 1.200

TABLE 1613.5.3(2) VALUES OF SITE COEFFICIENT F_v

Site Class	Mapped Spectral Response Acceleration at 1-s Period				
	$S_1 \le 0.10$	$S_1 = 0.20$	$S_1 = 0.30$	$S_1 = 0.40$	$S_i \ge 0.50$
A	0.8	0.8	0.8	0.8	0.8
В	1.0	1.0	1.0	1.0	1.0
с	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	See Section 11.4.7 of ASCE 7				

Note: Use straight-line interpolation for intermediate values of S_1

For Site Class = C and $S_{\rm i}$ = 0.073 g, $F_{\rm v}$ = 1.700

In the equations below, the equation number corresponding to the 2006 edition is listed first, and that corresponding to the 2009 edition is listed second.

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Equation (16-38; 16-37): $S_{M1} = F_v S_1 = 1.700 \times 0.073 = 0.124 \text{ g}$

Section 1613.5.4 — Design spectral response acceleration parameters

Equation (16-39; 16-38):

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 $S_{DS} = \frac{2}{3} S_{MS} = \frac{2}{3} \times 0.342 = 0.228 \text{ g}$

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Equation (16-40; 16-39):

 $S_{D1} = \frac{2}{3} S_{M1} = \frac{2}{3} \times 0.124 = 0.083 g$

Section 1613.5.6 — Determination of seismic design category

SEISMIC DESIGN CATEGORY BASED ON SHORT-PERIOD RESPONSE ACCELERATION			
VALUE OF S _{DS}	OCCUPANCY CATEGORY		
	I or II	III	IV
S _{DS} < 0.167g	A	А	A
$0.167g \le S_{DS} < 0.33g$	В	В	С
$0.33g \leq S_{\rm DS} < 0.50g$	С	С	D
$0.50g \leq S_{DS}$	D	D	D

TABLE 1613.5.6(1) SEISMIC DESIGN CATEGORY BASED ON SHORT-PERIOD RESPONSE ACCELERATION

For Occupancy Category = I and S_{DS} = 0.228 g, Seismic Design Category = B

TABLE 1613.5.6(2)

SEISMIC DESIGN CATEGORY BASED ON 1-SECOND PERIOD RESPONSE ACCELERATION

VALUE OF S _{D1}	OCCUPANCY CATEGORY		
	I or II	III	IV
S _{D1} < 0.067g	А	A	Α
$0.067g \le S_{D1} < 0.133g$	В	В	С
$0.133g \le S_{D1} < 0.20g$	С	С	D
0.20g ≤ S _{Di}	D	D	D

For Occupancy Category = I and S_{D1} = 0.083 g, Seismic Design Category = B

Note: When S_1 is greater than or equal to 0.75g, the Seismic Design Category is **E** for buildings in Occupancy Categories I, II, and III, and **F** for those in Occupancy Category IV, irrespective of the above.

Seismic Design Category \equiv "the more severe design category in accordance with Table 1613.5.6(1) or 1613.5.6(2)" = B

Note: See Section 1613.5.6.1 for alternative approaches to calculating Seismic Design Category.

References

- 1. *Figure 1613.5(1)*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/IBC-2006-Figure1613_5(01).pdf
- 2. *Figure 1613.5(2)*: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/IBC-2006-Figure1613_5(02).pdf



DRAFT EARTHWORK SPECIFICATIONS

EARTHWORK 02200-1

GWS TRANSFER STATION 426 FITCHBURG ROAD GREENVILLE, NEW HAMPSHIRE

SECTION 02200 EARTHWORK

PART I- GENERAL

1.01 GENERAL REQUIREMENTS

- 1. Include GENERAL CONDITIONS and SUPPLEMENTARY CONDITIONS as part of this Section.
- 2. Examine all other Sections of the Specifications for requirements, which affect work of this Section whether or not such work is specifically mentioned in this Section.
- 3. Coordinate work with trades affecting, or affected by, work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.02 WORK INCLUDED

- 1. Perform all work required to complete the work of the Section, as indicated. Such work includes, but is not limited to, the following:
 - 1. Excavation, filling, grading and compaction
 - 2. Supplying of fill materials
 - 3. Construction Dewatering
 - 4. Sheeting, shoring and bracing
 - 5. Rock excavation/blasting

1.03 RELATED WORK UNDER OTHER SECTIONS

- 1. Erosion And Sediment Control
- 2. Site Preparation
- 3. Bituminous Concrete Paving
- 4. Site Water Lines
- 5. Storm Drainage System
- 6. Sanitary Sewer System
- 7. Site Furnishings
- 8. Site Irrigation
- 9. Lawns
- 10. Planting

1.04 SUBMITTALS

1. Issue submittals in accordance with Division 1. Submittals under this Section shall include manufacturer's specifications and installation instructions.

1.05 SAMPLES AND TESTING

- 1. A 50 lb. sample of each off-site material proposed for use, and of any on-site material when so requested by the Architect or Geotechnical Engineer, shall be submitted for approval.
 - 1. Samples shall be delivered to office of the Geotechnical Engineer, as directed.
 - 2. Samples required in connection with compaction tests will be taken and transported by the Geotechnical Engineer.

3. Product Data: Submit location of pits for all borrow material.

1.06 COORDINATION

- 1. The work of this Section shall be coordinated with that of other trades affecting, or affected by, this work, as necessary to assure the steady progress of all work of the Contract.
- 2. Prior to the start of earthwork, the Contractor shall arrange an on-site meeting with the Architect and Geotechnical Engineer for the purpose of establishing Contractor's schedule of operations and scheduling inspection procedures and requirements.
- 3. As construction proceeds, the Contractor shall be responsible for notifying the Architect prior to start of earthwork operations requiring inspection and/or testing.

1.09 INFORMATION

- 1. It is hereby understood that the Contractor has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions.
- 2. Plans, surveys, measurements and dimensions, under which the work is to be performed, are believed to be correct to the best of the Architect's knowledge, but the Contractor shall have examined them for himself during the bidding period, as no allowance will be made for any errors or inaccuracies that may be found herein.
- 3. Information on the Drawings, Reference Drawings, and in the Specifications relating to subsurface conditions, natural phenomena, and existing utilities and structures is from the best sources presently available. Such information is furnished only for the information and convenience of the Contractor, and the accuracy or completeness of this information is not guaranteed.

1.10 EXISTING CONDITIONS

- 1. The Contractor shall become thoroughly familiar with the site, consult records and drawings of adjacent structures and of existing utilities, and note all conditions, which may influence the work of this Section.
- 2. By submitting a bid, the Contractor affirms that he has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions.
- 3. The Contractor may, at his own expense, conduct additional subsurface testing as required for his own information after approval by the Owner.

1.11 SUBSURFACE CONDITIONS AND SPECIAL SITE CONSIDERATIONS

- 1. Soil borings have been made by a qualified Contractor prior to this Contract. This information shall be made available to bidders as specified under other Sections. The final results of these subsurface explorations were prepared by Geotechnical Services, Inc., consulting geotechnical engineers, and are hereby attached to this specification for information only. Procedures for dewatering, areas to receive special fill and other methods and procedures specified herein shall be supplemented by this information. For purposes of this specification, this information will be referred to as the report. Where procedures within the report vary from procedures as specified herein, this specification shall override. The results and recommendations are available in the geotechnical report prepared by Geotechnical Services. Copies of this report are available from the Architect. Soil samples may be examined at the office of the Geotechnical Engineer.
- 2. It is the responsibility of the Contractor under this Contract to do the excavation, filling, grading and rough grading to bring the existing grades to subgrade and parallel to finished grades as

specified herein and as shown on the Drawings for this Work. The Contractor shall visit the site prior to submitting a bid to become familiar with the extent of the work to be done under this Contract. The Contractor shall be responsible for determining the quantities of earth materials necessary to complete the work under this Section. All earth materials shall be included in the Contractor's base bid.

- 3. Site Information data on indicated subsurface conditions are not representations or warrants of continuity of such conditions between subsurface explorations. It is expressly understood that the Owner will not be responsible for interpretations or conclusions drawn there from by the Contractor. Data are made available for the convenience of the Contractor. Neither the Owner nor the Geotechnical Engineer assumes responsibility for accuracy of the data other than at the particular locations and at the time the explorations were made.
- 4. The subsurface data was gathered and report prepared by Geotechnical Services, Inc. The elevations indicated on the drill holes, borings and test pits refer to existing conditions. A copy of this report may be seen at the office of the Architect during normal working hours.

1.12 QUALITY ASSURANCE

- 1. The Owner will retain a Geotechnical Engineer to perform on-site observations and testing during the following phases of the construction operations. The services of the Geotechnical Engineer may include, but not be limited to the following:
 - 1. Observation during excavation and dewatering of building areas, parking areas and controlled fill areas.
 - 2. Observation and testing during placement and compaction of fills within the building area, parking area, and controlled fill areas.
 - 3. Laboratory testing and analysis of fill and bedding materials specified, as required.
 - 4. Observation, construction and performance of water content, gradation, and compaction tests at a frequency and at locations to assure conformance of this Specification. The results of these tests will be submitted to the Architect; copy to the Contractor, on a timely basis so that the Contractor can take such action as is required to remedy indicated deficiencies. During the course of construction, the Geotechnical Engineer will advise the Architect, in writing, with copy to Contractor if, at any time, in his opinion, the work is not in substantial conformity with the Contract Documents.
- 2. The Geotechnical Engineer's presence does not include supervision or direction of the actual work by the Contractor, his employees or agents. Neither the presence of the Geotechnical Engineer, nor any observations and testing performed by him, nor any notice or failure to give notice shall excuse the Contractor from defects discovered in his work.
- 3. The Owner reserves the right to modify or waive Geotechnical Engineer services.

1.13 PERMITS, CODES AND SAFETY REQUIREMENTS

- 1. All work shall conform to the Drawings and Specifications and shall comply with applicable codes and regulations.
- 2. Comply with the rules, regulations, laws and ordinances of the Town of Greenville, New Hampshire appropriate agencies of the State of New Hampshire and all other authorities having jurisdiction. Coordinate all work done within town and State rights of way with the appropriate agencies. Provide all required traffic control and safety measures, including uniformed police officers per town and State requirements. All labor, materials, equipment and services necessary to make the work comply with such requirements shall be provided without additional cost to the Owner.
- 3. Comply with the provisions of the Manual of Accident Prevention in Construction of the Associated General Contractors of America, Inc. and the requirements of the Occupational Safety and Health Administration (OSHA), United States Department of Labor.

- 4. The Contractor shall procure and pay for all permits and licenses required for the complete work specified herein and shown on the Drawings.
- 5. The Contractor shall not close or obstruct any street, sidewalk, or passageway unless authorized in writing by the Architect. The Contractor shall so conduct his operations as to interfere as little as possible with the use ordinarily made of roads, driveways, sidewalks or other facilities near enough to the work to be affected hereby. The Contractor shall comply with the time limits established by the terms for trucking onto and off of the site.
- 6. Any apparent conflict between the Drawings and Specifications and the applicable codes and regulations shall be referred to the Architect in writing, for resolution before the work is started.

1.14 LAYOUTS AND GRADES

- 1. All line and grade work not presently established at the site shall be laid out by a survey team under the supervision of a Registered Land Surveyor or Professional Engineer employed by the Contractor in accordance with Drawings and Specifications. The Contractor shall establish permanent benchmarks and replace as directed any which are destroyed or disturbed.
- 2. The words "finished grades" as used herein shall mean final grade elevations indicated on the Drawings. Spot elevations shall govern over proposed contours. Where not otherwise indicated, project site areas outside of the building shall be given uniform slopes between points for which finished grades are indicated or between such points and existing grades.
- 3. The word "subgrade" as used herein, means the required surface of excavated area, subsoil, borrow fill or compacted fill. This surface is immediately beneath the site improvements; fill materials as dimensioned on the Drawings, or other proposed surface material.

1.15 DISPOSITION OF EXISTING UTILITIES

- 1. Active utilities existing on the site and work areas shall be carefully protected from damage and relocated or removed as required by the work. When an active utility line is exposed during construction, its location and elevation shall be plotted on the record drawings as described in this Section and both Architect and Utility Owner notified in writing.
- 2. Inactive or abandoned utilities encountered during construction shall be removed if within the building area or grouted, plugged or capped. The location of such utilities shall be noted on the record drawings and reported in writing to the Architect.
- 3. The Contractor shall notify "Dig Safe" and local utility companies prior to the start of construction. The "Dig Safe" number shall be submitted by the Contractor in writing to the Architect prior to construction.

1.16 SHORING, SHEETING, AND BRACING

- 1. Provide shoring, sheeting, and/or bracing at excavations, as required, to ensure complete safety against collapse of earth at sides of excavations.
- 2. If, at any place, sufficient or proper supports have not been provided, additional supports shall be placed at the expense of the Contractor. Care shall be taken to prevent voids outside of the sheeting, but if voids are formed, they shall be immediately filled and compacted.
- 3. All sheeting and bracing not ordered left in place shall be carefully removed in such a manner as not to endanger the construction of other structures, utilities or property whether public or private. All voids left after withdrawal of sheeting shall be immediately refilled with sand and rammed with tools especially adapted to that purpose or otherwise compacted as directed to achieve the required density.
- 4. Shoring or sheeting shall not constitute a condition for which an increase may be made in the contract price with the exception that if the Architect directs in writing that certain shoring or

sheeting shall be left in place, the contract price will be adjusted in accordance with General Conditions.

- 5. Excavation support systems shall be designed to support the earth pressures, hydrostatic pressures, surcharge loads and other forces from existing site conditions, stored material and construction equipment.
- 6. Shoring and bracing of trenches and other excavations shall, at a minimum, be in accordance with the latest requirements of the Department of Labor and Industries Bulletin No. 12, Section 10, and all subsequent amendments.
- 7. Shoring and sheeting shall be designed by a Registered Professional Engineer in the State of New Hampshire and paid for by the Contractor. The contractor shall submit an earth shoring and bracing plan to the Architect for review by the Geotechnical Engineer at least 2 weeks prior to installation. The submittal shall include calculations and plans drawn to scale.

1.17 DRAINAGE

- 1. The Contractor shall control the grading in areas under construction on the site so that the surface of the ground will properly slope to prevent accumulation of water in excavated areas and adjacent properties.
- 2. The Contractor shall excavate interceptor swales and ditches where shown on the Drawings and as otherwise necessary prior to the start of major earthmoving operations to insure minimal erosion and to keep areas as free from surface water as possible.
- 3. Should surface, rain or ground water be encountered during the operations, the Contractor shall furnish and operate pumps or other equipment, and provide all necessary piping to keep all excavations clear of water at all times and shall be responsible for any damage to work or adjacent properties for such water. All piping exposed above surface for this use, shall be properly covered to allow foot traffic and vehicles to pass without obstruction.
- 4. Presence of ground water in soil will not constitute a condition for which an increase in the contract price may be made. Under no circumstances place concrete fill, soil fill, lay piping or install appurtenances in excavation containing free water. Keep utility trenches free of water until pipe joint material has hardened and backfilled to prevent flotation.

1.18 FROST PROTECTION

- 1. Do not excavate to full-indicated depth when freezing temperatures may be expected, unless work can be completed to subgrade or piping can be installed and backfilled the same day. Protect the excavation from frost if placing of concrete or piping is delayed.
- 2. The Contractor shall keep the operations under this Contract clear and free of accumulation of snow within the limits of Contract Lines as required to carry out the work.
- 3. No work shall be installed on frozen ground.
- 4. Provide heat and/or insulation to slab, footings, foundation walls, and other elements during freezing conditions to prevent damage from frost heaving.

1.19 DISTURBANCE OF EXCAVATED AND FILLED AREAS DURING CONSTRUCTION

1. The Contractor shall take the necessary steps to avoid disturbance of subgrade and underlying natural soils/compacted fill during excavation and filling operations. Methods of excavation and filling operations shall be revised as necessary to avoid disturbance of the subgrade and underlying natural soils/compacted fill, including restricting the use of certain types of construction equipment and their movement over sensitive or unstable materials. The Contractor shall coordinate with the Architect or Geotechnical Engineer to modify his operations as necessary to minimize disturbance and protect bearing soils.

- 2. All excavated or filled areas disturbed during construction, all loose or saturated soil, and other areas that will not meet compaction requirements as specified herein shall be removed and replaced with compacted structural fill or crushed stone. Fill that cannot be compacted within 48 hours because of excess moisture shall be removed and replaced with compacted structural fill or crushed and replaced with compacted structural fill or stores and replacement with gravel fill or crushed stone shall be borne by the Contractor.
- 3. If requested by the Architect, the Contractor shall place a six-inch layer of crushed stone or 4-inch concrete mudmat over natural underlying soil to stabilize areas disturbed during construction. The placement of crushed stone layer or mudmat as well as material costs shall be borne by the Contractor.
- 4. Material that is not within +\- 3% optimum moisture for compaction as determined by the Modified Proctor Test of the particular material in place as determined by the Architect or the Geotechnical Engineer, and is disturbed by the Contractor during construction operations so that proper compaction cannot be reached, shall be construed as unsuitable bearing materials. This material shall be removed and replaced with crushed stone or structural fill as directed by the Architect or Geotechnical Engineer at no additional cost to the Owner.

1.20 PROTECTION OF BEARING SUBGRADES

- 1. The Contractor shall be required to maintain stable, dewatered, and frost fee subgrades for foundations, pavement areas, utility trenches, and other areas as directed by the Architect or Geotechnical Engineer.
- 2. The Contractor shall take precautions to reduce subgrade disturbance. Such precautions may include diverting storm water runoff away from construction areas, reducing traffic in sensitive areas, thermal protection during cold weather periods, and maintaining an effective dewatering operation.
- 3. Soils exhibiting weaving/instability or which become frozen, as determined by the Geotechnical Engineer, shall be over-excavated (removed) to competent bearing material and replaced with compacted gravel fill or lean concrete at no additional cost to the Owner.

1.21 DEWATERING

- 1. Based on subsurface investigations conducted prior to this Contract, it is anticipated that excavation will be carried out below existing groundwater levels. The Contractor shall be required to implement ground water control measures to maintain the ground water level a minimum of one foot below all final excavation levels or to propose alternative methods for placement of fill over existing undisturbed material with ground water at or near the surface in such a manner that the existing materials will not be disturbed. The Contractor will be required to implement ground water control measures adequate to maintain the excavation sufficiently dry to allow efficient use of normal excavation equipment and to provide a borrow material suitable for placement and compaction as specified or as directed by the Geotechnical Engineer. The moisture content shall not exceed 3% above the optimum moisture content as determined by modified Proctor test (ASTM DI557). The Contractor shall furnish all labor, equipment and materials in connection with handling ground water and surface water encountered during construction and placement of compacted granular fill or other material as specified.
- 2. Not less than 14 days prior to the scheduled start of work, the Contractor shall submit his proposed method of dewatering and maintaining dry conditions, to the Geotechnical Engineer for review. The submittal shall include calculations, plans, sketches, pump curves, method of sediment control, and disposal. The dewatering plan shall be prepared by a licensed Civil Engineer registered in the State of New Hampshire. Review by the Architect of the Contractor's proposed method of dewatering shall not relieve the Contractor of responsibility for the satisfactory performance of the dewatering system. The Contractor is responsible for correcting any disturbance of natural bearing soils or damage to structures caused by an inadequate

EARTHWORK 02200-7 dewatering system or by interruption of the continuous operation of the system as specified.

- 3. The Contractor shall make the entire excavation for this work in the dry. The water level is to be maintained continuously one foot below bottom of excavation for the length of time to complete the work. The Contractor shall place all fill materials and proposed improvements in the dry.
- 4. The Contractor shall, at all times during construction, provide and maintain proper equipment and facilities to remove promptly and dispose of properly, all water entering excavations and keep such excavations dry so as to obtain a satisfactory undisturbed bottom of excavation or subgrade condition. Dewatering shall be in operation until the fill or the proposed surface condition has been completed to such extent that it will not be floated or otherwise damaged by allowing water levels to return to natural elevations.
- 5. In excavations below the ground water level, it is expected that dewatering trenches or deep sumps will be required for predrainage of the soils prior to final excavation, and for maintaining the lowered groundwater level until construction has been completed to such an extent that floating, slumping or damage to excavations or materials placed does not occur. Monitoring of adjacent ground water levels by observation wells or other satisfactory means may be required.
- 6. The Contractor shall discharge all pumped water away from the work area, and in accordance with all applicable local codes and laws. Requirements specified herein for Erosion and Siltation Control shall be met during this process.
- 7. All fill material shall be placed and compacted in the dry. The Contractor shall dewater excavated areas as required to perform the work and in such a manner as to preserve the undisturbed state of the natural inorganic or other subgrade soils.
- 8. The Contractor shall verify that the construction and/or operation of his dewatering system will not adversely affect any well, pond, stream structure, utility, etc., on or adjacent to the area being dewatered.
- 1.22 RESTORATION OF DRAINAGE SWALES, DETENTION BASINS AND WATER BODIES
 - 1. In addition to other work specified and prior to substantial completion, the Contractor shall repair all erosion in all areas and excavate and remove accumulations of silt, debris or other material occurring from work under this Contract in the water bodies, detention areas and in all drainage swales to remain and as shown on Drawings. Water bodies and detention areas will be drained or pumped, if necessary, to properly remove all accumulations of silt and debris and to achieve a smooth bottom. If it is necessary to drain or pump water bodies and detention areas, the Contractor shall be required to implement ground water control measures to maintain the ground water level at a level to eliminate floating or slumping materials. The water level is to be maintained continuously at or below this level for the length of time that the pond water level is lowered. During filling of the water bodies to achieve previous or proposed water levels, the water level should be at or above the water level in the adjacent ground. Water bodies shall be filled with fresh water prior to securing the dewatering system. For further- information on dewatering, refer to DEWATERING as specified herein.

PART 2 - PRODUCTS

2.01 MATERIALS

- 1. Fill material shall be obtained from required on-site cut to the extent suitable material is available and off-site to the extent suitable material is not available from on-site cuts.
- 2. On-site material for use in compacted fill shall be natural inorganic granular soil taken from areas of cut after removal of pavement, topsoil, or other unsuitable materials.
- 3. Fill materials shall be well-graded within specified gradation limits. Gradation of backfill materials shall be determined in accordance with ASTM D-422.

4. <u>Crushed Stone:</u> Crushed stone processed from a stone quarry, washed, graded, free of organic materials. Gradation is as follows:

1.	<u>1/2" Crushed Stone U. S. SIEVE NO.</u> 2" 1/2" 3/8" #4 #8	<u>% PASSING BY WEIGHT</u> 100 85-100 15-45 0-15 0-5
2.	3/4" Crushed Stone U.S. SIEVE NO. 1" 3/4" 1/2" 3/8" # 4	<u>% PASSING BY WEIGHT</u> 100 90-100 10-50 0-20 0-5
3.	<u>1-1/2" Crushed Stone</u> <u>U.S. SIEVE NO</u> . 2" 1-1/2" " 3/4"	<u>% PASSING BY WEIGHT</u> 100 95-100 35-70 0-25
4.	Modified Rockfill U.S. SIEVE NO. 8" 4" 2-1/2"	<u>% PASSING BY WEIGHT</u> 100 0-25 0-5

5. <u>Structural Fill</u>: Well-graded, hard, durable, natural sand and gravel, free from ice and snow, roots, sod, rubbish, and other deleterious or organic matter. Material shall conform to the following gradation requirements:

<u>U.S. SIEVE NO.</u>	<u>% PASSING BY WEIGHT</u>
4"*	100
#4	40-70
#200	0-12

- Four inches where placed as base below concrete floor slab and pavement or within 12 inches of walls; elsewhere 2/3 the lift thickness.
- 6. <u>Ordinary Fill</u>: Well-graded, natural, inorganic soil approved by the Architect and meeting the following requirements:
 - 1. It shall have less than 3% organic matter, free from weak, compressible, or frozen materials, and of stones larger than eight inches in dimension. It shall not contain granite block, concrete, masonry rubble, roots, stumps or other similar materials.
 - 2. It shall be of such nature and character that it can be compacted to the specified densities.
 - 3. Topsoil and the zone directly below the topsoil indicated on the borings as "subsoil" shall not be considered Ordinary Fill nor shall topsoil or subsoil stockpiled on the site. Where subsoil is encountered, it shall be stripped separately from the topsoil and the granular

material directly beneath the subsoil. This excavated material shall only be utilized in lawn areas, playfield areas or other non-structural areas, and shall be placed in these areas at distances away from adjacent site improvements as specified herein or as directed by the Architect.

- 4. It shall have a minimum dry density of not less than 100 pounds per cubic foot.
- 5. Material from excavations on the site may be used as Ordinary Fill if it is deemed acceptable by the Geotechnical Engineer.
- 7. <u>Unsuitable material</u> which is classified as "unsuitable" shall be material having at least one of the following properties:
 - 1. Material with a maximum unit dry weight per cubic foot less than 90 lbs., as determined by ASTM D1557.
 - 2. Material containing greater than 5% organic matter by weight, organic silt, peat, construction debris, roots and stumps.
 - 3. Material deemed unsuitable by the Geotechnical Engineer based on its inherent inability to perform satisfactorily as a bearing stratum.
 - 4. Soil, which is allowed to become frozen, saturated, or unstable because of the contractor's failure to employ appropriate dewatering, excavation methods, or weather protection is not deemed unsuitable soil but rather represents a condition in which the subgrade was not adequately prepared and/or protected.
- 8. <u>Blast Rock Fill</u>: Shall be broadly graded blasted rock with a maximum size of 12 inches, 25% smaller than six inches and 10% finer than 3/4 inch. Occasional boulders up to 18 inches will be permitted near the base of the fill.
 - 1. General site rock fill (outside the building area) may be placed up to within 42 inches of finish grade in pavement areas and to within 18 inches of inverts of utility lines. First lift over the top of rock fill shall be a choke stone layer 18 inches thick. Compaction shall be by minimum of four coverages of a self-propelled vibratory drum roller in each direction (i.e. north-south and east-west). The minimum weight of the drum shall be 10,000 lbs. Compaction may also be by four coverages of heavy track equipment such as a CAT D8 Bulldozer or other heavy track equipment approved by the Geotechnical Engineer.
 - 2. Rock shall not be placed within a five-foot horizontal distance on either side of any proposed utility line. The intent is to leave a zone of granular fill that can later be excavated for installation of utilities. Also, large rock fragments shall be kept away from utility pipes.
- 9. <u>Choke Stone</u>: Shall have a maximum rock size of nine inches and shall have 50% finer than 1-1/2 inch and 25% finer than 3/4 inch.
- 10. <u>Sand Fill</u>: Shall consist of well-graded natural sand, free from organic, other weak or compressible materials, or frozen materials, Conforming to the following gradation:

<u>% PASSING BY WEIGHT</u>
100
15-40
2-10
0-5

11. <u>Slab Base Course :</u> Shall be hard, durable, natural sand and gravel, free from ice and snow, roots, sod, rubbish, or organic matter. Material shall conform to the following gradation requirements:

<u>U.S. SIEVE NO.</u>	<u>% PASSING BY WEIGHT</u>
2"	100
3/4"	20-90

#4	15-70
#40	10-50
#200	0-8

PART 3 - EXECUTION

3.01 GENERAL EXCAVATION

- 1. Excavate all materials encountered to allow construction of the proposed building and structures, utilities and site work as shown on the Drawings and as hereinafter specified.
- 2. Excavate to levels shown for footings and structures, as required to provide working clearance and to allow adequate inspection and to subgrades outside of buildings and structures as specified herein and as shown on Drawings.
- 3. In planted areas, remove ledge, boulders and other obstructions to a depth of at least two feet below finished grade.
- 4. Remove from the site and legally dispose of all debris and other excavated material not needed for, or suitable for, fill except as otherwise specified herein. Remove all materials subject to rot or attack by termites.
- 5. In general, the Contractor will be permitted to use machine excavation to the bottom of fill under concrete slabs on grade. The final three inches under footings and foundations shall be excavated using a straight blade bucket. If the final three inches cannot be satisfactorily excavated using a straight blade bucket without disturbing subgrades, the Contractor shall use alternative methods, including hand excavations. Alternative methods shall be subject to approval by the Architect or Geotechnical Engineer.
- 6. Unsuitable Soil Conditions:
 - a. If unsuitable bearing materials are encountered at the specified subgrade depths, the Contractor shall notify the Architect. The Contractor shall carry excavation deeper and replace the excavated material with compacted fill or concrete as directed by the Architect or Geotechnical Engineer. Soil subgrades, which are unstable due to inadequate construction dewatering or excessive subgrade disturbance, are not deemed unsuitable soils.
 - b. Removal of such material and its replacement as directed will be paid for as extra compensation in quantity approved by the Architect. Only changes in the work authorized in advance by the Architect in writing shall constitute an adjustment in the Contract Price.
 - c. Material that is not within +\- 3% optimum moisture for compaction of the particular material in place as determined by the Architect or the Geotechnical Engineer and is disturbed by the Contractor during construction operations so that proper compaction cannot be reached shall not be construed as unsuitable bearing materials. This material shall be removed and replaced with lean concrete or structural fill as directed by the Architect or Geotechnical Engineer at no additional cost to the Owner.
 - d. The Contractor shall follow a construction procedure, which permits visual identification of firm natural ground.
 - e. The volume of unsuitable material shall be measured by profiling the in-place topography and calculation by the average-end-area method or other method deemed acceptable by the Geotechnical Engineer. The contractor's Licensed Surveyor or Professional Engineer shall prepare the calculations. Payment limits shall be as for rock excavation.
- 7. Excessive Excavation: If any part of the general or trench excavation is carried, through error, beyond the depth and the dimensions indicated on the Drawings or called for in the Specifications, the Contractor at his own expense, shall furnish and install compacted gravel fill, concrete, or take other remedial measures as directed by the Architect to bring fill material up to the required level.

3.02 TRENCH EXCAVATION

- 1. Excavate as necessary for all footings, structures, pipes, storm and sanitary drainage, electrical, gas, water, related structures and appurtenances, and for any other trenching necessary to complete the work. Unless otherwise indicated, provide separate trench for each utility.
- 2. Definitions:
 - 1. "Trench excavation" shall be defined as an excavation in which the bottom width does not exceed seven feet and the top width does not exceed twice the depth or where footings are excavated by backhoe. Refer to Drawings for any special trenching conditions for utilities, structures, etc.
 - 2. The words "invert" or "invert elevation" as used herein mean the elevation at the inside bottom of pipe or channel.
 - 3. The words "bottom of the pipe" as used herein means the elevation at the base of the pipe at its outer surface.
- 3. In general, machine excavation of trenches will be permitted with the exception of preparation of pipe beds, which will be handwork. Excavate by hand or machine methods at least six inches below the bottom of all utilities.
- 4. Trench excavation shall include the removal of all materials encountered. During excavation, materials determined to be suitable for backfilling shall be piled in an orderly manner a sufficient distance from the banks of the trench to avoid overloading and to prevent slides or cave-ins. All excavated materials not required or unsuitable for backfill shall be removed and legally disposed off the site. The banks of trenches shall be cut as near vertical as practicable to the extent allowed by OSHA.
- 5. The Contractor shall provide, at his own expense, suitable bridges over trenches where required for accommodation and safety of the traveling public and as necessary to satisfy the required permits and codes.
- 6. Trenches shall be excavated to the necessary width and depth for proper laying of pipe or other utility and shall have vertical sides or slopes as required by codes. Minimum width of trenches shall provide clearance between the sides of the trench and the outside face of the utility. Maximum trench sizes are as shown on the Drawings or as specified herein. The depth of the trench shall be six inches below the bottom of the pipe barrel or respective utility. If the existing soil is found not suitable, the Architect or Geotechnical Engineer may approve removal and replacement of material. Costs for removal and replacement materials will be based on Unit Prices.
- 7. Coordinate all utility and trench backfilling with the trades involved.

3.03 ROCK EXCAVATION

- 1. Definitions and Classifications: The following classifications of excavation will be made only when rock excavation is required.
 - 1. "Earth Excavation" consists of removal and disposal of pavement and other obstructions visible on ground surface; underground structures and utilities indicated to be demolished and removed; material of any classification indicated in data on subsurface conditions; and other materials encountered that are not classified as rock excavation.
 - 2. "Rock Excavation" consists of removal and disposal of materials encountered that cannot be excavated without continuous and systematic drilling and blasting or continuous use of a ripper or other special equipment, except such materials that are classed as earth excavation. Typical of materials classified as rock excavation are as follows:
 - 1. Consolidated Bedrock.
 - 2. Boulders on site, outside trench limits, exceeding two cubic yards in volume.

- 3. Boulders within trench limits, exceeding one cubic yard in volume.
- 3. Should highly fractured or weathered bedrock be encountered during excavation, the following shall apply:
 - 1. When the material is encountered in trenching operations or under footings, it shall be excavated or ripped with a hydraulic backhoe equal to or larger than a Caterpillar 235 excavator, and will be classified as Earth Excavation. When it is demonstrated to the satisfaction of the Architect and the Geotechnical Engineer that this material can no longer be removed with a hydraulic backhoe and requires drilling and blasting, this material shall be classified as Rock Excavation. For excavation procedures when this material is encountered under footings, refer to paragraph below.
- 4. Intermittent drilling and ripping performed to increase production and not necessary to permit excavation of material encountered will be classified as Earth Excavation.
- 5. Allowance for Rock Excavation: The Contractor shall carry in the Base Bid an allowance for xxx cubic yards of rock encountered in trench excavation removed from the site. The Contractor shall also carry in the Base Bid an allowance of xxx cubic yards of open rock excavation removed from the site. The Base Bid shall cover all costs relating to such rock excavation, including blasting, removal and placement of the excavated material, overhead and profit. The Owner for excavation herein defined will pay no amount other than that herein specified.
 - 1. If the total quantity of Rock Excavation, open and/or trench, exceeds the amount of Rock Excavation included in the Contract as listed above, the Owner shall pay the excess excavation at the unit prices as indicated in the contract.
 - 2. If the total quantity of Rock Excavation, open and/or trench, is less than the amount of Rock Excavation included in the Contract as listed above, the Contract sum will be decreased by the difference in Rock Excavation multiplied by the unit prices as listed in the contract.
- 2. Measurements:
 - 1. When, during the process of excavation, rock is encountered, such material shall be uncovered and exposed in such a manner that the unbroken ledge surface is clearly visible, and the Contractor shall notify the Architect, before proceeding further. The areas in question shall then be cross-sectioned as hereinafter specified.
 - 2. Failure on the part of the Contractor to uncover such material and to notify the Architect and proceeding by the Contractor with the rock excavation before cross-sections are taken, will forfeit the Contractor's right of claim towards the stated allowance or additional payment over and above the stated allowance at the quoted unit price.
 - 3. The Contractor shall employ and pay for a licensed Registered Civil Engineer or Land Surveyor to take cross-sections of rock before removal and to make computations of volume of rock encountered within the Payment Lines. Cross-sections shall be taken in the presence of the Geotechnical Engineer and the computations approved by the Architect. The volume calculations shall be by the average end area method. The Owner has the option to perform independent cross-sections and computations of rock quantities.
 - 4. Where removal of boulder or ledge is required outside the established payment lines, the Architect shall determine the extent of this removal and basis of payment.
- 3. Blasting: Obtain written permission and approval of method from local authorities before proceeding with rock excavation. Explosives shall be stored, handled, and employed in accordance with state and local regulations or, in the absence of such, in accordance with the provisions of the "Manual of Accident Prevention of Construction" of the Associated General Contractors of America, Inc.
 - 1. Notify the Architect at least 48 hours before any intended blasting and do no blasting without his specific approval of each blasting operation.

- 2. Contractor shall present evidence that his insurance includes coverage for blasting operations before doing any blasting work. A preblast survey shall be performed for all buildings and utilities within a radius of 150 feet from the blasting zone or conforming to the ordinance governing blasting and the Fire Department regulations.
- 3. All rock blasting shall be well covered with heavy mats or timbers chained together and the Contractor shall take great care to do no damage to existing structures, utility lines and trees to remain.
- 4. Any damage caused by the work of this Contractor shall be repaired to the full satisfaction of the Architect at no additional cost to the Owner.
- 5. Any rock fragments or loose material from blasting operations shall be removed. All voids shall be filled with a leveling mat of structural fill or lean concrete as directed by the Geotechnical Engineer.
- 6. At least 2 weeks prior to blasting the contractor shall submit a blasting plan indicating blasting agents to be used, drill hole depths and spacing, powder factors, personnel, vibration limits and method of measurement, for review by the Geotechnical Engineer.
- 4. Complaints:
 - 1. Report all blasting complaints to the Architect within 24 hours of receipt thereof. Include the name, address, date, time received, date and time of blast complained about, and a brief description of the alleged damages or other circumstances upon which the complaint is predicated. Assign each complaint a number, and number all complaints consecutively in order of receipt.
 - 2. Submit a summary report to the Architect each month which indicates the date, time and name of person investigating the complaint, and the amount of settlement, if any.
 - 3. When settlement of a claim is made, furnish the Architect with a copy of the release of claim by the claimant.
 - 4. Immediately notify the Architect, throughout the statutory period of liability, of any formal claim or demands made by attorneys on behalf of claimants, or of serving of any notice, summons, subpoena, or other legal documents incidental to litigation, and of any out-of-court settlement or court verdict resulting from litigation.
 - 5. Immediately notify the Architect of any investigations, hearings, or orders received from any governmental agency, board or body claiming to have authority to regulate blasting operations.
- 5. If ledge is encountered within the limits of the Proposed Building Area, the Contractor shall excavate this material 18 inches below subgrade of footings and 12 inches below subgrade of slabs unless otherwise directed by the Architect or Geotechnical Engineer. All loose or shaken rock shall be removed and replaced with compacted gravel fill or lean concrete as specified herein.
- 6. Rock excavation for foundations outside of the Building Area: Remove rock to foundation or footing subgrade. All rock bottoms for foundations shall be carefully examined. Loose or shaken rock shall be removed to solid bearing, and the rock surface leveled, or shelved to a slope not exceeding one inch per two feet, or as directed.
- 7. Excavate rock encountered in grading under paved areas, lawns and plant beds to subgrade as specified herein and shown on the Drawings. All boulders or protruding rock outcrops shall remain undisturbed at lawns and plant beds when so directed by the Architect. Rock shall be fractured six inches below subgrade of paved areas but this six-inch layer shall remain in place.
- 8. If any part of the rock excavation at footings be carried beyond the depth and the dimensions indicated on the Drawings or called for in the Specifications, the Contractor shall, at his own expense, furnish and install concrete of same strength as footings to the required subgrade level of the footings as shown on the Drawings. Doweling or other corrective structural measures as directed by the Architect may also be required to properly anchor or reinforce the concrete. If rock excavation is carried beyond the depth and dimensions to subgrade in other areas, the Contractor shall, at his own expense, furnish and install compacted gravel fill to subgrade as directed by the Architect.

- 9. Basis of Payment: The total amount of rock excavation will be based upon the volume of rock excavated within and/or above the lines referred to in the next paragraph as "Payment Lines". The payment lines are only to be used as a basis of payment, and are not to be used as limits of excavation. Limits of excavation area as shown on the Drawings and as specified herein.
- 10. Payment Lines for Rock Excavation:
 - 1. Payment lines for columns and footings within the building shall be a vertical line one foot from the toe of the footings; the depth shall be measured at 24 inches below the bottom elevations shown on the Drawings. If rock is to remain directly below the bottom of the footings within the Building Area, payment lines shall be six inches below the bottom elevation of the footing as shown on the Drawings. Payment lines for walls to be damp-proofed shall be a vertical line two feet outside the walls. Payment lines for footings outside of the building shall be six inches below the bottom of footings. Vertical payment lines shall be as specified hereinafter.
 - 2. Payment lines for manholes and catch basins shall be one foot outside of the outer wall and six inches below subgrade beneath the structure.
 - 3. Payment lines for rock excavation under slabs on grade shall be six inches below the bottom elevation of the specified gravel base course outside of the building and 12 inches below subgrade for slabs within the building.
 - 4. Payment lines for rock excavation at paved areas and lawns shall be six inches below respective subgrades.
 - 5. Payment lines for rock excavation under pipes within the building and for utility trenches outside the building lines shall in no case be calculated as greater in width than the outside diameter of the pipe plus two feet for pipes up to 18 inches. For pipes 18 inches and larger payment lines shall in no case be calculated as greater in width than the outside diameter of the pipe plus three feet. Payment lines at bottom of all pipe and utility trenches shall be six inches below subgrade.

3.04 PROOF-ROLLING

- 1. Contractor shall be required to proofroll foundation and pavement subgrades prior to foundation construction or the placement and compaction of fill materials.
- 2. Proofrolling of foundation subgrades shall include at least ten passes of a small vibratory plate compactor for trench excavations or six passes of a heavy vibratory roller for open areas.
- 3. Proofrolling of pavement subgrades shall include four passes of a heavy vibratory roller.
- 4. If groundwater is located within one foot of foundation or pavement subgrade, proofrolling may be eliminated. However, the Contractor shall demonstrate care during excavation so as to minimize subgrade disturbance.
- 5. The Geotechnical Engineer shall visually observe Proofrolling. Foundation construction or replacement of fill materials shall not commence until the Geotechnical Engineer has witnessed subgrade conditions and proofrolling operations.
- 6. Soils which exhibit weaving or instability during the proofrolling operations as determined by the Geotechnical Engineer shall be removed and replaced with compacted Structural Fill or Crushed Stone at no additional cost to the Owner.

3.05 FILLING AND GRADING

- 1. Samples and Testing:
 - 1. All fill materials, and their placement shall be subject to quality control testing. The Owner shall pay for all testing except that the Contractor will bear cost of testing materials, which fail to conform to Specifications. Test results and laboratory recommendations will be available to Contractor. All sieve analyses for conformance of
on-site and off-site fill materials to be used in the work shall be done by means of a mechanical wet sieve analysis and in accordance with ASTM D-422.

- 2. The Owner will retain a Geotechnical Engineer to provide personnel, qualified by training and experience, to be at the site to observe preparation for the placement of compacted fills, to observe excavation and dewatering required for the work, and to observe earthwork operations and report on the conformity of operations with these Specifications. All service and approvals given by the Geotechnical Engineer shall not relieve the Contractor of his responsibility for performing the work in accordance with these Specifications. The Contractor agrees to accept as final the results of field and laboratory tests performed by the above representatives. As stated hereinbefore, the Owner reserves the right to modify or waive Geotechnical Engineer's services.
- 3. Excavated material taken directly from on-site cuts that will meet these Specifications may be used as Ordinary Fill or Structural Fill provided the Contractor obtains written approval from the Architect. No such fill material shall be put in place until approved for use by the Architect in writing.
- 4. Field density tests will be made by the Geotechnical Engineer in accordance with the Method of Test for ASTM Designation D1556 or D2944, to determine the adequacy of compaction; the location and frequency of such field tests shall be at the Geotechnical Engineer's discretion.
- 5. The Contractor shall notify the Architect or the Geotechnical Engineer when an area is ready for compaction testing. This notification shall be 48 hours in advance of placing or final compaction so that the Geotechnical Engineer has adequate time to take compaction tests.
- 6. The Architect or his designated representative shall have the right to observe the installation of all controlled compacted fills.
- 7. Testing of materials as delivered may be made from time to time. Materials in question may not be used, pending test results. Tests of compacted materials will be made regularly. Remove rejected materials and replace with new, whether in stockpiles or in place.
- 8. Cooperate with the Geotechnical Engineer in obtaining field samples of in-place materials after compaction. Furnish incidental field labor in connection with these tests. The Contractor will be informed by the Geotechnical Engineer of areas of unsatisfactory density which may require improvement by removal and replacement, or by scarifying, aerating, sprinkling (as needed), and re-compaction prior to the placement of the new lift. No additional compensation shall be paid for work required to achieve proper compaction.
- 9. The Geotechnical Engineer's presence does not include supervision or direction of the actual work by the Contractor, his employees, or agents. Neither the presence of the Geotechnical Engineer nor any observations and testing performed by him shall excuse the Contractor from defects discovered in his work.
- 10. In no case will frozen material be allowed for use in fill, backfill, or rough grading material.
- 11. Stones or rock fragments larger than four inches in their greatest dimension shall not be permitted within the top six inches of subgrade of any fills or embankments.
- 2. Placing, Spreading and Compacting Fill Material:
 - 1. Fill materials are to be placed as designated herein and as indicated on the Contract Drawings.
 - 1. Crushed Stone shall be placed as follows and compacted as specified herein:
 - 1.) Under and around utility structures and around foundation drains and underdrains, (use 1/2" stone).
 - 2.) Behind retaining walls, and under rip rap.
 - 3.) Where otherwise shown on Drawings or as directed by the Architect.
 - 2. Structural Fill shall be placed as follows and compacted in lifts to a minimum of 95% maximum dry density per the Modified Proctor Test (ASTM D 1557) as specified herein: (Refer to table specified herein for compaction methods and lift requirements.)

- 1.) Within building pad areas.
- 2.) As a subgrade fill for all material to be placed in controlled compacted fills under exterior concrete slabs, foundations, on grade stairs, and other soil bearing situations.
- 3.) Wherever a structural fill is called for or shown on the Drawings.
- 3. Ordinary Fill shall be placed as follows and compacted as specified herein:
 - 1.) In general fill areas such as lawn or in parking islands except where Structural Fill is shown.
 - 2.) Wherever Ordinary Fill is called for and as specified hereinbefore.
 - 3.) Wherever Structural Fill, Crushed Stone, Sand Fill or Topsoil is not required herein or on the Drawings.
- 4. Blast Rock Fill may be placed up to within three feet of finish grade in pavement areas and within two feet of finish grade in lawns, and to within 30 inches of inverts of utility lines and proposed utility routes. First lift over the top of rock fill shall be choked stone layer 18 inches thick which shall be a well-graded mixture of sand, gravel, and blasted rock with maximum stone size less than nine inches. Compaction shall be by minimum of six coverages of a self-propelled vibratory drum roller in each direction (i.e. north-south and east-west). The minimum weight of the drum shall be 1 0,000 lbs. Compaction may also be by four coverages of heavy track machinery such as a Caterpillar D8 or other track machinery approved by the Geotechnical Engineer.
 - 1.) Blast Rock Fill shall not be placed within 30 inches vertically of exterior concrete slabs (i.e. sidewalks, loading docks, etc..
 - 2.) Rock shall not be placed within a five-foot horizontal distance on either side of any proposed utility line. The intent is to leave a zone of granular fill that can later be excavated for installation of utilities. Also keep large rock fragments away from any utility lines.
 - 3.) Place woven filter fabric (Mirafi 500X or equivalent) over Blast Rock Fill.
- 5. Sand Fill shall be placed as follows and compacted as specified for the particular item:
 - 1.) As a bedding material for PVC electrical conduit where concrete is not required, telephone-cable, primary electric service and gas pipe.
 - 2.) Where otherwise specified or shown on the Drawings.
- 6. Slab Base Fill shall be placed in minimum 6-inch lift under concrete floor slabs.
- 7. Subsoil shall be used only under lawn areas and athletic fields. This material shall not be placed closer to areas being otherwise prepared than a 1:1 angle of repose x depth of fill for the particular area. For instance, if a fill is four feet deep, subsoil may not be placed closer than four feet to the area being otherwise prepared.
 - 1.) Unsuitable Earth Materials shall be removed from the site.
 - 2.) The fill material shall be placed in uniform horizontal layers and compacted as specified herein.
- 8. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to obtain uniformity of material in each layer. So far as practicable, each layer of material shall extend the entire length and width of the area being filled plus two additional feet horizontally along each side for every one foot of fill required.
- 3. All fill material shall be placed and compacted in the dry. The Contractor shall dewater

excavated areas as required to perform the work, and in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils. In freezing weather, a layer of fill shall not be left in an uncompacted state at the close of a day's operation. Prior to terminating operations for the day, the final layer of fill, after compaction, shall be rolled with a smooth-wheeled roller to eliminate ridges of soil left by tractors, trucks and compaction equipment.

- 4. The Contractor shall not place a layer of compacted fill on soil that was permitted to freeze prior to compaction or on snow or ice. Removal of these unsatisfactory materials will be required as directed by the Owner.
- 5. When the moisture content of the fill material is below optimal moisture necessary for compaction as specified herein, water shall be added until the moisture content is as specified.
- 6. When the moisture content of the fill material is above the optimal moisture necessary for compaction as specified herein, the fill material shall be aerated by blending, mixing, or other satisfactory methods until the moisture content is as specified.
- 7. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to the specified density. Compaction shall be continuous over the entire area and the equipment shall make sufficient passes to ensure that the desired density is obtained. A minimum of four coverages with acceptable compaction equipment described hereinafter is a requirement. These coverages are to be provided as systematic compactive effort; incidental coverages due to construction vehicle traffic through the area will not be included.
- 3. Structural Fill: All fills within the building area shall be made with Structural Fill as defined herein and shown on the Footing Zone of Influence detail included herein. No excavated on-site material will be acceptable as Structural Fill unless specifically approved by testing as specified herein.
- 4. Allowance for Unsuitable Materials and replacement with Structural Fill: The Contractor shall include in his base bid xxx cubic yards for the removal of Unsuitable Materials and Structural Fill in place and graded as specified herein to be used as directed by the Architect or the Geotechnical Engineer. This quantity of Structural Fill is in addition to the requirements for Structural Fill in areas as specified herein and as shown on the Contract Documents and is to be used at the discretion of the Architect or the Geotechnical Engineer.
- 5. Backfilling of Trenches, Structures and Foundations:
 - 1. Areas to be backfilled shall be free of construction debris, refuse, compressible or decayable materials and standing water. Do not place fill when temperature is below 30 degrees F and when fill materials or layers below it are frozen unless specifically approved by the Geotechnical Engineer.
 - 2. Requirement of description, placement, compaction and spreading of fill materials as specified herein shall be applicable to backfilling operations.
 - 3. Structural Fill shall be used as Backfill around manholes and other structures. Excavated material may be used if approved by the Architect or Geotechnical Engineer.
 - 4. Backfilling of foundations, structures and retaining walls shall not commence until construction finish grade has been approved, forms removed, and the excavation cleaned of trash and debris. Backfill shall not be placed against walls until they are braced or have cured sufficiently to develop the strength necessary to withstand, without damage, the pressure that will result from backfilling and compacting operations. If fill is required on both sides of a wall, it shall be brought up simultaneously and evenly on both sides. Avoid damage to the walls and to damp-proofing and waterproofing and other work in place. Allow seven days from the date of application of waterproofing before backfilling. Stones larger than four inches maximum dimension shall not be permitted in the upper six inches of fill or horizontally within 12 inches of walls.
 - 5. Do not commence backfilling operations of utility trenches until all piping, conduits, etc. have been installed, tested and approved and the locations of all pipe and appurtenances have been recorded. Backfill carefully by hand around pipe to depth of one foot above top of pipe using material specified herein, and tamping firmly in layers not exceeding six inch layers, compacting by hand rammers or mechanical tampers. When a

manufacturer of utility line materials suggests backfill materials and methods other than those specified herein, such requirements shall govern providing the finished work equals or exceeds the result obtained by the materials and methods specified herein. Water mains shall be hand backfilled to a minimum cover of 18 inches before mechanical equipment can be used to backfill trench.

- 6. Sand Bedding will be required below all pipe unless otherwise shown on the Drawings or specified herein. Crushed Stone is required under utility structures where shown on the Drawings. Gravel Bedding, Sand Bedding or Crushed Stone shall be placed to the full width of the trench and under utility structure foundations as indicated on the Drawings. After a pipe is bedded, the trench shall be filled to the centerline of the pipe with Gravel Fill or Sand Bedding except at the joint. After the joint is inspected, that portion shall be filled in with Sand Bedding. Material under and around the pipe shall be carefully and thoroughly tamped.
- 7. From the centerline of the pipe to a point 12 inches above the top of the pipe the backfill shall be Structural Fill or Sand Fill placed by hand and hand tamped. Above this point, backfill shall be placed in layers six inches deep and each layer shall be compacted with mechanical tampers to not less than 95% of maximum density at optimum moisture of the material. This backfill shall be carried up to the bottom of materials specified to be placed for surfacing requirements.
- 8. Utilities shall not be laid directly on ledge, boulders or other hard material. This material shall be removed as specified herein within trench limits, and within vertical planes one foot outside of structure walls. Backfill will be placed in eight-inch lifts and thoroughly compacted. If hand guided compaction equipment is used, fill shall be placed in six-inch lifts. All rock excavation shall be considered unsuitable for backfill around utilities. Ordinary fill may be used as backfill in areas as specified herein.
- 9. Coordinate all utility and trench backfilling with the trades involved.
- 6. Compaction Equipment:
 - 1. Compaction shall be accomplished by vibratory rollers, multiple wheel pneumatic tired rollers or other types of approved compacting equipment. Loaded trucks, low beds, water wagons and the like shall not be considered as acceptable compaction equipment unless specifically approved by the Architect or Geotechnical Engineer for a particular location. Equipment shall be of any such design that it will be able to compact the fill to the specified density in a reasonable length of time. All compaction equipment shall be subject to the approval of the Geotechnical Engineer.
- 7. Compaction Requirements:
 - 1. The following table lists minimum compactive efforts and lift weights which are required for all fill materials. Compaction of each lift shall be completed before compaction of the next lift is started. The compaction equipment shall make an equal number of transverse and longitudinal coverages of each lift. Allow the Geotechnical Engineer sufficient time to make necessary observations and tests. The degree of compaction for fill placed in various areas shall be as follows:

Relative Compaction

1.	Within buildings and structures: -Under footings -under slab	95% 95%
2.	Outside building areas:	
	-within paved areas	95%
	-within lawn areas	85%
	and playing fields	

• Percent of maximum dry density of the material at optimum moisture content as determined by methods or tests for ASTM designation D 1557.

- 8. Methods: The compaction alternatives given below are stated to provide minimum compaction standards only and in no way relieves the Contractor of his obligation to achieve the specified degree of compaction by whatever additional effort is necessary.
 - 1. All fill to be placed "in-the-dry" with the exception specified hereinafter. If, in the opinion of the Architect or the Geotechnical Engineer, the Contractor has followed a logical sequence of construction procedures, has employed the proper and necessary equipment, and has otherwise conducted himself in a workmanlike manner, but still cannot effectively dewater the excavation, the Architect or the Geotechnical Engineer may permit the Contractor to place a first lift of Gravel or Crushed Stone fill "in-the-wet". Fill placed in-the-wet must meet the gradation and placement requirements specified herein. The quantity of fill placed in-the-wet must be no greater than deemed necessary by the Architect and must be limited to the lowermost lift.
- 9. Moisture Control:
 - 1. Variation of moisture content in fill and backfill materials shall be limited to Optimum Moisture (-1% to +2%). Moisture content shall be as uniformly distributed as practicable within each lift, and shall be adjusted as necessary to obtain the specified compaction.
 - 2. Material which does not contain sufficient moisture to be compacted to the specified densities shall be moisture conditioned by sprinkling, discing, windrowing, or other method approved by the Geotechnical Engineer.
 - 1. Material conditioned by sprinkling shall have water added before compaction. Uniformly apply water to surface of subgrade or layer of soil material to obtain sufficient moisture content. The Contractor shall maintain sufficient hoses and/or water distributing equipment at the site for this purpose.
 - 3. Material containing excess moisture shall be dried to required Optimum Moisture before it is placed and compacted. Excessively moist soils shall be removed and replaced and shall be scarified by use of plows, discs, or other approved methods, and air-dried to meet the above requirements.
 - 4. Materials, which are within the moisture requirements specified above, but which display pronounced elasticity or deformation under the action of earthmoving and compaction equipment, shall be reduced to Optimum Moisture Content, or below, to secure stability.
 - 5. In the event of sudden downpours or other inclement weather, exposed subgrades and fills which, in the opinion of the Geotechnical Engineer become inundated or excessively moistened shall have excess water removed and soil dried as specified above.

3.06 ROUGH GRADING

- 1. Rough grading shall include the shaping, trimming, rolling and finishing the surface of the subbase, shoulders, and earth slopes, and the preparation of the sub-base for loam, seeding and paved surfaces. The grading of shoulders and sloped areas may be done by machine methods. Up to two inches in 100" tolerance will be permitted on slopes and one inch in 100" on lawn areas provided the slopes are uniform in appearance and without abrupt changes. All ruts shall be eliminated. Grading of subgrades for paved areas shall be finished at the required depth below and parallel to the proposed surface within 3/8 inch in 100" tolerance.
- 2. If, during the progress of rough grading work, water pipe, sewer conduit, drain, or other construction is damaged due to operations under this Contract, the Contractor shall repair all such damage at no additional cost to the Owner and restore damaged areas to their original condition.
- 3. Do all other cutting, filling and rough grading to the lines and grades indicated on the Drawings. Grade evenly to within the dimensions required for finished grades shown on the Drawings. No stone larger than three inches in largest dimension shall be placed in upper 12 inches of fill.
- 4. Grades shall be brought below finished grades in accordance with the various depths specified

below:

- 1. Under slabs-on-grade, as specified herein and as shown on the Drawings.
- 2. Under paved areas, bottom of base course as shown on Drawings.
- 3. Under seeded areas, six inches.
- 4. Under cattail marsh area and pond bottom, 12 inches.
- 5. No rubbish of any description shall be allowed to enter fill material. Such material shall be removed from the site.
- 6. Complete the grading operations after the building has been finished, the utilities installed, site improvements constructed, and all materials, rubbish and debris removed from the site. Leave subgrade for lawns clean at required grades. There must be sufficient grade staking to provide correct lines and grades.
- 3.07 DEFICIENCY OF FILL MATERIAL
 - 1. Provide required additional fill material from offsite sources to complete the work if a sufficient quantity of suitable material is not available from the required excavation on the project site.
- 3.08 SURPLUS OF FILL MATERIAL
 - 1. Surplus fill which is not required to fulfill the requirements of the Contract shall be removed from the site and legally disposed of.
- 3.09 DUST AND EROSION CONTROL
 - 1. The Contractor shall take all necessary measures and provide equipment and/or materials to minimize dust from rising and blowing across the site and also to control surface water throughout the operation so that it does not run onto paved ways without being filtered. In addition, the Contractor shall control all dust created by construction operations and movement of construction vehicles, both on the site and on paved ways. Provide additional crushed stone where necessary to provide traps or pads for construction vehicles carrying sediment. Provide temporary swales and interceptor ditches to control surface runoff water where necessary.
 - 2. If dust control is required off-site due to work under this Contract, in addition to watering, sweeping and other methods, the Contractor shall apply calcium chloride in the required amounts to properly control dust. These amounts shall be approved by the Norwich, VT City Engineer prior to application.
- 3.10 RESTORATION OF SITE ITEMS
 - 1. Wherever streets, lawns or other items within the Contract Limit Lines have been excavated in fulfilling the work required under the Contract, the Contractor shall furnish and install all material at no cost to the Owner to bring finish surface level with the existing adjacent conditions. All work shall be installed to match the existing conditions.

END OF SECTION 02200

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PERMIT APPLICATION REFERRAL INDEX

(blueprints/oversize paper)

SECTION VI: PRELIMINARY FACILITY DESIGN PLANS AND SPECIFICATIONS

Document List:

*See Section VI List of Attachments

LIST OF ABUTTERS

MAP 2 LOTS 17-1, 17-2, 37-1 MAP 2 LOT 20-1 GMB LEASING, LLC 184 MASON ROAD. NEW IPSWICH, NH 03071 BK.8948, PG.935, 3/17/17 BK.7014, PG.2422, 7/31/03

MAP 2 LOT 17 HANS G. & KAREN CHEMELLO 60 PAYSON HILL RD. APT. 101 RINDGE, NH 03461

MAP 2 LOT 18 148 PLEASANT STREET, LLC 148 PLEASANT STREET GREENVILLE, NH 03048 BK.8853, PG.89, 5/6/16

MAP 2 LOT 19 TONY S. ZINA JR. & KRISTINE ZINA 142 PLEASANT STREET GREENVILLE, NH 03048 9/13/16

ROBERT J. BARGER 50 BLOOD ROAD, TOWNSEND, MA 01469 BK.8925, PG.2149, 12/7/16

MAP 2 LOT 20-2 CO-AD REALTY, LLC 59 ARMORY ROAD, MILFORD, NH 03055 BK.8710, PG.2824, 12/1/14

MAP 2 LOT 20A TOWN OF GREENVILLE P.O. BOX 343. GREENVILLE, NH 03048 BK.1471, PG.32, 7/30/56

MAP 2 LOT 22 NANCY S. BROOKS 28 PLEASANT STREET GREENVILLE, NH 03048 BK.7294 PG.220 8/6/04

MAP 4 LOT 35 TOWN OF GREENVILLE P.O. BOX 343, GREENVILLE, NH 03048

MAP 2 LOTS 37A, 37B & 37C MICHEAL D. & KAY F. LAMARRE 22 OLD MASON CENTER ROAD GREENVILLE. NH 03048 BK.8931, PG.2048, 12/27/16

MAP 2 LOT 51 TIMOTHY C. & CLAIRE WASHBURN 66 MASON ROAD GREENVILLE, NH 03048 BK.7763 PG.2563 11/03/06







PREPARED FOR: GREATER WASTE SOLUTIONS, LLC

124 OLD WILTON ROAD GREENVILLE, NH 03048

LAND OF: **GMB LEASING, LLC**

124 OLD WILTON ROAD GREENVILLE, NH 03048





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	SHEET INDEX							
PAGE	SHEET	TITLE						
1	CV-1	COVER SHEET						
2	EX-1	EXISTING CONDITIONS & CONSOLIDATION PLAN						
3	SP-1	OVERALL SITE PLAN						
4	OP-1	OPERATIONS PLAN						
5	GR—1	SITE GRADING & DRAINAGE PLAN						
6	UT—1	SITE UTILITY PLAN						
7	LT—1	SITE LIGHTING PLAN						
8	EC-1	EROSION & SEDIMENT CONTROL PLAN						
9	PP-1	WATER MAIN EXTENSION PLAN AND PROFILE						
10	DT—1	EROSION CONTROL DETAILS						
11	DT-2	CONSTRUCTION DETAILS						
12	DT-3	DRAINAGE DETAILS						
13	DT-4	STORMWATER MANAGEMENT DETAILS						
14	DT-5	WATER CONSTRUCTION DETAILS						
15	DT-6	SEWER CONSTRUCTION DETAILS						
16	DT-7	INTERIOR FLOOR PLANS AND BUILDING SECTIONS						

ATTACHMENT VI-5

M 9/14/21 REVISIONS PER DES REVIEW L |11/17/20 **REVISIONS PER DOT REVIEW** CLR CEB к | 10/27/20 REVISIONS PER DOT REVIEW GWS CLR CEB REVISIONS PER CLIENT & IN HSE REVIEW 4/30/20 GWS CEB CEB 12" WATER MAIN LENGTH, 8" MAIN LENGTH/LOCATION 10/01/18 GWS NRC REVISE WATER MAIN TO ON-SITE HYDRANT FROM 6" TO 8' 05/15/18 GFD NRC CEB G 04/11/18 MINOR, ADDRESS 4/05/18 UEI REVIEW, SHTS 5 & CEB F 04/05/18 ADD SHEET 15, MINOR SITE, UTILITY PLAN REVS GWS NRC CEB E 03/22/18 ADDRESS DOT REVIEW DOT NRC CEB ADDRESS UEI 2/12/18 REVIEW D 03/21/18 UEI NRC CEB C 12/07/17 METAL PROCESSING AREA, ADDRESS AOT COMMENTS GWS/AOT NRC CEB REV. DATE C/O DR DESCRIPTION FILE: 204CV02M.dwg PROJ. NO. 204.02 SHEET: CV-1 PAGE 1



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LEGEND: EXISTING FEATURES GUARD RAIL = = GRAVEL ROAD ----- BOUNDARY LINE WARNER LINE EDGE OF WETLANDS TREES BENCHMARK TEST PIT LOCATION (SEE EXIST. COND. PLAN) PROPOSED FEATURES ------ 908 ------ 2 FT. CONTOUR UMITS OF CLEARING ----- 10 FT. CONTOUR C C C C C C GUARD RAIL EDGE OF PAVEMEN ----- SWALE/GUTTER LINE ----- EDGE OF GRAVEL Desired and end end top of Berm SPOT ELEVATION REFERENCE RETAINING WALL TOP OF CURB SPOT ELEVATION (UPPER & LOWER) SURFACE WATER FLOW EROSION CONTROL STONE DRAINAGE CATCH BASI GRAVEL AREA DRAINAGE HEADWALL BUILDING MOUNTED LIGHT PAVED AREA OR COMPACTED SURFACE AREA POLE MOUNTED LIGHT GRAPHIC SCALE IMPERIAL: 1"=50' REVISE PER DOT REVIEW CLR CEB CEB CEB **REV'S TRAFFIC CIRCULATION AND PARKING** REVISIONS PER CLIENT & IN HSE REVIEW CEB CEB 04/11/18 | MINOR, ADDRESS 4/5/18 UEI COMMENTS, SHTS 5 & 8 | UEI NRC CEB ADD SHEET 15, MINOR SITE, UTILITY PLAN REVS GWS NRC CEB DESCRIPTION C/O | DR | CK SITE GRADING & DRAINAGE PLAN GREATER WASTE SOLUTIONS, LLC TAX MAP 2, LOTS 17-1, 17-2 & 37-1 426 FITCHBURG ROAD, GREENVILLE, NH LAND OF **GMB LEASING, LLC** 124 OLD WILTON ROAD, GREENVILLE, NH 03048 MAY 2, 2017 Surveying Φ Engineering Φ Land Planning Φ Permitting Φ Septic Designs FIELDSTONE LAND CONSULTANTS, PLLC 206 Elm Street, Milford, NH 03055 Phone: (603) 672-5456 Fax: (603) 413-5456 www.FieldstoneLandConsultants.com PROJ. NO. 204.02 SHEET: GR-1 PAGE 5





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Symbol	Qty	Label	Arrangement	Description
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	4	S5	SINGLE	GLEON-AF-06-LED-E1-5WQ-BZ / SSS5A30SFN1 (30' AFG)
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	and the second second	1.	PRIOR TO STARTING ANY WORK ON THE SITE THE CONTRACTOR SHALL NOTIFY APPROPRIATE	
	:	2.	AGENCIES. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH STANDARDS	MATS / BLANKETS SHOULD BE INSTALLED VERTICALLY DOWN SLOPE
	:	3.	WATER MANUALS, VOLUME 1-3, LATEST EDITION.	The
	·		PERIMETER CONTROLS SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF EARTH DISTURBING ACTIVITIES.	
		4.	INSTALL INLET PROTECTION AROUND ALL STORM DRAIN STRUCTURES. INLET PROTECTION BMP'S SHALL REMAIN UNTIL THE SITE IS STABILIZED. CONSTRUCTION OF DETENTION BASINS AND TREATMENT SWALES SHALL OCCUR PRIOR TO AN EARTH MOVING OPERATION THAT WILL INFLUENCE	
	ţ	5.	THE WORK AREA SHALL BE GRADED, SHAPED AND OTHERWISE DRAINED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE THE LIMITS OF THE WORK AREA.	
	ŧ	6.	EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEN POSSIBLE.	
	7	7.	EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE KEPT CLEAN DURING CONSTRUCTION. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE A WEEK AND AFTER EVERY 0.5-INCH OR GREATER RAINFALL. SEDIMENTS SHALL BE DISPOSED OF IN AN UPLAND AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND BE PERMANENTLY STABILIZED.	MIN. 4" OVERLAP
	8	8.	THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION. AT NO TIME SHALL THE TOTAL UNSTABILIZED DISTURBED AREA, INCLUDING LOT DISTURBANCES, BE GREATER THAN FIVE (5) ACRES.	
		9.	THE LAND AREA EXPOSED SHALL BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME. ALL NON-ACTIVE DISTURBED AREAS SHALL BE STABILIZED WITHIN 30 DAYS OF THE DISTURBANCE. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF FINAL GRADING.	¥ ¥ ¥
	1	10.	DITCHES, SWALES AND DRAINAGE BASINS SHALL BE CONSTRUCTED DURING THE INITIAL PHASE OF CONSTRUCTION AND STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.	ISOMETRIC VIEW
	1	11.	AN AREA SHÂLL BE CONSIDERED STABILIZED IF ONE OF THE FOLLOWING HAS OCCURED: A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED; B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.	NOTES:
		(C. A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL, SUCH AS STONE OR RIPRAP, HAS BEEN INSTALLED; OR D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.	2. INSTALL STRAW/COCOD
	1	2. 1	EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES THAT ARE STEEPER THAN 3:1	ERONET ¹¹⁴ , SC150 ¹¹⁴ OR 3. THE EROSION CONTROL
	1	3	AMERICAN GREEN SC150, OR APPROVED EQUAL.	OR WOODEN STAKES W
	1	1	NSTALLED BELOW THE STONE (SEE APPROPRIATE DETAILS).	GOOD SOIL CONTACT.
	1	4. I	NCHES OF COMPACTED LOAM. LOAM SHALL BE COVERED WITH THE APPROPRIATE SEED MIXTURE AS INDICATED BELOW:	6. BEGINAT THE TOP OF T
			PERMANENT SEED (LAWN AREAS) LBS / 1,000 SQ. FT. PERMANENT SLOPE SEED MIX LBS / 1,000 SQ. FT. CREEPING RED FESCUE 0.92 LBS CREEPING RED FESCUE 0.80 LBS	STAKES IN APPROPRIAT STAPLE PATTERN.
			PERENNIAL RYEGRASS 1.15 LBS PERENNIAL RYEGRASS 0.69 LBS . KENTUCKY BLUEGRASS 0.58 LBS REDTOP 0.12 LBS . REDTOP 0.12 LBS ALSIKE CLOVER 0.12 LBS	7. LAY BLANKETS LOOSEL STRETCH.
			APPLICATION RATE TOTALS 2.8 LBS PER 1,000 SF SF**	8. IN LOOSE SOIL CONDITI NECESSARY TO PROPER
	1	5. 1 l	TEMPORARY STABILIZATION OF DISTURBED AREAS: STRIPPED SOIL SHALL BE STOCKPILED JNCOMPACTED, AND STABILIZED AGAINST EROSION AS OUTLINED BELOW:	9. THE CONTRACTOR SHAL COMPLETED AND ACCE
		1	OO SF AND AGRICULTURAL LIMESTONE AT A RATE OF 90 LBS PER 1000 SF AND INCORPORATED NTO THE SOIL. THE SOIL, FERTILIZER AND LIMESTONE SHALL BE TILLED TO PREPARE FOR	AND GRADE OF THE SO RESEEDED AND REMUL
			SEEDING. A. SEED MIXTURE: USE ANY OF THE FOLLOWING:	EROSION CON
			SPECIES RATE PER 1,000 SF DEPTH SEEDING DATES WINTER RYE 2.5 LBS 1 INCH 8/15 TO 9/15	
			OATS 2.5 LBS 1 INCH 4/15 TO 10/15 ANNUAL RYEGRASS 1.0 LBS 0.25 INCH 8/15 TO 9/15	1. ALL PROPOSED VEGETA BY OCTOBER 15TH, OR WHI
		E	3. MULCHING; MULCH SHOULD BE USED ON HIGHLY ERODIBLE AREAS, AND WHERE CONSERVATION OF MOISTURE WILL FACILITATE PLANT ESTABLISHMENT AS FOLLOWS: TYPE RATE PER 1,000 SE USE AND COMMENTS	STABILIZATION METHODS SI SLOPES GREATER THAN 3:1 WITH ANCHORED NETTING
			STRAW 70 TO 90 LBS MAY BE USED WITH PLANTINGS, MUST BE ANCHORED TO BE USED ALONE	AND NETTING SHALL NOT O COMPLETED IN ADVANCE OF
			WOOD CHIPS OR 460 TO 920 LBS USED WITH TREE AND SHRUB PLANTINGS BARK MULCH	2. ALL DITCHES OR SWALES OCTOBER 15TH, OR WHICH A EROSION CONTROL BLANKE
			FIBROUS MATTING AS RECOMMENDED MUST BE BIODEGRADABLE. USE BY MANUFACTURER IN SLOPE AREAS AND AREAS DIFFICULT TO VEGETATE	3. AFTER OCTOBER 15TH, IN THE WINTER SEASON, SHAL
NGRE		~ •	CRUSHED STONE SPREAD TO GREATER USE IN SPECIFIC AREAS AS 1/4" TO 1-1/2" DIA. THAN 1/2" THICKNESS SHOWN ON PLAN OR AS NEEDED	PROPERLY INSTALLED EROS OPTIONS ARE TO BE APPRO CONSTRUCTION IS TO CONT
	12	6. 7 15 C F	S NOT FEASIBLE (CRITICAL TIME FRAMES OR VARIABLE SITES) THEN APPLY FERTILIZER AT A RATE F 11 POUNDS PER 1,000 SF AND LIMESTONE AT A RATE OF 90 POUNDS PER 1,000 SF. ERTILIZER SHALL BE LOW PHOSPHATE (LESS THAN 2% PHOSPHORUS).	OF ACCUMULATED SNOW AF
	17	7. C II N	AUTION SHOULD BE TAKE WHEN THE PROPERTY IS LOCATED WITHIN 250 FEET OF A WATER BODY. I THIS CASE ALL FERTILIZERS SHALL BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE ITROGEN FERTILIZER. SLOW RELEASE FERTILIZERS MUST BE AT LEAST 50% SLOW RELEASE	WINTER CONS
		N T	ITROGEN COMPONENT. NO FERTILIZER EXCEPT LIMESTONE SHALL BE APPLIED WITHIN 25 FEET OF HE SURFACE WATER. THESE ARE REGULATED LIMITATIONS.	
	18	3. P W W	ERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS (SEE /INTER CONSTRUCTION NOTES). NO DISTURBED AREAS SHALL BE LEFT EXPOSED DURING THE /INTER MONTHS.	VEGETATED AREAS FLOW
	19	Э. А В	VIGOROUS DUST CONTROL PROGRAM SHALL BE APPLIED BY THE SITE CONTRACTOR. DUST SHALL E MANAGED THROUGH THE USE OF WATER AND/OR CALCIUM CHLORIDE.	
	20	D. IN A	I NO WAY ARE THE MEASURES INDICATED ON THE PLANS OR IN THESE NOTES TO BE CONSIDERED LL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGEMENT TO INSTALL ADDITIONAL EROSION	CATCH BASIN
	21	1. F(DLLOWING PERMANENT STABILIZATION, TEMPORARY EROSION CONTROL MEASURES SHALL BE EMOVED AND ACCUMULATED SEDIMENTATION IS TO BE DISPOSED OF IN AN APPROVED LOCATION, UTSIDE OF JURISDICTIONAL WETLANDS	SUCH AS SILTSACK BY ACF, OR EQUAL.
	22	2. LO Al	DT DISTURBANCE OTHER THAN SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL FTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE COMPLETE AND STABLE.	CORD
	23	3. TI PI IN	HE CONTRACTOR AND OWNER ARE RESPONSIBLE FOR OBSERVING AND MANAGING THE PROJECT ER RSA 430:53 AND AGR 3800 REGARDING INVASIVE SPECIES (PLANTS AND INSECTS). NO WASIVE SPECIES PLANT OR INSECT SHALL BE INTRODUCED ONTO THE SITE.	
	24	I. SI RI	EDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN STORMWATER UNOFF UNTIL PROPOSED STORMWATER MANAGEMENT AREAS ARE STABILIZED.	2. TO INSTALL AND MAIN IAIN SACH SIX INCHES OF THE SACK OUTSI
		. (EROSION CONTROL NOTES	SACK IN PLACE. 3. THE SACK SHOULD BE INSPE OCCURS FIRST.
20070001001			CONTACT DIO SAFE	4. THE RESTRAINT CORD SHOL SACK SHOULD BE EMPTIED, EMI
			72 HOURS PRIOR TO CONSTRUCTION	RE-ENTERING THE CATCH BASIN 5. REPLACE THE SACK IN THE C
			OR DIAL 8 1 1	COMPLETE AND ALL DISTURBED REMOVE THE SACK FROM THE C
			IT'S SMART, IT'S FREE, IT'S THE LAW	SILT SACK SEDI

MIN. 4" OVERLAP/ IETRIC VIEW

- FACTURER'S SPECIFICATIONS.

- SOIL CONTACT.
- <u>E PATTERN.</u> ГСН.

OPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH ER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED. TION METHODS SHALL INCLUDE SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON REATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED HORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH NG SHALL NOT OCCUR OVER ACCUMULATED SNOW OR FROZEN GROUND AND SHALL BE ED IN ADVANCE OF THAW OR SPRING MELT EVENTS.

CHES OR SWALES WHICH DO NOT EXHIBITA MINIMUM OF 85% VEGETATED GROWTH BY 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES. WHERE WORK HAS STOPPED FOR ER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL OR INSTALLED EROSION CONTROL BLANKETS COVERED WITH HAY. OTHER STABILIZATION RE TO BE APPROVED BY THE APPROPRIATE AGENCIES AND THE DESIGN ENGINEER. IF CTION IS TO CONTINUE THROUGH THE WINTER MONTHS THEN THE ROAD SHOULD BE CLEARED ULATED SNOW AFTER EACH STORM EVENT.

3 **FER CONSTRUCTION NOTES** DT-1



VAINT CORD SHOULD BE VISIBLE AT ALL TIMES, IF THE CORD IS COVERED WITH SEDIMENT, THE BE EMPTIED, EMPTY THE SACK AWAY FROM THE CATCH BASIN TO PREVENT SEDIMENT FROM THE CATCH BASIN. EMPTY THE SACK PER THE MANUFACTURES RECOMMENDATIONS.

HE SACK IN THE CATCH BASIN AFTER THE SACK HAS BEEN EMPTIED. ONCE CONSTRUCTION IS ND ALL DISTURBED AREAS HAVE BEEN STABILIZED BY PAVING OR A HEALTHY VEGETATIVE COVER, SACK FROM THE CATCH BASINS. SCALE: N.T.S.

ACK SEDIMENT FILTER



SIONS GIVEN IN THIS DETAIL ARE EXAMPLES: DEVICE SHOULD BE INSTALLED PER

LL STRAW/COCONUT FIBER EROSION CONTROL MAT SUCH AS NORTH AMERICAN GREEN, ROLLMAX, IET TA, SC150TH OR EQUAL ON ALL SLOPES EXCEEDING 3' HORZ : 1' VERT.

EROSION CONTROL MATERIAL(S) SHALL BE ANCHORED WITH "U" SHAPED 11 GAUGE WIRE STAPLES VOODEN STAKES WITH A MINIMUM TOP WIDTH OF 1 INCH AND LENGTH OF 6 INCH.

E SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS / BLANKETS SHALL HAVE

LIME, FERTILIZER AND PERMANENT SEEDING BEFORE PLACING BLANKETS.

AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET AS SHOWN. ROLL THE BLANKETS DOWN SLOPE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES OR ES IN APPROPRIATE LOCATIONS. REFER TO MANUFACTURERS STAPLE GUIDE FOR CORRECT

LANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT

OSE SOIL CONDITIONS THE USE OF STAPLES OR STAKE LENGTHS GREATER THAN 6 INCHES MAY BE SSARY TO PROPERLY SECURE THE BLANKETS.

ONTRACTOR SHALL MAINTAIN THE BLANKET UNTIL ALL WORK ON THE CONTRACT HAS BEEN LETED AND ACCEPTED. MAINTENANCE SHALL CONSIST OF THE REPAIR OF AREAS WHERE GED BY ANY CAUSE. ALL DAMAGED AREAS SHALL BE REPAIRED TO REESTABLISH THE CONDITIONS FADE OF THE SOIL PRIOR TO APPLICATION OF THE COVERING AND SHALL BE REFERTILIZED, DED AND REMULCHED AS DIRECTED. SCALE: N.T.S.

DSION CONTROL BLANKETS - SLOPE INSTALLATION



SECTION C - C

'L' = THE DISTANCE SUCH THAT POINTS 'A' AND 'B' ARE OF EQUAL ELEVATION

PROFILE - CHECK DAM SPACING

- 1. STONE CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.
- 2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE CHECK DAM SHOULD BE LESS THAN ONE ACRE.
- 3. STONE CHECK DAMS SHOULD NOT BE USED IN A FLOWING STREAM.
- 4. STONE CHECK DAMS SHOULD BE CONSTRUCTED OF WELL-GRADED ANGULAR 2 TO 3 INCH STONE. THE INSTALLATION OF 3/4-INCH STONE ON THE UPGRADIENT FACE IS RECOMMENDED FOR BETTER
- 5. WHEN INSTALLING STONE CHECK DAMS THE CONTRACTOR SHALL KEY THE STONE INTO THE CHANNEL BANKS AND EXTEND THE STONE BEYOND THE ABUTMENTS A MINIMUM OF 13-INCHES TO PREVENT FLOW AROUND THE DAM.
- 6. STONE CHECK DAMS SHOULD BE REMOVED ONCE THE SWALE OR DITCH HAS BEEN STABILIZED UNLESS OTHERWISE SPECIFIED. SCALE: N.T.S.

6

STONE CHECK DAM

NOTES:

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DT-1

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TILLED CENTER SOMETRIC VIEW --- E X D.A. t' MIN. VARIABLE ··· .. · . · PROFILE FILLED CENTED MIN --WEIR CREST and preside preside Independent · FLOW----FILLED. CENTET STONE OUTLET SECTION A-A SEDIMENT TRAP NUMPED, FACH (FOCIONAL COUNTY CONSERVICE DESIGNATION DESIGNATION (1997) - CONSERVICE DESIGNATION (1997) 1. The trap shall be installed as close to the disturbed area or source of sediment as possible; 2. The maximum contributing drainage area to the trap shall be less than 5 acres; 3. The minimum volume of the trap shall be 3,600 cubic feet of storage for each acre of drainage area; 4. The side slopes of the trap shall be 3:1 or flatter, and shall be stabilized immediately after their construction; 5. The outlet of the trap shall be a minimum of one foot below the crest of the trap ond shall discharge to a stabilized area; 6. The trap shall be cleaned when 50 percent of the original volume is filled; and 7. The materials removed from the trap shall be properly disposed of and stabilized. 8. Refer to the New Hampshire Stormwater Manual, Volume 3 for alternative sediment trap options. 12 SEDIMENT TRAP DT-2 **REVISIONS PER CLIENT & IN HSE REVIEW** G 4/30/20 CEB CEB F 04/05/18 ADD SHEET 15, MINOR SITE, UTILITY PLAN REVS GWS NRC CEB DOT NRC CEB E 03/22/18 ADDRESS DOT REVIEW UEI NRC CEB D 03/21/18 ADDRESS UEI REVIEW DES NRC CEB C 01/12/18 TRASH RACK DES NRC CEB B 12/07/17 ADDRESS AOT REVIEW MINOR NOTATIONS A 09/19/17 DES NRC CEB C/O DR CK REV. DATE DESCRIPTION **CONSTRUCTION DETAILS** GREATER WASTE SOLUTIONS, LLC TAX MAP 2, LOTS 17-1, 17-2 & 37-1 426 FITCHBURG ROAD, GREENVILLE, NH LAND OF: GMB LEASING, LLC 124 OLD WILTON ROAD, GREENVILLE, NH 03048 MAY 2, 2017 SCALE: AS NOTED Surveying \oplus Engineering \oplus Land Planning \oplus Permitting \oplus Septic Designs FIELDSTONE LAND CONSULTANTS, PLLC 206 Elm Street, Milford, NH 03055 Phone: (603) 672-5456 Fax: (603) 413-5456 www.FieldstoneLandConsultants.com FILE: 204DT02G.dwg PROJ. NO. 204.02 SHEET: DT-2 PAGE 11

NG MEMPINA PANANANA PANANA		art ar school and an				ED.
	FULL LENGTH OF PIPE	NOTES: 1. ALL MATERIALS AND INSTALL CONFORM TO .G.W.D. TECHNIC 2. ALL PIPE SHOULD HAVE A M TOP OF PIPE TO FINISH GRAC	Ation procedu Al specificati Inimum depti-1 De.	JRES WILL IONS. OF 5' FR	- 0M	
MJ TAPPING RS VALVE WITH MEGA DOWN STREAM SID VALVE AND BO SURFACE PER DETAIL	ATE UCS OF TO A-9	MEGALUG FOR DIPCL GRIP RING FOR PVC				
MJ TAPPING SL				•		٠
WATER MA		WATER MAIN				
4 MIL POLY CONCRETE AN IF POURED THRUS	BETWEEN FITTING FITTING BLOCK	MIN 3'×3'×3' PRE CAST CONCRI THRUST BLOCK MAY BE USED P.W.W. APPROVAL OR CONCRET THRUST BLOCK POURED AGAIN UNDISTURBED EARTH - SIZE T BASED ON SIZE OF FITTING AN PRESSURE IN WATER MAIN SEE DETAIL 2/0T-5 SCA	ETE WITH E ST O BE D LE: N.T.S.			
TYPICAL L	ARGE SERVICE	AND/OR TAPPING SLEEV	'E 7 DT-5)		
 REFERENCE GRE ALL SPRINKLER A UNLESS NOTED, A EXTEND THE LINE THRUST BLOCKS TEES, AND FIRE H MINIMUM COVER CONTRACTOR SH BETWEEN WATER VERTICAL. INSPECTIONS ON CONTRACTOR AN PAID FOR BY THE CONTRACTOR SH GREENVILLE WAT WITNESS TEST. ALL PIPE, VALVES DEPARTMENT SPI ALL FIRE HYDRAN SPECIFICATIONS. METALLIC TAPE O THAT THE PIPE M BE INSTALLED AP SHALL BE 14 GAU TAPE, GRIFFOLYN CONTRACTOR SH WATER DEPARTM INSTALLATION OF BY THE GREENVIL PVC WATER MAIN WATER DEPARTM 	ENVILLE WATER DEPARTMEN ND DOMESTIC LEADS TO BUIL ND SHALL BE PROVIDED WIT AS NECESSARY). AND MEGALUG (DIP) OR GRIF (DRANTS. SEE DETAIL. ON ALL WATER LINES IS 5'-6" L ALL MAINTAIN A 5'-0" HORIZO SERVICE AND UTILITIES OTH WATER SERVICE INSTALLATION SERVICE AND UTILITIES OTH WATER SERVICE INSTALLATION O SHALL BE COORDINATED W CONTRACTOR. ALL HAVE BACTERIOLOGICAL ER DEPARTMENT A COPY OF MISCELLANEOUS MATERIAL CIFICATIONS AND REQUIREM TS, VALVES, FITTINGS, PIPES ALL VALVES SHALL OPEN LEI R DETECTOR WIRE SHALL BE Y BE LOCATED WITH ELECTH ROXIMATELY 12" TO 18" BELC DE SOLID COPPER, SIMPLEX I COMPANY, INC., TERRATAPE ALL ENSURE ALL WATER VAL ALL ABTAIN ADVANCE WRITTING SACKFLOW PREVENTION DE LE WATER DEPARTMENT. PIPE SHALL CONFORM TO AW INT.	NT (G.W.D.) SPECIFICATIONS FOR INSTALLATION (LDING SHALL END 5 FEET OUTSIDE THE FACE OF FHA TEMPORARY PLUG AT THE END (FOR OTHER PRING (PVC) RESTRAINTS SHALL BE PROVIDED A JNLESS OTHERWISE NOTED. NTAL (UNLESS OTHERWISE NOTED) AND 12" VER HER THAN SANITARY SEWER WHICH IS 10-0" HOR ON DURING CONSTRUCTION IS THE RESPONSIBIL WITH GREENVILLE WATER DEPARTMENT. ALL INS AND PRESSURE TESTING PERFORMED. CONTR THE RESULTS. GREENVILLE WATER DEPARTMENT SAND INSTALLATION SHALL CONFORM TO GREEN HENTS. . ETC. SHALL BE IN ACCORDANCE WITH GREENV FT. INSTALLED IN THE SAME TRENCH WITH ALL NON RONIC LOCATING EQUIPMENT. METALLIC TAPE OF DW GRADE DIRECTLY ABOVE THE TOP OF THE PI BW3001 OR EQUAL. METALLIC TAPE SHALL BE 2" OR EQUAL. VES ARE IN A FULLY OPEN POSITION UPON COMI EN APPROVAL FOR ALL WATER INTERRUPTIONS I ED PROPERTY OWNERS 48 HOURS PRIOR TO TH VICES AND WATER METERS (LOCATION AND STY WWA C900, DR18 SPECIFICATIONS AND BE APPROV	DF ALL WATER L THE BUILDING S TO REMOVE A AT ALL HORIZON TICAL SEPARAT IZONTALAND 1' LITY OF THE SIT SPECTION FEES ACTOR SHALL OF NVILLE WATER ILLE WATER DE INVILLE WATER DE INVILLE WATER DE INVILLE WATER DE RETALLIC PIPE OR DETECTOR V PE. DETECTOR V PE. DETECTOR MINIMUM META PLETION. OF PR FROM THE GRE E WORK. LE) SHALL BE AN INVED BY GREEN	INES. WALL, AND TAL BEND TON 6" SHALL BE SHALL SHA SHALL SHA SHA SHALL SHA SHALL SHA SHALL SHA SHA SHA SHA SHA SHA SHA SHA SHA SHA	s, :	
WATER SY	STEM CONSTRU	JCTION NOTES	DT-5)		
	G 4/30/20 h F 04/05/18 5 03/22/19	ADDRESS DOT DOWDY	REVS	GWS		CEB
Witter	D 03/21/18 C 01/12/18	ADDRESS UEI REVIEW TRASH RACK	· · · · · · · · · · · · · · · · · · ·	UEI .	NRC NRC	CEB
W HAMB	B 12/07/17 A 09/19/17	ADDRESS AOT REVIEW MINOR NOTATIONS		DES DES	NRC NRC	CEB CEB
YON HEILING	REV. DATE	DESCRIPTION '		c/0	DR	CK
	GI S(TAX 426 FI 124 OL SCALE: AS NOTED Surveying \$ Eng	REATER WA OLUTIONS, MAP 2, LOTS 17-1, 17-2 TCHBURG ROAD, GREEN LAND OF. MB LEASING, D WILTON ROAD, GREENVILLI incering & Land Planning & Perm SELEDS MANDCONSULT 206 Elm Street, Milfor Phone: (603) 672-5456	STI LLC 2 & 37- 1VILLE, LLC E, NH 030 TC ANNTS rd, NH 030 Fax: (603	248 MAY eptic D	2, 2 esigi	2017 ns

16.B

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NOTE: 1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE, REFILL WITH BEDDING MATERIAL. (SEE ALSO NOTE 7) 2. BEDDING SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33, STONE SIZE #87 100% PASSING 1 INCH SCREEN 90-100% PASSING 3/4 INCH SCREEN 20-50% PASSING 3/8 INCH SCREEN 0-10% PASSING #4 SIEVE 0-5% PASSING #8 SIEVE 3. <u>SAND BLANKET</u> CLEAN SAND, FREE FROM ORGANIC MATTER, SO GRADED THAT 90-100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE. BLANKET MAY BE OMITTED FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE PROVIDED THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE. 4. <u>SUITABLE MATERIAL</u> IN ROADS, ROAD SHOULDERS, WALK WAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOPSOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES, IN LARGEST DIMENSION OR ANY MATERIAL WHICH AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED IN CROSS COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP-SOIL, LOAM, MUCK OR PEAT. IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER FOR MAINTENANCE (AND POSSIBLY **RECONSTRUCTION. WHEN NECESSARY) WILL BE PRESERVED** 5. BASE COURSE, IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF N.H. DEPT. OF TRANSPORTATION. 5. WOOD SHEETING, IF REQUIRED, IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER. IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE. WHERE THE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE OUT OFF AT LEAST 3 FEET BELOW FINISH GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE. 7. W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 38 INCHES. FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D., W SHALLALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE. 6. FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF & INCHES ABOVE THE ORIGINAL GROUND SURFACE. 9. CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000#) CONCRETE OF THE N.H. DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS AS FOLLOWS: CEMENT: 6.0 BAGS PER CUBIC YARD WATER: 5.75 GALLONS PER BAG OF CEMENT MAXIMUM AGGREGATE SIZE: 1 INCH

GENERAL NOTES

ALL WORK SHALL CONFORM TO THE 2015 INTERNATIONAL BUILDING CODE (IBC) WITH NEW HAMPSHIRE AMENDMENTS

THE OWNER SHALL RETAIN THE SERVICES OF AN INDEPENDENT TESTING AGENCY TO PERFORM STRUCTURAL INSPECTIONS AS INDICATED ON THE DRAWINGS AND AS REQUIRED/INDICATED BY THE PROGRAM OF STRUCTURAL TESTS AND INSPECTIONS.

THE CONTRACTOR SHALL EXAMINE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR VERIFICATION, LOCATION AND DIMENSIONS OF CHASES, INSERTS, OPENINGS, SLEEVES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL/FOUNDATION DRAWINGS.

THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD AND WITH THE ARCHITECTURAL DRAWINGS AND SHALL NOTIFY THE OWNER/ARCHITECT/ENGINEER OF ANY DISCREPANCY BEFORE PROCEEDING WITH THE WORK. EXISTING CONDITIONS SHOWN ARE NOT GUARANTEED.

ROOF IS NOT DESIGNED FOR PONDING THEREFORE SECONDARY DRAINS OR OVERFLOW ROOF SCUPPERS SHALL BE UTILIZED FOR ROOF DRAINAGE.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING & SHORING UNTIL ALL STRUCTURAL WORK IS COMPLETE.

G.C. TO REVIEW EXISTING ROOF PITCH CONDITION AND PROVIDE ADEQUATE ROOF DRAINS TO PROPERLY CONTROL ROOF WATER REMOVAL

SHOP DRAWINGS, IN ADDITION TO THE SUBMITTALS REQUIRED BY THE PROJECT SPECIFICATIONS, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND COMMENTS PRIOR TO FABRICATION FOR THE FOLLOWING

1) CONCRETE MIX & CURING METHOD

2) STRUCTURAL STEEL, JOIST & DECK 3) REINFORCING STEEL

4) STRUCTURAL FILL & COMPACTION METHOD

5) EXPANSION BOLTS AND ADHESIVE ANCHORS

PROVIDE SEALANT AT ALL CONTROL JOINTS.

PROVIDE RIGID INSULATION PER THE ARCHITECTURAL DRAWINGS.

STRUCTURAL DESIGN NOTES

DESIGN LOADS: PROPOSED BUILDING

- FIRST FLOOR SLAB-ON-GRADES DESIGN BY OWNER
- SNOW DESIGN DATA GROUND SNOW LOAD. Pq = 50 PSF (+DRIFTING)SNOW EXPOSURE FACTOR Ce = 1.0 SNOW IMPORTANCE FACTOR I = 1.0
- THERMAL EACTOR Ct - 10
- FLAT ROOF SNOW LOAD Pf = 40 PSF
- WIND LOAD DESIGN DATA V = 100 MPH
- BASIC WIND SPEED
- I = 1.0 EXPOSURE CATEGORY = B INTERNAL PRESS. COEFF. GCpi = +/- 0.18 (ENCLOSED BUILDING)
- SEISMIC DESIGN DATA
- BUILDING OCCUPANCY CATEGORY = II SEISMIC IMPORTANCE FACTOR, I = 1.0
- MAPPED SPECTRAL RESPONSE ACCELERATION SS: 026G & S1: 0.070G SITE CLASS = D (UNKNOWN) SPECTRAL RESPONSE COEFFICIENTS - SDS: 0.18G & SD1: 0.08G SEISMIC DESIGN CATEGORY = B DESIGN BASE SHEAR = TBD KIPS
- BASIC SEISMIC-FORCE-RESISTING SYSTEM: "BUILDING FRAME SYSTEM" SEISMIC RESISTING SYSTEM: CONCENTRICALLY BRACED FRAMES
- RESPONSE MODIFICATION FACTOR, R = 3 ANALYSIS PROCEDURE UTILIZED: "EQUIVALENT LATERAL FORCE METHOD"

DEFLECTION CRITERIA:

ROOF LIVE LOAD DEFLECTION: L/360 ROOF TOTAL LOAD DEFLECTION: L/240

STRUCTURAL INSPECTIONS

INSPECTION AND TESTING WILL BE PERFORMED PER CHAPTER 17 OF THE NEW HAMPSHIRE STATE BUILDING CODE & IBC 2009. THE OWNER WILL EMPLOY A TESTING AGENCY (SELECTED BY THE ENGINEER/OWNER) TO PERFORM STRUCTURAL TESTS AND INSPECTIONS AS INDICATED ON THIS SHEET. TEST REPORTS SHALL BE ADDRESSED TO THE OWNER & SENT DIRECTLY TO THE OWNER AND MCBRIE, LLC FROM THE TESTING AGENCY.

THE CONTRACTOR SHALL COORDINATE WITH, NOTIFY, AND PROVIDE ACCESS AND A SAFE WORKING ENVIRONMENT FOR THE OWNER'S TESTING AGENCY BOTH IN THE SHOP AND IN THE FIELD.

ALL FUL INSTALLATION CONCRETE REINFORCING CONCRETE PLACEMENT AND STRUCTURAL STEEL INSTALLATIONS SHALL BE INSPECTED/OBSERVED BY THE SER OR AN INDEPENDENT TESTING AGENCY. ANY WORK COMPLETED WITHOUT INSPECTIONS SHALL BE CONSIDERED AS UNACCEPTABLE AND SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER

AT A MINIMUM, THE FOLLOWING WILL BE INSPECTED: 1. EXCAVATION OF BUILDING FOOTPRINT AND CONTROLLED FILL AREAS

- 2. PROOF ROLLING OF SUBGRADES
- 3. REBAR PLACEMENT
- 4. CONCRETE PLACEMENT
- 5. MASONRY CONSTRUCTION
- STRUCTURAL STEEL AND METAL DECKING 7. LIGHT GAGE WALL & ROOF FRAMING
- 8. METAL BUILDING

GEOTECHNICAL/FOUNDATION DESIGN

FOUNDATION / FOOTING DESIGN IS BASED LIPON BEARING CAPACITIES PER THE MAY 13TH GEOTECHNICAL REPORT PREPARED BY GSI. BOTTOM ELEVATION OF FOOTING SHALL BE ADJUSTED UPON APPROVAL FROM STRUCTURAL ENGINEER OF RECORD, IF NECESSARY, TO BEAR ON ENGINEERED FILL OVER FIRM MATERIAL CAPABLE OF SUPPORTING A MINIMUM SOIL BEARING CAPACITY OF 4,000 PSF.

ALL FOOTINGS SHALL BEAR ON A MINIMUM OF 1 FOOT LIFT OF STRUCTURAL FUL OVER EXISTING BEDROCK IF ENCOUNTERED. GEOTECHNICAL ENGINEER SHALL APPROVE ALL SUBGRADE SOILS PRIOR TO INSTALLATION OF FOOTING FORMS.

THE CONTRACTOR SHALL HIRE THE SERVICES OF A REGISTERED GEOTECHNICAL ENGINEER IN THE STATE OF MA TO PROVIDE WRITTEN CONFIRMATION ON AN EVALUATION OF THE SUBGRADES FOR SOIL STIFFNESS AND DENSITY PRIOR TO PLACEMENT OF FOOTINGS. THE EVALUATION REPORT SHALL PROVIDE/INCLUDE THE ALLOWABLE BEARING CAPACITY OF THE SUBGRADE BASED UPON AN IN-PLACE TEST SIMILAR TO A CONE PENETROMETER TEST OR DYNAMIC CONE TEST

THE CONTRACTOR HIRED GEOTECHNICAL ENGINEER SHALL ALSO PROVIDE THE CONSTRUCTION OBSERVATION/TESTING SERVICES LISTED IN THE PROGRAM OF STRUCTURAL TESTS AND INSPECTION ON THIS SHEET.

CONCRETE & REINFORCING

ALL CONCRETE WORK SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-05)" AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).

ALL CONCRETE IN FOUNDATION WALLS AND FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. ALL CONCERT IN SLABS-ON-GRADE AND ELEVATED SLABS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. ALL EXTERIOR SLABS ON GRADE SHALL HAVE BETWEEN 4 TO 6% AIR ENTRAINMENT AND 4" MAXIMUM SLUMP. NO CONCRETE SHALL BE CAST IN WATER OR ON FROZEN GROUND.

DOWELS SHALL BE PROVIDED IN CONCRETE FOUNDATION WALLS AS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF THE DOWELS WITH THE PROPOSED CMU WALL VERTICAL REINFORCING WHERE APPLICABLE. ALL DOWELS ARE TO BE EPOXY GROUTED INTO EXISTING SLABS/FOUNDATIONS WITH HILTI HIT HY150 EPOXY OR APPROVED EQUAL.

FOUNDATION WALLS SHALL HAVE CONSTRUCTION JOINTS AS DETAILED. REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS AS INDICATED ON THE DRAWINGS.

BACKELL AGAINST WALLS SHALL BE PLACED ALTERNATELY ON EACH SIDE IN 12" MAXIMUM LIETS WALLS WITH UNBALANCED FILL AND WHERE TOP OF WALL IS SUPPORTED BY THE FLOOR FRAMING SHALL BE TEMPORARILY BRACED OR SHORED IF BACKFILLED BEFORE FRAMING IS COMPLETE.

REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING: (A) ASTM 615, GRADE 60 FOR DEFORMED BARS (Fy = 60,000 P.S.I.) (B) WELDED WIRE FABRIC (WWF) REINFORCEMENT: ASTM A185

WELDED WIRE FABRIC (WWF) SHALL BE LAPPED 6" OR ONE SPACE, WHICHEVER IS LARGER, AND SHALL BE WIRED TOGETHER

PREFABRICATED METAL BUILDING

METAL BUILDING DESIGN IS BY OTHERS. THE METAL BUILDING DESIGN SHALL BE PER THE LATEST EDITION OF THE HBC 2009 CODE OR ADOPTIVE CODE AS REQUIRED

PROGRAM OF STRUCTURAL TESTS AND INSPECTIONS FOR COMPLIANCE WITH CHAPTER 17 OF THE 8TH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE

THE OWNER WILL EMPLOY A TESTING AGENCY (SELECTED BY THE ENGINEER/OWNER) TO PERFORM STRUCTURAL TESTS AND INSPECTIONS AS INDICATED ON THIS SHEET. TEST REPORTS SHALL BE ADDRESSED TO THE OWNER & MCBRIE, LLC FROM THE TESTING AGENCY.

OWNER OWNER'S ADDRESS

ARCHITECT OF RECORD

STRUCTURAL ENGINEER OF RECORD (SER): BRIAN KAVANAUGH, MCBRIE, LLC

THE FOLLOWING FIRMS, AGENCIES, OR INDIVIDUALS (HEREINAFTER REFERRED TO COLLECTIVELY AS AGENTS) WILL PERFORM THE TESTS AND INSPECTIONS UNDER THE DIRECTION OF THE SER:

- AGENT STRUCTURAL ENGINEER OF RECORD (LISTED ABOVE)
- WILL PERFORM <u>ABBREVIATION</u> SER OTS LGE EWTE OFD OWNER'S TESTING SERVICE LIGHT GAGE ENGINEER ENGINEERED WOOD TRUSS ENGINEER GER
- GEOTECHNICAL ENGINEER OF RECORD N/A
- NOT APPLICABLE FOR THIS PROJECT

THE ABBREVIATIONS WILL BE USED TO IDENTIFY WHICH AGENT IS PERFORMING THE PARTICULAR TESTS OR INSPECTIONS.

"IN ACCORDANCE WITH SPECIFICATIONS" IN THE ITEM/SCOPE SHALL INCLUDE THE MASSACHUSETTS STATE BUILDING CODE, CHAPTER 17 AND THE SPECIFICATION FOR EACH MATERIAL AS INDICATED IN THE NOTES ON THIS SHEET (S1) UNDER EACH MATERIAL HEADING

THE FOLLOWING CATEGORIES OF STRUCTURAL TESTS AND INSPECTIONS ARE INCLUDED IN THE PROGRAM FOR STRUCTURAL TESTS AND INSPECTIONS FOR THIS PROJECT.

AGENT

CAST-IN-PLACE CONCRETE CONSTRUCTION

ITEM/SCOPE

I. MIX DESIGN:	SER
REVIEW MIX DESIGNS. 2. MATERIALS CERTIFICATION:	SER
REVIEW FOR CONFORMANCE TO SPECIFICATIONS.	OLIN
3. BATCHING PLANT: REVIEW PLANT QUALITY CONTROL PROCEDURES AND BATCHING AND MIXING METHODS	N/A
4. REINFORCEMENT INSTALLATION:	SER/OTS
5. FORMWORK GEOMETRY:	SER
INSPECT FORM SIZES. 6. CONCRETE PLACEMENT:	OTS
OBSERVE CONCRETE PLACEMENT OPERATIONS. VERIFY CONFORMANCE TO SPECIFICATIONS INCLUDING COLD-WEATHER AND HOT-WEATHER PLACEMENT PROCEDURES. PERFORM SLUMP, DENDITY, AND AIR CONTENT SETS AT POINT OF DISCHARCE.	
7. EVALUATION OF COORETE STRENGTH:	OTS
8. CURING AND PROTECTION: OBSERVE PROCEDURE FOR CONFORMANCE TO THE SPECIFICATIONS.	OTS
IN-SITIL REARING STRATA FOR FOOTINGS	
ITEM/SCOPE	AGENT
1. BEARING STRATA FOR FOOTINGS:	GER
INSPECT STRATA FOR CONFORMANCE TO THE STRUCTURAL DRAWINGS, SPECIFICATIONS, AND /OR CENTECHNICAL REPORT	
2. BEARING SURFACES OF FOOTINGS:	GER
INSPECT BEARING SURFACES FOR CONFORMANCE TO THE REQUIREMENTS OF THE	
STRUCTURAL DRAWINGS, SPECIFICATIONS, AND/OR GEOTECHNICAL REPORT.	
ADD'L = ADDITIONAL	
ALI. = ALIERNAIE	
AFFRUAL - APPRUAIMAILLI	
BM = BFAM	
B.O.F. = BOTTOM OF FOOTING $\#$	
B.O.S. = BOTTOM OF STEEL	
BRG. PL = BEARING PLATE OR SHEET SECTION IS SHOWN ON	
COL. = COLUMN	
CONN. = CONNECTION	
CONT. = CONTINUOUS (SINGLE MEMBER)	
DBL = DOUBLE T DOWEL AS CALLED OUT IN PLANS	
DC = DITTO	
F.F. = FACH FACE	
EL. = ELEVATION	
EMB. = EMBEDMENT	
E.O.S. = EDGE OF SLAB	
E.W. = EACH WAY	
EXIST. = EXISTING /- INDICATES REBAR DOWELED INTO	
EXIL = EXILERION EXISTING SLAB/FOUNDATION WITH	
FTG. = FOOTING HILLII HILLII HILLII HILLII HILLII HILLII HILLII HILLII	
GA. = GAUGE	
GALV. = GALVANIZED	
HOR. = HORIZONTAL	
K = KIP (1 KIP = 1000 lbs)	
LL = LIVE LOAD	
LLH = LONG LEG HORIZONTAL	
LLV = LONG LEG VERTICAL	
MANUF. = MANUFACTURER	
MIN = MINIMIM	
MIRR. = MIRROR IMAGE	
N.T.S. = NOT TO SCALE	
REINF. = REINFORCING	
SER = STRUCTURAL ENGINEER OF RECORD	
SIM. = SIMILAR	
S.S. = STAINLESS STEEL	
STUE HUR = STANDARU HEADER	
SHIFT. $PL = SHIFTENER PLATE$	
SIR. STITUS = SIRUCIUKAL SHEATHING	
T&C = TONCIF & CROOVE	
$T \cap C = TOP OF CONCRETE$	
T.O.S. = TOP OF STEEL	
T.O.W. = TOP OF WALL	
U.N.O. = UNLESS NOTED OTHERWISE	
VERT. = VERTICAL	
V.I.F. = VERIFY IN FIELD	
V.W.A. = VERIFY WITH ARCHITECTURAL DRAWINGS	
V.W.O. = VERIFY WITH OWNER	
WE = WIDE FLANGE	
WWF = WELDED WIKE FABRIC	

Attachment VI - 6

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FOR CONSTRUCTION 3/16/20


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POC RUCTIC	TABLE OF CONTE	INTS
	Design/Build Commercial · Industrial · Institutional DRAWING NO.	DRAWING TITLE
ANY REPOULIE	E1 AN E2 RI E3 RI E4 RO	NCHOR BOLT PLAN IGID FRAME ELEVATION FRAME LINE 2 3 4 5 6 7 8 9 10 IGID FRAME ELEVATION FRAME LINE 1 OOF FRAMING PLAN
:R BUILDIN J. 37148	IGS. E6 E7 E8 Ri	ACK SIDEWALL FRAME LINE A RONT SIDEWALL FRAME LINE H EFT ENDWALL FRAME LINE 1 IGHT ENDWALL FRAME LINE 11
ION ACCREDITED ACC472	BUILDING LOADS / DESCRIPTION: CERTIFICATION EXTENDS ONLY FOR THE LOADS SPECIFIED ON KIRBY'S PURCH ORDER TO THE STRUCTURAL COMPONENTS OF THE BUILDING DESIGNED AND SUPPLIED BY KIRBY BUILDING SYSTEMS, INC., IF ERECTED AS INDICATED. NOT KIRBY'S ENGINEER IS NOT ENGINEER OF RECORD FOR THIS CONSTRUCTION PE DESIGN LOADS HAVE BEEN APPLIED IN ACCORDANCE WITH THE FOLLOWING. THIS STRUCTURE IS DESIGNED UTILIZING THE LOADS INDICATED AND APPLIED AS REQUIRED BY : 2012 INTERNATIONAL BUILDING CODE	TE THAT ROJECT. <u>PRIMER:</u> STRUCTURAL FRAMING: <u>RP</u> SECONDARY FRAMING: <u>RP</u>
	THE CONTRACTOR IS TO CONFIRM THAT THESE LOADS COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT. <u>ROOF DEAD LOAD:</u> <u>3.45</u> PSF (ROOF PANELS & PURLINS) OCCUPANCY CATEGORY: <u>II – Normal</u>	TYPE: <u>KIRBY LOK SNAPSEAM 24Ga. KLS</u> COLOR: <u>Zinc-Aluminum</u> WALL PANELS:
ECIFICATION FOR Council on NGS, All A325 Bolts	COLLATERAL LOAD:5.0PSFGROUND SNOW LOAD:75.0PSFIs: 1.0Ct: 1.1Ce: 3.0ROOF SNOW LOAD:52.0PSFMINIMUM SNOW LOAD:20.0PSFRAIN ON SNOW SURCHARGE:N/APSFRAIN W/ SNOW (IF REQ'D)N/AROOF LIVE LOAD:20.0PSFTRIBUTARY REDUCTIONYes	TYPE: <u>KIRBY RIB II 26Ga. KR2</u> SF COLOR: <u>TBS – TO BE SELECTED</u> /A PSF
A SHORT PERIOD OF APPEARANCE, TANDARD SHOP COAT 36.	FRAME LIVE LOAD:12.0PSFBASIC WIND SPEED:120MPHEXPOSURE:CIw: 1.0KZT:SEISMIC CRITERIA:Ss:0.28S1:0.07SDS:0.30SD1:0.12SEISMIC USE GROUP:SITE CLASS:DIe:1.0SEISMIC DESIGN CATEGORY:BTI:6	
CTION MATERIALS. MIDITY AND MOISTURE, REFER TO THE D PANELS FOR	ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE LATERAL DIRECTION – BASE SHEAR: 37.10 KIPS R:3.0 CS:10.0996 STRUCTURAL SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANC LONGITUDINAL DIRECTION – BASE SHEAR: 36.67 KIPS R:3.0 CS:10.0996	EXERCEPT CCS These finality operating depict the first depicts the set of the probability and any children depicts of the set of the probability of the set of the
S INTENDED TO BE AT THE BRACING WILL	STRUCTURAL SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANC DEAD LOAD: NORMAL WEIGHT OF METAL BUILDING COMPONENTS AS SUPPLIED BY THE MANUFACTURER THIS BUILDING IS DESIGNED AS AN ENCLOSED STRUCTURE. ALL EXTERIOR CO	OMPONENTS
ING AND STORAGE. AND ON. THE WAX OR ON OTHER	(DOORS, WINDOWS, ETC.) MUST BE DESIGNED TO WITHSTAND THE WIND LOAD SPECIFIED FOR THE DESIGN OF COMPONENTS AND CLADDING IN THE DESIGN ALL EXTERIOR COMPONENTS (WINDOWS, DOORS, ETC) MUST MEET WIND LOAD FOR THE BUILDING CODE LISTED ABOVE OR MUST BE ADEQUATELY PROTECTE WIND EVENT. ALL GLAZING AND OTHER APPLICABLE OPENINGS IN WINDBORN	INGS CODE LISTED ABOVE. ING REQUIREMENTS ED DURING A HIGH IE DEBRIS REGIONS
AILS, SPECIAL DETAILS, EMENTS. FIELD STRUCTURAL INTEGRITY ED REPRESENTATIVE OF	MUST BE IMPACT-RESISTANT OR PROTECTED WITH AN IMPACT-RESISTANT COR RESISTANT MATERIALS MUST MEET THE LARGE AND/OR SMALL MISSILE TEST AND ASTM E 1886. OTHER LOADS	OVERING. IMPACT OF ASTM E 1996
WERE PRODUCED IN REMAINING WELDS ON 3 STRUCTURAL	ENGINEER NOTES	
LLULING.		

the

3 NOTE PAGES GO WITH THIS PAGE

![](_page_316_Figure_1.jpeg)

NOTE:

**GENERAL NOTES:** 

.

- 1. ALL DIMENSIONS ARE OUT TO OUT OF STEEL. IF
- CONCRETE NOTCH IS REQUIRED, THEN THE
- APPROPRIATE DIMENSIONS SHOULD BE ADDED TO OBTAIN THE OUT TO OUT OF CONCRETE DIMENSIONS.
- 2. CONCRETE STRENGTH = 3000 PSI MINIMUM.
- 3. ANCHOR BOLTS ARE NOT FURNISHED BY THE
- MANUFACTURER.

4.DRAWINGS ARE NOT TO SCALE.

## ONE SECTION OF THE BUILDING HAS BEEN REMOVED SO THE OVERALL LENGTH OF THE BUILDING IS 180 FEET NOT 200 FEET AS SHOWN.

A.B. SIZE AND PROJEC	CTION ANCHOR BOI	LT QUANTITY	ALLOW, LOAD	PROJ.	Τ
×	QTY.	BOLT DIA.	TO BOLTS (LBS.)	P (IN.)	
BOTTOM OF	AS REQ'D	±~			
	40	3**	8400	21	T
ANCHOR BOLT S	HAPE 72	1~	15,000	3″	
D ** IS TO BE DETE BY THE FOUNDA	RMINED TION	14"	23,400	34″	T
INGINEER		12	33,700	34″	
	BOLT M ** - ANCHO FOUND	ATERIAL = A R BOLT EMBEDM ATION ENGINEE	ISTM A36 MENT LENGTH "D" R.	IS TO BE DETE	RMI

![](_page_316_Figure_13.jpeg)

![](_page_317_Figure_0.jpeg)

- 197

		r	
RF1-1	1898	10.0/38.3	0.250
RF1-2 RF1-3	956 1210	37.0/20.1	0.250
RF1-4	1915	32.0/32.0 44.0/38.3 38.3/10.0	0.220 0.250 0.250

![](_page_318_Figure_0.jpeg)

			1
RF2-1	1492	10.0/34.0 34.0/39.0	0.188
RF2-2 RF2-3	705 798	36.0/28.0	0.250
RF2-4	798	28.0/28.0 28.0/28.0	0.164 0.164
RF2-5	699	28.0/28.0 28.0/36.0	0.188 0.250
RF2-6	1492	39.0/34.0 34.0/10.0	0.220

![](_page_319_Figure_0.jpeg)

![](_page_319_Figure_3.jpeg)

CB-6

CB-7

PB SR

CB08

PB

SR

![](_page_319_Picture_4.jpeg)

					APPLIED TO THE KIRBY BUILDING NOT ACTING AS 1	STRUCTURAL COMPONENTS OF SYSTEMS, IF ERECTED AS IN THE ENGINEER OF RECORD FOR	THE BUILDING DESIGNED DICATED. NOTE THAT KI THIS CONSTRUCTION PRO	AND SUPPLIED BY IRBY'S ENGINEER IS DJECT.	
ΞY	ISSUE	DESCRIPTION	BY	DATE		KIDRY	RUCTION		
)	S	STRUCTURAL	NLP	08/17/16	BETTER SOLUTIO	BUILDING SYSTEMS IN COMPANY DNS. BETTER BUILDINGS.	EC :	Des)gn/Buil Comercial • Industrial • 7	d Institutional
Ī					KIRBY	BUILDING SYSTEMS • 12	4 KIRBY DRIVE • POR	RTLAND, TN 37148	
		12			TITLE:	ROOF FRAMING PLA	AN	DRN.BY:	
					BUILDER:	D R POULIN CONST	F. CO. INC	DATE:	
					CUSTOMER	G.W. SHAW		CKD.BY:	
					LOCATION	GREENVILLE, NH		DATE:	
	ID NU	MBER: K16B0353A	I	MBS	JOB NO:	K16B0353A		DWG.NO:E4	0F:8

![](_page_320_Figure_0.jpeg)

![](_page_321_Figure_0.jpeg)

![](_page_321_Figure_1.jpeg)

![](_page_321_Figure_2.jpeg)

![](_page_322_Figure_0.jpeg)

·····			1 - 13		. 7 . 35
Columns/Raf	4	A325	1/2"	1	1/4"

![](_page_322_Picture_5.jpeg)

## STRUCTURAL DRAWINGS

There drawings coursely do, lot the line! during of this period and may Second to only the transity of the state I list takes this range of this

![](_page_322_Picture_8.jpeg)

# CERTIFICATION EXTENDS ONLY FOR THE LOADS SPECIFIED ON KIRBY'S PURCHASE ORDER AS APPLIED TO THE STRUCTURAL COMPONENTS OF THE BUILDING DESIGNED AND SUPPLIED BY KIRBY BUILDING SYSTEM, IF ERECTED AS INDICATED. NOTE THAT KIRBY'S ENGINEER IS NOT ACTING AS THE ENGINEER OR RECORD FOR THIS CONSTRUCTION PROJECT.

al an/Buil La
ustrial O Institutional
87148
E7 0F:8

![](_page_323_Figure_0.jpeg)

END TO A DOOR JAMB ARE 16 GAGE UNLESS NOTED OTHERWISE.

MBS JOB NO: K16B0353A ID NUMBER: K16B0353A

DWG.NO:E8 OF:8
# SECTION VII (STAND ALONE DOCUMENT INCORPORATED BY REFERENCE) OPERATING PLAN



REVISED: SEPTEMBER 14, 2021 - Operating Plan Completely Overhauled

Application for Standard Permit for Solid Waste Collection/Storage/Transfer Facility

Greater Waste Solutions, LLC.

# SECTION VI. PRELIMINARY FACILITY DESIGN PLANS AND SPECIFICATIONS (CONTINUED)

Clearly readable.Prepared in according

X

- Prepared in accordance with standard engineering practices, including dimensions, labels, details and other graphic elements.
- Stamped by a qualified professional engineer.
- (4) Unless other arrangements are approved in advance pursuant to Env-Sw 1103.05(f), the plans must:
  - Be papared at a scale of no less than 1 inch = 50 feet.
  - Be presinted on paper no larger than 24 inches by 36 inches.
  - Show process drawn to standard scales with a ratio of 10 horizontal to 1 vertical, such as 40:4 and 50:5.
  - Show elevations of the surface to the nearest 0.1 foot.
  - Show elevations of the piping, sewer, and manhole inverts to the nearest 0.01 foot.
  - Report all elevation in feet and tenths and reference all elevations to a standard datum, which shall be indicated on the plans, based on man sea level.
  - Show contours at a mininum interval of 2 feet on all plan views.
  - (5) Show all existing site features, including, but not necessarily limited to:
    - All structures within 1000 ft of the facility.
    - Wetlands and drainage ways or statem of that none exists.
    - Ledge outcroppings.
    - Soil types (SCS survey is acceptable).
    - S Flood hazard zones.
    - All waters under the jurisdiction of the Comprehensive Shoreland Protection Act on the property and/or at the 250 ft setback to the facility, or statement that none exist.
    - Description Property lines established by a land surveyor licensed in the Hampshire.
    - Locations of permanent benchmarks.
    - Prevailing wind direction.
  - (6) Show the facility and all related appurtenances, including, but not necessarily insited to:
    - Access roads and parking areas.
    - Fences, gates and other access control devices.
    - Buildings.
    - Scales.
    - Tipping and waste inspection area(s) and equipment.
    - Waste storage areas and devices.
    - Hot load segregation area(s) and other fire prevention/control features.
    - Sanitation facilities.
    - Storm water drainage systems.
    - Leachate collection and storage systems.
    - Screening and landscaping.
    - Proposed clearing lines.
    - Litter control appurtenances, if the facility manages waste having the potential to become windblown.
    - Other features as required by Env-Sw 404.03.
- (7) Delineate/dimension all relevant setback distances.

#### SECTION VII. OPERATING PLAN

Prepare and submit an Operating Plan, according to the following instructions. See also Env-Sw 1105.11.

- (1) A facility Operating Plan shall provide sufficient detail to allow the certified operator and other trained facility personnel to operate the facility in compliance with RSA 149-M, the permit and the Solid Waste Rules without further explanation or guidance. See Env-Sw 405; Env-Sw 900 (if for asbestos, ash, contaminated soil and/or other media, infectious waste, or tires); Env-Sw 1005; and Env-Sw 1105 (if operated longer than 90 days).
- (2) The Operating Plan shall be prepared as a loose leaf, stand-alone document to facilitate future amendment, as specified in Env-Sw 315. Submit the stand-alone document with this application, in its own binder.

#### SECTION VII. OPERATING PLAN (CONTINUED)

- (3) Each page of the Operating Plan shall bear the date of preparation or last revision, as applicable, and the facility name and location.
- (4) The content and organizational format of the Operating Plan shall be as follows:
  - Section 1, titled "Facility Identification," shall identify:
    - The facility name, mailing address, location by street address and municipality, and permit number.
    - I The type of the facility.
    - The capacity of the facility.
    - The facility service type.
    - The facility service area.
    - The name, address and telephone number of the permittee, property owner, and operator.
  - Section 2, titled "Authorized and Prohibited Waste," shall provide a list of:
    - The specific types of waste to be received by the facility.
    - The specific types of waste to be prohibited by the facility.
  - Section 3, titled "Routine Operations Plan," shall provide a detailed description of how the daily operations of the facility will be conducted to assure that the facility will be operated in accordance with the Solid Waste Rules, including a description of:
    - Hours of operations.
    - Facility access control and on-site traffic patterns.
    - Waste acceptance and rejection procedures, including unloading, sorting and inspection procedures.
    - The procedure by which the quantity and source(s) of all wastes received by the facility will be determined and recorded.
    - The procedure by which the quantity and destination of all outgoing waste and certified waste-derived products will be determined and recorded.
    - The storage time and capacity limits for all wastes received by the facility and the procedures by which the limits will be monitored to assure compliance therewith.
    - All collection, storage, transfer, processing, treatment and disposal methods and procedures employed by the facility for managing waste following receipt.
  - Section 4, titled "Residual Waste Management Plan," shall provide a detailed description of how all residual waste, will be managed by the facility. Include the following information:
    - The type and estimated quantity of all residual wastes to be generated by the facility.
    - How such wastes will be managed at the facility prior to removal.
    - Information to demonstrate how the provisions of Env-Sw 1105.10 will be met.

Quality assurance/quality control provisions, to assure that the wastes to be transferred are acceptable to the receiving facility.

- Section 5, titled "Facility Maintenance, Inspection and Monitoring Plan," shall identify all routine maintenance, inspection and monitoring requirements necessary to assure the integrity of facility operations, including a description of the measures to be undertaken to monitor and inhibit the following:
  - Spontaneous combustion.
  - Other fire hazards.
  - Vector production.
  - Generation of methane, hazardous and/or explosive gases.
  - 🗵 Odors.
  - Dust.
  - Windblown litter.
  - Leachate.
  - Spills.
  - Other potential or anticipated hazards or nuisances.
- Section 6, titled "Contingency Plan," shall:

#### SECTION VII. OPERATING PLAN (CONTINUED)

- Identify all reasonably foreseeable emergencies, such as fire, explosion, operator injury, and the like, based on the type of facility and wastes being handled;
- Describe the appropriate response of facility personnel for each emergency identified above; and
- Include identification of and telephone numbers for all local and state officials to be notified in the event of an emergency;
- Section 7, titled "Employee Training Program," shall provide a description of employee training program(s); and
- Section 8, titled "Record Keeping and Reporting," shall provide a description of record keeping procedures as necessary to comply with Env-Sw 1105.06 and Env-Sw 1105.07.

#### SECTION VIII. CLOSURE PLAN

Prepare and submit a Closure Plan, according to the following instructions. See also Env-Sw 1106.04.

- A facility Closure Plan shall provide sufficient detail to allow a third party to implement and complete all required facility closure tasks in compliance with RSA 149-M, the permit and the Solid Waste Rules without further explanation or guidance. See Envv 406; Env-Sw 900 (if for asbestos, ash, contaminated soil and/or other media, infectious waste, or tires); Env-Sw 1006; and Env Sw 1106, if operated longer than 90 days.
- (2) The Closure Plan shall be prepared as a loose leaf, stand-alone document to facilitate amendment as specified in Env-Sw 315. Submit the trand-alone document with this application, in its own binder.
- (3) Each page of the Closure Plan shall bear the date of preparation or revision, as applicable, and the facility name and permit number, if known.
- (4) The Closure Plan shall so organized and prepared as follows:
  - Section 1, titled "Facility Identification," shall provide the facility name, mailing address, location by street and municipality and permanumber.
  - Section 2, titled "Closure Schedule," shall provide the anticipated date of closure and a closure schedule that sets forth each discrete activity that will be undertaken to complete facility closure, the order in which the activities will be undertaken and the estimated length of time required to complete each activity.
  - Section 3, titled "Waste Identification," hall identify all types of waste received or intended to be received by the facility during its active life.
  - Section 4, titled "Notifications," shall provide a discription of how notice shall be given by the permittee to facility users prior to terminating receipt of waste;
  - Section 5, titled "Closure Requirements," shall provide
    - A list of each major closure work task required to implement and complete closure of the facility; and
      A description of the procedures for completing all required slosure work tasks.
  - Section 6, titled "Post-Closure Requirements," shall identify and describe all required post-closure testing, inspection, maintenance and monitoring that will be performed at the facility pursuan to the provisions of the Solid Waste Rules and the permit.
  - Section 7, titled "Record Keeping and Reporting," shall identify and describe:
    - All record keeping and reporting obligations required of the facility following completion of the closure work identified in Section 5 of the Closure Plan; and
    - Locations and provisions for storing facility records, including the operating records, for wing facility closure;
  - Section 8, titled "Other Permits," shall:
    - Identify all other local, state and federal permits and approvals required to implement facility closure, including the implementation of all post-closure monitoring and maintenance requirements; and
      Identify the status of each required permit and approval.
  - Section 9, titled "Closure Cost Estimate," shall provide a closure cost estimate prepared in accordance with the criteria in Env-Sw 1403.02. Closure cost estimation forms are available from the P&DRS at (603) 271-2925.

# **Operating Plan**



# Solid Waste Collection, Recycling/Recovery, Storage and Transfer Station

# **Greater Waste Solutions, LLC**

426 Fitchburg Road - Operations 124 Old Wilton Road - Mailing Greenville, New Hampshire 03048 YARD - 603-878-1170 OFFICE: 603.878.4108 July 19, 2021

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# GREATER WASTE SOLUTIONS, LLC FACILITY OPERATING PLAN

# 1. FACILITY IDENTIFICATION

Facility Name:	Greater Waste Solutions, LLC 426 Fitchburg Road Greenville, NH 03048
Mailing Address:	124 Old Wilton Road Greenville, NH 03048
Permit Number:	DES-SW-XX-XXX
Facility Type:	Collection, Storage and Transfer Facility
Facility Capacity:	The facility's permitted design capacity is 600 tons per day (3,600 tons per week) of solid waste on average, annually. This tonnage is estimated as approximately 448 tons of non-recyclable waste and 152 tons of recyclables per day. The facility is capable of storing up to 1,264 tons of material.
Service Type:	Unlimited Service
Service Area:	New Hampshire and Massachusetts
Permittee:	Greater Waste Solutions, LLC 426 Fitchburg Road Greenville, NH 03048 Tel. (603) 878-4108
Owner:	GMB Leasing, LLC 124 Old Wilton Road Greenville, NH 03048 Tel. (603) 878-4108
Operator:	Same as Permittee

#### 2. <u>AUTHORIZED AND PROHIBITED WASTE</u>

# 2.1 Pursuant to Permit No. DES-SW-XX-XXX, Greater Waste Solutions, LLC (GWS) is authorized to accept:

- Batteries, Alkaline manufactured 1996 Present
- Bulky Items/Furniture
- Cardboard, Corrugated
- Cardboard, Grey
- Construction and Demolition Debris (C&D)
- Electronics
- Glass
- Large Appliances
- Metal, Ferrous and Non-Ferrous
- Municipal/Mixed Solid Waste (MSW)
- Paper, Mixed
- Paper, News
- Plastic, numbered 1-7
- Tires

# 2.2 Pursuant to Permit No. DES-SW-XX-XXX, Prohibited Wastes include, but are not limited to:

- Asbestos or asbestos containing waste
- Ash
- Automobiles/boats/motorcycles
- Carcasses
- Contained gaseous waste (except when tanks have been cut up and certified as properly vented)
- Contaminated soils
- Explosives such as dynamite and ammunition, and potentially explosive materials of any type, such as sealed tanks
- Hazardous waste (per Env-Hw 400)
- Household Hazardous Wastes
- Infectious waste
- Liquid waste
- Military scrap of any kind (unless ownership established and approved in advance by GWS facility operator)
- Metal Kegs for Malt Beverages, or pieces of such kegs (unless supplier's name appears on the keg)
- Oils, (excluding used motor oil from residential sources), gasoline, other petroleum products and antifreeze
- Radioactive waste

- Railroad associated scrap metal (unless ownership established and approved in advance by GWS facility operator)
- Refrigerants leaking fluids
- Scrap metal from any minor under the age of 16 years, without the written consent of his/her parents or guardian.
- Sludge and Septic Waste
- Tanks, drums or other containers unless emptied and properly cleaned of residues prior to receipt
- Any material, which in the opinion of the GWS Operator constitutes a serious hazard for employees, users, or operation of the GWS facility, or any other wastes the facility has not been designed to handle

# 2.3 Pursuant to Permit No. DES-SW-XX-XXX, Universal Wastes may be accepted in conformance with Universal Waste Rules in Env-Hw 1100, including:

- Batteries, Button cell, Re-chargeable, Alkaline manufactured prior to 1996, Lead-Acid (intact only)
- Cathode Ray Tubes (CRTs)
- Electronics
- Lamps
- Mercury Containing Devices
- Used Motor Oil (accepted from residential sources only), for use in on-site waste oil furnace

# 2.4 The following items may be accepted but are excluded/exempt from permitting:

- Brush and Tree Limbs under nine (9) feet in length and five (5) inches in diameter
- Yard Waste such as leaves, grass clippings, garden debris, and small/chipped branches, stumps, etc.

# 3. <u>ROUTINE OPERATIONS PLAN</u>

This document is intended to guide the operation and management of the GWS Collection, Storage and Transfer Facility. GWS collects and sorts non-hazardous solid waste for recycling and disposal, consolidating materials into larger loads for hauling to an incinerator, landfill, or recycling markets.

#### **3.1** Hours of Operation

The facility is permitted to operate 12 hours a day, 6 days a week.

Monday – Saturday 6:00 AM to 6:00 PM Sunday Closed

# 3.2 Facility Access Control and On-site Traffic Patterns

Access to the facility is via a single driveway entrance on Fitchburg Road (NH Route Rte. 31) which is secured by a locked gate when the facility operator is not present. The local fire

department has a copy of the gate key for emergency access. When the gate is open, all traffic must stop at the vehicle scale house/office for instruction. The public has access only to the front of the facility: the office and the General Public Drop Off Area. Access to the facility by other means is restricted by a six-foot chain link fence along the western boundary (Fitchburg Road) and natural site features and topography on all other boundaries.

The site is designed with one directional traffic flow in each area to eliminate conflicts. Residential traffic/activities are separate from commercial traffic/activities. Residential traffic is routed north and counterclockwise, through the General Public Drop Off Area which is isolated by jersey barriers, and back to the main driveway at Fitchburg Road. Upon entry, commercial traffic proceeds past the scale, south and clockwise around the Solid Waste Processing Building and back to the scale. Trucks go over the scale, continue either south/clockwise or north/counterclockwise to unload in the appropriate location(s), and return to the scale prior to exiting. Traffic barriers and signage are used to maintain traffic control, separation, and safety. Weather resistant signs are posted throughout the facility indicating traffic flow, speed, and access restrictions. Site traffic patterns and signage are shown on Figure 1 – Operations Plan.

In accordance with Env-Sw 1105.05, a weather resistant sign posted near the facility entrance identifies the name, permit number, name and address of permittee, days and hours of operations, types of acceptable wastes, and a statement that unlawful dumping shall be subject to fine and prosecution. In addition to the facility sign, a copy of the approved permit showing the permit number and authorization signature is displayed at the facility. Current operator certifications are also displayed.

# 3.3 Waste Acceptance and Rejection Procedures

The facility has four (4) waste receiving and handling areas: the Solid Waste Processing Building, the General Public Drop Off Area, Scrap Metal Recycling Area (exterior stockpile sorting); and the Scrap Metal Processing Building. Waste areas are identified on Figure 1 – Operations Plan. The following inspection protocol has been established to detect and remove unauthorized material from the waste stream entering the facility:

For commercial and/or private haulers, waste inspection begins at the scale and includes an interview regarding waste source and type(s). Random visual inspection is performed by walking around the vehicle, examining its contents to assure compliance with rules regarding hazardous waste, hot loads, liquid wastes or other prohibited materials. The Random Load Inspection Form is included in Appendix C. Any vehicle suspected of hauling prohibited material is stopped and inspected. Any vehicle found to be carrying a prohibited material is not permitted to dump at the facility. The transporter is instructed to dispose of the prohibited material at an appropriate facility authorized to receive it. Authorized waste material is inventoried by commodity/type/grade, etc. Following weigh-in, the hauler is directed to the appropriate waste unloading and handling area. After unloading, the hauler is redirected to the scale for weigh-out and exit.

Residential materials are unloaded in the General Public Drop Off Area, debagged if necessary, and randomly inspected for contaminants/prohibited substances, and sorted prior to dumping into the appropriate container. Non-recyclable material is placed into the associated stationary compactor hopper.

Continuous visual monitoring of the discharged waste is conducted by facility personnel. Any prohibited waste discovered is rejected. If prohibited waste is discovered after the responsible party has left the facility, it is segregated and stored in a secure manner: either in the hazardous material area/container, or placed on an impervious or covered surface until appropriate disposal is possible. The discovery of any such wastes at the facility is immediately brought to the attention of the facility operator. Whenever possible, the name of the collector/hauler suspected of delivering prohibited material to the facility is secured in addition to information relating to the incident. The responsible party is contacted for retrieval of the material; or, if this is not possible, the facility operator properly manages the waste. Disposition of the material is dependent upon the specific type of waste discovered and applicable rules and regulations. The list of Third Party Waste Destination Providers is included in Appendix D.

Hot loads (smoking or on fire) are directed to the Hot Load Area and unloaded away from other waste and extinguished. Absorbent materials/booms are stored in the Solid Waste Processing Building, the General Public Drop Off Area, and the Hot Load Area, and are used to absorb and contain any associated runoff, which is collected and stored in sealed container(s).

#### Solid Waste Processing Building

The Solid Waste Processing Building consists of a tipping floor and a variety of containers, bunkers, and tables for receipt and sorting of both non-recyclables and recyclables, including commercial and residential construction and demolition debris (C & D). Facility personnel direct traffic to the appropriate unloading area, inspect the incoming materials, and remove any obvious prohibited or recoverable materials. Simultaneous unloading of three (3) commercial vehicles is possible. Loads containing all trash along with any trash residue remaining after processing are loaded into open-top transfer trailers and hauled to the disposal site (incinerator). Recovered materials are sorted and moved to the appropriate storage container or bunker. The unloading/tipping area is designed with surge capacity to hold approximately one half (½) peak day of waste.

#### General Public Drop Off Area

The General Public Drop Off Area (for residential waste) consists of a series of covered 30-yard roll-off recycling containers, stationary compactors (breakaways) and bunkers for the receipt of both non-recyclables and recyclables. Facility personnel direct traffic to the appropriate unloading area(s) and monitor unloading activities. Recyclables are de-bagged and sorted by residents and placed in the appropriate container for storage until shipped to markets or end users. Non-recyclable material is placed in the appropriate stationary compactor by residents. Both recyclables and non-recyclables are subject to random inspection, rejection and/or removal of obvious prohibited materials. Residents hauling trailers and/or C&D are directed to the scale

and/or the Solid Waste Processing Building. Facility personnel may direct residents with smaller quantities of C&D and bulky items to the C&D receptacle located in the General Public Drop Off Area.

A Do-It-Yourself (DIY) Used Oil Collection Area is located within the General Public Drop Off Area. DIY Used Oil is accepted only from residents who change oil in their personal vehicles -IF storage capacity exists. DIY Used oil must be in tightly capped, clear or translucent containers (preferably rigid plastic), that allows visual inspection by facility personnel for verification that it is free of contaminates. Only facility personnel are permitted to place the inspected containers on the receiving table for later reuse in the on-site waste oil furnace.

# Scrap Metal Recycling Area and Scrap Metal Processing Building

The Scrap Metal Recycling & Processing areas consist of exterior ferrous and non-ferrous stockpiles located on impervious surfaces and a series of shipping gaylords and containers located within the Scrap Metal Processing Building for the receipt of additional non-ferrous recyclable scrap metals. Facility personnel direct traffic to the appropriate unloading area, inspect the incoming materials, and remove any obvious prohibited or recoverable materials. Scrap metal is sorted and stored in the appropriate container or stockpile until shipped to markets or end users. Scrap Acceptance/Grading Guidelines are included in Appendix B.

# 3.4 Waste Quantity and Source Monitoring Procedures

All incoming commercial collection vehicles as well as residential vehicles hauling MSW, scrap metal, C & D, or trailers are weighed at the certified vehicle scale before unloading and issued a tracking ticket. The tracking ticket includes the type and source of materials, vehicle plate number and state, and the gross vehicle weight. After unloading, vehicles return to the scale for re-weighing (tare weight). The scale operator updates the tracking ticket with the type of material and weight tipped. The scale tracking ticket is signed by both the weigh master and supplier; and a copy is provided to the supplier.

For incoming Scrap Metal, the scale operator also verifies the supplier's identity, records their photo identification number and issuing authority, mailing address, phone number, and obtains their signature. Facility personnel direct suppliers with smaller scrap metal quantities to the certified floor scale located in the rear of the Scrap Metal Processing Building for material weighing and recording.

Residential vehicles utilizing only the General Public Drop Off Area are not weighed. Residents deposit materials into various containers which are visually monitored, and weighed and removed once full.

Outgoing commercial transfer vehicles are weighed at the certified vehicle scale prior to leaving the facility. The scale operator records the type and destination of the materials and the gross vehicle weight. Outgoing roll-off containers are weighed prior to departure and at the destination facility on certified scales and the associated data is recorded in Greater Waste Solutions, LLC database management software and record systems.

The database management system is used on a daily basis to record the source of in-bound and out-bound material, including vehicle and load information. The database accurately tracks quantities of each material received, stored, and transported. Estimated quantities of materials sorted, or loaded and awaiting transport, are also monitored. To ensure compliance with public benefit requirements pursuant to Env-Sw 405.04, the database is used to track the total quantity of waste transferred on an annual basis to New Hampshire landfills and to New Hampshire incinerators such that it does not exceed the total quantity of waste received from New Hampshire generators. Recyclable materials are monitored to ensure they are diverted to authorized facilities for reuse such that landfill disposal is avoided.

#### 3.5 Storage Time and Capacity Limits

The database management system is used daily to assess received, currently stored, and transported materials, and to ensure compliance with public benefit requirements pursuant to Env-Sw 405.04. At no time is a waste stored for a period of time which results in a condition adversely affecting the environment, public health or safety, including conditions that attract insects and vectors, generate odors, decomposition gasses, or leachate, or have the potential to cause fire or explosion. Materials received at the facility are primarily stored inside the Solid Waste Processing Building and outside in covered bulk containers, bunkers, and stockpiles. Recyclables are stored in a manner that preserves market value.

MSW and C & D are unloaded, inspected, sorted, and reloaded into transport trailers immediately. Occasionally materials are stored overnight within the Solid Waste Processing Building on the tipping floor prior to or after sorting. Transport trailers containing sorted MSW and C & D normally remain at the facility not longer than one day, and occasionally up to four days due to weekends and/or holidays. Commercial roll-offs and transport containers for recyclables typically remain at the facility from one to four days for consolidation prior to transport. Depending on quantities and available markets, the storage time for processed recyclables and certain scrap metals varies from 30-60 days up to 12 months.

TABLE I MAXIMUM PERMITED STORAGE LIMITS						
WASTE TYPE	WEIGHT (TONS)	EST. VOLUME (cu. yds.)				
C&D Waste	351	1,424				
MSW	359	1,340				
Scrap Metal	501	1,671				
SSR & Recyclables	53	506				

The maximum total quantity of waste permitted to be stored at the facility is 1,264 tons, estimated as follows:

A schedule of waste areas and associated capacities is included on Figure 1 – Operations Plan.

#### 3.6 Material Collection, Storage, Transfer, and Processing Methods and Procedures

Commercial waste delivery vehicles and residential vehicles hauling C&D or trailers proceed to the scale for weighing, initial screening of waste loads, and the collection of fees, where applicable. Vehicles then proceed to the Solid Waste Processing Building and are directed to the tipping floor for unloading. Waste is unloaded (tipped) on the tipping floor to allow for materials recovery ("floor sorting") and waste inspection. Non-recyclable material is pushed into an open-top transfer trailer by a rubber tired front-end loader/bobcat. Recyclable material is pushed or loaded into its associated storage container/bunker for delivery via roll-off truck to its destination facility.

Residential vehicles proceed to the General Public Drop Off Area for unloading. Non-recyclable material is unloaded into the associated compactor hopper and is subsequently transferred and merged with MSW in the Solid Waste Processing Building. Pre-sorted recyclable materials are unloaded into the appropriate designated containers through the cover access doors. Bulky Items are temporarily unloaded into the White Goods/Bulky Items Bunker and subsequently transferred to the Solid Waste Processing Building by facility personnel.

Recyclable materials and metal commodities are stored so as to preserve market value. Outside material storage occurs on compacted soil, or on an impervious surface in bulk stockpiles or bulk storage bins as indicated on the Operations Plan (Figure 1). Some metals are stored in containers and gaylords in the Scrap Metal Processing Building. The Soft Metals Warehouse Layout and Materials Flow is shown on Figure 2 – Interior Floor Plans & Building Sections.

Transfer of materials to off-site destination facilities occurs in bulk or packaged form by truck. Filling of transfer trailers is monitored by facility personnel. Once full, trailers are covered and moved to the trailer parking area indicated on the Operations Plan (Figure 1) in preparation for hauling to the disposal facility. All vehicles transporting waste from Greater Waste Solutions, LLC must have a valid solid waste transporter permit. Recyclable and waste materials transported off-site shall be taken to a facility permitted to accept the specific type of waste material. Refer to Appendix D - Third Party Waste Destination Providers.

<u>Commingled materials</u> are delivered to the facility from both roll-off containers and curbside collection programs and are sometimes placed in plastic bags by residents. Upon arrival at the facility, these materials are unloaded onto the tipping floor; the bags are opened, emptied, and inspected manually by facility personnel.

<u>Electronics</u> are collected in the Scrap Metal Processing Building, delivered to the General Public Drop Off Area, or recovered from the tipping floor. Suppliers with electronics are directed to the inspection and collection area in the Scrap Metal Processing building where the item(s) are placed on a receiving table for inspection and subsequent transfer by facility personnel to storage. They are stored on a skidded Gaylord corrugated box located in rear of the Scrap Metal Processing Building. (Figure 2) Residents with electronics, including CRTs, are directed to the Electronics (CRT) Inspection and Storage Area in the General Public Drop Off Area. The items are inspected by facility personnel and transferred to the Scrap Metal Processing Building for storage until shipped within four months to an authorized recycling facility.

<u>Mixed Paper Grades</u> are sometimes received. Drop-off site roll-off containers have a compartment for mixed paper only, and some commercial loads may contain both cardboard and mixed paper. These materials are tipped in the Solid Waste Processing Building, floor-sorted, and placed in the appropriate storage bunker. The Solid Waste Processing Building Floor Plan is included on Figure 2 - Interior Floor Plans & Building Sections.

Pre-Sorted Materials include:

- Pre-sorted recyclable materials, primarily from the public, delivered to the General Public Drop Off Area
- Materials delivered to the facility by commercial haulers with multiple compartment collection vehicles
- Commercially sourced pre-sorted materials such as corrugated cardboard, mixed paper, and sorted glass are dumped onto the tipping floor of the Solid Waste Processing Building, inspected for contaminants, and pushed directly into the appropriate material storage bunker

<u>Scrap Metal</u> acceptance is determined by the procedures outlined in Sections 3.3 and 3.4, and in accordance with guidelines included in Appendix B. Non-commercial vehicles with small quantities of materials are directed to the parking area at the rear of the Scrap Metal Processing Building for unloading and inspection. Materials are weighed and placed into the appropriate labeled container or processing area by facility personnel. Scrap metal material may require manual or mechanical processing prior to being transferred to its final off-site destination.

<u>Tires</u> are collected and stored in an enclosed container in the General Public Drop Off Area (Figure 1) and transferred in accordance with Env-Sw 905.02.

<u>Used Motor Oil (DIY)</u> for use in the on-site waste oil furnace, is collected from residents ONLY and is stored in a 55-gallon double-walled sealed container located in the Waste Oil Collection area (Figure 1). Residents with used waste oil are directed to the Waste Oil Collection Area for inspection and receipt by facility personnel. Later, utilizing a funnel to reduce the opportunity of spills, the oil is added to the double-walled storage container by a facility operator.

<u>White Goods</u> are accepted by the facility, for a fee. Appliances are inspected by facility personnel upon delivery and then unloaded in the appropriate area. Refrigerants (including CFCs and HCFCs) in refrigerators and air conditioners are prohibited. Refrigerant containing appliances and compressors are kept in a designated area (for no longer than 6 months) until refrigerant is recovered and removed from the site by a licensed refrigerant recovery and reclamation contractor for recycling or disposal. Refer to Appendix D – Third Party Waste Destination Providers.

# 4. <u>RESIDUAL WASTE MANAGEMENT PLAN</u>

Greater Waste Solutions, LLC is not a Processing/Treatment facility, and, as such does not generate significant residual waste. Any minimal residual waste resulting from scrap metal management such as dirt, fibers, glass, and other non-metal is disposed of as by-pass waste. Temporary storage of by-pass waste is within a covered 30-yard dumpster until transfer by third parties to an authorized destination facility.

# 5. FACILITY MAINTENANCE, INSPECTION AND MONITORING PLAN

Routine maintenance, inspection and monitoring procedures are necessary to assure the integrity of facility operations and to address nuisance, safety, and environmental issues.

# 5.1 Spontaneous Combustion

Spontaneous combustion is not likely to occur in the waste materials, metal products, or potential residuals generated at the site. Fire potential for stockpiled materials is low due to the acceptance/rejection procedures, segregation by type of materials, and limited storage times. Stockpiled and warehoused materials are examined daily for visual signs of fire, (hot spots, smoke, flames, etc.).

# 5.2 Other Fire Hazards

Fire hazards exist in areas where there is a presence of paper, fuel, heat, or human activity. Gasoline required for facility equipment is stored in a tank outside the Scrap Metal Processing Building, away from waste materials. Lithium-ion and other rechargeable batteries are collected in a designated closed container, distinct from other materials, and equipped with CellBlockEX granulate in the event of fire. The potential for electrical fires is minimized by keeping covers on electrical equipment when not in active use. Smoking is prohibited at the facility. Employees are trained to operate fire extinguishers which are located throughout the facility and regularly inspected.

# 5.3 Vector Production

In order to reduce the likelihood of attracting vectors, litter and other debris are picked up daily and good general housekeeping practices are followed. Periodic inspections are performed to ensure that all openings, which may allow rodents and insects to enter the Solid Waste Processing Building or the Scrap Metal Processing Building, such as door and window frames, vents, and masonry cracks, are properly sealed or screened. Additionally, any chewed insulation observed at points where utilities enter buildings is repaired promptly. During routine visual inspection, any observed insect breeding areas are treated and eliminated. A professional pest control service is retained as necessary to eliminate any problems should they occur.

# 5.4 Generation of Methane, Hazardous and/or Explosive Gases

There is minimal risk of methane and/or explosive gas production at the facility. There is no long-term storage of explosive gas producing waste and, subsequently, a minimal decomposition

period. As containers/bunkers/trailers are filled, they are transported offsite to their associated destination facility. Greater Waste Solutions, LLC provides no composting facilities. Proper storage of batteries (in accordance with NHDES BMPs) prevents breakage and resultant potential for hazardous and explosive conditions.

# 5.5 Odors

The potential spread of odors is minimized by the use of covered containers outdoors, and conducting facility operations within the Solid Waste Processing Building. The concrete tipping floor and transfer trailer pit areas are swept and disinfected regularly to remove any remaining residues after material transfer. Any spillage of waste into the transfer trailer pit is removed immediately after each load departs. The tipping floor, pit, and General Public Drop Off Area are swept and washed as needed; the resulting leachate is collected using absorbent materials and/or a wet/dry vacuum. In the event odor complaints are received, steps are taken to identify the source for mitigation.

While on-site storage of MSW is no more than 72 hours, wherever possible, odorous or potentially odorous wastes are immediately loaded into a transfer trailer and transferred to the disposal site. Short-term storage of a loaded transfer trailer could generate detectable odor downwind of the facility. In order to minimize the potential for odors, loaded trailers are not kept at the facility for more than 24 hours, barring emergencies. Especially odorous trailers are removed on a priority basis. All transfer trailers are cleaned and repaired regularly to ensure that odor problems do not develop.

# 5.6 Dust

Operation and on-site travel areas are either impervious or hard-packed gravel to minimize dust generation from traffic and transfer/processing equipment. Dust generation from MSW and recyclables transfer is typically low because of the moisture characteristics of the handled materials. Water is sprayed on facility travel ways via water truck as necessary to minimize dust generation from vehicular traffic during dry periods. Facility personnel keep building tipping floors clean and apply mist/water to suppress dust as required during handling of dusty wastes.

# 5.7 Windblown Litter

Most materials at the facility are heavy enough to preclude being lifted and transported by wind. A six-foot chain link fence in conjunction with natural boundaries around the facility will contain any incidental windblown litter. Facility personnel perform regular visual inspections and collect windblown litter which is stored in a closed dumpster until ultimate disposal.

# 5.8 Leachate

Facility operations are conducted primarily within the Solid Waste Processing Building to limit exposure of materials to precipitation. Exterior material storage is within covered containers where leachate generation is unlikely, or in areas underlain with impermeable surfaces, where leachate is easily contained for cleanup. Additionally, any solid waste generated at the facility

(such as personnel generated MSW) is stored within a covered 30-yard container. Absorbent materials are located throughout the site for containment and cleanup of leachate as needed.

# 5.9 Spills

To reduce the possibility of oil spills and subsequent environmental contamination, facility material handling areas are designed with impermeable underlying surfaces. The Solid Waste Processing Building and Scrap Metal Processing Building have concrete floors. The exterior Scrap Metal Recycling Area has concrete slabs on which metals are stored. Heating and waste oil storage containers are double-walled. When transferring oil between containers, a funnel is used to reduce the possibility of spills. Additionally, a tank integrity inspection program is implemented to ensure leakage does not occur. In the unlikely event of a spill, Spill Kits are strategically located throughout the facility. Refer to Figure 2 for locations.

# 5.10 Detention Basins

Stormwater detention basins are inspected and maintained as outlined in the "New Hampshire Storm Management Manual, Volume 2, Post-Construction Best Management Practices and Design", annually (or following a significant storm event), as follows:

- Inspect inlet pipes and outlet pipes for structural integrity and, where necessary, take corrective action;
- Inspect riprap aprons for sediment and debris accumulation;
- Inspect for and remove litter or other debris that may be blocking inlet/outlet pipes, swales or spillways;
- Inspect for sediment accumulation at inlet pipes and in basins;
- Inspect stone around outlet pipes or swales for accumulated sediment, vegetation and/or debris;
- Mow vegetated basins and embankments and maintain in healthy condition; and,
- Re-establish native vegetation on eroded slopes/embankments as necessary.

Results of inspections are recorded on the forms included in Appendix I.

# 5.11 Equipment and Vehicle Maintenance

Equipment required to operate the facility are in conformance with the NHDES Solid Waste Rules and are appropriate to the size and scope of operations, (i.e., compactors, fork lifts, mechanical sorting devices, scales, trucks and other vehicles.) A list of Facility Equipment is included in Appendix G. Only minor equipment and/or vehicle maintenance will be conducted on-site on an impervious surface. All major repairs and cleanings will be performed off-site. Washing or cleaning equipment and/or vehicles outside is prohibited.

# 5.12 Other Potential Hazards or Nuisances

Metal processing and facility vehicles have the potential to generate noise and vibrations. To minimize these potential nuisances, Greater Waste Solutions, LLC will operate only during

regularly established hours. Building setbacks and topographical features will provide an additional noise and vibration buffer.

# 6. <u>CONTINGENCY PLAN</u>

This section identifies foreseeable emergencies and, based on the type of wastes being handled, describes the appropriate response of facility personnel. A comprehensive emergency contact list is included in Appendix E. This list is also posted beside facility telephones.

#### 6.1 Foreseeable Emergencies

#### Excavator/Heavy Equipment Accident

Only trained and qualified personnel are assigned to operate excavators and other heavy equipment used at the facility. Operation of this equipment is in areas where the general public may be present. Safety training for personnel is completed and regularly updated.

#### Hot Loads

Materials accepted by the facility are unlikely to be combustible, however, any vehicle that visibly contains smoldering, smoking, or burning materials is directed to the Hot Load Area, where the fire is extinguished.

#### Prohibited Waste

All incoming material is checked for prohibited waste. These materials are rejected when found. If there is any question as to whether a waste is hazardous, the load is not to be accepted until documentation of non-hazardous materials is provided. Sealed containers are rejected: contents are not known and assumed to be liquid, which is not accepted.

# <u>Spills</u>

Petroleum products are used on-site (Refer to Appendix H – Petroleum and Fluids Storage); and, although prohibited, may unintentionally arrive at the facility in loads of C & D or scrap metal. Materials are processed/stored either within the Solid Waste Processing Building, the Scrap Metal Processing Building, in a container, or on an impermeable surface that prevents any liquid waste from contaminating underlying soil and/or groundwater.

#### Fire and Explosion

Open burning is prohibited at the facility; however, petroleum products used on-site are flammable. Proper use of and storage procedures for these products are followed. Lithium-ion and other rechargeable batteries are accepted at the facility and contain flammable fluids. These batteries are collected in a closed container, distinct from other materials. Facility personnel are trained to provide appropriate fire-fighting response in the event of fire. All areas of the building (e.g. administration, processing, storage) and exterior equipment are equipped with suitable fire extinguishers for controlling minor fires.

# 6.2 Emergency Response Procedures

#### Personal Injury

First aid equipment is available on-site for use in administration of first aid by personnel, if trained, or for self-administration by the injured individual.

Procedures in the event of injury:

- Assess the situation and evaluate health and safety hazards
- Take any action necessary to prevent additional risk to people (i.e. alert all personnel and customers to evacuate and relocate to a designated safe area, shut down machines, etc.)
- If trained, administer first aid and make efforts to stabilize the situation; if untrained, provide access to first aid equipment to the injured
- If necessary, dial 911 to notify Emergency Services or evacuate to the nearest Emergency Room

# Hot Loads

Any vehicle that visibly contains smoldering, smoking, or burning materials is directed to the Hot Load Area. The load is dumped and its contents spread out and saturated with water or smothered with inter material until all burning material has been extinguished. The extinguished load is then moved into the Solid Waste Processing Building where the load is safely dumped. Runoff from extinguishing a hot load is captured and contained utilizing absorbent materials or a wet/dry vacuum, stored in a sealed container, and later transported to an appropriate facility for disposal.

# Prohibited Waste

Suspect prohibited materials include, but are not limited to, drummed liquid waste and materials specifically labeled as hazardous. Prohibited waste inadvertently dumped shall be removed from the waste stream and placed into the Hazardous Material Area/Container until the firm specializing in the handling of that type of waste is contacted to retrieve the material. In the event of a hazardous waste spill or leak, the associated area is isolated and cleaned using absorbents. Spill response kits are located in the building.

# Spill Response

Oil Spills which exceed the requirements of Env-Or 604.06 require that verbal notification be made directly to NHDES during normal working hours or to the NH State police outside of normal working hours. (see Appendix E for contact information) In the event of a spill or oil discharge, the following procedure is followed immediately by facility personnel.

Procedures in the event of spill:

• Assess the situation and evaluate fire, health and safety hazards

- Take necessary steps to prevent injury to personnel, damage to equipment, and fire hazards (i.e. alert all personnel and customers to evacuate and relocate to a designated safe area, shut down machines, etc.)
- Initiate action to stop the spill, contain and prevent run-off, and prevent environmental damage
- Notify your immediate supervisor via phone or two-way radio
- Small spills (less than 25 gallons, cleaned-up with on-site Spill Kits):
  - Contain and remove all discharged oil and oil-contaminated debris
  - Stockpile and dispose of discharged oil and oil-contaminated materials in accordance with all applicable local, state and federal regulations
- Larger spills are handled by an emergency response contractor
- If spill management requires additional equipment (i.e., Vacuum truck, large booms, roll-offs, etc.) or if spill has reached surface water, continue to monitor and mitigate any fire or health and safety hazard; investigate to determine the presence of free product and notify Emergency Services if/as necessary by dialing 911

# Fire and Explosion

All firefighting equipment is maintained in operating condition and kept clear of obstructions at all times. CellBlockEX granulate is stored next to the battery collection container, to be used in the event of a fire originating therein. Facility personnel are alert for signs of burning waste such as smoke, steam or heat being released from incoming loads. An adequate water supply is readily available on-site.

Procedures in the event of fire:

- Assess the situation and evaluate health and safety hazards, extent of fire, possibilities of fire spreading and alternatives to extinguish the fire
- Take any action necessary to prevent risk to people: alert all personnel and customers and relocate to a designated safe area
- Attempt to contain or extinguish fire, if trained and can safely do so
- If necessary, activate fire alarm and dial 911 to notify Greenville Fire Department
- Upon arrival, direct Fire Department personnel to fire and provide assistance, if requested
- Do not attempt to fight the fire alone
- Firefighting methods may include smothering, separation of burning material, spraying with water
- Apply CellBlockEX granulate to suffocate/extinguish battery fires
- Small fires may be controlled with hand held fire extinguishers

# 6.3 Incident Notifications

Refer to Section 8.2.3, Emergency Reporting

# 7. <u>EMPLOYEE TRAINING PROGRAM</u>

Greater Waste Solutions, LLC provides a training program for all personnel. All facility employees will receive, at a minimum, a comprehensive overview of all aspects of facility procedures to assure their health and welfare, training to recognize and avoid unsafe conditions, and training in the rules applicable to their work, allowing them to perform their specific duties in accordance with operating procedures and in compliance with safety rules and regulations, and NHDES Solid Waste Rules, including Env-Sw 1002.04 Safety.

# 7.1 Facility Manpower Requirements

Greater Waste Solutions, LLC is staffed with persons qualified by reason of experience, education, and performance history to operate the facility in accordance with all applicable requirements of the Solid Waste Rules and permit in a manner which is protective of the environment, public health and safety. In accordance with Env-Sw 1600, 1005.06, 1005.07, and pursuant to RSA 438, "Standards for Weights and Measures", and in accordance with Agr1400, "Weights and Measures":

- All persons who operate the facility shall be certified (issued or interim) in accordance with Env-Sw 1600;
- Facility Manager shall hold a Principal Operator Certification-Level III, or higher;
- At least one certified Principal Operator shall be present during facility operation;
- At least one licensed Public Weighmaster shall be present for weight, measure or count determinations;
- No less than 50% of on-site personnel directly involved with the management of solid waste shall be operators certified by issued certification.

# Facility Manager

- Directs the operations of the facility;
- Supervises, trains, and evaluates facility personnel;
- Coordinates delivery of materials to the facility by commercial and private haulers;
- Solves problems related to waste management and environmental issues;
- Ensures equipment is maintained and ready for operations;
- Operates facility and heavy equipment;
- Loads trucks for market;
- Oversees implementation of safety program and compliance;
- Reviews and updates safety program as needed;
- Contacts buyers and potential buyers to promote the sale of processed recycled materials;
- Resolves public complaints concerning solid waste and recycling issues;
- Conducts random load inspections; and
- Performs other administrative/clerical duties as required.

#### Secretary

- Assists public and maintains handout information;
- Calls transfer company when loads are ready for transfer;
- Prepares/completes Bills of Lading;
- Keeps accurate records of shipments/sales on paper and computer;
- Uses computer for database entry and maintenance;
- Generates accounts receivable records;
- Maintains records as required for annual reporting;
- Handles filing, copying, telephone-related duties;
- Keeps office space clean and requests necessary supplies; and
- Performs other administrative/clerical duties as required.

#### Solid Waste Facility Operator

- Oversees the recycling management of salvageable materials;
- Operates truck to plow and sand in winter;
- Assesses materials, pays suppliers, collects fees, and issues receipts;
- Keeps accurate daily accounts of all monetary transactions collected in daily work log;
- Operates front-end loader, excavator, bobcat, floor jack and other equipment to pack containers, load appliances, process and recycle necessary material;
- Inspects and cleans facility property and access road;
- Ensures bins are properly closed at the end of each day;
- De-bags comingled recyclables in the tipping area;
- Sorts incoming mixed metal loads;
- Assists all customers with waste and recycling questions;
- Monitors dumping to ensure recyclable material is not contaminated;
- Monitors unloading to ensure no hazardous or prohibited material is illegally dumped;
- Conducts random load inspections; and
- Performs other administrative/clerical duties as required.

#### Scale Operator

- Operates weight scale computer;
- Weighs trucks in and out and keeps records on paper and computer;
- Operates floor scale(s) and keeps records on paper and computer;
- Directs loads to proper areas;
- Prints tickets for customers; and
- Performs other administrative/clerical duties as required.

# 7.2 Safety Training

All certified facility operators renew their certification by attending at least one annual workshop administered or approved by the NHDES. (Operator certification is valid for one (1) year from the date of issuance.) For information regarding the certification program, contact the Solid Waste Operator Training Program of the NHDES at 603-271-2900. Facility operations managers, supervisors, and/or third party contracted trainers conduct regular (at least weekly) meetings to discuss safety issues, facility issues, and to inform employees of changes in operational or other facility plans. Training topics include:

Refresher:	
Emergency Response/Spill Plan Fire	
Fire Extinguisher Use	
Health and Safety	
Hazard Communication	
Operating Plan	
Regulation and Procedural Changes	
Emergency Response/Spill Plan	
Waste Screening	
Equipment Safety Review	

# 8. <u>RECORDKEEPING AND REPORTING</u>

# 8.1 Facility Operating Records

Greater Waste Solutions, LLC will maintain records at the facility at all times during active life documenting all aspects of operation, as required by Env-Sw 1105.06. At a minimum this information includes the following:

- Identification of the facility by name, location by street and municipality and permit number;
- Identification of the permittee by name, address and telephone number;
- Identification of all facility operators by name, address, certificate number, and date(s) of employment at the facility;
- Quantity, type, source and destination of all waste received by the facility;
- Quantity, type and destination of all waste generated by the facility, if any, including bypass waste and residual waste;
- Quantity, type and destination of all certified waste-derived products produced by the facility, if any;
- Record of inspections, maintenance, and repairs;
- Record of accidents, violations, remedial and emergency event response actions;
- Record of complaints received and related response actions;
- Data from all environmental monitoring performed at or for the facility, whether required by the solid waste rules or the permit or undertaken voluntarily;

- Documentation of contact with the waste management district(s) served by the facility as required by Env-Sw 1105.12;
- Other recordkeeping information and documentation required by Env-Sw 400; and
- Other information and documentation as required by the terms and conditions of the permit.

A copy of the most current version of the permit, including a complete copy of the Operating Plan of record and a complete copy of the last approved facility Closure Plan, will be maintained at the facility for use by the facility operators and for inspection by the New Hampshire Department of Environmental Services (NHDES).

# 8.2 **Reporting Requirements**

# 8.2.1 General Reporting

Greater Waste Solutions, LLC shall notify the NHDES in accordance with Env-Sw 1105.07(a) in writing within 30 calendar days of any change in the facility address, telephone number, key certified operators and contact person(s).

Greater Waste Solutions, LLC shall report all changes in operational and ownership control in accordance with the provisions for a type III or type IV permit modification, as applicable, pursuant to Env-Sw 315.

Greater Waste Solutions, LLC shall notify the NHDES in writing prior to conducting the following activities at the facility not specifically authorized in the permit:

- Any activity not regulated by the solid waste rules but involving a waste listed in Env-Sw 101.03, and
- Any activity that is permit-exempt in Env-Sw 302.03.

For activities commencing at the facility after permit issuance, written notice pursuant to the above shall include the following, compiled in the following order:

- Facility name, location by street and municipality, and permit number;
- A description of the subject activity;
- A site plan showing the location of the subject activity in relation to the permitted facility activities;
- The date the subject activity will commence and the anticipated duration of the activity;
- Identification and status of other local, state and federal permits and approvals required to implement the subject activity; and
- Certification, signed by the permittee, that the activity shall not adversely affect the permitted construction, operation and closure of the facility as required by Env-Sw 1102.02.

# 8.2.2 Annual Report

No later than March 31st each year, Greater Waste Solutions, LLC shall submit an annual report to the NHDES. This annual report shall summarize facility operations for the previous year and shall include the following, in accordance with Env-Sw 1105.07(b):

- Facility name, location by street and municipality, and permit number;
- Name, address and telephone number of the permittee;
- Name, address, certificate number and telephone number of all facility operators;
- Status of the facility, including whether active or inactive and the estimated remaining life and capacity of the facility;
- Quantity in tons, type and source of all waste received by the facility, with out-ofstate tonnage figures separately listed and totaled;
- Destination of all wastes received by the facility;
- Quantity, type and destination of all waste generated by the facility, including bypass and residual waste;
- The estimated quantity of waste stored at the facility, by type, as of the end of the calendar reporting year;
- A summary and assessment of environmental monitoring performed at the facility, whether required by the solid waste rules or the permit or undertaken voluntarily;
- Pursuant to the provisions of RSA 149-M: 11, X1, a discussion of how facility operations satisfied the public benefit requirements specified in the permit, if any;
- A certification that the facility is in compliance with:
  - The facility Operating Plan in accordance with Env-Sw 1105.04(b);
  - Applicable requirements of Env-Sw 905 Tires;
  - All terms and conditions of the facility permit;
  - The requirements of Env-Hw 1100 for the management of universal wastes;
  - The requirements of Env-Hw 807 for the management of used oil;
- If unable to certify compliance as detailed above, a schedule for achieving compliance;
- Other information, if any, identified as annual reporting information in:
  - Env-Sw 400;
  - Env-Sw 905 Tires; and
- The signature required by Env-Sw 303.04.

For compliance with the annual requirement in Env-Sw 1105.12 to communicate with the host solid waste management district, Greater Waste Solutions, LLC shall send a copy of the facility's Annual Report to the district chairperson with a cover letter identifying the purpose of the communication and soliciting a response from district officials to assure that:

- All operating requirements established for the facility pursuant to the provisions of RSA 149- M:11, XI pertaining to the requirements of RSA 149-M:11, III(c) and RSA 149-M:12, I(b) are being met by the facility; and
- 2) Facility operations meet other relevant planning needs and requirements identified or established by the district, to the extent allowed by the permit.

# 8.2.3 Emergency Reporting

Greater Waste Solutions, LLC shall report incidents involving injuries and other health and safety issues according to OSHA requirements. Greater Waste Solutions, LLC shall notify the NHDES verbally as soon as practicable, Monday through Friday at (603) 271-3899, or weekends at (603) 271-3636 (8 AM to 4 PM) in the event of all incidents or situations at the facility which involve an imminent and/or substantial risk to human health, safety or the environment or which constitute a violation of the solid waste rules or the facility permit.

Greater Waste Solutions, LLC shall submit a follow-up written report to the NHDES within five (5) working days of the time Greater Waste Solutions, LLC becomes aware of the incident or situation which shall include the following information:

- Facility name, location by street and municipality, and permit number;
- Permittee name, mailing address and telephone number;
- Identification of all persons involved in the incident or situation, including name, title and affiliation;
- A description of the incident or situation, including:
  - The date and time the incident or situation occurred;
  - The quantity and types of wastes and material(s) involved in the incident or situation and in the clean-up activities;
  - Measures employed to contain releases caused by the incident or situation;
  - An assessment of actual or potential hazards to the environment, safety and human health related to the incident; and
- Measures Greater Waste Solutions, LLC has or intends to apply to reduce, eliminate, and prevent a recurrence of the incident or situation.

Greater Waste Solutions, LLC shall report to the NHDES, in writing, complaints made by abutters or other third parties which involve operating conditions or practices having the potential to adversely affect human health, safety or the environment or which involve a recurring or persistent nuisance situation such as noise, litter, odor, dust or vectors. Reports shall contain the following information:

- Facility name, location by street and municipality, and permit number;
- Permittee name, mailing address and telephone number;
- Name, mailing address and, if available, telephone number of the complainant;
- Nature of the complaint, date(s) of receipt by Greater Waste Solutions, LLC, complete description of the circumstances or situation giving rise to the complaint; and
- A description of Greater Waste Solutions, LLC response actions; and
- Other information required on Incident Reporting (found in Contingency Plan) if part of an incident.

Oil Spills which exceed the requirements of Env-Or 604.06 require that verbal notification be made directly to the NHDES during normal working hours or to the NH State police at (800) 525-5555 outside of normal working hours.

# 8.2.4 Additional Reporting

As soon as noticed, Greater Waste Solutions, LLC shall report to the NHDES any intentional or accidental deviation from any approved plan.

Greater Waste Solutions, LLC shall provide written notification to the NHDES, within five (5) business days, anytime the weight restriction or storage time limits are exceeded, or vehicles are diverted due to the facility approaching the weight restriction.

Greater Waste Solutions, LLC shall maintain a current and correct "Emergency Contacts" and "Emergency Services" list at the facility. (Appendix E)

# Appendix A

#### **GLOSSARY of TERMS**

**Antifreeze** – Shall mean a material having an ethylene glycol or propylene glycol base that is used full strength or diluted with water only as protection against freezing, overheating, and corrosion of the cooling system or an internal combustion engine. (Env-Hw 103.07)

**Ash** – Shall mean bottom ash and fly ash (ash produced in small dark flecks, typically a furnace, and carried into the air. (Env-Sw 902). Ash shall also mean ash generated from the combustion of wood or fossil fuel; and ash from crematoriums.

**Battery** – Shall mean a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed. (Env-Hw 103.11) (40 CFR 260.10) Alkaline batteries manufactured after 1995 may be disposed of as solid waste. All other batteries are managed as universal waste.

**Bulky Waste** – Shall mean "large items that cannot be handled by normal solid waste processing, collection or disposal methods, such as appliances, furniture, large auto parts, tires, and, when they are not buried on-site in accordance with RSA 149-M:4, XXII, tree stumps". (Env-Sw 100)

**Cathode Ray Tubes (CRTs)** – Shall mean a glass tube used to provide the visual display in televisions, computer monitors, and certainscientific instruments, such as oscilloscopes. (Env-Hw 103)

**Commercial Waste** – Shall mean waste materials originating in wholesale, retail, institutional or service establishment, such as office building, stores, markets, theaters, hotels or warehouses.

**Commingled Recyclables** – Shall mean a mixture of several types of recyclables.

**Compost** – Shall mean "a stable, humus-like substance which is derived from a process involving the biological decomposition of any readily biodegradable material, such as animal manure, garbage, yard waste, septage, sludge, or other organic solid wastes, and which can be beneficially re-used for land application." (Env-Sw 102.39)

**Construction and Demolition Debris** – Shall mean "non-putrescible waste building materials and rubble which is solid waste resulting from the construction, remodeling, repair or demolition of structures or roads. The term includes, but is not limited to, bricks, concrete and other masonry materials, wood, wall coverings, plaster, dry wall, plumbing, fixtures, non-asbestos insulation or roofing shingles, asphaltic pavement, glass, plastics that are not sealed in a manner that conceals other wastes and electrical wiring and components, incidental to any of the above and containing no hazardous liquid or metals. The term does not include asbestos waste, garbage, corrugated container board, electrical fixtures containing hazardous liquids such as fluorescent light ballasts or transformers, furniture, appliances, tires, drums and containers, and fuel tanks." (Env-Sw 102.42)

**Curbside Collection** – Shall mean programs where waste or recyclable materials are collected at the curb, often from special containers, to be brought to various processing facilities.

**Drop-Off Site** – Shall mean a central site serving an area for the safe and convenient deposit of a specifically designated waste.

**Do-It-Yourselfer (DIY) Used Oil** – Used oil, (includes motor oil, transmission fluid, differential oil, brake fluid, power-steering fluid and transaxle fluid) that is not mixed with other substances such as gas, antifreeze or solvents and is generated and delivered to collection sites by residents who change the oil in their personal vehicles.

**Electronic Waste or E-waste** – includes, but is not limited to computer towers, central processing units, monitors printers and other computer related accessories, televisions, cell phones, office electronic equipment, DVD players and VCRs. Electronic waste accepted at facilities is subject to the disposal ban in RSA 149-M27, IV and must be managed so that it complies with Universal Waste Rules for Cathode Ray Tubes (CRTs).

**Ferrous** – Includes scrap metals consisting of iron, steel and cast iron in various forms including prepared steel, unprepared steel, mixed steel and cast-iron materials:

(a). Prepared Steel – Material of a certain size, thickness, and quality requirement to be described as commodity grade prepared scrap. This material requires no further processing.

(b). Un-prepared Steel – Material of miscellaneous size, thickness and quality requiring processing (shearing, cutting, baling, etc.) into prepared steel (above).

- (c). Mixed Steel Material of miscellaneous size, thickness and quality requiring sorting and processing to manufacture marketable ferrous material.
- (d). Cast Iron Materials including boilers, radiators, obsolete machinery, etc. that are not steel.

(e) Light Iron – Material consisting of light gauge steel, white goods, appliances, roofing material and other sheet steel items generated from households, industrial sources, transfer stations and solid waste facilities.

(f). Obsolete machinery and other equipment generally from manufacturing operations.

**Hazardous Waste** –Shall mean a solid, semi-solid, liquid or contained gaseous waste, or any combination of these wastes, which, because of either quantity, concentration, or physical, chemical, or infectious characteristics may cause or contribute to an increase in mortality or an increase in irreversible or incapacitating reversible illness, or, pose a present or potential threat to human health or the Environment when improperly treated, stored, disposed of, or otherwise mismanaged. Such wastes include, but are not limited to, those which are reactive, toxic, corrosive, ignitable, irritants, strong sensitizers or which generate pressure through decomposition, heat or other means. Such wastes do not include radioactive substances that are regulated by the Atomic Energy Act of 1954, as amended. (Env-Sw 103)

Household Hazardous Waste - Shall mean hazardous waste generated from non-commercial usage by individuals in their living abodes. (Env-Sw 103).

Incinerator - A facility with one or more furnaces in which wastes are burned.

**Infectious Waste** – Shall mean any waste which because of its infectious nature may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or pose a substantial present or potential hazard to humanhealth or the Environment when improperly treated, stored, transported, disposed of or otherwise managed. (Env-Sw 103)

**Lamp** – also referred to as "universal waste lamp", is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps. (Env-Hw 104.01) (40 CFR 260.10)

**Leachate** - Any liquid that has percolated through solid waste or another medium and has extracted, dissolved, or suspended materials from t, which may include potentially harmful materials.

**Mercury-Containing Devices** – Shall mean any product or component, excluding batteries and lamps, that contain elemental mercury necessary for its operation and is housed within an outer casing. The term includes but is not limited to thermostats, intact mercury-containing ampules, thermocouples, thermometers, manometers, barometers, sphygmomanometers, electric switches and relays, gas flow regulators, water meters, and electric meters that contain mercury switches or relays. (Env-Hw 104.11). These devices are managed as universal waste.

**Municipal Solid Waste** (**MSW**) – Shall mean "solid waste generated at residences, commercial or industrial establishments, and institutions, but excluding construction and demolition debris, automobile scrap and other motor vehicle waste, infectious waste, asbestos waste, contaminated soil and other absorbent media and ash other than ash from household stoves." (Env-Sw 103.46)

**Non-Ferrous** – Includes scrap metals consisting of: Aluminum, Brass, Copper, Lead, Lead Acid Batteries, Stainless Steel and High Temperature Alloys, Catalytic Convertors, and any other non-ferrous recyclable materials that have value, ex. Gold, Nickle, Silver, Platinum.

**Organic Waste** – Shall mean waste material containing organic or naturally occurring carbon. The organic fraction of municipal solid waste includes paper, wood, food wastes, and yard trim.

**Pesticides** – Shall mean any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that: (1). Is a new animal drug under FFDCA section 201(w), or (2). Is an animal drug that has been determined by regulation of the Secretary of Health and Human Services not to be a new animal drug or, (3). Is an animal feed under FFDCA section 201(x) that bears or contains any substances described by paragraph (1) or (2) of this definition. (40 CFR 260.10)

**Scrap Metal** – Bits and pieces of ferrous and non-ferrous metal parts, bars, rods, sheets, or wire or metal pieces that may be combined together with bolts or solder, for example, radiators, aluminum window frames, lawn furniture, pipes and fittings.

**Processed Mixed Municipal Solid Waste** - waste which has been collected and transported to a facility where it is subject to one or more processes included, but not limited to: separation, clarification, classification, densification, size reduction, incineration and biological.

**Processed Recyclable Material** – shall mean "a recyclable material which has been physically sorted and separated by material type, formed into bales or otherwise physically processed and packaged in a manner satisfying the specifications for transportation to and acceptance by a market that will use the material for the production of certified waste-derived products." (Env-Sw 104)

**Recycling Center** - A facility that is designed, operated and authorized to receive and process recyclables by utilizing manual or mechanical methods to separate, process and classify materials for recycling purposes.

**Recyclable Materials** – Shall mean materials that can be used to produce marketable goods, including but not limited to, separated clear and colored glass, aluminum, ferrous and nonferrous metals, plastics, corrugated cardboard, motor vehicle batteries, tires from motor vehicles, and paper. The term does not include; hazardous waste, hazardous air pollutants, and other waste not regulated as solid waste, as identified in Env-SW 101.03; waste identified as non-reusable in Env-SW 900, including asbestos and infectious waste; and wastes from an unspecified production or generation process, such as municipal solid waste incinerator ash and contaminated soils or absorbent media. (Env-Sw 104)

**Recycling** - The collection, storage, processing and redistribution of recyclable materials. The term excludes the redistribution of recyclable materials for any purpose constituting disposal, as defined in RSA 149-M:4, VI, incineration or another purpose not directly related to the production of certified waste-derived products. (Env-Sw 104).

**Residual Waste** – Shall mean solid waste remaining after processing, treatment or disposal of solid waste or as a byproduct of processing or treatment or disposal of solid waste, including leachate, decomposition gases and wastederived products not certified for distribution and use pursuant to Env-SW 1500. The term includes "residuals." (Env-Sw 104)

**Resource Recovery** - Reclaiming, through the processing of solid waste materials, substances, energy, or other products contained within or derived from the solid waste for sale or reuse.

**Reuse** - The use of a product more than once in its same form for the same purpose, i.e., a soft-drink bottle is reused when it is returned to the bottling company for refilling.

**Single Stream Recyclables (SSR)**– Refers to a system in which all paper fibers, plastics, metals, and other containers are mixed and collected instead of being sorted by the depositor into separate recyclable commodities.

**Solid Waste** – "As defined by RSA 149-M:4, XXII, namely "any matter consisting of putrescible material, refuse or residue from an air pollution control facility; and other discarded or abandoned material. It includes solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. For purposes of this chapter [RSA 149-M] it does not include hazardous wastes as defined in RSA 147-A:2; solid or dissolved materials in irrigation return flows; cut or uprooted tree stumps buried on-site with local approval if required, provided that such burial locations are not located within 75 feet of any drinking water supply; municipal and industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended; source, special nuclear or by-product materials as defined by the Atomic Energy Act of 1954, as amended; or septage or sludge as defined in RSA 485-A:2, IX-a and 23 Env-Sw 100 NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES XI- a," that is to say sludge which is not disposed at solid waste facilities permitted under RSA 149-M. The term "solid waste" also does not include yard waste, actively managed waste-derived products which are certified for distribution and use pursuant to Env-SW 1500, and bodies of deceased persons." (Env-Sw 104)

**Source Separation** - The segregation of specific materials at the point of generation for separate collection. Residences source separate recyclables as part of a curbside recycling program.

**Tires** – Shall mean automobile, pickup truck, motorcycle and bicycle tires removed from the wheel or rim; this also includes large truck and tractor tires which must be cut into quarters prior to delivery.

**Transfer Station** – "Means a solid waste collection, storage and transfer facility, which collects, stores and transfers solid waste, including non-recyclable waste." (Env-Sw 104)

**Tree Limbs and Brush** – means tree tops, limbs, saplings and tree cuttings, including attached leaves, that are 5" in diameter and 9' in length, or less.

**Type of Waste -** Shall mean " a category of waste, at least as specific as the following, which describes the belonging waste by its material composition or other distinguishing characteristics: (a) ash; (b) bulky waste; (c) construction and demolition debris; (d) hazardous waste; (e) household hazardous waste; (f) household infectious waste; (g) infectious waste; (h) municipal solid waste; (i) putrescible waste; (j) recyclable materials; (k) white goods; and (l) yard waste." (Env-Sw 104)

**Unlimited Service** – Shall mean the service type provided by a commercial facility, which, through the conditions of the permit, allows the facility to receive authorized waste from any source, including the spot market. (Env-Sw 104)

**Universal Waste** – Shall mean any of the following wastes that may be managed in accordance with Env-HW 1100 in lieu of Env-Hw 300 through Env-Hw 700: a) certain types of batteries; (b) pesticides; (c) mercury-containing devices; (d) fluorescent bulbs/lamps; (e) Cathode ray tubes and (f) Antifreeze. (Env-Sw 104).

**Untreated Wood** – Also referred to as "virgin wood", is defined by Env-A 101.211 as any timber, board or sawn dimensional lumber which has not been treated, coated or preserved. This term does not include construction and demolition debris or any manufactured building material, such as plywood or wafer board.

**Used Oil** – Includes motor oil, transmission fluid, differential oil, brake fluid, power-steering fluid and transaxle fluid and is classified as a Hazardous Waste. (NH DES BMP). ONLY Do-It-Yourselfer (DIY) used oil is accepted at this facility.

**Vector** - An organism, including insects, other arthropods or rodents, which are capable of transmitting pathogens from one organism to another.

**Waste Stream** - A term describing the process flow of waste materials from homes or businesses that must be recycled, burned or disposed of in landfills.

White Goods – Shall mean "a generic term for a variety of discarded household appliances, including clothes washers, clothes dryers, stoves, refrigerators, freezers, dishwashers and air conditioners." (Env-Sw 104)

**Yard Waste -** Means leaves, grass clippings, garden debris, and small or chipped branches. (Env-Sw 104.68) It includes yard maintenance and land clearing debris, such as leaves, grass clippings, garden debris, trees, stumps, logs, branches, brush, shrubs, downedtimber, rotten wood, root mat, duff, leaf litter, soil material, etc., that remains from yard work or the clearing of an area for land development, grading, residential or commercial/industrial construction, agricultural clearing, maintenance, clearing and utility easement maintenance.

# Appendix B

#### SCRAP ACCEPTANCE / GRADING GUIDELINES

The requirements for acceptance of recyclable metals detailed in this document provide for responsible Environmental management. Many of these guidelines are mandated by state and federal Environmental regulations and apply to us and our suppliers.

Prior to delivery/acceptance, ALL suppliers are required to acknowledge that: materials meet quality requirements, provide certification of refrigerants present / properly evacuated, as applicable, certify materials have been inspected and free of hazardous and prohibited materials; and provide for indemnity to receiver by reading and signing the Hazardous & Prohibited Substance Removal Compliance Agreement (included in Appendix F)

The following list is not inclusive as other items not listed may be inappropriate for scrap metal recycling. Read these guidelines carefully and contact your supervisor or buyer with any questions about specific items.

#### The following materials will not be accepted at our scrap metal facility:

- Any material containing hazardous or toxic substances;
- Any material, which, in the opinion of the GWS Operator constitutes a serious hazard to other users or to the property, employees or operation of the facility;
- Asbestos or asbestos containing materials, such as pipe insulation, acetylene tanks and surfacing material commonly found on I-beams, tanks, and other structural and demolition debris (40 CFR §61.150);
- Ash;
- Automobiles/boats/motorcycles (except associated/incidental scrap metal that never contained fluids or lubricants and is free of contained gaseous waste).
- Carcasses any;
- Circuit boards (unless sold as electronic scrap);
- Computers, televisions, computer monitors, CRTs, LCDs. (Computers may be accepted if previously approved for purchase as electronic scrap);
- Contained gaseous waste, including pressurized containers or cylinders, such as propane tanks, compressed gas tanks, aerosol cans, and extinguisher, EXCEPT when said tanks have been previously, properly cut up and have been certified as properly vented;
- Contaminated soils and other absorbent media;
- Construction or demolition debris;
- Explosives such as dynamite and ammunition, explosive residuals, and potentially explosive materials of any type, such as sealed tanks;
- Fluorescent lights, neon, high intensity mercury vapor lights, high pressure sodium, metal halide and associated ballasts;
- Hazardous or Toxic waste;
- Household trash, garbage, or other putrescible waste;
- Household hazardous wastes including gasoline, transformer and cutting oil, oil-based paints, liquid asphalt, pesticides, herbicides, solvents, or their products;
- Infectious waste;
- Lead-acid batteries that have broken, burned, cracked, leaked or missing caps, (or NiCad batteries or battery parts, including automobile batteries (40 CFR §273). (Undamaged Lead-acid batteries may be accepted if sold as a separate commodity for recycling);
- Liquid waste;
- Military scrap of any kind, unless ownership clearly established AND approved in advance by GWS facility operator;
- Mercury-containing switches and other devices
- Metal kegs for malt beverages, as defined in FSA 179:5-a, or pieces of such kegs, unless supplier is brewer whose name appears on the keg (RSA 322:12-a);
- Non-Recyclable materials, including: asphalt, dirt, concrete, glass, rubber, tires, wood, and yard waste.
- Oil, gasoline, other petroleum products and antifreeze. This includes hydraulic fluids, gear oils and grease, metal shavings coated or mixed with oils or lubricants, and motor vehicle parts that contain or have contained fluids or lubricants;
- Paint cans or other paint containers;
- PCBs items that contain or have contained PCBs, including small capacitors, fluorescent light ballasts and electrical transformers or transformer components and paint (TSCA 15 U.S.C. § 2601 <u>et seq.</u>, and its implementing regulations at 40 CRF §258 and §761). (Transformers and transformer components may be accepted if properly drained and documented as "certified clean".)
- Radioactive material of any type;
- Railroad associated scrap metal, (unless ownership clearly established AND approved in advance by GWS facility operator);
- Refrigerants, (including CFCs and HCFCs) in refrigerators and air conditioners that may be leaking fluids are
  prohibited from acceptance. Clean Air Act regulations (§608(b)(1) and (§603(c)) prohibit any release of refrigerants
  to the atmosphere and require persons handling refrigerants to follow specific procedures. Suppliers of previously
  refrigerant-evacuated goods are required to sign a statement certifying that all refrigerants have been properly
  removed (40 CFR §61.150). Un-damaged refrigerant containing refrigerators and air conditioners may be accepted
  in designated areas for proper management.
- Scrap metal from any minor under the age of 16 years, (without the written consent of his/her parent or guardian).
- Sludge and septic waste;
- Tanks, drums or other containers, including pressurized containers, unless properly cut up, and certified as empty and being properly vented;
- Tires.

### The following items will be accepted ONLY if prepared as described:

- Automobiles/boats/motorcycle ONLY the associated/incidental scrap metal that never contained fluids or lubricants and is free of contained gaseous waste;
- Appliances must have been drained of ALL fluids, including refrigerants to be sold and accepted in the metal processing area and supplier must certify that any materials containing refrigerants or non-exempt refrigerant substitutes as those terms are defined at 40 CFR 82.32(f) and 40 CFR 82.153 were removed and disposed of in accordance with all applicable laws prior to delivery. (Refer to "Refrigerant Recovery Statement" in the Hazardous & Prohibited Substance Removal Compliance Agreement included in Appendix F) Undamaged appliances that have not previously leaked and contain refrigerants, but no other fluids, may be accepted in designated areas, and a fee charged, for proper management, reclamation and disposal;
- Computers may be accepted if previously approved for purchase as electronic scrap);
- Containers, cylinders and other pressurized vessels, such as propane tanks, compressed gas tanks, aerosol cans (must be empty and crushed or punctured and plastic caps removed), and extinguishers, that have been previously, properly cut up and have been certified as properly vented;
- Lead-acid batteries may be accepted if sold as a separate commodity for recycling and are not broken, burned, cracked, leaking or missing caps;
- Military scrap IF ownership clearly established AND approved in advance by GWS facility operator;
- Metal kegs for malt beverages, as defined in FSA 179:5-a, or pieces of such kegs, IF supplier is brewer whose name appears on the keg (RSA 322:12-a);
- PCBs –transformer and transformer components may be accepted ONLY IF properly drained and documented as "certified clean";
- Railroad associated scrap metal, IF ownership clearly established AND approved in advance by GWS facility operator;

- Refrigerants, (including CFCs and HCFCs) see 'appliances', above;
- Scrap metal from any minor under the age of 16 years only WITH written consent of his/her parent or guardian;
- Tanks, drums or other containers, including pressurized containers, IF properly cut up, and certified as empty and being properly vented. Drums and other containers must be thoroughly cleaned and the entire top removed and open for inspection. Gas cylinders, including air bottles, propane tank and other gas tanks, must be cut in half. Storage tanks must be clean and purged of all fluids/gases, free of plastic, fiberglass and asbestos coatings/liners. Tanks that previously held hazardous chemicals must be certified clean and free of hazardous material by competent authority. Access panel must be removed or a 'basketball 'sized section removed prior to delivery so we may inspect the interior.

## METAL THEFT

GWS maintains records of all transaction and cooperates fully with local, state and federal law enforcement in the prosecution of metal theft. In support curtailing metal theft incidents, the following materials will only be accepted upon clearly established ownership:

- Beer kegs, soda cylinders and shopping carts;
- Full-sized, new materials, such as those used in construction and equipment tools used by contractors;
- Items used only by governments, utilities, railroads, or for very specific purposes. This includes guardrails, manhole covers, storm drain covers and grates, cables and certain wires used only in high voltage transmission lines, historic markers, cemetery plaques, and artwork;
- Materials that have been reported as stolen;
- Materials that may not be new, but are clearly suspect, such as bleachers or traffic signs.

# WHEN IN DOUBT, OBTAIN THE APPROVAL OF THE GWS FACILITY OPERATOR PRIOR TO ACCEPTING SUSPECT MATERIALS.

**SCRAP METAL (Ferrous) GRADING AIDE** – in addition to the preceding requirements, once inspected and determined to be generally acceptable, materials should be further examined, categorized, and segregated using these additional parameters:

### LIGHT IRON:

Light metal 1/8" and under in thickness.

Includes items such as lawn mowers, bicycles, swing sets, water heaters, tin sheds, metal shelving, steel desks, appliances, etc. Must be free from all capacitors, CFCs and HCRCs.

### #1 HMS, Prepared

Wrought iron and/or steel scrap, ¹/₄" and over in thickness. Individual pieces 1" thick or less MUST NOT exceed 60' x 18" in size. Individual pieces greater than 1" in thickness MUST NOT exceed 36" x 24" in size.

May not include auto/light truck scrap, galvanized material, sheet iron or thin-gauged material.

### #1 HMS, Unprepared

Includes materials that exceed the above measurements for #1 HMS, Prepared

### Plate & Structural, Prepared

Clean open-hearth steel plates, structural shapes, crop ends and shearing scrap, ¹/₄" and over in thickness. Individual pieces may not exceed 60" x 24" in size.

Individual pieces greater than 1" in thickness MUST NOT exceed 36" x 24" in size. May not include pipe or reinforcing bar (rebar).

### Plate & Structural, Un-prepared

Includes material that exceed the above measurements for Plate & Structural, Prepared.

Mixed Cast

May include all grades of cast iron except: burnt iron; sash weights; foreign material. Outbound sizing may not exceed 24" x 30" OR any one piece over 150 pounds in weight.

### Busheling, Prepared

Clean, un-coated, un-painted new production scrap, not exceeding 2'. x 3' (24" x 36") in size. Must be free of non-ferrous metals and non-metallics of any kind, including but not limited to: excessive dirt, loose turnings, oil, grease, excessive rust, tin plate, galvanized metal, stainless steel, chrome or porcelainized coatings (such as appliance coatings), etc.

Must be alloy free and lay reasonable flat in a truck/railcar.

### Busheling, Un-Prepared

Includes material that exceed the above measurements for Busheling, PreparedOutbound sizing may not exceed 5' x 10' in size (60" x 120")

# Appendix C

### **RANDOM LOAD INSPECTION FORM**



# **Greater Waste Solutions, LLC**

Yard: 426 Fitchburg Road Office: 124 Old Wilton Road Greenville, NH 03048

Yard:	Phone:	603-878-1170
Office:	Phone:	603.878.4108
	Fax:	603.878.2757

# Certificate of Acceptable Waste (check one)

The undersign, hereby certifies that, to the best of their knowledge and belief, the materials that are delivered for disposal at the Greater Waste Solutions, LLC Transfer Station/Recycling Center are acceptable solid wastes, as defined by the Greater Waste Solutions, LLC Operating Plan under paragraph 2.1 "Authorized Waste" or at the Greater Waste Solutions, LLC Scrap Metal Collection and Recycling Center are acceptable scrap metal as defined by Greater Waste Solutions, LLC Scrap Acceptance Guidelines and incorporated herein by reference.

Date:		Time	e of Ir	nspection:			
Origin of Waste (city/town):							_
Hauler/Customer Nat Hauler/Customer	me:				 		_
Signature:							_
Inspected by:						 _	
Load Type	Scrap Metal □	MSW		<i>C</i> & <i>D</i>	Mixed	Recycling	
<b>Type of Truck</b>	1	Packer		R/O	P/U	Resident	
Load Rejected		Yes		No			
If rejected, explain:							

# Appendix D

# THIRD PARTY WASTE DESTINATION PROVIDERS

Material		Facility Location
Electronics		East Coast Electronics/Shirley, MA
		Tech Recycling Solutions/Leominster, MA
Hazardous/Spills/Toxic Waste		US Ecology/Wrentham, MA
(Emergency Response)		Clean Harbors/Bow, NH
Lead Acid Batteries		Harding Metals/Northwood, NH
		Sims Metal Manag. /Providence, RI
Leachate		Wheelabrator Holdco/Fitchburg, MA
MSW		Covanta Energy/ Haverhill, MA
Recyclables, Pre-Sorted:	Paper:	Casella/Charlestown, MA
ANELLEVIT And ALTER STRATE STRATE	Mix Paper:	E.L. Recycling/Fitchburg, MA
	Cardboard:	E.L. Recycling/Westborough, MA
Recyclables, - Pre-Sorted:	Plastics:	E.L. Recycling/Fitchburg, MA
		Casella/Charlestown, MA
Refrigerants		Pinnacle Rock Solutions/Peterborough, NH
		Pinnacle Rock Solutions/ Milford, NH
Scrap Metal		Excel Recycling/ Freetown, MA
		Sims Metal Management/Providence, RI
White Goods		
		Excel Recycling/Freetown, MA
		Sims Metal Management/Providence, RI

# Appendix E

## EMERGENCY CONTACTS & EMERGENY SERVICES PROVIDERS

GREATER WASTE SOLUTIONS, LLC. 426 Fitchburg Road, GreEnville, NH 03048 yard 603-878-1170 office 603-878-4108

Company Emergency Contacts			
Facility Owner/Operations Manager Greater Waste Solutions, LLC	Julie Shaw	603-878-4108 x 10 603-547-7817 603-291-0418	Office Mobile Home
Property Owner GMB Leasing, LLC	Glen Shaw	603-554-5557 603-291-0418	Mobile Home
Emergency Spill Response US Ecology	EMERGENCY Non-Emergency	<b>800-839-3975</b> 800-590-5220	
Local Emergency Contacts			
Ambulance/Fire/Police	EMERGENCY	911	
Ambulance Souhegan Ambulance Services	Non-Emergency	603-878-4140	
Fire Department GreEnville, NH	Non-Emergency	603-878-1242	
Police Department GreEnville, NH	Non-Emergency	603-878-2324	
Hospital Monadnock Community Hospital	Non-Emergency	603-924-7191	
Poison Control Center	EMERGENCY	800-222-1222	
New Hampshire Emergency Contacts			
State Police Headquarters	EMERGENCY	800-525-5555 or 603-271-3636	
State Police Troup B (Hillsborough County)	Non-Emergency	603-666-3334	
NHDES – NH Department of Environmental Services	EMERGENCY	603-271-3899 603-271-3636	(DAY) (NIGHT)
NHDES – NH Department of Environmental Services Solid Waste Management Division	Non-Emergency	603-271-2925	
NH Homeland Security and Emergency Management	Non-Emergency	603-271-2232	
Federal Emergency Contacts			
OSHA Area Office	Non-Emergency	603-225-1629	
U.S. Environmental Protection Agency - EPA Region 1 – Boston	Non-Emergency	888-372-7341	
Federal Emergency Management Agency - FEMA	FEMA Boston FEMA Region 1	617-956-7506 202-646-2500	
Centers for Disease Control and Prevention	Atlanta, GA	404-639-3311	

# Appendix F



### GREATER WASTE SOLUTIONS, LLC Yard: 603-878-1170 Office: 603-878-4108

### HAZARDOUS & PROHIBITED SUBSTANCE <u>REMOVAL COMPLIANCE AGREEMENT</u>

	SELLER	RECEIVER
Company Name:		Greater Waste Solutions, LLC
Authorized Representative / Title		
Address: City, State, Zip Code:		Mailing: 124 Old Wilton Rd. Yard: 426 Fitchburg Rd. Greenville, NH 03048

As part of Greater Waste Solutions, LLC's (GWS) (Receiver) waste monitoring procedures and Environmental protection requirements, suppliers of appliances and other light iron products destined for shredding (collectively "light iron") are required to sign a Hazardous Materials Compliance Agreement, (HRCA) PRIOR TO BEING ACCEPTED at our scrap metal facility. The HRCA is the supplier's certification that hazardous materials are not present in scrap metal delivered to and accepted by the facility except, in the case of refrigerants, as specified below:

MATERIAL QUALITY REQUIREMENTS: In addition to the hazardous and other prohibited substances herein noted, GWS may reject any material, which in the opinion of the GWS Operator constitutes a serious hazard to other users, property, employees, or operation of the GWS facility. GWS Receiver shall not be deemed to have accepted any Materials purchased from Seller in accordance with this Agreement until such Materials have been approved by the Receiver at the GWS facility. GWS reserves the right to reject, at any time, any Material non-conforming with GWS quality requirements or requirements of this Agreement. Any Material rejected by Receiver shall be at Seller's sole cost and risk. Under no circumstances will title to any Material transfer to Receiver which is not as warranted, certified or conforming to this Agreement, or fully accepted by Receiver.

### REFRIGERANTS:

### (Delivered by Seller Free of Refrigerants and all other fluids)

(Seller must also fill out and Sign a Refrigerant Recovery Statement)

Seller hereby certifies that all appliances delivered to GWS, including without limitation: air conditioning units, are free of any and all "refrigerants" and any substitutes (including, but not limited to: chlorofluorocarbons (CFCs) and hydro chlorofluorocarbons (HCFCs) as defined in §608 of the Clean Air Act and 40 CFR Part 82), and that all such refrigerants or substitutes were removed and recovered in accordance with the requirements of 40 CFR 82.156(g) or (h) prior to delivery of the appliances. This includes the Seller certifying that all refrigerant that had not leaked previously have been recovered from the appliance or shipment of appliances by a certified technician for recycling or disposal; or, that if all refrigerant had previously leaked, that it was not intentionally vented.

### (Delivered with Refrigerants but free of all other fluids): (ONLY –un-damaged appliances containing "refrigerants" accepted)

Seller hereby certifies that all appliances, including without limitation: air conditioning units, delivered to GWS containing "refrigerants" and any substitutes, are free of all other fluids and are undamaged.

OTHER PROHIBITED MATERIALS: Seller hereby certifies that he/she has and/or will inspect all materials prior to delivery to GWS and shall not deliver any materials which: are considered hazardous or toxic wastes or substances under any applicable Law, including without limitation any of the following prohibited waste: Asbestos or asbestos containing materials, including: pipe insulation, acetylene tanks, and surfacing material commonly found on I-beams, tanks, and other structural and demolition debris. (40 CFR §61.150); Ash; Automobiles/boats/motorcycles (except associated/incidental scrap metal that never contained fluids or lubricants and is free of contained gaseous waste); Carcasses - any; Contained gaseous waste including pressurized containers or cylinders, such as propane tanks, compressed gas tanks, aerosol cans, and extinguishers, EXCEPT when said tanks have been previously properly cut up and have been certified as properly vented; Contaminated soils and other absorbent media; Construction or demolition debris; Explosives such as dynamite and ammunition, and potentially explosive materials of any type, such as sealed tanks; Hazardous or toxic waste; Household trash, and garbage, or other putrescible waste; Household Hazardous Wastes including gasoline, transformer and cutting oil, oilbased paints, liquid asphalt, pesticides, herbicides, solvents or their products; Infectious waste; Liquid waste; Mercury-containing switches and other devices, including but not limited to: PCB capacitors as defined in 40 CFR Part 761, DEHP and other encapsulated PCBs of DEHP, Military scrap of any kind, unless ownership clearly established AND approved in advance by GWS facility operator; Metal Kegs for Malt Beverages, as defined in FSA 179:5-a, or pieces of such kegs, unless supplier is brewer whose name appears on the keg (RSA 322:12-a); Oils, gasoline, other petroleum products and antifreeze. This includes hydraulic fluids, gear oils and grease, metal shavings coated or mixed with oils or lubricants, and motor vehicle parts that contain or have contained fluids or lubricants; Radioactive waste; Railroad associated scrap metal, unless ownership clearly established AND approved in advance by GWS facility operator; Scrap metal from any minor under the age of 16 years, without the written consent of his/her parents or guardian; Sludge and Septic Waste; Tanks, drums or other containers unless emptied and properly cleaned of residues prior to receipt; Tires. All warranties, certifications, indemnities, and other obligations made by Seller shall survive the expiration of this agreement.

Seller hereby certifies that all appliances to be delivered to GWS have been, and/or will be, inspected for small capacitors and that all PCB-containing small capacitors have been, and/or will be, removed before delivery to GWS.

**INDEMNITY:** Seller agrees to defend, indemnify, release, and hold harmless Receiver and its owners, affiliates, and employees (each an "Indemnitee"), from and against any claim, penalty, fine, fee, cost, expense (including attorneys' and expert fees), loss, obligation, damages, enforcement actions, or any other liability of any kind sustained by any Indemnitee arising directly or indirectly, in whole or in part, from any breach of this Agreement by Seller or any act or omission of Seller, its subcontractor(s), or any of their respective employees or agents. Seller is solely responsible for the condition and clean-up of its Material and any releases therefrom.

The undersigned individual signing on behalf of Seller represents and certifies that he/she is duly authorized by Seller to sign this agreement and certification on behalf of Seller. Any acknowledgement or confirmation issued by Seller regarding any Contract of this Agreement shall be deemed as issued solely for administrative purposes, but in no event shall any terms or conditions thereon govern.

AGREED: SELLER	
Authorized Signature:	
Print Name: / Title:	 
Print Name: / Title:	 

Print Name: / Title:

Signature:

AGREED: RECEIVER

Date

Telephone:

# Appendix G

## FACILITY EQUIPMENT

GREATER WASTE SOLUTIONS, LLC. 426 Fitchburg Road, Greenville, NH 03048 yard 603-878-1170 office 603-878-4108

	EXCAVATOR:	Hitachi Ex200LC-5:	Bucket
	<b>EXCAVATOR</b> : (with attachments)	<u>Volvo EC210Blc:</u>	Bucket 40" Electric Drop Magnet (w/ Ohio RD-1W Controller) Genesis GVP 07 Shear Jaws
	GRINDER	Sunex 5002A	8" Bench Grinder w/ Lamp
	LIFT TRUCK	Big Joe PDC30	3,000 lb. Power Driven Counter-Balanced Lift Truck
	MISCELLANEOUS		Chains & Rigging Straps, Hand & Power Tools, etc.
[+]	PALLET TRUCK	<u>Uline H-1193</u>	5,500 lb.
NANCI	SCALE	Triner TSM5-44	5,000 lb. Floor Scale (w/ Digital Indicator)
INTE	SCALE	Powell 10' x 70'	120,000 lb. Truck Scale (w/ Cardinal 225 Display)
MA	SHEARER, HAND	Constellation 1 1/2-8	Hydraulic Metals and Bars Shear

<b>SKID STEER LOADER</b> (with attachments)	Kubota SSV75	Bucket	LM2584
		Forks	PFL5548
		Grapple	
		Plow	SSP15 - 96"
		Sheer Jaws	LaBounty MSD7/r

## **STREET / PARKING LOT SWEEPER**

**PROCESSING / FACILITY** 

TORCH	Harris Model 85	Cutting Torch #	6290 to 5"
USED OIL FURNACE	Energylogic E-340H	Fuel Types:	ASTM D396 No. 2 oil fuel,
	Multi-Fuel Burning		Used Crankcase Oil,
	Appliance		Used Auto Transmission Oil

WIRE STRIPPER	Stripinator 918-28C Scrap Wire Stripping Machine
---------------	--------------------------------------------------

Various Sizes/Styles, Industry Standard
Various Sizes/Styles, Industry Standard
Various Sizes/Styles, Industry Standard
48" X 40" X 36"to Various styles: 2 – 5 walled, covered/open/on pallet;
(or other pallet-sized) Lined/Vented/Secondary Containment
Various Sizes/Styles, Industry Standard
Various Sizes/Styles, Industry Standard



Selected Dimensions		
Boom/Stick Option		
A. SHIPPING LENGTH OF UNIT	31.6 ft in	9620 mm
C. SHIPPING HEIGHT OF UNIT	10.1 ft in	3090 mm
I. MAX CUTTING HEIGHT	30.1 ft in	9170 mm
J. MAX LOADING HEIGHT	21 ft in	6390 mm
K. MAX REACH ALONG GROUND	29.8 ft in	9080 mm
L. MAX VERTICAL WALL DIGGING DEPTH	16.9 ft in	5140 mm
M. MAX DIGGING DEPTH	19.6 ft in	5980 mm
Dimensions		
B. WIDTH TO OUTSIDE OF TRACKS	10.5 ft in	3190 mm
D. LENGTH OF TRACK ON GROUND	12 ft in	3660 mm
E. GROUND CLEARANCE	1.5 ft in	450 mm
G. HEIGHT TO TOP OF CAB	9.4 ft in	2870 mm
H. TAIL SWING RADIUS	9 ft in	2750 mm
O. COUNTERWEIGHT CLEARANCE	3.4 ft in	1030 mm
Undercarriage		
F. TRACK GAUGE	7.8 ft in	2390 mm
N. SHOE SIZE	31.5 in	800 mm

Specification



MODEL	M*0DV11	THE REAL PROPERTY AND INCOME.
NET POWER	132 hp	98.4 kw
POWER MEASURED @	1950 rpm	
DISPLACEMENT	396 cu in	0.5 L
TORQUE MEASURED @	1600 rpm	4/1 31-4
MAX TORQUE	340 lb ft	401 NW
NUMBER OF CYLINDERS	6	
ASPIRATION	Turbocharged	
Operational		
OPERATING WEIGHT	44100 lb	20003.4 kg
FUEL CAPACITY	81.9 gal	310 L
COOLING SYSTEM FLUID CAPACITY	6.1 gal	23 L
HYDRAUILC SYSTEM FLUID CAPACITY	52.8 gal	200 L
ENGINE OIL CAPACITY	6.6 gal	25 L
SWING DRIVE FLUID CAPACITY	2.2 gal	8.2 L
ALTERNATOR SUPPLIED AMPERAGE	40 amps	
HYDRAULIC SYSTEM RELIEF VALVE PRESSURE	4980 psi	34335.9 kPa
HYDRAULIC PUMP FLOW CAPACITY	97.7 gal/min	370 L/min
Swing Machaniam		
Swing Mechanism	13.9 ram	Contraction of the second
SWING SPEED	and the second	Contraction of the second second second
Undercarriage		
NUMBER OF SHOES PER SIDE	49	800 mm
SHOE SIZE	31.5 m	000 11114
NUMBER OF CARRIER ROLLERS PER SIDE		
NUMBER OF TRACK ROLLERS PER SIDE	8	31 A b Da
GROUND PRESSURE	4.6 pst	55 km/h
MAX TRAVEL SPEED	3.4 mph	2300 mm
TRACK GAUGE	7.8 it in	2370 1010
Buckets		0.0.7
REFERENCE BUCKET CAPACITY	1 yd3	0.8 m3
MINIMUM BUCKET CAPACITY	0.67 yd3	0.51 m3
MAXIMUM BUCKET CAPACITY	1.6 yd3	1.2 m3
Boom/Stick Option (HEX) 1		
DOOM/STICK OPTION (HEX) I	Boom 18'8" (5680mm) / Stick 7'3" (2220m	m)
SUIDDING HEIGHT OF LINIT	10.1 ft in	3090 mm
SHIPPING LENGTH OF UNIT	31.6 ft in	9620 mm
MAX DIGGNIG DEPTH	19.6 ft in	5980 mm
MAX DIGOING DELTH	29.8 ft in	9080 mm
MAX CUTTING HEIGHT	30.1 ft in	9170 mm
MAX LOADING HEIGHT	21 ft in	6390 mm
MAX VERTICAL WALL DIGGING DEPTH	16.9 ft in	5140 mm
n with Orthon (HEV) 2		
Boom/Stick Option (HEA) 2	Boom 18'S" (5680mm) / Stick 9'7" (2910m	(m)
BOOM/STICK OPTION (HEX) 2	9.7 ft in	2970 mm
SHIPPING HEIGHT OF UNIT	31.2 ft in	9500 mm
SHIPPING LENGTH OF UNIT	21.9 ft in	6670 mm
MAX DIGGING DEPTH	32 ft in	9750 mm
MAX REACH ALONG GROUND	31 5 ft in	9600 mm
MAX CUTTING HEIGHT	22.2 ft in	6780 mm
MAX VERTICAL WALL DIGGING DEPTH	19.8 ft in	6050 mm

Boom/Stick Option (HEX) 3

AND DESCRIPTION OF A DE	JIHI	01/0
SHIPPING LENGTH OF OUT	26.8 ft in	8100 Hits
MAX DIGGING DEPTH	364 ft in	11100 mm
MAX REACH ALONG GROUND	22 5 6 in	10220 mm
MAX CUTTING HEIGHT	33.5 ft fil	7410 mm
VINTOADDNE HEIGHT	24.3 ft in	7540 mm
MAX VERTICAL WALL DIGGING DEPTH	24.7 ft in	7.540 mills
Dimensions	10.5 ft in	3190 mm
WIDTH TO OUTSIDE OF TRACKS	a d C in	2870 mm
HEIGHT TO TOP OF CAB	9.4 R m	450 mm
CDOLDID CLEARANCE	1.5 ft in	1020 mm
CHECKING CLEARANCE	3,4 ft in	1030 mm
COUNTERWEIGHT CLEARAINCE	9 ft in	2750 mm
TAIL SWING RADIUS	12 ft in	3660 mm
LENGTH OF TRACK ON GROUND	1.4.14.14	

VOLVO EC210-LC HYDRAU



elected Dimensions		
Boom/Stick Option		
	32.2 ft in	9810 mm
A. SHIPPING LENGTH OF UNIT	10.3 ft in	3150 mm
C. SHIPPING HEIGHT OF UNIT	29 ft in	8830 mm
I. MAX CUTTING HEIGHT	20 ft in	6110 mm
J. MAX LOADING HEIGHT	28.7 ft in	8740 mm
K. MAX REACH ALONG GROUND	139 ft in	4230 mm
L. MAX VERTICAL WALL DIGGING DEPTH	185 ft in	5630 mm
M. MAX DIGGING DEPTH	10.0 11 m	
Dimensions	0.00 %	2000 mm
B. WIDTH TO OUTSIDE OF TRACKS	9.8 ft in	2660 mm
D. LENGTH OF TRACK ON GROUND	12 ft in	3000 mm
E GROUND CLEARANCE	1.5 ft in	460 mm
G HEIGHT TO TOP OF CAB	9.5 ft in	2900 mm
H TAIL SWING RADIUS	9.4 ft in	2850 mm
O COUNTERWEIGHT CLEARANCE	3.4 ft in	1025 mm
Undersorrigge		
	7.8 ft in	2390 mm
T. TRACK GROOD	23.6 in	600 mm





Lagine		
MAKE	Cummins	
MODEL	В5.9-С	
GROSS POWER	160 hp	119.3 kw
NET POWER	143 hp	106.6 kw
POWER MEASURED @	1900 rpm	
DISPLACEMENT	360 cu in	5.9 L
TORQUE MEASURED @	1500 rpm	
MAX TORQUE	455.8 lb ft	618 Nm
ASPIRATION	Turbocharged	
NUMBER OF CYLINDERS	6	
Operational		
OPERATING WEIGHT	45194.8 lb	20500 kg
FUEL CAPACITY	92.5 gal	350 L
COOLING SYSTEM FLUID CAPACITY	7 gal	26.5 L
HYDRAUILC SYSTEM FLUID CAPACITY	75.3 gal	285 L
ENGINE OIL CAPACITY	6.3 gal	24 L
SWING DRIVE FLUID CAPACITY	1.6 gal	6 L
OPERATING VOLTAGE	24 V	
ALTERNATOR SUPPLIED AMPERAGE	50 amps	
HYDRAULIC SYSTEM RELIEF VALVE PRESSURE	4974.8 psi	34300 kPa
HYDRAULIC PUMP FLOW CAPACITY	105.7 gal/min	400 L/min
Swing Mechanism		
SWING SPEED	11.6 rpm	
Undercarriage		
NUMBER OF SHOES PER SIDE	49	
SHOE SIZE	23.6 in	600 mm
NUMBER OF CARRIER ROLLERS PER SIDE	2	
NUMBER OF TRACK ROLLERS PER SIDE	9	Contraction of the second strength
MAX TRAVEL SPEED	3.4 mph	5.5 km/h
TRACK GAUGE	7.8 ft in	2390 mm
Buckets		
REFERENCE BUCKET CAPACITY	0.65 yd3	0.5 m3
MINIMUM BUCKET CAPACITY	0.65 yd3	0.5 m3
MAXIMUM BUCKET CAPACITY	1.6 yd3	1.3 m3
Boom/Stick Ontion (HEX) 1		
BOOM/STICK OPTION (HEX) 1	Monobloc Boom 5700mm / Stie	:k 1800mm
SHIPPING HEIGHT OF UNIT	10.3 ft in	3150 mm
SHIPPING LENGTH OF UNIT	32.2 ft in	9810 mm
MAX DIGGING DEPTH	18.5 ft in	5630 mm
MAX REACH ALONG GROUND	28.7 ft in	8740 mm
MAX CUTTING HEIGHT	29 ft in	8830 mm
MAX LOADING HEIGHT	20 ft in	6110 mm
MAX VERTICAL WALL DIGGING DEPTH	13.9 ft in	4230 mm
Boom/Stick Option (HEX) 2		
BOOM/STICK OPTION (HEX) 2	Monobloc Boom 5700mm / Sti	ck 2300mm
SHIPPING HEIGHT OF UNIT	10.2 ft in	3120 mm
SHIPPING LENGTH OF UNIT	32 ft in	9750 mm
MAX DIGGING DEPTH	20.1 ft in	6130 mm
MAX REACH ALONG GROUND	30.3 ft in	9230 mm
MAX CUTTING HEIGHT	30.3 ft in	9230 mm

nonmance obtion (mend)	Marchice Room 5700mm / Stick 3900mm	States and States and
BOOM/STICK OPTION (HEX) 3	MIGRODIOC BOOM STOOMMAT SHOK STOOM	3590 mm
SHIPPING HEIGHT OF UNIT	11.0 R III	9670 mm
SHIPPING LENGTH OF UNIT	31.7 II III 25.4 A in	7730 mm
MAX DIGGING DEPTH	23.4 11 11	10610 mm
MAX REACH ALONG GROUND	34,8 II III 21 6 B in	9620 mm
MAX CUTTING HEIGHT	31.0 H III	6830 mm
MAX LOADING HEIGHT	22.4 H III 21 / ft in	6570 mm
MAX VERTICAL WALL DIGGING DEPTH	21.0 it in	
Boom/Stick Option (HEX) 4	2 . D	
BOOM/STICK OPTION (HEX) 4	2-piece Boom 55/omin / Suck rooomin	3040 mm
SHIPPING HEIGHT OF UNIT	10 ft in	9670 mm
SHIPPING LENGTH OF UNIT	51.7 ft m	5720 mm
MAX DIGGING DEPTH	17.1 ft in	8640 mm
MAX REACH ALONG GROUND	28.3 ft in	9900 mm
MAX CUTTING HEIGHT	32.5 ft in	7010 mm
MAX LOADING HEIGHT	23 ft in	3090 mm
MAX VERTICAL WALL DIG DEPTH	13.1 ft in	5770 1111
Boom/Stick Option (HEX) 5	1011 1 2200 mm	SALAN CONTRACT
BOOM/STICK OPTION (HEX) 5	2-piece Boom 5570mm / Stick 2500mm	3040 mm
SHIPPING HEIGHT OF UNIT	10 ft in	9610 mm
SHIPPING LENGTH OF UNIT	31.5 ft in	5720 mm
MAX DIGGING DEPTH	18.8 ft in	0130 mm
MAX REACH ALONG GROUND	30 ft in	10330 mm
MAX CUTTING HEIGHT	33.9 ft in	7400 mm
MAX LOADING HEIGHT	24.3 ft in	4770 mm
MAX VERTICAL WALL DIG DEPTH	15.6 ft in	4770
Boom/Stick Option (HEX) 6	104-1-2000mm	
BOOM/STICK OPTION (HEX) 6	2-piece Boom 55/0mm / SHCK 5900Him	3630 mm
SHIPPING HEIGHT OF UNIT	11.9 mm	9470 mm
SHIPPING LENGTH OF UNIT	31.1 ft m	7240 mm
MAX DIGGING DEPTH	23.8 ft in	10530 mm
MAX REACH ALONG GROUND	34.5 ft in	11180 mm
MAX CUTTING HEIGHT	36.7 ft in	8270 mm
MAX LOADING HEIGHT	27.1 ft in	6180 mm
MAX VERTICAL WALL DIG DEPTH	20.3 ft in	0100 1000
Dimensions		2990 mm
WIDTH TO OUTSIDE OF TRACKS	9.8 ft in	2900 mm
HEIGHT TO TOP OF CAB	9.5 ft in	460 mm
GROUND CLEARANCE	Lonm	1025 mm
COUNTERWEIGHT CLEARANCE	5.4 II III	2850 mm
TAIL SWING RADIUS	9.4 ft in	3660 mm
LENGTH OF TRACK ON GROUND	12 ft in	Job III
Automatical and an		

O" DENUT UNINUEN WITH LAMP

# 5002A **8" BENCH GRINDER** WITH LAMP

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LISTED 34JK

SPECIFICATIONS	5001A	5002A
Size of Grinding Wheel	6" x 3/4" x 1/2"	8" x 1" x 5/8"
Speed (at 60 HZ)	3400 RPM	3400 RPM
Power	1/2 HP	3/4 HP
Weight (G.W.)	28 LBS	33 LBS.

# AWARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

· lead from lead-based paints,

OOL

**GUARANTEED TO PERFORM** 

S

- · crystalline silica from bricks and cement and other masonry products, and
- · arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

5001A and 5002A: Parts Breakdown and Operating Manual

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ALWAYS WEAR EYE PROTECTION WHEN **OPERATING THIS TOOL (USERS AND BYSTANDERS**) ALWAYS WEAR HEARING PROTECTION

ALWAYS READ THIS MANUAL BEFORE

**OPERATING THIS TOOL** 

WHEN OPERATING THIS TOOL (USERS AND BYSTANDERS)

ALWAYS WEAR BREATHING APPARATUS WHEN OPERATING THIS TOOL (USERS AND BYSTANDERS)



1

AVOID PROLONGED EXPOSURE TO VIBRATION

RATED RPM OF ACCESSORY USED MUST EXCEED THE MAXIMUM TOOL RPM SHOWN

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the device owner to keep this manual intact and in a convenient location for all to see and read. If the manual or product labels are lost or not legible, contact Sunex for replacements. If the operator is not fluent in English, the product and safety instructions shall be read and discussed with the operator in the operator's native language by the purchaser/owner or his designee, making sure that the operator comprehends its contents.

### **ELECTRICAL WARNINGS**

- 1. This unit must always be used in accordance with all electrical and safety codes and ordinances including National Electric Code (NEC) and Occupational Safety and Health Act (OSHA).
- Read, study, understand and follow all instructions before using.
- Failure to follow all instructions listed below may result in electric 3. shock, fire, explosion and/or serious personal injury.
- Keep bystanders, children and visitors away while operating unit.
- Distractions can cause you to loose control and endanger others. Store unit or product out of reach of children and other untrained persons, which can become dangerous in the hands of untrained users.
- 6. Keep cord away from heat, oil, sharp edges or moving parts.
- 7. Do not remove any labels. Replace any damaged labels.
- Slipping, tripping and or falling while operating product can be 8. a major cause of serious injury or death. Be aware of cord left on walking or work surface.
- 9. Never remove, bypass or modify the grounding prong on any electrical plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.
- 10. Never use cord for carrying, pulling or unplugging the unit or product.
- 11. Never attempt to plug in or operate unit or product with defective
- or damaged wires, power cord or power cord plug. Have any defective or damaged parts replaced immediately by an authorized repair center.
- 12. Do not use in or around water, damp conditions, on wet surfaces, wet hands or while standing in water.

13. Do not use unit or product around any flammable material or fuel.

- 14. Keep unit or product away from hot objects. 15. Ground Fault Circuit Interrupter (GFCI) protection is to be provided on the circuit(s) or outlet(s) to be used for the wet location portable luminaries. Receptacles are available having built-in GFCI protection and are able to be used for this measure of safety.
- 16. If an extension cord is required:
  - · Use only "UL Listed" extension cords.
  - If you are using the tool outdoors, use an extension cord rated and marked "For Outdoor Use". Use only an extension cord type SEW, SEOW, SEOW, SOW, SOW, STW, STOW, STOOW, SJEW, SJEOW, SJEOOW, SJW, SJOW, SJOW, SJTW, SJTOW, or SJTOOW.
  - · The cord must be of the proper size and type to supply the correct current to the light without overheating. Otherwise the extension cord could melt and catch fire, or cause electrical damage to the light. This light requires the use of an extension cord of 0 to 12 amps capability (up to 50 feet) with wire size rated at 16 AWG. Longer extension cords require larger size wire (smaller AWG number). AWG = American Wire Gauge.
- 17. Stay alert, watch what you are doing and use common sense when operating a product. Do not use product while tired or under the influence of drugs, alcohol or medication. A moment of in

5001A and 5002A: Parts Breakdown and Operating Manual

- 18. Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving narts.
- 19. Avoid accidental starting. Be sure switch is in the locked or "off" position before plugging product into the units power source. Carrying product with your finger on the switch or plugging into power source with the switch "on" invites accidents.
- 20. Disconnect product from power source or place switch in the locked or "off" position before making any adjustments, changing accessories, or storing the product. Such preventative safety measures reduce the risk of starting the product accidently.
- 21. Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enable better control in unexpected situations.
- 22. If damaged, have the unit or product serviced before using. Many accidents are caused by poorly maintained products.
- 23. Do not use (or modify) this product for any other purpose than that for which it was designed without consulting the manufacturer's authorized representative.
- 24. Use only accessories that are recommended by the manufacturer. Accessories that may be suitable for one product may create a risk of injury when used on another product.
- 25. This product may contain one or more chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands thoroughly after handling.
- 26. Handling the brass parts of this product will expose you to lead, a chemical known to the State of California to cause birth defects and other reproductive harm. Wash hands after handling.
- 27. Failure to heed these warnings may result in serious or fatal personal injury and/or property damage.

## ADDITIONAL GRINDER WARNINGS



2

- Always use guards and eye shields (users and bystanders). Always wear safety glasses or other eye protection and hearing protection when operating this tool and keep the eye shields mounted in their proper position on the wheel guard.
- Always wear breathing apparatus when using this tool.
- Replace a cracked wheel immediately. Handle wheels carefully to avoid bumping or dropping. DO NOT use a grinding wheel that has been dropped. Before using, inspect each wheel for cracks or flaws and if these are evident, discard the wheel.
- Before mounting a new wheel, be sure that it is marked with an RPM that is the same as, or higher than, the no load speed of the orinder as marked on the nameplate.
- Never start a grinder with anyone, including the operator, standing 5. in line with the wheel. After installing a replacement wheel, stand to one side and allow it to revolve freely for about one minute.
- 6. Do not grind on the sides of grinding wheels unless they are the special wheels designed specifically for this purpose.
- Do not over tighten wheel nut. 7.
- 8. Use only flanges furnished with this grinder.
- Any damaged parts should be replaced with original parts and/or 9. by a qualified service technician.
- 10. Bolt Bench Grinder to a bench or pedestal to prevent movements.
- 11. Use accessories only in the proper and intended manner.
- 12. Spark Breakers should be installed perpendicular to the grinding wheel. If these are not installed properly, it is an OSHA violation. See picture on page 5.

rev. 3/13/17



- GROUND ALL TOOLS. If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate two-prong receptacle, the adapter wire must be attached to a known ground. Never remove the third prong.
- 2. KEEP GUARDS IN PLACE and in working order.
- REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
- AVOID DANGEROUS ENVIRONMENT. Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep your work area well illuminated.
- KEEP CHILDREN AWAY. All visitors should be kept a safe distance from work area.
- MAKE WORKSHOP CHILD PROOF with padlocks, master switches, or by removing starter keys.
- DON'T FORCE TOOL. Don't force tool or attachment to do a job for which it was not designed.
- USE RIGHT TOOL. It will do the job better and safer at the rate for which it was designed.

 WEAR PROPER APPAREL. No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip

## ASSEMBLY

#### **Tool Rests**

Attach the left and right tool rests with the four 5/8" bolts and large washers. Adjust the rests for a distance of 1/16-inch from the surface of the grinding wheel.

### Spark Breakers

Attach the spark breakers with the two 5/16" bolts and medium washers. Adjust the spark breaker for a distance of 1/16" from the surface of the grinding wheel. Spark Breakers should be installed perpendicular to the grinding wheel. If these are not installed properly, it is an OSHA violation. See picture on page 5.

#### Eveshields

Select one of the eyeshields. Put its clamp into one of the spark breaker brackets. Adjust eyeshield to be located in the middle of wheel to protect operator from sparks.

#### **Final Assembly**

Fasten the grinder to the workbench, stand or cabinet. Two holes are provided in the base of the bench grinder so that suitable length bolts can be inserted to attach the grinder securely and prevent it from moving during operation

### **BENCH MOUNTING**

Mounting the grinder on a bench is required in order to prevent movement of the grinder when pressure is applied against a wheel. First, slide rubber feet on both sides and in the middle of the grinder base. Then drill 2 holes for 1/4" wood screws or bolts in the bench. Use 1/4" wood screws or bolts, and tighten down only enough to partially compress rubber feet (about 1/16"). The rubber feet will not be effective in absorbing vibration if fully compressed. When using 1/4" bolts, a second nut is required to lock against the first nut and keep grinder from loosening during operation. Never operate the grinder without the rubber feet attached to its base.

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contain long hair.

- USE SAFETY GLASSES (USERS AND BYSTANDERS). Also always use hearing protection and face or dust mask.
- NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if cutting tool is accidently contacted.
- 13. DON'T OVERREACH. Keep proper footing and balance at all times.
- 14. MAINTAIN TOOLS IN TOP CONDITION. Follow instructions for
- lubricating and changing accessories. 15. DISCONNECT TOOLS before servicing; when changing accessories.
- USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. Use of improper accessories may be hazardous.
- 17. AVOID ACCIDENTAL STARTING. Make sure switch is off before plugging in cord.
- 18. Vibration, repetitive motions or uncomfortable positions over extended periods of time may be harmful to hands and arms. Discontinue use of tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.

NOTE: The warnings and cautions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

### **OPERATION**

A bench grinder is designed for hand grinding operations such as sharpening chisels or screwdrivers, grinding drills, removing excess metal from work, and smoothing metal surfaces. A medium grain abrasive grinding wheel is suitable for rough grinding where a considerable amount of metal has to be removed or where a smooth finish is not important. For sharpening tools or grinding to close limits of size, a fine grain wheel should be used as it removes metal slower and gives the work a smooth finish.

NOTE: Always use guards and eye shields. Always wear safety glasses when operating this grinder (user and bystanders).

1. Adjust the eyeshield

3

- 2. Check for a 1/16" clearance between the tool rests and the grinding wheels, and between the spark breakers and the grinding wheels. Adjust as needed. Always keep the tool rest adjusted so that it just clears the wheel and is at the same level or just below the center line of the wheel to prevent accidental jamming of work between the tool rest and the wheel.
- Turn the grinder on and let it come up to speed.

CAUTION: When starting the grinder, turn it on and stand to one side until the grinder has come up to speed. There is always the possibility that a piece from a damaged grinding wheel may be thrown off when coming to full speed.

- 4. When grinding, always keep the work moving across the face of the wheel. Grinding against the same spot on the wheel will cause grooves to be worn into the face of the wheel.
- 5. When it is necessary to reshape the grinding wheels, use the proper tools. After reshaping, adjust the tool rests and spark breakers as needed to maintain the 1/16" clearance from the wheel.

rev. 3/13/17



IS ITOM 15 to 100 rest, to gauge with is required unoughout the extension.

NOTE: 16 gauge wire is heavier than 18 gauge and will carry current for longer distances without a voltage drop.

Use only three wire extension cords which have three prong grounding type plugs and three hole receptacles which accept the tools plug. Replace or repair damaged or worn cord immediately.

### **CHANGING THE GRINDING WHEEL**

- 1. Unplug the bench grinder.
- Remove the outer wheel guard cover screws and the wheel guard cover. 2.
- Hold the opposite wheel firmly. Remove the nut and flange. 3.

Note: Turn the spindle nut on the right-hand side counter-clockwise to loosen. Turn the spindle nut on the left-hand side clockwise to loosen.

- 4. Remove the old wheel and replace it with the new one.
- 5. Assemble the flange and nut onto the spindle. Tighten the spindle nut just enough to hold the wheel firmly. If the nut is tightened too much, the wheel may be damaged.
- Attach the wheel guard cover. 6.
- 7. Turn the grinder on and let it come up to speed and idle for one minute.

### **TECHNICAL DATA**

- 1. All ball bearing construction for long-lasting reliability.
- 2. Adjustable, shatterproof eyeshields, spark breakers and tool rest.
- 3. Accessories of eyeshields, spark breakers, and tool rests are included.

tuy to itt ute proper groutionig e and yellow) conductor in the cord is the grounding wire. Never connect the green (or green and yellow) wire to a live terminal.

2. Permanently Connected Tools. The tool should be connected to a grounded metal enclosed wiring system or an equipment grounding conductor should be run with the circuit conductors and connected to the equipment grounding terminal or lead on the tool.



NEVER disassemble the tool or try to do any rewiring in the electric system. Any such repair should be performed only by a qualified service organization. Should you be determined to make a repair yourself, remember that the green colored wire is the "ground" wire. Never connect this green wire to a "live" terminal. If you replace the plug on the power cord, be sure to connect the green wire only to the ground (longest) prong on a 3 prong plug.

### LIMITED WARRANTY:

SUNEX INTERNATIONAL, INC. WARRANTS TO ITS CUSTOMERS THAT THE COMPANY'S SUNEX TOOLS® BRANDED PRODUCTS ARE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS.

Sunex International, Inc. will repair or replace its Sunex Tools® branded products which fail to give satisfactory service due to defective workmanship or materials, based upon the terms and conditions of the following described warranty plans attributed to that specific product. This product carries a ONE-YEAR warranty. During this warranty period, Sunex Tools® will repair or replace at our option any part or unit which proves to be defective in material or workmanship.

### Other important warranty information

This warranty does not cover damage to equipment or tools arising from alteration, abuse, misuse, damage and does not cover any repairs or replacement made by anyone other than Sunex Tools® or its authorized warranty service centers. The foregoing obligation is Sunex Tools® sole liability under this or any implied warranty and under no circumstances shall we be liable for any incidental or consequential damages.

Note: Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Return equipment or parts to Sunex Tools®, or an authorized warranty service center, transportation prepaid. Be certain to include your name and address, evidence of the purchase date, and description of the suspected defect.

If you have any questions about warranty service, please write to Sunex Tools®. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Repair kits and replacement parts are available for many of Sunex Tools® products regardless of whether or not the product is still covered by a warranty plan.

SHIPPING ADDRESS: Sunex Tools • 315 Hawkins Rd. • Travelers Rest, SC 29690 MAILING ADDRESS: Sunex Tools . P.O. Box 1233 . Travelers Rest, SC 29690

5001A and 5002A: Parts Breakdown and Operating Manual

rev. 3/13/17

Ideal for cable or hydraulic machines
Heavy Duty cast case construction
AWX standard/DAWX deep field aluminum coil designs
230 VDC Standard

TECHNI	CAL SPEC	IFICATION	IS	AVERAC	GE LIFTING (	CAPACITY IN I	POUNDS*	
Size (Dia.)	Cold Amps at 230 VDC	Required KW	Magnet Shipping Weight	Wire Size	Controller Size	#1 H, M,	#2 H. M.	Steel Turnings
34 AWX	18	4.2	1,150	#10	CDS	550	250-400	300
40 AWX	29	6.6	1,900	#8	RD-1W / MC-1A	900	400-600	325
45 DAWX	38	8.8	3,035	#8	RD-1W / MC-1A	1,800	570-1100	625
55 DAWX	53	12.2	3,950	#6	RD-1W / MC-1A	2,760	1650-1950	825
66 DAWX	82	18.8	6,460	#4	RD-1W / MC-1A	4,370	2600-3100	1.275
71 DAWX	99	22.7	8,290	#4	MC-1.5A	5,580	3450-4200	1,660
77 DAWX	119	27.3	10,365	#2	MC-1.5A	6,600	3900-4800	2,135
83 DAWX	149	34.2	15,340	#2	MC-2A	9,200	5350-6900	3,040
93 DAWX	173	39.8	18,800	#2	RD-3A	10,900	6400-8000	3.515

1.

* Material descriptions are based on specifications for Iron & Steel Scrap, published by the Institute of Scrap & Steel, Washington, D.C. Capacities are based on tests under optimum conditions. Performance will vary with specific conditions.



*Weight includes mounting bracket to attach to excavator. **Distance is measured from the attachment mounting pivot (boom or stick) forward. The stability of each lift class varies between OEM skid steer and mini excavator models. Please consult with your Genesis salesperson for recommended carrier models. Control packages are available for carriers less equipped. Patents: genesisattachments.com/products/patents

GENESIS

1000 Genesis Drive, Superior, WI 54880

888-SHEAR-IT (743-2748) - Tel: 715.395.5252 - genesisattachments.com

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GVP 07 11/18 Rev. E

CIVISION OF CONTERNATIO

(lbs.)

7,000

7,000

7,000

7,000





Model #	Capacity at 24" Load Center	Lift Height	Col Height	² Ext Height	Free Lift Height	Overall Width	Power Head Length	³ Turn Radius	CL LOAD WHEEL TO CL DRIVE WHEEL	Battery 24V	Charger 24V	Ship Weight
PDC 15 Series		<u>A</u>	B	<u> </u>		D	E	F	VVIS	Luna		
PDC 15 Serie.	4500	00	1	00	E-2 1	00	FEA	177	071	praising and services		0005
PDC-15-60	1500	00	74	08	5/	30	55.1	41.1	37.1	200 4 H	40.000	2895
PDC-15-106	15001	130	83	147	12	36	55.1	47.7	37.1	(599 lbc )	lbs.) (60 lbs)	3130
PDC-15-150	15001	150	05	171	12	30	55.1	47.7	27.1	(500 lbs.)		3270
PDC-30-154	15001	1.Jet	20	11.1	14	100 00	00.1	41.1	27.1	1		5210
PDG ZUM BEI	0000	00		00		00	EE A	477.77	074	procession and the second		2740
PDC-20A-60	2000	60	11	00	10	30	55.1	41.1	37.1			3740
PDC-20A-106	2000	100	/1	12	12	00	33.1	41.1	37.1	200 AH	40 Amp	3730
PDC-20A-130	2000	130	83	14/	12	30	00.1 55.1	47.7	37.1	(588 lbs.)	(60 lbs)	3/95
PDC-20A-154	2000	104	102	185	12	36	55.1	47.7	37.1	in section		3850
PDC 20 Sorie	2000	100	102	100	12	50	30.1	41.1	37.1	I		5050
PDC 20 Sene.	2000	60	5 77	80	57	36	61.4	53.8	133	r		3740
PDC-20-00	2000	106	71	12	12	36	61.4	53.8	43.3		40 Amp (60 lbs)	3750
PDC-20-130	2000	130	83	147	12	36	61.4	53.8	43.3	(588 lbs.)		3800
PDC-20-154	2000	154	95	171	12	36	61.4	53.8	43.3			3900
PDC-20-168	2000	168	102	185	12	36	61.4	53.8	43.3			3975
PDC 20 Series	s Tri-Mast	Contraction of the second	( all control of the barrier structure	Contraction Contra	The most statement	Contraction of Contraction	Constant Constant Section 2	HEIG AND GARAGE IN	and a second second second	land the second		1 Second Second Second Second
PDC-20-158	2000	158	71	178	51	36	61.5	53.8	43.3	200 AH	40 Amp	4025
PDC-20-194	20001	194	83	214	63	36	61.5	53.8	43.3	(588 lbs.)	(60 lbs)	4280
PDC 25 Series	S			Comparison of the local division of the loca	No. of Concession, Name		the second s					- Commission of Street and
PDC-25-60	2500	60	77	80	57	36	61.4	53.8	43.3	1		3870
PDC-25-106	2500	106	71	12	12	36	61.4	53.8	43.3	340 44	40 Amo	4315
PDC-25-130	2500	130	83	147	12	36	61.4	53.8	43.3	(721 lbc )	(60 lbc)	4420
PDC-25-154	2500	154	95	171	12	36	61.4	53.8	43.3	(121 105.)	(00 105)	4600
PDC-25-168	2500	168	102	185	12	36	61.4	53.8	43.3			4675
PDC 25 Series	s Tri-Mast			interesting the second second								
PDC-25-158	2500	158	71	178	51	36	61.5	53.8	43.3	340 AH	40 Amp	4760
PDC-25-194	25001	194	83	214	63	36	61.5	53.8	43.3	(721 lbs.)	(60 lbs)	4890
PDC 30 Series	S	A	S	And the second sec					from the second s	for stars second second second		
PDC-30-60	3000	60	77	80	57	36	67.4	59.8	49.3			7025
PDC-30-106	3000	106	71	12	12	36	67.4	59.8	49.3	340 44	40 Amo	4370
PDC-30-130	3000	130	83	147	12	36	67.4	59.8	49.3	(704 lbs )	(CO lbo)	4675
PDC-30-154	3000	154	95	171	12	36	67.4	59.8	49.3	(721 IDS.)	(80 105)	4703
PDC-30-168	3000	168	102	185	12	36	67.4	59.8	49.3			4780
PDC 30 Series	s Tri-Mast	Abatation Diversion of the	Same Astronom	Contract Contraction	Lawrence and the	and the second states	Concernance of the second	the state of the s		1 miles		
PDC-30-158	3000	158	71	178	51	36	67.5	59.8	49.3	340 AH	75 Amp	4780
PDC-30-194	30001	194	83	214	63	36	67.5	59.8	49.3	(721 lbs.)	(90 lbs)	4910
1 Cor dorsto consul	t Factory	2 Add 31" for 48"	tall load backs	pet	3 Length to fai	ce of forks						

Certification All units are built to be in compliance with the Occupational Safety & Health Act (OSHA)

Big Lift LLC / EP Group will not assume liability for injuries or damage arising from, or caused by, the removal of any safety devices from their vehicles by user. Because of the Big Lift LLC / EP Group continuing product improvements, specifications are subject to change without notice.

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BIGLOE Big Lift LLC / EP Group www.bigjoeforklifts.com 630-916-2600



Model Number		Load Size								
	Length	36"	x 36"	42"	x 42"	48" x 48"				
		В	A	В	A	В	A			
PDC-15	55"	55" 42"	92"	48"	98"	54"	104"			
PDC-20A										
PDC-20	67	42"	98"	48"	104"	54"	110*			
PDC-25		1.					1.15			
PDC-30	67"	42"	104"	48"	110"	54"	116			
PDC-40	73"	. 42"	110"	48"	116"	54"	122			

Add 12" for ease of use







Model #	Capacity at 24" Load	Lift Height	Col Height	² Ext Height	Free Lift Height	Overall Width	Power Head Length	Turn Radius	CL LOAD WHEEL TO CL DRIVE WHEEL	Battery 24V	Charger 24V	Ship Weight
	Genter	A	B	C	North Contraction	D	E	F	WB			
PDC 40 Serie	S											
PDC-40-60	4000	60	77.5	80	57	36	73.3	65.7	55.3			5238
PDC-40-106	4000	106	71.5	12	12	36	73.3	65.7	55.3	510 AH	75 Amp (90 lbs)	5688
PDC-40-130	4000	130	83.5	147	12	36	73.3	65.7	55.3	(1042 lbc )		5808
PDC-40-154	4000	154	95.5	171	12	36	73.3	65.7	55.3	(1042 105.)		5928
PDC-40-168	4000	168	102.5	185	12	36	73.3	65.7	55.3			6048
PDC 40 Serie	s Tri-Mast											
PDC-40-158	4000	158	71.5	178	51	36	73.5	65.7	55.3	510 AH	75 Amp	5980
PDC-40-1941	4000	194	83.5	214	63	36	73.5	65.7	55.3	(1042 lbs.)	(90 lbs)	6100
1 For derate consu	lt factory	2 Add 31* fo	r load backrest									

Certification All units are built to be in compliance with the Occupational Safety & Health Act (OSHA)

Big Lift LLC / EP Group will not assume liability for injuries or damage anting from, or caused by, the removal of any safety devices from their vehicles by user. Because of the Big Lift LLC / EP Group continuing product improvements, specifications are subject to change without notice.

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# TECHNICAL DATA

# STANDARD

MODEL	H-1043	H-1193	H-4803	H-1484	H-1366	H-4122	H-4804	U 1770	11 2640	11 4300
Capacity	5,500 lbs.	5,500 lbs.	5.500 lbs	5 500 lbs	5 500 lbc	1 100 11-2	F 500 #	п-1//У	H-2040	H-4123
Max Fork Height	7 54	7.54	7.000 1.00.	0,000 100.	0.000 lbs.	4,400 IDS.	5,500 lbs.	3,300 lbs.	3,300 lbs.	5,500 lbs.
man i one noight	7.0	7.5"	7.5"	7.5*	7.5"	7.5"	7.5"	7.5 ⁿ	7.5"	7.5°
Min. Fork Height	3.0"	3.0*	3.0"	3.0"	3.0"	3.0"	3.0"	3.0"	3.0 ⁿ	3.0"
Fork Length	48"	48"	42"	36"	36"	36"	60"	70"	701	0.0
Overall Fork Width	27"	21"	27*	27ª	21*	16"	07#	078	018	90
Fork Wheel Diam. (Polyurethane)	3"	3"	3"	3"	3"	2.75"	3"	3"	3"	3"
Steering Wheel Diam. (Polyurethane)	7"	7*	7 ^u	7ª	7"	6.25"	7ª	7"	7°	7"
Net Weight	153 lbs.	137 lbs.	149 lbs.	136 lbs.	130 lbs.	127 lbs.	210 lbs.	205 lbs.	200 lbs	276 lbs

# LOW PROFILE

MODEL	H-1365	H-1780	H-1781
Capacity	3,300 lbs.	3,300 lbs.	3,300 lbs.
Max. Fork Height	5.6°	5.6"	5.6"
Min. Fork Height	2.0"	2.0"	2.0°
Fork Length	48"	48 [*]	48"
Overall Fork Width	27"	21"	33"
Fork Wheel Diam. (Steel)	2*	2"	2*
Steering Wheel Diam. (Polyurethane)	6"	6"	6 ^u
Net Weight	182 lbs.	173 lbs.	212 lbs.

PAGE 1 OF 9

1118 IH-1043

## by Triner Scale

### SPECIFICATIONS General

- · Quick, easy setup
- High accuracy
- · Heavy duty steel construction
- Diamond steel deck plate
- Durable powder coated finish
- Height adjustable precision ball & cup leveling feet
- Top access to leveling feet for easy adjustment
- Top access junction box

### Technical

- Four premium alloy steel nickel Plated loadcells
- NTEP approved *
- Loadcells are watertight for wet
   environments
- Loadcell capacity is 2 times the scale capacity
- Built in overload protection
- Nema 4x watertight junction box
- · Shipping weight:
- 4' x 4' = 315 lb
- 5' X 5' = 450 lb
- 4' X 6' = 435 lb
- 4' X 8' = 800 lb
- 5' X 7' = 905 lb

### **Dimensions & Capacities**

Deck Size	Capacity	Model #
4' x 4' x 4.5"	5,000 lb	TSM5-44
4' x 4' x 4.5"	10,000 lb	TSM10-44
5' x 5' x 4.5"	5,000 lb	TSM5-55
5' x 5' x 4.5"	10,000 lb	TSM10-55
4' x 6' x 4.5"	5,000 lb	TSM5-46
4' x 6' x 4.5"	10,000 lb	TSM10-46
4' x 8' x 4.5"	5,000 lb	TSM5-48
4' x 8' x 4.5"	10,000 lb	TSM10-48
5' x 7' x 4.5"	5,000 lb	TSM5-57
5' x 7' x 4.5"	10,000 lb	TSM10-57

### Includes

- · Pre-wired Junction Box
- · 20 ft. Homerun Cable
- Setup Instructions

Triner Scale and Manufacturing Company, Inc. Toll Free: (800) 238-0152 Tel: (662) 890-2385 Fax: (662) 890-2386 www.trinerscale.com

## CONFIGURATIONS

Deck alone

· Deck with anchor plates and front ramp

· Deck with anchor plates, ramps and indicator stand

### OPTIONS

- Ramps
- Anchor plates
- Surround guards
   Floor mount indicator stand



NOTICE: DIGITAL INDICATOR SHIPS SEPARATELY FROM WEIGHING PLATFORM

www.trinerscale.com

Version 3.0_01/15/17





MODEL 11 - 18 SHEAR



	MODEL	BLADE I.C.	SHEARING FORCE	MOTOR SIZE	FLOOR SPACE	DOMETIC SHIPPING WEIGHT	/
	1 - 8	8#	50,000	3 HP	24 × 40	750 lbs.	
	$1\frac{1}{2} - 8$	8"	110,000	脑脚 10 HP	36 x 58	1,800 lbs.	
	$1\frac{1}{2} - 18^{\circ}$	18 ⁿ	110,000	政田的 10 HP	36 x 68	2,000 lbs.	
	2 ¹ / ₂ - 12	12"	200,000	15 HE 20 HP	52 x 80	5,200 lbs.	
114	$2\frac{1}{2} - 24$	24"	200,000	MS RP 20 HP	52 × 92	6,500 lbs.	
	$3\frac{1}{2} - 20$	20"	630,000	Std. 20 HP HS 30 HP	72 x 104	10,400 lbs.	
CALLS IN	$3\frac{1}{2} = 36$	36"	525,000	Std. 20 HP	72 x 120	11,200 lbs.	



MODEL 31 - 20 SHEAR


Model				T	
Type of opera	tor station			SSV65	SSV75
	Model	the second s		Open CAB / Closed CAB	Open CAB / Closed CA
	Emission certification		V2607-CR-TE4	V3307-CB-TE4	
	Gross HP (SAF 11995)		Tier 4	Tier 4	
	Net HP (SAF, 11349)	and the second second	HP (kW)/rpm	64.0 (47.7)/2700	74.3 (55.4)/2600
Engine	Displacement		HP (kW)/rpm	61.3 (45.7)/2700	71.6 (53.4)/2600
	Cylinders		cu.in. (cc)	159.7 (2615)	203.3 (3331)
	Bore Stroke			4	4
	Aspiration		3.5 (87) × 4.4 (110)	3.8 (94) × 4.8 (120)	
	Rated operating capacity	50% finales las 1	Turbocharged	Turbocharged	
	Tipping load	-beal ghidin % acc	1950 (885)	2690 (1220)	
oader	Breakout force	1	lbs. (kg)	3900 (1770)	5380 (2440)
erformance	Dieakourioice	Bucket	lbf. (kgf)	4839 (2195)	5884 (2660)
		Lift arm	lbf. (kgf)	3858 (1750)	4850 (2009)
	Citrade data		Vertical	Vortical	
	Standard tire size	1	10-16.5-8PR	12-16 5 1000	
	Troublessed			80	100
ower train	Travel speed	Low	mph(km/h)	6.9 (11,1)	7.4 (11.0)
	Traction from	High mph(km/h)			11.8 (10.0)
	Ground elegande		7339 (3329)	8494 (3853)	
	Londor budroutto th		in. (mm)	7.6 (193)	8 1 (207)
	Loader hydraulic flow	and a second second	gpm (ℓ/min.)	18.0 (68.0)	20.9 (207)
/draulic	Loader hydraulic pressure		psi (kgf/cm²)	3271 (230)	3271 (230)
system	Aux, hydraulic flow	Standard	gpm (e/min.)	18.0 (68.0)	20.0 (70.0)
		High	gpm ( &/min.)	28.0 (106.0)	20.5 (75.0)
rvice refill	Hydraulic tank		gal. (¿)	4.2 (16.0)	30.4 (115.0)
Daoilles	Fuel tank		gal. (ℓ)	25.4 (96.0)	4.2 (16.0)
lerating weigh	it (Include operator weight 1)	65 lbs.)	lbs. (kg)	6790 (3080) / 7055 (3200)	25.9 (102.0)

# DIMENSIONS SSV65 / SSV75



Unit: in. (mm)

## MAIN DIMENSIONS



#### 1BCAAAAAP380A

Mod	el		SSV65	SSV75
А	Length of tire on ground	mm (in.)	1125 (44.3)	1200 (47.2)
В	Length w/o bucket	mm (in.)	2700 (106.3)	2920 (115.0)
С	Length w/bucket on ground	mm (in.)	3439 (135.4)	3660 (144.1)
D	Height to top of cab	mm (in.)	2029 (79.9)	2065 (81.3)
Е	Bucket hinge pin height at max. lift	mm (in.)	3085 (121.5)	3258 (128.3)
F	Rollback angle at carry position	degree	27	27
G	Reach at max. lift and dump	mm (in.)	831 (32.7)	936 (36.9)
Н	Ground clearance	mm (in.)	193 (7.6)	207 (8.1)
1	Departure angle	degree	23.9	24.6
J	Max. dump angle	degree	41	43
Κ	Vehicle width	mm (in.)	1689 (66.5)	1823 (71.8)
L	Width with bucket	mm (in.)	1753 (69.0)	1905 (75.0)
M	Turning radius from center-machine front w/bucket	mm (in.)	2345 (92.3)	2503 (98.5)
N	Turning radius from center-machine rear	mm (in.)	1364 (53.7)	1435 (56.5)

NOTE :
Above dimensions are based on the machine with KUBOTA standard bucket.
Above dimensions are based on the machine with KUBOTA standard tire.
Specifications subject to change without notice.

			S P	ECIFICA	TIONS							
MODEL	(1) EXCAVAT APPROX 2n	(1) EXCAVATOR WEIGHT APPROX 2nd Member		(1) EXCAVATOR WEIGHT APPROX 3rd Member		(2) ATTACHMENT WEIGHT APPROX		EAR NING	SHEAR (3) DEPTH REAC		сн	
·	(lbs)	(m tons)	(lbs)	(m tons)	(lbs)	(kg)	(in)	(mm)	(in)	(mm)	(ft-in)	(m)
MSD 7	6,000	3	12,000	5	950	431	10	254	11	279	4' - 7"	1.4
MSD 7R	7,500	3	15,000	7	1,100	499	10	254	11	279	5'-0"	1.5

(1) Excavator weight recommendation is based on standard excevator weights and boom and/or arm lengths. All applications must be approved by Stanley LaBounty prior to sale

(2) Attachment weight can vary depending upon mounting bracket, appropriate cylinder required to maximize base machine operating pressures, and any options installed on the sheer.

(3) Typical reach of bottom and back bracket is listed. Reach can vary depending upon the bracket needed for the base machine. Total reach may be substantially increased by mounting the attachment to the stick and bucket linkage of a large base machine. Stanley LaBounty sales staff are available to assist in reach/base machine sizing.

**MSD7R Mobile Shear Components** 

NOTE: Weights, dimensions and operating specifications listed on this sheet are subject to change without notice. Where specifications are critical to your application, please consult Stanley LaBourty.

(with skid-steer bracket shown)

LaBounty MSD7 and MSD7R (R indicates rotating model) Mobile Shears are ideal for ferrous and non-ferrous scrap applications. The MSD7/MSD7R will easily H- and I-beams, plate, rebar, pipe, round stock, wire and concrete. The primary applications for the MSD7 and MSD7R include both ferrous, and non-ferrous scrap yards and demolition applications where maneuvering into tight areas is required.

MSD Mobile Shears Feature four-way indexible blades, replaceable wear parts for easy maintenance, and a patented design offering maximum cutting strength and reach with minimal weight. MSD Rotating Mobile Shears feature 360° continuous rotation and a severe-duty turntable bearing.

Built to Last, LaBounty Mobile Shears are manufactured in the U.S.A. using abrasion-resistant, high-strength alloy steel for minium weight and maximum durability and reach.

# MOVABLE UPPER JAW FOUR-WAY INDEXABLE (4) CUTTING BLADES SEVERE-DUTY TURNTABLE BEARING HEAVY-DUTY **PIVOT GROUP** STATIONARY LOWER JAW

SAFETY FIRST! Please read, observe and follow the safety precautions found in the LaBounty Safety, Operation & Maintenance Manual shipped with your attachment.





L1025 V-1 6/01

- · Bolt-in Replaceable Guide Blade
- · Weld-in Replaceable Piercing Tip
- At-Factory Upgrade and Rebuilding Services
- · Selector Valve which supplies oil to the rotator
- Mini-Excavator/Skid-Steer Adapter Bracket

## MSD7 / MSD7R Appetite (Mild Steel and Concrete)

The appetite data in the chart below are typical. Please contact Stanley LaBounty for any other appetite or application questions.

I-BEAM	PLATE	SOLID ROUND	PIPE	CONCRETE
7 in. (178 mm)	1/4 in. (6.4 mm)	1.25 in. (32 mm)	5 in. (127 mm)	8 in. (203 mm)

#### MSD Shear Operation (Rotating Model Shown)

Mobile Shear controls will vary with the type of base machine on which the shear is mounted and depending on whether it is mounted as a second or third member.

#### SECOND MEMBER SKID-STEER MOUNT



replace only those parts which prove to nave been defective at the time of purchase.

Ask your Stanley LaBounty dealer to explain this warranty in detail.

Stanley LaBounty offers several cylinder sizes to optimize the performance of the MSD7R Mobile Shear. Recommended pressure and flow ranges are as follows:

FUNCTION	PRESSURE	FLOW
OPEN AND CLOSE	3601 - 4350 psi (248 - 300 bar)	13 - 22 gpm (49 - 83 lpm)
	3001 - 3600 psi (207 - 248 bar)	14 - 24 gpm (53 - 91 lpm)
	2000 - 3000 psi (138 - 207 bar)	17 - 29 gpm (64 - 110 lpm)
ROTATION	1350 - 2000 psi (92 - 138 bar)	4 - 6 gpm (15 - 22 lpm)

For skid-steer mounting, typically the rear auxilliary hydraulic circuit is used to operate the open and close function of the jaws. An optional selector valve can be ordered from Stanley LaBounty to supply oil to the shear's rotator. For mini-excavator mounting or rubber-tire backhoe loaders, please consult Stanley LaBounty for proper hydraulic recommendations.

Stanley LaBounty 1538 Highway 2 Two Harbors, MN 55616 USA Tel: (218) 834-2123 Fax: (218) 834-3879



#### THE HARRIS PRODUCTS GROUP

#### Model 85

Description: Classic Torch Handle

The Model 85 is designed for welding, heating and cutting with oxy-acetylene but can be adapted to alternate fuels with the proper accessories.



Model 85

#### DETAILS

#### Features:

- · Silver brazed twin tube construction for safety and durability
- Equipped with Flash Guard[®] check valves
- · Capacity: cuts 5", welds to 1/2"
- · Length: 8 1/2", Weight: 1 lb.

Part	Model	Tip Seat Style	Torch Type	Length	Weight	Cutting Tip	Brazing Tip	Series	Accessories
1401340	85	Harris	Handle	8 1/2"	1 lbs	6290	23-A-90, 1390	85	D-85, 72-3, 39-3, 8593, 6290, 23-A-90, 1390, 1390-HA, J-63-1 & 2

#### TECHNICAL

Part Number	Fuel Gas	Certifications	Mixor	Cutting Attachment	Inlet
1401340	Oxy-acetylene/Hydrogen Oxy-natural Gas/Methane Oxy-propane/Butane Oxy-propylene	UL	D-85	72-3, 39-3F	"B" 9/16" - 18 RL



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https://www.harrisproductsgroup.

	Multi-Fue	Burning Appliance	
Model Number	Model EL-140H	Model EL-200H	Model EL-340H
Bonnet Capacity Output BTU	112,000 BTU	160,000 BTU	275,000 BTU
Fuel Input	1.0 GPH	1.4 GPH	2.25 GPH
Nozzle Only	No. 30609-5	No. 30609-5	No. 30609-11 or 30609-28
Fuels	ASTM D396 No. 2 oil fuel, Used Crankcase Oil, and Used Automatic Transmission fluid	ASTM D396 No. 2 oil fuel, Used Crankcase Oil, and Used Automatic Transmission fluid	ASTM D396 No. 2 oil fuel, Used Crankcase Oil, and Used Automatic Transmission fluid
Designed Outlet Air Temperature	250°F Maximum	250°F Maximum	250°F Maximum
Flue Draft	-0.05" WC	-0.05" WC	-0.05" WC
Atomizing Air Pressure	9-11 PSI	9-11 PSI	9-11 PSI
Blower Size	9" X 9"	10" X 10"	10" X 10"
Unit Heater or Ductable	0.28" WC Maximum External Static Pressure	0.28" WC Maximum External Static Pressure	0.28" WC Maximum External Static Pressure
Maximum Fuse Size	25A	25A	25A
Blower Motor	1/3 HP, 115V/60Hz, 6.1A	1/2 HP, 115V/60Hz, 8.1A	3/4 HP, 115V/60Hz, 10.8A
Burner Motor	1/5 HP, 115V/60Hz, 3.3A	1/5 HP, 115V/60Hz, 3.3A	1/4 HP, 115V/60Hz, 4.3A
Metering Pump Motor	15Watt, 115V/60Hz, 0.35A	15Watt, 115V/60Hz, 0.35A	15Watt, 115V/60Hz, 0.35A
Ignition Transformer & Control Circuit	115V/60Hz, 2.0A	115V/60Hz, 2.0A	115V/60Hz, 2.0A
Oil Preheaters	115V/60Hz, 2.0A Maximum	115V/60Hz, 2.5A Maximum	115V/60Hz, 3.0A Maximum
Minimum Clearnance to Combustible Surfaces	Top - 6" Front - 24" Sides - 6" Rear - 6" Flue Pipe - 18" Bottom - 6" Warm air duct within 3' of furnace (when ducted) - 6"	Top - 6" Front - 24" Sides - 6" Rear - 6" Flue Pipe - 18" Bottom - 6" Warm air duct within 3' of furnace (when ducted) - 6"	Top - 6" Front - 24" Sides - 6" Rear - 6" Flue Pipe - 18" Bottom - 6" Warm air duct within 3' of furnace (when ducted) - 6"
For commercial and in	ndustrial use only.	1	L
The Unit may be susp	ended from the ceiling.	and a second standard strange s	
Normal continuous so	ound level: 77dBA		

Call 1-615-471-5290 for Technical Support



6

## 918-28C Scrap Wire Stripping Machine

## **READ BEFORE MACHINE USE**



### II. SPECIFICATIONS:

- Power supply: 110V 50-60Hz 2.2Kw 220V/50HZ
- Wire Range: .078" 1-3/4" (2mm-45mm)
- 8 Channels of Cutters
- Combined Gear and Belt Driven Function
- Shipping Weight: 250lb
- Carton Size: 24" x 24" x 35"

Basically there are 2 sets of cutter/rollers. It's made to cut the tops and bottoms of larger wires and the bottoms only on smaller wire. The spring loaded mechanism on the top allows you to adjust the tension of the cutters depending on what wire or jacket size you are cutting. You can cut two wires at once if you want. Also .078" is approximately 13 AWG.

# Appendix H

## ABOVE GROUND PETROLEUM & FLUIDS STORAGE

### GREATER WASTE SOLUTIONS, LLC: 426 Fitchburg Road, Greenville, NH 03048 yard 603-878-1170 office 603-878-4108

Z TANK								SAFE FILL		
LOCATIC	ТҮРЕ	ID	PURPOSE	PRODUCT	HAZARD ID: (NFPA 30)	High Level Alarm	Safe Fill Vol./Ht.	Secondary Containment	Other Controls / Notes	MAX VOLUME (gal.)
А	275 gal. metal tank	A	Heating, on-premise	#2 Fuel Oil	1993, PG III	Whistle	256 gal.	n/a inside building	spill kit	275
В	275 gal. metal tank	в	Heating, on-premise	Used Oil for Recycle/ #2 Fuel Oil	1993, PG III	Whistle	256 gal.	n/a inside building	spill kit, may contain #2 fuel oil and/or used oil for recycle	275
с	55 gal. plastic drum	с	Heating, on-premise	Used Oil for Recycle	1993, PG III	Drum gauge	51 gal.	double walled	spill kit, hand filled / transferred	55
D	55 gal. plastic drum	D	Heating, on-premise	Used Oil for Recycle	1993, PG III	Drum gauge	51 gal.	double walled	spill kit, hand filled / transferred	55
					Total c	apacity for	stored hea	ting oil used sole	ely for heating on-premise:	660
E	120 gal. metal tank	Е	Heating, on-premise	Propane	1075, PG II	Spitter Valve	96 gal.	not required		96
F	23 gal. metal tank	F	Cooking, on-premise	Propane	1075. PG II	Spitter Valve	18 gal.	not required		18
			Total capa	city for stored	liquid that is a	gas at atm	nospheric te	mperature and	pressure, such as propane:	114
G	550 gal. metal tank	G	Off Road Equipment	#3 Dyed Diesel	1993, PG III	Whistle	510 gal.	yes, covered	fuel transfer kit, stat mat, spill kit	550
	Total capacity for non-heating oil/stored propane:									

Location Key:

А	Metal Processing Building, Inside (Front)
В	Metal Processing Building, Inside (Rear)
С	Metal Processing Building, Inside (Rear)
D	Residential DIY Used Oil Collection Area, (Covered Container)
Е	Security Trailer, Outside (Side)
F	Security Trailer, Outside (Side)
G	Metal Processing Building, Outside (Rear)

# Appendix I

## **Stormwater Construction Site Inspection Report**

	General Info	rmation			
Project Name					
NPDES Tracking No.		Location			
Date of Inspection		Start/End Time			
Inspector's Name(s)					
Inspector's Title(s)					
Inspector's Contact Information					
Inspector's Qualifications					
Describe present phase of construction					
Type of Inspection:         □ Regular       □ Pre-storm event	During storm event	□ Post-storm e	vent		
	Weather Info	ormation			
Has there been a storm event since	the last inspection? □Ye	s □No			
If yes, provide: Storm Start Date & Time: S	torm Duration (hrs):	Approximate	Amount of Precipitation (in):		
Weather at time of this inspection?         □ Clear       □ Cloudy       □ Rain       □ Sleet       □ Fog       □ Snowing       □ High Winds         □ Other:       Temperature:					
Have any discharges occurred since the last inspection?  □Yes  □No If yes, describe:					
Are there any discharges at the time of inspection?  Yes  No If yes, describe:					

#### Site-specific BMPs

- Number the structural and non-structural BMPs identified in your SWPPP on your site map and list thembelow (add as many BMPs as necessary). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required BMPs at your site.
- Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.

	BMP	BMP	BMP	Corrective Action Needed and Notes
		Installed?	Maintenance	
			<b>Required?</b>	
1		□Yes □No	□Yes □No	
2		□Yes □No	□Yes □No	
3		□Yes □No	□Yes □No	
4		□Yes □No	□Yes □No	
5		□Yes □No	□Yes □No	
6		□Yes □No	□Yes □No	
7		□Yes □No	□Yes □No	
8		□Yes □No	□Yes □No	
9		□Yes □No	□Yes □No	
10		□Yes □No	□Yes □No	
11		□Yes □No	□Yes □No	

	BMP	BMP	BMP	Corrective Action Needed and Notes
		Installed?	Maintenance	
			Required?	
12		□Yes □No	□Yes □No	
13		□Yes □No	□Yes □No	
14		□Yes □No	□Yes □No	
15		□Yes □No	□Yes □No	
16		□Yes □No	□Yes □No	
17		□Yes □No	□Yes □No	
18		□Yes □No	□Yes □No	
19		□Yes □No	□Yes □No	
20		□Yes □No	□Yes □No	

#### **Overall Site Issues**

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	□Yes □No	□Yes □No	
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	□Yes □No	□Yes □No	
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	□Yes □No	□Yes □No	
4	Are discharge points and receiving waters free of any sediment deposits?	□Yes □No	□Yes □No	
5	Are storm drain inlets properly protected?	□Yes □No	□Yes □No	
6	Is the construction exit preventing sediment from being tracked into the street?	□Yes □No	□Yes □No	
7	Is trash/litter from work areas collected and placed in covered dumpsters?	□Yes □No	□Yes □No	
8	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	□Yes □No	□Yes □No	

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
9	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	□Yes □No	□Yes □No	
10	Are materials that are potential stormwater contaminants stored inside or under cover?	□Yes □No	□Yes □No	
11	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	□Yes □No	□Yes □No	
12	(Other)	□Yes □No	□Yes □No	

#### **Non-Compliance**

Describe any incidents of non-compliance not described above:

#### **CERTIFICATION STATEMENT**

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

#### Print name and title: _____

Signature:_____Date:_____

Figure 1

**Operations Plan, Sheet SP-1 Page 4** 



# Figure 2

**Interior Floor Plans & Building Sections, Sheet DT-7 Page 16** 





# SECTION VIII (STAND ALONE DOCUMENT INCORPORATED BY REFERENCE) CLOSURE PLAN



REVISED: SEPTEMBER 14, 2021 - Closure Plan Completely Overhauled

Application for Standard Permit for Solid Waste Collection/Storage/Transfer Facility

Greater Waste Solutions, LLC.

## **SECTION VII. OPERATING PLAN (CONTINUED)**

Identify all reasonably foreseeable en	nergéncies, such as fi	re, explosion,	operator injury	, and the like,	based on
the type of seility and wastes being h	andled;				

- Describe the appropriate response of facility personnel for each emergency identified above; and
- Include identification of and templative numbers for all local and state officials to be notified in the event of an emergency;
- Section 7, titled "Employee Training Program," shall provide a description femployee training program(s); and
- Section 8, titled "Record Keeping and Reporting," shall provide a description of record keeping procedures as necessary to comply with Env-Sw 1105.06 and Env-Sw 1105.07.

#### SECTION VIII. CLOSURE PLAN

Prepare and submit a Closure Plan, according to the following instructions. See also Env-Sw 1106.04.

- (1) A facility Closure Plan shall provide sufficient detail to allow a third party to implement and complete all required facility closure tasks in compliance with RSA 149-M, the permit and the Solid Waste Rules without further explanation or guidance. See Env-Sw 406; Env-Sw 900 (if for asbestos, ash, contaminated soil and/or other media, infectious waste, or tires); Env-Sw 1006; and Env-Sw 1106, if operated longer than 90 days.
- (2) The Closure Plan shall be prepared as a loose leaf, stand-alone document to facilitate amendment as specified in Env-Sw 315. Submit the stand-alone document with this application, in its own binder.
- (3) Each page of the Closure Plan shall bear the date of preparation or revision, as applicable, and the facility name and permit number, if known.
- (4) The Closure Plan shall be organized and prepared as follows:
  - Section 1, titled "Facility Identification," shall provide the facility name, mailing address, location by street and municipality and permit number.
  - Section 2, titled "Closure Schedule," shall provide the anticipated date of closure and a closure schedule that sets forth each discrete activity that will be undertaken to complete facility closure, the order in which the activities will be undertaken and the estimated length of time required to complete each activity.
  - Section 3, titled "Waste Identification," shall identify all types of waste received or intended to be received by the facility during its active life.
  - Section 4, titled "Notifications," shall provide a description of how notice shall be given by the permittee to facility users prior to terminating receipt of waste;
  - Section 5, titled "Closure Requirements," shall provide:
    - A list of each major closure work task required to implement and complete closure of the facility; and
       A description of the procedures for completing all required closure work tasks.
  - Section 6, titled "Post-Closure Requirements," shall identify and describe all required post-closure testing, inspection, maintenance and monitoring that will be performed at the facility pursuant to the provisions of the Solid Waste Rules and the permit.
  - Section 7, titled "Record Keeping and Reporting," shall identify and describe:
    - All record keeping and reporting obligations required of the facility following completion of the closure work identified in Section 5 of the Closure Plan; and
    - Locations and provisions for storing facility records, including the operating records, following facility closure;
  - Section 8, titled "Other Permits," shall:
    - Identify all other local, state and federal permits and approvals required to implement facility closure, including the implementation of all post-closure monitoring and maintenance requirements; and
       Identify the status of each required permit and approval.
  - Section 9, titled "Closure Cost Estimate," shall provide a closure cost estimate prepared in accordance with the criteria in Env-Sw 1403.02. Closure cost estimation forms are available from the P&DRS at (603) 271-2925.

# Closure Plan



# Solid Waste Collection, Recycling/Recovery, Storage and Transfer Station

## **Greater Waste Solutions, LLC**

426 Fitchburg Road - Operations 124 Old Wilton Road - Mailing Greenville, New Hampshire 03048 YARD: 603.878.1170 OFFICE: 603.878.4108 July 12, 2021

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## APPENDICES

- A Third Party Waste Destination Providers
- B Closure Cost Estimate

# GREATER WASTE SOLUTIONS, LLC FACILITY CLOSURE PLAN

## 1. FACILITY IDENTIFICATION

Facility Name:	Greater Waste Solutions, LLC
-	426 Fitchburg Road
	Greenville, NH 03048

Mailing Address: 124 Old Wilton Road Greenville, NH 03048

Permit Number: DES-SW-XX-XXX

## 2. <u>CLOSURE SCHEDULE</u>

The facility has no scheduled closure date. Should the facility close for some unforeseen reason, the following schedule will be followed:

	Closure Activity Required	Duration of Activity	Completion Deadline
1	File a Notice of Intent to Close in accordance with Env-Sw 1106.02 and provide Notification of closure to facility users	0 Days	Fifteen days before termination of receipt of waste
2	Terminate all waste deliveries to the facility	0 Days	Immediately
3	Remove all wastes, including processed recyclables, bypass wastes and residuals, and surface debris/litter from the site to an authorized facility	60 Days	Two months after termination of receipt of waste
4	Remove, dismantle, or otherwise decommission all facility equipment	120 Days	Four months after termination of receipt of waste
5	Clean facility and site in accordance with Env-Sw 1006.02 (e) and (f)	120 Days	Four months after termination of receipt of waste
6	Perform all actions necessary, based on actual facility performance and actual site conditions, to monitor and remediate any associated environmental damage.	180 Days	Six months after termination of receipt of waste

## 3. <u>WASTE IDENTIFICATION</u>

- Batteries: Alkaline, Button cell, Re-chargeable, Lead-Acid (intact only)
- Bulky Items/Furniture
- Cardboard, Corrugated
- Cardboard, Grey
- Cathode Ray Tubes (CRTs)
- Construction and Demolition Debris (C&D)
- Electronics
- Glass
- Lamps
- Large Appliances
- Mercury Containing Devices
- Metal, Ferrous and Non-Ferrous
- Municipal/Mixed Solid Waste (MSW)
- Paper, Mixed
- Paper, News
- Plastic, numbered 1 7
- Tires
- Tree Limbs and Brush
- Used Motor Oil (accepted from residential sources only)
- Yard Waste

## 4. <u>NOTIFICATIONS</u>

Prior to termination of receipt of waste, notification will be given to users of the Greater Waste Solutions, LLC facility as follows:

- Letters will be sent to all users of record who have used the facility during the past year.
- Notification of termination of receipt of waste by the facility will be provided by notices posted on the facility gates and public notice printed in the regional newspaper.
- Signs will be posed at the entrance, clearly stating that no dumping is allowed at this site. The sign will also contain the following information: (1) Greater Waste Solutions, LLC Facility Closure Project; (2) emergency telephone numbers; and (3) penalty for unlawful dumping.

## 5. <u>CLOSURE REQUIREMENTS</u>

The procedure for closure of the facility will include removal and appropriate disposal of all waste materials on site, including unprocessed waste, processed recyclables, bypass wastes and residuals, and surface debris/litter. The contractor may use the on-site facility equipment to

perform the closure work. Any additional equipment necessary to perform the closure is the responsibility of the contractor. Unprocessed waste materials in the Solid Waste Processing Building will be loaded into transfer trailers for transport to the disposal site. Recyclable materials in the Solid Waste Processing Building will be transferred to the appropriate containers within the General Public Drop Off Area for subsequent transport to markets. Scrap metal in the exterior Scrap Metal Recycling Area or within the Scrap Metal Processing Building will be transported to appropriate markets. Refer to Appendix A for a list of Third Party Waste Destination Providers.

Facility equipment will be removed, dismantled or otherwise decommissioned in the following manner:

- Disconnect electricity and other utilities.
- The Solid Waste Processing Building surfaces and equipment used in handling of waste material will be pressure washed, scraped/squeegeed, and triple rinsed to remove all residual waste material. Wash and rinse water will be collected for appropriate off-site disposal.
- Building doors will be locked. Windows and other building openings will be boarded up to minimize vandalism.
- The facility site will be cleared of any remaining debris and/or windblown litter.
- The facility site will be secured by locking the entrance gates to prevent unauthorized access.

## 6. <u>POST-CLOSURE REQUIREMENTS</u>

After completion of the facility closure, maintenance of the site to protect public health and the environment involves regular monitoring of the buildings and stormwater controls. Inspection and maintenance requirements for the stormwater system components are located in Appendix I of the Facility Operating Plan.

## 7. <u>RECORDKEEPING AND REPORTING</u>

At least 15 days prior to termination of receipt of waste at the facility, Greater Waste Solutions, LLC will submit a written Notice of Intent to Close to the New Hampshire Department of Environmental Services (NHDES) in accordance with Env-Sw 1106.02, including:

- Facility identification;
- Date the facility intends to stop receiving wastes;
- A copy of the facility's approved closure plan or file reference thereto;
- If the provisions of the last approved closure plan of record are no longer applicable or no longer conform to the closure requirements of the solid waste rules, identification of such provisions and revisions in accordance with Env-Sw 315; and
- Date the facility intends to commence closure activities.

During or subsequent to facility closure activities, in accordance with Env-Sw 1105.07(b) and Env-Sw 1105.14, by March 31st of the following calendar year, Greater Waste Solutions, LLC will submit a report for the prior year including the following:

- Facility name, location by street and municipality, and permit number;
- Name and address of the permittee;
- Name, address, certificate number and telephone number of all facility operators, if applicable;
- Name, address, affiliation and telephone number of the person or persons responsible for managing all post-closure activities at the facility;
- Facility status, including, as applicable:
  - Date the facility discontinued receipt of waste;
  - Commencement and completion dates for all construction activities at the facility related to the approved closure plan; and
  - Anticipated or scheduled date for completing all required post-closure monitoring and maintenance activities; and
- A summary and assessment of all environmental monitoring performed at or for the facility, whether required by the solid waste rules or the permit or undertaken voluntarily, specifically including as applicable:
  - Information concerning emergency events or other unexpected or unusual events at the facility relevant to assessing whether the facility is achieving post-closure performance expectations; and
  - For a facility having post-closure obligations, an evaluation of the available environmental monitoring data and other information pertaining to facility conditions, including a statement by a qualified professional engineer identifying whether the facility is achieving post-closure performance expectations and whether adjustments to the approved post-closure monitoring and maintenance period or provisions are recommended in light of the performance evaluation.

Following facility closure, operating and closure records will be taken to a commercial file storage facility and maintained for a period of 10 years, unless destruction of the records is approved pursuant to the provisions for a Type V permit modification in Env-Sw 315.

## 8. <u>OTHER PERMITS</u>

No additional state, federal, or local permits are required to implement closure of the facility. Post closure monitoring requirements will be in accordance with the following existing/approved permits:

• Solid Waste Management Permit

## 9. <u>CLOSURE COST ESTIMATE</u>

A closure cost estimate prepared in accordance with the criteria in Env-Sw 1403.02 is included in Appendix B. The closure cost estimate accounts for removal and disposal of stored and unprocessed wastes at the time of facility closure. The estimate is based on a conservative assumption that, at the time of closure, the waste and recyclable material will be at the maximum permitted storage capacity. Salvage value from the sale of facility structures, equipment, or other assets is not included.

# Appendix A

## THIRD PARTY WASTE DESTINATION PROVIDERS

Material		Facility Location
Electronics		East Coast Electronics/Shirley, MA
		Tech Recycling Solutions/Leominster, MA
Hazardous/Spills/Toxic Waste		US Ecology/Wrentham, MA
(Emergency Response)		Clean Harbors/Bow, NH
Lead Acid Batteries		Harding Metals/Northwood, NH
		Sims Metal Manag. /Providence, RI
		Wheelshater Holdes /Fitchburg, MA
Leachate		
MSW		Covanta Energy/ Haverniii, MA
Recyclables, Pre-Sorted:	Paper:	Casella/Charlestown, MA
	Mix Paper:	E.L. Recycling/Fitchburg, MA
	Cardboard:	E.L. Recycling/Westborough, MA
Recyclables, - Pre-Sorted:	Plastics:	E.L. Recycling/Fitchburg, MA
		Casella/Charlestown, MA
Refrigerants		Pinnacle Rock Solutions/Peterborough, NH
		Pinnacle Rock Solutions/ Milford, NH
Course Martel		Excel Recycling/Freetown MA
Scrap Metal		Sims Metal Management/Providence, Bl
		Sins weta wanagement, i e naenes, ii
White Goods		Event Reputing/Frontown MA
		Sime Metal Management/Providence Pl
		Sins weta wanagement/ Flowdence, Ki

# Appendix B

NHDES-5-05-024

vironmental

Services

Cost Estimate Form for Closure of Solid Waste Collection/Storage/Transfer Facilities or Recycling Facilities Waste Management Division/Solid Waste Management Bureau

solidwasteinfo@des.nh.gov or phone (603) 271-2925 PO Box 95, Concord, NH 03302-0095 des.nh.gov



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Address: 426 Fitchburg Road, Greenville, NH 03048

Facility Name: Greater Waste Solutions, LLC

NHDES Permit #:						•.					
Permitted Solid Waste Material	Permitted Amount	Quantity ¹ SPR ²	Quantity ¹ Non-SPR ²	Unit	Loading Cost Per Unit (Non-SPR)	Transp. Cost Per Unit (Non-SPR)	Disposal Cost Per Unit (Non-SPR)	Total Cost P( (Non-SP)	er Unit R)	Total Cost	Disposal Destination
Ash				Ton							
Bulky Waste/White Goods	2			Ton	\$ 2.80	\$ 14.00	\$ 75.00	0 \$	91.80	\$ 183.60	Excel Recycling, LLC
Bypass/Residual Waste				Ton							
C & D Debris	351			Ton	\$ 2.80	\$ 15.00	\$ 80.00	0 \$	97.80	\$ 34,327.80	ERRCO
CFC Containing Appliances	1			Ton	\$ 2.80	\$ 50.00	\$ 120.00	\$ 0	172.80	\$ 172.80	Scrap It
Contaminated Soil/Media				Ton							
E-Scrap	4			Ton	\$ 2.80	\$ 75.00	\$ 500.01	0 \$	577.80	\$ 2,311.20	Multiple Markets
Leachate				Ton							
Mixed MSW/MSW/Non-Recyclable Wastes for Disposal	359			Ton	\$ 2.80	\$ 15.00	\$ 80.0	\$ 0	97.80	\$ 35,110.20	Covanta Energy
Non-Metal Unprocessed Recyclable Waste	41			Ton	\$ 2.80	\$ 15.00	\$ 87.0	5 0	104.80	\$ 4,296.80	Excel Recycling, LLC
Solid Waste-Liquid				Gallon							
Tires	S			Ton	\$ 2.80	\$ 100.00	\$ 150.0	0 \$	252.80	\$ 1,264.00	Bob's Tire
Unprocessed Recyclables-Commingled				Ton							
Unprocessed Waste				Ton							
Other: Scrap Metal	501			Ton	\$ 2.80	\$ 25.00		\$	27.80	\$ 13,927.80	Excel Recycling, LLC
		Ð									
Site Cleanup (per approved closure plan)					Description of Work t	o be Performed					Third Party Providing Estimate
Labor	1 week: 2 lab	orers (80hrs@	0\$30/hr) + 1 e	quipmen	operator & excavato	r (40hrs@\$140/hr)				\$ 8,000.00	Nobis Group
Equipment Decommissioning	2 days: 2 labo	orers (32hrs@	\$30/hr)							\$ 960.00	Nobis Group
Equipment Removal	N/A - equipm	tent retained	by facility								
Building Cleaning	1 week (remo	ove residual w	aste remainin	g in build	ing, steam cleaning, g	eneral site cleanup, sv	weep pavement): 2 la	aborers (80hrs@	0\$30/hr	\$ 2,400.00	Nobis Group
Regrading	N/A										
Hydroseeding	N/A										
Other: Steam Cleaner Rental	1 week @ \$7	5/day								\$ 375.00	*
Miscellaneous Closure Work											
Administrative	N/A										
Other:											
								\$	ubtotal	\$103,329.20	
								10% Cont	ingency	\$10,332.92	
									Total *	\$113,662.12	
		•	Add the cost	s for qual	ified professional ove	rsight of all closure ac	ctivities if the total is	more than \$50	000.000	\$7,100.00	Nobis Group
								GRAND	TOTAL	\$120,762.12	
The combined Quantity of Select Processed Recyclables (SF	PR) and Non-SP	R must equal t	d mumixem an	ermitted	storage capacity.						

A (SPR) is a recyclable material comprised of one of the following materials: paper, cardboard, glass, plastic, ferrous metal, non-ferrous metal, or textile materials) which has been physically sorred and separated by material type, formed into bales or otherwise physically processed and packaged in a manner satisfying the specifications for transportation to and acceptance by a market that will use the material for the production of certified waste-derived products.

This closure cost estimate has been figured based on representative current market rates for having a third party perform all required closure and post-closure activities at the point in the facility's active life when the extent and manner of facility operations in compliance with permit coordinance with permit coordinance with permit coordinance with permit coordinance of actility of a summer of actility closure plan.

10

Date:

Signature of Permittee:

1707 12

Date: 07 provid Signature of Preparer:

2018-06-15

# SECTION IX FINANCIAL REPORT



Greater Waste Solutions, LLC.

## SECTION IX. FINANCIAL REPORT

Provide the following information. Use separate paper if necessary.

(	) The estimated cost of constructing the facility, unless the facility is an existing facility and no new construction is proposed: \$724,200	J.D
(	) The type and source of financing: Financing Not Required	
(	) The estimated facility operating cost(s): \$ 140,555.00 / Month	
(	) The estimated tipping fee or, if no tipping fee will be assessed by the facility, the estimated average cost per ton to manage waste at	
	the facility: \$125 /ton	
(!	Prepare and submit a financial assurance plan in accordance with Env-Sw 1400. Contact the DES Financial Assurance Coordinator	Τ
	at (603) 271-2925 for additional assistance and guidance, including forms for preparing financial assurance documents such as	
	letters of credit trust agreements surety bonds etc	

## ECTION X. PERFORMANCE HISTORY

) SACKGROUND INVESTIGATION: (Note: This requirement does not apply if the applicant is a government unit or agency or subdivision of the stre. If so, check here and go to question (2) below.)

The oplicant must provide as part of this application certain "personal and business disclosure information." The information will be used to facilitate a background investigation by the New Hampshire Department of Justice/Office of Attorney General (NH DoJ/AGO) pursuant a RSA 149-M:9,III and IX. The information is provided by completing two different forms, one for personal disclosure information and one for business disclosure information. The number and type of forms to be completed depends on whether the applicant is an advividual or a non-individual and whether the applicant, facility operator and property owner are the same. The forms provide specific in tructions for determining which individuals and entities must complete the forms. Submit the completed forms direct to the NH DoJ/AGO, Environmental Protection Bureau, 33 Capitol St., Concord, NH 03301-6397 with a "Notice of Filing" as specified by Section IV of this form. Do NOT submit copies of the completed personal and business disclosure forms to DES.

Note: If blank copies of the Personal and Business Disclosure Forms were not included with this permit application package, you may obtain copies from the P&DRS at (603) 271-295

Note also: The applicant must pay the cost incurred by the NH DoJ/AGO to complete the background investigation and prepare a report to DES. An invoice will be sent by the NH DoJ/AGO and payment will be due upon receipt.

#### (2) COMPLIANCE STATUS: The applicant must either:

- sign the Compliance Statement provided below; or
- submit a Compliance Report as specified Env-Sw 303.15. Mark the Compliance Report as "Attachment X(2)."

Check the appropriate box above to indicate which option you are undertaking.

#### COMPLIANCE STATEMENT

The applicant shall certify that each of the statements listed 1 (1)-(8) below are true for each of the following individuals and entities:

- **the applicant.**
- □ the facility owner.
- the facility operator.
- all individuals and entities holding 10% or more of the applicant's abt or equity.
- all of the applicant's officers, directors, and partners.

all individuals and entities having managerial, supervisory or substantia	deci	ision making authority and responsibility
for the management of facility operations or the activity(s) for which appr	ro	is being sought.

(1) No individual or entity listed above has been convicted of or plead guilty or no context to a felony in any state or federal court during the 5 years before the date of the application.

(2) No individual or entity listed above has been convicted of or plead guilty or no contest is a misdemeanor for a violation of environmental statutes or rules in any state or federal court during the 5 years before the date on the application.

(3) No individual or entity listed above has owned or operated any hazardous or solid waste facility which has been the subject of an administrative or judicial enforcement action for a violation of environmental statutes or rules during the 5 years before the date of the application.

(4) No individual or entity listed above has been the subject of any administrative or judicial enforcement as ion for a violation of environmental statutes and rules during the 5 years before the date of the application.

(5) All hazardous and solid waste facilities owned or operated in New Hampshire by any individual or entity lister above are in compliance with either:

(a) All applicable environmental statutes, rules, and DES permit requirements; or

(b) A DES approved schedule for achieving compliance therewith;

(6) All individuals and entities listed above are in compliance with all civil and criminal penalty provisions of any outstanding consist agreement, settlement, or court order to which DES is a party.

# Section IX List of Attachments

Attachment IX (1)Construction Cost Estimate

Attachment IX (3) (4) Estimated Cost Analysis

Attachment IX (5)

Standby Trust Agreement

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Greater Waste Solutions Transfer Station

**BUDGET / ACTUAL** Project Address: 426 Fitchburg Road, Greenville, NH 03048 Owner: GMB Leasing, LLC In tabulations below, amounts are stated to the nearest dollar.

08/24/20 PERIOD TO:

PAGE 1 of 1

V	B					υ	Q	ш	ţ.	Ο		н
IIEM	DESCRIPTION OF WORK	BUDGET	ADJUSTED	NON - COMP	COMP	CURRENT _	WORK CON	PLETED	MATERIALS	TOTAL	%	BALANCE
Ö N		VALUE	CONTRACT	CHANGE	CHANGE	BUDGET	FROM PREVIOUS	THIS PERIOD	PRESENTLY	COMPLETED	(G ÷ C)	TO FINISH
			VALUE	ORDER	ORDER		PERIOD		STORED	AND STORED		(C - G)
				NA			(D + E)		(NOT IN	TO DATE		
ļ									D OR E)	(D+E+F)		
_	Engineering - Survey	\$23,000.00	\$23,000.00			\$23,000.00		\$10,370,55	\$ -	\$10,370.55	45%	\$12,629.45
7	Engineering - Geotech	\$2,000.00	\$2,000.00			\$2,000,00		\$1,500.00	•	\$1,500.00	75%	\$0.00
η	Engineering - Bldg/Found.	\$9,500.00	\$9,500.00			\$9,500.00		\$ 9,500.00	۰ ج	\$9,500.00	100%	\$0.00
4	Engineering - Other/Misc.	\$1,000.00	\$1,000.00			\$1,000.00		•	•	- \$	%0	\$1,000.00
ŝ	Inspections / Permits	\$27,000.00	\$27,000.00			\$27,000.00		\$25,089.30	•	\$25,089.30	63%	\$1,910.70
œ	Concrete/Block - Retaining Walls	\$10,000.00	\$10,000.00			\$10,000.00		، ج	•	•	%0	\$10,000.00
-	Site - Foundation	\$151,000.00	\$151,000.00	-\$991.60		\$150,008.40		\$150,008.40	s .	\$150,008.40	100%	\$0.00
∞	Site - Water/Sewer	\$135,000.00	\$135,000.00			\$135,000.00		\$82,946.29	۰ \$	\$82,946.29	61%	\$52,053.71
6	Site - Roadway/Processing Areas	\$60,000.00	\$60,000.00			\$60,000.00		•	- \$	- \$	%0	\$60,000.00
10	Concrete - Foundation	\$270,000.00	\$270,000.00	-\$1,289.00		\$268,711.00		\$268,711.00	, S	\$268,711.00	100%	\$0.00
Ξ	Concrete - Slab	\$97,500.00	\$97,500.00			\$97,500.00		•	•	- \$	%0	\$97,500.00
12	Structural Steel Bldg.	\$198,415.00	\$198,415.00			\$198,415.00		- \$	\$198,415.00	\$198,415.00	100%	\$0.00
13	Steel - Siding /Trim	\$35,000.00	\$35,000.00			\$35,000.00		۰ ج	-	•	%0	\$35,000.00
14	Steel - Bldg. Erection	\$185,000.00	\$185,000.00			\$185,000.00		۰ ۲	-	•	%0	\$185,000.00
15	Insulation	\$16,000.00	\$16,000.00			\$16,000.00		- S	\$14,990.00	\$14,990,00	94%	\$1,010.00
16	Doors/Windows	\$35,000.00	\$35,000.00			\$35,000.00		۰ ج	۰ د	5	%0	\$35,000.00
17	Interior Finish	\$5,000.00	\$5,000.00			\$5,000.00		•	۰ د	•	%0	\$5,000.00
18	Plumbing	\$22,000.00	\$22,000.00			\$22,000.00		- \$	، ج	۔ ج	%0	\$22,000.00
19	Fire Sprinklers	\$ 95,000.00	\$95,000.00			\$95,000.00		- -	- S	- \$	%0	\$95,000,00
20	Electric - Bldg.Int/Ext./Fire Alarm	\$ 85,275.00	\$85,275.00			\$85,275.00		•		s	%0	\$85,275.00
21	Electric - Site General	\$ 12,000.00	\$12,000.00			\$12,000.00		•	-		%0	\$12,000,00
52	Temp Utilities/Dumpster	\$ 3,800.00	\$3,800.00			\$3,800.00		\$	- \$	- s	%0	\$3,800.00
23	Site - Fencing / Clean-up	\$ 10,000.00	\$10,000.00			\$10,000.00		<del>ک</del>	- S	<u>،</u>	%0	\$10,000.00
24	Insurance - BldRisk	\$ 775.00	\$775.00			\$775.00		\$ 775.00	· S	\$775.00	100%	\$0.00
25												
26												
27												
28												
34												
35												
36												
37												
38												
											ŀ	
	Total	\$1,489,265.00	\$1,489,265.00			\$1,486,984.40	\$0.00	\$548,900.54		\$762,305.54	51%	\$724,178,86

## **Greater Waste Solutions, LLC**

Yard: 426 Fitchburg Rd. Mail: 124 Old Wilton Rd. Greenville, NH 03048



#### **Estimated Cost Analysis**

We are proposing an estimated cost analysis based on data through recycling and disposal markets.

Official Board Markets (The Yellow Sheet) which is released on a monthly basis declares the value of mixed paper, boxboard cuttings, (#6) news, (#8) news, occ, sop, and Sorted white ledger.

Scrap metal, tin, aluminum, plastics and wood, these recyclable materials are based on volume which determines the cost or credit given to you as a vendor.

Final trash disposal sites are also based on volume which determines the cost of disposal.

Prior to applying for transfer station permit to handle solid waste, we consulted with other transfer/recycling centers on estimated revenue income. The entities we consulted with based their numbers on their tonnage.

Based on our solid waste permit at 300 tons per day (TPD), annualized at 150,000 (TPY) \$125.00 per ton receivable materials is 18% profit/month of \$81,000 (Eighty-one thousand)

#### STANDBY TRUST AGREEMENT

Standby Trust Agreement (the "Agreement") entered into as of _____

______, 20_____ by and between [Name of Company providing financial assurance], a [identify State] corporation with a principal place of business at [Address of Company] (the "Grantor") and [Name and Address of Trustee, usually a bank] (the "Trustee").

#### PREAMBLE

The Grantor owns and operates a solid waste facility located at **426 Fitchburg Road**, **Greenville**, **NH** (the "Facility"). The Facility consists of **Solid Waste Recycling/Recovery**, **Storage and Transfer Station** and is permitted by the New Hampshire Department of Environmental Services (DES) under Solid Waste Management Facility Standard Permit No.

_____ (the "Permit"). The Permit was issued on [Date of Issuance].

The Grantor is required under the laws of the State of New Hampshire, in particular New Hampshire RSA 149-M and the regulations duly promulgated there under as they may be amended from time to time, and under the terms of the Permit, to perform closure of the Facility at the end of the Facility's operations and to provide the necessary thirty year post-closure monitoring and maintenance of the Facility. The closure and post-closure activities that must be performed by the Grantor are set forth in the Facility's approved closure plan, incorporated in the Permit, as it may be amended from time to time to time with the approval of DES.

The Grantor is further required to provide financial assurance to the State of New Hampshire that funds will be available in the future to cover the cost of all required closure and post-closure activities of the Facility. The Grantor has elected to satisfy its obligation to provide financial assurance for the Facility by obtaining a [Surety Bond/Letter of Credit] in the amount of \$49,006.00 from [TD Bank, N.A.] and by establishing this standby trust agreement, both for the benefit of the State of New Hampshire.

The Grantor, acting through its duly authorized officers, has selected the Trustee to fulfill the obligations identified for the Trustee under this Agreement and the Trustee is willing to act in that capacity and to fulfill its obligations under this Agreement.

THEREFORE, the Grantor and the Trustee agree as follows:

#### Section 1. Identification of Facility and Closure Work.

(a) This Agreement pertains to the Facility, as more specifically described in the Permit, the Closure Work and to the [Surety Bond/Letter of Credit], a copy of which is attached as
 Appendix A. No provision is hereby made for closure of other existing or proposed phases of the Facility.

(b) The Closure Work is defined as all work, materials, labor or other services required under the Facility's closure plan, permits, approvals related thereto and/or laws and rules of the

1
State of New Hampshire, as they may be amended from time to time, to carry out closure and 30 years of post-closure monitoring and maintenance of the Facility.

(c) Current estimates for the cost of the Closure Work total **\$49,006.00**. The cost of the Closure Work may be revised from time to time as necessary to more accurately reflect actual anticipated costs.

Section 2. Establishment of Fund. Pursuant to the conditions of this Agreement, the Grantor and the Trustee hereby establish a standby trust fund (the "Fund") for the benefit of the State of New Hampshire, through its Department of Environmental Services, Waste Management Division. The Fund is dedicated exclusively to the Closure Work at the Facility. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Commissioner of DES, or the Commissioner's duly appointed designee, shall exercise all powers and responsibilities given to the State of New Hampshire herein. The Commissioner may designate another state official to exercise those powers and responsibilities in his or her stead with ten days written notice to the Trustee and Grantor.

#### Section 3. Payment Comprising the Fund.

(a) The Fund is established initially with the delivery and deposit of the [Surety
Bond/Letter of Credit] with the Trustee. The amount guaranteed under the [Surety
Bond/Letter of Credit] shall be deposited in the Fund in the event payment is triggered under the [Surety Bond/Letter of Credit] and funds are received by the Trustee.

(b) The Fund will consist of monies paid under the [**Surety Bond/Letter of Credit**], any other cash or securities acceptable to the Trustee subsequently deposited in the Fund, and all earnings, interest and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement.

(c) The Fund shall be held by the Trustee, in trust, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of any payments necessary to discharge any obligations of the Grantor, nor shall the Trustee have any duty to collect such payments from the Grantor or Surety.

Section 4. Payment for Closure Work. Upon receipt of funds from the [Surety/Letter of Credit Issuer], the Trustee shall make payments from the Fund as the Commissioner shall direct in writing to provide for the payment of the Closure Work consistent with this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the Commissioner from the Fund for Closure Work expenditures in such amounts as the Commissioner shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as DES specifies in writing. Upon refund, such refunds shall no longer constitute part of the Fund as defined herein.

The Trustee shall account for each disbursement from the Fund consistent with the Commissioner's instructions. The Trustee shall notify the Commissioner and the Grantor when all monies have been disbursed.

Section 5. Trustee Management. The Trustee shall invest and reinvest the principal

and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject to the provisions of this Section and state law. All investments shall provide for the preservation of the principal of the Fund. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the Fund solely in the interest of DES, the beneficiary, and with the care, skill, prudence and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

(c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

**Section 6.** Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

<u>Section 7</u>. <u>Express Powers of Trustee</u>. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a

nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 8. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust shall be paid by the Grantor, including fees for legal services rendered to the Trustee, the compensation of the Trustee, and all other proper charges and disbursements of the Trustee. In the event the Grantor fails to pay the Trustee in accordance with this Section and written demand on the Grantor for payment does not result in prompt payment, the Trustee is entitled to payment from the Fund after written notification to DES.

Section 9. Annual Valuation. The Trustee shall annually, after the first deposit of monies from the [Surety Bond/Letter of Credit], at least 30 days before the anniversary date of the first deposit, furnish to the Grantor and to the Commissioner a statement confirming the value of the Fund. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the first deposit.

Section 10. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel. To the extent the Trustee consults with counsel for the Grantor with respect to questions concerning the interpretation of this Agreement, or actions to be taken hereunder, the Trustee shall be fully protected, to the extent permitted by law, in acting upon the advise of such counsel, if the Trustee has communicated such questions and proposed interpretations or advice to the Commissioner in writing, and if the Commissioner has not objected to the proposed interpretation or advice within 30 days of notification.

Section 11. Trustee Compensation. The Trustee shall be entitled to reasonable

compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee, DES approves the proposed successor, and the successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, DES, and the present Trustee by certified mail ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of the acts contemplated by this Section shall be paid by the Grantor as provided in Section 8.

Section 13. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in Appendix B or such others as may be designated by amendment to Appendix B. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions where Grantor is authorized under this Agreement to issue such orders, requests and instructions. All orders, requests and instructions by DES to the Trustee shall be in writing, signed by the Commissioner. The Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person on behalf of the Grantor or DES has occurred. The Trustee shall have no duty to act in the absence of such orders, requests and instructions from the Grantor and/or DES, except as provided for herein. In the event that the Trustee receives contradicting instructions from the Grantor and the Commissioner, or in the event of a dispute between the Grantor and the Commissioner, the Trustee shall be entitled to rely and act upon the instructions of the Commissioner without incurring any liability and obligation with respect to the Grantor.

**Section 14**. **Amendment of Agreement**. This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, after approval by DES, or by the Trustee and DES if the Grantor ceases to exist and has no successor or assign.

<u>Section 15.</u> <u>Irrevocability and Termination</u>. Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated as provided below. The Fund shall terminate at the earliest of:

(a) The written agreement of the Grantor, the Trustee and the Commissioner, or by the Trustee and the Commissioner, if the Grantor ceases to exist and has no successor or assign.

(b) Certification by the Commissioner that the Closure Work at the Facility has been fully completed.

Upon termination of the Fund, all property remaining in the Fund, less final trust administration expenses shall be delivered to the Grantor.

Section 16. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Fund, or in carrying out any directions by the Grantor or DES issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or, if recourse against the Grantor fails, from the Fund from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

**Section 17**. **Choice of Law**. This Agreement shall be administered, construed, and enforced according to the laws of the State of New Hampshire.

**Section 18**. **Interpretation**. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

Section 19. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the successors and assigns of the parties hereto. The Grantor may not assign its rights and obligations under this Agreement to any other party without the prior written consent of the Commissioner.

**Section 20.** Incorporation of Preamble. The parties to this Agreement adopt and incorporate the assertions of the Preamble as though fully set forth herein.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written.

Witness

By [Grantor]: _____

[Certificate of Corporate Authority]

Witness

By [Trustee]: _____

[Certificate of Corporate Authority]

STATE OF	
COUNTY OF	
The foregoing instrument was ackr	nowledged before me this day of
, 20, by	of
	Notary Public
	My Commission Expires:
STATE OF	
COUNTY OF	
The foregoing instrument was ackr	nowledged before me this day of
, 20, by	of
	Notary Public
	My Commission Expires:

Date of Last Revision: 6/20/11

### APPENDIX A

#### **IRREVOCABLE LETTER OF CREDIT**

Robert R. Scott, Commissioner N. H. Department of Environmental Services 29 Hazen Drive, PO Box 95 Concord, NH 03302-0095

Dear Commissioner Scott:

We hereby establish our Irrevocable Letter of Credit No. ______ in your favor, at the request and for the account of Julie A. Shaw d/b/a Greater Waste Solutions, LLC, 426 Fitchburg Road, Greenville, NH, 03048 (*Mailing Address: 124 Old Wilton Road, Greenville, NH 03048*), up to the aggregate amount of Forty-Nine Thousand, Six U.S. dollars \$49,006.00 available upon presentation of:

(1) your sight draft, bearing reference to this Letter of Credit No. _____, and

(2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of New Hampshire Revised Statutes Annotated, Chapter 149-M."

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year], on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and Julie A. Shaw d/b/a Greater Waste Solutions, LLC, by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both you and Julie A. Shaw d/b/a Greater Waste Solutions, LLC, as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of **Julie A. Shaw** d/b/a **Greater Waste Solutions, LLC**, in accordance with your instruction.

#### [Signature(s) and title(s) of official(s) of issuing institution] [Date]

This credit is subject to the New Hampshire Uniform Commercial Code, N.H. RSA Chapter 382-A, Article 5.

Date of Last Revision: 6/20/11

## Appendix B Designated Persons

Name

Facility/Company

Address

Phone

Fax

E-mail

## SECTION X PERFORMANCE HISTORY



#### **SECTION IX. FINANCIAL REPORT**

Provide the roll information. Use separate paper if necessary.

(1)	The estimated cost of construction the facility, unless the facility is an existing facility and no new construction is proposed: \$
(2)	The type and source of financing: Financing Net Required
(3)	The estimated facility operating cost(s): \$
(4)	The estimated tipping fee or, if no tipping fee will be assessed by the stimated average cost per ton to manage waste at
	the facility: \$125 /ton
(5)	Prepare and submit a financial assurance plan in accordance with Env-Sw 1400. Contact the set Sinancial Assurance Coordinator
	at (603) 271-2925 for additional assistance and guidance, including forms for preparing financial assurance and guidance, including forms for preparing financial assurance and guidance as
	letters of credit, trust agreements, surety bonds, etc.

## SECTION X. PERFORMANCE HISTORY

(1) BACKGROUND INVESTIGATION: (Note: This requirement does not apply if the applicant is a government unit or agency or subdivision of the state. If so, check here and go to question (2) below.)

The applicant must provide as part of this application certain "personal and business disclosure information." The information will be used to facilitate a background investigation by the New Hampshire Department of Justice/Office of Attorney General (NH DoJ/AGO) pursuant to RSA 149-M:9,III and IX. The information is provided by completing two different forms, one for personal disclosure information and one for business disclosure information. The number and type of forms to be completed depends on whether the applicant is an individual or a non-individual and whether the applicant, facility operator and property owner are the same. The forms provide specific instructions for determining which individuals and entities must complete the forms. Submit the completed forms direct to the NH DoJ/AGO, Environmental Protection Bureau, 33 Capitol St., Concord, NH 03301-6397 with a "Notice of Filing" as specified by Section IV of this form. Do NOT submit copies of the completed personal and business disclosure forms to DES.

Note: If blank copies of the Personal and Business Disclosure Forms were not included with this permit application package, you may obtain copies from the P&DRS at (603) 271-2925.

Note also: The applicant must pay the cost incurred by the NH DoJ/AGO to complete the background investigation and prepare a report to DES. An invoice will be sent by the NH DoJ/AGO and payment will be due upon receipt.

#### (2) COMPLIANCE STATUS: The applicant must either:

- sign the Compliance Statement provided below; or
- submit a Compliance Report as specified in Env-Sw 303.15. Mark the Compliance Report as "Attachment X(2)."
- Check the appropriate box above to indicate which option you are undertaking.

#### **COMPLIANCE STATEMENT**

The applicant shall certify that each of the statements listed in (1)-(8) below are true for each of the following individuals and entities:

- d the applicant.
- the facility owner.
- the facility operator.
- all individuals and entities holding 10% or more of the applicant's debt or equity.
- **I** all of the applicant's officers, directors, and partners.

all individuals and entities having managerial, supervisory or substantial decision making authority and responsibility for the management of facility operations or the activity(s) for which approval is being sought.

No individual or entity listed above has been convicted of or plead guilty or no contest to a felony in any state or federal court during the 5 years before the date of the application.
No individual or entity listed above has been convicted of or plead guilty or no contest to a misdemeanor for a violation of

environmental statutes or rules in any state or federal court during the 5 years before the date of the application.

- (3) No individual or entity listed above has owned or operated any hazardous or solid waste facility which has been the subject of an administrative or judicial enforcement action for a violation of environmental statutes or rules during the 5 years before the date of the application.
- (4) No individual or entity listed above has been the subject of any administrative or judicial enforcement action for a violation of environmental statutes and rules during the 5 years before the date of the application.
- (5) All hazardous and solid waste facilities owned or operated in New Hampshire by any individual or entity listed above are in compliance with either:
  - (a) All applicable environmental statutes, rules, and DES permit requirements; or
    - (b) A DES approved schedule for achieving compliance therewith;
- (6) All individuals and entities listed above are in compliance with all civil and criminal penalty provisions of any outstanding consent agreement, settlement, or court order to which DES is a party.

(7)	All individuals and entities listed above have paid, or are in compliance with the payment schedule for any administrative fine assessed by DES; and					
(8)	All individuals and entities listed above are in compliance with all terms and conditions under every administrative order, court					
Simo	order or settlement agreement relating to programs implemented by DES.					
Applica	Applicant Name (Print Clearly or Type)   Greater Waste Solutions, LLC by its Member, Julie A. Shaw					
Applica	ant Signature Julie Shaw					
Date _	7 10 2020					

#### **ECTION XI. PUBLIC BENEFIT**

You must demonstrate that the subject facility will provide a "substantial public benefit" pursuant to the requirements of RSA 149-M:11. a order to make this demonstration, you must show how the facility meets three criteria, as provided in RSA 149-M:11, III(a) -(c), or, an matively, you may certify that operation of the facility satisfies conditions specified in Env-Sw 405.04, summarized as follows:

(1) Irrespective of the source of the waste, the total quantity of waste transferred by the facility on an annual basis to New Hampshire landfills and New Hampshire incinerators shall not exceed the total quantity of waste received by the facility from New Hampshire generators, bured in tons.

[Example: If a facility receives 1000 tons of waste per year from New Hampshire generators and 2000 tons per year from out-ofstate generators, up to 000 tons of the total 3000 tons of waste per year may be transferred by the facility for disposal at New Hampshire landfills and/or acinerators. The remaining 2000 tons must be transferred elsewhere, such as to composting facilities or recycling facilities or out-of-state facilities].

- (2) The facility shall operate, or be put of an integrated system which operates, in a manner which:
  - (a) Separates and diverts recyclable materials to authorized facilities for reuse.
  - (b) Avoids disposal of recyclable reterials in a lined landfill with a leachate collection system.
- (3) During each calendar year that the facility receives waste, the permittee shall communicate with the host solid waste management district as specified in Env-Sw 1105.12.

Therefore, to complete this permit application, you may select either on the following options:

- Submit an independently prepared demonstration of public basefit which identifies how the subject facility meets each of the three public benefit criteria specified in RSA 149-M:11, III(a) (c) Mark as "Attachment XI". (To obtain a copy of the statute, contact the P&DRS at (603) 271-2925 or look up on the internet at the public loss.
- OR
- Sign the following statement to certify the facility will operate in a mannel patisfying the conditions for public benefit in Env-Sw 405.04, as summarized in (1) (3) above. If you select this option, be certain to include sufficient information in the Operating Plan you prepare pursuant to Section VII of this application form to show how facility operations will in fact satisfy the conditions for public benefit. Note: Conditions (1) (3) below will be conditions of any permittive und. Therefore, you MUST accordingly operate the facility and maintain records to verify the same.

### CERTIFICATION FACILITY OPERATIONS SHALL PROVIDE A SUBSTANTIAL PUBLIC BENE IT PER Env-Sw 405.04

(1)	The total quantity of waste that the subject facility transfers annually to New Hampshire landfills and incinerators shall be limited to
	the quantity of waste the subject facility receives annually from New Hampshire generators.
(2)	The subject facility shall operate, or be part of an integrated system of facilities which operates, in a manner wheth: separates and
	diverts recyclable materials to authorized facilities for reuse; and avoids disposal of recyclable materials in a line landfill with a
	leachate collection system.
(3)	During each calendar year, the subject facility shall communicate with the host solid waste management district as sucified in
	Env-Sw 1105.12, for example by sending to the district chairperson a copy of the facility's annual report with a cover letter which
	explains how the facility met its obligations for providing a substantial public benefit during the preceding year and which requires
	the district to identify specific needs which the facility may be able to assist the district in meeting.

## SECTION XI PUBLIC BENEFIT



	All individuals and entities listed above have paid, or are in compliance with the payment schedule for any administrative fine					
	assessable DES; and					
(8)	All individuals and stitles listed above are in compliance with all terms and conditions under every administrative order, court					
	order or settlement agreement plating to programs implemented by DES.					
Signat	ture of the applicant certifying the above statements are true for each of the applicable individuals and entities:					
Applicant Name (Print Clearly or Type) Greater Waste Solutions, Exception its Member, Julie A. Shaw						
Applica	ant Signature Julie Shaw					
Date _	7 62020					

#### SECTION XI. PUBLIC BENEFIT

You must demonstrate that the subject facility will provide a "substantial public benefit" pursuant to the requirements of RSA 149-M:11. In order to make this demonstration, you must show how the facility meets three criteria, as provided in RSA 149-M:11, III(a) -(c), or, alternatively, you may certify that operation of the facility satisfies conditions specified in Env-Sw 405.04, summarized as follows:

(1) Irrespective of the source of the waste, the total quantity of waste transferred by the facility on an annual basis to New Hampshire landfills and New Hampshire incinerators shall not exceed the total quantity of waste received by the facility from New Hampshire generators, figured in tons.

[Example: If a facility receives 1000 tons of waste per year from New Hampshire generators and 2000 tons per year from out-ofstate generators, up to 1000 tons of the total 3000 tons of waste per year may be transferred by the facility for disposal at New Hampshire landfills and/or incinerators. The remaining 2000 tons must be transferred elsewhere, such as to composting facilities or recycling facilities or out-of-state facilities].

- (2) The facility shall operate, or be part of an integrated system which operates, in a manner which:
  - (a) Separates and diverts recyclable materials to authorized facilities for reuse.
  - (b) Avoids disposal of recyclable materials in a lined landfill with a leachate collection system.
- (3) During each calendar year that the facility receives waste, the permittee shall communicate with the host solid waste management district as specified in Env-Sw 1105.12.

Therefore, to complete this permit application, you may select either of the following options:

Submit an independently prepared demonstration of public benefit which identifies how the subject facility meets each of the three public benefit criteria specified in RSA 149-M:11, III(a) - (c); Mark as "Attachment XI". (To obtain a copy of the statute, contact the P&DRS at (603) 271-2925 or look up on the internet at http://www.des.nh.gov).

OR

Sign the following statement to certify the facility will operate in a manner satisfying the conditions for public benefit in Env-Sw 405.04, as summarized in (1) - (3) above. If you select this option, be certain to include sufficient information in the Operating Plan you prepare pursuant to Section VII of this application form to show how facility operations will in fact satisfy the conditions for public benefit. Note: Conditions (1) - (3) below will be conditions of any permit issued. Therefore, you MUST accordingly operate the facility and maintain records to verify the same.

### CERTIFICATION FACILITY OPERATIONS SHALL PROVIDE A SUBSTANTIAL PUBLIC BENEFIT PER Env-Sw 405.04

(1)	The total quantity of waste that the subject facility transfers annually to New Hampshire landfills and incinerators shall be limited to					
	the quantity of waste the subject facility receives annually from New Hampshire generators.					
(2)	The subject facility shall operate, or be part of an integrated system of facilities which operates, in a manner which: separates and					
	diverts recyclable materials to authorized facilities for reuse; and avoids disposal of recyclable materials in a lined landfill with a					
	leachate collection system.					
(3)	During each calendar year, the subject facility shall communicate with the host solid waste management district as specified in					
	Env-Sw 1105.12, for example by sending to the district chairperson a copy of the facility's annual report with a cover letter which					
	explains how the facility met its obligations for providing a substantial public benefit during the preceding year and which requests					
	the district to identify specific needs which the facility may be able to assist the district in meeting.					

## SECTION XII SIGNATURES



Signature of the applicant certifying a	greement that the subject facility shall operate in compliance with the above provisions:
Applicant Name (Print Clearly or Type)	Greater Waste Solutions, LLC by its Member, Julie A. Shaw
Applicant Signature	Shaw
Date 7 10 2020	

## **SECTION XII. SIGNATURES**

#### Applicant Signature

The applicant(s) must sign the following statement prior to submitting this application. All copies of the application filed with DES must bear the applicant's ORIGINAL signature(s). If the applicant is not an individual, an individual duly authorized by the applicant shall sign the application.

(1)	To the best of my knowledge and belief, the information and material submitted herewith is correct and complete.					
(2)	I understand that any approval granted by DES based on false and/or incomplete information shall be subject to revocation or					
	suspension, and that administrative, civil or criminal penalties may also apply.					
(3)	I certify that this application is submitted on a complete and accurate form as provided by DES without alteration of the text.					
			•			
	Greater Waste Solutions, LLC					
Applic	ant Name (Print Clearly or Type)	Co-Applicant Name (Print Clearly or Type)	3			
	ule shaw					
Applicant Signature Julie A Shaw, Member		Co-Applicant Signature				
-1.	10000					
1/2	12020					
Date		Date				

#### **Property Owner Signature**

If the property owner is not the applicant, then the property owner(s) must also sign this form as follows. All copies of the application filed with DES must bear the property owner's ORIGINAL signature(s). If the property owner(s) is not an individual, an individual duly authorized by the property owner shall sign the application.

(1)	I hereby affirm that the applicant has, or shall be granted, the legal right to occupy and use the property on which the subject
	facility is or will be located for the purposes specified in this application.
(2)	I hereby affirm that I shall grant access to the property for closure and post-closure monitoring of the subject facility and site as

required by KSA 149-wi and the New Hampshire Solid Waste Rules (ENV-SW 100-300 and ENV-SW 400-2000), as amended.					
GMB Leasing LLC					
Property Owner Name (Print Clearly or Type)	Joint Owner Name (Print Clearly or Type)				
Property Owner Signature Glen Wishaw, Jr. Member	Joint Owner Signature				
7/ <u>//。  7()</u> Date	Date				

# SECTION XIII FEE CALCULATION FORM



## SECTION XIII. FEE CALCULATION FORM

Pursuant to Part Env-Sw 310 of the New Hampshire Solid Waste Rules, a fee as specified in (1) - (3) below, shall be remitted to TREASURER, STATE OF NEW HAMPSHIRE at the time this application is filed.

(1)	The f	The fee for an existing facility that holds a temporary permit is \$500. Check here 🗌 if applicable.					
(2)	The f	The fee for an existing facility that does NOT hold a temporary permit and which is scheduled to close, is zero.					
	Check here 🗌 if applicable.						
(3)	For all other facilities, follow the instructions in (a) through (d) below:						
	(a)	(a) FACILITY CAPACITY:					
	How many tons per day of solid waste is this facility designed to receive? 600 tons per day (TPD)						
	(b) FACILITY LIFE EXPECTANCY: What is the designed life expectancy of this facility? Unlimited (Years)						
	(c) Using the numbers you have provided in (a) and (b) above, circle the related dollar amount in chart below.						
		FACILITY LIFE EXPECTANCY					
		FACILITY CAPACITY	0-1 YR.	1-5 YRS.	5-10 YRS.	10+ YRS.	
		30 or fewer TPD	\$100.00	\$400.00	\$800.00	\$1,000.00	
		31 to 120 TPD	\$200.00	\$800.00	\$1,000.00	\$2,000.00	
		121 to 300 TPD	\$500.00	\$2,000.00	\$4,000.00	\$5,000.00	
		301 to 600 TPD	\$1,000.00	\$4,000.00	\$8,000.00	\$10,000.00	
		601 or more TPD	\$2,000.00	\$8,000.00	\$16,000.00	\$20,000.00	
(d) Calculate the required fee, using the formula below.							
MINIMUM BASE FEE (MBF) =						\$ 2,000	
		AMOUNT CIRCLED IN ITEM (c) A	BOVE	=	+	\$10,000.00	
	TOTAL FEE = \$ 12,000					\$ 12,000	