SEA APPLICATION ACCEPTED: May 20, 2013
SEA APPLICATION AMENDED: November 8, 2013 & January 6, 2014
2232 APPLICATION ACCEPTED: December 12, 2013
PLANNING COMMISSION: February 27, 2014
BOARD OF SUPERVISORS: Not yet scheduled

County of Fairfax, Virginia

FEBRUARY 24, 2014

STAFF REPORT ADDENDUM

SPECIAL EXCEPTION AMENDMENT SEA 80-L/V-061-02
APPLICATION 2232-V13-18

MOUNT VERNON DISTRICT

APPLICANT:	Furnace Associates, Inc.
ZONING:	R-1 (Residential, 1 du/ac)
PARCELS:	113-1 ((1)) part 5, 7, 8 113-3 ((1)) 1, 2, 4
ACREAGE:	249.82 acres
INTENSITY:	8,800 square feet
PLAN MAP:	Private Recreation and Private Open Space
SE CATEGORY:	Landfill and Electrical Generating Facilities (Category 2), Private Clubs (Radio Controlled Aircraft Field) (Category 3), Baseball Hitting Range and Golf Driving Range (Category 5)
PROPOSAL:	To amend SEA 80-L/V-061 to extend the landfill operation end date and to permit electrical generating facilities, a radio controlled aircraft field, a baseball hitting range, and/or golf driving range.

STAFF RECOMMENDATIONS:

Staff recommends that the Planning Commission find that the solar and wind electrical generating facilities proposed under 2232-V13-18 satisfies the conditions of location,

Mary Ann Tsai, AICP

Department of Planning and Zoning
Zoning Evaluation Division
12055 Government Center Parkway, Suite 801
Fairfax, Virginia 22035-5509
Phone 703-324-1290 FAX 703-324-3924
www.fairfaxcounty.gov/dpz/

character, and extent as specified in Section 15.2-2232 of the Code of Virginia, as amended, and is in accord with the Comprehensive Plan.

Staff recommends approval of SEA 80-L/V-061-02, subject to the approval of the proposed development conditions contained in Appendix 1.

Staff recommends approval of the following waivers and modifications:

- Modification of Par. 9 of Sect. 9-205 of the Zoning Ordinance to permit improvements less than 20 years after the termination of landfill operations;
- Waiver of Par. 11 of Sect. 11-102 of the Zoning Ordinance for a dustless surface;
- Waiver of the peripheral parking lot landscaping requirement pursuant to Par. 6 of Sect. 13-202 of the Zoning Ordinance;
- Waiver of the interior parking lot landscaping requirement pursuant to Par. 3 of Sect. 13-203 of the Zoning Ordinance;
- Modification of the transitional screening and waiver of the barrier requirements pursuant Sect. 13-305 of the Zoning Ordinance to permit the landscaping as shown on the SEA Plat;
- Waiver of Par. 2 of Sect. 17-201 of the Zoning Ordinance for an 8-foot wide major paved trail along the east side of Furnace Road, as shown on the Countywide Trails Plan; and
- Board of Supervisors' approval to permit off-site vehicular parking on Tax Map Parcels 113-1 ((1)) 12 and 13 for the Observation Point, pursuant to Sect. 11-102 of the Zoning Ordinance.

Staff recommends denial of the following requested waivers and modifications:

- Modification of the invasive species management plan requirement pursuant to Section 12-0404.2C of the Public Facilities Manual; and
- Modification of the submission requirements for a tree inventory and condition analysis pursuant to Section 12-0503.3 of the Public Facilities Manual.

It should be noted that it is not the intent of staff to recommend that the Board of Supervisors, in adopting any conditions, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendation of staff; it does not reflect the position of the Board of Supervisors.

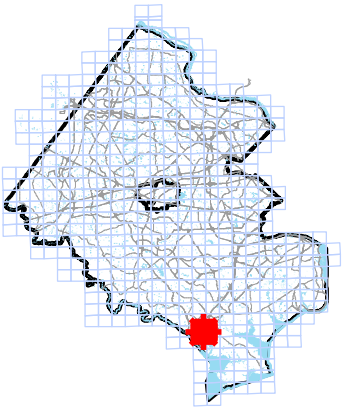
The approval of this application does not interfere with, abrogate or annul any easement, covenants, or other agreements between parties, as they may apply to the property subject to this application.

For information, contact the Zoning Evaluation Division, Department of Planning and Zoning, 12055 Government Center Parkway, Suite 801, Fairfax, Virginia 22035-5505, (703) 324-1290.

Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 48 hours advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

Special Exception Amendment

SEA 80-LV-061-02



Applicant: FURNACE ASSOCIATES, INC.
Accepted: 01/06/2014- AMENDED 05/20/2013 11/08/2013

Proposed: SEA to allow expanded operation of a construction debris landfill with no change in maximum elevation; green energy electrical generating facilities and quasi-public use - private club/public benefit associations - and/or golf driving range and/or outdoor baseball hitting range uses

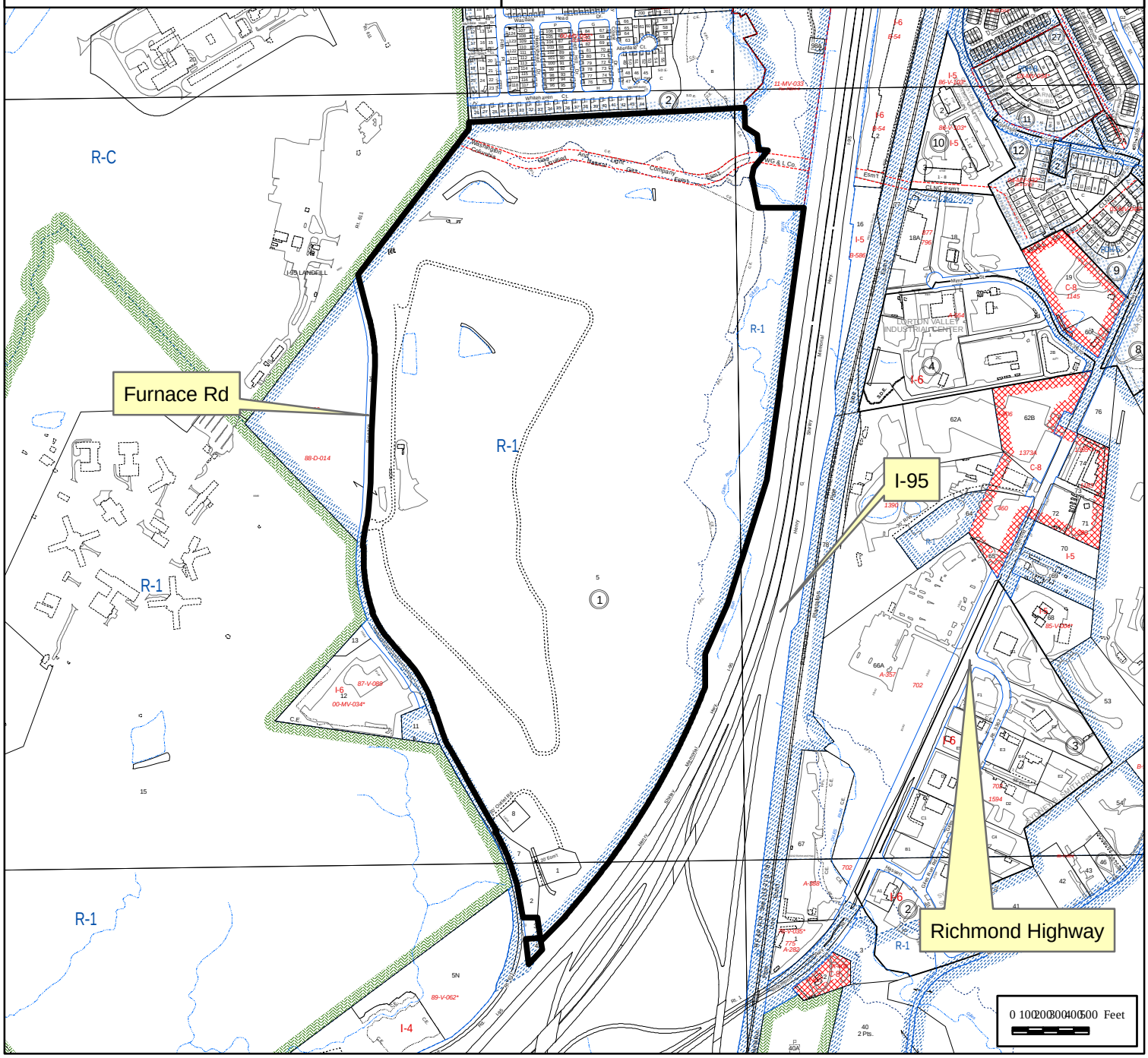
Area: 249.82 AC OF LAND; DISTRICT - MOUNT VERNON

Zoning Dist Sect: 03-010403-010403-010403-010403-010403-0104

Art 9 Group and Use: 2-01 2-03 5-39 3-07 3-07 5-37

Located: 10001, 10201, 10209, 10215, 10219 AND 10229 FURNACE ROAD, LORTON, VA 22079

Zoning: R- 1
Plan Area: 4,
Overlay Dist:
Map Ref Num: 113-1- /01/ /0005 (partial) /01/ /0007 /01/ /0008
113-3- /01/ /0001 /01/ /0002 /01/ /0004



REASON FOR THE ADDENDUM

Subsequent to the publication of the staff report dated February 13, 2014, the applicant revised the SEA Plat to show a 50-foot wide gas transmission easement along the subject property's northern property line. The revision to the SEA Plat is discussed in the Revision to the SEA Plat section of this staff report along with staff's analysis.

At the Board of Supervisors' (Board) February 11, 2014, meeting, staff was directed to address issues raised by the Sierra Clubs of Mount Vernon and Great Falls in their letter dated October 2, 2012, in the staff report. However, at the time of the Board meeting, the staff report had been completed and was in production for printing. As a result, staff was unable to incorporate a response to the Sierra Clubs letter in the staff report as requested. However, staff indicated to the Board that a response would be provided as part of any staff report addendum and such response is provided in the Staff Response to Sierra Clubs' Letter section of this report.

DESCRIPTION OF THE APPLICATION

The applicant, Furnace Associates, Inc., requests approval of a special exception amendment (SEA) for the Lorton Landfill, an existing construction, demolition, and debris (CDD) landfill consisting of six parcels (collectively referred to as the subject property) containing approximately 250 acres in Lorton. Concurrent with this SEA application is 2232-V13-18 in which the applicant proposes solar and wind electrical generating facilities on the subject property and seeks the Planning Commission's determination that the proposed electrical generating facilities satisfies the criteria of location, character, and extent pursuant to Section 15.2-2232 of the Code of Virginia.

Waivers and Modifications

The applicant's requested waivers and modifications were previously described and discussed in the February 13, 2014, staff report. The applicant requests the following waivers and modifications:

- Modification of Par. 9 of Sect. 9-205 of the Zoning Ordinance to permit improvements less than 20 years after the termination of landfill operations;
- Waiver of Par. 11 of Sect. 11-102 of the Zoning Ordinance for a dustless surface;
- Waiver of the peripheral and interior parking lot landscaping requirement pursuant to Par. 6 of Sect. 13-202 and Par. 3 of Sect. 13-203 of the Zoning Ordinance;
- Modification of the transitional screening and waiver of the barrier requirements pursuant Sect. 13-305 of the Zoning Ordinance to permit the landscaping as shown on the SEA Plat;
- Waiver of Par. 2 of Sect. 17-201 of the Zoning Ordinance for an 8-foot wide major paved trail along the east side of Furnace Road, as shown on the Countywide Trails Plan;

- Modification of the invasive species management plan requirement pursuant to Section 12-0404.2C of the Public Facilities Manual;
- Modification of the submission requirements for a tree inventory and condition analysis pursuant to Section 12-12-0503.3 of the Public Facilities Manual; and
- Board of Supervisors' approval to permit off-site vehicular parking on Tax Map Parcels 113-1 ((1)) 12 and 13 for the Observation Point, pursuant to Sect. 11-102 of the Zoning Ordinance.

A redlined copy of the SEA Plat showing the revisions made to the SEA Plat is included as Appendix 1. The proposed development conditions and revised affidavit are contained in Appendix 2 and 3, respectively. The statement of justification remains unchanged from that provided in the February 13, 2014, staff report.

REVISION TO THE SPECIAL EXCEPTION AMENDMENT (SEA) PLAT

On February 21, 2014, the applicant submitted a revised SEA Plat entitled, "Lorton Green Energy Park and Debris Landfill," prepared by BC Consultants on March 22, 2013 and revised through February 20, 2014, consisting of 45 sheets. The applicant revised the SEA Plat upon determining that a 50-foot wide gas transmission easement is located parallel to and overlapping in some areas with an existing 40-foot wide gas transmission easement along the site's northern property line. With the identification of the 50-foot wide gas transmission easement, the applicant revised the SEA Plat to show this transmission easement. This is the only revision to the SEA Plat. Staff revised development condition #4 to reflect February 20, 2014, as the revised through date of the SEA Plat and is contained in Appendix 2. Figure 1 depicts the location of the two gas transmission easements and surrounding area.

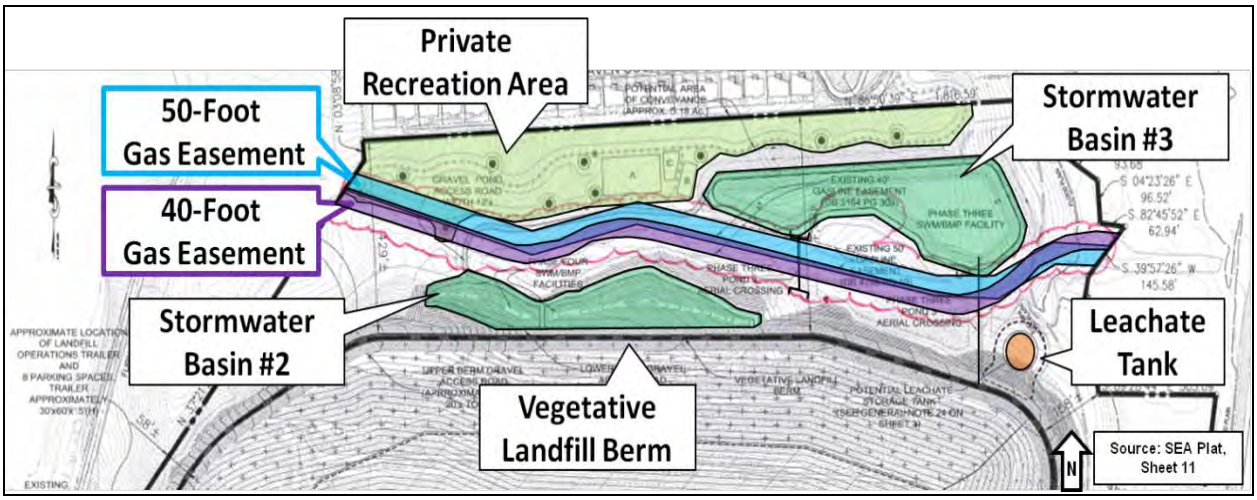


Figure 1: Gas Transmission Easements

ANALYSIS

Landscaping Analysis

The subject property contains an existing tree canopy of 2,662,285 square feet. A 10-year tree canopy of 30% (3,264,617 square feet) is required. The trees located within the 50-foot wide gas transmission easement cannot be counted towards the 10-year tree canopy requirement and are not proposed to be removed. As such, there is a decrease in the provided 10-year tree canopy area and is summarized below.

Previously the applicant proposed to provide a total 10-year tree canopy area of 3,762,728 square feet with 1,734,528 square feet provided through tree preservation. With the 50-foot gas transmission easement, a total 10-year tree canopy area of 3,673,297 square feet is provided with 1,645,097 square feet provided through tree preservation, as shown in the tree canopy calculations on Sheet 23 of the SEA Plat. The difference is a decrease of 89,431 square feet in the tree canopy and tree preservation area. However, with 3,673,297 square feet of tree canopy being provided, this still exceeds the required 3,264,617 square feet. As such, the 10-year tree canopy requirement is still met. In addition, a total of 4,393 deciduous trees and 8,787 evergreen trees proposed remains unchanged and is not affected by the 50-foot gas transmission easement.

In staff's opinion, the 50-foot gas line easement along the northern property line does not adversely impact the 10-year tree canopy requirement and the requirement remains satisfied.

Stormwater Analysis

Best Management Practices (BMPs) facilities in the form of conservation and floodplain easements were provided with the current special exception amendment and associated approved site plan to meet the redevelopment requirement of 10% phosphorous removal. Currently, the site achieves 15% phosphorous removal and will have to meet a minimum of 20% phosphorous removal to meet the new stormwater regulations. The applicant previously stated that it will meet the 20% phosphorous removal requirement if not subject to a grandfathering provision of the new stormwater regulations.

With the 50-foot gas transmission easement, there is no change to the BMP calculations and the subject property still achieves 15% phosphorous removal, which is greater than the required 10%. However, as shown on Sheet 27 of the SEA Plat, with the gas easement, there is an increase to the conservation easements (CE-1 and CE-2) along the northern property from 3.89 acres to 4.16 acres. The conservation easement to be removed in the northeastern area of the subject property identified as CE-TBR changes from 8.54 acres to 9.26 acres. A near in kind conservation easement is proposed to replace CE-TBR and was previously discussed in the staff report dated

February 13, 2014. The floodplain easements along the northern property line (FP-1-4) decreases from 23.81 acres to 23.43 acres.

In staff's opinion, the 50-foot gas transmission easement along the northern property does not adversely impact the areas being served by BMP facilities and the BMP requirement still is being met.

STAFF RESPONSE TO SIERRA CLUBS' LETTER

As previously discussed, at the February 11, 2014, Board of Supervisors' meeting, staff was directed to address issues raised by the Sierra Clubs of Mount Vernon and Great Falls in their letter dated October 2, 2012. In their 2012 letter, the Sierra Clubs stated with regard to the request to extend the use of the Lorton Landfill beyond 2019, "we believe that a careful study of the environmental effects of such an extension, including any implication for ground water, should be done before the project is approved." A copy of the Sierra Clubs' letter is provided as Appendix 4.

The staff report dated February 13, 2014, and proposed development conditions address a variety of environmental issues, such as landscaping, tree canopy, tree preservation, stormwater management and detention, leachate control, and landfill gas management. The staff report also addresses the issue of ground water impacts through an existing development condition that is proposed to remain, which states "[a] Groundwater Monitoring Program shall be prepared and implemented in accordance with Virginia's Solid Waste Management Regulations. A copy of all water test results, including groundwater, surface water and water quality, submitted to DEQ, shall also be submitted at the same time to the Fairfax County Health Department and the Solid Waste Program, DPWES. If, upon determination by DEQ and/or Fairfax County, any off-site private well is adversely affected by the landfill operation, the landfill owner will provide an adequate potable water supply to any affected property within 48 hours of being notified of such a determination." DPZ staff is unaware of any unacceptable pollutants having been introduced into the surface or groundwater or otherwise cause a potential health hazard. In addition, monitoring is required by the Virginia Department of Environmental Quality (DEQ).

Should the Board of Supervisors' approve SEA 80-L/V-061-02, a more extensive review continues after the Board's approval through a technical review by the County's Geotechnical Review Board (GRB), which includes environmental impacts and site plan review by the Department of Public Works and Environmental Services. Development conditions are proposed that any and all recommendations within the purview of the GRB shall be implemented. Additionally, existing development conditions related to the environment include conditions on stormwater management and best management practices, a Water Quality Impact Assessment, a Gas Management Plan, and landscaping, and encroachment in the Giles Run Resource Protection Area are proposed to remain.

The Virginia Department of Environmental Quality (DEQ) is the ultimate permitting, regulatory, and enforcement body for landfills in Virginia. Should the Board of Supervisors approve SEA 80-L/V-061-02, the applicant would then be required to apply and receive DEQ approval for a Major Permit Amendment to the existing solid waste permit. Staff has proposed a development condition that if the applicant does not received DEQ approval for a Major Permit Amendment then this SEA shall be null and void and is contained as part of development condition #10 in Appendix 2.

The Major Permit Amendment is an extensive, three-part application and review process and consists of a Notice of Intent, Part A Permit Application, and Part B Permit Application. The Part A Permit Application requires the submission of soils, geotechnical, and hydrogeological reports, as detailed the Solid Waste Management Regulations contained in Virginia Administrative Code 9VAC20-81-460 at http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+9VAC20-81-460. The Part B Permit Application requires the landfill owner/operator to provide groundwater testing and a groundwater monitoring program, in accordance with the guidelines at http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+9VAC20-81-250 (9VAC20-81-250). The groundwater monitoring program requires landfill owners/operators to install, operate, and maintain a groundwater monitoring system that is capable of determining the landfill's impact on the quality of groundwater in the uppermost aquifer at the disposal unit boundary during the active life and post-closure care period of the landfill. In addition, DEQ requires and reviews leachate collection, control, storage, and treatment systems and the landfill gas management plan. A public hearing and review of public comments are part of the DEQ permit process. After a Major Permit Amendment is approved, a landfill owner/operator is required to submit semi-annual groundwater and surface water monitoring test results to DEQ.

The Sierra Clubs' letter also states "[s]tate law also requires that ESI reach agreement with Dominion Virginia Power regarding the number of grid interconnection related issues. We believe the County has a role to play in these negotiations and should work with ESI and Dominion to reach resolutions that share the substantial benefits of this proposed project…"

It has been staff's understanding and the applicant has confirmed that the applicant would have to reach an agreement with Dominion Virginia Power if it were to sell electricity onto the electrical grid through Dominion Virginia Power. However, based on discussions with the applicant, the electricity would more likely be delivered to the Landfill Energy Systems facility (formerly known as the Michigan Cogeneration facility) rather than through Dominion Virginia Power's electrical grid. Should the applicant decide to sell the electricity generated from the proposed electrical generating facilities (wind turbines, solar panels, methane gas, and geothermal infrastructure) through Dominion Virginia Power, then the County will have a role to play in these negotiations to ensure that the County maximizes its benefits from the alternative energy generated on the site.

CONCLUSIONS AND RECOMMENDATIONS

Staff Conclusions

The revised Special Exception Amendment (SEA) Plat dated February 20, 2014, reflects the identification of a 50-foot wide gas transmission easement that runs in an east to west direction along the northern property line. This is the sole revision to the SEA Plat. Staff has determined that the inclusion of this gas easement has minimal impact on the application, as described in the staff analysis.

Staff previously studied the environmental effects of extending the operation of the subject CDD landfill beyond 2019, including any implication for groundwater. In staff's opinion, the proposed development conditions, technical review by the County's Geotechnical Review Board, review by the Department of Public Works and Environmental Services, and technical review and monitoring by the Virginia Department of Environmental Quality, provide sufficient review of impacts to the environment and groundwater.

Recommendations

The recommendations contained in the staff report dated February 13, 2014, remain unchanged and were previously discussed in that staff report.

Staff recommends that the Planning Commission find that the solar and wind electrical generating facilities proposed under 2232-V13-18 satisfies the conditions of location, character, and extent as specified in Section 15.2-2232 of the Code of Virginia, as amended, and is in accord with the Comprehensive Plan.

Staff recommends approval of Special Exception Amendment SEA 80-L/V-061-02, subject to the proposed development conditions contained in Appendix 2.

Staff recommends approval of the following waivers and modifications:

- Waiver of Par. 9 of Sect. 9-205 of the Zoning Ordinance to permit improvements less than 20 years after the termination of landfill operations;
- Waiver of Par. 11 of Sect. 11-102 of the Zoning Ordinance for a dustless surface;
- Waiver of the interior parking lot landscaping requirement pursuant to Par. 3 of Sect. 13-203 of the Zoning Ordinance;
- Waiver of the peripheral parking lot landscaping requirement pursuant to Par. 6 of Sect. 13-202 of the Zoning Ordinance;
- Modification of the transitional screening and waiver of the barrier requirements pursuant Sect. 13-305 of the Zoning Ordinance, as shown on the SEA Plat;
- Waiver of the Countywide Trails Plan recommendation for an 8-foot wide major paved trail along the east side of Furnace Road; and

- Board of Supervisors' approval to permit off-site vehicular parking for the Observation Point on Tax Map Parcels 113-1 ((1)) 12 and 13 pursuant to Sect. 11-102 of the Zoning Ordinance.

Staff recommends denial of the following requested waivers and modifications:

- Modification of the invasive species management plan requirement pursuant to Section 12-0404.2C of the Public Facilities Manual; and
- Modification of the submission requirements for a tree inventory and condition analysis pursuant to Section 12-0503.3 of the Public Facilities Manual.

It should be noted that it is not the intent of staff to recommend that the Board of Supervisors, in adopting any development conditions, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

The approval of this special exception amendment does not interfere with, abrogate or annul any easement, covenants, or other agreements between parties, as they may apply to the property subject to this application.

It should be further noted that the content of this report reflects the analysis and recommendations of staff; it does not reflect the position of the Board of Supervisors.

APPENDICES

1. Special Exception Amendment Plat
2. Proposed Development Conditions
3. Affidavit
4. Sierra Clubs of Mount Vernon and Great Falls Letter

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Department of Planning & Zoning

FEB 21 2014

Zoning Evaluation Division

LORTON GREEN ENERGY PARK AND DEBRIS LANDFILL

SPECIAL EXCEPTION AMENDMENT PLAT

SEA 80-L/V-061-2

FAIRFAX COUNTY, VIRGINIA

MARCH 22, 2013

REVISED MAY 14, 2013

REVISED SEPTEMBER 11, 2013

REVISED OCTOBER 7, 2013

REVISED NOVEMBER 1, 2013

REVISED DECEMBER, 10, 2013

REVISED JANUARY 22, 2014

REVISED FEBRUARY 20, 2014

OWNER/APPLICANT

FURNACE ASSOCIATES, INC.
11220 Assett Loop
Suite 201
Manassas, VA 20109
Telephone 703.378.0600
Fax 703.378.0800

ATTORNEY/AGENT

HUNTON & WILLIAMS LLP
1751 Pinnacle Drive
Suite 1700
McLean, VA 22102
Telephone 703.714.7400
Fax 703.714.7410

ENGINEER/LANDSCAPE ARCHITECT/PLANNER

THE BC CONSULTANTS
12600 Fair Lakes Circle
Suite 100
Fairfax, VA 22033
Telephone 703.449.8100
Fax 703.449.8108

ENGINEER/ENERGY CONSULTANTS

GEOSYNTEC CONSULTANTS
9211 Arboretum Parkway
Suite 200
Richmond, VA 23236
Telephone 804.767.2206
Fax 804.767.2182

VICINITY MAP
SCALE: 1" = 2,000'

SHEET INDEX

Sheet List Table

Sheet Number	Sheet Title
1	COVER SHEET
2	PHASING PLAN AND TABULATIONS
3	GENERAL NOTES AND COMMENTS
4	EXISTING CONDITIONS
5	EXISTING VEGETATION MAP
6	PHASE ONE OPERATIONS AREAS
7	PHASE TWO OPERATIONS AREAS
8	PHASE THREE OPERATIONS AREAS
9	PHASE FOUR OPERATIONS AREAS
10	PHASE FIVE OPERATIONS AREAS
11	PHASE FIVE - AT COMPLETION OF OPERATIONS
12	PHASE FIVE - AT COMPLETION OF OPERATIONS
13	PHASE FIVE - AT COMPLETION OF OPERATIONS
14	SITE DETAILS
15	SITE DETAILS
16	PHASE ONE LANDSCAPE PLAN
17	PHASE TWO LANDSCAPE PLAN
18	PHASE THREE LANDSCAPE PLAN
19	PHASE FOUR LANDSCAPE PLAN
20	PHASE FIVE LANDSCAPE PLAN
21	NORTHERN TRANSITIONAL SCREENING AREA
22	LANDSCAPE DETAILS
23	LANDSCAPE DETAILS
24	TREE PRESERVATION PLAN
25	TREE PRESERVATION DETAILS
26	QUEUING AREAS
27	BMP PLAN
28	OVERALL STORMWATER MANAGEMENT PLAN
29	OVERALL STORMWATER MANAGEMENT
30	STORMWATER MANAGEMENT POND 2
31	OUTFALL CROSS SECTIONS POND 2
32	STORMWATER MANAGEMENT POND 3
33	OUTFALL CROSS SECTIONS POND 3
34	STORMWATER MANAGEMENT POND 8
35	OUTFALL CROSS SECTIONS POND 8
36	STORMWATER MANAGEMENT POND 9
37	OUTFALL CROSS SECTIONS POND 9
38	OVERALL DRAINAGE AREA MAP
39	PHASE ONE LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
40	PHASE TWO LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
41	PHASE THREE LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
42	PHASE FOUR LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
43	PHASE FIVE LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
44	SIGHT DISTANCE
45	PHASE SIX - CATEGORY 3 AND/OR 5 END USES

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(703)449-8100 (703)449-8108 (Fax)
www.bcconsultants.com

COMMONWEALTH OF VIRGINIA
DENNIS D. SOOW
Lic. No. 0437
2-20-2014
LANDSCAPE ARCHITECT

APPENDIX 1

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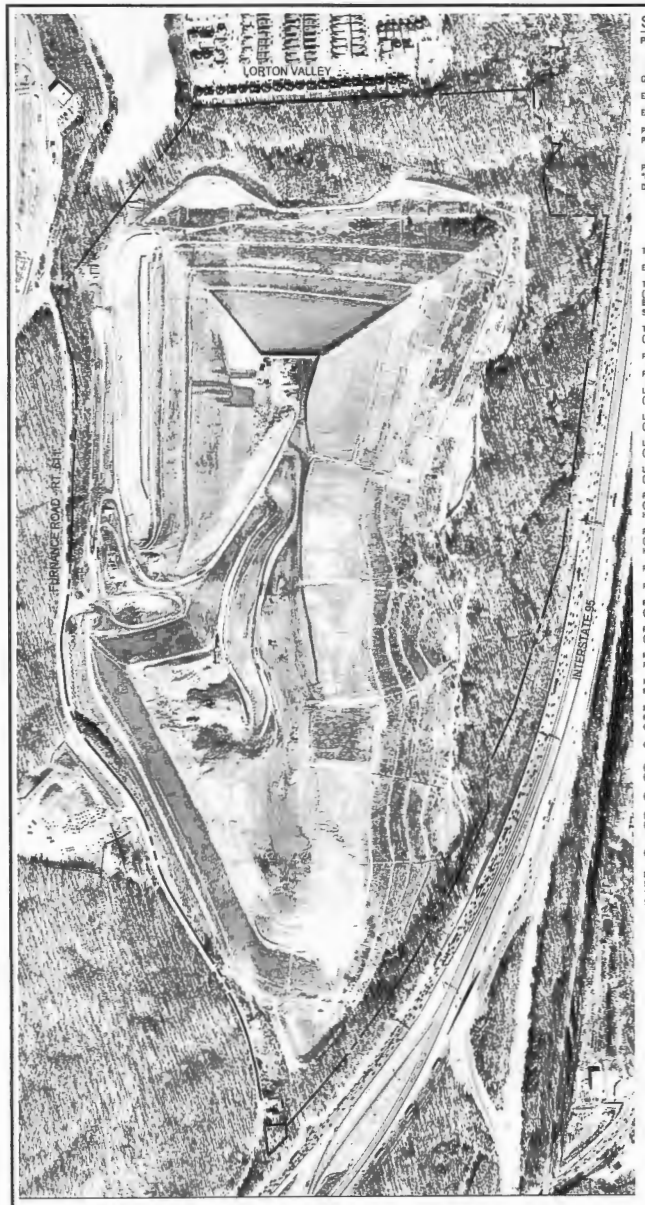


AERIAL PHOTOGRAPH SCALE: 1"=300'

SITE TABULATIONS:

PARCELS:	FAIRFAX COUNTY TAX ASSESSMENT MAPS: 113-1 ((1)) PARCELS 7, 8 AND PART OF PARCEL 5 113-3 ((1)) PARCELS 1, 2 AND 4
GROSS SITE AREA (G.S.A.):	249.82 Ac.± (10,882,058 s.f.±)
EXISTING ZONING:	R-1
EXISTING USE:	DEBRIS LANDFILL
PROPOSED USE (DURING LANDFILL OPERATIONS AND PRIOR TO "POST-CLOSURE PERIOD"):	CATEGORY TWO DEBRIS LANDFILL AND ELECTRIC GENERATING FACILITIES (1*); OBSERVATION POINT (1*)
PROPOSED USE (AFTER LANDFILL OPERATIONS, DURING "POST-CLOSURE PERIOD" AND CONTINUING PAST DEQ RELEASE) (6*):	CATEGORY 2 DEBRIS LANDFILL AND POTENTIAL ELECTRIC GENERATING FACILITIES (CATEGORY TWO USES); CATEGORY THREE QUASI-PUBLIC USES PRIVATE CLUB AND/OR PUBLIC BENEFIT ASSOCIATIONS (2*) AND/OR CATEGORY FIVE OUTDOOR BASEBALL HITTING RANGE (PHASES 5 AND 6) AND/OR GOLF DRIVING RANGE (2*); OBSERVATION POINT ONLY UNTIL RELEASE BY DEQ.
TOTAL GROSS FLOOR AREA OF EXISTING STRUCTURES:	5,000 s.f. ±
EXISTING FLOOR AREA RATIO:	0.00046
TOTAL GROSS FLOOR AREA OF PROPOSED STRUCTURES (ONE OPERATIONS TRAILER AT END OF PHASE 5; ONE BASEBALL HITTING RANGE MAINTENANCE AND OPERATIONS STRUCTURE):	2,500 s.f. ±
TOTAL GROSS FLOOR AREA OF PROPOSED STRUCTURES (TWO OPERATIONS/MAINTENANCE STRUCTURE FOR PHASE 6):	1,300 s.f. ± (3*)
PROPOSED FLOOR AREA RATIO (AT END OF PHASE 5):	0.00023
PROPOSED FLOOR AREA RATIO (PHASE 6):	0.00012
LOADING SPACES REQUIRED FOR PHASES 1-5 (FOR LANDFILL OPERATIONS AND GREEN ENERGY USES):	2 (4*)
LOADING SPACES PROVIDED FOR PHASES 1-5 (FOR LANDFILL OPERATIONS AND GREEN ENERGY USES):	2 (4*)
LOADING SPACES REQUIRED FOR PHASES 6 (FOR END USES AND MAINTENANCE):	0 (4*)
LOADING SPACES PROVIDED FOR PHASE 6 (FOR END USES AND MAINTENANCE):	0 (4*)
PARKING SPACES REQUIRED FOR PHASES 1-5 (FOR LANDFILL OPERATIONS, MAINTENANCE, BASEBALL HITTING RANGE AND GREEN ENERGY USES):	42 (4*)
PARKING SPACES PROVIDED FOR PHASES 1-5 (FOR LANDFILL OPERATIONS, MAINTENANCE, BASEBALL HITTING RANGE AND GREEN ENERGY USES):	42 (4*)
PARKING SPACES REQUIRED AT THE END OF PHASE FIVE:	34 (4*)
PARKING SPACES PROVIDED AT THE END OF PHASE FIVE:	34 (4*)
PARKING SPACES REQUIRED FOR PHASE 6 (FOR END USES AND MAINTENANCE):	78 (4*)
PARKING SPACES PROVIDED FOR PHASE 6 (FOR END USES AND MAINTENANCE):	78 (4*)
MAXIMUM HEIGHT OF STRUCTURE ALLOWED FOR ALL PHASES:	60'
MAXIMUM HEIGHT OF STRUCTURE PROPOSED FOR PHASES 1-5:	180' (5*)
MAXIMUM HEIGHT OF STRUCTURE PROPOSED FOR PHASE 6 (EXCEPT FOR ACCESSORY CONTAINMENT NETS AND POLES):	15' ±
OPEN SPACE REQUIRED/PROVIDED:	NOT APPLICABLE

(1) PHASES 1 THROUGH 5.
(2) PHASE 6 (AFTER LANDFILL CLOSURE AND VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) RELEASE. SEE SHEET 45 FOR ADDITIONAL INFORMATION.)
(3) PHASE 5 STRUCTURES TO BE REMOVED AT THE BEGINNING OF PHASE 6 (EXCEPT THE BASEBALL HITTING RANGE, IF ALLOWED BY DEQ DURING PHASE 5, MAY REMAIN IN PHASE 6).
(4) BASED ON A REVIEW BY THE DIRECTOR.
(5) THE THREE INITIAL WIND TURBINES DURING PHASES 1-4 ARE DEEMED "ACCESSORY USES". THE POTENTIAL 12 WIND TURBINES SHOWN DURING PHASE 5 ARE CONTINGENT UPON BOARD OF SUPERVISOR'S APPROVAL OF A ZONING ORDINACE AMENDMENT PER ZONING ORDINANCE SECTION 9-607.
(6) USES SHOWN PRIOR TO DEQ RELEASE MAY BE PROVIDED ONLY AS MAY BE APPROVED BY DEQ.

NOTE: PER ZONING ORDINANCE SECTION 11-102, THE APPLICANT REQUESTS BOARD OF SUPERVISORS' APPROVAL OF OFFSITE PARKING FOR THE OBSERVATION POINT (ACCESSORY USE) ON TAX ASSESSMENT MAP NO. 113-1 ((1)), PARCELS 12 AND 13 SUBJECT TO PCA APPLICATION 2000-MV-034. SEE NOTE 21 ON SHEET 3.

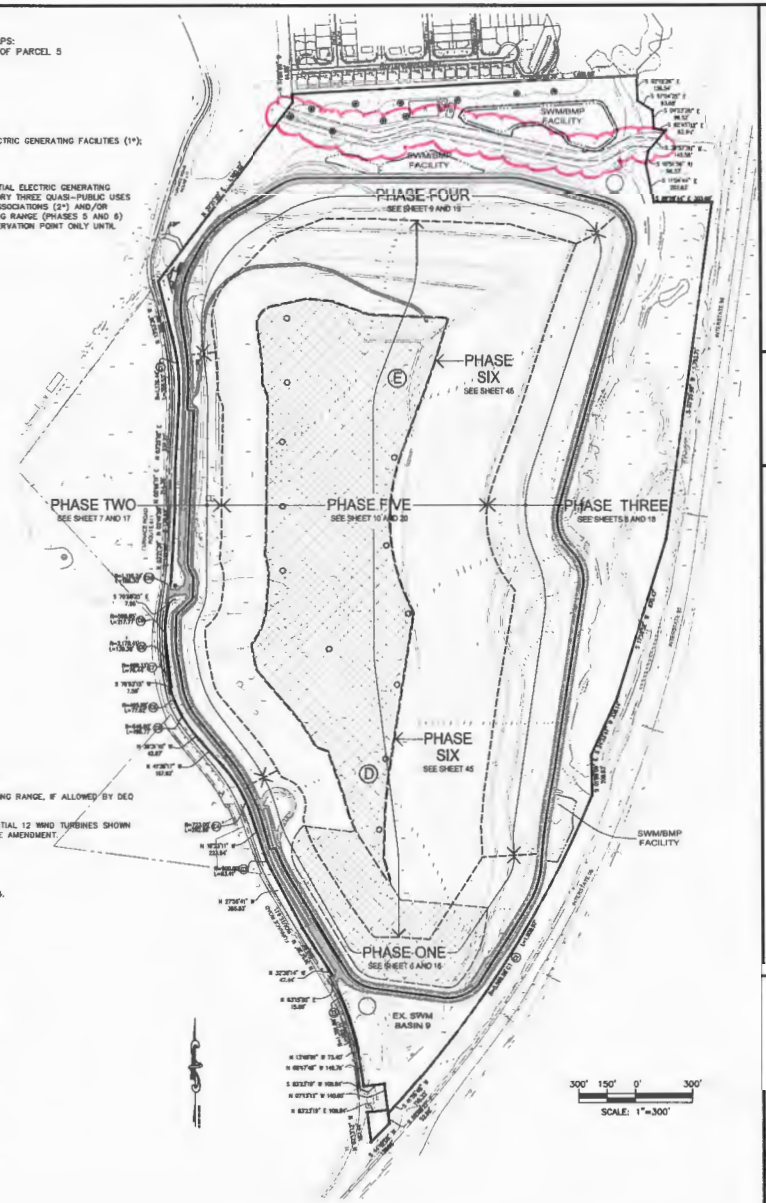
LEGEND:

- (A) APPROXIMATE LOCATION OF POTENTIAL MULTI-PURPOSE OPEN SPACE AREA
- (B) APPROXIMATE LOCATION OF POTENTIAL DOG PARK
- (C) APPROXIMATE LOCATION OF POTENTIAL PICNIC AREA
- ○ APPROXIMATE LOCATION OF POTENTIAL WIND TURBINES (BY APPLICANT/OWNER AND/OR OTHERS)
- ◉ APPROXIMATE LOCATION OF POTENTIAL EXERCISE STATIONS
- 100-YR. FLOODPLAIN
- EQC/RPA
- APPROXIMATE LOCATION OF PROPOSED VEGETATED LANDFILL BERM
- POTENTIAL AREAS FOR SOLAR PANELS IN PHASE 5, AND FOR SOUTHERN 10 ACRES ONLY IN PHASES 4 AND 6 (BY APPLICANT/OWNER AND/OR OTHERS)
- (D) OBSERVATION POINT (PHASES 1 THROUGH 4)
- (E) OBSERVATION POINT** (PHASE 5 THROUGH POST CLOSURE)

** OBSERVATION POINT WILL BE RELOCATED AS REQUIRED DURING PHASE 5 TO ALLOW ONGOING LANDFILL OPERATIONS.

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C1	5,349.24'	1,900.97'	958.82'	S 32°09'06" W	1,891.78'	19°37'21"
C2	1,281.88'	383.31'	193.53'	N 20°28'48" W	380.79'	17°02'01"
C3	300.00'	83.61'	41.99'	N 33°08'56" W	83.32'	8°47'30"
C4	733.00'	292.88'	148.53'	N 28°52'54" W	290.85'	23°31'01"
C5	648.00'	186.77'	99.15'	N 30°47'36" W	186.01'	17°28'09"
C6	495.00'	77.82'	38.99'	N 17°26'45" W	77.55'	8°58'06"
C7	348.00'	217.77'	110.10'	S 05°26'35" W	218.37'	8°38'06"
C8	2,179.41'	136.32'	68.18'	S 05°58'34" E	136.32'	3°35'55"
C9	606.40'	220.91'	111.49'	N 20°26'32" E	219.70'	20°52'05"
C10	1,116.24'	188.30'	94.37'	N 06°11'27" E	188.08'	9°39'35"
C11	1,176.64'	358.53'	179.13'	N 05°14'06" W	354.18'	17°46'33"



LORTON GREEN ENERGY PARK AND DEBRIS LANDFILL PHASING PLAN SCALE: 1"=300'

REFER TO SHEETS 6 THROUGH 13 AND SHEET 45 TO IDENTIFY THE FACILITIES PROVIDED DURING EACH PHASE.

BC Consultants
Planners · Engineers · Surveyors · Landscape Architects
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(703)449-8100 (703)449-8108 (Fax)
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SPECIAL EXCEPTION AMENDMENT
PHASING PLAN AND TABULATIONS

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED 5-14-2013	
REVISED 8-11-2013	
REVISED 11-1-2013	
REVISED 12-19-2013	
REVISED 1-28-2014	

APPLICANT:
LORTON VALLEY ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. AS SHOWN VERT.
SHEET 2 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117COMP
LAYOUT: COMPOSITE
FILE NO. 05117.08-00

V:\project_2005\05117\Plan\Cadfiles\SEA OVERLOOK BERM\SE5117COMP.dwg, 2/21/2014 10:48:50 AM

GENERAL NOTES:

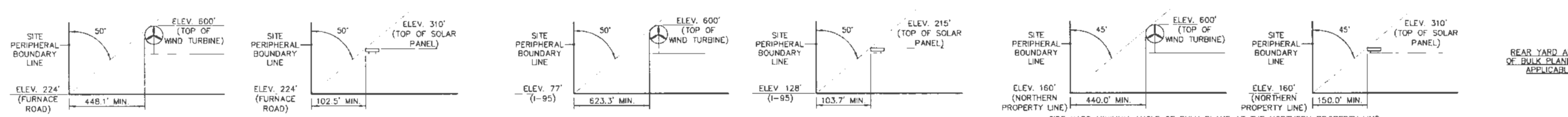
1. THIS APPLICATION SEEKS TO AMEND PREVIOUSLY APPROVED SPECIAL EXCEPTION SEA 80-L/V-061 PURSUANT TO SECTIONS 3-104, 9-200, 9-300 AND 9-500 OF THE ZONING ORDINANCE IN ORDER TO EXTEND THE USEFUL LIFE OF THE EXISITING CONSTRUCTION DEMOLITION AND DEBRIS (CDD) LANDFILL TO ALLOW THE ESTABLISHMENT OF RENEWABLE ENERGY ELECTRICAL GENERATING FACILITIES BY THE APPLICANT/OWNER AND/OR OTHERS, AND ALLOW CATERGORY 3-QUASI PUBLIC USE PRIVATE CLUB/ PUBLIC BENEFIT ASSOCIATIONS AND/OR CATEGORY 5-OUTDOOR BASEBALL HITTING RANGE AND/OR GOLF DRIVING RANGE USES. NO INCREASE IN THE MAXIMUM HEIGHT OF THE LANDFILL (FINAL DEBRIS ELEVATION) IS BEING REQUESTED IN THIS APPLICATION.
2. THE PROPERTY DELINEATED ON THIS SPECIAL EXCEPTION AMENDMENT PLAT IS IDENTIFIED AS FAIRFAX COUNTY TAX ASSESSMENT MAP #113-1 ((1)), PARCELS 7, 8 AND PART OF PARCEL 5, AND AS MAP #113-3 ((1)), PARCELS 1, 2 AND 4 AND IS ZONED R-1.
3. THE BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON A BOUNDARY SURVEY PROVIDED BY WILLIAM H. GORDON ASSOCIATES, INC. (CHANTILLY, VA), DATED FEBRUARY 2004 AND FIELD VERIFIED BY BC CONSULTANTS IN APRIL 2007.
4. THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS FROM AN AERIAL SURVEY CONDUCTED BY AERO-METRIC AND IS COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED MAY 3, 2012. THE SURVEY IS BASED UPON NAD 83 (NORTH ZONE) HORIZONTAL DATUM AND NGS MEAN SEA LEVEL VERTICAL DATUM. THE TOPOGRAPHY IS SHOWN AT TWO (2) FEET CONTOUR INTERVALS.
5. THE PROPERTY SHOWN ON THIS PLAT IS IN THE MOUNT VERNON MAGISTERIAL DISTRICT, OCCOQUAN SEWER SHED AND THE MILL BRANCH WATERSHED.
6. THIS DEVELOPMENT IS IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE FAIRFAX COUNTY COMPREHENSIVE PLAN AND CONFORMS WITH THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS AND CONDITIONS (INCLUDING SECTIONS 9-201 THROUGH 9-205, 9-300 AND 9-500 OF THE FAIRFAX COUNTY ZONING ORDINANCE) WITH THE EXCEPTION OF THE FOLLOWING WAIVER AND MODIFICATION REQUESTS. SEE "APPLICANT'S STATEMENT" AND "SE STANDARDS ANALYSIS" WHICH HAVE BEEN FILED UNDER SEPARATE COVER.
   - MODIFICATION AND/OR WAIVER OF THE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS TO THE NORTH, EAST, SOUTH AND WEST TO THAT AS SHOWN ON THE PLAT PURSUANT TO ARTICLE 13, SECTION 13-305, PARAGRAPHS 3, 5 7, 11 12 AND 14 OF THE FAIRFAX COUNTY ZONING ORDINANCE. SEE SHEET 21 FOR A DETAILED DEPICTION OF PROPOSED SCREENING TO BE PROVIDED TO THE NORTH.
   - WAIVER OF THE COUNTYWIDE TRAILS PLAN IS HEREBY REQUESTED SEE GENERAL NOTE 7 BELOW.
   - WAIVER OF THE DUSTLESS SURFACE REQUIREMENTS FOR THE GRAVEL ACCESS ROADS AND PARKING AREAS IN ALL PHASES.
   - WAIVER OF PARAGRAPH 9 OF SECTION 9-205 OF THE ZONING ORDINANCE IS REQUESTED TO PERMIT IMPROVEMENTS AS DEPICTED ON THE SEA-2 PLAT WHICH ARE PROPOSED AFTER TERMINATION OF LANDFILL OPERATIONS AND PRIOR TO DEQ RELEASE. THESE IMPROVEMENTS SHALL INCLUDE ALL THOSE SHOWN ON THE PLAT, SUCH AS THE OBSERVATION POINT, TRAILER, GREEN ENERGY USES AND ACTIVE RECREATION USES, AS MAY BE APPROVED BY DEQ.
   - GIVEN THE UNUSUAL NATURE OF LANDFILL OPERATIONS, THE AMOUNT OF UNDISTURBED AREA AND THE SIZE OF THE SITE, THE APPLICANT REQUESTS THAT THE BOARD OF SUPERVISORS DIRECTS THE DIRECTOR OF DPWES TO MODIFY THE REQUIREMENTS OF PFM SECTION 12-0404.2C AND TO WORK WITH THE APPLICANT TO IMPLEMENT A REASONABLE INVASIVE SPECIES MANAGEMENT PLAN THAT IS COST EFFECTIVE AND LIMITED IN SCOPE
   - PER ZONING ORDINANCE SECTION 11-102, THE APPLICANT REQUESTS BOARD OF SUPERVISORS' APPROVAL OF OFFSITE PARKING FOR THE OBSERVATION POINT (ACCESSORY USE) ON TAX ASSESSMENT MAP NO. 113-1 ((1)), PARCELS 12 AND 13, SUBJECT TO PCA APPLICATION 2000-MV-034.
   - MODIFICATION OF THE 35' TRANSITIONAL SCREENING TO THAT SHOWN ON PLAT AND WAIVER OF THE BARRIER REQUIREMENT FOR PHASES 5 AND 6 RECREATION USES PURSUANT TO PARAGRAPHS 3, 11 AND 12 OF SECTION 13-305 OF THE ZONING ORDINANCE.
   - WAIVER OF INTERIOR AND PERIPHERAL PARKING LOT LANDSCAPING REQUIREMENTS IN ALL PHASES GIVEN THE UNIQUE NATURE OF THE USES AND ELEVATION OF THE PROPOSED RECREATIONAL USES.
7. THE COUNTYWIDE TRAILS PLAN RECOMMENDS AN EIGHT FOOT (8') WIDE ASPHALT TRAIL ON THE EAST SIDE OF FURNACE ROAD. A WAIVER OF SAID TRAIL IS HEREBY REQUESTED, AS GRANTED PREVIOUSLY BY THE BOARD OF SUPERVISORS IN SEA 80-L/V-061-1, THE LIMITED SPACE AND ON-SITE VEHICULAR ACTIVITY BETWEEN THE RIGHT-OF-WAY AND THE LANDFILL BERM, BECAUSE SUCH IMPROVEMENT WOULD NOT CONNECT TO ANY PORTION OF AN ESTABLISHED TRAIL SYSTEM, AND A TRAIL HAS BEEN INSTALLED ON THE WEST SIDE OF FURNACE ROAD ALONG PARCELS 12 AND 13.
8. THE FAIRFAX COUNTY WATER AUTHORITY IS THE PUBLIC WATER SUPPLY AGENCY FOR THIS DEVELOPMENT. WATER WILL BE PROVIDED TO THE SITE BY CONNECTING TO AN EIGHT (8) INCH WATERLINE LOCATED IN FURNACE ROAD. THE COUNTY OF FAIRFAX IS THE SANITARY SEWER SUPPLY AGENCY FOR THIS DEVELOPMENT AND CURRENTLY PROVIDES SERVICE TO THE SITE.
9. THIS PLAT SHOWS ALL KNOWN (WITHOUT THE BENEFIT OF TITLE REPORT INFORMATION) EXISTING UNDERGROUND UTILITIES AND ALL EXISTING UTILITY EASEMENTS OF 25' OR MORE. THE LOCATIONS OF THE EASEMENTS SHOWN ARE FROM TAX RECORDS AND/OR DEEDS AND INFORMATION OF RECORD AND SHOULD NOT BE REGARDED AS CORRECT AND FINAL.
10. THIS PLAT DOES NOT SHOW PROPOSED UTILITIES. ALL NECESSARY PUBLIC UTILITIES ARE READILY ACCESSIBLE TO THE SITE AND WILL BE EXTENDED BY THE DEVELOPER OR UTILITY COMPANY. UTILITY PLANS AND PROFILES WILL BE SUBMITTED IN THE FUTURE FOR CONSTRUCTION PURPOSES. THE BC CONSULTANTS, INC. ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION WITH THESE PLANS.
11. HAZARDOUS AND/OR TOXIC SUBSTANCES THAT ARE CURRENTLY STORED AND CONTAINED ON THE SITE ARE LIMITED TO HYPOCHLORITE, USED FOR LEACHATE TREATMENT AND DIESEL AND OTHER PETROLEUM PRODUCTS THAT ARE USED FOR THE GENERAL OPERATIONS OF THE LANDFILL AND FOR LANDFILL OWNED EQUIPMENT AND VEHICLES. THESE SUBSTANCES WILL BE REMOVED UPON RELEASE BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY. METHODS FOR THEIR REMOVAL AND/OR DISPOSAL SHALL ADHERE TO COUNTY, STATE AND/OR FEDERAL LAW.
12. THERE ARE NO KNOWN GRAVES OR PLACES OF BURIAL ON SITE.
13. THE PROPOSED LIMITS OF CLEARING AND GRADING ARE SHOWN ON THE PLAT. THESE LIMITS ARE APPROXIMATE AND SUBJECT TO ADJUSTMENT AT THE TIME OF FINAL GRADING AND ENGINEERING. WHERE THE LIMITS OF CLEARING AND GRADING ARE SHOWN ADJACENT TO A PROPERTY LINE, IT SHOULD BE ASSUMED THAT THE LIMITS EXTEND TO THE PROPERTY LINE.
14. PARKING SPACES ARE AS SHOWN ON THE PLAT AND WILL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 11 OF THE ZONING ORDINANCE. SEE GENERAL NOTE 21 BELOW RE: OFF-SITE PARKING FOR "OBSERVATION POINT".
15. IN ACCORDANCE WITH PARAGRAPH 4 OF SECTION 9-004 OF THE ZONING ORDINANCE, MINOR MODIFICATIONS TO THE APPROVED SPECIAL EXCEPTION MAY BE PERMITTED WHEN IT IS DETERMINED BY THE ZONING ADMINISTRATOR THAT THEY ARE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED SPECIAL EXCEPTION AND ARE IN RESPONSE TO ISSUES OF TOPOGRAPHY, DRAINAGE, UNDERGROUND UTILITIES, STRUCTURAL OR OTHER SAFETY, LAYOUT, DESIGN, VEHICULAR CIRCULATION OR REQUIREMENTS OF DEQ, VDOT OR FAIRFAX COUNTY OR ARE ACCESSORY STRUCTURES, USES OR MINOR BUILDING ADDITIONS AS PERMITTED BY PARAGRAPH 4(A)7 OF SECTION 9-004. IT IS TO BE UNDERSTOOD THAT DEQ REGULATORY REQUIREMENTS SHALL SUPERSEDE THESE LIMITATIONS, AND THAT PRACTICES REQUIRED OR PERMITTED UNDER VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) REGULATIONS TO MITIGATE ENVIRONMENTAL, SAFETY OR OTHER CONCERNS SHALL, PER SE, BE PERMITTED UNDER THIS PROVISION.
16. PHASES 1 THROUGH 5 MAY OVERLAP ONE ANOTHER; THAT IS A SUBSEQUENT PHASE OR PHASES MAY BE INITIATED PRIOR TO COMPLETION OF A CURRENT PHASE OR PHASES. IMPROVEMENTS DEPICTED FOR EACH PHASE REPRESENT THOSE PROPOSED TO BE COMPLETED BY THE END OF SUCH PHASE. FINAL LANDSCAPING FOR EACH PHASE MAY NOT BE COMPLETED UNTIL SUBSEQUENT PHASE(S) HAVE BEGUN.
17. THE POTENTIAL "SOLAR PANEL FARM" MAY BE PROVIDED BY APPLICANT/OWNER AND/OR OTHERS IN PHASES 4, 5, AND/OR 6 AS GENERALLY SHOWN ON SHEETS 9, 10 AND 45.
18. THE APPLICANT RESERVES THE RIGHT TO RELOCATE UTILITY AND TRAIL CROSSINGS OF FURNACE ROAD AND TO ALTER THE INTERNAL CIRCULATION WITHIN EACH PHASE.
19. THE THREE (3) WIND TURBINES TO BE ERECTED IN PHASE ONE BY THE APPLICANT/OWNER SHALL REMAIN FOR THEIR USEFUL LIFE OR UNTIL THE BEGINNING OF PHASE 5, WHICHEVER FIRST OCCURS, AS DETERMINED BY THE APPLICANT. LOCATION OF SAID TURBINES MAY BE ADJUSTED BY THE APPLICANT BASED ON FINAL ENGINEERING AND DESIGN. THIS FINAL AREA IS TO BE FILLED AND CAPPED WHEN THESE TURBINES SHALL BE REMOVED. THE APPLICANT/OWNER SHALL NOT BE REQUIRED TO REPLACE AND/OR RELOCATE THESE TURBINES.
20. SEE SHEET 26 FOR TRUCK QUEUING AREAS FOR EACH PHASE.
21. PURSUANT TO PARAGRAPH 1 OF SECTION 11-102 OF THE ZONING ORDINANCE, IN THIS SPECIAL EXCEPTION AMENDMENT APPLICATION, THE APPLICANT REQUESTS AUTHORIZATION BY THE BOARD OF SUPERVISORS TO LOCATE VISITOR PARKING ASSOCIATED WITH THE LANDFILL "OBSERVATION POINT" OFF-SITE ON IT'S I-6 PROPERTY, GENERALLY AS DEPICTED ON THE GDPA FILED IN PCA 2000-MV-034. THE ALTERNATIVE, OFF-SITE PARKING IS NEEDED DUE TO PUBLIC SAFETY CONCERNS ASSOCIATED WITH LANDFILL OPERATIONS AND THE REQUIREMENT THAT FURNACE ASSOCIATES, THE OWNER OF BOTH PROPERTIES, STRICTLY CONTROL PUBLIC ACCESS FOR VISITORS WHO ALL WOULD BE REQUIRED TO PRE-REGISTER AND EXECUTE A LIABILITY WAIVER AND RELEASE PRIOR TO TRAVELING TO THE ADJACENT LANDFILL VIA SHUTTLE SERVICE FROM THIS PARKING AREA THESE VISITOR SPACES SHALL BE PERMANENTLY AVAILABLE TO SUPPORT THE OFF-SITE 'OBSERVATION POINT' THROUGHOUT ITS OPERATION UNTIL THE END OF PHASE 5.
22. GATES AND SECURITY FENCING MAY BE PROVIDED ON-SITE AS DETERMINED BY THE APPLICANT
23. A FIFTY FOOT-WIDE TREE TRANSITIONAL SCREEN SHALL BE PROVIDED ALONG THE ENTIRE NORTHERN PROPERTY BOUNDARY AND CONSIST OF A COMBINATION OF EXISTING, MATURE TREES AND SUPPLEMENTAL PLANTINGS WHICH SHALL BE INSTALLED AND MAINTAINED BY THE APPLICANT IN ACCORDANCE WITH THAT SHOWN ON SHEET 21. MINIMAL GRADING SHALL BE PERMITTED WITHIN THIS TRANSITIONAL SCREEN AREA, AS DETERMINED BY THE URBAN FOREST MANAGEMENT DIVISION, AS NECESSARY FOR INSTALLATION OF THE BELOW TRAIL AND/OR OTHER IMPROVEMENTS. ADJACENT TO THIS TRANSITIONAL SCREEN AREA, A NATURAL SURFACE (EXISTING SOIL) TRAIL AND ANY OFF-SITE TRAIL CONNECTION, EXERCISE STATIONS ALONG THE TRAIL, A MULTI-PURPOSE OPEN SPACE AREA, DOG PARK AND PICNIC TABLES SHALL BE PROVIDED AT THE SOLE OPTION OF AND AS DETERMINED BY THE LORTON VALLEY HOA. AT THE SOLE OPTION OF AND TO THE EXTENT DETERMINED BY THE LORTON VALLEY HOA, THE RECREATION USES SHOWN MAY BE ELIMINATED OR ADJUSTED, PROVIDED THAT THEY DO NOT ENCROACH INTO THE FIFTY FOOT TRANSITIONAL SCREEN AREA.
24. THE APPLICANT MAY PROVIDE A LEACHATE STORAGE TANK, RESPECTIVELY, IN THE SOUTHWEST AND NORTHEAST AREAS OF THE PROPERTY IN THE GENERAL LOCATIONS DEPICTED ON THE PLAN AND SHALL NOT EXCEED 20 FEET ABOVE GRADE AND A MAXIMUM 90 FEET IN DIAMETER. A SECOND SANITARY SEWER CONNECTION MAY BE INSTALLED BY THE APPLICANT SUBJECT TO DPWES APPROVAL AND THE AVAILABILITY OF OFF-SITE EASEMENTS.
25. THE LIMITS OF OPERATIONS AREAS ARE DEFINED AS THE WORKING FACE OF THE LANDFILL, AREAS OF CONSTRUCTION FOR THE SUBSEQUENT PHASE AND AREAS THAT ARE BEING FILLED AND/OR CAPPED AND LANDSCAPED AND SHALL INCLUDE BOTH 'PRIMARY' AND 'ANCILLARY' OPERATIONS SUCH AS STORMWATER AND EROSION AND SEDIMENT CONTROL BASINS AND STORMWATER CONVEYANCE SYSTEMS (i.e. INCLUDING SLOPE DOWNCHUTES AND STORM SEWER SYSTEMS), LEACHATE MANAGEMENT SYSTEMS, GAS COLLECTION AND DISTRIBUTION SYSTEMS, ENVIRONMENTAL MONITORING SYSTEMS AND WELLS, LANDFILL MAINTENANCE FACILITIES, LANDFILL STAGING AREAS AND SIMILAR AREAS AND FACILITIES.
26. RETAINING WALLS MAY BE ADJUSTED OR ADDED, AS NECESSARY, BASED ON FINAL ENGINEERING DESIGN.
27. FINAL WASTE DEBRIS ELEVATION SHALL NOT EXCEED 412 FEET.

ZONING ORDINANCE, ARTICLE 9, SECTION 9-011 COMMENTS:

1. APPLICATION TO BE SUBMITTED WITH THIS PLAT
2. A. BOUNDARY INFORMATION AS SHOWN ON THE PLAT AND AS REFERENCED IN GENERAL NOTE 3.
   B. REFER TO THE SITE TABULATIONS ON SHEET 2 FOR SITE AREA AND GENERAL NOTE 2 ON SHEET 3 FOR THE ZONING.
   C. SCALE AND NORTH ARROW AS SHOWN ON THE PLAT.
   D. THE LOCATIONS, DIMENSIONS AND MAXIMUM HEIGHTS OF ALL PROPOSED STRUCTURES ARE SHOWN ON SHEETS 6 THROUGH 10 FOR PHASES 1 THROUGH 5 AND ON SHEET 45 FOR PHASE 6. THE LOCATIONS, DIMENSIONS AND MAXIMUM HEIGHTS OF ALL EXISTING STRUCTURES AND SIGNS ARE SHOWN ON SHEET 4. THE LOCATIONS, DIMENSIONS AND LIGHTING OF THE PROPOSED SIGN IS SHOWN ON SHEET 6. ALL EXISTING STRUCTURES ARE TO BE REMOVED/DEMOLISHED AT THE CONCLUSION OF PHASE 5, HOWEVER, THEY MAY BE MOVED AND/OR REPLACED IN KIND AS REQUIRED TO CONTINUE LANDFILL OPERATIONS UNTIL THE COMPLETION OF PHASE 5. STRUCTURES PROPOSED FOR PHASE 6 SHALL REMAIN THROUGH THE CONCLUSION OF PHASE 6.
   E. THE MINIMUM ANGLE OF BULK PLANE FOR THE WIND TURBINES AND SOLAR PANELS IS SHOWN BELOW THE REQUIRED DISTANCES TO LOT LINES FOR THE PROPOSED STRUCTURES ARE SHOWN ON SHEETS 6 THROUGH 10 FOR PHASES 1 THROUGH 5 AND ON SHEET 45 FOR PHASE 6. THE DISTANCES TO LOT LINES FOR THE EXISTING STRUCTURES ARE SHOWN ON SHEET 4.
   F. NO PUBLIC RIGHT OF WAY DEDICATION IS PROPOSED WITH THIS SPECIAL EXCEPTION AMENDMENT. THE REQUIRED DIMENSIONS FOR THE EXISTING ROADS AND THE ENTRANCE IMPROVEMENTS ARE SHOWN ON SHEETS 11, 12 AND 13.
   G. MEANS OF INGRESS AND EGRESS FROM A PUBLIC STREET ARE AS SHOWN ON THE PLAT.
   H. PROPOSED PARKING SPACE LOCATIONS ARE SHOWN ON SHEETS 6 THROUGH 10 FOR PHASES 1 THROUGH 5 AND ON SHEET 45 FOR PHASE 6. THE REQUIRED DISTANCES FROM THE PROPOSED PARKING SPACES TO THE NEAREST BOUNDARY LINE ARE SHOWN ON SHEETS 6 THROUGH 10 AND SHEET 45. EXISTING PARKING SPACE LOCATIONS ARE AS SHOWN ON SHEET 4. THE REQUIRED DISTANCES FROM THE EXISTING PARKING SPACE LOCATIONS TO THE NEAREST BOUNDARY LINE ARE ALSO SHOWN ON SHEET 4. REFER TO THE SITE TABULATIONS FOR PARKING REQUIREMENTS.
   I. THERE ARE NO KNOWN WELLS USED FOR HUMAN WATER CONSUMPTION OR OTHER DOMESTIC PURPOSE ON THE SITE. ANY WELLS THAT ARE LOCATED ON THE SITE ARE USED STRICTLY FOR THE MONITORING OF GROUND WATER. THE PROPERTY IS SERVED BY PUBLIC SANITARY SEWER AND WILL BE SERVED BY PUBLIC WATER. REFER TO GENERAL NOTE 8 FOR ADDITIONAL INFORMATION.
   J. REFER TO SHEETS 27 THROUGH 38 FOR THE REQUIRED STORMWATER MANAGEMENT INFORMATION.
   K. THE TOTAL GROSS FLOOR AREAS OF EXISTING AND PROPOSED STRUCTURES ARE SHOWN IN THE SITE TABULATIONS ON SHEET 2, THE FLOOR AREA RATIOS FOR PHASES 1, 2, 3, 4 AND 5 ARE SHOWN ON SHEETS 6, 7, 8, 9 AND 10 RESPECTIVELY. THE FLOOR AREA RATIO FOR PHASE 6 IS SHOWN IN THE SITE TABULATIONS ON SHEET 2.
   L. REFER TO GENERAL NOTE 4 FOR TOPOGRAPHIC INFORMATION.
   M. THE LIMITS OF CLEARING AND GRADING ARE AS SHOWN ON THE PLAT AND MAY BE ADJUSTED PER GENERAL NOTES 13 AND 15. PROPOSED AND EXISTING LANDSCAPING AND TRANSITIONAL SCREENS AND BARRIERS, WHERE REQUIRED, MODIFIED AND/OR WAIVED FOR PHASES 1, 2, 3, 4, 5 AND 6 ARE SHOWN ON SHEETS 16, 17, 18, 19, 20 AND 45 RESPECTIVELY. REFER TO SHEET 21 FOR ADDITIONAL INFORMATION CONCERNING THE NORTHERN TRANSITIONAL SCREENING AREA. REFER TO SHEET 5 FOR ALL PRE-DEVELOPMENT EXISTING VEGETATION INFORMATION.
   N. A FLOODPLAIN, RESOURCE PROTECTION AREA AND AN ENVIRONMENTAL QUALITY CORRIDOR EXIST ON THE SITE AND ARE SHOWN ON THE PLAT. THE REMAINING AREA OF THE SITE IS DESIGNATED AS A RESOURCE MANAGEMENT AREA. THE REQUIRED DISTANCES FROM THE PROPOSED STRUCTURES TO THE NEAREST POINT OF THE FLOODPLAIN, RPA OR EQC ARE SHOWN ON SHEETS 6 THROUGH 10 AND ON SHEET 45. THE REQUIRED DISTANCES FROM THE EXISTING STRUCTURES TO THE CLOSEST POINT ON THE EQC ARE SHOWN ON SHEET 4.
   O. SHOWN ON PLAT WHERE APPLICABLE.
   P. NOT APPLICABLE.
   Q. REFER TO GENERAL NOTE 9 FOR INFORMATION CONCERNING EXISTING UTILITY EASEMENTS.
   R. REFER TO GENERAL NOTE 7 FOR COMPREHENSIVE PLAN TRAILS REQUIREMENTS.
   S. THERE ARE NO KNOWN GRAVES OR PLACES OF BURIAL ON THE SITE.
   T. SEAL AND SIGNATURE AS SHOWN ON THE PLAT
3. ZONING MAP SUBMITTED WITH THIS APPLICATION.
4. SITE PHOTOGRAPHS SUBMITTED WITH THIS APPLICATION.
5. SOILS MAP NOT REQUIRED FOR THIS APPLICATION.
6. AFFIDAVIT SUBMITTED WITH THIS APPLICATION.
7. APPLICANT'S WRITTEN STATEMENT DESCRIBING THE PROPOSED USES SUBMITTED WITH THIS APPLICATION.
8. APPLICANT AND OWNER: FURNACE ASSOCIATES, INC.
   11220 ASSETT LOOP
   SUITE 201
   MANASSAS, VA 20109
9. THE SITE IS NOT WITHIN ANY OVERLAY DISTRICTS.
10. APPLICATION FEE SUBMITTED WITH THIS APPLICATION.

ZONING ORDINANCE, ARTICLE 9, SECTION 9-203 COMMENTS:

1. MAP AND WRITTEN STATEMENT CONCERNING UTILITY SYSTEM SUBMITTED UNDER SEPARATE COVER.
2. WRITTEN STATEMENT CONCERNING SELECTION OF THE SITE SUBMITTED UNDER SEPARATE COVER
3. PURSUANT TO ARTICLE 9, SECTION 9-203, PARAGRAPH 3, THE REQUIREMENTS OF SECTION 8-011 OF THE ZONING ORDINANCE HAVE BEEN PROVIDED UNDER SEPARATE COVER AND APPLICABLE REQUIREMENTS ARE SHOWN ON THE PLAT.



FRONT YARD MINIMUM ANGLE OF BULK PLANE AT FURNACE ROAD

FRONT YARD MINIMUM ANGLE OF BULK PLANE AT I-95

SIDE YARD MINIMUM ANGLE OF BULK PLANE AT THE NORTHERN PROPERTY LINE

MINMIMUM ANGLE OF BULK PLANE

NO SCALE

NOTE: THE ELEVATIONS REFERENCED AT THE NORTHERN PROPERTY LINE, AT FURNACE ROAD AND AT I-95 ARE THE LOWEST ELEVATIONS RELATIVE TO THE ELEVATION OF EACH STRUCTURE NEAREST TO THAT RESPECTIVE PROPERTY LINE.

BC Consultants
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(703)449-8100 (703)449-8108 (Fax)
www.bccon.com

COMMONWEALTH OF VIRGINIA — DENNIS D. DIXON — LIC. No. 882 — 2-20-2014 — LANDSCAPE ARCHITECT

SPECIAL EXCEPTION AMENDMENT
GENERAL NOTES AND COMMENTS

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 5-14-2013
REVISED 9-11-2013
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-10-2013
REVISED 2-20-2014
REVISED 2-22-2014

APPLICANT:
FURNACE ASSOCIATES, INC
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY:	PLR
DRAFTED BY:	CAD
CHECKED BY:	NB
DATE:	MARCH 22, 2013
SCALE:	HOR. AS SHOWN VERT.
SHEET 3 OF 45	
CO. NO.	SEA 80-L/V-061-2
CAD NAME:	SE5117COMP
LAYOUT:	NOTES
FILE NO.	05117.08-00

XREFS:

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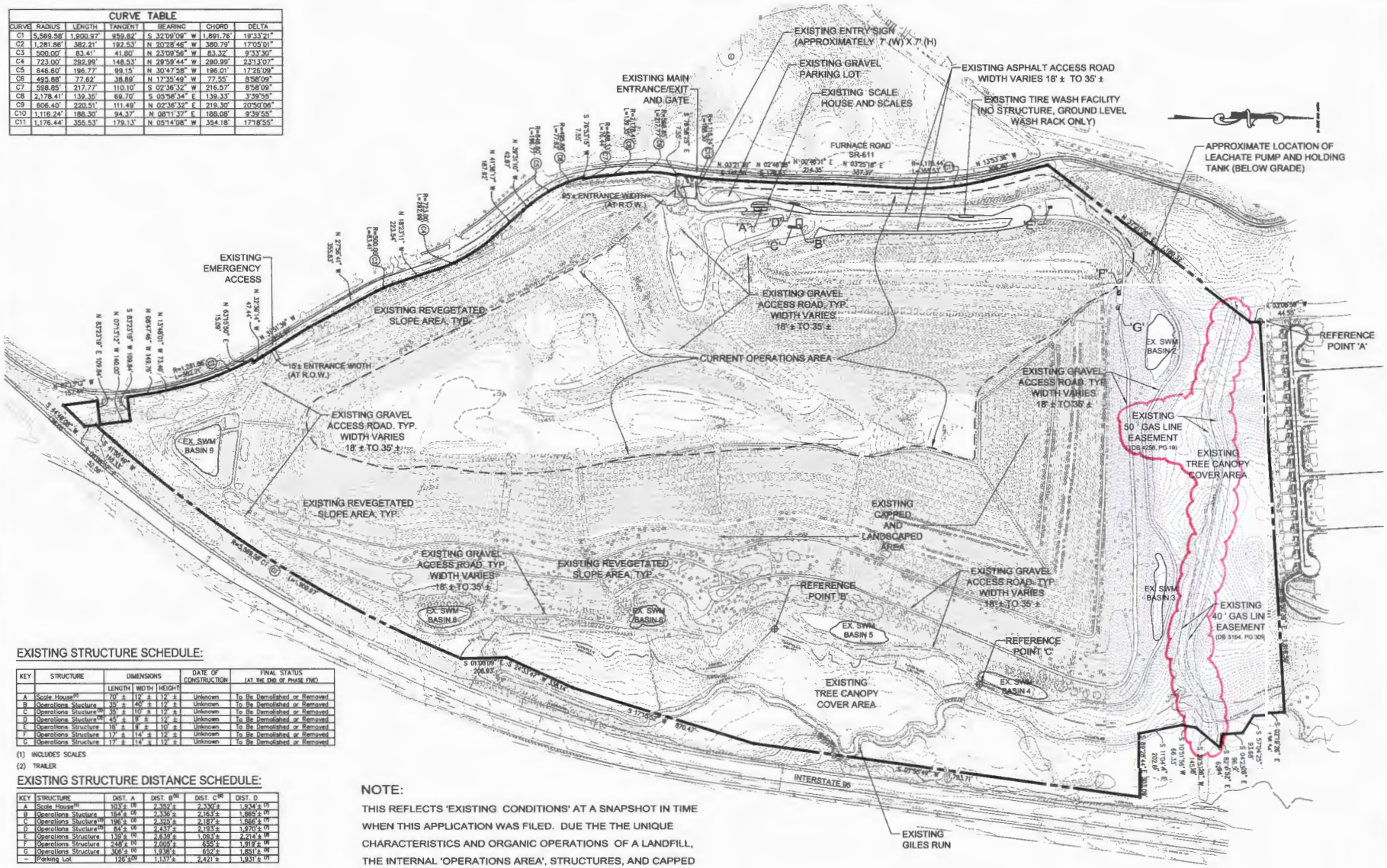
CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C1	5,569.58'	1,900.97'	959.82'	S 32°09'09" W	1,891.76'	19°33'21"
C2	1,281.86'	382.21'	192.53'	N 20°28'46" W	380.79'	17°05'01"
C3	500.00'	83.41'	41.80'	N 23°09'56" W	83.32'	9°33'30"
C4	723.00'	292.99'	148.53'	N 29°59'44" W	290.99'	23°13'07"
C5	646.60'	196.77'	99.15'	N 30°47'58" W	196.01'	17°26'09"
C6	495.88'	77.62'	38.89'	N 17°35'49" W	77.55'	8°58'09"
C7	598.85'	217.77'	110.10'	S 02°36'32" W	216.57'	8°58'09"
C8	2,178.41'	139.35'	69.70'	S 05°58'34" E	139.33'	3°39'55"
C9	606.40'	220.51'	111.49'	N 02°36'32" E	219.30'	20°50'06"
C10	1,116.24'	188.30'	94.37'	N 08°11'37" E	188.08'	9°39'55"
C11	1,176.44'	355.53'	179.13'	N 05°14'08" W	354.18'	17°18'55"



EXISTING STRUCTURE SCHEDULE:

KEY	STRUCTURE	DIMENSIONS			DATE OF CONSTRUCTION	FINAL STATUS (AT THE END OF PHASE FIVE)
		LENGTH	WIDTH	HEIGHT		
A	Scale House(1)	70' ±	12' ±	12' ±	Unknown	To Be Demolished or Removed
B	Operations Structure	35' ±	40' ±	12' ±	Unknown	To Be Demolished or Removed
C	Operations Structure(2)	35' ±	10' ±	12' ±	Unknown	To Be Demolished or Removed
D	Operations Structure(2)	45' ±	9' ±	12' ±	Unknown	To Be Demolished or Removed
E	Operations Structure	18' ±	9' ±	10' ±	Unknown	To Be Demolished or Removed
F	Operations Structure	17' ±	14' ±	12' ±	Unknown	To Be Demolished or Removed
G	Operations Structure	17' ±	14' ±	12' ±	Unknown	To Be Demolished or Removed

(1) INCLUDES SCALES

(2) TRAILER

EXISTING STRUCTURE DISTANCE SCHEDULE:

KEY	STRUCTURE	DIST. A	DIST. B(5)	DIST. C(6)	DIST. D
A	Scale House(7)	103'± (8)	2,352'±	2,330'±	1,934'± (7)
B	Operations Structure	164'± (8)	2,336'±	2,163'±	1,865'± (7)
C	Operations Structure(3)	196'± (8)	2,329'±	2,187'±	1,866'± (7)
D	Operations Structure(3)	84'± (8)	2,437'±	2,183'±	1,970'± (7)
E	Operations Structure	139'± (8)	2,639'±	1,093'±	2,214'± (7)
F	Operations Structure	248'± (8)	2,005'±	655'±	1,919'± (7)
G	Operations Structure	306'± (8)	1,938'±	652'±	1,851'± (7)
–	Parking Lot	126'±(4)	1,137'±	2,421'±	1,931'± (7)

(3) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE WEST

(4) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTHWEST

(5) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE EAST

(6) DISTANCE FROM STRUCTURE TO REFERENCE POINT 'A.' (CLOSEST PROPERTY LINE TO THE NORTH)

(7) REFERENCE POINT 'B' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EOC/RPA.

(8) REFERENCE POINT 'C' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EOC/RPA.

NOTE: THERE ARE NO EXISTING SWM BASINS NUMBERED 1 OR 7.

NOTE:

THIS REFLECTS 'EXISTING CONDITIONS' AT A SNAPSHOT IN TIME WHEN THIS APPLICATION WAS FILED. DUE THE THE UNIQUE CHARACTERISTICS AND ORGANIC OPERATIONS OF A LANDFILL, THE INTERNAL 'OPERATIONS AREA', STRUCTURES, AND CAPPED AREAS ARE ALL SUBJECT TO CHANGE DURING THE REVIEW PERIOD OF THE APPLICATION.

BC Consultants
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(703)449-8100 (703)449-8108 (Fax)
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COMMONWEALTH OF VIRGINIA
DENIS D. NOTH
Lic. No. 0402
2-20-2014
Landscape Architect

SPECIAL EXCEPTION AMENDMENT
EXISTING CONDITIONS

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISION	REVISED 2-20-2014
REVISED 8-12-2013	
REVISED 7-11-2013	
REVISED 12-10-2012	
REVISED 11-1-2013	

APPLICANT:
LORTON LANDFILL ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"= 200'
VERT. N/A

SHEET 4 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117EX
LAYOUT: EXISTING
FILE NO. 05117.08-00

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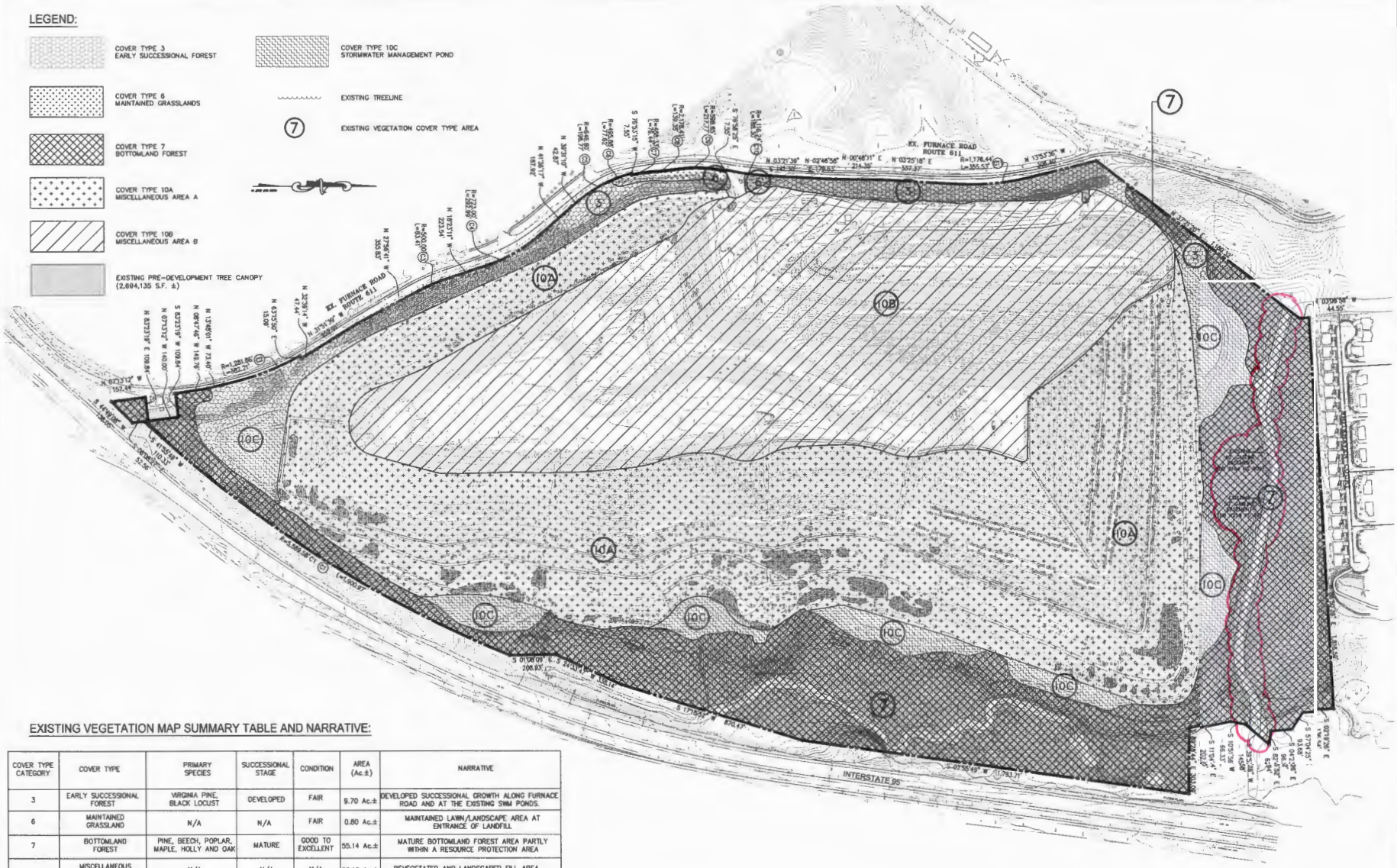
LEGEND:

- COVER TYPE 3 EARLY SUCCESSIONAL FOREST
- COVER TYPE 6 MAINTAINED GRASSLANDS
- COVER TYPE 7 BOTTOMLAND FOREST
- COVER TYPE 10A MISCELLANEOUS AREA A
- COVER TYPE 10B MISCELLANEOUS AREA B
- EXISTING PRE-DEVELOPMENT TREE CANOPY (2,604,135 S.F. ±)
- COVER TYPE 10C STORMWATER MANAGEMENT POND
- EXISTING TREELINE
- (7) EXISTING VEGETATION COVER TYPE AREA



EXISTING VEGETATION MAP SUMMARY TABLE AND NARRATIVE:

COVER TYPE CATEGORY	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	AREA (Ac.±)	NARRATIVE
3	EARLY SUCCESSIONAL FOREST	VIRGINIA PINE, BLACK LOCUST	DEVELOPED	FAIR	9.70 Ac.±	DEVELOPED SUCCESSIONAL GROWTH ALONG FURNACE ROAD AND AT THE EXISTING SWM PONDS.
6	MAINTAINED GRASSLAND	N/A	N/A	FAIR	0.80 Ac.±	MAINTAINED LAWN/LANDSCAPE AREA AT ENTRANCE OF LANDFILL
7	BOTTOMLAND FOREST	PINE, BEECH, POPLAR, MAPLE, HOLLY AND OAK	MATURE	GOOD TO EXCELLENT	55.14 Ac.±	MATURE BOTTOMLAND FOREST AREA PARTLY WITHIN A RESOURCE PROTECTION AREA
10A	MISCELLANEOUS AREA A	N/A	N/A	N/A	95.13 Ac.±	REVEGETATED AND LANDSCAPED FILL AREA
10B	MISCELLANEOUS AREA B	N/A	N/A	N/A	76.05 Ac.±	ACTIVE LANDFILL OPERATIONS AREA
10C	STORMWATER MANAGEMENT AREA	N/A	N/A	N/A	13.00 Ac.±	STORMWATER MANAGEMENT AREA
Total: 249.82 Ac.±						

200' 100' 0' 200'
SCALE: 1"=200'

BC Consultants
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COMMONWEALTH OF VIRGINIA
BRIAN C. NOLL
Lic. No. 882
2-20-2014

SPECIAL EXCEPTION AMENDMENT
EXISTING VEGETATION MAP
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISION 013	REVISED 2-20-2014
REVISED 9-14-2013	REVISED 2-20-2014
REVISED 8-1-2013	
REVISED 6-10-2013	
REVISED 11-1-2013	
REVISED 12-16-2013	

ALPHAGRAPHICS
ALPHAGRAPHICS ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 231
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"=200'
VERT.
SHEET 5 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117EVM
LAYOUT: evm
FILE NO. 05117.08-00

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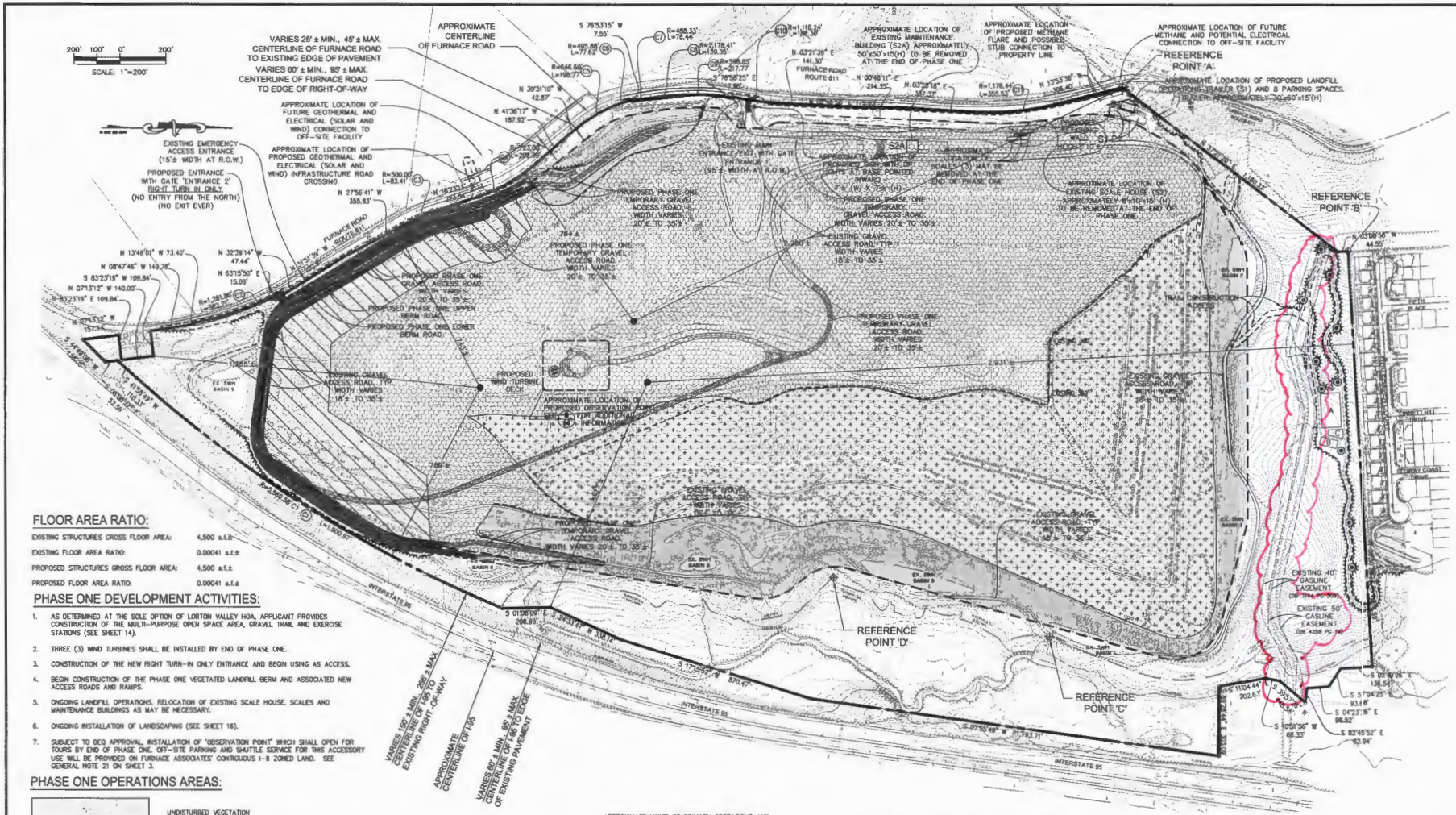

FLOOR AREA RATIO:

EXISTING STRUCTURES GROSS FLOOR AREA:	4,500 s.f.±
EXISTING FLOOR AREA RATIO:	0.00041 s.f.±
PROPOSED STRUCTURES GROSS FLOOR AREA:	4,500 s.f.±
PROPOSED FLOOR AREA RATIO:	0.00041 s.f.±

PHASE ONE DEVELOPMENT ACTIVITIES:

1. AS DETERMINED AT THE SOLE OPTION OF LORTON VALLEY HOA, APPLICANT PROVIDES CONSTRUCTION OF THE MULTI-PURPOSE OPEN SPACE AREA, GRAVEL TRAIL AND EXERCISE STATIONS (SEE SHEET 14).
2. THREE (3) WIND TURBINES SHALL BE INSTALLED BY END OF PHASE ONE.
3. CONSTRUCTION OF THE NEW RIGHT TURN-IN ONLY ENTRANCE AND BEGIN USING AS ACCESS.
4. BEGIN CONSTRUCTION OF THE PHASE ONE VEGETATED LANDFILL BERM AND ASSOCIATED NEW ACCESS ROADS AND RAMPS.
5. ONGOING LANDFILL OPERATIONS. RELOCATION OF EXISTING SCALE HOUSE, SCALES AND MAINTENANCE BUILDINGS AS MAY BE NECESSARY.
6. ONGOING INSTALLATION OF LANDSCAPING (SEE SHEET 16).
7. SUBJECT TO DEQ APPROVAL, INSTALLATION OF 'OBSERVATION POINT' WHICH SHALL OPEN FOR TOURS BY END OF PHASE ONE. OFF-SITE PARKING AND SHUTTLE SERVICE FOR THIS ACCESSORY USE WILL BE PROVIDED ON FURNACE ASSOCIATES' CONTIGUOUS I-5 ZONED LAND. SEE GENERAL NOTE 21 ON SHEET 3.

PHASE ONE OPERATIONS AREAS:

- UNDISTURBED VEGETATION
- EXISTING EVERGREEN AND EXISTING DECIDUOUS TREES, SHRUBS AND WILDFLOWERS (SEE SHEET 16 FOR LANDSCAPE INFORMATION)
- ONGOING LANDFILL OPERATIONS AND INTERIM VEGETATIVE COVER (SEE SHEET 16 FOR ADDITIONAL INFORMATION)
- PROPOSED LANDFILL OPERATIONS AND FUTURE LANDFILL CAP LANDSCAPE AREAS (SEE SHEET 16 FOR LANDSCAPE INFORMATION)
- APPROXIMATE LIMITS OF PRIMARY OPERATIONS AND LANDSCAPE AREAS (SEE NOTE 25 ON SHEET 3)
- APPROXIMATE LOCATION OF PROPOSED PHASE ONE VEGETATED LANDFILL BERM (15)
- APPROXIMATE LOCATION OF POTENTIAL NATURAL SURFACE (EXISTING SOIL) TRAIL
- ENVIRONMENTAL QUALITY CORRIDOR/ RESOURCE PROTECTION AREA (EQC/RPA)
- 100-YR. FLOODPLAIN
- APPROXIMATE LIMITS OF CLEARING AND GRADING
- EXISTING TREELINE
- PROPOSED TREELINE
- APPROXIMATE LOCATION OF PROPOSED WIND TURBINES (8/14)
- A — APPROXIMATE LOCATION OF POTENTIAL MULTI-PURPOSE OPEN SPACE AREA
- B — APPROXIMATE LOCATION OF POTENTIAL DOG PARK
- C — APPROXIMATE LOCATION OF POTENTIAL PICNIC AREA
- APPROXIMATE LOCATION OF POTENTIAL EXERCISE STATIONS
- EXISTING 360' — EXISTING FILL SPOT ELEVATIONS

NOTE:

1. ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE APPROXIMATE DEPENDING ON FILL VOLUMES.
2. SEE SHEET 26 FOR TRUCK QUEUING INFORMATION AND FOR ENTRANCE AND EXIT INFORMATION.
3. SEE SHEET 39 FOR PHASE ONE LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION.
4. APPROXIMATE LOCATIONS OF LANDFILL OPERATIONAL FACILITIES ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE FACILITIES AND ROADS AS REQUIRED TO CONTINUE THE GENERAL OPERATIONS OF THE LANDFILL DURING PHASE ONE OPERATIONS PHASE AND ALL SUBSEQUENT PHASES. PHASES MAY OVERLAP (SEE GENERAL NOTES 16 AND 25 ON SHEET 3).
5. WIND TURBINE LOCATIONS AND OBSERVATION POINT MAY BE ADJUSTED DUE TO FINAL ENGINEERING AND DESIGN.

EXISTING STRUCTURE DISTANCE SCHEDULE:(9)

KEY	STRUCTURE	DIST. A	DIST. B	DIST. C
S1	Operations Trailer	$29'\pm^{(1)}$	$57'\pm^{(2)}$	$2,322'\pm^{(3)}$
S1-P	Operations Trailer Parking	$28'\pm^{(1)}$	$58'\pm^{(2)}$	$2,272'\pm^{(3)}$
S2	Scale House	$101'\pm^{(4)}$	$483'\pm^{(5)}$	$2,191'\pm^{(6)}$
S2A	Maintenance Building	$138'\pm^{(4)}$	$923'\pm^{(5)}$	$1,897'\pm^{(6)}$

(1) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTHWEST
(2) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE WEST
(3) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE EAST
(4) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTH
(5) DISTANCE FROM STRUCTURE TO REFERENCE POINT 'A.' (CLOSEST PROPERTY LINE TO THE WEST)
(6) DISTANCE FROM THE STRUCTURE TO REFERENCE POINT 'B' (CLOSEST PROPERTY LINE TO THE NORTH)
(7) REFERENCE POINT 'C' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(8) REFERENCE POINT 'D' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(9) SUBJECT TO CHANGE BASED ON LANDFILL OPERATIONS.

BC Consultants
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DENIS D. BOCK Lic. No. 885 2-20-2014

SPECIAL EXCEPTION AMENDMENT
PHASE ONE OPERATIONS AREAS
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 3-14-2013
REVISED 5-17-2013
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-18-2013
REVISED 1-29-2014

FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY:	PLR
DRAFTED BY:	CAD
CHECKED BY:	NB
DATE:	MARCH 22, 2013
SCALE: HOR.	1"=200'
VERT.	
SHEET	6 OF 45
CO. NO.	SEA 80-L/V-061-2
CAD NAME:	SE5117PH1
LAYOUT:	PH1
FILE NO.	05117.08-00

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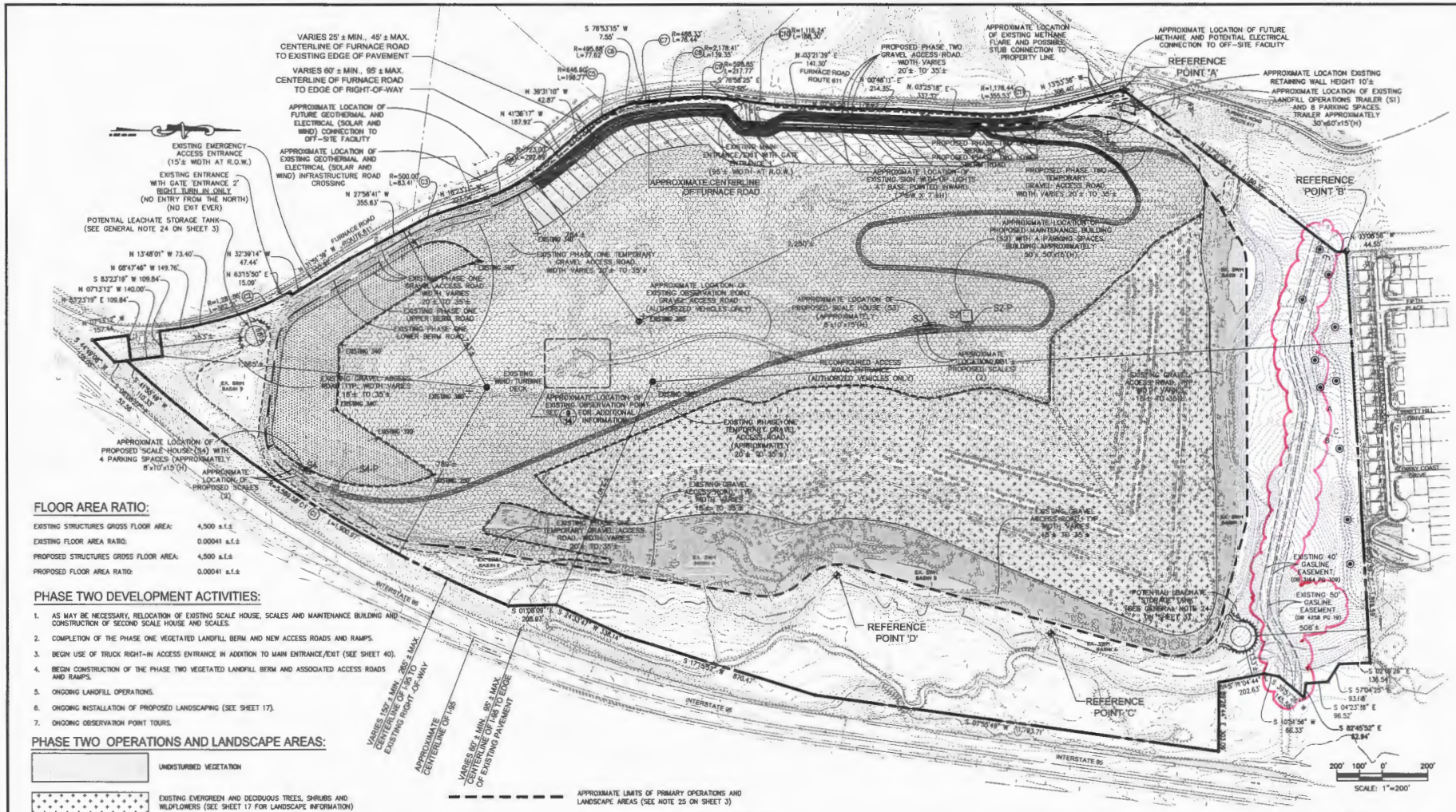

FLOOR AREA RATIO:

EXISTING STRUCTURES GROSS FLOOR AREA:	4,500 s.f.±
EXISTING FLOOR AREA RATIO:	0.00041 s.f.±
PROPOSED STRUCTURES GROSS FLOOR AREA:	4,500 s.f.±
PROPOSED FLOOR AREA RATIO:	0.00041 s.f.±

PHASE TWO DEVELOPMENT ACTIVITIES:

1. AS MAY BE NECESSARY, RELOCATION OF EXISTING SCALE HOUSE, SCALES AND MAINTENANCE BUILDING AND CONSTRUCTION OF SECOND SCALE HOUSE AND SCALES.
2. COMPLETION OF THE PHASE ONE VEGETATED LANDFILL BERM AND NEW ACCESS ROADS AND RAMPS.
3. BEGIN USE OF TRUCK RIGHT-IN ACCESS ENTRANCE IN ADDITION TO MAIN ENTRANCE/EXIT (SEE SHEET 40).
4. BEGIN CONSTRUCTION OF THE PHASE TWO VEGETATED LANDFILL BERM AND ASSOCIATED ACCESS ROADS AND RAMPS.
5. ONGOING LANDFILL OPERATIONS.
6. ONGOING INSTALLATION OF PROPOSED LANDSCAPING (SEE SHEET 17).
7. ONGOING OBSERVATION POINT TOURS.

PHASE TWO OPERATIONS AND LANDSCAPE AREAS:

- UNDISTURBED VEGETATION
- EXISTING EVERGREEN AND DECIDUOUS TREES, SHRUBS AND WILDFLOWERS (SEE SHEET 17 FOR LANDSCAPE INFORMATION)
- ONGOING LANDFILL OPERATIONS AND INTERIM VEGETATIVE COVER (SEE SHEET 17 FOR ADDITIONAL INFORMATION)
- ONGOING INSTALLATION OF PHASE ONE FINAL LANDFILL CAP LANDSCAPE AREAS (SEE SHEET 17 FOR ADDITIONAL LANDSCAPE INFORMATION)
- PROPOSED LANDFILL OPERATIONS AND FUTURE FINAL CAP LANDSCAPE AREAS

NOTES:

1. ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE APPROXIMATE DEPENDING ON FILL VOLUMES.
2. SEE SHEET 26 FOR TRUCK QUEUING INFORMATION AND ENTRANCE AND EXIT INFORMATION.
3. SEE SHEET 39 FOR PHASE TWO LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION.
4. APPROXIMATE LOCATIONS OF LANDFILL OPERATIONAL FACILITIES ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE FACILITIES AND ROADS AS REQUIRED TO CONTINUE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE AND ALL SUBSEQUENT PHASES. PHASES MAY OVERLAP (SEE GENERAL NOTES 16 AND 25 ON SHEET 3).

- APPROXIMATE LIMITS OF PRIMARY OPERATIONS AND LANDSCAPE AREAS (SEE NOTE 25 ON SHEET 3)
- APPROXIMATE LOCATION OF PROPOSED PHASE TWO VEGETATED LANDFILL BERM (15)
- APPROXIMATE LOCATION OF EXISTING PHASE ONE VEGETATED LANDFILL BERM
- APPROXIMATE LOCATION OF POTENTIAL NATURAL SURFACE (EXISTING SOIL) TRAIL
- ENVIRONMENTAL QUALITY CORRIDOR/ RESOURCE PROTECTION AREA (EQC/RPA)
- 100-YR. FLOODPLAIN
- APPROXIMATE LIMITS OF CLEARING AND GRADING
- EXISTING TREELINE
- PROPOSED TREELINE

- A — APPROXIMATE LOCATION OF POTENTIAL MULTI-PURPOSE OPEN SPACE AREA
- B — APPROXIMATE LOCATION OF POTENTIAL DOG PARK
- C — APPROXIMATE LOCATION OF POTENTIAL PICNIC AREA
- APPROXIMATE LOCATION OF POTENTIAL EXERCISE STATIONS
- APPROXIMATE LOCATION OF EXISTING WIND TURBINES
- EXISTING 360' ± — EXISTING FILL SPOT ELEVATIONS

PROPOSED STRUCTURE DISTANCE SCHEDULE: (9)

KEY	STRUCTURE	DIST. A	DIST. B	DIST. C
S1	Operations Trailer	25'±(1)	57'±(2)	2,322'±(3)
S1-P	Operations Trailer Parking	28'±(1)	58'±(2)	2,272'±(3)
S2	Maintenance Building	865'±(4)	1,671'±(5)	1,245'±(6)
S2-P	Maintenance Building Parking	921'±(4)	1,686'±(5)	1,224'±(6)
S3	Scale House	933'±(4)	1,861'±(5)	1,175'±(6)
S4	Scale House	742'±(4)	103'±(7)	2,383'±(8)
S4-P	Scale House Parking	702'±(4)	849'±(7)	2,228'±(8)

(1) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTHWEST
(2) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE WEST
(3) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE EAST
(4) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTH
(5) DISTANCE FROM STRUCTURE TO REFERENCE POINT 'A.' (CLOSEST PROPERTY LINE TO THE WEST)
(6) DISTANCE FROM THE STRUCTURE TO REFERENCE POINT 'B' (CLOSEST PROPERTY LINE TO THE NORTH)
(7) REFERENCE POINT 'C' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(8) REFERENCE POINT 'D' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(9) SUBJECT TO CHANGE BASED ON LANDFILL OPERATIONS.

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COMMONWEALTH OF VIRGINIA — DENIS B. PAPE — Lic. No. 682 — 2-20-2014 — LANDSCAPE ARCHITECT

SPECIAL EXCEPTION AMENDMENT
PHASE TWO OPERATIONS AREAS
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

REV. REVISIONS	
REVISED 5-14-2013	REVISED 1-27-2014
REVISED 8-11-2013	REVISED 2-20-2014
REVISED 10-7-2013	
REVISED 11-1-2013	
REVISED 12-19-2013	

OWNER: FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 202
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR	
DRAFTED BY: CAD	
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DATE: MARCH 22, 2013	
SCALE: HOR. 1"=200' VERT.	
SHEET 7 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE5117PH2	
LAYOUT: PH2	
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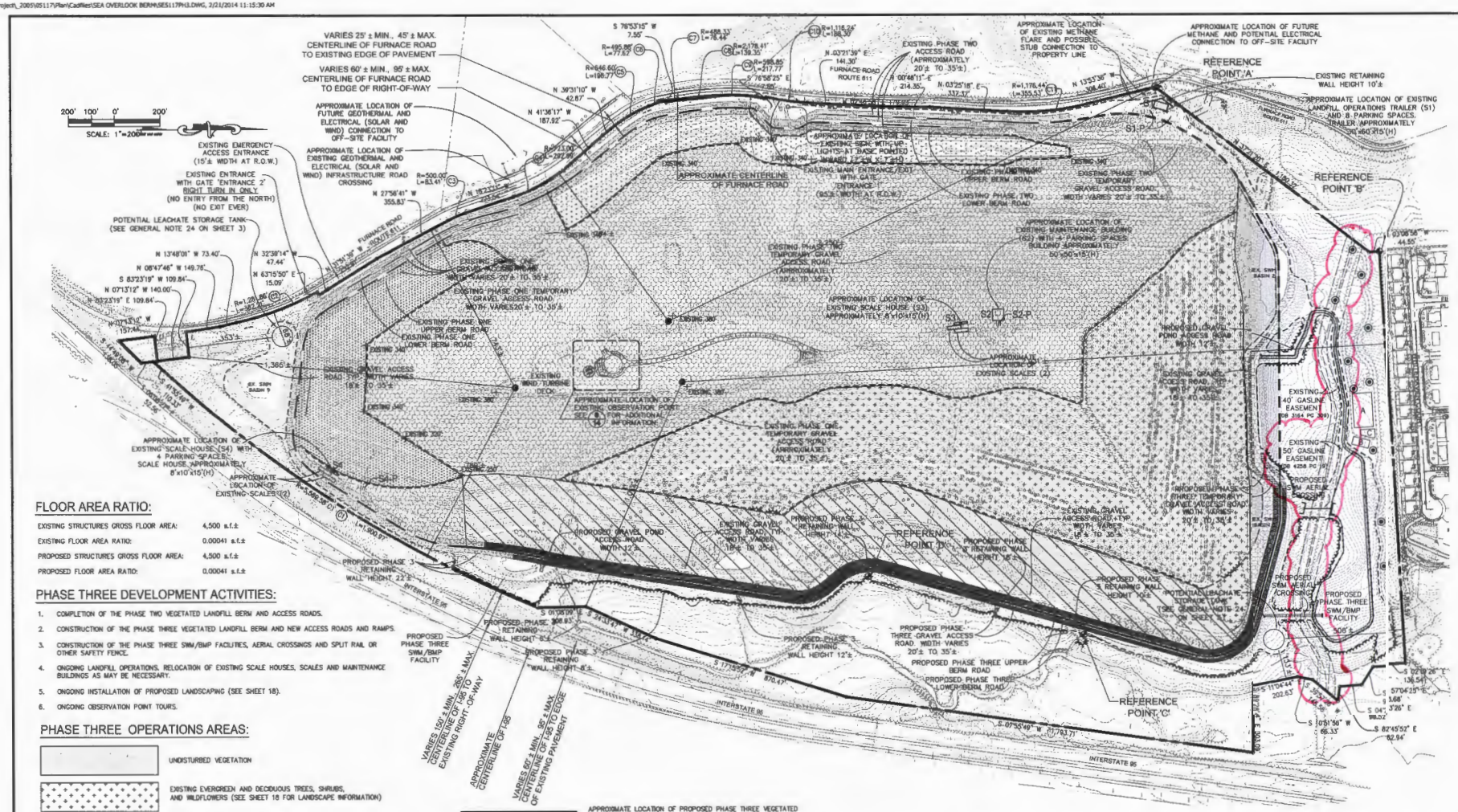

FLOOR AREA RATIO:

EXISTING STRUCTURES GROSS FLOOR AREA:	4,500 s.f.±
EXISTING FLOOR AREA RATIO:	0.00041 s.f.±
PROPOSED STRUCTURES GROSS FLOOR AREA:	4,500 s.f.±
PROPOSED FLOOR AREA RATIO:	0.00041 s.f.±

PHASE THREE DEVELOPMENT ACTIVITIES:

1. COMPLETION OF THE PHASE TWO VEGETATED LANDFILL BERM AND ACCESS ROADS.
2. CONSTRUCTION OF THE PHASE THREE VEGETATED LANDFILL BERM AND NEW ACCESS ROADS AND RAMPS.
3. CONSTRUCTION OF THE PHASE THREE SWM/BMP FACILITIES, AERIAL CROSSINGS AND SPLIT RAIL OR OTHER SAFETY FENCE.
4. ONGOING LANDFILL OPERATIONS, RELOCATION OF EXISTING SCALE HOUSES, SCALES AND MAINTENANCE BUILDINGS AS MAY BE NECESSARY.
5. ONGOING INSTALLATION OF PROPOSED LANDSCAPING (SEE SHEET 18).
6. ONGOING OBSERVATION POINT TOURS.

PHASE THREE OPERATIONS AREAS:

- UNDISTURBED VEGETATION
- EXISTING EVERGREEN AND DECIDUOUS TREES, SHRUBS, AND WILDFLOWERS (SEE SHEET 18 FOR LANDSCAPE INFORMATION)
- ONGOING LANDFILL OPERATIONS AND INTERIM VEGETATIVE COVER (SEE SHEET 18 FOR ADDITIONAL INFORMATION)
- EXISTING PHASE ONE FINAL LANDFILL CAP LANDSCAPE AREAS (SEE SHEET 18 FOR LANDSCAPE INFORMATION)
- ONGOING INSTALLATION OF PHASE TWO FINAL LANDFILL CAP LANDSCAPE AREAS (SEE SHEET 18 FOR LANDSCAPE INFORMATION)
- PROPOSED LANDFILL OPERATIONS AND FUTURE FINAL CAP LANDSCAPE AREAS

NOTE:

1. ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE APPROXIMATE DEPENDING ON FILL VOLUMES.
2. SEE SHEET 26 FOR TRUCK QUEUING INFORMATION AND EXIT INFORMATION.
3. SEE SHEET 41 FOR PHASE THREE LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION.
4. APPROXIMATE LOCATIONS OF LANDFILL OPERATIONAL FACILITIES ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE FACILITIES AND ROADS AS REQUIRED TO CONTINUE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE AND ALL SUBSEQUENT PHASES. PHASES MAY OVERLAP (SEE GENERAL NOTES 16 AND 25 ON SHEET 3).

- APPROXIMATE LOCATION OF PROPOSED PHASE THREE VEGETATED LANDFILL BERM (1/S)
- APPROXIMATE LOCATION OF EXISTING PHASES ONE AND TWO VEGETATED LANDFILL BERM
- APPROXIMATE LOCATION OF POTENTIAL NATURAL SURFACE (EXISTING SOIL) TRAIL
- ENVIRONMENTAL QUALITY CORRIDOR/ RESOURCE PROTECTION AREA (EQC/RPA)
- FLOODPLAIN
- APPROXIMATE LIMITS OF CLEARING AND GRADING
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED SPLIT RAIL OR OTHER SAFETY FENCE (36" MINIMUM HEIGHT) (1/S)
- APPROXIMATE LIMITS OPERATIONS AND LANDSCAPE AREAS
- A — APPROXIMATE LOCATION OF POTENTIAL MULTI-PURPOSE OPEN SPACE AREA
- B — APPROXIMATE LOCATION OF POTENTIAL DOG PARK
- C — APPROXIMATE LOCATION OF POTENTIAL PICNIC AREA
- APPROXIMATE LOCATION OF POTENTIAL EXERCISE STATIONS
- APPROXIMATE LOCATION OF EXISTING WIND TURBINES
- EXISTING 380' — EXISTING FILL SPOT ELEVATIONS

EXISTING STRUCTURE DISTANCE SCHEDULE: (9)

KEY	STRUCTURE	DIST. A	DIST. B	DIST. C
S1	Operations Trailer	25'± (1)	57'± (1)	2,322'± (1)
S1-P	Operations Trailer Parking	28'± (1)	58'± (1)	2,272'± (1)
S2	Maintenance Building	865'± (2)	1,671'± (2)	1,245'± (2)
S2-P	Maintenance Building Parking	921'± (2)	1,686'± (2)	1,224'± (2)
S3	Scale House	933'± (3)	1,861'± (3)	1,175'± (3)
S4	Scale House	742'± (4)	103'± (4)	2,363'± (4)
S4-P	Scale House Parking	102'± (4)	849'± (4)	2,228'± (4)

(1) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTHWEST
(2) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE WEST
(3) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE EAST
(4) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTH
(5) DISTANCE FROM STRUCTURE TO REFERENCE POINT 'A.' (CLOSEST PROPERTY LINE TO THE WEST)
(6) DISTANCE FROM THE STRUCTURE TO REFERENCE POINT 'B' (CLOSEST PROPERTY LINE TO THE NORTH)
(7) REFERENCE POINT 'C' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(8) REFERENCE POINT 'B' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(9) SUBJECT TO CHANGE BASED ON LANDFILL OPERATIONS.

BC Consultants
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DENIS D. BOYLE Lic. No. 862 2-20-2014

SPECIAL EXCEPTION AMENDMENT
PHASE THREE OPERATIONS AREAS
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISION	REVISED 2-20-2014
REVISED 3-11-2013	REVISED 3-26-2014
REVISED 3-11-2013	
REVISED 3-15-2013	
REVISED 3-18-2013	
APPLICANT: LORTON ASSOCIATES, INC. 11220 ASSETT LOOP SUITE 201 MANASSAS, VIRGINIA 20109	
DESIGNED BY: PLR	
DRAFTED BY: CAD	
CHECKED BY: NB	
DATE: MARCH 22, 2013	
SCALE: HOR. 1"=200' VERT.	
SHEET 8 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE5117PH3	
LAYOUT: PH3	
FILE NO. 05117.08-00	

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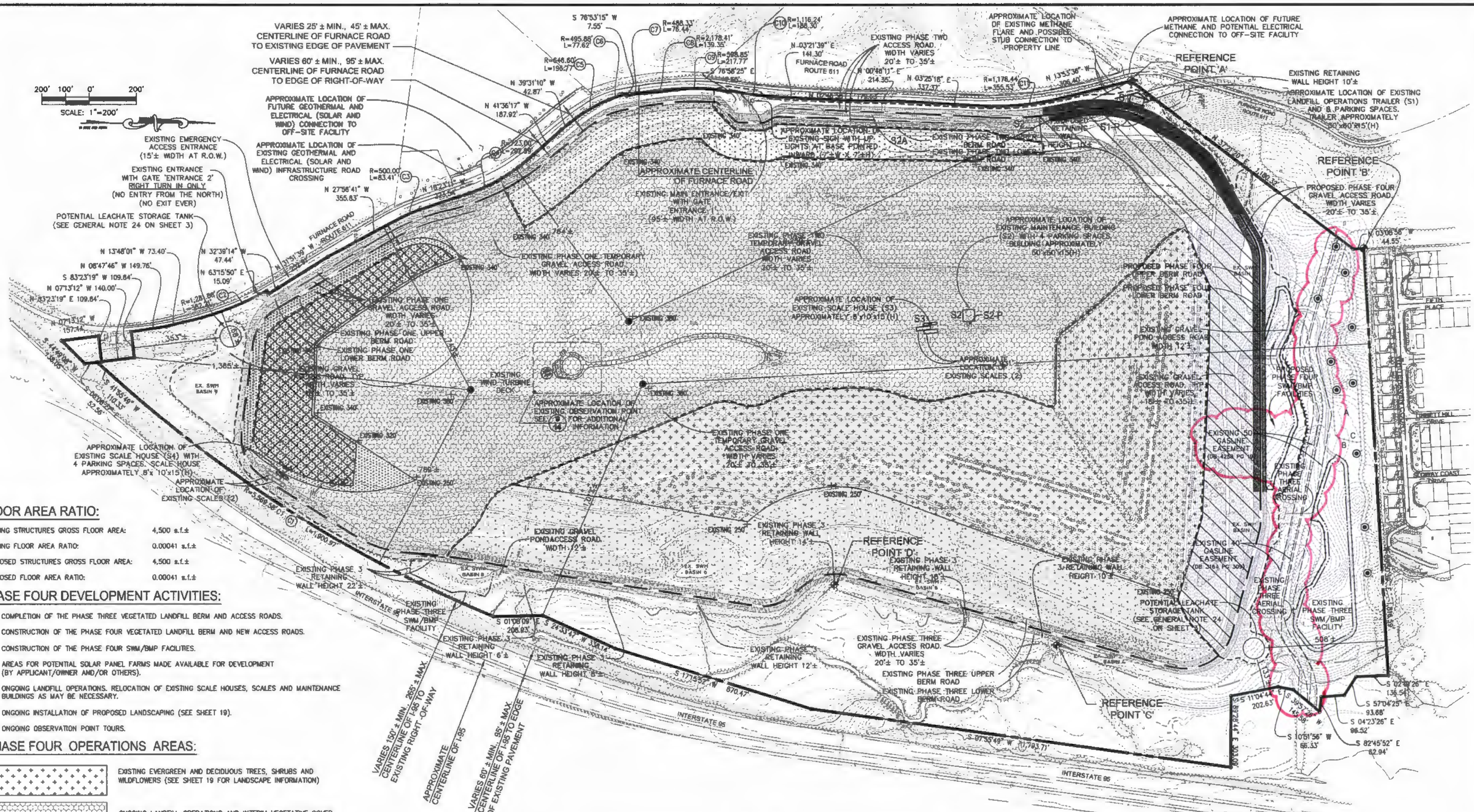

FLOOR AREA RATIO:

EXISTING STRUCTURES GROSS FLOOR AREA:	4,500 s.f.±
EXISTING FLOOR AREA RATIO:	0.00041 s.f.±
PROPOSED STRUCTURES GROSS FLOOR AREA:	4,500 s.f.±
PROPOSED FLOOR AREA RATIO:	0.00041 s.f.±

PHASE FOUR DEVELOPMENT ACTIVITIES:

1. COMPLETION OF THE PHASE THREE VEGETATED LANDFILL BERM AND ACCESS ROADS.
2. CONSTRUCTION OF THE PHASE FOUR VEGETATED LANDFILL BERM AND NEW ACCESS ROADS.
3. CONSTRUCTION OF THE PHASE FOUR SWM/BMP FACILITIES.
4. AREAS FOR POTENTIAL SOLAR PANEL FARMS MADE AVAILABLE FOR DEVELOPMENT (BY APPLICANT/OWNER AND/OR OTHERS).
5. ONGOING LANDFILL OPERATIONS. RELOCATION OF EXISTING SCALE HOUSES, SCALES AND MAINTENANCE BUILDINGS AS MAY BE NECESSARY.
6. ONGOING INSTALLATION OF PROPOSED LANDSCAPING (SEE SHEET 19).
7. ONGOING OBSERVATION POINT TOURS.

PHASE FOUR OPERATIONS AREAS:

- EXISTING EVERGREEN AND DECIDUOUS TREES, SHRUBS AND WILDFLOWERS (SEE SHEET 19 FOR LANDSCAPE INFORMATION)
- ONGOING LANDFILL OPERATIONS AND INTERIM VEGETATIVE COVER (SEE SHEET 19 FOR ADDITIONAL INFORMATION)
- EXISTING PHASE ONE FINAL LANDFILL CAP LANDSCAPE AREAS (SEE SHEET 19 FOR LANDSCAPE INFORMATION)
- EXISTING PHASE TWO FINAL LANDFILL CAP LANDSCAPE AREAS (SEE SHEET 19 FOR LANDSCAPE INFORMATION)
- ONGOING INSTALLATION OF PHASE THREE FINAL LANDFILL CAP LANDSCAPE AREAS (SEE SHEET 19 FOR LANDSCAPE INFORMATION)
- PROPOSED LANDFILL OPERATIONS AND FUTURE FINAL LANDFILL CAP LANDSCAPING

NOTE:

1. ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE APPROXIMATE DEPENDING ON FILL VOLUMES.
2. SEE SHEET 26 FOR TRUCK QUEUING INFORMATION AND EXIT INFORMATION.
3. SEE SHEET 42 FOR PHASE FOUR LANDFILL OPERATIONS TRAFFIC CIRCULATION.
4. APPROXIMATE LOCATIONS OF LANDFILL OPERATIONAL FACILITIES ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE FACILITIES AND ROADS AS REQUIRED TO CONTINUE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE AND ALL SUBSEQUENT PHASES. PHASES MAY OVERLAP (SEE GENERAL NOTES 16 AND 25 ON SHEET 3).

- POTENTIAL AREAS FOR DEVELOPMENT OF A SOLAR PANEL FARM (BY APPLICANT/OWNER AND/OR OTHERS) 7/14
- APPROXIMATE LOCATION OF PROPOSED PHASE FOUR VEGETATED LANDFILL BERM 1/15
- APPROXIMATE LOCATION OF EXISTING PHASES ONE, TWO AND THREE VEGETATED LANDFILL BERM
- APPROXIMATE LOCATION OF POTENTIAL NATURAL SURFACE (EXISTING SOIL) TRAIL
- ENVIRONMENTAL QUALITY CORRIDOR/ RESOURCE PROTECTION AREA (EQC/RPA)
- 100-YR. FLOODPLAIN
- APPROXIMATE LIMITS OF CLEARING AND GRADING
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING SPLIT RAIL OR OTHER SAFETY FENCE
- A — APPROXIMATE LOCATION OF POTENTIAL MULTI-PURPOSE OPEN SPACE AREA
- B — APPROXIMATE LOCATION OF POTENTIAL DOG PARK
- C — APPROXIMATE LOCATION OF POTENTIAL PICNIC AREA
- APPROXIMATE LOCATION OF POTENTIAL EXERCISE STATIONS
- APPROXIMATE LOCATION OF EXISTING WIND TURBINES TO BE REMOVED (REFER TO GENERAL NOTE 19 ON SHEET 3 FOR ADDITIONAL)
- EXISTING 360' + — EXISTING FILL SPOT ELEVATIONS

EXISTING STRUCTURE DISTANCE SCHEDULE: (9)

KEY	STRUCTURE	DIST. A	DIST. B	DIST. C
S1	Operations Trailer	25'± (1)	57'± (2)	2,322'± (7)
S1-P	Operations Trailer Parking	28'± (1)	58'± (2)	2,272'± (7)
S2	Maintenance Building	865'± (2)	1,671'± (6)	1,245'± (8)
S2-P	Maintenance Building Parking	921'± (2)	1,686'± (6)	1,224'± (8)
S3	Scale House	933'± (2)	1,661'± (6)	1,175'± (8)
S4	Scale House	742'± (2)	103'± (3)	2,383'± (8)
S4-P	Scale House Parking	102'± (3)	849'± (2)	2,226'± (8)

(1) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTHWEST
(2) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE WEST
(3) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE EAST
(4) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTH
(5) DISTANCE FROM STRUCTURE TO REFERENCE POINT 'A.' (CLOSEST PROPERTY LINE TO THE WEST)
(6) DISTANCE FROM THE STRUCTURE TO REFERENCE POINT 'B' (CLOSEST PROPERTY LINE TO THE NORTH)
(7) REFERENCE POINT 'C' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(8) REFERENCE POINT 'D' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(9) SUBJECT TO CHANGE BASED ON LANDFILL OPERATIONS.

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SPECIAL EXCEPTION AMENDMENT
PHASE FOUR OPERATIONS AREAS

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 5-14-2013 | REVISED 1-22-2014
REVISED 8-11-2013 | REVISED 2-20-2014
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-10-2013

APPLICANT:
FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY:	PLR
DRAFTED BY:	CAD
CHECKED BY:	NB
DATE:	MARCH 22, 2013
SCALE:	HOR. 1"=200' VERT.
SHEET 9 OF 45	
CO. NO.	SEA 80-L/V-061-2
CAD NAME:	SE5117PH4
LAYOUT:	PH4
FILE NO.	05117.08-00

XREFS:

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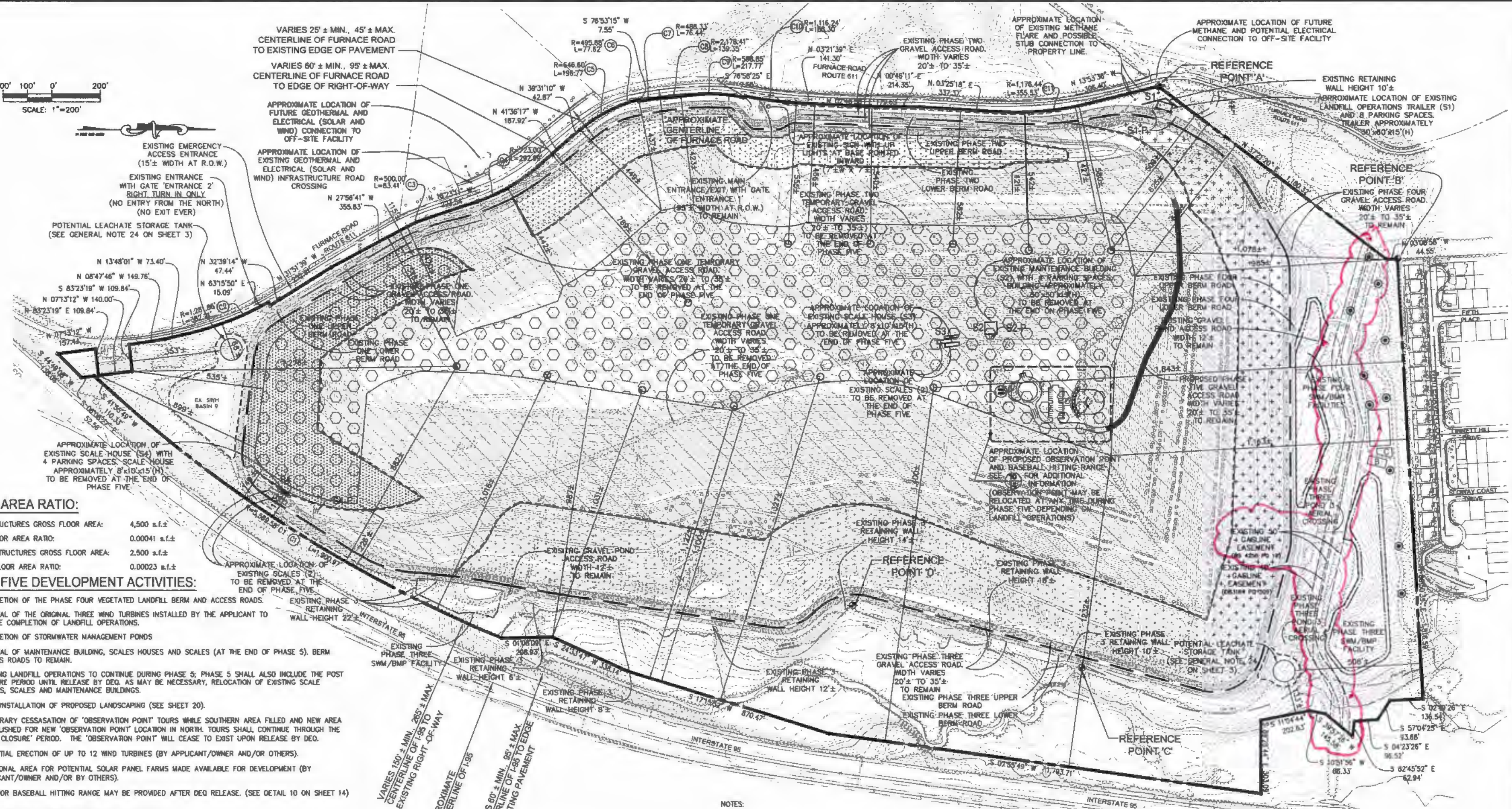

FLOOR AREA RATIO:

EXISTING STRUCTURES GROSS FLOOR AREA:	4,500 s.f.±
EXISTING FLOOR AREA RATIO:	0.00041 s.f.±
PROPOSED STRUCTURES GROSS FLOOR AREA:	2,500 s.f.±
PROPOSED FLOOR AREA RATIO:	0.00023 s.f.±

PHASE FIVE DEVELOPMENT ACTIVITIES:

1. COMPLETION OF THE PHASE FOUR VEGETATED LANDFILL BERM AND ACCESS ROADS.
2. REMOVAL OF THE ORIGINAL THREE WIND TURBINES INSTALLED BY THE APPLICANT TO ENABLE COMPLETION OF LANDFILL OPERATIONS.
3. COMPLETION OF STORMWATER MANAGEMENT PONDS
4. REMOVAL OF MAINTENANCE BUILDING, SCALES HOUSES AND SCALES (AT THE END OF PHASE 5). BERM ACCESS ROADS TO REMAIN.
5. ONGOING LANDFILL OPERATIONS TO CONTINUE DURING PHASE 5; PHASE 5 SHALL ALSO INCLUDE THE POST CLOSURE PERIOD UNTIL RELEASE BY DEQ. AS MAY BE NECESSARY, RELOCATION OF EXISTING SCALE HOUSES, SCALES AND MAINTENANCE BUILDINGS.
6. FINAL INSTALLATION OF PROPOSED LANDSCAPING (SEE SHEET 20).
7. TEMPORARY CESSASATION OF 'OBSERVATION POINT' TOURS WHILE SOUTHERN AREA FILLED AND NEW AREA ESTABLISHED FOR NEW 'OBSERVATION POINT' LOCATION IN NORTH. TOURS SHALL CONTINUE THROUGH THE 'POST CLOSURE' PERIOD. THE 'OBSERVATION POINT' WILL CEASE TO EXIST UPON RELEASE BY DEQ.
8. POTENTIAL ERECTION OF UP TO 12 WIND TURBINES (BY APPLICANT/OWNER AND/OR OTHERS).
9. ADDITIONAL AREA FOR POTENTIAL SOLAR PANEL FARMS MADE AVAILABLE FOR DEVELOPMENT (BY APPLICANT/OWNER AND/OR BY OTHERS).
10. OUTDOOR BASEBALL HITTING RANGE MAY BE PROVIDED AFTER DEQ RELEASE. (SEE DETAIL 10 ON SHEET 14)

PHASE FIVE OPERATIONS AREAS:

- EXISTING PHASE ONE FINAL LANDFILL CAP LANDSCAPE AREA (SEE SHEET 20 FOR LANDSCAPE INFORMATION)
- EXISTING PHASE TWO FINAL LANDFILL CAP LANDSCAPE AREA (SEE SHEET 20 FOR LANDSCAPE INFORMATION)
- EXISTING PHASE THREE FINAL LANDFILL CAP LANDSCAPE AREA (SEE SHEET 20 FOR LANDSCAPE INFORMATION)
- ONGOING INSTALLATION OF PHASE FOUR FINAL LANDFILL CAP LANDSCAPE AREA (SEE SHEET 20 FOR LANDSCAPE INFORMATION)
- POTENTIAL AREAS FOR DEVELOPMENT OF A SOLAR PANEL FARM (7/14) (BY APPLICANT/OWNER AND/OR BY OTHERS)
- PROPOSED PHASE FIVE LANDFILL OPERATIONS AND FINAL CAP LANDSCAPE AREA
- APPROXIMATE LOCATION OF EXISTING PHASES ONE, TWO, THREE AND FOUR VEGETATED LANDFILL BERM
- APPROXIMATE LOCATION OF POTENTIAL NATURAL SURFACE (EXISTING SOIL) TRAIL
- ENVIRONMENTAL QUALITY CORRIDOR/RESOURCE PROTECTION AREA (EQC/RPA)
- 100-YR. FLOODPLAIN
- APPROXIMATE LIMITS OF CLEARING AND GRADING
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING SPLIT RAIL, OR OTHER SAFETY FENCE
- A — APPROXIMATE LOCATION OF POTENTIAL MULTI-PURPOSE OPEN SPACE AREA
- B — APPROXIMATE LOCATION OF POTENTIAL DOG PARK
- C — APPROXIMATE LOCATION OF POTENTIAL PICNIC AREA
- APPROXIMATE LOCATION OF POTENTIAL EXERCISE STATIONS
- APPROXIMATE LOCATION OF POTENTIAL WIND TURBINES (6/14) (BY APPLICANT/OWNER AND/OR BY OTHERS)
- EXISTING 360' — EXISTING FILL SPOT ELEVATIONS

NOTES:

1. ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE APPROXIMATE DEPENDING ON FILL VOLUMES.
2. SEE SHEET 26 FOR TRUCK QUEUING INFORMATION.
3. SEE SHEET 43 FOR PHASE FIVE LANDFILL OPERATIONS TRAFFIC CIRCULATION.
4. APPROXIMATE LOCATIONS OF LANDFILL OPERATIONAL FACILITIES ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE FACILITIES AND ROADS AS REQUIRED TO CONTINUE AND COMPLETE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE. (SEE GENERAL NOTES 16 AND 25 ON SHEET 3)
5. THE INFORMATION SHOWN ON THIS SHEET REFLECTS THE GREEN ENERGY PARK AND DEBRIS LANDFILL AS IT WILL EXIST AT THE END OF PHASE FIVE.
6. SEE SHEETS 16, 17, 18, 19 AND 20 FOR INTERIM AND FINAL LANDSCAPING PHASING INFORMATION.
7. THE ORIGINAL THREE WIND TURBINES INSTALLED IN PHASE ONE SHALL BE ENTIRELY REMOVED BY THE APPLICANT/OWNER DURING PHASE FIVE. NEW WIND TURBINES MAY BE ERECTED BY APPLICANT/OWNER AND/OR BY OTHERS PRIOR TO THE END OF PHASE FIVE, SUBSEQUENT TO CESSATION OF LANDFILL OPERATIONS, AS GENERALLY DEPICTED HEREON.
8. DURING PHASE 5, THERE WILL BE A GAP DURING WHICH NO "OBSERVATION POINT" WILL BE PROVIDED DUE TO THE NEED FOR FILLING, SETTLING AND CAPPING OF TOP PLATFORM.
9. WIND TURBINE, OBSERVATION POINT AND BASEBALL HITTING RANGE LOCATIONS MAY BE ADJUSTED DUE TO FINAL ENGINEERING AND DESIGN.
10. CONTOURS REPRESENT TOP OF FINAL COVER; FINAL WASTE DEBRIS MAY NOT EXCEED 412'.
11. OUTDOOR BASEBALL HITTING RANGE USE MAY BE PROVIDED IN PHASE 5. (SEE DETAIL ON SHEET 14)
12. PERSONAL AND MAINTENANCE VEHICLES SHALL BE ALLOWED TO MAKE LEFT TURNS IN AND RIGHT TURNS OUT AT MAIN ENTRANCE.

EXISTING STRUCTURE DISTANCE SCHEDULE: (9)

KEY	STRUCTURE	DIST. A	DIST. B	DIST. C
S1	Operations Trailer	25'±(1)	57'±(2)	2,322'±(7)
S1-P	Operations Trailer Parking	28'±(1)	58'±(2)	2,272'±(7)
S2	Maintenance Building	865'±(2)	1,671'±(6)	1,245'±(8)
S2-P	Maintenance Building Parking	921'±(2)	1,686'±(6)	1,224'±(8)
S3	Scale House	933'±(2)	1,861'±(6)	1,175'±(8)
S4	Scale House	742'±(3)	103'±(3)	2,383'±(8)
S4-P	Scale House Parking	102'±(3)	849'±(2)	2,228'±(8)

(1) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTHWEST
(2) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE WEST
(3) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE EAST
(4) DISTANCE FROM STRUCTURE TO CLOSEST PROPERTY LINE TO THE NORTH
(5) DISTANCE FROM STRUCTURE TO REFERENCE POINT 'A' (CLOSEST PROPERTY LINE TO THE WEST)
(6) DISTANCE FROM THE STRUCTURE TO REFERENCE POINT 'B' (CLOSEST PROPERTY LINE TO THE NORTH)
(7) REFERENCE POINT 'C' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(8) REFERENCE POINT 'D' PROVIDES THE DISTANCE FROM THE STRUCTURE TO THE CLOSEST POINT ON THE LIMITS OF THE EQC/RPA.
(9) SUBJECT TO CHANGE BASED ON LANDFILL OPERATIONS.

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SPECIAL EXCEPTION AMENDMENT
PHASE FIVE OPERATIONS AREAS
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 5-14-2013
REVISED 8-11-2013
REVISED 10-7-2013
REVISED 11-6-2013
REVISED 12-10-2013
REVISED 1-15-2014
REVISED 2-20-2014

APPLICANT:
FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"=200' VERT.
SHEET 10 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117PH5
LAYOUT: PH5
FILE NO. 05117.08-00

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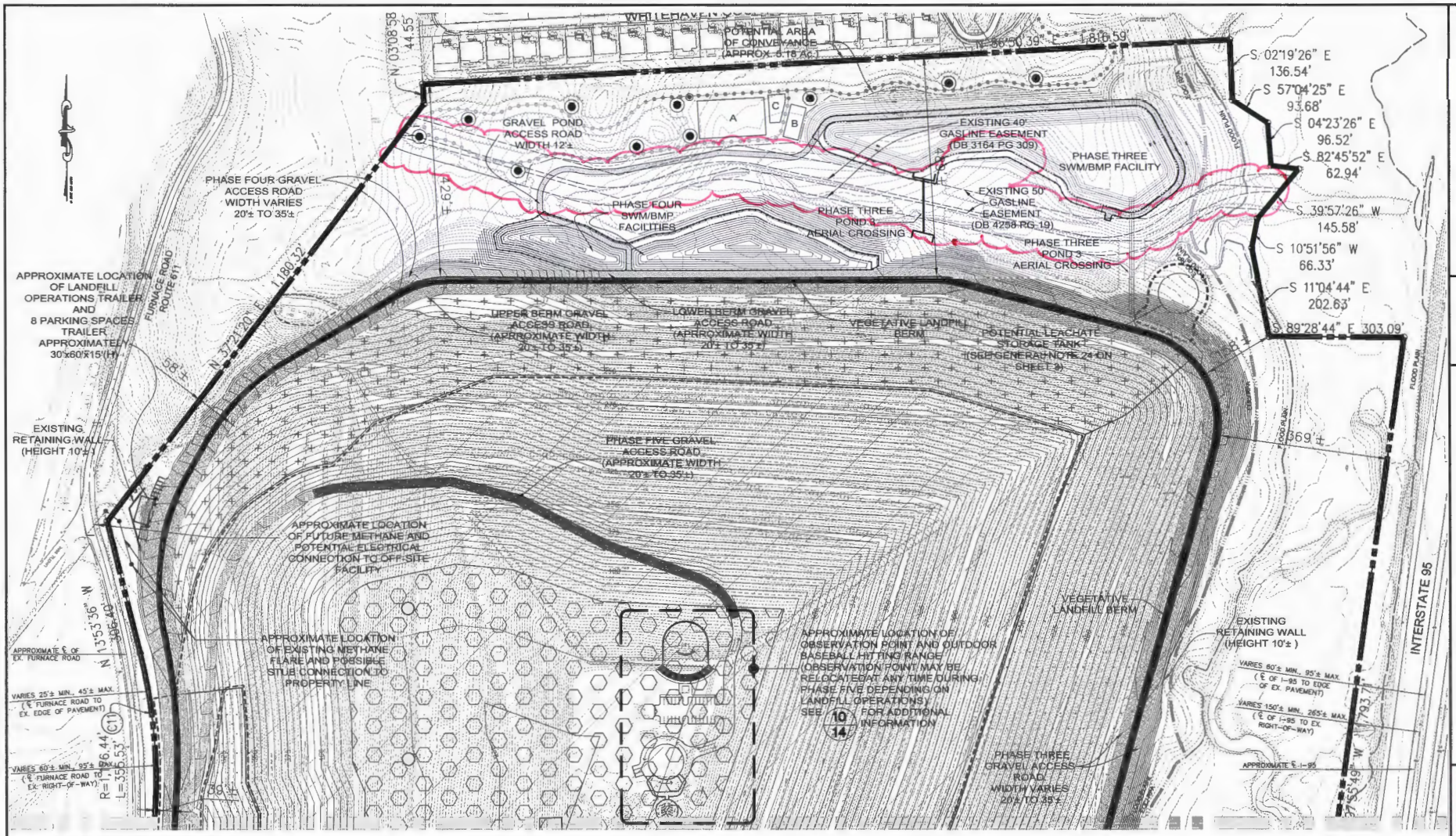

PHASE FIVE OPERATIONS AREAS:

- PHASE ONE FINAL LANDFILL CAP LANDSCAPE AREA
- PHASE TWO FINAL LANDFILL CAP LANDSCAPE AREA
- PHASE THREE FINAL LANDFILL CAP LANDSCAPE AREA
- PHASE FOUR FINAL LANDFILL CAP LANDSCAPE AREA
- PHASE FIVE FINAL LANDFILL CAP LANDSCAPE AREA
- POTENTIAL AREAS FOR DEVELOPMENT OF A SOLAR PANEL ENERGY FARM – PHASES FOUR, FIVE, AND/OR SIX ONLY (BY APPLICANT/OWNER AND/OR BY OTHERS)
- A — APPROXIMATE LOCATION OF POTENTIAL MULTI-PURPOSE OPEN SPACE AREA (11/14)
- B — APPROXIMATE LOCATION OF POTENTIAL DOG PARK (7/14)
- C — APPROXIMATE LOCATION OF POTENTIAL PICNIC AREA (7/14)
- APPROXIMATE LOCATION OF POTENTIAL EXERCISE STATIONS (9/14)

MATCHLINE – SEE SHEET 12

- APPROXIMATE LOCATION OF POTENTIAL WIND TURBINES (BY APPLICANT/OWNER AND/OR BY OTHERS) (8/14)
- EQC/RPA
- 100-YR. FLOODPLAIN
- APPROXIMATE LOCATION OF VEGETATED LANDFILL BERM (10/14)
- APPROXIMATE LOCATION OF SPLIT RAIL OR OTHER SAFETY FENCE (8/14)
- APPROXIMATE LOCATION OF POTENTIAL NATURAL SURFACE (EXISTING SOIL) TRAIL (4/14)
- APPROXIMATE LIMITS OF CEARING AND GRADING

NOTES:

1. ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE APPROXIMATE DEPENDING ON FILL VOLUMES.
2. SEE SHEET 26 FOR TRUCK QUEUING INFORMATION.
3. SEE SHEET 43 FOR PHASE FIVE LANDFILL OPERATIONS TRAFFIC CIRCULATION.
4. APPROXIMATE LOCATIONS OF LANDFILL OPERATIONAL FACILITIES ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE FACILITIES AND ROADS AS REQUIRED TO CONTINUE AND COMPLETE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE. (SEE GENERAL NOTES 16 AND 23 ON SHEET 3)
5. THE INFORMATION SHOWN ON THIS SHEET REFLECTS THE GREEN ENERGY PARK AND DEBRIS LANDFILL AS IT WILL EXIST AT THE END OF PHASE FIVE.
6. SEE SHEETS 16, 17, 18, 19 AND 20 FOR INTERIM AND FINAL LANDSCAPING PHASING INFORMATION.
7. THE ORIGINAL THREE WIND TURBINES INSTALLED IN PHASE ONE SHALL BE ENTIRELY REMOVED BY THE APPLICANT/OWNER DURING PHASE FIVE. NEW WIND TURBINES MAY BE ERECTED BY APPLICANT/OWNER AND/OR BY OTHERS PRIOR TO THE END OF PHASE FIVE, SUBSEQUENT TO CESSATION OF LANDFILL OPERATIONS, AS GENERALLY DEPICTED HEREON.
8. DURING PHASE 5, THERE WILL BE A GAP DURING WHICH NO "OBSERVATION POINT" WILL BE PROVIDED DUE TO THE NEED FOR FILLING, SETTLING AND CAPPING OF TOP PLATFORM.
9. WIND TURBINE, OBSERVATION POINT AND BASEBALL HITTING RANGE LOCATIONS MAY BE ADJUSTED DUE TO FINAL ENGINEERING AND DESIGN.
10. CONTOURS REPRESENT TOP OF FINAL COVER; FINAL WASTE DEBRIS MAY NOT EXCEED 412'.
11. OUTDOOR BASEBALL HITTING RANGE USE MAY BE PROVIDED IN PHASE 5. (SEE DETAIL ON SHEET 14)
12. PERSONAL AND MAINTENANCE VEHICLES SHALL BE ALLOWED TO MAKE LEFT TURNS IN AND RIGHT TURNS OUT AT MAIN ENTRANCE.

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COMMONWEALTH OF VIRGINIA — JOHN D. DUDA — Lic. No. 932 — 2-20-2014 — PROFESSIONAL ENGINEER

SPECIAL EXCEPTION AMENDMENT
PHASE FIVE – AT COMPLETION OF OPERATIONS
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 5-14-2013
REVISED 8-11-2013
REVISED 10-15-2013
REVISED 11-1-2013
REVISED 12-18-2013
REVISED 1-21-2014
REVISED 2-20-2014

APPLICANT: LORTON ASSOCIATES, INC. 11220 ASSETT LOOP SUITE 201 MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR	
DRAFTED BY: CAD	
CHECKED BY: NB	
DATE: MARCH 22, 2013	
SCALE:	HOR. 1"=100' VERT.
SHEET 11 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE51175PE	
LAYOUT: PHASE FIVE A	
FILE NO. 05117.08-00	

95575

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MATCHLINE – SEE SHEET 11

MATCHLINE – SEE SHEET 13

PHASE FIVE OPERATIONS AREAS:

- PHASE ONE FINAL LANDFILL CAP LANDSCAPE AREA
- PHASE TWO FINAL LANDFILL CAP LANDSCAPE AREA
- PHASE THREE FINAL LANDFILL CAP LANDSCAPE AREA
- APPROXIMATE LIMITS OF CLEARING AND GRADING
- PHASE FOUR FINAL LANDFILL CAP LANDSCAPE AREA
- PHASE FIVE FINAL LANDFILL CAP LANDSCAPE AREA
- POTENTIAL AREAS FOR DEVELOPMENT OF A SOLAR PANEL ENERGY FARM – PHASES FOUR, FIVE AND/OR SIX ONLY (BY APPLICANT/OWNER AND/OR BY OTHERS) (7/14)
- APPROXIMATE LOCATION OF POTENTIAL WIND TURBINES (BY APLICANT/OWNER AND/OR BY OTHERS) (8/14)
- A – APPROXIMATE LOCATION OF POTENTIAL MULTI-PURPOSE OPEN SPACE AREA (1/14)
- B – APPROXIMATE LOCATION OF POTENTIAL DOG PARK (1/14)
- C – APPROXIMATE LOCATION OF POTENTIAL PICNIC AREA (1/14)
- APPROXIMATE LOCATION OF POTENTIAL EXERCISE STATIONS (5/14)
- EQC/RPA
- 100-YR. FLOODPLAIN
- APPROXIMATE LOCATION OF VEGETATED LANDFILL BERM (1/14)
- APPROXIMATE LOCATION OF SPLIT RAIL OR OTHER SAFETY FENCE (8/14)
- APPROXIMATE LOCATION OF POTENTIAL NATURAL SURFACE (EXISTING SOIL) TRAIL (4/14)

NOTES:

1. ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE APPROXIMATE DEPENDING ON FILL VOLUMES.
2. SEE SHEET 26 FOR TRUCK QUEUING INFORMATION.
3. SEE SHEET 43 FOR PHASE FIVE LANDFILL OPERATIONS TRAFFIC CIRCULATION.
4. APPROXIMATE LOCATIONS OF LANDFILL OPERATIONAL FACILITIES ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE FACILITIES AND ROADS AS REQUIRED TO CONTINUE AND COMPLETE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE. (SEE GENERAL NOTES 14 AND 25 ON SHEET 3)
5. THE INFORMATION SHOWN ON THIS SHEET REFLECTS THE GREEN ENERGY PARK AND DEBRIS LANDFILL AS IT WILL EXIST AT THE END OF PHASE FIVE.
6. SEE SHEETS 16, 17, 18, 19 AND 20 FOR INTERIM AND FINAL LANDSCAPING PHASING INFORMATION.
7. THE ORIGINAL THREE WIND TURBINES INSTALLED IN PHASE ONE SHALL BE ENTIRELY REMOVED BY THE APPLICANT/OWNER DURING PHASE FIVE. NEW WIND TURBINES MAY BE ERECTED BY APPLICANT/OWNER AND/OR BY OTHERS PRIOR TO THE END OF PHASE FIVE, SUBSEQUENT TO CESSATION OF LANDFILL OPERATIONS, AS GENERALLY DEPICTED HEREON.
8. DURING PHASE 5, THERE WILL BE A GAP DURING WHICH NO "OBSERVATION POINT" WILL BE PROVIDED DUE TO THE NEED FOR FILLING, SETTLING AND CAPPING OF TOP PLATFORM.
9. WIND TURBINE, OBSERVATION POINT AND BASEBALL HITTING RANGE LOCATIONS MAY BE ADJUSTED DUE TO FINAL ENGINEERING AND DESIGN.
10. CONTOURS REPRESENT TOP OF FINAL COVER; FINAL WASTE DEPTHS MAY NOT EXCEED 412'.
11. OUTDOOR BASEBALL HITTING RANGE USE MAY BE PROVIDED IN PHASE 5. (SEE DETAIL ON SHEET 14)
12. PERSONAL AND MAINTENANCE VEHICLES SHALL BE ALLOWED TO MAKE LEFT TURNS IN AND RIGHT TURNS OUT AT MAIN ENTRANCE.

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COMMONWEALTH OF VIRGINIA – DENIS P. GUIDA – No. 852 – 2-20-2014 – PROFESSIONAL ENGINEER

SPECIAL EXCEPTION AMENDMENT
PHASE FIVE – AT COMPLETION OF OPERATIONS
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 2-20-2014
REVISED 9-11-2013
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-18-2013
REVISED 1-22-2014

FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 203
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"=100' VERT.
SHEET 12 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE51175PE
LAYOUT: PHASE FIVE B
FILE NO. 05117.08-00

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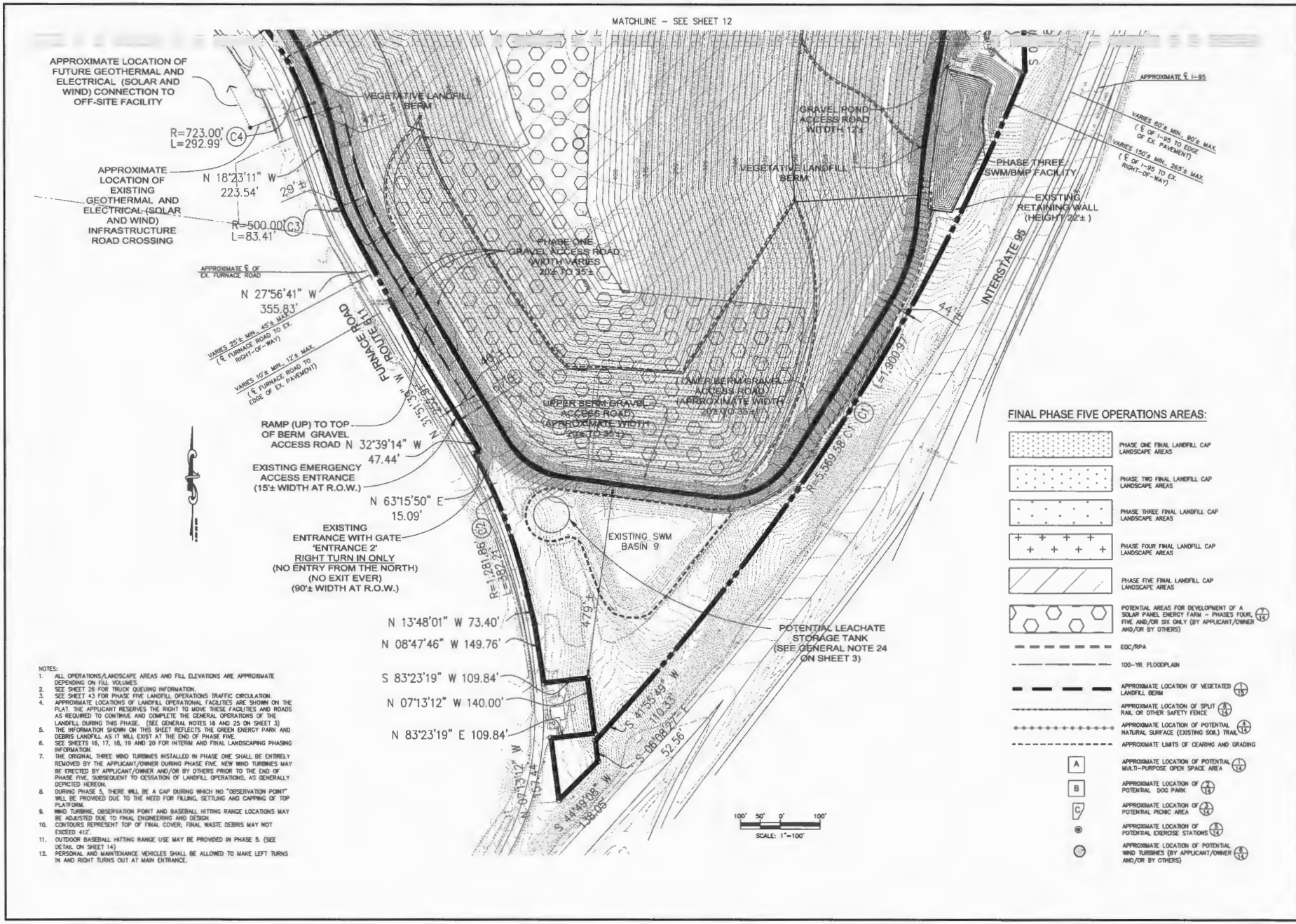

NOTES:

1. ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE APPROXIMATE DEPENDING ON FILL VOLUMES.
2. SEE SHEET 26 FOR TRUCK QUEUING INFORMATION.
3. SEE SHEET 43 FOR PHASE FIVE LANDFILL OPERATIONS TRAFFIC CIRCULATION.
4. APPROXIMATE LOCATIONS OF LANDFILL OPERATIONAL FACILITIES ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE FACILITIES AND ROADS AS REQUIRED TO CONTINUE AND COMPLETE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE. (SEE GENERAL NOTES 18 AND 25 ON SHEET 3)
5. THE INFORMATION SHOWN ON THIS SHEET REFLECTS THE GREEN ENERGY PARK AND DEBRIS LANDFILL AS IT WILL EXIST AT THE END OF PHASE FIVE.
6. SEE SHEETS 16, 17, 18, 19 AND 20 FOR INTERIM AND FINAL LANDSCAPING PHASING INFORMATION.
7. THE ORIGINAL THREE WIND TURBINES INSTALLED IN PHASE ONE SHALL BE ENTIRELY REMOVED BY THE APPLICANT/OWNER DURING PHASE FIVE. NEW WIND TURBINES MAY BE ERECTED BY APPLICANT/OWNER AND/OR BY OTHERS PRIOR TO THE END OF PHASE FIVE, SUBSEQUENT TO CESSATION OF LANDFILL OPERATIONS, AS GENERALLY DEPICTED HEREON.
8. DURING PHASE 5, THERE WILL BE A CAP DURING WHICH NO "OBSERVATION POINT" WILL BE PROVIDED DUE TO THE NEED FOR FILLING, SETTLING AND CAPPING OF TOP PLATFORM.
9. WIND TURBINE, OBSERVATION POINT AND BASEBALL HITTING RANGE LOCATIONS MAY BE ADJUSTED DUE TO FINAL ENGINEERING AND DESIGN.
10. CONTOURS REPRESENT TOP OF FINAL COVER; FINAL WASTE DEBRIS MAY NOT EXCEED 412'.
11. OUTDOOR BASEBALL HITTING RANGE USE MAY BE PROVIDED IN PHASE 5. (SEE DETAIL ON SHEET 14)
12. PERSONAL AND MAINTENANCE VEHICLES SHALL BE ALLOWED TO MAKE LEFT TURNS IN AND RIGHT TURNS OUT AT MAIN ENTRANCE.

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COMMONWEALTH OF VIRGINIA
DENIS B. BOYLE
Lic. No. 8857
2-20-2014
PROFESSIONAL ENGINEER

SPECIAL EXCEPTION AMENDMENT
PHASE FIVE – AT COMPLETION OF OPERATIONS
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 3-11-2013
REVISED 4-25-2013
REVISED 10-3-2013
REVISED 11-1-2013
REVISED 12-16-2013
REVISED 2-20-2014

FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"=100'
VERT.

SHEET 13 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117SPE
LAYOUT: PHASE FIVE C
FILE NO. 05117.08-00

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1/14 MULTI-PURPOSE OPEN SPACE NO SCALE

DESIGNATED MULTI-PURPOSE OPEN SPACE AREA APPROXIMATELY 12,750 s.f.

2/14 DOG PARK NO SCALE

FENCED AREA APPROXIMATELY 2,625 s.f.

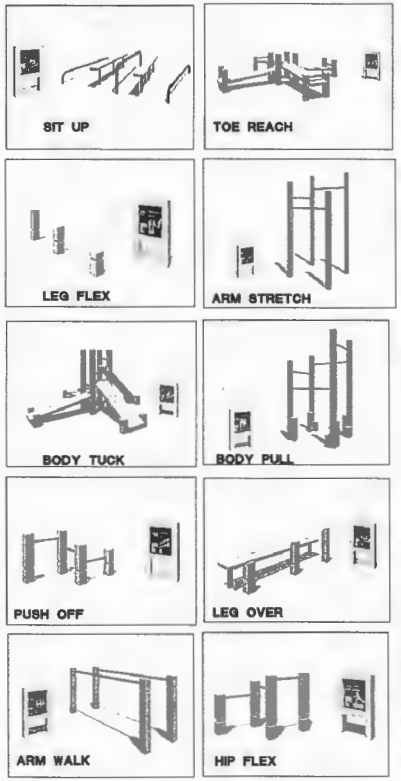
3/14 PICNIC AREA NO SCALE

DESIGNATED AREA OR INDIVIDUAL PICNIC TABLES MAY BE LOCATED THROUGHOUT THE RECREATION AREA.

4/14 NATURAL SURFACE (EXISTING SOIL) TRAIL NO SCALE

(MINIMUM 10' WIDE TRAIL)

NOTE: DETAILS 1 THROUGH 5 ARE POTENTIAL USES THAT MAY BE PROVIDED BY THE APPLICANT AS DETERMINED BY THE LORTON VALLEY HOMEOWNERS ASSOCIATION.



8/14 WIND TURBINE NO SCALE

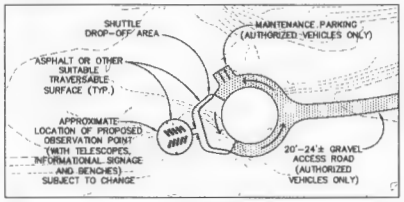
TURBINE MANUFACTURER TO BE DETERMINED. 120' APPROXIMATE TOWER HEIGHT, 60' APPROXIMATE ROTOR RADIUS AND 10' APPROXIMATE TOWER BASE DIAMETER. MAXIMUM HEIGHT OF TOWER WITH ROTOR SHALL NOT EXCEED 180'±.

7/14 POTENTIAL SOLAR PANEL NO SCALE

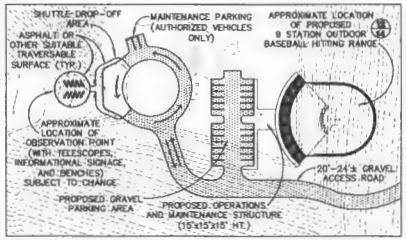
APPROXIMATELY 40 ACRES ON TOP AND 10 ACRES ON THE SOUTHERN SLOPE ARE AREAS FOR DEVELOPMENT OF A SOLAR PANEL FARM (BY APPLICANT AND/OR OTHERS). SOLAR PANEL HEIGHT APPROXIMATELY 10', LENGTH APPROXIMATELY 50' AND WIDTH APPROXIMATELY 25'. FINAL SIZE MAY BE ADJUSTED DEPENDING ON THE PREVAILING TECHNOLOGY AT THE TIME OF INSTALLATION PROVIDED THAT THE MINIMUM SETBACK DISTANCES ARE NOT DIMINISHED.

8/14 SPLIT RAIL OR OTHER SAFETY FENCE NO SCALE

(36" MIN. HEIGHT WITH WIRE MESH BACKING)



9/14 OBSERVATION POINT CONCEPT PLAN PHASES 1 TO 4 FEATURES MAY BE ADJUSTED 1"=80'

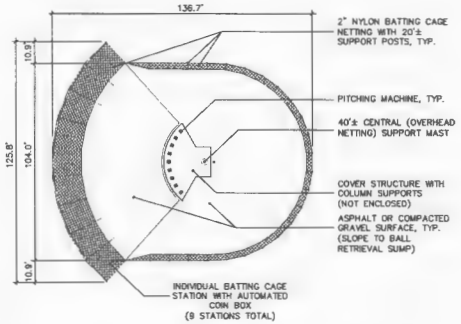


10/14 OBSERVATION POINT AND OUTDOOR BASEBALL HITTING RANGE CONCEPT LAYOUT - PHASE 5 1"=80'

OUTDOOR BASEBALL BATTING RANGE MAY BE PROVIDED AT THE END OF PHASE 5. LOCATION AND LAYOUT MAY BE ADJUSTED FROM THAT SHOWN.

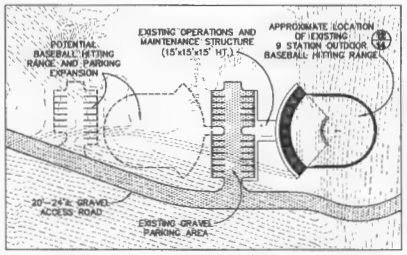
6/14 EXERCISE STATIONS NO SCALE

AS MANUFACTURED BY COLUMBIA CASCADE (OR AN APPROVED EQUAL). SEE PLAN FOR APPROXIMATE STATION LOCATIONS. ALL EQUIPMENT IS MADE FROM RECYCLED PLASTIC.



12/14 9 STATION OUTDOOR BASEBALL HITTING RANGE NO SCALE

TYPICAL LAYOUT. MAY BE ADJUSTED AT FINAL ENGINEERING AND DESIGN.



11/14 OUTDOOR BASEBALL HITTING RANGE - PHASE 6 1"=80'

OUTDOOR BASEBALL BATTING RANGE MAY BE PROVIDED DURING PHASE 6 AND MAY INCLUDE A SECOND, NINE STATION BATTING RANGE. LOCATION AND LAYOUT MAY BE ADJUSTED AT FINAL ENGINEERING AND DESIGN.

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COMMONWEALTH OF VIRGINIA
DONG B. JUNG
Lic. No. 885
2-20-2014
PROFESSIONAL ENGINEER

SPECIAL EXCEPTION AMENDMENT
SITE DETAILS
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED 3-11-2013	APPROVED 1-23-2014
REVISED 7-15-2013	REVISED 2-20-2014
REVISED 10-2-2013	
REVISED 10-9-2013	
REVISED 11-1-2013	
REVISED 12-18-2013	

FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 210
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. AS SHOWN VERT.

SHEET 14 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE51170ET3
LAYOUT: DETAILS
FILE NO. 05117.08-00

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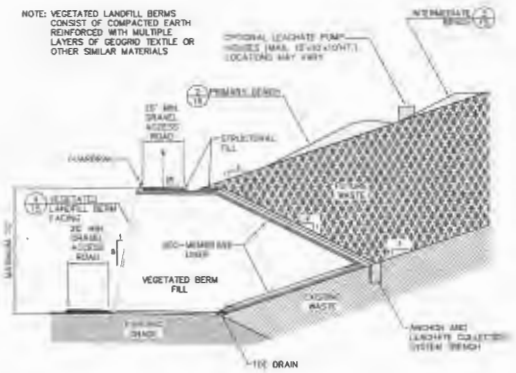
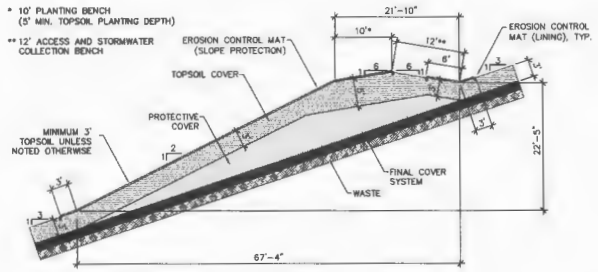


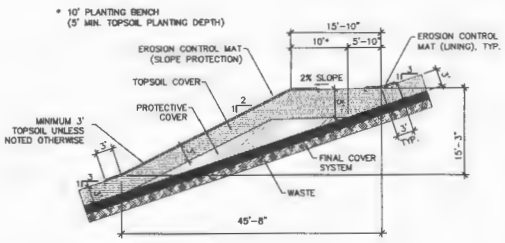
1/18 TYPICAL VEGETATED LANDFILL BERM SECTION

NO SCALE



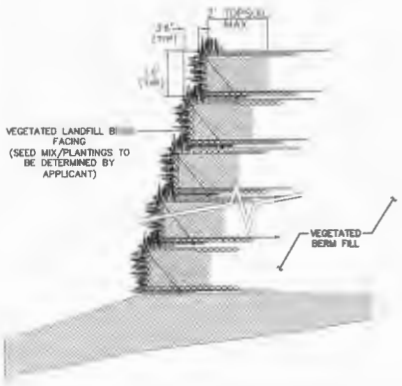
2/18 TYPICAL PRIMARY BENCH

SCALE: 1"=10'



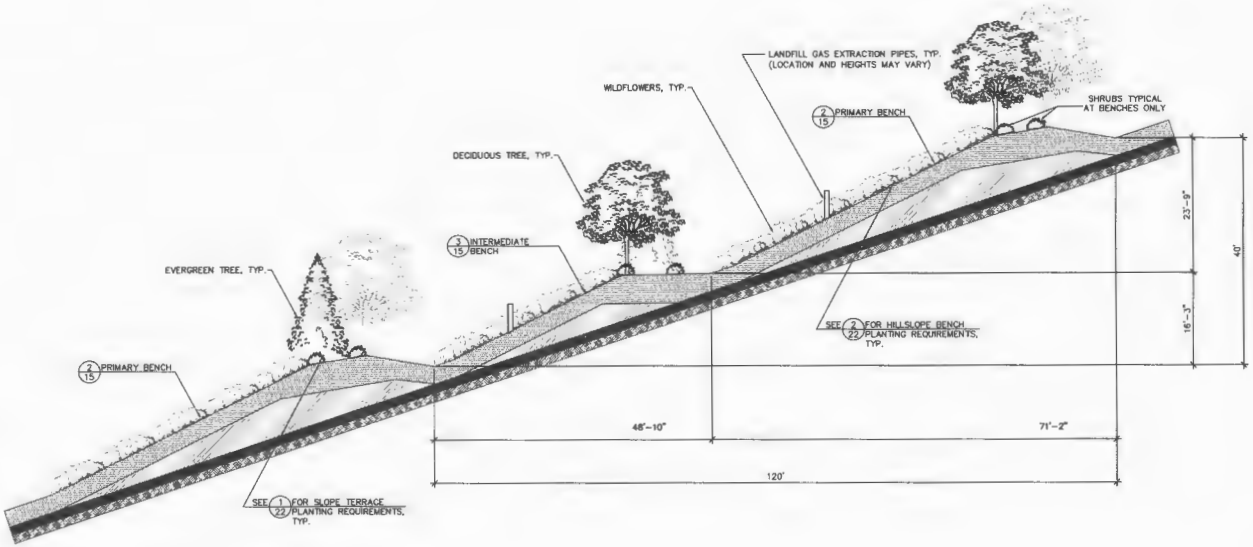
3/18 TYPICAL INTERMEDIATE BENCH

SCALE: 1"=10'



4/18 TYPICAL VEGETATED LANDFILL BERM FACING

NO SCALE



5/18 TYPICAL SIDE SLOPE TERRACE AND HILLSIDE SECTION

SCALE: 1"=10'

NOTE: THE DETAILS SHOWN ON THIS SHEET MAY BE ADJUSTED BY THE APPLICANT/OWNER AND/OR OTHERS DURING THE SITE PLAN PHASE AND/OR VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) REVIEW PHASE PURSUANT TO ENGINEERING AND LANDSCAPING DESIGN REQUIREMENTS.

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COMMONWEALTH OF VIRGINIA
DENIS B. GOLDEN
Lic. No. 1842
2-20-2014

SPECIAL EXCEPTION AMENDMENT
SITE DETAILS

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

ESC REVISION	
REVISED 5-17-2013	
REVISED 8-12-2013	
REVISED 10-15-2013	
REVISED 11-11-2013	
REVISED 12-16-2013	
APPLICANT: LORTON LANDFILL ASSOCIATES, INC. 11220 ASHETT LOOP SUITE 201 MANASSAS, VIRGINIA 20109	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. AS SHOWN VERT.

SHEET 15 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117DET
LAYOUT: DETAILS
FILE NO. 05117.08-00

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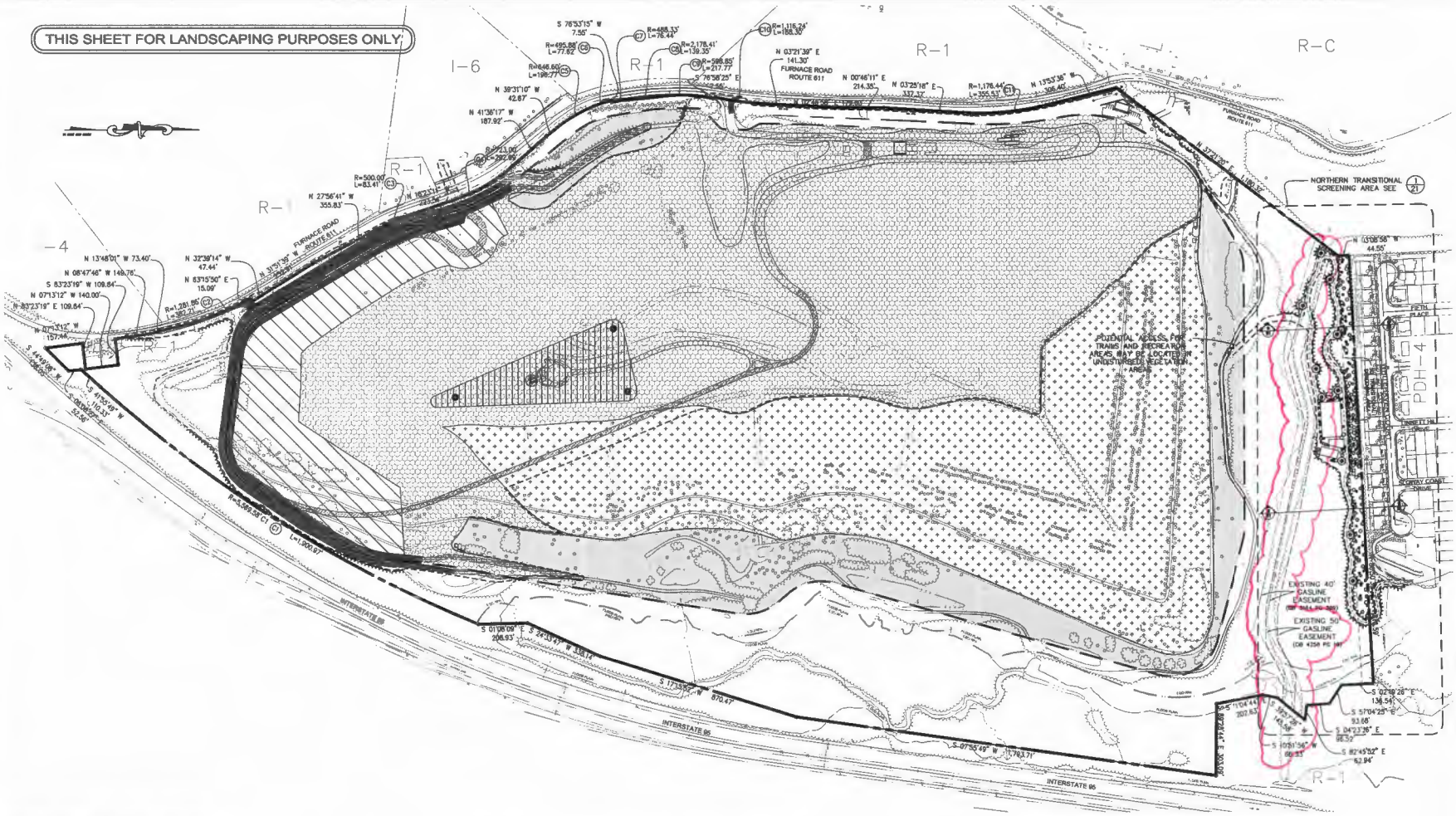
THIS SHEET FOR LANDSCAPING PURPOSES ONLY


I-6
R-1
R-C
FURNACE ROAD ROUTE 611
NORTHERN TRANSITIONAL SCREENING AREA SEE 1/21
POTENTIAL ACCESS FOR TRANS. AND RECREATION AREAS, MAY BE LOCATION OF UNDISTURBED VEGETATION AREAS
PDH-4
FIFTH PLACE
TINNEYLIN DRIVE
SOMMY COURT DRIVE
EXISTING 40' GASLINE EASEMENT
EXISTING 50' GASLINE EASEMENT
INTERSTATE 95
S 76°53'15" W 7.55'
N 03°21'39" E 141.30'
N 00°46'11" E 214.35'
N 03°25'18" E 337.37'
N 13°53'36" W 106.40'
N 39°31'10" W 42.87'
N 41°36'17" W 187.92'
N 27°56'41" W 355.83'
N 32°39'14" W 47.44'
N 83°15'50" E 15.09'
N 13°48'01" W 73.40'
N 08°47'46" W 149.76'
S 83°23'19" W 109.84'
N 07°13'12" W 140.00'
N 83°23'19" E 109.84'
S 44°49'06" W 90.00'
S 41°53'49" W 110.31'
S 08°06'55" E 52.50'
S 01°08'09" E 206.93'
S 17°34'52" W 870.47'
S 07°55'49" W 1,763.71'
S 02°18'28" E 136.54'
S 57°04'25" E 93.88'
S 04°27'26" E 98.57'
S 82°45'52" E 62.94'
S 10°51'56" W 60.33'
N 01°08'58" W 44.55'
N 37°21'00" E 180.32'
S 11°04'44" E 202.83'
S 32°37'28" E 143.48'
S 30°00'47" E 301.00'
R=1,281.86' L=301.21'
R=500.00' L=83.41'
R=495.89' L=77.62'
R=646.60' L=198.77'
R=488.33' L=76.44'
R=2,178.41' L=139.35'
R=585.85' L=217.77'
R=1,116.24' L=188.30'
R=1,176.44' L=355.53'
R=5,988.35' L=1,900.67'

PHASE ONE LANDSCAPE AREAS:

- UNDISTURBED VEGETATION (EXCEPT FOR BERM ACCESS ROADS AND RAMPS)
- EXISTING VEGETATION PLUS PROPOSED EVERGREEN AND DECIDUOUS TREES, SHRUBS AND WILDFLOWERS
- LANDFILL OPERATIONS AND PROPOSED INTERIM VEGETATIVE COVER 1/22
- LANDFILL OPERATIONS AREA AND PROPOSED WILDFLOWER LANDSCAPE AREA 2/22
- PROPOSED PHASE ONE FINAL CAP WILDFLOWER LANDSCAPE AREA 3/22

NOTE: ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE APPROXIMATE DEPENDING ON FILL VOLUMES.

- APPROXIMATE LIMITS OF OPERATIONS AND LANDSCAPE AREAS
- APPROXIMATE LOCATION OF PROPOSED PHASE ONE VEGETATED LANDFILL BERM 1/15
- APPROXIMATE LIMITS OF CLEARING AND GRADING
- EXISTING TREELINE
- PROPOSED TREELINE
- ENVIRONMENTAL QUALITY CORRIDOR/ RESOURCE PROTECTION AREA (EQC/RAP)
- FLOODPLAIN
- EXISTING TREES
- PROPOSED DECIDUOUS AND EVERGREEN TREES AND SHRUBS

200' 100' 0' 200'
SCALE: 1"=200'

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DENNIS B. BOYD
2-20-2014

SPECIAL EXCEPTION AMENDMENT
PHASE ONE LANDSCAPE PLAN

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 5-14-2013 REVISED 2-20-2014
REVISED 5-31-2013 REVISED 2-20-2014
REVISED 9-9-2013
REVISED 11-1-2013
REVISED 12-19-2013

APPLICANT
FRANKLIN ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"=200' VERT.

SHEET 16 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117LSC-PH1
LAYOUT: LSC-PH1
FILE NO. 05117.08-00

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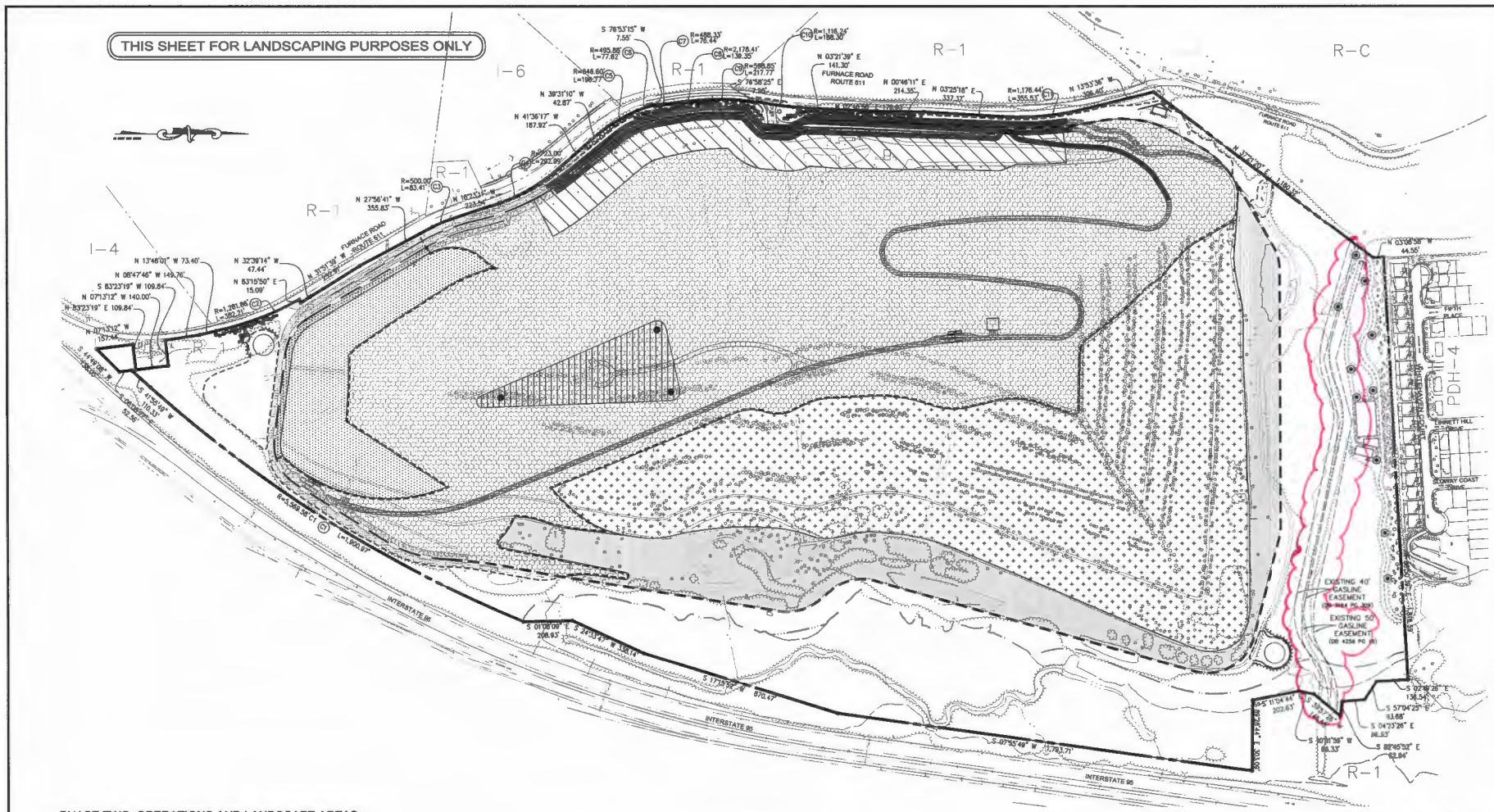

PHASE TWO OPERATIONS AND LANDSCAPE AREAS:

- UNDISTURBED VEGETATION (EXCEPT FOR BERM ACCESS ROADS AND RAMPS)
- EXISTING EVERGREEN AND DECIDUOUS TREES, SHRUBS AND WILDFLOWERS LANDSCAPE AREA
- EXISTING LANDFILL OPERATIONS AND INTERIM LANDSCAPE AREAS
- EXISTING LANDFILL OPERATIONS AND WILDFLOWER LANDSCAPE AREA
- EXISTING PHASE ONE FINAL CAP WILDFLOWER LANDSCAPE AREA
- PROPOSED PHASE TWO FINAL CAP WILDFLOWER LANDSCAPE AREA (3/22)
- APPROXIMATE LIMITS OF CLEARING AND GRADING
- EXISTING DECIDUOUS AND EVERGREEN TREES AND/OR SHRUBS
- PROPOSED DECIDUOUS AND EVERGREEN TREES AND/OR SHRUBS
- EXISTING TREELINE
- PROPOSED TREELINE
- APPROXIMATE LIMITS OF PROPOSED PHASE TWO VEGETATED LANDFILL BERM (1/15)
- APPROXIMATE LOCATION OF EXISTING PHASE ONE VEGETATED LANDSCAPE BERM
- APPROXIMATE LIMITS OF OPERATIONS AND LANDSCAPE AREAS

NOTE: ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE ILLUSTRATIVE APPROXIMATE DEPENDING ON FILL VOLUMES.

200' 100' 0' 200'
SCALE: 1"=200'

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(703)449-8100 (703)449-8108 (Fax)
www.bccoll.com

SPECIAL EXCEPTION AMENDMENT
PHASE TWO LANDSCAPE PLAN

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED 5-14-2013	REVISED 1-30-2014
REVISED 7-25-2013	REVISED 2-21-2014
REVISED 10-7-2013	
REVISED 11-1-2013	
REVISED 12-16-2013	

FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"=200' VERT.

SHEET 17 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117LSC-PH2
LAYOUT: LSC-PH2
FILE NO. 05117.08-00

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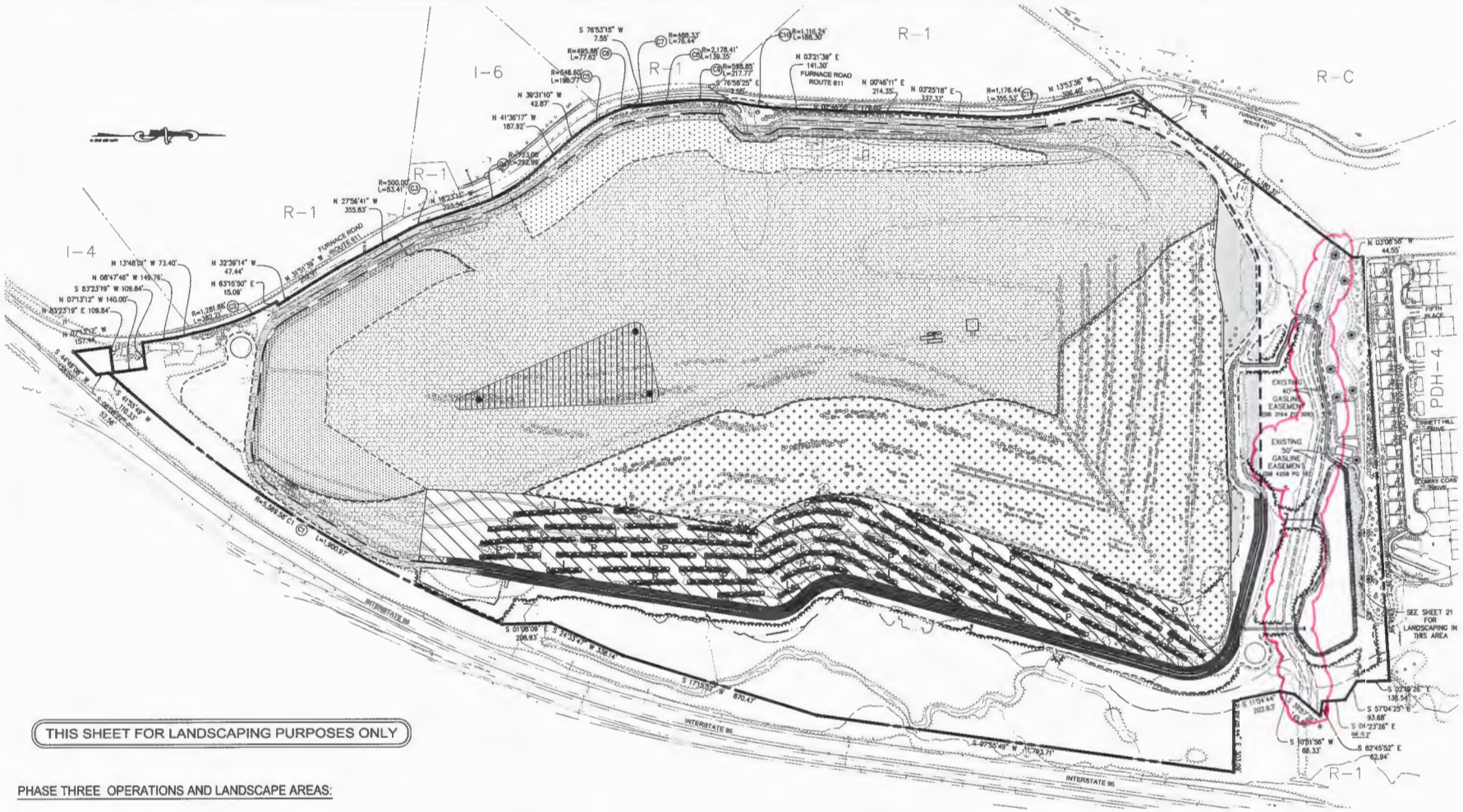

THIS SHEET FOR LANDSCAPING PURPOSES ONLY

PHASE THREE OPERATIONS AND LANDSCAPE AREAS:

- UNDISTURBED VEGETATION (EXCEPT FOR BERM ACCESS ROADS AND RAMPS)
- EXISTING EVERGREEN AND DECIDUOUS TREES, SHRUBS AND WILDFLOWERS LANDSCAPE AREA
- EXISTING LANDFILL OPERATIONS AND INTERIM LANDSCAPE AREAS
- EXISTING LANDFILL OPERATIONS AND WILDFLOWER LANDSCAPE AREA
- EXISTING PHASE ONE FINAL CAP WILDFLOWER LANDSCAPE AREA
- EXISTING PHASE TWO FINAL CAP WILDFLOWER LANDSCAPE AREA
- PROPOSED PHASE THREE FINAL CAP WILDFLOWER LANDSCAPE AREA (3/23)
- P — PROPOSED PHASE THREE PRIMARY SLOPE TERRACE PLANTING (2/15) (5/15) (1/22)
- I — PROPOSED PHASE THREE INTERMEDIATE SLOPE TERRACE PLANTING (1/15) (5/15) (1/22)
- EXISTING DECIDUOUS AND EVERGREEN TREES AND/OR SHRUBS
- APPROXIMATE LOCATION OF PROPOSED PHASE THREE VEGETATED LANDFILL BERM
- APPROXIMATE LOCATION OF EXISTING PHASES ONE AND TWO VEGETATED LANDFILL BERM
- APPROXIMATE LIMITS OF OPERATIONS AND LANDSCAPE AREAS
- EXISTING TREELINE
- PROPOSED TREELINE
- APPROXIMATE LIMITS OF CLEARING AND GRADING

200' 100' 0' 200'
SCALE: 1"=200'

NOTE: ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE ILLUSTRATIVE AND APPROXIMATE DEPENDING ON FILL VOLUMES.

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SPECIAL EXCEPTION AMENDMENT
PHASE THREE LANDSCAPE PLAN
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	REVISED 2-20-2014
REVISED 5-14-2013	REVISED 2-20-2014
REVISED 8-21-2013	
REVISED 9-11-2013	
REVISED 11-1-2013	
REVISED 12-10-2013	
APPLICANT: LORTON ASSOCIATES, INC. 11220 ASSETT LOOP SUITE 201 MANASSAS, VIRGINIA 20109	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"=200' VERT.
SHEET 18 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117LSC-PH3
LAYOUT: LSC-PH3
FILE NO. 05117.08-00

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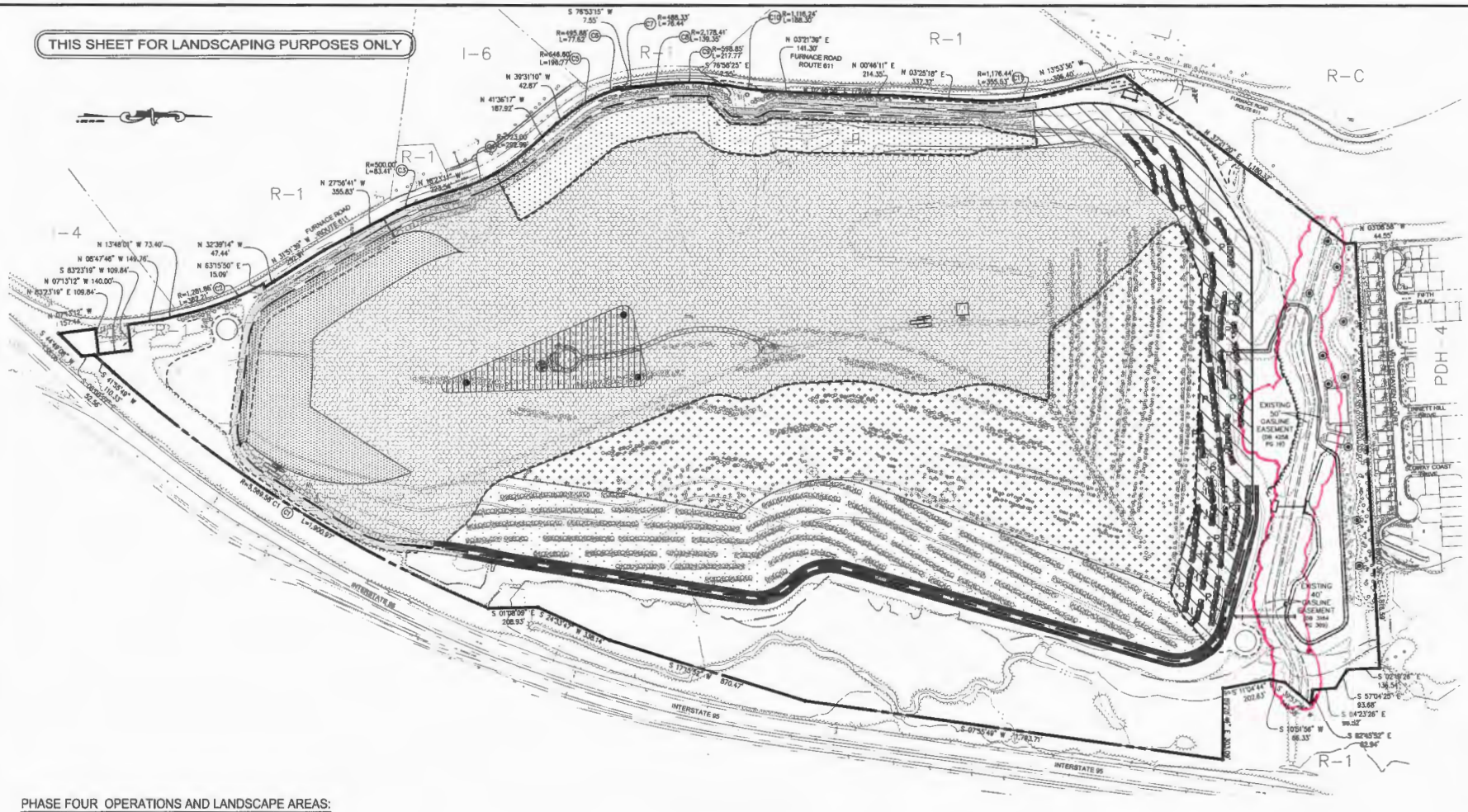

PHASE FOUR OPERATIONS AND LANDSCAPE AREAS:

- EXISTING EVERGREEN AND DECIDUOUS TREES, SHRUBS AND WILDFLOWERS LANDSCAPE AREA
- EXISTING LANDFILL OPERATIONS AND INTERIM LANDSCAPE AREAS
- EXISTING LANDFILL OPERATIONS AND WILDFLOWER LANDSCAPE AREA
- EXISTING PHASE ONE FINAL CAP WILDFLOWER LANDSCAPE AREA
- EXISTING PHASE TWO FINAL CAP LANDSCAPE AREA
- EXISTING PHASE THREE FINAL CAP LANDSCAPE AREA
- PROPOSED PHASE FOUR FINAL CAP WILDFLOWER LANDSCAPE AREA (3/22)
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING PHASE THREE PRIMARY AND INTERMEDIATE SLOPE TERRACE PLANTING
- PROPOSED PHASE FOUR PRIMARY SLOPE TERRACE PLANTING (3/15) (9/15) (1/22)
- PROPOSED PHASE FOUR INTERMEDIATE SLOPE TERRACE PLANTING (3/15) (9/15) (1/22)
- EXISTING DECIDUOUS AND EVERGREEN TREES AND/OR SHRUBS
- APPROXIMATE LOCATION OF EXISTING PHASES ONE, TWO & THREE VEGETATED LANDFILL BERM
- APPROXIMATE LOCATION OF PROPOSED PHASE FOUR VEGETATED LANDFILL BERM (1/15)
- APPROXIMATE LIMITS OF CLEARING AND GRADING

200' 100' 0' 200'
SCALE: 1"=200'

NOTE:
1. ALL OPERATIONS AND LANDSCAPE AREAS AND FILL ELEVATIONS ARE ILLUSTRATIVE AND APPROXIMATE DEPENDING ON FILL VOLUME.
2. SEE SHEET 9 FOR POTENTIAL PHASE FOUR SOLAR PANEL FARM

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SPECIAL EXCEPTION AMENDMENT
PHASE FOUR LANDSCAPE PLAN
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED 7-12-2013	
REVISED 8-21-2013	REVISED 2-20-2014
REVISED 9-5-2013	
REVISED 11-1-2013	
REVISED 12-6-2013	
REVISED 12-20-2013	

FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"=200' VERT.

SHEET 19 OF 45

CO. NO. SEA 80-L/V-081-2
CAD NAME: SE5117LSC-PH4
LAYOUT: LSC-PH4
FILE NO. 05117.08-00

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THIS SHEET FOR LANDSCAPING PURPOSES ONLY

R-1
R-C
PDH-4
I-6
I-4
FURNACE ROAD ROUTE 611
INTERSTATE 95
EXISTING 50' GASLINE EASEMENT (DB 3184 PG. 308)
EXISTING 40' GASLINE EASEMENT (DB 3184 PG. 308)
FIFTH BLACK
DARRETT HILL DRIVE
SEAWAY COAST DRIVE

PHASE FIVE LANDSCAPE AREAS:

- EXISTING PHASE ONE FINAL LANDFILL CAP WILDFLOWER LANDSCAPE AREA
- EXISTING PHASE TWO FINAL LANDFILLCAP WILDFLOWER LANDSCAPE AREA
- EXISTING PHASE THREE FINAL LANDFILL CAP WILDFLOWER LANDSCAPE AREA
- EXISTING PHASE FOUR FINAL LANDFILL CAP WILDFLOWER LANDSCAPE AREA
- PROPOSED PHASE FIVE FINAL LANDFILL CAP WILDFLOWER LANDSCAPE AREA (3/22)
- PROPOSED PHASE FIVE FINAL LANDFILL CAP MEADOW LANDSCAPE AREA (2/22)
- PROPOSED PHASE FIVE PRIMARY SIDE SLOPE TERRACE PLANTINGS (2/15) (1/22)
- PROPOSED PHASE FIVE INTERMEDIATE SLOPE TERRACE PLANTINGS (3/15) (1/22)
- EXISTING PHASE THREE AND FOUR PRIMARY & INTERMEDIATE SLOPE TERRACE PLANTING
- EXISTING VEGETATED LANDFILL BERM
- APPROXIMATE LIMITS OF CLEARING AND GRADING
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING DECIDUOUS AND EVERGREEN TREES AND/OR SHRUBS

200' 100' 0' 200'
SCALE: 1"=200'

NOTE:

1. ALL OPERATIONS/LANDSCAPE AREAS AND FILL ELEVATIONS ARE AND APPROXIMATE DEPENDING ON FILL VOLUMES.
2. SEE SHEETS 11, 12 AND 13 FOR PHASE FIVE FINAL GRADING.
3. SEE SHEET 10 FOR POTENTIAL PHASE FIVE SOLAR PANEL FARM

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SPECIAL EXCEPTION AMENDMENT
PHASE FIVE LANDSCAPE PLAN
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED 5-14-2013	REVISED 1-29-2014
REVISED 5-21-2013	REVISED 2-20-2014
REVISED 9-5-2013	
REVISED 11-1-2013	
REVISED 12-16-2013	
OWNER: FURNACE ASSOCIATES, INC. 11220 ASSETT LOOP SUITE 205 MANASSAS, VIRGINIA 20109	
DESIGNED BY: PLR	
DRAFTED BY: CAD	
CHECKED BY: NB	
DATE: MARCH 22, 2013	
SCALE: HOR. 1"=200' VERT.	
SHEET 20 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE5117LSC-PH5	
LAYOUT: LSC-PH5	
FILE NO. 05117.08-00	

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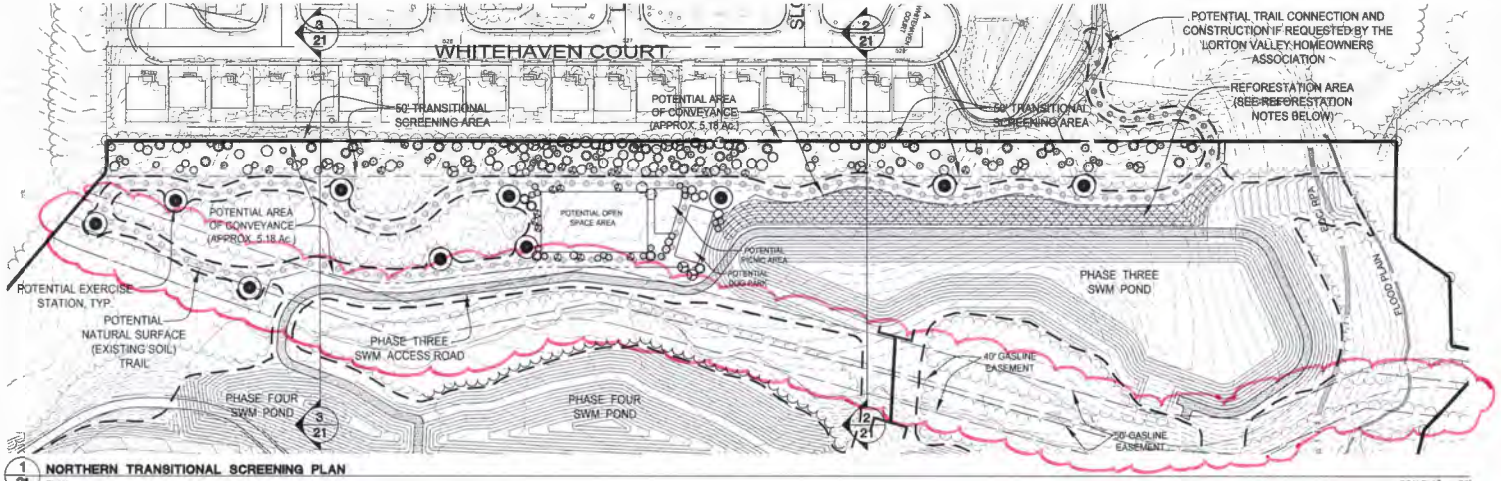
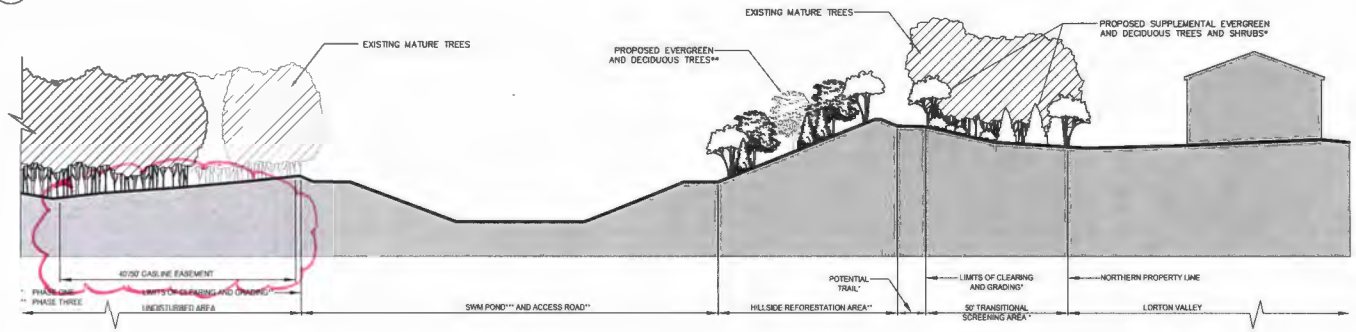
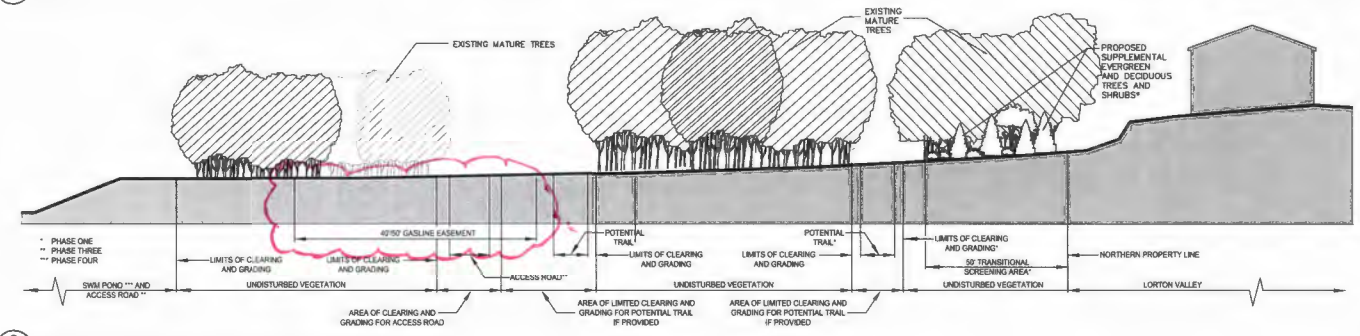


1/21 NORTHERN TRANSITIONAL SCREENING PLAN

KEY MAP
NO SCALE



2/21 NORTHERN TRANSITIONAL SCREENING SECTION
SECTION
SCALE 1" = 20'



3/21 NORTHERN TRANSITIONAL SCREENING SECTION
SECTION
SCALE 1" = 20'

LEGEND:

- LIMITS OF CLEARING AND GRADING
- CATEGORY IV DECIDUOUS TREES
- CATEGORY III OR II DECIDUOUS TREES
- CATEGORY IV EVERGREEN TREES
- CATEGORY III OR II EVERGREEN TREES
- REFORESTATION AREA (SEE REFORESTATION NOTES BELOW)

GENERAL NOTES:

1. MINIMAL GRADING SHALL BE PERMITTED WITHIN THE 50' TRANSITIONAL SCREENING AREA, AS DETERMINED BY THE URBAN FOREST MANAGEMENT DIVIDSION (UFMD), AS NECESSARY FOR INSTALLATION OF THE POTENTIAL TRAIL AND/OR OTHER IMPROVEMENTS.
2. LOCATION OF THE POTENTIAL TRAIL IS APPROXIMATE. FINAL LOCATION SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF UFMD TO AVOID EXISTING TREES AND UNDERSTOREY VEGETATION WHERE POSSIBLE.
3. SUPPLEMENTAL DECIDUOUS AND EVERGREEN TREES ARE SHOWN WITHIN THE 50' TRANSITIONAL SCREENING AREA. THEIR FINAL LOCATIONS MAY CHANGE SUBJECT TO UFMD APPROVAL. DECIDUOUS AND EVERGREEN SHRUBS ARE NOT SHOWN WITHIN THE 50' TRANSITIONAL SCREENING AREA BUT WILL BE PROVIDED. THE FINAL QUANTITY, LOCATIONS AND TYPE OF SHRUBS PROVIDED SHALL BE SUBJECT TO UFMD APPROVAL.
4. PROPOSED TREES LOCATED OUTSIDE THE LIMITS OF CLEARING AND GRADING AND THOSE LOCATED WITHIN THE 50' TRANSITIONAL SCREENING AREA SHALL BE PLANTED MANUALLY. NO HEAVY EQUIPMENT SHALL BE USED.

REFORESTATION NOTES:

1. REFORESTATION AREA (APPROXIMATELY 23,979 s.f.±) TO BE PLANTED WITH A MIX OF DECIDUOUS AND EVERGREEN OVERSTORY AND UNDERSTORY TREES AND STABILIZED WITH A SEED MIX OF NATIVE PERENNIALS AND GRASSES.
2. OVERSTORY TREES SHALL BE PLANTED AT A RATE OF 100 TREES PER ACRE OF REFORESTATION AREA.
3. UNDERSTORY TREES SHALL BE PLANTED AT A RATE OF 200 TREES PER ACRE OF REFORESTATION AREA.
4. DECIDUOUS TREES SHALL BE A MINIMUM OF TWO (2) INCHES IN CALIPER AND EVERGREEN TREES SHALL BE A MINIMUM OF SIX (6) TO EIGHT (8) FEET IN HEIGHT AT THE TIME OF PLANTING.
5. FINAL SEED MIX TO BE DETERMINED IN CONSULTATION WITH UFMD.

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SPECIAL EXCEPTION AMENDMENT
NORTHERN TRANSITIONAL SCREENING AREA
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
SHEET NOTES 10-1-2013
REVISED 10-15-2013
REVISED 12-19-2013
REVISED 1-3-2014
REVISED 2-21-2014

FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR	
DRAFTED BY: CAD	
CHECKED BY: NB	
DATE: MARCH 22, 2013	
SCALE: HOR. AS SHOWN VERT.	
SHEET 21 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE5117TRANSCREEN	
LAYOUT: TRANSCREENING	
FILE NO. 05117.08-00	

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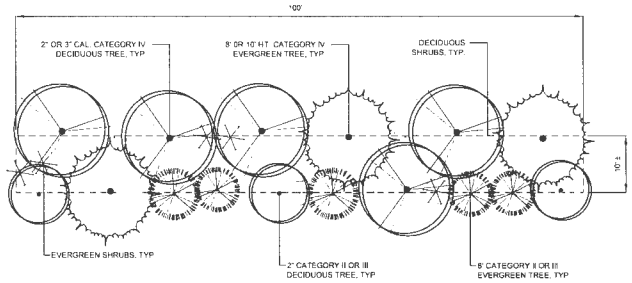

TYPICAL BENCH PLANTING.
(Per 100 l.f. of Terrace)

5 - CATEGORY IV DECIDUOUS TREES
3 - CATEGORY II OR III DECIDUOUS TREES
3 - CATEGORY IV EVERGREEN TREES
5 - CATEGORY II OR III EVERGREEN TREES
10 - EVERGREEN OR DECIDUOUS SHRUBS

1/22 TYPICAL BENCH PLANTING (Per 100 l.f. of Bench)

SCALE: 1"=10'

NATIVE UPLAND WILDLIFE FORAGE AND COVER MEADOW MIX
(ERNST SEEDS MIX ERNMX-123 OR AN APPROVED EQUIVALENT)

%	BOTANICAL NAME	COMMON NAME
20.00%	Elymus virginicus	Virginia Wild Rye
20.00%	Schizachyrium scoparium, PA Ecotype	Little Bluestem, PA Ecotype
20.00%	Sorghastrum nutans, PA Ecotype	Indiangrass, PA Ecotype
10.00%	Dichanthelium clandestinum	Deertongue
5.00%	Coreopsis tripteris	Tall Coreopsis
5.00%	Coreopsis verticillata	Threadleaf Coreopsis
5.00%	Andropogon virginicus	Broomsedge Bluestem
4.00%	Tripsacum dactyloides	Eastern Gamma Grass
4.00%	Chamaecrista fasciculata	Partridge Pea
3.00%	Rudbeckia hirta	Black-eyed Susan
2.00%	Desmodium paniculatum	Narrow-leaf Tick Trefoil
2.00%	Heliopsis helianthoides	Ox Eye Sunflower
100.00%	Total	

Seeding Rate: 20 lbs. per acre or 1/2 lb. per 1,000 s.f.

2/22 WILDLIFE FORAGE AND COVER MEADOW SEED MIX

ALL SEED SHALL BE OBTAINED FROM ERNST SEED, 9006 MERCER PIKE, MEADVILLE, PA 16335 (1-800-873-3321). THE FAIRFAX COUNTY URBAN FOREST MANAGEMENT DIVISION MAY ALLOW SUBSTITUTIONS WITH THEIR APPROVAL.

SHOWY NORTHEAST NATIVE WILDFLOWER AND GRASS MIX
(ERNST SEEDS MIX ERNMX-153 OR AN APPROVED EQUIVALENT)

%	BOTANICAL NAME	COMMON NAME
28.00%	Schizachyrium scoparium	Little Bluestem
10.00%	Bouteloua curtipendula	Sideoats Grama
10.00%	Elymus virginicus	Virginia Wildrye
10.00%	Sorghastrum nutans	Indiangrass
4.00%	Chamaecrista fasciculata	Partridge Pea
4.00%	Rudbeckia hirta	Blackeyed Susan
4.00%	Senna hebecarpa	Wild Senna
3.00%	Penstgemon digitalis	Tall White Beardtongue
2.00%	Andropogon gerardii	Big Bluestem
2.00%	Asclepias syriaca	Common Milkweed
2.00%	Baptisia australis	Blue False Indigo
2.00%	Liatris spicata	Marsh (Dense) Blazing Star
2.00%	Monarda fistulosa	Wild Bergamot
2.00%	Penstemon laevigatus	Appalachian Beardtongue
2.00%	Senna marilandica	Maryland Senna
2.00%	Solidago nemoralis	Gray Goldenrod
2.00%	Tradescantia ohiensis	Ohio Spiderwort
2.00%	Zizia aurea	Golden Alexanders
1.00%	Aster laevis	Smooth Blue Aster
1.00%	Aster novae-angliae	New England Aster
1.00%	Aster prenanthoides	Zigzag Aster
1.00%	Helopsis helianthoides	Oxeye Sunflower
1.00%	Rudbeckia fulgida var.fulgida	Orange Coneflower
1.00%	Silphium trifoliatum	Whorled Rosinweed
1.00%	Solidago juncea	Early Goldenrod
100.00%	Total	

Seeding Rate 20 lbs. per acre or 1/2 lb. per 1,000 s.f.

3/22 HILLSIDE WILDFLOWER AND GRASS SEED MIX

PLANT LIST AND 10-YEAR TREE CANOPY CALCULATIONS:

Phase	Deciduous Shrubs	Deciduous Tree Selection Breakdown									Total 10-Year Tree Canopy (Deciduous Trees)								Deciduous Tree Final 10-Year Tree Canopy (s.f.)
		Category IV Deciduous Trees (3" Cal.)	Category IV Deciduous Trees (3" Cal.)*	Category IV Deciduous Trees (2" Cal.)	Category IV Deciduous Trees (2" Cal.)*	Category III Deciduous Trees (2" Cal.)	Category III Deciduous Trees (2" Cal.)*	Category II Deciduous Trees (2" Cal.)	Category II Deciduous Trees (2" Cal.)*	Total All Deciduous Trees	Category IV Deciduous 3" Cal. Trees (250 s.f./Tree)	Category IV Deciduous 3" Cal. Trees (375 s.f./Tree)*	Category IV Deciduous 2" Cal. Trees (200 s.f./Tree)	Category IV Deciduous 2" Cal. Trees (300 s.f./Tree)*	Category III Deciduous 2" Cal. Trees (150 s.f./Tree)	Category III Deciduous 2" Cal. Trees (225 s.f./Tree)*	Category II Deciduous 2" Cal. Trees (100 s.f./Tree)	Category II Deciduous 2" Cal. Trees (200 s.f./Tree)*	
Phase One**	0	0	0	79	0	10	0	10	0	99	0	0	0	0	0	0	0	0	0
Phase Two	0	11	0	11	0	15	0	15	0	52	2,750	0	2,200	0	2,250	0	1,500	0	8,700
Phase Three	670	223	263	86	126	137	178	76	76	1,165	55,750	98,625	17,200	37,800	20,550	40,050	7,600	15,200	292,775
Phase Four	268	74	104	34	55	43	63	27	27	427	18,500	39,000	6,800	16,500	6,450	14,175	2,700	5,400	109,525
Phase Five	1,651	519	579	256	296	315	355	144	186	2,650	129,750	217,125	51,200	88,800	47,250	79,875	14,400	37,200	665,600
Subtotal	2,589	827	946	466	477	520	596	272	289	4,393	206,750	354,750	77,400	143,100	76,500	134,100	26,200	57,800	1,076,600

Phase	Evergreen Shrubs	Evergreen Tree Selection Breakdown									Evergreen Total 10-Year Tree Canopy								Evergreen Tree Final 10-Year Tree Canopy (s.f.)
		Category IV Evergreen Trees (3" Cal.)	Category IV Evergreen Trees (3" Cal.)*	Category IV Evergreen Trees (2" Cal.)	Category IV Evergreen Trees (2" Cal.)*	Category III Evergreen Trees (2" Cal.)	Category III Evergreen Trees (2" Cal.)*	Category II Evergreen Trees (2" Cal.)	Category II Evergreen Trees (2" Cal.)*	Total All Evergreen Trees	Category IV Evergreen 3" Cal. Trees (250 s.f./Tree)	Category IV Evergreen 3" Cal. Trees (375 s.f./Tree)*	Category IV Evergreen 2" Cal. Trees (200 s.f./Tree)	Category IV Evergreen 2" Cal. Trees (300 s.f./Tree)*	Category III Evergreen 2" Cal. Trees (150 s.f./Tree)	Category III Evergreen 2" Cal. Trees (225 s.f./Tree)*	Category II Evergreen 2" Cal. Trees (100 s.f./Tree)	Category II Evergreen 2" Cal. Trees (200 s.f./Tree)*	
Phase One**	0	0	0	25	0	44	0	44	0	113	0	0	0	0	0	0	0	0	0
Phase Two	0	10	0	10	0	10	0	10	0	40	2,500	0	2,000	0	1,500	0	1,000	0	7,000
Phase Three	670	133	173	52	71	237	258	120	120	1,164	33,250	64,875	10,400	21,300	35,550	58,050	12,000	24,000	259,425
Phase Four	268	38	68	22	32	79	99	44	45	427	9,500	25,500	4,400	9,600	11,850	22,275	4,400	9,000	96,525
Phase Five	1,651	300	360	144	186	534	574	256	296	2,650	75,000	135,000	28,800	55,800	80,100	129,150	25,600	59,200	568,650
Subtotal	2,589	481	601	253	289	904	931	474	461	4,394	120,250	225,375	45,600	86,700	129,000	209,475	43,000	92,200	951,600
Total	5,178	1,308	1,547	719	766	1,424	1,527	746	750	8,787	327,000	580,125	123,000	229,800	205,500	343,575	69,200	150,000	2,028,200

* THE PHASE ONE TREE PLANTINGS ARE PROPOSED AS SUPPLEMENTAL UNDERSTORY PLANTINGS IN AND BELOW THE EXISTING TREE CANOPY IN THE NORTHERN TRANSITIONAL SCREENING AREA, AS UNDERSTORY PLANTINGS NO TREE CANOPY CREDIT IS TAKEN.

** BONUS MULTIPLIER OF 1.5 TAKEN FOR WILDLIFE BENEFIT FOR 10-YEAR TREE CANOPY CREDIT. ADDITIONAL BONUS MULTIPLIERS MAY BE TAKE AS MAY BE APPLICABLE WITH UFMD APPROVAL

PLANT SELECTION GENERAL NOTES:

1 FINAL TREE GENUS AND SPECIES TO BE DETERMINED BY THE APPLICANT AT THE SITE PLAN PHASE. TREES WILL BE SELECTED BY THE APPLICANT FROM THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, TABLE 12.19 TREE SELECTION AND CANOPY COVER GUIDE OR IN CONSULTATION WITH THE URBAN FOREST MANAGEMENT DIVISION.

BC Consultants
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COMMONWEALTH OF VIRGINIA
BONG B. NGO
Lic. No. 862
2-20-2014
LICENSED LANDSCAPE ARCHITECT

SPECIAL EXCEPTION AMENDMENT
LANDSCAPE DETAILS

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS		
REVISED 5-14-2013	ANALYZED 2-22-2014	
REVISED 9-11-2013	REVISED 2-26-2014	
REVISED 10-1-2013		
REVISED 11-1-2013		
REVISED 12-19-2013		

APPLICANT:
LORTON LAND ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. AS SHOWN
VERT.

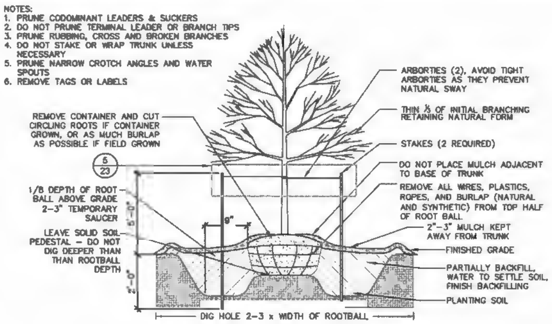
SHEET 22 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME:SE5117LSC-DET2
LAYOUT: LSC-DET2
FILE NO. 05117.06-00

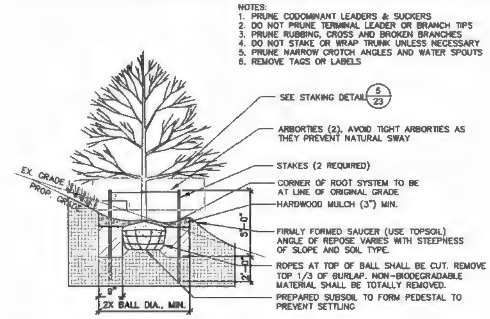
A9675

FINAL (PHASE FIVE) TREE PRESERVATION TARGET AND STATEMENT (10-YEAR TREE CANOPY CALCULATIONS)

A.	TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT	Totals (s.f.)
A1	Pre-development Area of Existing Tree Canopy	2,662,285
A2	Percentage of Gross Site Area Covered by Existing Tree Canopy (A1/B1)	24.5%
A3	Percentage of 10-year Tree Canopy Required for the Site (R-1 Zone)	30%
A4	Percentage of the 10-Year Tree Canopy Requirement That Should be Met Through Tree Preservation	24.5%
A5	Proposed Percentage of Canopy Requirement That Will be Met Through Tree Preservation (C10/B7)	50.4%
A6	Has the Tree Preservation Target Minimum Been Met?	No
A7	If A6 is no, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in §12-0508.3 along with a narrative that provides a site-specific explanation of why the Tree Preservation Target cannot be meet. Provide sheet number where deviation request is located. The narrative shall be prepared in accordance with §12-0507.4.	No (See General Note 1 Below)
B.	TREE CANOPY REQUIREMENT	
B1	Identify Gross Area	10,862,058
B2	Subtract Areas Dedicated to Parks, and Road Frontage	
B3	Subtract Area of Exemption	0
B4	Adjusted Gross Site Area B1- (B2+B3)	10,862,058
B5	Identify Site's Zoning and/or Use	R-1
B6	Percentage of 10-Year Tree Canopy Required	30%
B7	Area of 10 Year Tree Canopy Required (B4xB6)	3,264,617
B8	Modification of 10-Year Tree Canopy Requirements Requested	No
B9	If B8 is Yes, Then List Plan Sheets Where Modification Request is Located	N/A
C.	TREE CANOPY PRESERVATION	
C1	Tree Preservation Target Area (B7 x A4)	[illegible]
C2	Total Canopy Area Meeting Standards of §12-0200	529,581
C3	C2 x 1.25	661,976
C3.1	Total Canopy Area Meeting Standards of §12-0200 But Does Not Qualify for Bonus Multiplier	0
C3.2	C3.1 x 1.00	0
C4	Total Canopy Area Provided by Unique or Valuable Forest or Woodland Community	0
C5	C4 x 1.5	0
C6	Total Canopy Area Provided Through Tree Transplantation (See General Note 2 Below)	0
C7	C6 x 1.0	0
C8	Canopy Area of Trees Within Resource Protection Areas and 100-Year Floodplains	983,121
C9	C8 x 1.0	983,121
C10	Totals of C3, C3.2, C5, C7 and C9	1,645,097
D.	TREE PLANTING	
D1	Area of Canopy to be Met Through Tree Planting (B7-C10)	1,619,520
D2	Area of Canopy Planted for Air Quality Benefits	0
D3	D2 x 1.5	0
D4	Area of Canopy Planted for Energy Conservation	0
D5	D4 x 1.5	0
D6	Area of Canopy Planted for Water Quality Benefits	0
D7	D6 x 1.25	0
D8	Area of Canopy Planted for Wildlife Benefits	869,000
D9	D8 x 1.5	1,303,500
D10	Area of Canopy Provided by Native Species	0
D11	D10 x 1.5	0
D12	Area of Canopy Provided by Improved Cultivars and Varieties	0
D13	D12 x 1.25	0
D14	Area of Canopy Provided Through Tree Seeding	0
D14.1	D14 x 1.0	0
D15	Area of Canopy Provided Through Native Shrubs or Wood Seed Mix	0
D15.1	D15 x 1.0	0
D16	Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14	0
D16.1	Area of Canopy Planted With No Multiplier	724,700
D17	Total Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1)	2,028,200
D18	Is an Offsite Planting Relief Requested?	No
D19	Tree Bank or Tree Fund	N/A
D20	Canopy Area Requested to be Provided Through Offsite Banking or Tree Fund	0
D21	Amount to be Deposited into the Tree Preservation and Planting Fund	0
E.	TOTAL OF 10-YEAR TREE CANOPY PROVIDED	
E1	Total of Canopy Area Provided Through Tree Preservation (C10)	1,645,097
E2	Total of Canopy Area Provided Through Tree Planting (D17)	2,028,200
E3	Total of Canopy Area Provide Through Offsite Mechanism (D20)	0
E4	Total of 10-Year Tree Canopy Provided (Totals of E1, E2 and E3)	3,673,297

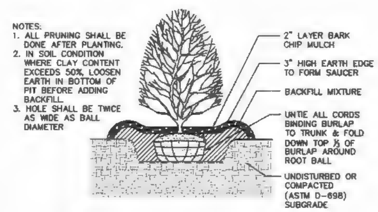


1/23 TREE PLANTING GUIDELINE — SECTION — NOT TO SCALE

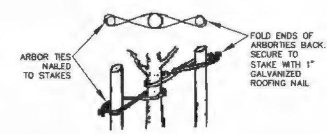


2/23 TREE PLANTING GUIDELINE ON SLOPE — SECTION — NOTE TO SCALE — 12-3103 DECDSLOPE_1

3/23 EVERGREEN PLANTING GUIDELINE — NOT TO SCALE



4/23 SHRUB PLANTING GUIDELINE — SECTION — 12-3103 DECDSLOPE_1 — NOT TO SCALE



5/23 STAKING DETAIL — NOT TO SCALE

THIS SHEET FOR LANDSCAPING PURPOSES ONLY

LANDSCAPE PROCEDURES:

LANDSCAPE MAINTENANCE:

1. EXISTING TREES SHALL BE INSPECTED BY THE OWNER'S PROJECT ARBORIST ("ARBORIST"). THE INSPECTION SHALL IDENTIFY DEAD OR DAMAGED TREES, IDENTIFY TREES IN NEED OF CORRECTIVE MEASURES TO ENSURE THEIR SURVIVAL AND RECOMMEND TREATMENTS AND PREVENTATIVE MEASURES TO FACILITATE THEIR CONTINUING HEALTH AND VITALITY.
2. DEAD TREES SHALL BE REMOVED. TREES THAT ARE EVALUATED BY THE ARBORIST AS HAVING LITTLE CHANCE OF SURVIVAL SHALL ALSO BE REMOVED AND REPLACED
3. TREES SHALL BE PRUNED TO REMOVE DEAD OR DAMAGED BRANCHES AS DEEMED NECESSARY BY THE ARBORIST. PRUNING SHALL CONFORM TO THE REQUIREMENTS OF ANSI (AMERICAN NATIONAL STANDARDS INSTITUTE) A300 PART 1 – PRUNING STANDARDS.
4. SUPPLEMENTAL WATERING SHALL BE REQUIRED DURING PERIODS OF DROUGHT OR EXTREME HEAT. TO PREVENT OVER-WATERING OR UNDER-WATERING, SOIL MOISTURE CONTENT SHOULD BE MONITORED BY THE FOLLOWING 'FEEL AND APPEARANCE' METHOD ON A REGULAR BASIS: (i) WALNUT-SIZED SOIL SAMPLES SHALL BE TAKEN AT VARIOUS LOCATIONS ON THE SITE AT A DEPTH OF SIX (6) TO TWELVE (12) INCHES; (ii) WATERING SHOULD BE AVOIDED IF FREE WATER CAN BE HAND SQUEEZED FROM THE SAMPLE OR IF IT FORMS A BALL THAT IS VERY PLIABLE AND STICKS READILY TO THE SKIN; (iii) WATER SHOULD BE PROVIDED IF THE SOIL IS CRUMBLY OR DRY AND DOES NOT READILY HOLD TOGETHER UNDER PRESSURE.
5. ALL TAGS AND/OR BAMBOO OR WOODEN SUPPORT STAKES (OTHER THAN OFFSET TREE STAKES) SHALL BE REMOVED. A TREE MAY BE REFUSED OR REMOVED IF IT IS NOT SELF-SUPPORTING WHEN BAMBOO OR WOODEN SUPPORT STAKES ARE REMOVED.
6. TREES THAT HAVE SURVIVED THROUGH ONE (1) GROWING SEASON SHOULD HAVE ALL (OFFSET) TREE STAKES WITH STRAPS AND/OR GUY WIRES REMOVED. TREES STAKES WITH STRAPS AND/OR GUY WIRES MAY REMAIN ON CERTAIN TREES THAT ARE SUBJECTED TO EXTREME ENVIRONMENTAL CONDITIONS AS DETERMINED BY THE ARBORIST BUT NO LONGER THAN TWO (2) GROWING SEASONS.
7. WHERE DEEMED NECESSARY BY THE ARBORIST: (i) COMPETING GROUND VEGETATION GROWING WITHIN ONE (1) FOOT OF EXISTING SHRUBS SHALL BE CUT OR MOWED AS CLOSE TO THE GROUND AS POSSIBLE AND CARE SHALL BE TAKEN TO PREVENT DAMAGE TO THE EXISTING PLANT; (ii) THE ONE (1) FOOT AREA SURROUNDING THE PLANT SHALL THEN BE MULCHED WITH THREE (3) INCHES OF SHREDDED HARDWOOD MULCH OR COVERED WITH A BIODEGRADABLE MULCH MAT; (iii) THE MULCHED AREA SHALL BE ROUTINELY MONITORED DURING THE ACTIVE GROWING SEASON; (iv) REGROWTH OF ANY OTHERWISE UNDESIRABLE PLANT MATERIAL SHALL BE REMOVED; AND (v) CONTINUOUS BEDS OF MU LCH SHALL BE PROVIDED FOR GROUP PLANTINGS OF SHRUBS AND PERENNIALS. MONITORING SHALL CONTINUE THROUGH TWO (2) GROWING SEASONS. APPROPRIATELY SIZED WOOD CHIPS MAY BE USED IN LIEU OF SHREDDED HARDWOOD MULCH WHEN THE WOOD CHIPS ORIGINATE FROM THE ON-SITE GRINDING OF ACCEPTABLE WOOD DEBRIS.
8. DETRIMENTAL ENVIRONMENTAL OR MECHANICAL CONDITIONS AFFECTING CERTAIN SURVIVING PLANTS SHALL BE IDENTIFIED BY THE ARBORIST AND CORRECTED AS NEEDED. CORRECTIVE MEASURES MAY INCLUDE RE-MULCHING, RE-STAKING, RE-SETTING OF ROOT BALLS, SUPPLEMENTING SOIL AND SEDIMENT AND EROSION CONTROL.
9. PLANT MATERIAL SHALL BE MONITORED BY THE ARBORIST TO IDENTIFY NEW OR CONTINUING ADVERSE CONDITIONS AND RECOMMEND CORRECTIVE MEASURES. PLANTS EXHIBITING UNUSUAL STRESS OR DAMAGE SHALL BE IDENTIFIED AND TREATED. TREE AND SOIL PROTECTION MEASURES WHERE DEEMED APPROPRIATE BY THE ARBORIST MAY BE EMPLOYED TO PREVENT FUTURE ADVERSE CONDITIONS. TREE MAINTENANCE DEVICES MAY BE INSTALLED TO HELP MAINTAIN AND IMPROVE THE HEALTH OF DISTRESSED TREES.
10. PLANT MAINTENANCE SHALL BEGIN AT PLANT INSTALLATION AND CONTINUE THROUGH BOND RELEASE FOR RESPECTIVE LANDSCAPE AREAS.

PLANT MATERIALS.

1. TREES AND SHRUBS TO BE PLANTED SHALL BE OF THE SPECIES AND SIZE AS SPECIFIED AND APPROVED BY THE URBAN FOREST MANAGEMENT DIVISION ("UFMD"). THERE SHALL BE NO DEVIATIONS FROM THE APPROVED MINIMUM SIZES SPECIFIED EXCEPT AS APPROVED BY UFMD.
2. ALL TREES AND SHRUBS SHALL MEET THE STANDARDS FOR SIZES AND QUALITY SPECIFIED IN THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION'S AMERICAN STANDARD FOR NURSERY STOCK, 2004.
3. PLANTS WILL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ARBORIST FOR CONFORMITY TO SPECIFICATION REQUIREMENTS AS TO QUALITY, SIZE AND VARIETY.
4. ALL PROPOSED PLANT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY UFMD.

PLANTING:

1. ALL LANDSCAPE MATERIAL SHALL BE PLANTED ACCORDING TO THE PLANTING DETAILS AS SHOWN HEREON.
2. PLANT INSTALLATION SHALL BE DONE UNDER THE GENERAL SUPERVISION OF THE ARBORIST.

STAGING AREA:

1. ANY PLANT THAT IS NOT REPLANTED IMMEDIATELY UPON ARRIVAL AT THE SITE SHALL BE STORED IN A DESIGNATED STAGING AREA.
2. THE STAGING AREA SHALL BE RELATIVELY FLAT AND PROVIDE GOOD SURFACE DRAINAGE.
3. PROPERLY BALLED PLANTS SHALL BE COVERED WITH LOOSE, DAMP MEDIUM TO KEEP THE ROOT BALL MOIST SUCH AS COMPOSED WOOD, SHREDDED HARDWOOD MULCH, SAWDUST OR WOOD CHIPS.
4. PLANTS SHALL BE WATERED DAILY.
5. NO PLANT SHALL BE STORED ON THE SITE FOR A PERIOD LONGER THAN TWO (2) WEEKS EXCEPT AS APPROVED BY THE ARBORIST DUE TO UNFORESEEN EVENTS SUCH AS INCLEMENT WEATHER.

SOIL TESTING:

1. SOIL TESTING MAY BE REQUESTED BY UFMD.
2. SOIL TESTING SHOULD BE PERFORMED BY THE VIRGINIA COOPERATIVE EXTENSION.
3. SOIL MAY BE AMENDED BASED ON THE RESULTS OF THE SOIL TEST.

LANDSCAPE INSPECTION PROCEDURES:

1. AT THE END OF EACH PLANTING CYCLE OR AS AGREED TO BY UFMD AND THE ARBORIST, A LANDSCAPE INSPECTION SHALL BE SCHEDULED WITH UFMD.
2. PRIOR TO THE INSPECTION, THE ARBORIST SHALL SUBMIT TO UFMD A PLANT INVENTORY LISTING THE QUANTITIES AND SPECIES OF ALL LANDSCAPE MATERIAL PLANTED WITHIN THE INSPECTION AREA.
3. PRIOR TO THE INSPECTION, THE LIMITS OF THE BENCH PLANTING AREA SHALL BE STAKED OUT WITH A CONTINUOUS LINE OF FLAGGING.

URBAN FOREST MANAGEMENT POLICY ON LANDSCAPE IMPLEMENTATION
November 17, 2010

This compilation of selected portions of the Public Facilities Manual is intended to summarize and clarify regulations pertaining to the implementation of landscape plans on development sites subject to review and inspection by the County. Included are regulations governing the most common areas of nonconformance experienced by staff in the course of conducting landscape inspections, and a brief summary of the policy regarding seasonal landscape deferrals.

<u>Tree Species and Size</u>

1. Trees and shrubs that are planted shall be of the species and size specified on the approved plans. There shall be no deviations from the approved sizes specified except as approved by Fairfax County Urban Forest Management (UFMD). (PFM 12-0705.1A)
2. All trees and shrubs shall meet the standards for sizes and quality specified in the American Association of Nurserymen's American Standard for Nursery Stock, (ANSI Z60.1-1996). See attachment #1. (PFM 12-0705.1B)

<u>Species Substitutions</u>

3. Species substitutions within the tree categories listed in Table 12.17 are generally accepted unless otherwise specified by proffered conditions, development conditions, special exceptions, or special permits. Any tree substitution shall also be in conformance with the following. (PFM 12-0705.1C)
   a. *Plant Diversity* - The use of substitutions shall not result in any species making up more than 10 percent, and shall not result in any one genus making up more than 33 percent, of the total number of trees required to be planted on the site. (PFM 12-0515.1L)
   b. *Authorization* - A letter signed by the permittee shall be provided to UFMD acknowledging any proposed substitutions to trees and shrubs shown on the approved plans. (PFM 12-0705.1C(2))
   c. *Substitutions Outside of Tree Category* - Substitution of a tree shown on the approved plan from one tree category, as listed in PFM Table 12.17, with a tree from a different category shall require a revision to the approved plan. (PFM 12-0705.1C(3))
   d. *Species Suitability* - Substituted species must be suited to the post-development conditions of the planting location for which it is intended. (PFM 12-0601.1E)
   e. *Additional Tree Cover Credit* - In cases where additional tree cover credit has been given, no tree substitutions shall be made except as approved by the Urban Forest Management. Examples of additional credit include the following: Air Quality, PFM 12-0510.4B(1); Energy Conservation, PFM 12-0510.4B(2); Water Quality, PFM 12-0510.4B(3); Wildlife Benefits, PFM 12-0510.4B(4); Native Trees, PFM 12-0510.4B(5)

<u>Planting Locations</u>

4. Planting locations of all trees on the site shall be in substantial conformance with the approved plan. UFMD acknowledges that not all trees may be optimally located, as shown on the plan, and encourage input from Permittees and their landscape professionals regarding proposed improvements that might be implemented. Any substantive deviations from the approved plan that are made in the field must be approved by UFMD and shall be in conformance with the following:
   a. *Planting Area* - At least the minimum size planting area shall be provided for each tree according to its projected 10-year tree cover area as found in Table 12.7. (PFM 12-0601.1B)
   b. *Environmental Conditions* - Light, moisture, and other conditions affecting the health and viability of the tree at the field location shall be suitable for the species. (PFM 12-0601.1E)
   c. *Compacted Soil* – If planting in areas that have been previously compacted, the soil shall be properly prepared (tilled and amended as needed based on soil samples) to a depth of 12 inches, prior to installation of landscape material. Soil within individual planting holes shall not be amended. (PFM 12-0705.3B)
   d. *Restrictive Barriers* - Trees shall be planted no closer than four feet from any restrictive barrier (PFM 12-0510.4B(5)
   e. *Spacing* - Trees shall be spaced so that the outer limit of their projected 10-year tree cover area, as indicated in Table 12.19, does not significantly overlap; or as determined appropriate by UFMD for site conditions and to promote long-term survival. (PFM 12-0510.4E(6))
   f. *Easements* - Trees for tree cover credit shall not be planted within any existing or proposed public utility easement or within five feet of storm drainage easements that contain pipes. In addition, trees shall not be planted in an area that will interfere with existing or proposed utilities or with maintenance of the utility, as determined by the Director of DPWES. (PFM 12-0515.6B)

<u>Staking and Guying</u>

5. Staking and guying should only be implemented where site conditions warrant their use. Planted trees should be assessed individually and staking and guying installed only as required. Conditions where staking and guying may be necessary to ensure stability include: windy locations, steep slopes, or where vandalism may be a concern. All staking and guying material must be removed within one year of plant installation. (PFM 12-0705.3C)

<u>Seasonal Landscape Deferrals</u>

6. A Seasonal Landscape Deferral may be granted when seasonal or weather-related conditions, such as excessively wet soil, extended periods of drought, or frozen ground, substantially reduce the survivability of the plant material, as determined by the Urban Forest Management. A request for a landscape deferral will not be granted for landscaping required prior to the issuance of a RUP or Non-RUP when seasonal or weather-related conditions on the site plan do not preclude planting. Lack of species availability may justify the approval of a Seasonal Landscape Deferral when specific plant species are required by proffers or conditions.
7. The party responsible for the placement of the performance bond and conservation deposit for the project shall act as the Applicant for this seasonal deferral. Seasonal Landscape Deferral request forms can be obtained from the Environmental and Facilities Inspections Division or the Urban Forest Management.
8. At the time of final inspection for release of performance bond and conservation deposit, all of the plant material is inspected. Plant material previously inspected, as part of the process to release any deferral deposit that may have existed, is not exempt from this final inspection. All plant material must be healthy and in good condition.

<u>Requirements Prior to Approval of RUP/Non-RUP</u>

9. The landscaping and screening requirements of Article 13 or of any approved proffered condition, special permit, special exception or variance must be completed prior to approval of any Residential or Non-Residential Use Permit; provided, however, that completion of the requirements may be delayed when justification satisfactory to the Director is provided; such justification shall include an agreement and bond with surety satisfactory to the Director for completion in accordance with a firm schedule for timely completion. (ZO 18-704.3) See Seasonal Landscape Deferrals above.

BC Consultants
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SPECIAL EXCEPTION AMENDMENT
LANDSCAPE DETAILS

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS: REVISED 5-14-2013; REVISED 8-11-2013; REVISED 10-7-2013; REVISED 11-1-2013; REVISED 12-10-2013; REVISED 1-22-2014; REVISED 2-20-2014

APPLICANT: FURNACE ASSOCIATES, INC. 11220 ASSETT LOOP SUITE 201 MANASSAS, VIRGINIA 20109

DESIGNED BY:	PLR
DRAFTED BY:	CAD
CHECKED BY:	NB
DATE:	MARCH 22, 2013
SCALE:	HOR. N/A VERT. N/A
SHEET	23 OF 45
CO. NO.	SEA 80-L/V-061-2
CAD NAME:	SE05117NEW-LSC-
LAYOUT:	LSC-DET
FILE NO.	05117.08-00

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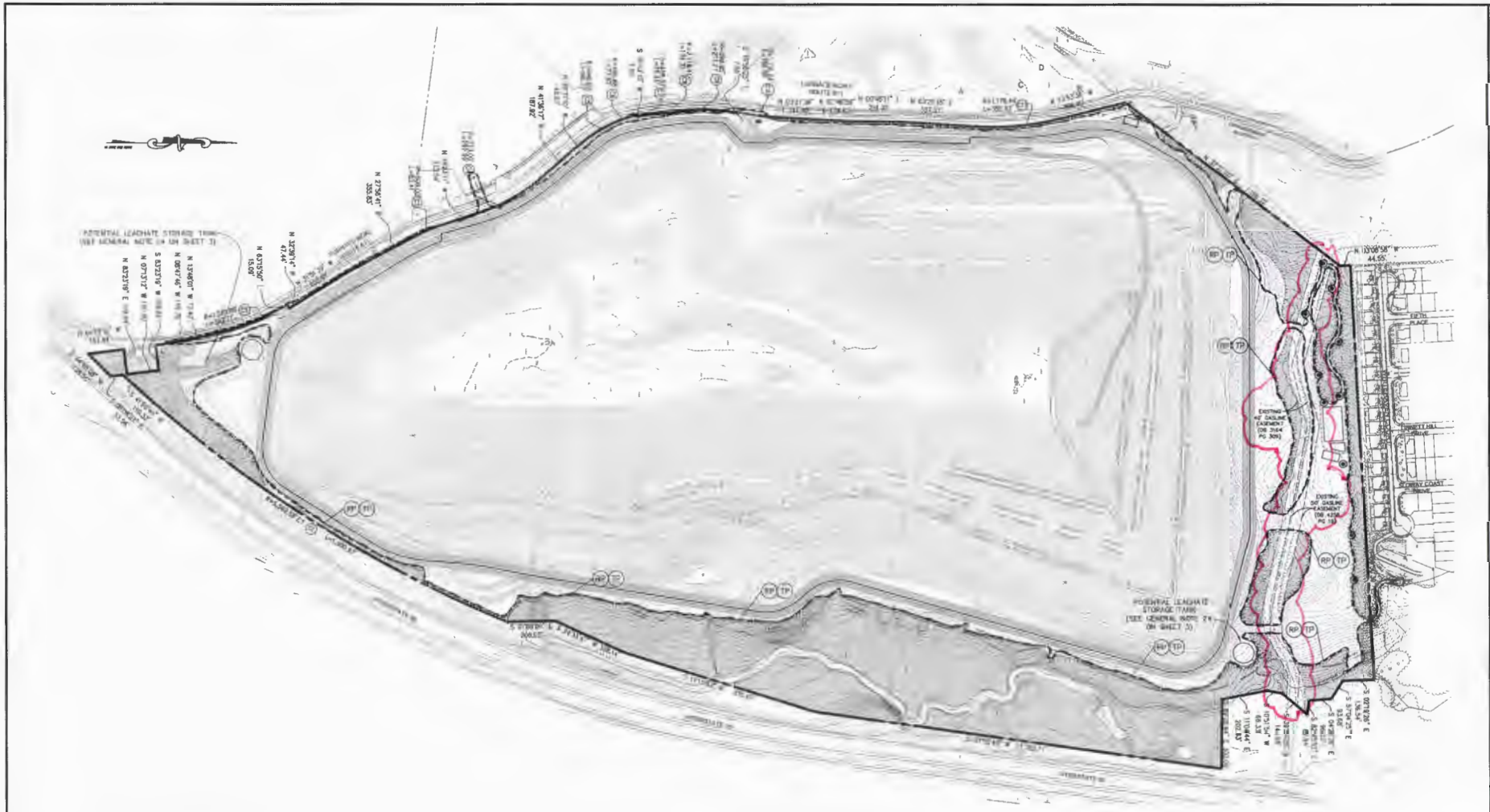

PHASE FIVE TREE PRESERVATION PLAN:

- APPROXIMATE LIMITS OF CLEARING AND GRADING
- ROOT PRUNE (RP) 2/25 AND/OR TREE PROTECTION FENCE (TP) 1/25
- EXISTING TREELINE
- PROPOSED TREELINE
- POSSIBLE MULCH AREA 3/25
- POST-DEVELOPMENT 10-YEAR TREE CANOPY CREDIT AREA

SEE SHEET 25 FOR TREE PRESERVATION DETAILS AND NARRATIVE.

CERTIFIED ARBORIST

International Society of Arboriculture
CERTIFIED ARBORIST
Dennis Dale Dixon
Certificate Number MA-0983A
Expiration Date Dec 31, 2014

BC Consultants
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SPECIAL EXCEPTION AMENDMENT
PHASE 5 TREE PRESERVATION PLAN
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 3-14-2013
REVISED 9-12-2013
REVISED 10-2-2013
REVISED 11-1-2013
REVISED 12-10-2013
REVISED 2-20-2014

PURKINE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY:	PLR
DRAFTED BY:	CAD
CHECKED BY:	NB
DATE:	MARCH 22, 2013
SCALE: HOR.	1"=200'
VERT.	
SHEET	24 OF 45
CO. NO.	SEA 80-L/V-061-2
CAD NAME:	SE5117TPP-5
LAYOUT:	TREE PRESER (5)
FILE NO.	05117.08-00

PRIOR TO ANY CONSTRUCTION ACTIVITY, ALL INDIVIDUAL AND GROUPS OF TREES MARKED FOR PRESERVATION SHALL BE PROTECTED WITH TREE PROTECTION FENCING

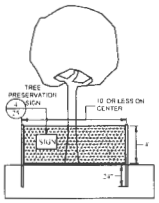
TREE PROTECTION FENCE SHALL BE POSITIONED DIRECTLY IN THE ROOT PRUNING TRENCH AND BACKFILLED FOR STABILITY OR JUST OUTSIDE THE TRENCH WITHIN THE DISTURBED AREA

- TREE PROTECTION FENCING SHALL CONSIST OF FOUR FOOT 14-GUAGE WELDED WIRE FENCE ATTACHED TO SIX FOOT TALL T-POSTS DRIVEN 18 INCHES INTO THE GROUND. POSTS SHALL BE NO FURTHER THAN 10 FEET APART

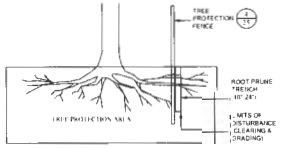
WHERE APPROPRIATE, BASED ON EROSION AND SEDIMENT CONTROL PLANS, SUPER SILT FENCE MAY BE USED AS TREE PROTECTION FENCING WITH THE APPROVAL OF FAIRFAX COUNTY

TREE PROTECTION FENCING SHALL BE MADE CLEARLY VISIBLE TO ALL CONSTRUCTION PERSONNEL. SIGNS IN ENGLISH AND SPANISH, WHICH STATES "TREE PRESERVATION AREA - KEEP OUT" SHALL BE INSTALLED ON TREE PROTECTION FENCING EVERY 30 FEET.

A CERTIFIED ARBORIST SHALL MONITOR THE INSTALLATION OF TREE PROTECTION FENCING



1/25 TREE PROTECTION FENCE
NOT TO SCALE
12A1-8098Tree Protect



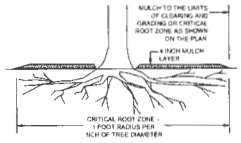
- PRIOR TO ANY CONSTRUCTION ACTIVITY, ALL TREES MARKED FOR PRESERVATION ALONG THE LIMITS OF CLEARING AND GRADING SHALL BE ROOT PRUNED WHERE SHOWN ON THE PLAN

- ROOT PRUNING SHALL BE CONDUCTED USING A TRENCHER OR VIBRATORY PLOW

- THE ROOT PRUNING TRENCH SHALL BE A MAXIMUM OF 6 INCHES WIDE AND 18-24 INCHES DEEP. ONCE COMPLETED, THE ROOT PRUNING TRENCH SHALL BE IMMEDIATELY BACK FILLED

- ROOT PRUNING SHALL BE CONDUCTED UNDER THE SUPERVISION OF A CERTIFIED ARBORIST

2/25 ROOT PRUNING
NOT TO SCALE
12A1-8098 Root Pruning



SPREAD MULCH BY HAND TO A UNIFORM THICKNESS OF 4 INCHES

- MULCH SHALL COVER AS MUCH OF THE ENTIRE CRITICAL ROOT ZONE AS POSSIBLE UP TO 10' FROM THE LIMITS OF CLEARING AND GRADING.

MULCH SHALL CONSIST OF A WOODY MATERIAL THAT HAS BEEN CHIPPED OR SHREDDED OR OTHER APPROVED MATERIAL.

- MULCH SHALL NOT TOUCH THE BASE OF THE TREE.

3/25 PROTECTIVE MULCHING
NOT TO SCALE
12A1-8098 Protect Mulch

TREE PRESERVATION AREA
KEEP OUT

NO EQUIPMENT OR MATERIALS ARE TO BE STORED OR DEPOSITED WITHIN THIS AREA. TRAFFIC BY CONSTRUCTION EQUIPMENT AND PERSONNEL IS PROHIBITED.

(CONSTRUCTION COMPANY NAME)
(COMPANY CONTACT PERSON & TELEPHONE NUMBER)

PENALTY FOR VIOLATIONS
STRICTLY ENFORCED

SPECIFICATIONS

DIMENSIONS:	WIDTH:	17 INCHES MINIMUM
	HEIGHT:	11 INCHES MINIMUM
BACKGROUND COLOR:		WHITE
LETTER COLOR:		BLACK

LETTER SIZE:
LETTER 1: 1.5 INCH MINIMUM (LARGEST)
LETTER 2: 0.75 INCH MINIMUM
LETTER 3: 0.5 INCH MINIMUM
LETTER 4: 0.375 INCH MINIMUM (SMALLEST)

LANGUAGE: ENGLISH AND SPANISH (SEPARATE SIGNS)

NOTE: ALTERNATE SIGNAGE MAY BE SUBMITTED TO FAIRFAX COUNTY FOR APPROVAL

4/25 TREE PRESERVATION SIGN
NOT TO SCALE
12A1-8098Tree Preser Sign

TREE CONSERVATION REQUIREMENTS:

IN ACCORDANCE WITH THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM) TREE CONSERVATION REQUIREMENTS (SECTION 12-0000), TREE CONSERVATION PLANS SHALL BE SUBMITTED AS PART OF FIRST SITE PLAN SUBMISSION. THE SUBMISSION WILL PROVIDE AN EXISTING VEGETATION MAP, TREE PRESERVATION TARGET CALCULATIONS AND NARRATIVE, 10-YEAR TREE CANOPY REQUIREMENTS AND CALCULATIONS, A TREE INVENTORY AND CONDITIONS ANALYSIS, LANDSCAPE PLANS AND REQUIREMENTS AND SPECIFICATIONS FOR REPLACEMENT TREES. THE TREE INVENTORY AND CONDITION ANALYSIS SHALL IDENTIFY ALL TREES 12 INCHES OR GREATER IN DIAMETER, ALL TREES IN POOR CONDITION (PFM SECTION 12-12.0507.2A(2)), ALL HAZARDOUS TREES (PFM SECTION 12-.0507.2B) AND ALL DEAD TREES WITHIN THE REQUIRED REPORTING AREA. APPROPRIATE ACTIONS AND TREATMENTS FOR THESE TREES INCLUDING REMOVAL, PRUNING, ROOT PRUNING, FERTILIZATION, ETC. WILL BE RECOMMENDED.

A MODIFICATION OF THE TREE INVENTORY AND CONDITIONS ANALYSIS SUBMISSION MAY BE REQUESTED IF THE PLANS CLEARLY MEET OR EXCEED THE MINIMUM LEVEL OF TREE PRESERVATION IDENTIFIED BY TREE PRESERVATION TARGET PROVISION OF PFM SECTION 12.503.3.

CERTIFIED ARBORIST

CERTIFIED ARBORIST
Dennis Dale Dixon

BC Consultants
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(703)449-8100 (703)449-8108 (Fax)
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COMMONWEALTH OF VIRGINIA
DENNIS B. BUCK
Lic. No. 0402
2-20-2014
PROFESSIONAL ENGINEER

SPECIAL EXCEPTION AMENDMENT
TREE PRESERVATION DETAILS

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

B.C. REVISIONS	
REVISED 5-14-2013	
REVISED 9-11-2013	
REVISED 10-17-2013	
REVISED 11-1-2013	
REVISED 12-10-2013	
APPLICANT: LORTON DEVELOPER, LLC	CLARES, INC.
11220 ASHETT LOOP SUITE 201 MANASSAS, VIRGINIA 20109	
DESIGNED BY: PLR	
DRAFTED BY: CAD	
CHECKED BY: NB	
DATE: MARCH 22, 2013	
SCALE: HOR. N/A VERT. N/A	
SHEET 25 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE5117-TPP-DET	
LAYOUT: TPP-DET	
FILE NO. 05117.08-00	

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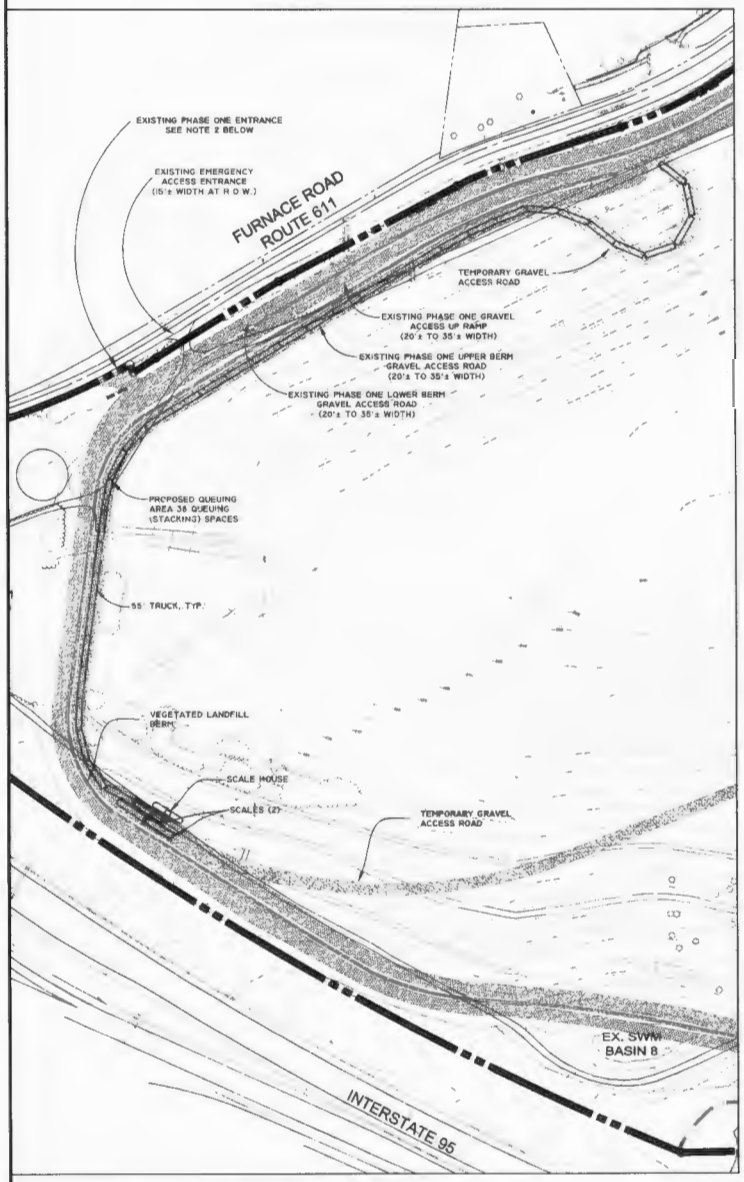
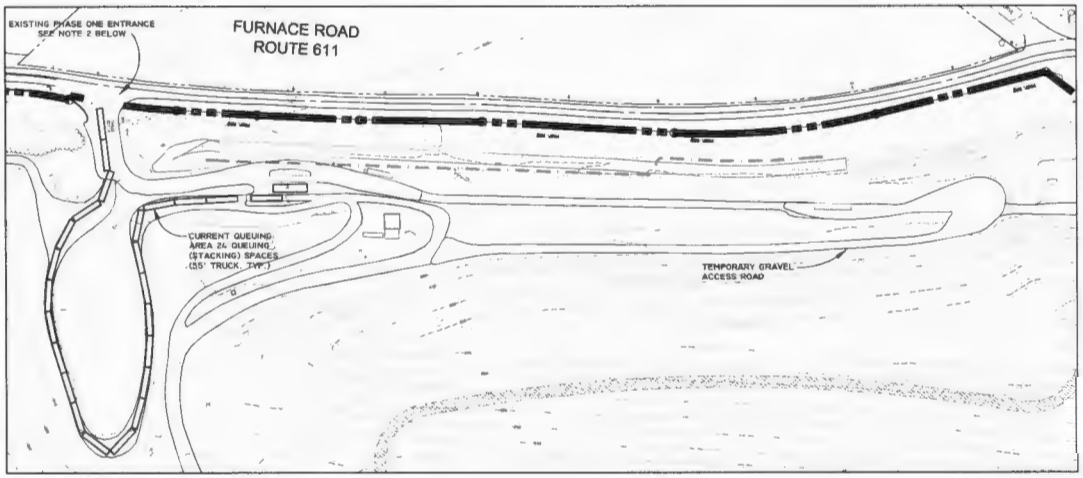


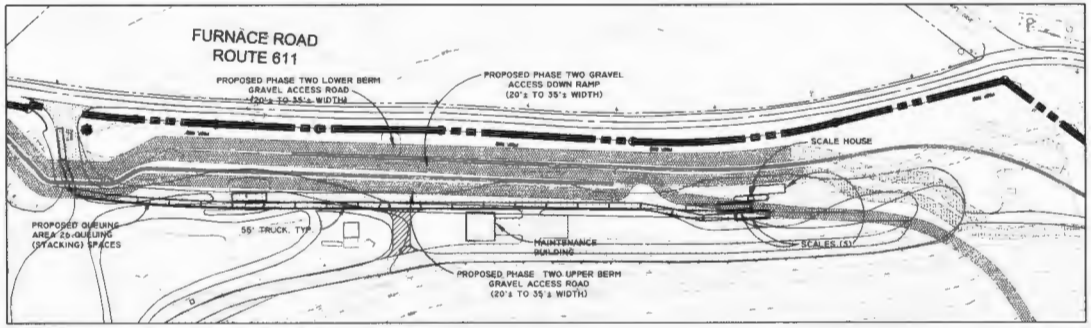
PHASE TWO THROUGH FIVE ENTRANCE QUEUING AREA

SCALE 1"=100'



BEGINNING OF PHASE ONE ENTRANCE QUEUING AREAS

SCALE 1"=100'



END OF PHASE ONE ENTRANCE AND EXIT QUEUING AREAS

SCALE 1"=100'

NOTE:

1. SEE SHEETS 39 THROUGH 43 FOR ADDITIONAL INFORMATION CONCERNING LANDFILL OPERATIONS TRAFFIC CIRCULATION.
2. VEHICULAR ACCESS AT THE SOUTHERN ENTRANCE IS RIGHT TURN IN ONLY (NO EXIT) AND IS LIMITED TO TRUCKS ONLY.
3. AT THE NORTHERN ENTRANCE TRUCKS ARE LIMITED TO LEFT TURN OUT ONLY (NO ENTRY) BY THE BEGINNING OF PHASE 2.
4. INTERNAL DETAILS SHOWN ON THIS SHEET MAY BE ADJUSTED BASED ON OPERATIONS NEEDS AS DETERMINED BY THE APPLICANT.

100' 50' 0' 100'

SCALE: 1"=100'

BC Consultants

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(703)449-8100 (703)449-8108 (Fax)

www.bccon.com

DENIS B. BRIDGE — No. 046 — 2-20-2014

SPECIAL EXCEPTION AMENDMENT

QUEUING AREAS

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED 5-14-2013	AR VISED 1-8-2014
REVISED 9-11-2013	REVISED 2-20-2014
REVISED 11-1-2013	
REVISED 12-16-2013	
APPLICANT: LORTON ARTS ASSOCIATES, INC. 11220 ASSETT LOOP SUITE 201 MANASSAS, VIRGINIA 20109	
DESIGNED BY: PLR	
DRAFTED BY: CAD	
CHECKED BY: NB	
DATE: MARCH 22, 2013	
SCALE: HOR. 1"=200' VERT.	
SHEET 26 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE5117QUEING	
LAYOUT: QUEU AREAS	
FILE NO. 05117.08-00	

0505

CHESAPEAKE BAY PRESERVATION ORDINANCE AND BMP NARRATIVE

CHAPTER 118-1-6 OF THE FAIRFAX COUNTY CODE DEFINES REDEVELOPMENT AS "THE SUBSTANTIAL ALTERATION, REHABILITATION, OR REBUILDING OF A PROPERTY FOR RESIDENTIAL, COMMERCIAL, INDUSTRIAL, OR OTHER PURPOSES WHERE THERE IS NO NET INCREASE IN IMPERVIOUS AREA BY THE PROPOSED REDEVELOPMENT WITHIN AN RPA AND NO MORE THAN A NET INCREASE IN IMPERVIOUS AREA WITHIN AN RMA OF 20% RELATIVE TO CONDITIONS PRIOR TO REDEVELOPMENT." THIS SITE PLAN DOES NOT PROPOSE AN INCREASE IN IMPERVIOUS AREA WITHIN THE RPA. ADDITIONALLY, THERE IS LESS THAN A 20% INCREASE IN IMPERVIOUS AREA FROM EXISTING CONDITIONS AS WELL AS THE CURRENT SEA PUBLIC PARK USE.

A TOTAL OF 37.25-ACRES OF PRIVATELY MAINTAINED OPEN SPACE HAVE BEEN PLACE WITHIN CONSERVATION EASEMENTS AND FLOODPLAIN AND STORM DRAINAGE EASEMENT ALONG THE NORTHERN AND EASTERN BOUNDARIES OF THE SITE. THIS APPLICATION PROPOSES A STORMWATER MANAGEMENT POND AND SOME RECREATIONAL AMENITIES WITHIN THE EXISTING CONSERVATION AREA. THE APPLICANT PROPOSES OFFSITE CONSERVATION EASEMENTS TO REPLACE THIS AREA IN KIND. THIS AREA WILL RECEIVE 100% PHOSPHORUS REMOVAL EFFICIENCY, THUS, GIVING A TOTAL SITE PHOSPHORUS REMOVAL EFFICIENCY OF 15.00%. SINCE THIS IS GREATER THAN THE REQUIRED 10%, BMP REQUIREMENTS ARE MET PER PFM 6-0401.2B AND COUNTY CODE CHAPTER 118-1-6.

FOR THE REDEVELOPMENT OF ANY PROPERTY NOT CURRENTLY SERVED BY ONE OR MORE BMP'S, THE REQUIRED REDUCTION IN PHOSPHORUS LOADS WILL BE COMPUTED FOR EACH SITE BASED ON THE FORMULA IDENTIFIED IN PFM 6-0401.2B. BEST MANAGEMENT PRACTICES IN THE FORM OF CONSERVATION AND FLOODPLAIN EASEMENTS HAVE BEEN PROVIDED WITH THE PREVIOUS SPECIAL EXCEPTION AND ASSOCIATED APPROVED SITE PLAN TO MEET THE REDEVELOPMENT REQUIREMENT. THIS SEA PROPOSES A CHANGE FROM A PUBLIC PARK USE TO A GREEN ENERGY PARK USE. BECAUSE THE GREEN ENERGY PARK USE DOES NOT RESULT IN ANY MORE IMPERVIOUS AREA THAN THE PUBLIC PARK USE, IT IS THE OPINION OF THE ENGINEER THAT THE BMPS PROVIDED WITH THE PREVIOUSLY APPROVED SEA STILL ADEQUATELY SERVE THE PROPERTY IN ACCORDANCE WITH CHAPTER 118 AND PFM 6-0401.2B.

PHOSPHORUS REMOVAL CALCULATIONS FOR REDEVELOPMENT SITES

Per PFM 6-0401.2B, the Redevelopment of any property not currently served by one or more BMP's, the required reduction in phosphorus loads will be computed for each site based on the formula.

[1 - 0.9("c"pre/"c"post)] x 100 = % P removal "I" = Impervious Area

Site Area = 249.89 Acres

			(AC.)	(%)
Pre "C" factor =	0.32	"I"pre =	9.30	3.7
Post "C" factor =	0.30	"I"post =	1.90	0.8

% P Removal = required for site [1 - 0.9 (0.027 / 0.008)] x 100 = -318.25% (Use 10%)

BMP FACILITY DESIGN CALCULATIONS

II. WATERSHED INFORMATION

PART 1: LIST ALL OF THE SUBAREAS AND "C" FACTORS USED IN THE BMP COMPUTATIONS

SUBAREA DESIGNATION & DESCRIPTION		"C"	AREA (AC.)
(1)		(2)	(3)
CE & FP	Onsite - Treated	0.25	37.25
UT	Onsite - Untreated	0.31	212.64

PART 2: COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE SITE

(A) AREA OF THE SITE (a) 249.89 ACRES

(B) SUBAREA DESIGNATION		"C"		AREA (AC.)		PRODUCT
(1)		(2)		(3)		(4)
CE & FP	Onsite - Treated	0.25	X	37.25	=	9.31
UT	Onsite - Untreated	0.31	X	212.64	=	65.92
				(b) TOTAL	=	75.23

(C) WEIGHTED AVERAGE "C" FACTOR (b) / (a) = (c) 0.30

PART 3: COMPUTE THE TOTAL PHOSPHORUS REMOVAL FOR THE SITE

SUBAREA DESIGNATION	BMP TYPE	REMOVAL EFF. (%)		AREA RATIO		"C" FACTOR RATIO		PRODUCT
(1)	(2)	(3)		(4)		(5)		(6)
CE & FP	Conservation Esm't	100	X	0.18	X	1.00	=	15.00
UT	None	0	X	0.85	X	1.03	=	0.00
	20% Credit for Offsite Areas							
						(a) TOTAL	=	15.00

PART 4: DETERMINE COMPLIANCE WITH PHOSPHORUS REMOVAL REQUIREMENT

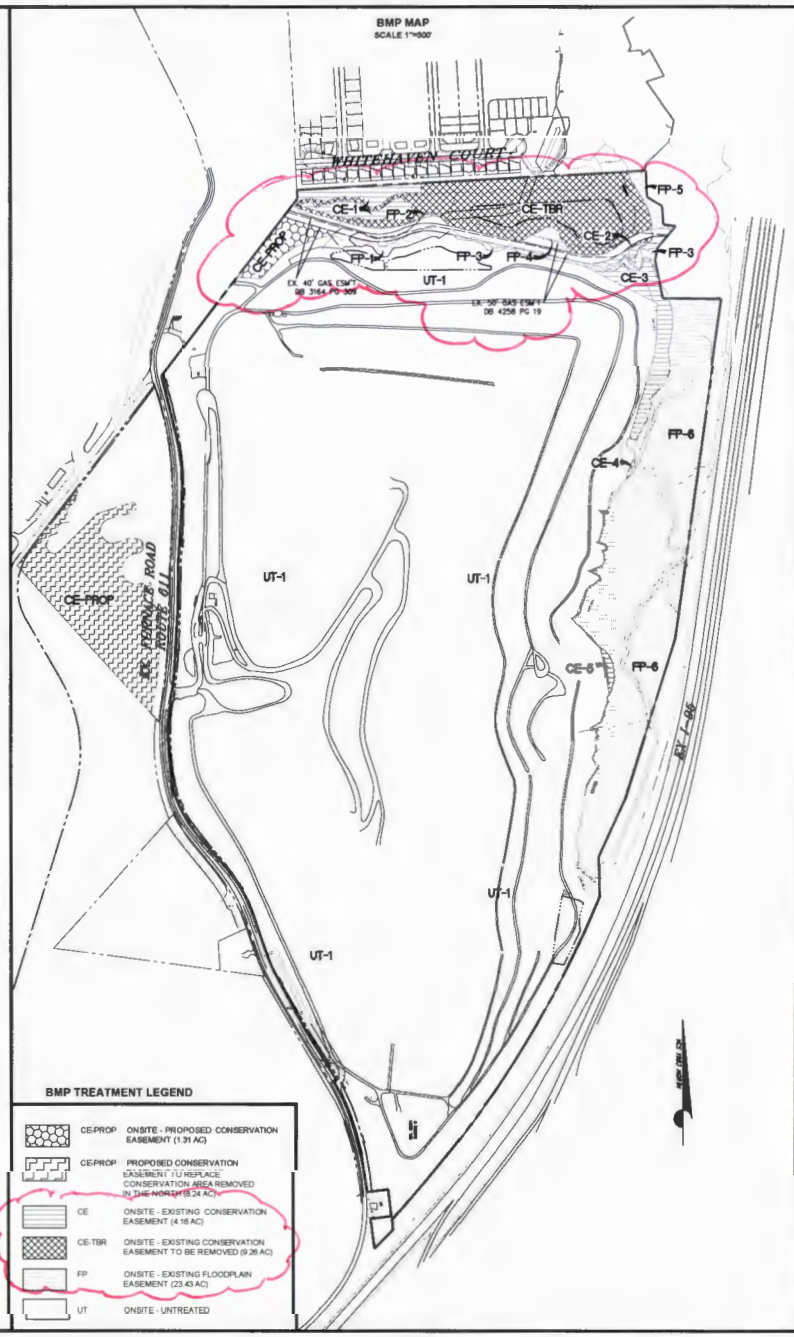
(A) SELECT REQUIREMENT: (a) 10.00 %
(FAIRFAX COUNTY CHESAPEAKE BAY PRESERVATION AREA - 40%)
OR (FAIRFAX COUNTY WATER SUPPLY OVERLAY DISTRICT - 50%)
OR (SITE REDEVELOPMENT - 10.00%)

(B) IF LINE 3 (a) 15.00 % > LINE 4(a) 10.00 %
THEN PHOSPHORUS REMOVAL REQUIREMENT IS SATISFIED.

NOTE:

ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.

BMP MAP
SCALE 1"=800'



BMP TREATMENT LEGEND

CE-PROP	ONSITE - PROPOSED CONSERVATION EASEMENT (1.31 AC)
CE-PROP	PROPOSED CONSERVATION EASEMENT TO REPLACE CONSERVATION AREA REMOVED IN THE NORTH (8.24 AC)
CE	ONSITE - EXISTING CONSERVATION EASEMENT (4.16 AC)
CE-TBR	ONSITE - EXISTING CONSERVATION EASEMENT TO BE REMOVED (9.26 AC)
FP	ONSITE - EXISTING FLOODPLAIN EASEMENT (23.43 AC)
UT	ONSITE - UNTREATED

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COMMONWEALTH OF VIRGINIA
Date: 2-20-2014

SPECIAL EXCEPTION AMENDMENT
BMP PLAN
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED 2-20-2014	REVISED 2-20-2014
REVISED 8-11-2013	
REVISED 10-7-2013	
REVISED 11-1-2013	
REVISED 12-10-2013	

FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. AS SHOWN VERT
SHEET 27 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117BMP
LAYOUT: BMP
FILE NO. 05117.06-00

STORMWATER MANAGEMENT NARRATIVE

GENERAL

THIS 250.15-ACRE SITE IS BORDERED BY RESIDENTIAL LOTS TO THE NORTH, I-95 TO THE EAST, AND FURNACE ROAD THE WEST. THERE ARE SEVEN EXISTING PONDS ONSITE. SIX OF THE SEVEN PONDS DRAIN TO GILES RUN BEFORE CROSSING UNDER INTERSTATE 95. THE SOUTHERNMOST POND DRAINS INTO AN UNNAMED TRIBUTARY OF BELMONT BAY. THE ENTIRE SITE RESIDES WITHIN THE MILL BRANCH WATERSHED.

THE EXISTING STORMWATER MANAGEMENT PONDS WERE DESIGNED BY BC CONSULTANTS, MAY 2, 2004, PER PFM STANDARDS. THE INTENT OF THE PONDS PROVIDE EROSION AND SEDIMENT CONTROL DURING THE ONGOING LAND DISTURBANCE ON THIS SITE ASSOCIATED WITH LANDFILL OPERATIONS.

AS PART OF THE PROPOSED EXPANSION OF THE LANDFILL, THE SEVEN EXISTING SWM PONDS WILL BE CONSOLIDATED TO FOUR SWM PONDS. EXISTING PONDS #4, #5 AND #6, WHICH ARE LOCATED TO THE EAST OF THE SITE, WILL BE REMOVED. TO COMPENSATE FOR THE LOSS OF STORAGE VOLUME EXISTING PONDS #2, #3 AND #8 WILL INCREASE IN VOLUME AND BE RELOCATED NEAR THEIR ORIGINAL FOOTPRINTS. EXISTING POND #9 WILL NOT BE DISTURBED. APPROXIMATELY 191.62-ACRES OF RUNOFF FROM THE LANDFILL WILL BE COLLECTED IN A SERIES OF BENCHES THAT WILL DIRECT THE WATER TO DOWN DRAINS. THE DOWN DRAINS WILL CONVEY THE WATER FROM THE LANDFILL SLOPES TO A COLLECTION OF FOUR PONDS. THE ORIGINAL OUTFALLS TO ALL EXISTING SEVEN SWM PONDS WILL REMAIN AND THE PRE-DEVELOPMENT CONTROLLED FLOW TO THEIR CORRESPONDING OUTFALL WILL BE MATCHED IN POST-DEVELOPMENT CONDITIONS. PROPOSED SWM POND #3 WILL PROVIDE A CONTROLLED RELEASE THAT WILL BE DIVIDED AMONGST THE ORIGINAL OUTFALLS OF THE THREE PONDS BEING REMOVED. PROPOSED STORM SEWER WILL EXTEND FROM SWM POND #3 TO EACH OF THE EXISTING OUTFALLS OF EXISTING PONDS #4, #5 AND #6. THESE FOUR PONDS HAVE BEEN DESIGNED TO COLLECT THE 2-YEAR AND 10-YEAR STORM EVENTS AND RELEASE THEM TO EACH OUTFALL AT A RATE EQUAL TO OR LESS THAN THE PREDEVELOPMENT CONDITIONS. THEY HAVE ALSO BEEN DESIGNED TO CONVEY THE 100-YEAR STORM EVENT WITH ALL PRINCIPLE SPILLWAYS CLOGGED WHILE MAINTAINING A MINIMUM FREEBOARD OF 2.0-FEET. A COMBINED SPILLWAY HAS BEEN USED IN EACH POND SINCE A SEPARATE EMERGENCY SPILLWAY WOULD NOT BE POSSIBLE WITH CURRENT GRADING CONSTRAINTS. A SUMMARY SPECIFIC TO EACH POND IS AS FOLLOWS:

PROPOSED SWM BASIN 2

THE PROPOSED STORMWATER MANAGEMENT BASIN 2 IS LOCATED TO THE NORTH OF THE SITE ON THE NORTH FACE OF THE LANDFILL. IT HAS BEEN DESIGNED TO MANAGE 34.00-ACRES OF RUNOFF FROM THE SITE. THIS POND WILL REPLACE AN EXISTING SWM POND, IDENTIFIED AS EXISTING POND #2, AND RECONSTRUCTED WITH A NEW OUTFALL STRUCTURE; HOWEVER, THE NEW OUTFALL WILL REMAIN WITHIN THE SAME EXISTING CHANNEL. IN ADDITION TO CONTROLLING THE 2- AND 10-YEAR STORMS, BASIN 2 HAS BEEN DESIGNED TO DETAIN THE 1-YEAR RUNOFF VOLUME FOR A PERIOD OF 24-HOURS. THE DRAINAGE AREA HAS A CN VALUE OF 77.

	2-YEAR	10-YEAR
EXISTING POND #2 RELEASE	0.53 CFS	8.57 CFS
PROPOSED BASIN #2 RELEASE	0.46 CFS	7.83 CFS
REDUCTION IN DISCHARGE	13.21%	8.63%

THE BASIN MEETS FREEBOARD REQUIREMENTS WITH APPROXIMATELY 2.1-FEET OF FREEBOARD DURING THE 100-YEAR STORM EVENT. THE DAM HAS A HEIGHT OF 22-FEET. THE POND WILL OUTFALL TO CROSS-SECTION A-A.

PROPOSED SWM BASIN 3

STORMWATER MANAGEMENT BASIN 3 IS LOCATED IN THE NORTHEASTERN CORNER OF THE SITE ON THE NORTH FACE OF THE LANDFILL. IT HAS BEEN DESIGNED TO MANAGE 79.50-ACRES OF RUNOFF FROM THE SITE. THIS POND WILL REPLACE FOUR EXISTING SWM PONDS, EXISTING PONDS #3, #4, #5 AND #6, IN AN EFFORT TO REDUCE LAND DISTURBING ACTIVITY AND ENVIRONMENTAL IMPACTS WITHIN THE LIMITED SPACE BETWEEN THE PROPOSED LANDFILL EXPANSION AND EXISTING FLOODPLAIN. THE RUNOFF FROM THE DRAINAGE AREA OF THESE FOUR EXISTING PONDS WILL BE DIVERTED TO PROPOSED BASIN 3 USING PROPOSED BENCHES AND PROPOSED DOWN DRAINS. THE ORIGINAL OUTFALLS TO EACH OF THE FOUR EXISTING PONDS WILL REMAIN AND BE UTILIZED. THE PROPOSED BASIN 3 WILL BE CONSTRUCTED WITH A CONTROL STRUCTURE THAT DIVIDES THE RELEASE AMONG THE FOUR EXISTING OUTFALLS. PROPOSED SWM BASIN 3 WILL ALSO PROVIDE VOLUME NECESSARY TO DETAIN THE 1-YEAR RUNOFF VOLUME FOR A PERIOD OF 24 HOURS THAT WAS NECESSARY TO MEET EXISTING POND #5 OUTFALL REQUIREMENTS. PROPOSED STORM SEWER WILL DIRECT DISCHARGE TO EACH OF THE EXISTING CHANNELS. PROPOSED BASIN 3 WILL BE DESIGNED TO MEET OR EXCEED PROPORTIONAL IMPROVEMENT DESIGN REQUIREMENTS OF THE FOUR EXISTING SWM PONDS. THE DRAINAGE AREA HAS A CN VALUE OF 77.

	2-YEAR	10-YEAR
EX. POND #3 RELEASE TO OUTFALL D-D	1.30 CFS	13.14 CFS
PROP. BASIN 3 RELEASE TO OUTFALL D-D	0.00 CFS	0.00 CFS
REDUCTION IN DISCHARGE	100.00%	100.00%

	2-YEAR	10-YEAR
EX. POND #4 RELEASE TO OUTFALL E-E	1.68 CFS	10.84 CFS
PROP. BASIN 3 RELEASE TO OUTFALL E-E	1.36 CFS	9.34 CFS
REDUCTION IN DISCHARGE	19.05%	13.84%

	2-YEAR	10-YEAR
EX. POND #5 RELEASE TO OUTFALL F-F	0.27 CFS	4.74 CFS
PROP. BASIN 3 RELEASE TO OUTFALL F-F	0.21 CFS	4.19 CFS
REDUCTION IN DISCHARGE	22.22%	11.60%

	2-YEAR	10-YEAR
EX. POND #6 RELEASE TO OUTFALL G-G	1.77 CFS	16.17 CFS
PROP. BASIN 3 RELEASE TO OUTFALL G-G	0.81 CFS	12.91 CFS
REDUCTION IN DISCHARGE	51.21%	20.16%

THE BASIN HAS BEEN EVALUATED DURING THE 100-YEAR STORM LEAVING APPROXIMATELY 3.2-FEET OF FREEBOARD. THE DAM HAS A HEIGHT OF 14-FEET. THE POND OUTFALL TO CROSS-SECTION D-D, E-E, F-F AND G-G.

PROPOSED SWM BASIN 8

STORMWATER MANAGEMENT BASIN 8 IS LOCATED IN THE SOUTHEASTERN CORNER OF THE SITE ON THE EAST FACE OF THE LANDFILL. IT HAS BEEN DESIGNED TO MANAGE 31.33-ACRES OF RUNOFF FROM THE SITE. THIS POND WILL REPLACE AN EXISTING SWM POND, IDENTIFIED AS EXISTING POND #8, AND RECONSTRUCTED WITH A NEW OUTFALL STRUCTURE; HOWEVER, THE NEW OUTFALL WILL REMAIN WITHIN THE SAME EXISTING CHANNEL. IN ADDITION TO CONTROLLING THE 2- AND 10-YEAR STORMS, BASIN 8 HAS BEEN DESIGNED TO DETAIN THE 1-YEAR RUNOFF VOLUME FOR A PERIOD OF 24-HOURS. THE DRAINAGE AREA HAS A CN VALUE OF 77.

	2-YEAR	10-YEAR
EXISTING POND #8 RELEASE	2.12 CFS	18.52 CFS
PROPOSED BASIN #8 RELEASE	1.72 CFS	14.27 CFS
REDUCTION IN DISCHARGE	18.87%	22.95%

THE BASIN HAS BEEN EVALUATED DURING THE 100-YEAR STORM LEAVING APPROXIMATELY 3.0-FEET OF FREEBOARD. THE DAM HAS A HEIGHT OF 22-FEET. THE POND WILL OUTFALL TO CROSS-SECTION J-J.

EXISTING SWM BASIN 9

EXISTING STORMWATER MANAGEMENT POND #9 IS LOCATED IN THE SOUTHERN MOST CORNER OF THE SITE. THIS EXISTING POND WILL NOT BE DISTURBED. THE PRE-DEVELOPMENT AND POST-DEVELOPMENT DRAINAGE AREA, IMPERVIOUS AREA, RUNOFF VOLUME INFLOW AND POND RELEASE RATES REMAIN THE SAME. IT HAS BEEN DESIGNED TO MANAGE 46.79-ACRES OF RUNOFF FROM THE SITE. IN ADDITION TO CONTROLLING THE 2- AND 10-YEAR STORMS, BASIN 2 HAS BEEN DESIGNED TO DETAIN THE 1-YEAR RUNOFF VOLUME. THE DRAINAGE AREA HAS A CN VALUE OF 77.

	2-YEAR	10-YEAR
EXISTING POND #9 PRE-DEV. RELEASE	0.89 CFS	13.78 CFS
EXISTING POND #9 POST-DEV. RELEASE	0.89 CFS	13.78 CFS
REDUCTION IN DISCHARGE	0.00%	0.00%

THE BASIN MEETS FREEBOARD REQUIREMENTS WITH APPROXIMATELY 3.6-FEET OF FREEBOARD DURING THE 100-YEAR STORM EVENT. THE DAM HAS A HEIGHT OF 18.0-FEET. THE POND WILL OUTFALL TO CROSS-SECTION L-L.

CONCLUSION

EACH OF THESE FOUR PONDS HAS A RELEASE FOR THE 2- AND 10-YEAR STORM EVENT THAT IS LESS THAN THE PREDEVELOPMENT CONDITIONS. ALSO EACH POND CONTAINS AND PASSES THE 100-YEAR STORM EVENT WHILE MAINTAINING A MINIMUM 2.0-FOOT FREEBOARD. THEREFORE, IT IS THE OPINION OF THIS ENGINEER THAT THE PONDS HAVE BEEN DESIGNED ADEQUATELY AND IN CONFORMANCE WITH FAIRFAX COUNTY.

MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS

The following information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately. Failure to adequately address the required submission information may result in a delay in processing this application

This information is required under the following Zoning Ordinance paragraphs:

Special Permits (8-011 2J & 2L)	Special Exceptions (9-011 2J & 2L)
Cluster Subdivision (9-615 1G & 1H)	Commercial Revitalization Districts (9-622 2A (12)&(14))
Development Plans PRC District (16-302 2 & 4L)	PRC Plan (16-303 1E & 1O)
FDP - P Districts (except PRC) 916-502 1F & 1Q)	Amendments (18-202 10F & 10I)

1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"= 100')
2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading to accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheets 26 27, 28, 29 and 30.
3. Provide:

Facility Name/ Type & No.	On-Site area served (acres)	Off-Site area served (acres)	Drainage area (acres)	Footprint area (sf.)	Storage Volume (cf.)	If pond, dam height (ft.)
Dry Pond #2	34	0	34	58,217	454,080	22
(e.g., dry pond A, infil. trench, underground vault, etc.)						
Dry Pond #3	79.5	0	79.5	104,621	1,034,936	14
Dry Pond #8	31.33	0	31.33	35,780	381,773	22
Dry Pond #9	46.79	0	46.79	58,520	562,442	18
Totals	191.62	0	191.62	257,138	2,413,250	

4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 29, 30, 31, 33, 35 and 37. Pond inlet and outlet pipe systems are shown on Sheets Sheet 29, 30, 31, 33, 35 and 37.
5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheets 29, 30, 31, 33, 35 and 37. Type of maintenance access road surface noted on the plat is Gravel (asphalt, geoblock, gravel, etc.)
6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheets 17, 18, 19, 20 and 21.
7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 28.
8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet 39.
9. A description of how the outfall requirements, including known changes to contributing drainage areas (i.e. drainage diversions), of the Public Facilities Manual will be satisfied is provided on Sheet 39.
10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheet 29.
11. A submission waiver is requested for: N/A
12. Stormwater management is not required because: N/A

Revised 2-21-2006

PROPOSED SEDIMENT BASIN VOLUME CALCS

Stage-Area-Storage for Pond 2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
104.00	424	0
104.50	628	261
105.00	871	634
105.50	1,155	1,139
106.00	1,478	1,796
106.50	1,834	2,622
107.00	2,228	3,636
107.50	2,660	4,856
108.00	3,131	6,303
108.50	3,635	7,992
109.00	4,176	9,944
109.50	4,755	12,175
110.00	5,372	14,705
110.50	6,051	17,559
111.00	6,770	20,763
111.50	7,529	24,336
112.00	8,329	28,299
112.50	9,405	32,730
113.00	10,547	37,715
113.50	11,754	43,288
114.00	13,027	49,480
114.50	14,392	56,332
115.00	15,825	63,883
115.50	17,325	72,168
116.00	18,894	81,220
116.50	20,453	91,054
117.00	22,073	101,683
117.50	23,755	113,137
118.00	25,499	125,448

DA = 34.00 Acres

Wet Volume (Required) = 34acres x 67 CY/Acre (Per VESCH) = 2,278 CY = 61,506 CF

Dry Volume (Required) = 34acres x 67 CY/Acre = 2,278 CY = 61,506 CF

114.86 = 61,506 CF (Approx.) Wet Volume Storage Elev.
117.90 = 12[illegible],[illegible]12 CF (Approx.) Dry Volume Storage Elev.

Stage-Area-Storage for Pond 8

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
62.00	680	0
62.50	1,030	425
63.00	1,453	1,042
63.50	1,948	1,889
64.00	2,515	3,002
64.50	3,015	4,383
65.00	3,561	6,025
65.50	4,152	7,951
66.00	4,788	10,184
66.50	5,402	12,730
67.00	6,052	15,592
67.50	6,740	18,788
68.00	7,465	22,338
68.50	8,172	26,246
69.00	8,911	30,516
69.50	9,683	35,163
70.00	10,486	40,204
70.50	11,253	45,638
71.00	12,047	51,461
71.50	12,868	57,689
72.00	13,716	64,334
72.50	14,535	71,396
73.00	15,378	78,873
73.50	16,245	86,777
74.00	17,135	95,121
74.50	18,005	103,905
75.00	18,896	113,130

DA = 31.3 Acres

Wet Volume (Required) = 31.3 Acres x 67 CY/Acre (Per VESCH) = 2,099 CY = 56,676 CF

Dry Volume (Required) = 31.3 Acres x 67 CY/Acre = 2,099 CY = 56,676 CF

71.45 = 56,676 CF (Approx.) Wet Storage Volume Elev.
75.05 = 113,352 CF (Approx.) Dry Storage Volume Elev.

Stage-Area-Storage for Pond 3

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
86.00	44,652	
86.40	46,202	18,170
86.80	47,778	36,965
87.20	49,381	56,396
87.60	51,010	76,473
88.00	52,666	97,208
88.40	54,271	118,594
88.80	55,900	140,628
89.20	57,553	163,318
89.60	59,231	186,674
90.00	60,932	210,705
90.40	62,573	235,406
90.80	64,236	260,767
91.20	65,921	286,798
91.60	67,628	313,507

DA = 79.5 Acres

Wet Volume (Required) = 79.5 Acres x 67 CY/Acre (Per VESCH) = 5,327 CY = 143,816 CF

Dry Volume (Required) = 79.5 Acres x 67 CY/Acre = 5,327 CY = 143,816 CF

88.86 = 143,816 CF (Approx.) Wet Storage Volume Elev.
91.22 = 287,632 CF (Approx.) Dry Storage Volume Elev.

Stage-Area-Storage for Pond 9

Elevation (ft)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
174.00	0	0	0	0
176.00	5630	5630	3753	3753
178.00	25870	43568	29046	32799
180.00	35570	91775	61183	93982
182.00	40210	113599	75733	169715
184.00	44550	127084	84723	254438
186.00	48980	140243	93495	347933
188.00	53540	153729	102486	450419
190.00	58520	168035	112023	562442
190.80	58520	175560	46816	609258

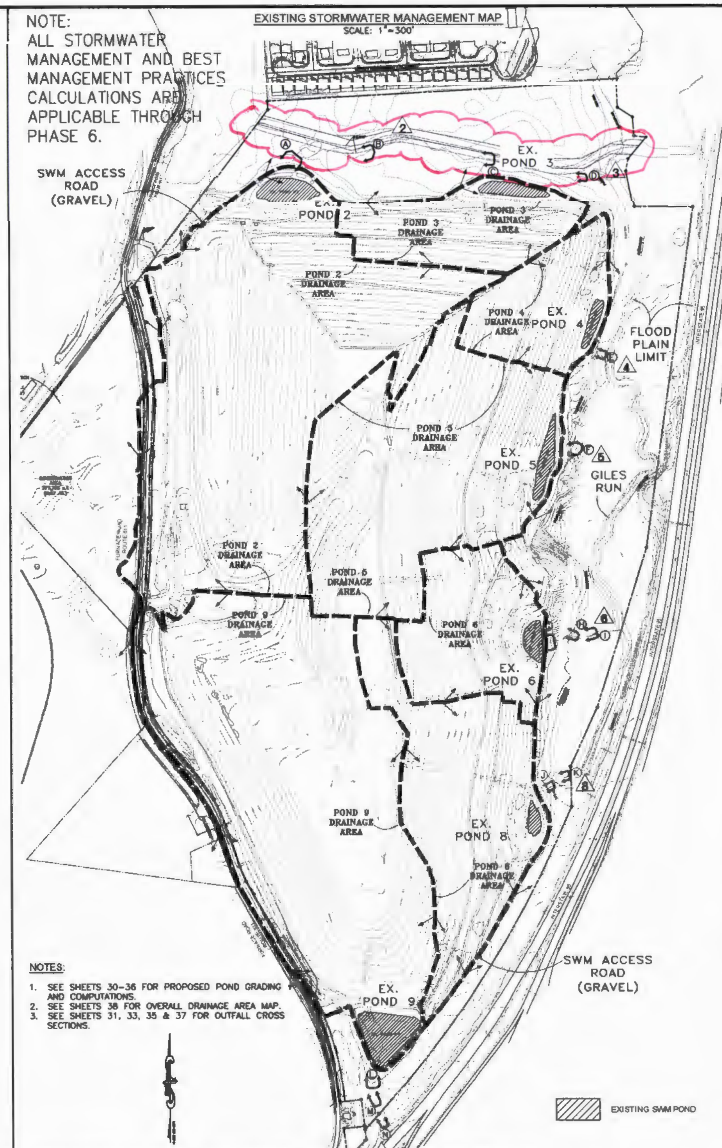
Wet Volume (Required) = 46.8 acres x 67 CY/Acre (Per VESC) = 3,136 CY = 84,672 CF

Dry Volume (Required) = 46.8 acres x 67 CY/Acre = 3,136 CY = 84,672 CF

175.67 = 84,672 CF (Approx.) Wet Volume Storage Elev.

176.17 = 169,344 CF (Approx.) Dry Volume Storage Elev.

NOTE:
ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.



NOTES:
1. SEE SHEETS 30-36 FOR PROPOSED POND GRADING AND COMPUTATIONS.
2. SEE SHEETS 38 FOR OVERALL DRAINAGE AREA MAP.
3. SEE SHEETS 31, 33, 35 & 37 FOR OUTFALL CROSS SECTIONS.

EXISTING SWM POND

CROSS-SECTION ID	POND OUTFALL	CHANNEL DESCRIPTION	MANNING'S 'N'	2-YEAR FLOW (CFS)	2-YEAR VELOCITY (FPS)	10-YEAR FLOW (CFS)	10-YEAR DEPTH (FT)
A-A	2	RIP-RAP	0.078	N/A	N/A	N/A	N/A
B-B	2	WEEDY	0.045	N/A	N/A	N/A	N/A
C-C	2	WEEDY	0.045	N/A	N/A	N/A	N/A
D-D	2,3	WEEDY	0.045	1.92	2.13	25.79	0.90
E-E	4	WEEDY	0.045	1.01	1.86	9.48	0.38
F-F	5	WEEDY	0.045	1.72	2.77	15.34	0.81
G-G	6	WEEDY	0.045	1.63	2.44	15.91	0.89
H-H	6	WEEDY	0.045	1.63	2.54	15.91	0.49
I-I	6	WEEDY	0.045	1.63	2.75	15.91	0.61
J-J	8	WEEDY	0.045	1.79	2.17	17.92	0.79
K-K	8	WEEDY	0.045	1.79	2.27	17.92	0.77
L-L	9	WEEDY	0.045	N/A	N/A	N/A	N/A
M-M	9	WEEDY	0.045	N/A	N/A	N/A	N/A
N-N	9	WEEDY	0.045	N/A	N/A	N/A	N/A

300' 150' 0' 300' 600'
SCALE: 1"=300'
CONTOUR INTERVAL = 10'
*EXISTING TOPO FROM AIR SURVEY

BC Consultants
Planners • Engineers • Surveyors • Landscape Architects
12600 Fair Lakes Circle, Suite 100, Fairfax, VA 22033
(703)449-8100 (703)449-8108 (Fax)
www.bccon.com

SPECIAL EXCEPTION AMENDMENT
OVERALL STORMWATER MANAGEMENT PLAN
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

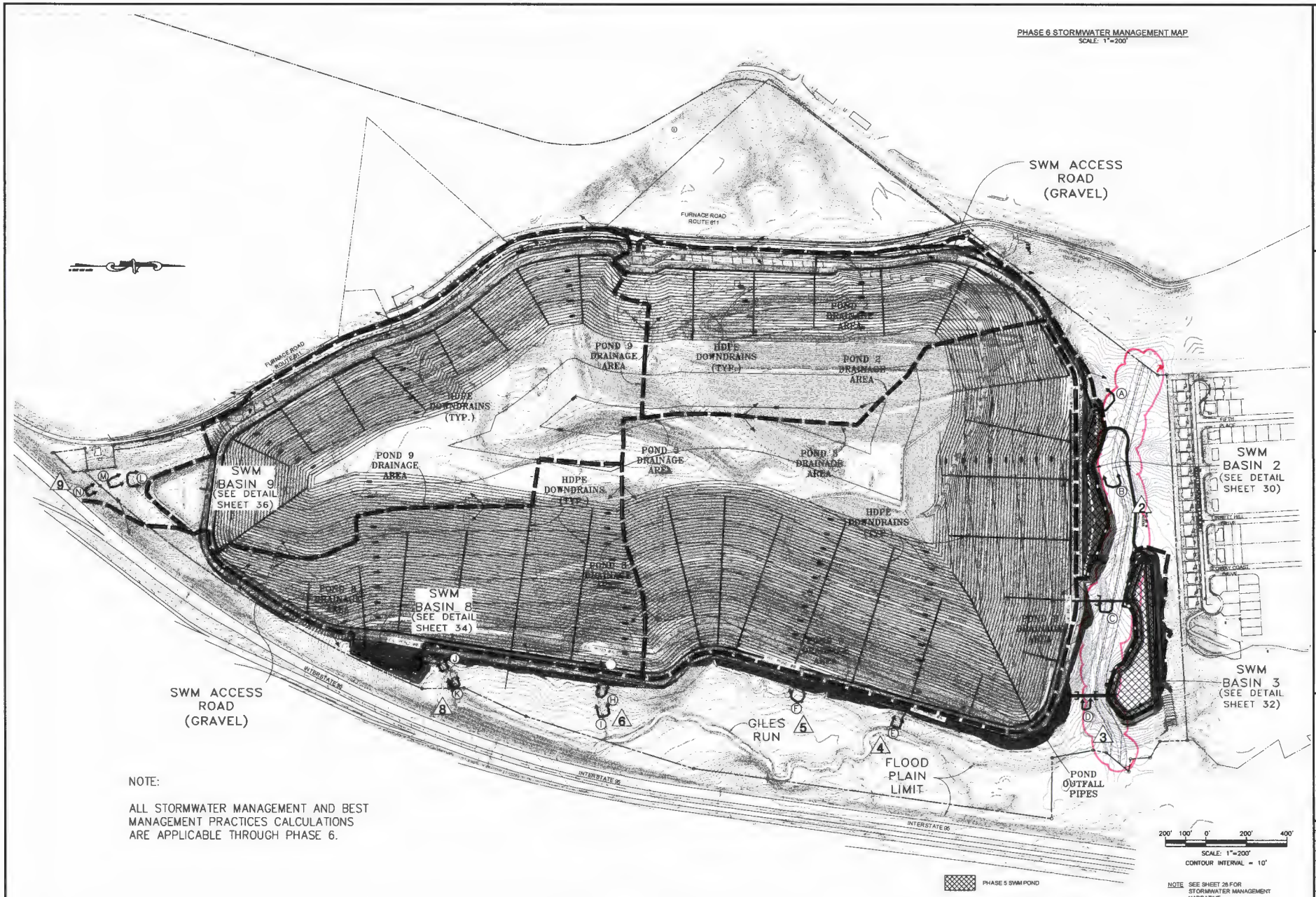
BC REVISIONS
REVISED 5-14-2013
REVISED 9-11-2013
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-10-2013
REVISED 1-22-2014
REVISED 2-20-2014

APPLICANT:
FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY:	PLR
DRAFTED BY:	CAD
CHECKED BY:	NB
DATE:	MARCH 22, 2013
SCALE:	HOR. AS SHOWN VERT
SHEET 28 OF 45	
CO. NO.	SEA 80-L/V-061-2
CAD NAME:	SE5117SWM1
LAYOUT:	SWM-1
FILE NO.	05117.06-00

XREFS:

PHASE 6 STORMWATER MANAGEMENT MAP
SCALE: 1"=200'



NOTE:

ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.

NOTE SEE SHEET 28 FOR STORMWATER MANAGEMENT NARRATIVE

BC Consultants
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www.bccon.com

COMMONWEALTH OF VIRGINIA
DONG S. DOOR
Reg. No. 402
2-20-2014
LICENSED PROFESSIONAL ENGINEER

SPECIAL EXCEPTION AMENDMENT
OVERALL STORMWATER MANAGEMENT
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 1-4-2013
REVISED 9-11-2013
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-10-2013
REVISED 2-20-2014

PROPERTY OWNER
FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 200
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR AS SHOWN
VERT

SHEET 29 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117SWM1
LAYOUT: SWM-O
FILE NO 05117.08-00

PRE-DEVELOPED EX. CN

```
RUNOFF CURVE NUMBER DATA
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
--------------------------------------------------------------------------
                                              Impervious
                                       Area   Adjustment  Adjusted
Soil/Surface Description          CN   acres   %C   %UC      CN
-------------------------------- ---- -------- ----- -----  ------
Existing Drainage Area             55    7.370               55.00

COMPOSITE AREA & WEIGHTED CN --->        7.370               55.00 (55)
                                              Impervious
                                       Area   Adjustment  Adjusted
Soil/Surface Description          CN   acres   %C   %UC      CN
-------------------------------- ---- -------- ----- -----  ------
Existing Drainage Area             55   11.780               55.00

COMPOSITE AREA & WEIGHTED CN --->       11.780               55.00 (55)
                                              Impervious
                                       Area   Adjustment  Adjusted
Soil/Surface Description          CN   acres   %C   %UC      CN
-------------------------------- ---- -------- ----- -----  ------
Existing Drainage Area             55   18.950               55.00

COMPOSITE AREA & WEIGHTED CN --->       18.950               55.00 (55)
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
```

PRE-DEVELOPED EX. T.C.

```
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
TIME OF CONCENTRATION CALCULATOR
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
--------------------------------------------------------------------------

Segment #1:  Tc: TR-55 Sheet

Mannings n            .4000
Hydraulic Length    200.00 ft
2yr, 24hr P          3.2000 in
Slope               .070000 ft/ft

Avg.Velocity           .15 ft/sec

                                   Segment #1 Time:     22.65 min
--------------------------------------------------------------------------

Segment #2:  Tc: TR-55 Shallow

Hydraulic Length    950.00 ft
Slope               .070000 ft/ft
Unpaved

Avg.Velocity          4.27 ft/sec

                                   Segment #2 Time:      3.71 min
--------------------------------------------------------------------------
                                     ------------------------
                                     Total Tc:      26.36 min
```

POST-DEVELOPED PROP. CN & T.C.

Lorton LF 2.0 — Lorton Landfill 2.0
Prepared by Geosyntec Consultants, Inc. — Type II 24-hr 2 year Rainfall=3.20"
HydroCAD 10.00 s/n 07857 © 2012 HydroCAD Software Solutions LLC — Printed 9/20/2012 — Page 3

Summary for Subcatchment 41S: Basin 2

Runoff = 42.04 cfs @ 12.16 hrs, Volume= 3.433 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 year Rainfall=3.20"

Area (ac)	CN	Description
* 34.000	77	50-75% Grass cover, Fair, HSG C
34.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0200	0.17		Sheet Flow, Sheet Flow - 100 feet Grass: Short n= 0.150 P2= 3.20"
6.3	373	0.0200	0.99		Shallow Concentrated Flow, Shallow Flow 373 feet Short Grass Pasture Kv= 7.0 fps
0.3	300	0.0800	14.35	143.48	Channel Flow, Tack On Bench 300 feet Area= 10.0 sf Perim= 10.8' r= 0.93' n= 0.022 Earth, clean & straight
0.3	720	0.3300	44.81	140.79	Pipe Channel, 24" HDPE 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
2.9	1,124	0.0100	6.54	78.46	Channel Flow, Top of Berm Channel 1,124 feet Area= 12.0 sf Perim= 12.6' r= 0.95' n= 0.022 Earth, clean & straight
0.7	465	0.0100	11.40	142.55	Pipe Channel, RCP_Round 48" 48.0" Round w/ 1.0" inside fill Area= 12.5 sf Perim= 12.6' r= 1.00' n= 0.013
1.6	1,394	0.0160	14.96	423.51	Pipe Channel, RCP_Round 72" 72.0" Round Area= 28.3 sf Perim= 18.8' r= 1.50' n= 0.013
21.9	4,476	Total			

1 YR. POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0 — Lorton Landfill 2.0
Prepared by Geosyntec Consultants, Inc. — Type II 24-hr 1 year Rainfall=2.70"
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Summary for Pond 42P: Basin 2

Inflow Area = 34.000 ac, 0.00% Impervious, Inflow Depth = 0.87" for 1 year event
Inflow = 28.28 cfs @ 12.18 hrs, Volume= 2.461 af
Outflow = 0.40 cfs @ 24.28 hrs, Volume= 1.084 af, Atten= 99%, Lag= 726.9 min
Primary = 0.40 cfs @ 24.28 hrs, Volume= 1.084 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 119.34' @ 24.28 hrs Surf.Area= 30,288 sf Storage= 90,841 cf
Flood Elev= 126.00' Surf.Area= 58,217 sf Storage= 381,931 cf

Plug-Flow detention time= 1,098.7 min calculated for 1.084 af (44% of inflow)
Center-of-Mass det. time= 916.4 min (1,790.3 - 874.0)

Volume	Invert	Avail.Storage	Storage Description
#1	115.50'	507,240 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
115.50	17,326	0	0	17,326
116.00	18,694	9,052	9,052	18,917
118.00	25,400	44,228	53,280	25,636
120.00	32,765	58,103	111,383	33,011
122.00	40,713	73,324	184,707	41,116
124.00	49,277	89,854	274,561	49,845
126.00	58,217	107,370	381,931	58,975
128.00	67,200	125,310	507,240	68,179

Device	Routing	Invert	Outlet Devices
#1	Primary	109.00'	48.0" Round Culvert L= 108.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 109.00' / 104.00' S= 0.0463 '/' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	115.50'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	120.50'	11.0" Vert. Orifice/Grate X 2.00 C= 0.600
#4	Device 1	122.37'	72.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.40 cfs @ 24.28 hrs HW=119.34' (Free Discharge)
1=Culvert (Passes 0.40 cfs of 174.75 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.40 cfs @ 9.29 fps)
3=Orifice/Grate (Controls 0.00 cfs)
4=Orifice/Grate (Controls 0.00 cfs)

2 YR. POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0 — Lorton Landfill 2.0
Prepared by Geosyntec Consultants, Inc. — Type II 24-hr 2 year Rainfall=3.20"
HydroCAD 10.00 s/n 07857 © 2012 HydroCAD Software Solutions LLC — Printed 9/20/2012 — Page 12

Summary for Pond 42P: Basin 2

Inflow Area = 34.000 ac, 0.00% Impervious, Inflow Depth = 1.21" for 2 year event
Inflow = 42.04 cfs @ 12.16 hrs, Volume= 3.433 af
Outflow = 0.46 cfs @ 24.30 hrs, Volume= 1.282 af, Atten= 99%, Lag= 728.5 min
Primary = 0.46 cfs @ 24.30 hrs, Volume= 1.282 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 120.58' @ 24.30 hrs Surf.Area= 34,988 sf Storage= 130,264 cf
Flood Elev= 126.00' Surf.Area= 58,217 sf Storage= 381,931 cf

Plug-Flow detention time= 1,070.1 min calculated for 1.282 af (37% of inflow)
Center-of-Mass det. time= 931.4 min (1,795.2 - 863.8)

Volume	Invert	Avail.Storage	Storage Description
#1	115.50'	507,240 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
115.50	17,326	0	0	17,326
116.00	18,694	9,052	9,052	18,917
118.00	25,400	44,228	53,280	25,636
120.00	32,765	58,103	111,383	33,011
122.00	40,713	73,324	184,707	41,116
124.00	49,277	89,854	274,561	49,845
126.00	58,217	107,370	381,931	58,975
128.00	67,200	125,310	507,240	68,179

Device	Routing	Invert	Outlet Devices
#1	Primary	109.00'	48.0" Round Culvert L= 108.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 109.00' / 104.00' S= 0.0463 '/' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	115.50'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	120.50'	11.0" Vert. Orifice/Grate X 2.00 C= 0.600
#4	Device 1	122.37'	72.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.46 cfs @ 24.30 hrs HW=120.58' (Free Discharge)
1=Culvert (Passes 0.46 cfs of 187.06 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.46 cfs @ 10.70 fps)
3=Orifice/Grate (Controls 0.00 cfs)
4=Orifice/Grate (Controls 0.00 cfs)

10 YR. POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0 — Lorton Landfill 2
Prepared by Geosyntec Consultants, Inc. — Type II 24-hr 10 year Rainfall=5.3[illegible]
HydroCAD 10.00 s/n 07857 © 2012 HydroCAD Software Solutions LLC — Printed [illegible] — Page 1

Summary for Pond 42P: Basin 2

Inflow Area = 34.000 ac, 0.00% Impervious, Inflow Depth = 2.78" for 10 year event
Inflow = 99.74 cfs @ 12.15 hrs, Volume= 7.886 af
Outflow = 7.83 cfs @ 13.54 hrs, Volume= 5.579 af, Atten= 92%, Lag= 83.1 min
Primary = 7.83 cfs @ 13.54 hrs, Volume= 5.579 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 122.37' @ 13.54 hrs Surf.Area= 42,076 sf Storage= 198,417 cf
Flood Elev= 126.00' Surf.Area= 58,217 sf Storage= 381,931 cf

Plug-Flow detention time= 489.8 min calculated for 5.573 af (70% of inflow)
Center-of-Mass det. time= 368.1 min (1,197.6 - 829.5)

Volume	Invert	Avail.Storage	Storage Description
#1	115.50'	507,240 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
115.50	17,326	0	0	17,326
116.00	18,694	9,052	9,052	18,917
118.00	25,400	44,228	53,280	25,636
120.00	32,765	58,103	111,383	33,011
122.00	40,713	73,324	184,707	41,116
124.00	49,277	89,854	274,561	49,845
126.00	58,217	107,370	381,931	58,975
128.00	67,200	125,310	507,240	68,179

Device	Routing	Invert	Outlet Devices
#1	Primary	109.00'	48.0" Round Culvert L= 108.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 109.00' / 104.00' S= 0.0463 '/' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	115.50'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	120.50'	11.0" Vert. Orifice/Grate X 2.00 C= 0.600
#4	Device 1	122.37'	72.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.82 cfs @ 13.54 hrs HW=122.33' (Free Discharge)
1=Culvert (Passes 7.82 cfs of 203.68 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.53 cfs @ 12.48 fps)
3=Orifice/Grate (Orifice Controls 7.28 cfs @ 5.52 fps)
4=Orifice/Grate (Weir Controls 0.00 cfs @ 0.11 fps)

100 YR. CLOGGED POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0 — Lorton Landfill 2.0
Prepared by Geosyntec Consultants, Inc. — Type II 24-hr 100 year Rainfall=7.30"
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Summary for Pond 44P: Basin 2 100yr

Inflow Area = 34.000 ac, 0.00% Impervious, Inflow Depth = 4.64" for 100 year event
Inflow = 165.23 cfs @ 12.16 hrs, Volume= 13.136 af
Outflow = 138.46 cfs @ 12.25 hrs, Volume= 13.137 af, Atten= 16%, Lag= 5.1 min
Primary = 138.46 cfs @ 12.25 hrs, Volume= 13.137 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Starting Elev= 122.33' Surf.Area= 42,070 sf Storage= 198,395 cf
Peak Elev= 124.04' @ 12.25 hrs Surf.Area= 49,460 sf Storage= 276,788 cf (78,403 cf above start)
Flood Elev= 126.00' Surf.Area= 58,217 sf Storage= 381,931 cf (183,536 cf above start)

Plug-Flow detention time= 192.5 min calculated for 6.574 af (50% of inflow)
Center-of-Mass det. time= 17.7 min (842.8 - 825.1)

Volume	Invert	Avail.Storage	Storage Description
#1	115.50'	507,240 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
115.50	17,326	0	0	17,326
116.00	18,694	9,052	9,052	18,917
118.00	25,400	44,228	53,280	25,636
120.00	32,765	58,103	111,383	33,011
122.00	40,713	73,324	184,707	41,116
124.00	49,277	89,854	274,561	49,845
126.00	58,217	107,370	381,931	58,975
128.00	67,200	125,310	507,240	68,179

Device	Routing	Invert	Outlet Devices
#1	Primary	109.00'	48.0" Round Culvert L= 108.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 109.00' / 104.00' S= 0.0463 '/' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	122.37'	72.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

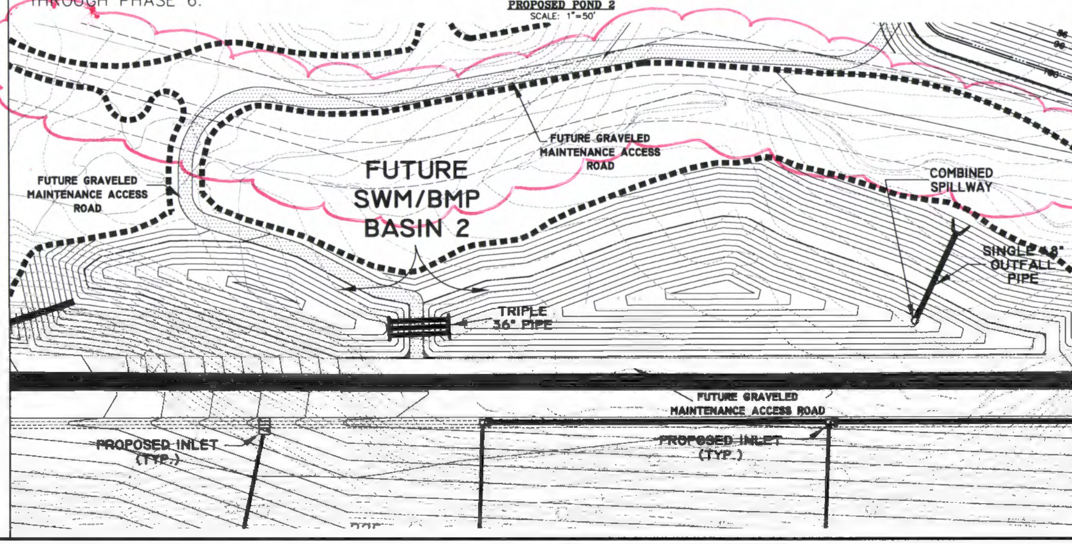
Primary OutFlow Max=138.15 cfs @ 12.25 hrs HW=124.04' (Free Discharge)
1=Culvert (Passes 138.15 cfs of 218.52 cfs potential flow)
2=Orifice/Grate (Weir Controls 138.15 cfs @ 4.28 fps)

NOTE:

ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.

THIS SHEET IS FOR STORMWATER MANAGEMENT INFORMATION ONLY

PROPOSED POND 2
SCALE: 1"=50'



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12600 Fair Lakes Circle, Suite 100, Fairfax, VA 22033
(703)449-8100 (703)449-8108 (Fax)
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COMMONWEALTH OF VIRGINIA — DENNIS D. DIXON — Lic. No. 862 — 2-20-2014 — LANDSCAPE ARCHITECT

SPECIAL EXCEPTION AMENDMENT
STORMWATER MANAGEMENT POND 2
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 3-14-2013
REVISED 8-11-2013
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-10-2013
REVISED 1-22-2014
REVISED 2-20-2014

APPLICANT:
FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

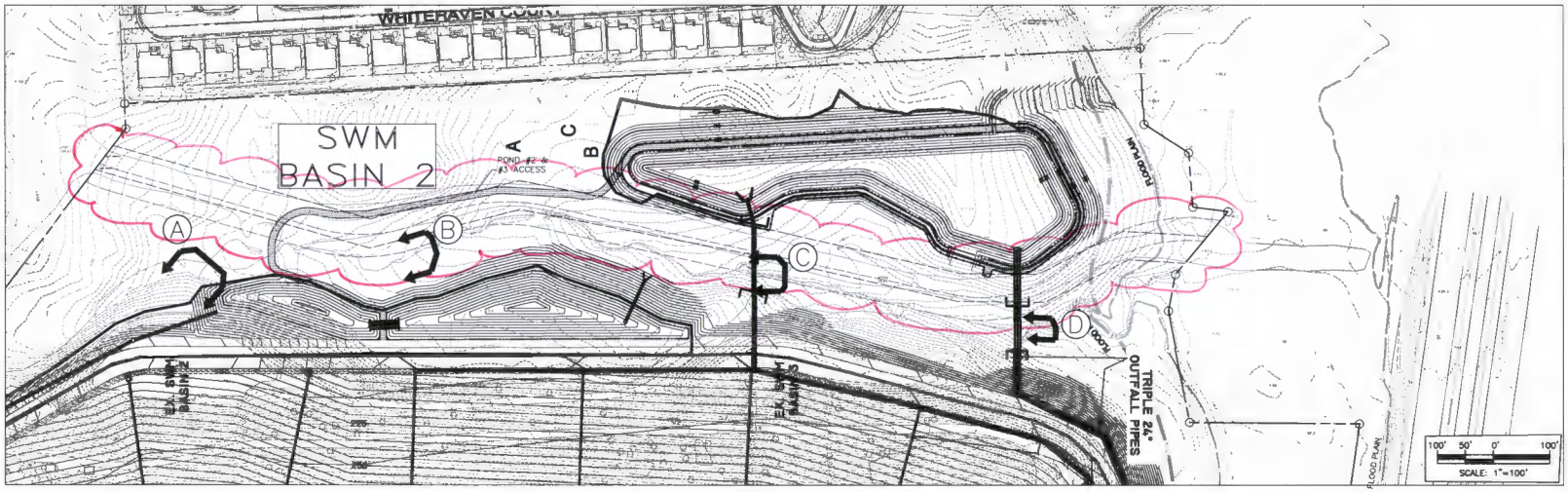
DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR AS SHOWN VERT

SHEET 30 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117SWM2
LAYOUT: Pond2
FILE NO. 05117.08-00
XREFS:

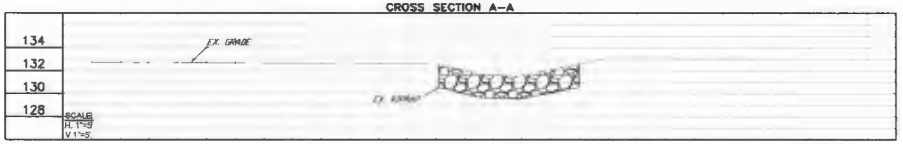
OUTFALL 2 CROSS SECTION PLAN VIEW

SCALE: 1"=100'

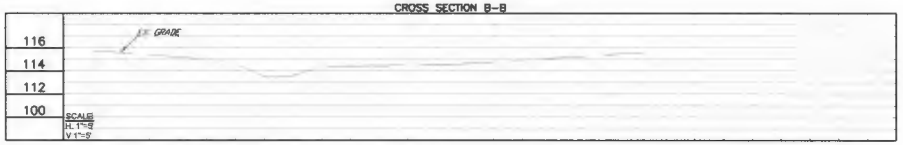


OUTFALL 2

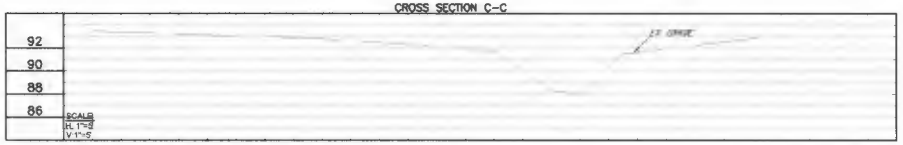
CROSS SECTION A-A



CROSS SECTION B-B

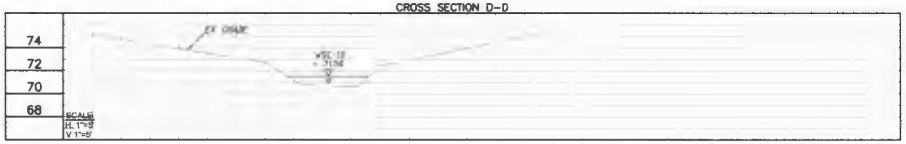


CROSS SECTION C-C



OUTFALL 3

CROSS SECTION D-D



NOTE:

ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.

NOTES

1. SEE SHEET 28 FOR CROSS SECTION LOCATIONS AND OUTFALL NARRATIVE.

BC Consultants
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COMMONWEALTH OF VIRGINIA
DENIS D. DUDA
Lic. No. 484
2-20-2014
PROFESSIONAL ENGINEER

SPECIAL EXCEPTION AMENDMENT
OUTFALL CROSS SECTIONS POND 2

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED 5-14-2013	REVISED 1-22-2014
REVISED 8-11-2013	REVISED 2-20-2014
REVISED 10-7-2013	
REVISED 11-1-2013	
REVISED 12-10-2013	

APPROVED BY:
FURNACE ASSETT, INC.
11220 ASSETT LOOP
SUITE 200
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR AS SHOWN
VERT

SHEET 31 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117SWM3
LAYOUT: OUT2 3
FILE NO. 05117.08-00

V:\project_2005\05117\Plan\Cadfiles\SEA OVERLOOK BERM\SE5117swm2.dwg, 2/21/2014 1:30:12 PM

PRE-DEVELOPED EX. CN

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Existing Drainage Area	55	15.620			55.00
COMPOSITE AREA & WEIGHTED CN --->		15.620			55.00 (55)

PRE-DEVELOPED EX. T.C.

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 200.00 ft
2yr, 24hr P 3.2000 in
Slope .100000 ft/ft

Avg.Velocity .17 ft/sec

Segment #1 Time: 19.64 min

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 650.00 ft
Slope .100000 ft/ft
Unpaved

Avg.Velocity 5.10 ft/sec

Segment #2 Time: 2.12 min

Total Tc: 21.76 min

POST-DEVELOPED PROP. CN & T.C.

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Lorton Landfill 2.0
Type II 24-hr 2 year Rainfall=3.20"
Printed 9/20/2012
Page 9

Summary for Subcatchment 53S: Basin 3

Runoff = 98.29 cfs @ 12.16 hrs, Volume= 8.028 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 year Rainfall=3.20"

Area (ac)	CN	Description
* 79.500	77	50-75% Grass cover, Fair, HSG C
79.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0200	0.17		**Sheet Flow, Sheet Flow - 100 feet** Grass: Short n= 0.150 P2= 3.20"
6.3	373	0.0200	0.99		**Shallow Concentrated Flow, Shallow Flow 373 feet** Short Grass Pasture Kv= 7.0 fps
0.3	300	0.0500	14.35	143.48	**Channel Flow, Tack On Bench 300 feet** Area= 10.0 sf Perim= 10.8' r= 0.93' n= 0.022 Earth, clean & straight
0.3	720	0.3300	44.81	140.79	**Pipe Channel, 24" HDPE** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
2.9	1,124	0.0100	6.54	78.46	**Channel Flow, Top of Berm Channel 1,124 feet** Area= 12.0 sf Perim= 12.6' r= 0.95' n= 0.022 Earth, clean & straight
0.7	465	0.0100	11.43	142.64	**Pipe Channel, RCP_Round 48"** 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013
1.6	1,394	0.0100	14.98	423.51	**Pipe Channel, RCP_Round 72"** 72.0" Round Area= 28.3 sf Perim= 18.8' r= 1.50' n= 0.013
21.9	4,476	Total			

150 YR. POST-DEVELOPMENT DESIGN SUMMARY

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Lorton Landfill 2.0
Type II 24-hr 100 year Rainfall=7.30"
Printed 9/20/2012
Page 5

Summary for Pond 56P: Basin 3

Inflow Area = 119.260 ac, 0.00% Impervious, Inflow Depth = 4.84" for 100 year event
Inflow = 579.51 cfs @ 12.15 hrs, Volume= 48.074 af
Outflow = 522.78 cfs @ 12.22 hrs, Volume= 48.074 af, Atten= 10%, Lag= 4.5 min
Discarded = 522.78 cfs @ 12.22 hrs, Volume= 48.074 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 96.52' Surf.Area= 88,946 sf Storage= 554,314 cf
Peak Elev= 98.86' @ 12.22 hrs Surf.Area= 99,399 sf Storage= 774,400 cf (220,086 cf above start)
Flood Elev= 100.00' Surf.Area= 104,621 sf Storage= 890,947 cf (336,633 cf above start)

Plug-Flow detention time= 183.3 min calculated for 33.314 af (72% of inflow)
Center-of-Mass det. time= 14.6 min (839.6 - 825.1)

Volume	Invert	Avail.Storage	Storage Description
#1	88.86'	1,109,205 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
88.86	66,147	0	0	66,147
90.00	60,832	66,716	66,716	61,057
92.00	69,356	130,197	196,914	69,725
94.00	77,836	147,208	344,122	78,575
96.00	86,674	164,533	508,655	87,610
98.00	95,589	182,171	690,825	96,828
100.00	104,621	200,122	890,947	106,225
102.00	113,700	218,258	1,109,205	115,881

Device	Routing	Invert	Outlet Devices
#1	Discarded	96.52'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 4.00 Width (feet) 40.00 80.00

Discarded OutFlow Max=517.21 cfs @ 12.22 hrs HW=98.84' (Free Discharge)
└─1=Custom Weir/Orifice (Weir Controls 517.21 cfs @ 4.88 fps)

1 YR. POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0
Prepared by Geosyntec Consultants, Inc.
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Lorton Landfill 2.0
Type II 24-hr 1 year Rainfall=2.70"
Printed 9/20/2012
Page 5

Summary for Pond 54P: Basin 3

Inflow Area = 79.500 ac, 0.00% Impervious, Inflow Depth = 0.87" for 1 year event
Inflow = 58.46 cfs @ 12.16 hrs, Volume= 5.765 af
Outflow = 1.98 cfs @ 19.77 hrs, Volume= 4.789 af, Atten= 97%, Lag= 456.1 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 1.13 cfs @ 19.77 hrs, Volume= 2.717 af
Secondary = 0.17 cfs @ 19.77 hrs, Volume= 0.419 af
Tertiary = 0.68 cfs @ 19.77 hrs, Volume= 1.633 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 91.62' @ 19.77 hrs Surf.Area= 67,712 sf Storage= 170,844 cf
Flood Elev= 100.00' Surf.Area= 104,621 sf Storage= 890,947 cf

Plug-Flow detention time= 891.9 min calculated for 4.789 af (83% of inflow)
Center-of-Mass det. time= 813.5 min (1,687.5 - 874.0)

Volume	Invert	Avail.Storage	Storage Description
#1	88.86'	1,109,205 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
88.86	66,147	0	0	66,147
90.00	60,832	66,716	66,716	61,057
92.00	69,356	130,197	196,914	69,725
94.00	77,836	147,208	344,122	78,575
96.00	86,674	164,533	508,655	87,610
98.00	95,589	182,171	690,825	96,828
100.00	104,621	200,122	890,947	106,225
102.00	113,700	218,258	1,109,205	115,881

Device	Routing	Invert	Outlet Devices
#1	Primary	88.70'	**24.0" Round Culvert** L= 270.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 88.70' / 81.80' S= 0.0256 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	88.86'	**5.2" Vert. Orifice/Grate Pond 4** C= 0.600
#3	Device 1	92.76'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	95.04'	**72.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Secondary	88.70'	**24.0" Round Culvert** L= 270.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 88.70' / 81.80' S= 0.0256 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#6	Device 5	88.86'	**2.0" Vert. Orifice/Grate Pond 5** C= 0.600
#7	Device 5	92.76'	**10.5" Vert. Orifice/Grate** C= 0.600
#8	Device 5	95.04'	**72.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#9	Tertiary	88.70'	**24.0" Round Culvert** L= 270.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 88.70' / 81.80' S= 0.0256 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#10	Device 9	88.86'	**4.0" Vert. Orifice/Grate Pond 6** C= 0.600
#11	Device 9	92.76'	**13.1" Vert. Orifice/Grate X 2.00** C= 0.600
#12	Device 9	95.04'	**72.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#13	Discarded	96.52'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 4.00 Width (feet) 40.00 80.00

2 YR. POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0
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Lorton Landfill 2.0
Type II 24-hr 2 year Rainfall=3.20"
Printed 9/20/2012
Page 12

Summary for Pond 54P: Basin 3

Inflow Area = 79.500 ac, 0.00% Impervious, Inflow Depth = 1.21" for 2 year event
Inflow = 98.29 cfs @ 12.16 hrs, Volume= 8.028 af
Outflow = 2.38 cfs @ 20.23 hrs, Volume= 6.041 af, Atten= 98%, Lag= 484.4 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 1.36 cfs @ 20.23 hrs, Volume= 3.453 af
Secondary = 0.21 cfs @ 20.23 hrs, Volume= 0.505 af
Tertiary = 0.81 cfs @ 20.23 hrs, Volume= 2.084 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 92.76' @ 20.23 hrs Surf.Area= 72,586 sf Storage= 260,812 cf
Flood Elev= 100.00' Surf.Area= 104,621 sf Storage= 890,947 cf

Plug-Flow detention time= 954.9 min calculated for 6.041 af (75% of inflow)
Center-of-Mass det. time= 856.8 min (1,719.8 - 863.0)

Volume	Invert	Avail.Storage	Storage Description
#1	88.86'	1,109,205 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
88.86	66,147	0	0	66,147
90.00	60,832	66,716	66,716	61,057
92.00	69,356	130,197	196,914	69,725
94.00	77,836	147,208	344,122	78,575
96.00	86,674	164,533	508,655	87,610
98.00	95,589	182,171	690,825	96,828
100.00	104,621	200,122	890,947	106,225
102.00	113,700	218,258	1,109,205	115,881

Device	Routing	Invert	Outlet Devices
#1	Primary	88.70'	**24.0" Round Culvert** L= 270.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 88.70' / 81.80' S= 0.0256 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	88.86'	**5.2" Vert. Orifice/Grate Pond 4** C= 0.600
#3	Device 1	92.76'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	95.04'	**72.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Secondary	88.70'	**24.0" Round Culvert** L= 270.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 88.70' / 81.80' S= 0.0256 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#6	Device 5	88.86'	**2.0" Vert. Orifice/Grate Pond 5** C= 0.600
#7	Device 5	92.76'	**10.5" Vert. Orifice/Grate** C= 0.600
#8	Device 5	95.04'	**72.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#9	Tertiary	88.70'	**24.0" Round Culvert** L= 270.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 88.70' / 81.80' S= 0.0256 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#10	Device 9	88.86'	**4.0" Vert. Orifice/Grate Pond 6** C= 0.600
#11	Device 9	92.76'	**13.1" Vert. Orifice/Grate X 2.00** C= 0.600
#12	Device 9	95.04'	**72.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#13	Discarded	96.52'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 4.00 Width (feet) 40.00 80.00

10 YR. POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0
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Lorton Landfill 2.0
Type II 24-hr 10 year Rainfall=5.20"
Printed 9/20/2012
Page 19

Summary for Pond 54P: Basin 3

Inflow Area = 79.500 ac, 0.00% Impervious, Inflow Depth = 2.79" for 10 year event
Inflow = 233.20 cfs @ 12.15 hrs, Volume= 18.482 af
Outflow = 26.49 cfs @ 13.03 hrs, Volume= 16.200 af, Atten= 89%, Lag= 52.8 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 9.36 cfs @ 13.03 hrs, Volume= 6.764 af
Secondary = 4.21 cfs @ 13.03 hrs, Volume= 2.319 af
Tertiary = 12.92 cfs @ 13.03 hrs, Volume= 7.117 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 95.04' @ 13.03 hrs Surf.Area= 82,427 sf Storage= 427,592 cf
Flood Elev= 100.00' Surf.Area= 104,621 sf Storage= 890,947 cf

Plug-Flow detention time= 489.7 min calculated for 16.200 af (88% of inflow)
Center-of-Mass det. time= 409.4 min (1,249.0 - 839.6)

Volume	Invert	Avail.Storage	Storage Description
#1	88.86'	1,109,205 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
88.86	66,147	0	0	66,147
90.00	60,832	66,716	66,716	61,057
92.00	69,356	130,197	196,914	69,725
94.00	77,836	147,208	344,122	78,575
96.00	86,674	164,533	508,655	87,610
98.00	95,589	182,171	690,825	96,828
100.00	104,621	200,122	890,947	106,225
102.00	113,700	218,258	1,109,205	115,881

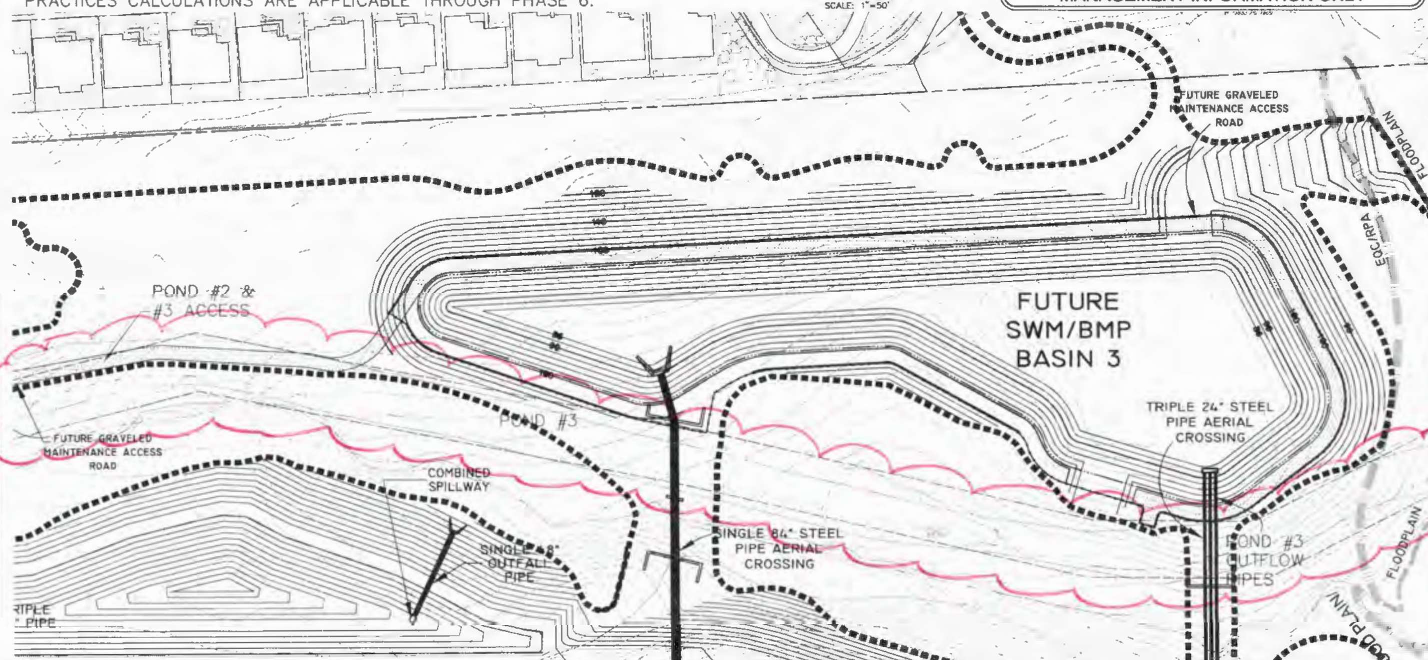
Device	Routing	Invert	Outlet Devices
#1	Primary	88.70'	**24.0" Round Culvert** L= 270.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 88.70' / 81.80' S= 0.0256 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	88.86'	**5.2" Vert. Orifice/Grate Pond 4** C= 0.600
#3	Device 1	92.76'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	95.04'	**72.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Secondary	88.70'	**24.0" Round Culvert** L= 270.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 88.70' / 81.80' S= 0.0256 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#6	Device 5	88.86'	**2.0" Vert. Orifice/Grate Pond 5** C= 0.600
#7	Device 5	92.76'	**10.5" Vert. Orifice/Grate** C= 0.600
#8	Device 5	95.04'	**72.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#9	Tertiary	88.70'	**24.0" Round Culvert** L= 270.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 88.70' / 81.80' S= 0.0256 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#10	Device 9	88.86'	**4.0" Vert. Orifice/Grate Pond 6** C= 0.600
#11	Device 9	92.76'	**13.1" Vert. Orifice/Grate X 2.00** C= 0.600
#12	Device 9	95.04'	**72.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#13	Discarded	96.52'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 4.00 Width (feet) 40.00 80.00

NOTE:

ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.

PROPOSED POND 3
SCALE: 1"=50'

THIS SHEET IS FOR STORMWATER MANAGEMENT INFORMATION ONLY



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SPECIAL EXCEPTION AMENDMENT
STORMWATER MANAGEMENT POND 3

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

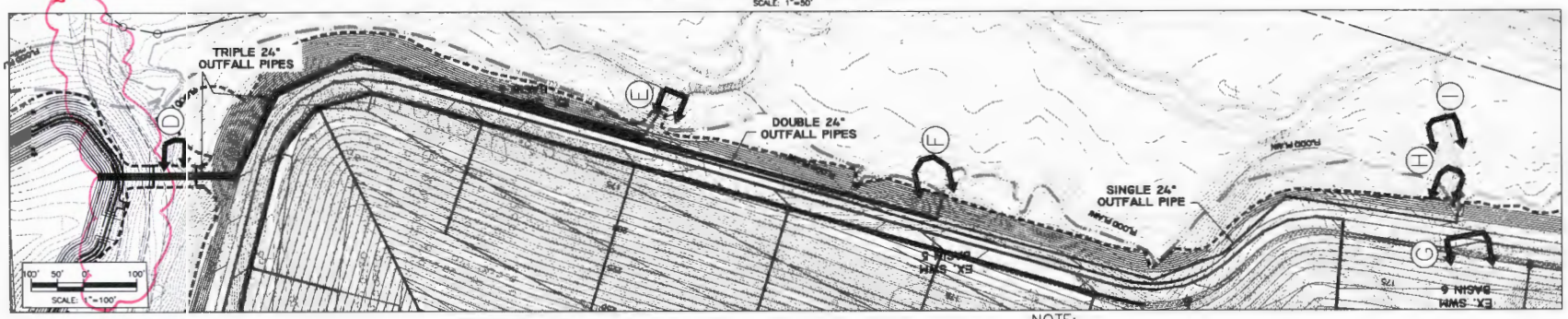
BC REVISIONS: REVISED 8-14-2013; REVISED 9-11-2013; REVISED 10-7-2013; REVISED 11-1-2013; REVISED 12-10-2013; REVISED 1-22-2014; REVISED 2-20-2014

APPLICANT: FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

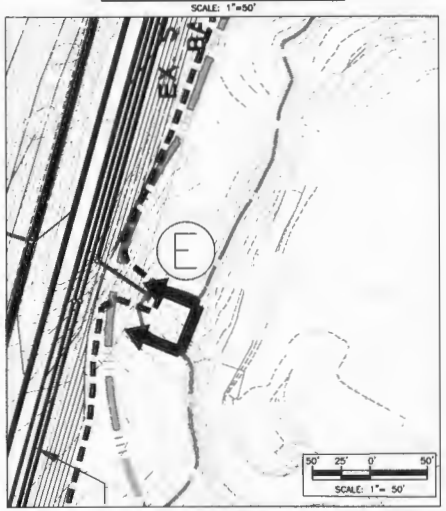
DESIGNED BY:	PLR
DRAFTED BY:	CAD
CHECKED BY:	NB
DATE:	MARCH 22, 2013
SCALE:	HOR. AS SHOWN VERT.
SHEET	32 OF 45
CO. NO.	SEA 80-L/V-061-2
CAD NAME:	SE5117SWM2
LAYOUT:	Pond3
FILE NO.	05117.08-00

XREFS:

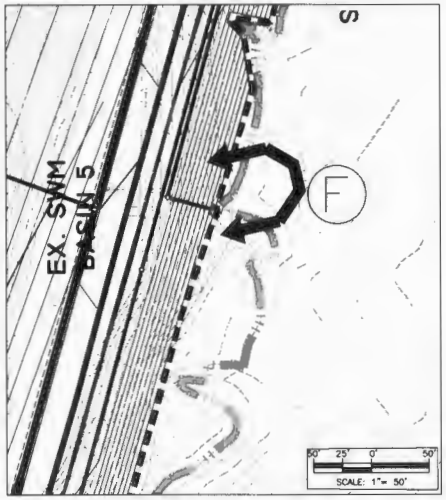
OUTFALL 4,5,&6 OVERALL CROSS SECTION PLAN VIEW
SCALE: 1"=50'



OUTFALL 4 CROSS SECTION PLAN VIEW
SCALE: 1"=50'

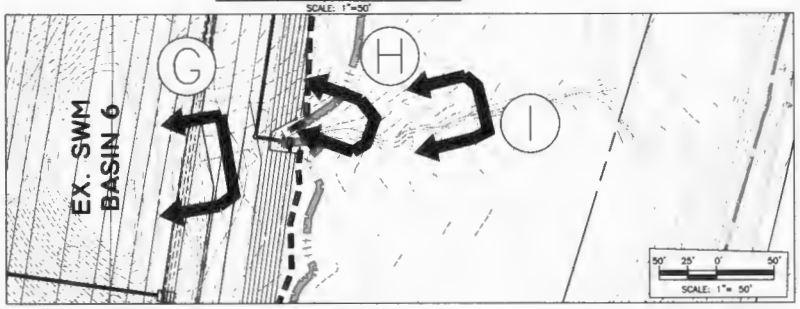


OUTFALL 5 CROSS SECTION PLAN VIEW
SCALE: 1"=50'



NOTE:
ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.

OUTFALL 6 CROSS-SECTION PLAN VIEW
SCALE: 1"=50'



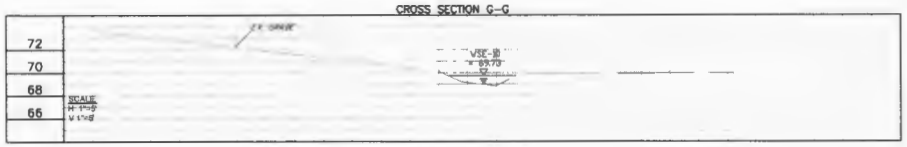
OUTFALL 4

OUTFALL 6

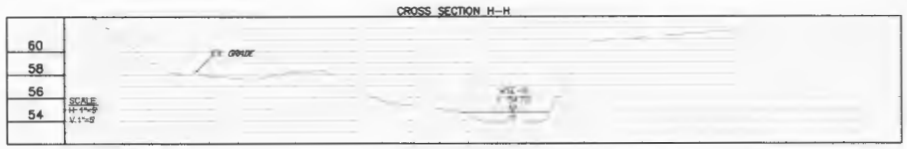
CROSS SECTION E-E

OUTFALL 5

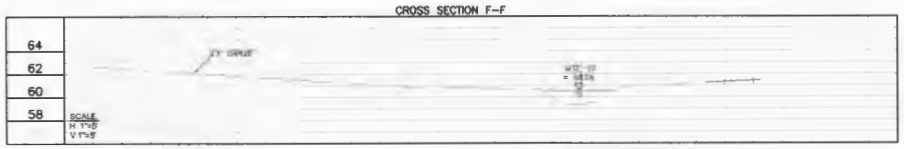
CROSS SECTION G-G



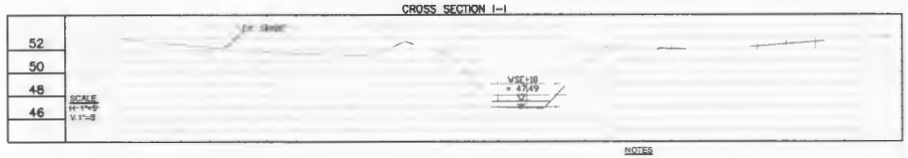
CROSS SECTION H-H



CROSS SECTION F-F



CROSS SECTION I-I



NOTES

1. SEE SHEET 38 FOR CROSS SECTION LOCATIONS AND OUTFALL NARRATIVE.

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COMMONWEALTH OF VIRGINIA
DONNA S. BOYK
Lic. No. 862
2-20-2014
LANDSCAPE ARCHITECT

SPECIAL EXCEPTION AMENDMENT
OUTFALL CROSS SECTIONS POND 3

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISION	REVISED 3-22-2014
REVISED 5-14-2013	REVISED 2-20-2014
REVISED 6-11-2013	
REVISED 10-7-2013	
REVISED 11-1-2013	
REVISED 12-18-2013	

APPLICANT
FLOWS ASSOCIATES, INC.
11200 ROSSWITT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR AS SHOWN
VERT
SHEET 33 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117SWM.3
LAYOUT: OUT4 5 6
FILE NO. 05117.08-00

PRE-DEVELOPED EX. CN

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Existing Drainage Area	55	1.290			55.00
COMPOSITE AREA & WEIGHTED CN --->		21.290			55.00 (55)

PRE-DEVELOPED EX. T.C.

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 200.00 ft
2yr, 24hr P 3.2000 in
Slope .100000 ft/ft

Avg.Velocity .1 ft/sec

Segment #1 Time: 19.64 min

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 800.00 ft
Slope .100000 ft/ft
Unpaved

Avg.Velocity 5.10 ft/sec

Segment #2 Time: 2.61 min

Total Tc: 22.25 min

POST-DEVELOPED PROP. CN & T.C.

Lorton LF 2.0 — Lorton Landfill 2.0
Prepared by Geosyntec Consultants, Inc. — Type II 24-hr 2 year Rainfall=3.20"
HydroCAD® 10.00 s/n 07957 © 2012 HydroCAD Software Solutions LLC — Printed 9/20/2012 — Page 9

Summary for Subcatchment 47S: Basin 8

Runoff = 43.37 cfs @ 12.11 hrs, Volume= 3.164 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 year Rainfall=3.20"

Area (ac)	CN	Description
* 31.330	77	60-70% Grass cover, Fair, HSG C
31.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0200	0.17		Sheet Flow, Sheet Flow 100 feet Grass: Short n= 0.150 P2= 3.20"
5.9	350	0.0200	0.99		Shallow Concentrated Flow, Shallow Flow Short Grass Pasture Kv= 7.0 fps
0.3	300	0.0500	14.35	143.48	Channel Flow, Tack On Bench 300 feet Area= 10.0 sf Perim= 10.8' r= 0.93' n= 0.022 Earth, clean & straight
0.3	707	0.3300	44.81	140.79	Pipe Channel, 24" HDPE 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
1.7	650	0.0100	6.54	78.46	Channel Flow, Top of Berm Channel Area= 12.0 sf Perim= 12.6' r= 0.95' n= 0.022 Earth, clean & straight
0.1	70	0.0100	11.43	143.64	Pipe Channel, RCP Round 48" 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013
18.1	2,177	Total			

2 YR. POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0 — Lorton Landfill 2.0
Prepared by Geosyntec Consultants, Inc. — Type II 24-hr 2 year Rainfall=3.20"
HydroCAD® 10.00 s/n 07957 © 2012 HydroCAD Software Solutions LLC — Printed 9/20/2012 — Page 12

Summary for Pond 48P: Basin 8

Inflow Area = 31.330 ac, 0.00% Impervious, Inflow Depth = 1.21" for 2 year event
Inflow = 43.37 cfs @ 12.11 hrs, Volume= 3.164 af
Outflow = 1.72 cfs @ 15.92 hrs, Volume= 3.127 af, Atten= 96%, Lag= 228.0 min
Primary = 1.72 cfs @ 15.92 hrs, Volume= 3.127 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 76.13' @ 15.92 hrs Surf.Area= 20,887 sf Storage= 81,821 cf
Flood Elev= 84.00' Surf.Area= 35,780 sf Storage= 307,870 cf

Plug-Flow detention time= 605.2 min calculated for 3.127 af (99% of inflow)
Center-of-Mass det. time= 598.4 min (1,458.6 - 860.2)

Volume	Invert	Avail.Storage	Storage Description
#1	71.20'	383,842 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
71.20	12,372	0	0	12,372
72.00	13,716	10,431	10,431	13,785
74.00	17,136	30,788	41,218	17,325
76.00	20,744	37,822	79,040	21,098
78.00	24,542	45,233	124,273	25,082
80.00	28,529	53,021	177,294	29,276
82.00	33,171	61,642	238,936	34,126
84.00	35,780	68,935	307,870	37,128
86.00	40,032	75,772	383,842	41,658

Device	Routing	Invert	Outlet Devices
#1	Primary	70.00'	36.0" Round RCP_Round 36" L= 130.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 70.00' / 62.00' S= 0.0615 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf
#2	Device 1	71.20'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	76.15'	12.0" Vert. Orifice/Grate X 2.00 C= 0.600
#4	Device 1	79.80'	72.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.72 cfs @ 15.92 hrs HW=76.13' (Free Discharge)
└1=RCP_Round 36" (Passes 1.72 cfs of 73.26 cfs potential flow)
 ├2=Orifice/Grate (Orifice Controls 1.72 cfs @ 10.44 fps)
 ├3=Orifice/Grate (Controls 0.00 cfs)
 └4=Orifice/Grate (Controls 0.00 cfs)

10 YR. POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0 — Lorton Landfill 2.0
Prepared by Geosyntec Consultants, Inc. — Type II 24-hr 10 year Rainfall=5.20"
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Summary for Pond 48P: Basin 8

Inflow Area = 31.330 ac, 0.00% Impervious, Inflow Depth = 2.79" for 10 year event
Inflow = 102.35 cfs @ 12.11 hrs, Volume= 7.287 af
Outflow = 14.28 cfs @ 12.71 hrs, Volume= 7.232 af, Atten= 86%, Lag= 36.4 min
Primary = 14.28 cfs @ 12.71 hrs, Volume= 7.232 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 79.19' @ 12.71 hrs Surf.Area= 26,887 sf Storage= 154,975 cf
Flood Elev= 84.00' Surf.Area= 35,780 sf Storage= 307,870 cf

Plug-Flow detention time= 385.1 min calculated for 7.224 af (99% of inflow)
Center-of-Mass det. time= 361.5 min (1,197.5 - 836.0)

Volume	Invert	Avail.Storage	Storage Description
#1	71.20'	383,842 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
71.20	12,372	0	0	12,372
72.00	13,716	10,431	10,431	13,785
74.00	17,136	30,786	41,218	17,325
76.00	20,744	37,822	79,040	21,098
78.00	24,542	45,233	124,273	25,082
80.00	28,529	53,021	177,294	29,276
82.00	33,171	61,642	238,936	34,126
84.00	35,780	68,935	307,870	37,128
86.00	40,032	75,772	383,842	41,656

Device	Routing	Invert	Outlet Devices
#1	Primary	70.00'	36.0" Round RCP_Round 36" L= 130.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 70.00' / 62.00' S= 0.0615 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf
#2	Device 1	71.20'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	76.15'	12.0" Vert. Orifice/Grate X 2.00 C= 0.600
#4	Device 1	79.80'	72.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=14.28 cfs @ 12.71 hrs HW=79.19' (Free Discharge)
└1=RCP_Round 36" (Passes 14.28 cfs of 84.40 cfs potential flow)
 ├2=Orifice/Grate (Orifice Controls 2.21 cfs @ 13.42 fps)
 ├3=Orifice/Grate (Orifice Controls 12.06 cfs @ 7.68 fps)
 └4=Orifice/Grate (Controls 0.00 cfs)

THIS SHEET IS FOR STORMWATER MANAGEMENT INFORMATION ONLY

100 YR. CLOGGED POST-DEVELOPMENT DESIGN SUMMARY

Lorton LF 2.0 — Lorton Landfill 2.0
Prepared by Geosyntec Consultants, Inc. — Type II 24-hr 100 year Rainfall=7.30"
HydroCAD® 10.00 s/n 07957 © 2012 HydroCAD Software Solutions LLC — Printed 9/20/2012 — Page 5

Summary for Pond 50P: Basin 8 100yr

Inflow Area = 31.330 ac, 0.00% Impervious, Inflow Depth = 4.64" for 100 year event
Inflow = 169.14 cfs @ 12.10 hrs, Volume= 12.105 af
Outflow = 111.08 cfs @ 12.24 hrs, Volume= 12.105 af, Atten= 34%, Lag= 8.4 min
Primary = 111.08 cfs @ 12.24 hrs, Volume= 12.106 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 79.80' Surf.Area= 28,117 sf Storage= 171,629 cf
Peak Elev= 82.15' @ 12.24 hrs Surf.Area= 32,367 sf Storage= 244,010 cf (72,381 cf above start)
Flood Elev= 84.00' Surf.Area= 35,780 sf Storage= 307,870 cf (136,241 cf above start)

Plug-Flow detention time= 179.9 min calculated for 8.186 af (67% of inflow)
Center-of-Mass det. time= 12.7 min (834.3 - 821.5)

Volume	Invert	Avail.Storage	Storage Description
#1	71.20'	383,842 cf	Custom Stage Data (Pyramidal) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
71.20	12,372	0	0	12,372
72.00	13,716	10,431	10,431	13,765
74.00	17,135	30,786	41,218	17,328
76.00	20,744	37,822	79,040	21,088
78.00	24,542	45,233	124,273	25,082
80.00	28,529	53,021	177,294	29,276
82.00	33,171	61,642	238,936	34,126
84.00	35,780	68,935	307,870	37,128
86.00	40,032	75,772	383,842	41,656

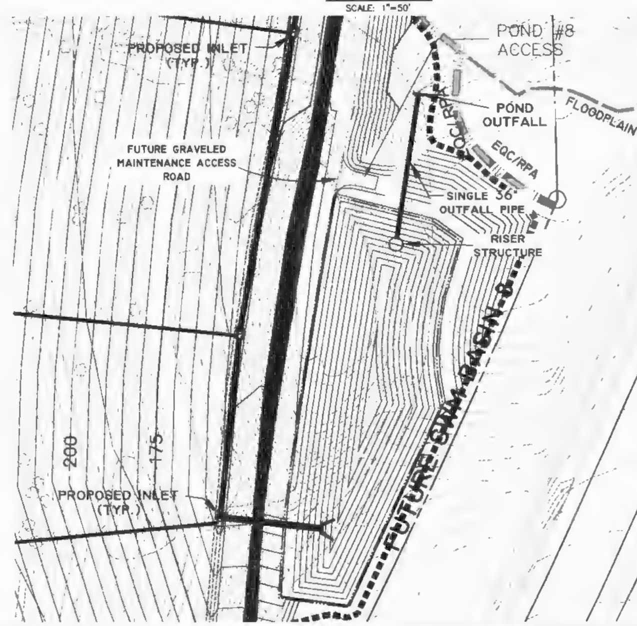
Device	Routing	Invert	Outlet Devices
#1	Primary	70.00'	36.0" Round RCP_Round 36" L= 130.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 70.00' / 56.00' S= 0.1077 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf
#2	Device 1	79.80'	72.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=111.04 cfs @ 12.24 hrs HW=82.14' (Free Discharge)
└1=RCP_Round 36" (Inlet Controls 111.04 cfs @ 15.71 fps)
 └2=Orifice/Grate (Passes 111.04 cfs of 208.44 cfs potential flow)

NOTE:

ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.

PROPOSED POND 8
SCALE: 1"=50'



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SPECIAL EXCEPTION AMENDMENT
STORMWATER MANAGEMENT POND 8
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

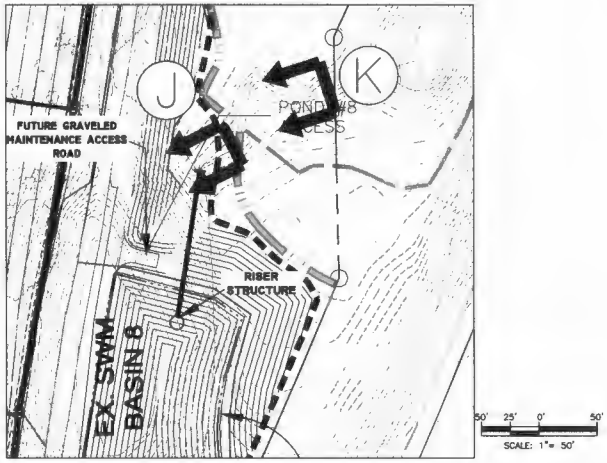
REVISIONS
REVISED 5-14-2013
REVISED 9-11-2013
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-10-2013
REVISED 2-20-2014

APPLICANT:
FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. AS SHOWN VERT.
SHEET 34 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117SWM2
LAYOUT: Pond8
FILE NO. 05117.08-00

OUTFALL 8 CROSS SECTION PLAN VIEW

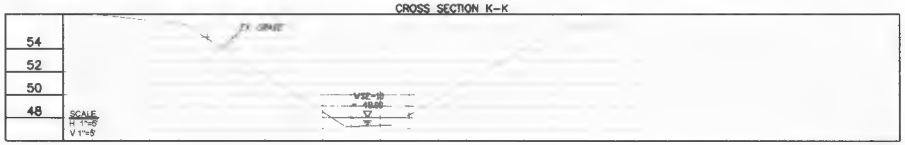
SCALE: 1"=50'



OUTFALL 8

CROSS SECTION J-J

CROSS SECTION K-K



NOTES

1. SEE SHEET 38 FOR CROSS SECTION LOCATIONS AND OUTFALL NARRATIVE.

BC Consultants

Planners · Engineers · Surveyors · Landscape Architects

12800 Fair Lakes Circle, Suite 100, Fairfax, VA 22033

(703)449-8100 (703)449-8108 (Fax)

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SPECIAL EXCEPTION AMENDMENT

OUTFALL CROSS SECTIONS POND 8

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 5-14-2013
REVISED 8-11-2013
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-10-2013
REVISED 1-23-2014
REVISED 2-20-2014

PREPARED FOR:
FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 200
MANASSAS, VIRGINIA 20109

DESIGNED BY PLR
DRAFTED BY CAD
CHECKED BY NB
DATE MARCH 22, 2013
SCALE: HOR AS SHOWN
VERT

SHEET 35 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117SWM3
LAYOUT OUT8
FILE NO 05117 08-00

V:\project_2005\05117\Plan\Cadfiles\SEA OVERLOOK BERM\SE5117swm2.dwg, 2/21/2014 1:31:24 PM

PRE-DEVELOPED EX. CN

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Existing Drainage Area	95	50.860			95.00
COMPOSITE AREA & WEIGHTED CN --->		50.860			95.00 (95)

POST-DEVELOPED PROP. CN

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Prop Drainage Area	77	46.790			77.00
COMPOSITE AREA & WEIGHTED CN --->		46.790			77.00 (77)

PRE-DEVELOPED EX. T.C.

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 100.00 ft
2yr, 24hr P 3.2000 in
Slope .100000 ft/ft

Avg.Velocity .1 ft/sec

Segment #1 Time: 19.64 min

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 600.00 ft
Slope .100000 ft/ft
Unpaved

Avg.Velocity 5.10 ft/sec

Segment #2 Time: 1.96 min

Total Tc: 21.60 min

POST-DEVELOPED PROP. TC

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Mannings n .1500
Hydraulic Length 100.00 ft
2yr, 24hr P 3.2000 in
Slope .333333 ft/ft

Avg.Velocity .32 ft/sec

Segment #1 Time: 5.18 min

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 810.00 ft
Slope .010000 ft/ft
Unpaved

Avg.Velocity 1.61 ft/sec

Segment #2 Time: 8.37 min

Segment #3: Tc: TR-55 Channel

Flow Area 16.0000 sq.ft
Wetted Perimeter 14.65 ft
Hydraulic Radius 1.09 ft
Slope .333333 ft/ft
Mannings n .0690
Hydraulic Length 280.00 ft

Avg.Velocity 13.22 ft/sec

Segment #3 Time: .35 min

Segment #4: Tc: TR-55 Channel

Flow Area 24.0000 sq.ft
Wetted Perimeter: 18.65 ft
Hydraulic Radius 1.29 ft
Slope .012000 ft/ft
Mannings n .0350
Hydraulic Length 1610.00 ft

Avg.Velocity 5.52 ft/sec

Segment #4 Time: 4.86 min

Total Tc: 16.76 min

POND VOLUME

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
174.00	-----	0	0	0	0
176.00	-----	1630	[illegible]	3753	[illegible]
178.00	-----	2580	[illegible]	29046	[illegible]
180.00	-----	3570	[illegible]	61183	[illegible]
182.00	-----	4020	[illegible]	75733	[illegible]
184.00	-----	4550	[illegible]	84723	[illegible]
186.00	-----	4880	[illegible]	93495	[illegible]
188.00	-----	5240	[illegible]	102486	[illegible]
190.00	-----	5650	[illegible]	112023	[illegible]
190.80	-----	5850	[illegible]	46816	[illegible]

RISER SCHEDULE

REQUESTED POND WS ELEVATIONS:

Min. Elev. 174.00 ft
Increment .50 ft
Max. Elev. 190.80 ft

OUTLET CONNECTIVITY

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	El. ft	E2. ft
Orifice-Area	PS	--->	CV	182.000	190.800
Inlet Box	RS	--->	CV	183.900	190.800
Orifice-Circular	LF	--->	CV	174.000	190.800
Culvert-Circular	CV	--->	TW	173.750	190.800

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID = PS
Structure Type = Orifice-Area

# of Openings 1
Invert Elev. 182.00 ft
Area 2.2500 sq.ft
Top of Orifice = 182.50 ft
Datum Elev. 182.00 ft
Orifice Coeff. = .600

Structure ID = RS
Structure Type = Inlet Box

# of Openings 1
Invert Elev. 183.90 ft
Orifice Area = 36.0000 sq.ft
Orifice Coeff. .600
Weir Length 24.00 ft
Weir Coeff. 2.060
K, Reverse 1.000
Mannings n .0000
Kev,Charged Riser .000
Weir Submergence

OUTLET STRUCTURE INPUT DATA

Structure ID = LF
Structure Type = Orifice-Circular

# of Openings 1
Invert Elev. 174.00 ft
Diameter 3.50 in
Orifice Coeff. = .600

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels 1
Barrel Diameter 48.00 in
Upstream Invert 173.75 ft
Downstream Invert = 173.00 ft
Horiz. Length 115.00 ft
Barrel Length = 115.01 ft
Barrel Slope .01522 ft/ft

OUTLET CONTROL DATA...
Mannings n .0130
Ke .3000 (forward entrance loss
Kb = .004925 (per ft of full flow)
Kr 1.0000 (reverse entrance loss)
HW Convergence = .001 +/- ft

INLET CONTROL DATA...
Equation form 1
Inlet Control K .0098
Inlet Control M 2.0000
Inlet Control C .03980
Inlet Control Y .6700
T1 ratio (HW/D) 1.153
T2 ratio (HW/D) 1.299
Slope Factor = -.500

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...
At T1 Elev = 178.36 ft ---> Flow = 87.96 cfs
At T2 Elev = 178.95 ft ---> Flow = 100.53 cfs

OUTLET STRUCTURE INPUT DATA

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 40
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .00 cfs
Max. Q tolerance = .00 cfs

1 YR. - 2 YR. - 10 YR. POST-DEVELOPMENT DESIGN SUMMARY

1 YR. ROUTING SUMMARY

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 174.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment 2.00 min

INFLOW/OUTFLOW [illegible] SUMMARY

Peak Inflow = 45.13 cfs at 724.00 min
Peak Outflow = .81 cfs at 1358.00 min

Peak Elevation = 180.50 ft
Peak Storage = 111892 cu.ft

2 YR. ROUTING SUMMARY

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 174.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 2.00 min

INFLOW/OUTFLOW [illegible] SUMMARY

Peak Inflow = 64.52 cfs at 724.00 min
Peak Outflow .89 cfs at 1374.00 min

Peak Elevation = 181.90 ft
Peak Storage = 165849 cu.ft

10 YR. ROUTING SUMMARY

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 174.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment 2.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow = 151.50 cfs at 724.00 min
Peak Outflow 15.78 cfs at 770.00 min

Peak Elevation = 183.88 ft
Peak Storage = 249323 cu.ft

100 YR. CLOGGED POST-DEVELOPMENT DESIGN SUMMARY

CLOGGED 100 YR. ROUTING SUMMARY

No Infiltration

INITIAL CONDITIONS

Starting WS Elev 183.90 ft
Starting Volume 249994 cu.ft
Starting Outflow = .00 cfs
Starting Infltr. .00 cfs
Starting Total Qout .00 cfs
Time Increment 2.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow 268.45 cfs at 724.00 min
Peak Outflow 198.96 cfs at 730.00 min

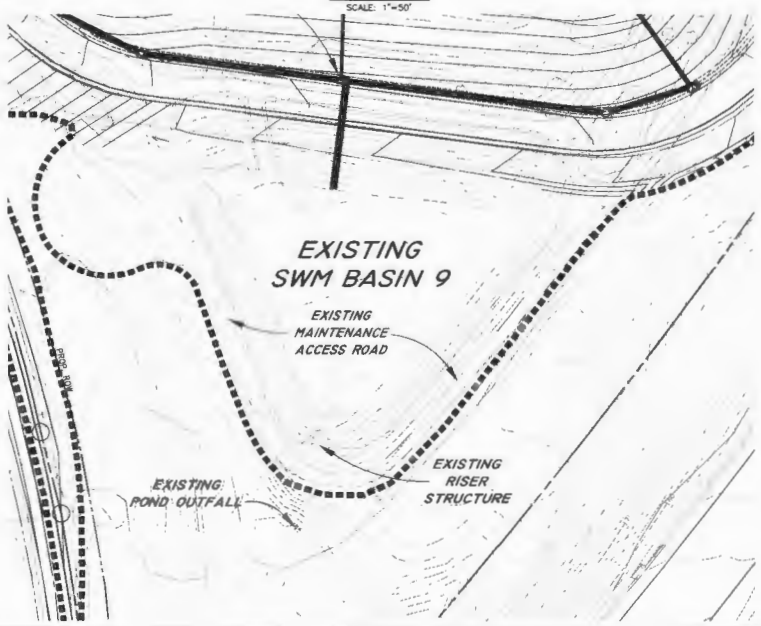
Peak Elevation 186.38 ft
Peak Storage = 366590 cu.ft

NOTE:

ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.

THIS SHEET IS FOR STORMWATER MANAGEMENT INFORMATION ONLY

EXISTING POND 9
SCALE: 1"=50'



BC Consultants
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COMMONWEALTH OF VIRGINIA
DENIS A. BOZIK
No. 2-20-2014
LICENSED PROFESSIONAL ENGINEER

SPECIAL EXCEPTION AMENDMENT
STORMWATER MANAGEMENT POND 9
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

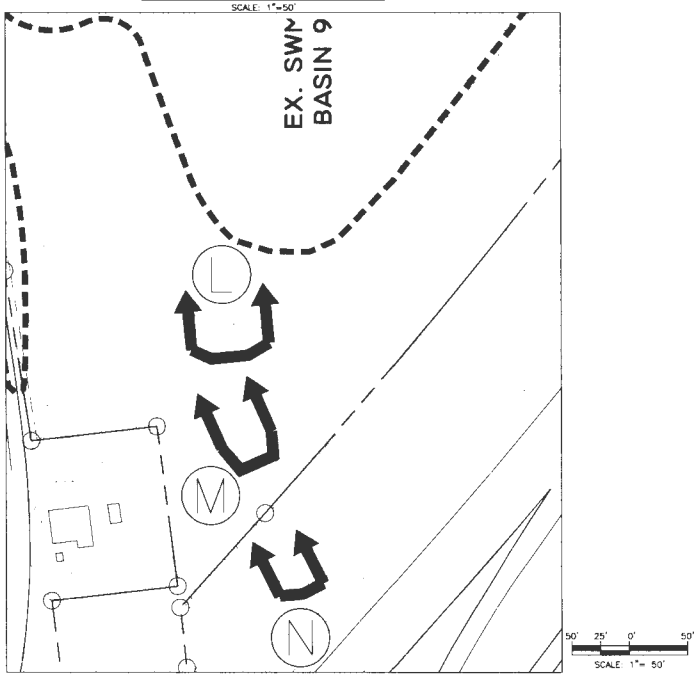
BC REVISIONS	
REVISED 5-14-2013	REVISED 2-20-2014
REVISED 6-11-2013	REVISED 2-25-2014
REVISED 9-10-2013	
REVISED 11-1-2013	
REVISED 12-10-2013	

APPLICANT:
LORTON ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. AS SHOWN VERT.

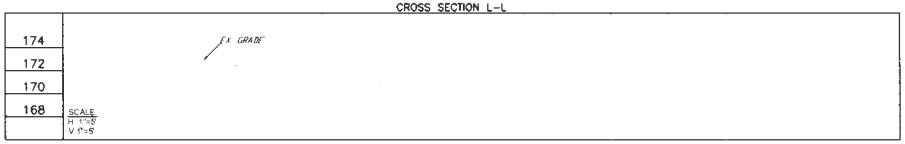
SHEET 36 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117SWM2
LAYOUT: Pond9
FILE NO. 05117.08-00

OUTFALL 9 CROSS SECTION PLAN VIEW
SCALE: 1"=50'

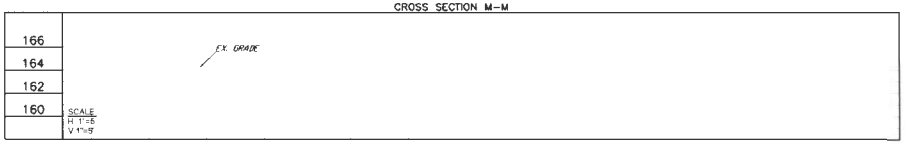


OUTFALL 9

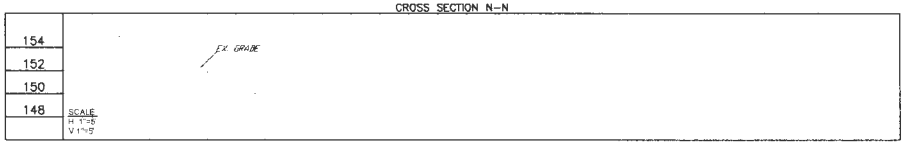
CROSS SECTION L-L



CROSS SECTION M-M



CROSS SECTION N-N



NOTES

1. SEE SHEET 38 FOR CROSS SECTION LOCATIONS AND OUTFALL NARRATIVE.

NOTE:

ALL STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES CALCULATIONS ARE APPLICABLE THROUGH PHASE 6.

BC Consultants
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COMMONWEALTH OF VIRGINIA
DENIS D. BRICK
Lic. No. 1892
2-20-2014
LANDSCAPE ARCHITECT

SPECIAL EXCEPTION AMENDMENT
OUTFALL CROSS SECTIONS POND 9

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEA REVISIONS	
REVISED 1-14-2013	REVISED 1-22-2014
REVISED 8-11-2013	REVISED 2-20-2014
REVISED 10-7-2013	
REVISED 11-1-2013	
REVISED 12-10-2013	

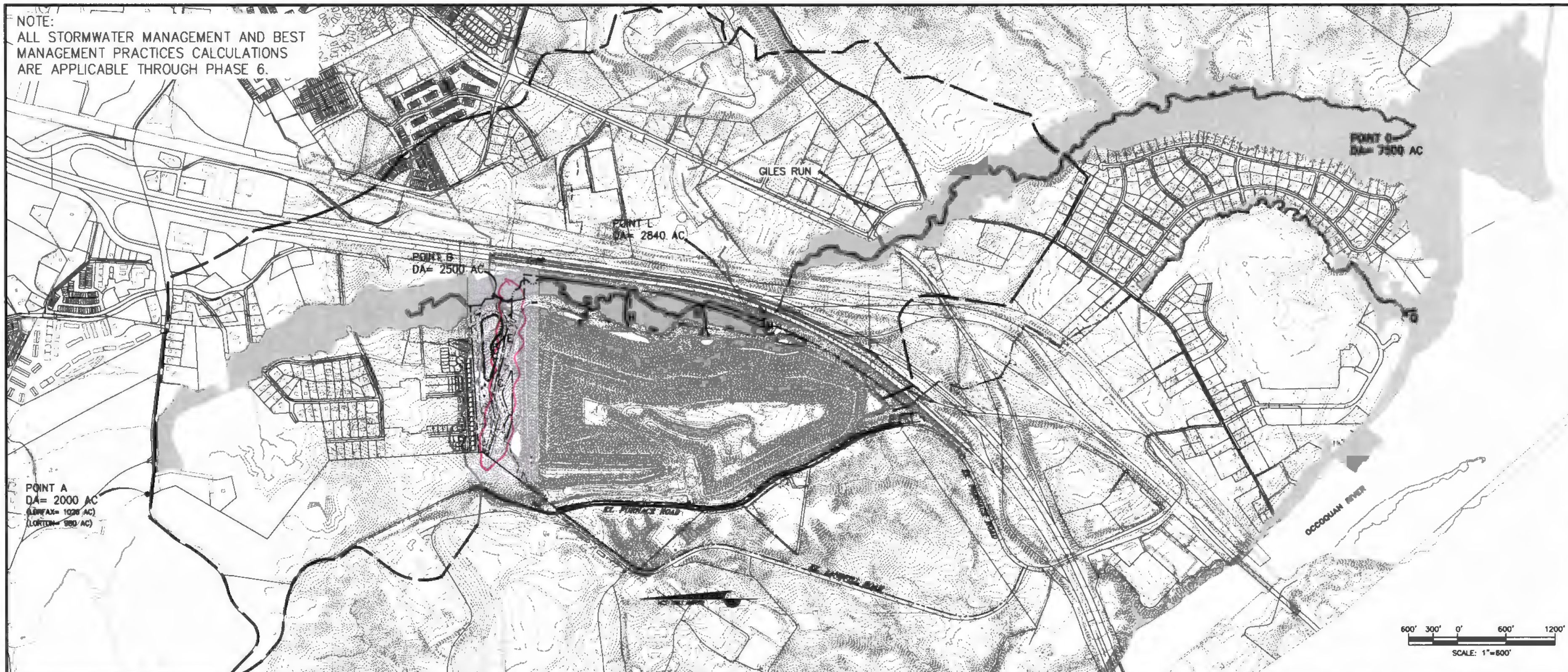
PROPERTY OWNER:
FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 200
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. AS SHOWN
VERT.

SHEET 37 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE51175WM3
LAYOUT: OUT 9
FILE NO. 05117.08-00

V3.5



OUTFALL AND EXTENT OF REVIEW NARRATIVE

GENERAL

THIS 250 15-ACRE SITE IS IN THE MILL BRANCH WATERSHED NORTHERNMOST PORTIONS AND APPROXIMATELY HALF OF THE WESTERN PORTION OF THE SITE DRAIN TO AN UNNAMED TRIBUTARY OF GILES RUN. THE EASTERN PORTION OF THE SITE DRAINS DIRECTLY INTO A BOARD-ADOPTED FLOODPLAIN SURROUNDING GILES RUN ONCE THE RUNOFF ENTERS GILES RUN, IT PASSES UNDER I-95 NEAR EXISTING SWM BASIN 8 AND IS CARRIED INTO MASSEY CREEK AND THE OCCOQUAN RIVER THE SOUTHERN AND REMAINING WESTERN PORTIONS OF THE SITE DRAIN INTO AN UNNAMED TRIBUTARY OF THE OCCOQUAN RIVER AT POINT P EXISTING SWM BASIN 9 IS THE ONLY POINT OF CONCENTRATED DISCHARGE THAT DRAINS INTO THIS TRIBUTARY FROM THE SITE.

PRESENTLY, THERE ARE SEVEN EXISTING STORMWATER MANAGEMENT DRY PONDS ONSITE WITH PRE-DEVELOPMENT CONDITIONS APPROXIMATELY 190 ACRES OF RUNOFF IS COLLECTED FROM THE SITE AND IS CONVEYED TO THE SEVEN PONDS IN A SERIES OF DOWN DRAINS AND RIP-RAP CHANNELS EXISTING PONDS 4, 6, AND 8 HAVE BEEN PREVIOUSLY DESIGNED TO HAVE PROPORTIONAL IMPROVEMENTS FOR THE 2- AND 10-YEAR STORMS EXISTING PONDS 2, 3, 5, AND 9 HAVE BEEN PREVIOUSLY DESIGNED TO DETAIN THE 1-YEAR STORM AND HAVE PROPORTIONAL IMPROVEMENTS FOR THE 2- AND 10-YEAR STORMS

THE PROPOSED LANDFILL EXPANSION WILL CONSOLIDATE THE SEVEN EXISTING PONDS TO FOUR BASINS PROPOSED BASIN 2 WILL REPLACE EXISTING POND #2, PROPOSED BASIN 3 WILL REPLACE EXISTING POND #3 AND PROPOSED BASIN 8 WILL REPLACE EXISTING POND #8. EXISTING POND #9 WILL NOT BE DISTURBED AND WILL FUNCTION AS ORIGINALLY DESIGNED SOME INTERNAL DRAINAGE DIVIDES HAVE BEEN ALTERED FROM THE EXISTING CONDITIONS SO THAT RUNOFF IS DIVERTED INTO LARGER PONDS TO MINIMIZE THE RECONSTRUCTION OF SMALLER PONDS SHOULD NATURAL DIVIDES BE MAINTAINED ENVIRONMENTAL IMPACTS ARE MINIMIZED WITH THIS DIVERSION PROPOSED BASIN 2 WILL COLLECT RUNOFF FROM MOST OF THE DRAINAGE AREA SERVING EXISTING POND #2 PROPOSED BASIN 3 WILL COLLECT THE REMAINING RUNOFF FROM THE DRAINAGE AREA SERVING EXISTING POND #2, THE RUNOFF FROM DRAINAGE AREA SERVING EXISTING POND #3 AND ALSO RUNOFF FROM THE DRAINAGE AREAS COLLECTED BY THE THREE EXISTING PONDS TO BE REMOVED ON THE WESTERN PORTION OF THE SITE (EXISTING PONDS #4, #5 AND #6) THE DRAINAGE AREA SERVING EXISTING POND #9 WILL NOT CHANGE THE OVERALL DRAINAGE DIVIDE FOR THE SITE HAS BEEN MAINTAINED FROM EXISTING CONDITIONS, THUS MEETING REQUIREMENTS OUTLINED IN PFM SECTION 6-0202.2A

AT POINT A, THE DRAINAGE AREA OF GILES RUN IS APPROXIMATELY 2000 ACRES AS REPORTED IN *THE OCCOQUAN WATERSHEDS, PG II-82* THIS AREA IS COMPOSED OF 1020 ACRES IN THE LORFAX SEGMENT OF THE MILL BRANCH WATERSHED AND 980 ACRES IN THE LORTON SEGMENT THE DRAINAGE AREA OF GILES RUN PRIOR TO ENTERING THE SITE (POINT B) IS APPROXIMATELY 2500 ACRES

GENERAL (CONTINUED)

WE REVIEWED THE APPROVED OVERLOOK RIDGE SITE PLAN (COUNTY NUMBER 1883-SP-002-3) FOR THE DESIGN OF EACH OF THE SEVEN EXISTING PONDS AND ANALYSIS FOR EACH RESPECTIVE OUTFALL. THE EXISTING OUTFALLS TO EACH OF THE EXISTING SEVEN PONDS WILL REMAIN IN POST-DEVELOPMENT CONDITIONS AND ARE DESCRIBED IN THE FOLLOWING PARAGRAPHS

OUTFALL C (BASIN 2)

AN ANALYSIS OF THE EXISTING DRAINAGE CONDITIONS AT THE BEGINNING OF THE LANDFILL OPERATIONS REPORTS A DRAINAGE AREA TO POINT C OF 38 10 ACRES THE GOOD FORESTED CONDITION 2- AND 10-YEAR FLOWS FROM THE SITE TO THIS CATCHMENT ARE 3 53 CFS AND 31 58 CFS, RESPECTIVELY EXISTING POND 2 WAS PREVIOUSLY DESIGNED TO DETAIN THE 1-YEAR STORM AND PROVIDE PROPORTIONAL IMPROVEMENTS TO THE 2- AND 10-YEAR STORMS, AS SHOWN ON THE APPROVED SITE PLAN NOTED EXISTING POND 2 WAS DESIGNED TO DETAIN 52 80 ACRES AND RELEASE 2- AND 10-YEAR FLOWS AT 0 53 CFS AND 8 57 CFS, RESPECTIVELY

PROPOSED BASIN 2 IS DESIGNED TO DETAIN THE 1-YEAR STORM AND PROVIDE PROPORTIONAL IMPROVEMENTS TO THE 2- AND 10-YEAR STORMS THAT MEET OR EXCEED PROPORTIONAL IMPROVEMENTS FROM THE PREVIOUSLY DESIGNED EXISTING POND 2. THE PROPOSED DRAINAGE AREA FOR BASIN 2 IS 34 00 ACRES THIS BASIN WILL OUTFALL AT POINT C AND EXTENT OF REVIEW WILL BEGIN HERE. THE DISCHARGE FROM THE POND ENTERS AN EXISTING CHANNEL WHICH CONVEYS THE WATER TO GILES RUN. THE CROSS-SECTIONS ILLUSTRATED ON SHEET 31 SHOW THIS EXISTING CHANNEL. THE DRAINAGE AREA AT POINT B IS APPROXIMATELY 2500 ACRES. SINCE THIS DRAINAGE AREA IS GREATER THAN 360 ACRES, EXTENT OF REVIEW CAN END 150' DOWNSTREAM OF THE CHANNEL'S INTERSECTION WITH GILES RUN (PFM SECTION 6-0203.2C) THE 1-YEAR STORM IS DETAINED AND PROPORTIONAL IMPROVEMENTS ON THE 2- AND 10-YEAR STORMS ARE PROVIDED ADDITIONALLY, AN INCISED CHANNEL EXISTS FROM THE POINT OF OUTFALL TO THE END OF THE EXTENT OF REVIEW THUS, IT IS THE OPINION OF THE ENGINEER THAT THE OUTFALL IS ADEQUATE PER PFM SECTION 6-0203 4C. FURTHERMORE, THE OUTFALL EXTENDED DOWNSTREAM OF THE SITE REACHES A POINT WHICH THE DRAINAGE AREA IS GREATER THAN ONE SQUARE MILE, THEREFORE A DESCRIPTION OF THE EXISTING CONDITIONS ENDS AT POINT B, PER Z O 9-011 2J(2)(C)

OUTFALL D (BASIN 3)

AN ANALYSIS OF THE EXISTING DRAINAGE CONDITIONS AT THE BEGINNING OF THE LANDFILL OPERATIONS REPORTS A DRAINAGE AREA TO POINT D OF 15 62 ACRES. THE GOOD FORESTED CONDITION 2- AND 10-YEAR FLOWS FROM THE SITE TO THIS CATCHMENT ARE 1.58 CFS AND 14 30 CFS, RESPECTIVELY

OUTFALL D (BASIN 3) - CONTINUED

EXISTING POND 3 WAS PREVIOUSLY DESIGNED TO DETAIN THE 1-YEAR STORM AND PROVIDE PROPORTIONAL IMPROVEMENTS TO THE 2- AND 10-YEAR STORMS, AS SHOWN ON THE APPROVED SITE PLAN NOTED EXISTING POND 3 WAS DESIGNED TO DETAIN 10 53 ACRES AND RELEASE 2- AND 10-YEAR FLOWS AT 0.53 CFS AND 8.57 CFS, RESPECTIVELY

PROPOSED BASIN 3 IS DESIGNED TO DETAIN THE 1-YEAR STORM AND PROVIDE PROPORTIONAL IMPROVEMENTS TO THE 2- AND 10-YEAR STORMS THAT MEET OR EXCEED PROPORTIONAL IMPROVEMENTS FROM THE PREVIOUSLY DESIGNED EXISTING POND 3 THE PROPOSED DRAINAGE AREA FOR BASIN 3 IS 79 50 ACRES AT POINT D THE PROPOSED POND OUTFALLS INTO AN EXISTING UNNAMED TRIBUTARY TO GILES RUN AND EXTENT OF REVIEW WILL BEGIN. THE DISCHARGE FROM THE POND ENTERS AN EXISTING CHANNEL WHICH CONVEYS THE WATER TO GILES RUN THE CROSS-SECTIONS ILLUSTRATED ON SHEET 31 SHOW THIS EXISTING CHANNEL THE DRAINAGE AREA AT POINT B IS APPROXIMATELY 2500 ACRES SINCE THIS DRAINAGE AREA IS GREATER THAN 360 ACRES, EXTENT OF REVIEW CAN END 150' DOWNSTREAM OF THE CHANNEL'S INTERSECTION WITH GILES RUN (PFM SECTION 6-0203 2C) THE 1-YEAR STORM IS DETAINED AND PROPORTIONAL IMPROVEMENTS ON THE 2- AND 10-YEAR STORMS ARE PROVIDED ADDITIONALLY, AN INCISED CHANNEL EXISTS FROM THE POINT OF OUTFALL TO THE END OF THE EXTENT OF REVIEW THUS, IT IS THE OPINION OF THE ENGINEER THAT THE OUTFALL IS ADEQUATE PER PFM SECTION 6-0203.4C FURTHERMORE, THE OUTFALL EXTENDED DOWNSTREAM OF THE SITE REACHES A POINT WHICH THE DRAINAGE AREA IS GREATER THAN ONE SQUARE MILE, THEREFORE A DESCRIPTION OF THE EXISTING CONDITIONS ENDS AT POINT B, PER Z O 9-011 2J(2)(C)

OUTFALL F (BASIN 3)

AN ANALYSIS OF THE EXISTING DRAINAGE CONDITIONS AT THE BEGINNING OF THE LANDFILL OPERATIONS REPORTS A DRAINAGE AREA TO POINT F OF 18.78 ACRES THE PRE-DEVELOPMENT 2- AND 10-YEAR FLOWS FROM THE SITE TO THIS CATCHMENT ARE 1 71 CFS AND 15.32 CFS RESPECTIVELY EXISTING POND 4 WAS PREVIOUSLY DESIGNED TO DETAIN 9.25 ACRES AND RELEASE 2- AND 10-YEAR FLOWS AT 1.64 CFS AND 11 17 CFS, RESPECTIVELY

EXISTING POND 4 WILL BE REMOVED INTERNAL DRAINAGE DIVIDES HAVE BEEN ALTERED FROM THE EXISTING CONDITIONS SO THAT RUNOFF FROM THIS CATCHMENT IS DIVERTED INTO PROPOSED BASIN 3 TO MINIMIZE THE RECONSTRUCTION OF SMALLER PONDS SHOULD NATURAL DIVIDES BE MAINTAINED ENVIRONMENTAL IMPACTS ARE MINIMIZED WITH THIS DIVERSION PROPOSED BASIN 3 WILL COLLECT RUNOFF FROM MOST OF THE DRAINAGE AREA SERVING EXISTING POND 4 THE PROPOSED DRAINAGE AREA FOR BASIN 3 IS 79 50 ACRES THE PROPOSED BASIN WILL PROVIDE AN OUTFALL AT POINT F AND EXTENT OF REVIEW WILL BEGIN

OUTFALL F (BASIN 3) - CONTINUED

FROM THIS POINT THE RUNOFF DRAINS TO AN UNNAMED TRIBUTARY OF GILES RUN, WHICH ENTERS GILES RUN AT POINT G THE CROSS-SECTIONS ILLUSTRATED ON SHEET 31 SHOW THIS EXISTING UNNAMED TRIBUTARY TO GILES RUN AT POINT G, THE TOTAL DRAINAGE AREA IS OVER 2500 ACRES WHICH IS LARGER THAN 100 TIMES THE SITE AREA DRAINING TO THIS POINT THUS, EXTENT OF REVIEW CAN END AT THIS LOCATION PER PFM SECTION 6-0203 2B BY DEFINITION, AN OUTFALL IS ADEQUATE IF THE CONTRIBUTING DRAINAGE AREA FROM THE SITE IS 1% OF THE OVERALL DRAINAGE AREA THUS, IT IS THE OPINION OF THE ENGINEER THAT THE OUTFALL IS ADEQUATE PER PFM SECTION PER PFM SECTION 6-0203 3A. FURTHERMORE, THE OUTFALL EXTENDED DOWNSTREAM OF THE SITE REACHES A POINT WHICH THE DRAINAGE AREA IS GREATER THAN ONE SQUARE MILE, THEREFORE A DESCRIPTION OF THE EXISTING CONDITIONS ENDS AT POINT G, PER Z O 9-011 2J(2)(C)

OUTFALL H (BASIN 3)

AN ANALYSIS OF THE EXISTING DRAINAGE CONDITIONS AT THE BEGINNING OF THE LANDFILL OPERATIONS REPORTS A DRAINAGE AREA TO POINT H OF 22.11 ACRES. THE GOOD FORESTED CONDITION 2- AND 10-YEAR FLOWS FROM THE SITE TO THIS CATCHMENT ARE 2.03 CFS AND 18 13 CFS, RESPECTIVELY EXISTING POND 5 WAS PREVIOUSLY DESIGNED TO DETAIN THE 1-YEAR STORM AND PROVIDE PROPORTIONAL IMPROVEMENTS TO THE 2- AND 10-YEAR STORMS, AS SHOWN ON THE APPROVED SITE PLAN NOTED EXISTING POND 5 WAS DESIGNED TO DETAIN 32.22 ACRES

EXISTING POND 5 WILL BE REMOVED INTERNAL DRAINAGE DIVIDES HAVE BEEN ALTERED FROM THE EXISTING CONDITIONS SO THAT RUNOFF FROM THIS CATCHMENT IS DIVERTED INTO PROPOSED BASIN 3 TO MINIMIZE THE RECONSTRUCTION OF SMALLER PONDS SHOULD NATURAL DIVIDES BE MAINTAINED ENVIRONMENTAL IMPACTS ARE MINIMIZED WITH THIS DIVERSION PROPOSED BASIN 3 WILL COLLECT RUNOFF FROM MOST OF THE DRAINAGE AREA SERVING EXISTING POND 5 THE PROPOSED DRAINAGE AREA FOR BASIN 3 IS 79 50 ACRES. THIS POND WILL PROVIDE AN OUTFALL AT POINT H AND EXTENT OF REVIEW WILL BEGIN HERE THE FLOW THEN ENTERS A CHANNEL AND IS CONVEYED TO POINT I CROSS-SECTIONS SHOWN ON SHEET 31 SHOW THIS CHANNEL THE DRAINAGE AREA AT POINT I IS GREATER THAN 360 ACRES THUS, PER PFM SECTION 6-0203.2C EXTENT OF REVIEW CAN END 150' DOWNSTREAM OF POINT I SINCE THE 1-YEAR STORM IS DETAINED AND PROPORTIONAL IMPROVEMENTS ON THE 2- AND 10-YEAR STORMS ARE PROVIDED, IT IS THE OPINION OF THE ENGINEER THAT THE OUTFALL IS ADEQUATE PER PFM SECTION 6-0203.4C FURTHERMORE, THE OUTFALL EXTENDED DOWNSTREAM OF THE SITE REACHES A POINT WHICH THE DRAINAGE AREA IS GREATER THAN ONE SQUARE MILE, THEREFORE A DESCRIPTION OF THE EXISTING CONDITIONS ENDS AT POINT B, PER Z O 9-011 2J(2)(C)

OUTFALL J (BASIN 3)

AN ANALYSIS OF THE EXISTING DRAINAGE CONDITIONS AT THE BEGINNING OF THE LANDFILL OPERATIONS REPORTS A DRAINAGE AREA TO POINT J OF 18 68 ACRES THE PRE-DEVELOPMENT 2- AND 10-YEAR FLOWS FROM THE SITE TO THIS CATCHMENT ARE 1 85 CFS AND 16 57 CFS RESPECTIVELY EXISTING POND 6 WAS PREVIOUSLY DESIGNED TO DETAIN 11.86 ACRES AND RELEASE 2- AND 10-YEAR FLOWS AT 1 08 CFS AND 14.85 CFS, RESPECTIVELY

EXISTING POND 6 WILL BE REMOVED INTERNAL DRAINAGE DIVIDES HAVE BEEN ALTERED FROM THE EXISTING CONDITIONS SO THAT RUNOFF FROM THIS CATCHMENT IS DIVERTED INTO PROPOSED BASIN 3 TO MINIMIZE THE RECONSTRUCTION OF SMALLER PONDS SHOULD NATURAL DIVIDES BE MAINTAINED ENVIRONMENTAL IMPACTS ARE MINIMIZED WITH THIS DIVERSION PROPOSED BASIN 3 WILL COLLECT RUNOFF FROM MOST OF THE DRAINAGE AREA SERVING EXISTING POND 6 THE PROPOSED DRAINAGE AREA FOR BASIN 3 IS 79.50 ACRES. THE PROPOSED BASIN WILL PROVIDE AN OUTFALL AT POINT J AND EXTENT OF REVIEW WILL BEGIN FROM THIS POINT THE RUNOFF DRAINS TO AN UNNAMED TRIBUTARY OF GILES RUN, WHICH ENTERS GILES RUN AT POINT G THE CROSS-SECTIONS ILLUSTRATED ON SHEET 33 SHOW THIS EXISTING UNNAMED TRIBUTARY TO GILES RUN AT POINT K, THE TOTAL DRAINAGE AREA IS OVER 2500 ACRES WHICH IS LARGER THAN 100 TIMES THE SITE AREA DRAINING TO THIS POINT THUS, EXTENT OF REVIEW CAN END AT THIS LOCATION PER PFM SECTION 6-0203 2B BY DEFINITION, AN OUTFALL IS ADEQUATE IF THE CONTRIBUTING DRAINAGE AREA FROM THE SITE IS 1% OF THE OVERALL DRAINAGE AREA THUS, IT IS THE OPINION OF THE ENGINEER THAT THE OUTFALL IS ADEQUATE PER PFM SECTION PER PFM SECTION 6-0203 3A FURTHERMORE, THE OUTFALL EXTENDED DOWNSTREAM OF THE SITE REACHES A POINT WHICH THE DRAINAGE AREA IS GREATER THAN ONE SQUARE MILE, THEREFORE A DESCRIPTION OF THE EXISTING CONDITIONS ENDS AT POINT K, PER Z O 9-011 2J(2)(C)

OUTFALL M (BASIN 8)

AN ANALYSIS OF THE EXISTING DRAINAGE CONDITIONS AT THE BEGINNING OF THE LANDFILL OPERATIONS REPORTS A DRAINAGE AREA TO POINT M OF 21.29 ACRES THE GOOD FORESTED CONDITION 2- AND 10-YEAR FLOWS FROM THE SITE TO THIS CATCHMENT ARE 2.13 CFS AND 19 10 CFS, RESPECTIVELY EXISTING POND 8 WAS PREVIOUSLY DESIGNED TO PROVIDE PROPORTIONAL IMPROVEMENTS TO THE 2- AND 10-YEAR STORMS, AS SHOWN ON THE APPROVED SITE PLAN NOTED EXISTING POND 8 WAS DESIGNED TO DETAIN 20 93 ACRES AND RELEASE 2- AND 10-YEAR FLOWS AT 1 98 CFS AND 17 29 CFS, RESPECTIVELY

PROPOSED BASIN 8 IS DESIGNED TO PROVIDE PROPORTIONAL IMPROVEMENTS TO THE 2- AND 10-YEAR STORMS THAT MEET OR EXCEED PROPORTIONAL IMPROVEMENTS FROM THE PREVIOUSLY DESIGNED EXISTING POND 8 THE PROPOSED DRAINAGE AREA FOR BASIN 2 INCREASED TO 31 33 ACRES THE PROPOSED BASIN WILLRELEASE 2- AND 10-YEAR FLOWS AT 1 72 CFS AND 14.27 CFS,

OUTFALL M (BASIN 8) - CONTINUED

RESPECTIVELY THIS BASIN WILL OUTFALL AT POINT M AND EXTENT OF REVIEW WILL BEGIN HERE THE DISCHARGE FROM THE POND ENTERS AN EXISTING CHANNEL WHICH CONVEYS THE WATER TO GILES RUN THE CROSS-SECTIONS ILLUSTRATED ON SHEET 33 SHOW THIS EXISTING CHANNEL THE DRAINAGE AREA AT POINT N IS APPROXIMATELY 2500 ACRES SINCE THIS DRAINAGE AREA IS GREATER THAN 360 ACRES, EXTENT OF REVIEW CAN END 150' DOWNSTREAM OF THE CHANNEL'S INTERSECTION WITH GILES RUN (PFM SECTION 6-0203 2C). THE PROPORTIONAL IMPROVEMENTS ON THE 2- AND 10-YEAR STORMS ARE PROVIDED ADDITIONALLY, AN INCISED CHANNEL EXISTS FROM THE POINT OF OUTFALL TO THE END OF THE EXTENT OF REVIEW THUS, IT IS THE OPINION OF THE ENGINEER THAT THE OUTFALL IS ADEQUATE PER PFM SECTION 6-0203 4C FURTHERMORE, THE OUTFALL EXTENDED DOWNSTREAM OF THE SITE REACHES A POINT WHICH THE DRAINAGE AREA IS GREATER THAN ONE SQUARE MILE, THEREFORE A DESCRIPTION OF THE EXISTING CONDITIONS ENDS AT POINT N, PER Z O 9-011.2J(2)(C)

OUTFALL P (POND 9)

AN ANALYSIS OF THE EXISTING DRAINAGE CONDITIONS AT THE BEGINNING OF THE LANDFILL OPERATIONS REPORTS A DRAINAGE AREA TO POINT P IS 50 86 ACRES THE GOOD FORESTED CONDITION 2- AND 10-YEAR FLOWS FROM THE SITE TO THIS CATCHMENT ARE 5 15 CFS AND 46 79 CFS RESPECTIVELY EXISTING POND 9 WAS DESIGNED TO DETAIN THE 1-YEAR STORM AND PROVIDE PROPORTIONAL IMPROVEMENTS TO THE 2- AND 10-YEAR STORMS THE DRAINAGE AREA FOR EXISTING POND 9 IS 51.97 ACRES. EXISTING POND 9 WILL NOT BE DISTURBED AND WILL OPERATE AS ORIGINALLY DESIGNED. EXISTING POND 9 OUTFALLS AT POINT P AND EXTENT OF REVIEW WILL BEGIN HERE. THE FLOW THEN ENTERS A CHANNEL AND IS CONVEYED TO POINT Q THROUGH AN UNNAMED TRIBUTARY OF THE OCCOQUAN RIVER CROSS-SECTIONS SHOWN ON SHEET 33 SHOW THIS CHANNEL THE DRAINAGE AREA AT POINT Q IS GREATER THAN 360 ACRES THUS, PER PFM SECTION 6-0203.2C EXTENT OF REVIEW CAN END 150' DOWNSTREAM OF POINT Q SINCE THE 1-YEAR STORM IS DETAINED AND PROPORTIONAL IMPROVEMENTS ON THE 2- AND 10-YEAR STORMS ARE PROVIDED, THUS, IT IS THE OPINION OF THE ENGINEER THAT THE OUTFALL IS ADEQUATE PER PFM SECTION 6-0203 4C FURTHERMORE, THE OUTFALL EXTENDED DOWNSTREAM OF THE SITE REACHES A POINT WHICH THE DRAINAGE AREA IS GREATER THAN ONE SQUARE MILE, THEREFORE A DESCRIPTION OF THE EXISTING CONDITIONS ENDS AT POINT Q, PER Z.O 9-011 2J(2)(C)

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SPECIAL EXCEPTION AMENDMENT
OVERALL DRAINAGE AREA MAP

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 5-14-2013
REVISED 9-11-2013
REVISED 10-7-2013
REVISED 11-1-2013
REVISED 12-10-2013
REVISED 1-22-2014
REVISED 2-20-2014

APPLICANT:
FURNACE ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: NB
DATE: MARCH 22, 2013
SCALE: HOR. 1"=600' VERT.
SHEET 38 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117OUT
LAYOUT: OUT&EXT
FILE NO. 05117.06-00
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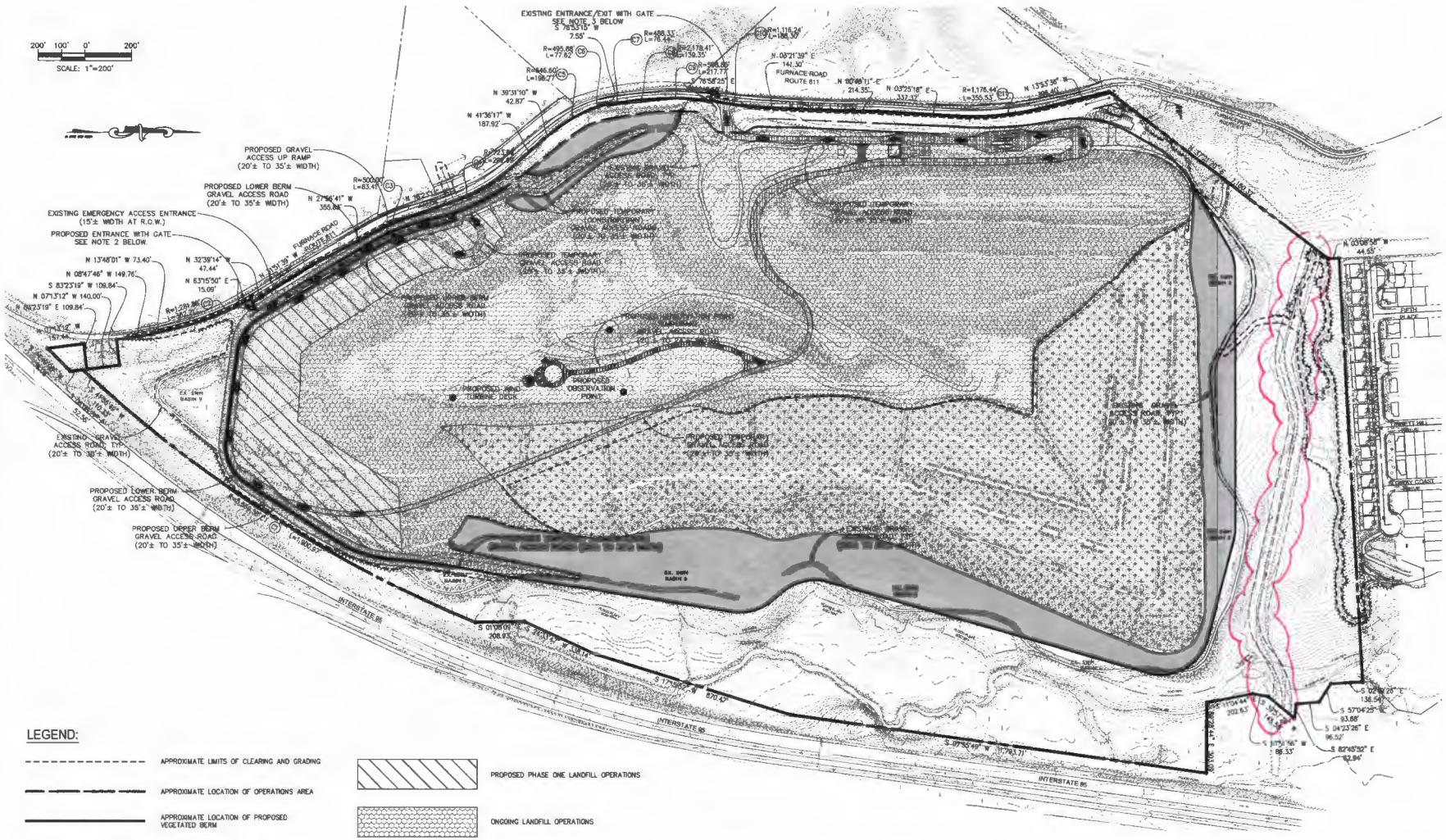

NOTE:

1. THE APPROXIMATE LOCATIONS OF INTERNAL LANDFILL OPERATIONS ROADS AND LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE ROADS, LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. WITHIN THE LIMITS OF THE VEGETATED BERM/OPERATIONS AREA AS REQUIRED TO CONTINUE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE OPERATIONS AND ALL SUBSEQUENT PHASES. PHASES MAY OVERLAP (SEE GENERAL NOTE 16 ON SHEET 3).
2. VEHICULAR ACCESS AT THE SOUTHERN ENTRANCE IS RIGHT TURN IN ONLY (NO EXIT) AND IS LIMITED TO TRUCKS ONLY.
3. AT THE NORTHERN ENTRANCE LANDFILL OPERATIONS TRUCKS ARE LIMITED TO RIGHT TURN IN ONLY AND LEFT TURN OUT ONLY.

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SPECIAL EXCEPTION AMENDMENT
PHASE ONE LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED 9-11-2013	REV. 2-20-14
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SHEET 39 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE5117CIR-PH1	
LAYOUT: PH1	
FILE NO. 05117.08-00	

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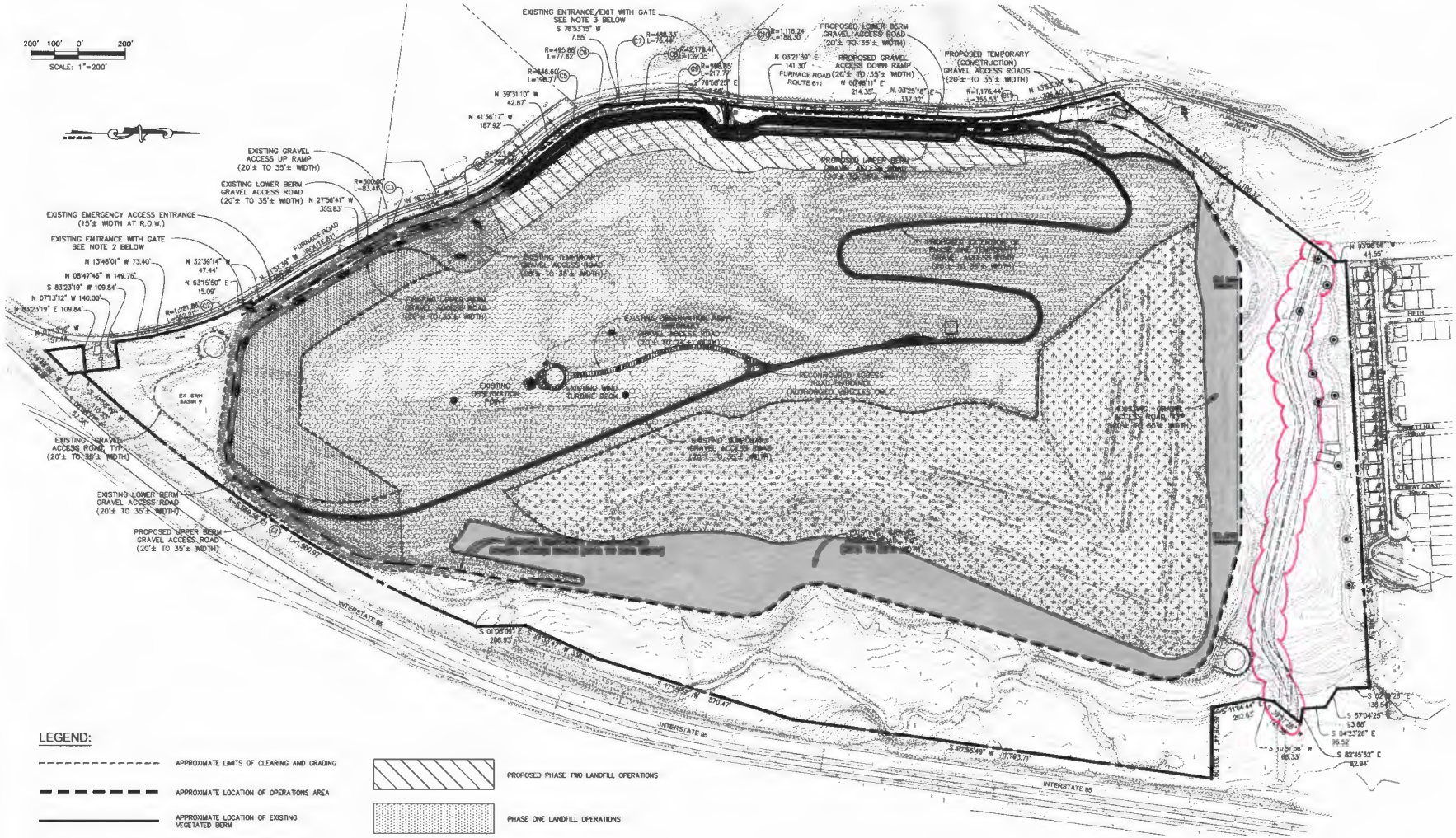

LEGEND:

- APPROXIMATE LIMITS OF CLEARING AND GRADING
- APPROXIMATE LOCATION OF OPERATIONS AREA
- APPROXIMATE LOCATION OF EXISTING VEGETATED BERM
- APPROXIMATE LOCATION OF PROPOSED VEGETATED BERM
- LANDFILL OPERATIONS TRAFFIC CIRCULATION (ONE WAY)
- GRAVEL ACCESS RAMP (ONE WAY - 10% MAXIMUM SLOPE)
- PROPOSED PHASE TWO LANDFILL OPERATIONS
- PHASE ONE LANDFILL OPERATIONS
- ONGOING LANDFILL OPERATIONS
- EXISTING VEGETATION/UNDISTURBED VEGETATION

NOTE:

1. THE APPROXIMATE LOCATIONS OF INTERNAL LANDFILL OPERATIONS ROADS AND LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE ROADS, LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. WITHIN THE LIMITS OF THE VEGETATED BERM/OPERATIONS AREA AS REQUIRED TO CONTINUE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE OPERATIONS AND ALL SUBSEQUENT PHASES. PHASES MAY OVERLAP (SEE GENERAL NOTE 16 ON SHEET 3).
2. VEHICULAR ACCESS AT THE SOUTHERN ENTRANCE IS RIGHT TURN IN ONLY (NO EXIT) AND IS LIMITED TO TRUCKS ONLY.
3. AT THE NORTHERN ENTRANCE LANDFILL OPERATIONS TRUCKS ARE LIMITED TO LEFT TURN OUT ONLY (NO ENTRY).

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SPECIAL EXCEPTION AMENDMENT
PHASE TWO LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

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DATE: MARCH 22, 2013
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SHEET 40 OF 45
CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117CIR-PH2
LAYOUT: PH2
FILE NO. 05117.08-00

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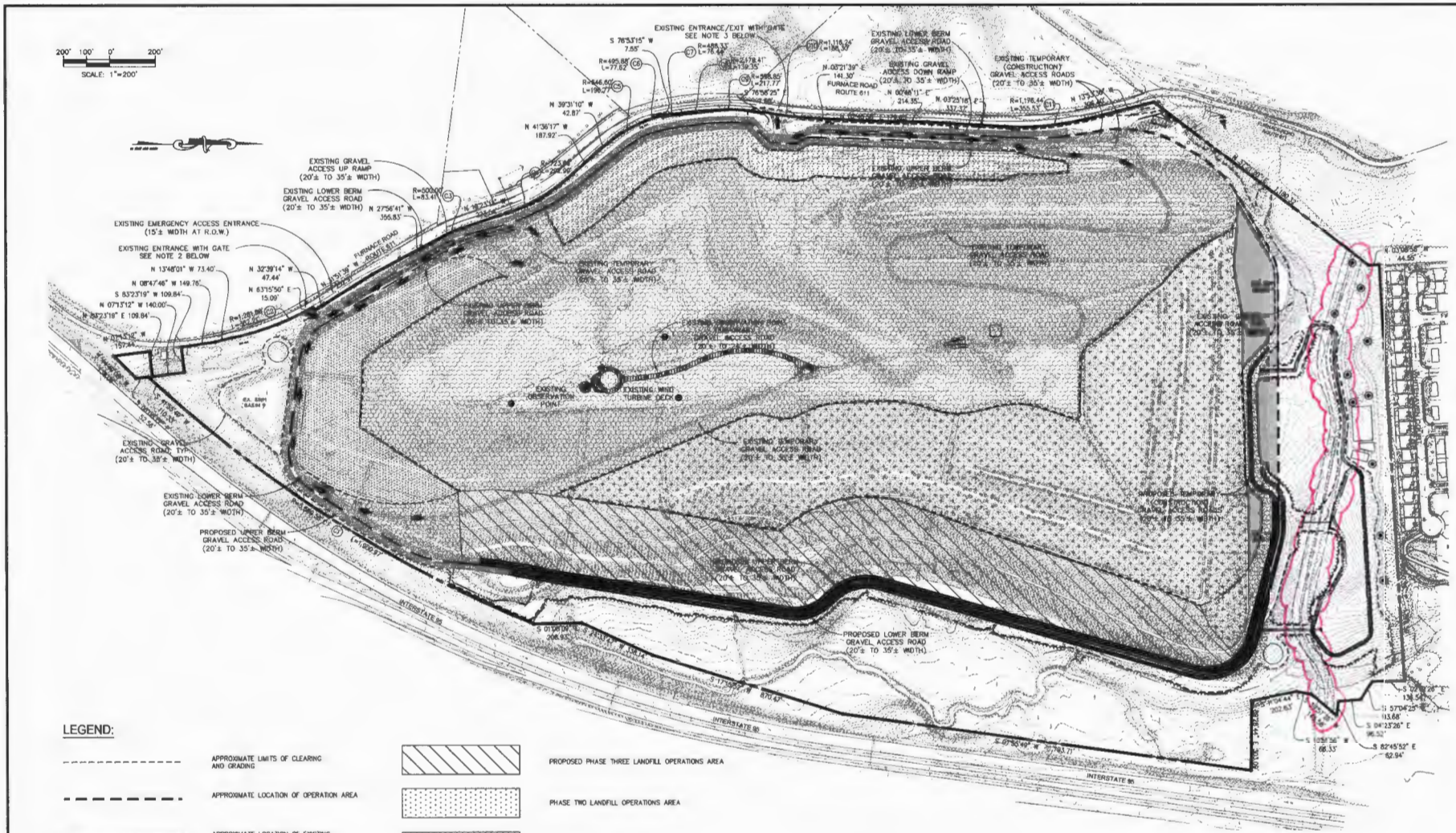

LEGEND:

- APPROXIMATE LIMITS OF CLEARING AND GRADING
- APPROXIMATE LOCATION OF OPERATION AREA
- APPROXIMATE LOCATION OF EXISTING VEGETATED BERM
- APPROXIMATE LOCATION OF PROPOSED VEGETATED BERM
- ONE WAY LANDFILL OPERATIONS TRAFFIC CIRCULATION
- ONE WAY GRAVEL ACCESS RAMP (10% MAXIMUM SLOPE)
- PROPOSED PHASE THREE LANDFILL OPERATIONS AREA
- PHASE TWO LANDFILL OPERATIONS AREA
- PHASE ONE LANDFILL OPERATIONS AREA
- ONGOING LANDFILL OPERATIONS AREA
- EXISTING VEGETATION/UNDISTURBED VEGETATION

NOTE:

1. THE APPROXIMATE LOCATIONS OF INTERNAL LANDFILL OPERATIONS ROADS AND LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE ROADS, LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. WITHIN THE LIMITS OF THE VEGETATED BERM/OPERATIONS AREA AS REQUIRED TO CONTINUE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE OPERATIONS AND ALL SUBSEQUENT PHASES. PHASES MAY OVERLAP (SEE GENERAL NOTE 18 ON SHEET 3).
2. VEHICULAR ACCESS AT THE SOUTHERN ENTRANCE IS RIGHT TURN IN ONLY (NO EXIT) AND IS LIMITED TO TRUCKS ONLY.
3. AT THE NORTHERN ENTRANCE LANDFILL OPERATIONS TRUCKS ARE LIMITED TO LEFT TURN OUT ONLY (NO ENTRY).

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SPECIAL EXCEPTION AMENDMENT
PHASE THREE LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED 8-11-2013	REV. 2-20-14
REVISED 10-7-2013	
REVISED 11-19-2013	
REVISED 12-13-2013	
REVISED 1-22-2014	

APPLICANT:
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11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

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DATE: MARCH 22, 2013	
SCALE: HOR. 1"=200' VERT.	
SHEET 41 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE5117CIR-PH3	
LAYOUT: PH3	
FILE NO. 05117.08-00	

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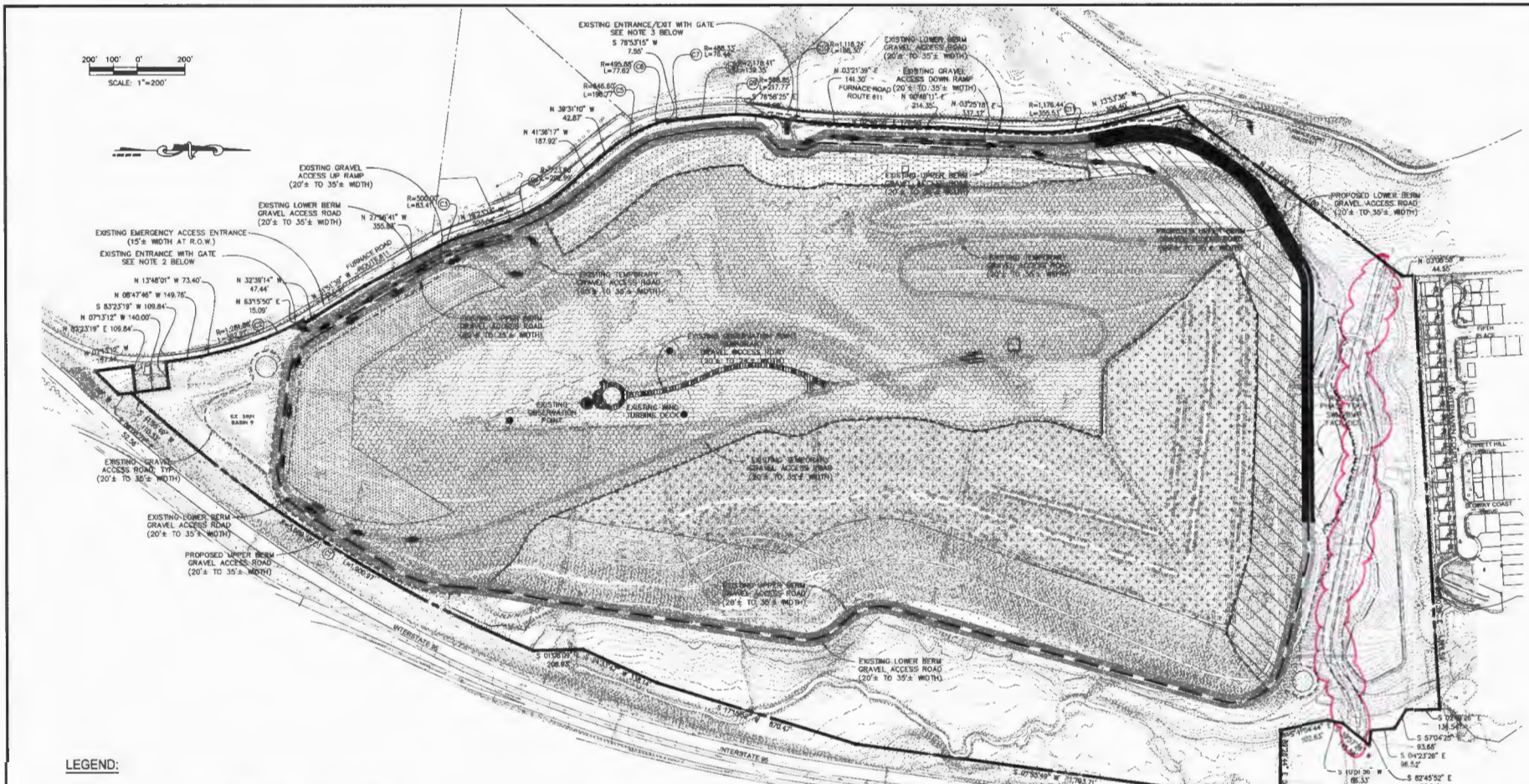

LEGEND:

- APPROXIMATE LIMITS OF CLEARING AND GRADING
- APPROXIMATE LOCATION OF EXISTING VEGETATED LANDFILL BERM
- APPROXIMATE LOCATION OF PROPOSED VEGETATED LANDFILL BERM
- LANDFILL OPERATIONS TRAFFIC CIRCULATION (ONE WAY)
- GRAVEL ACCESS RAMP (ONE WAY – 10% MAXIMUM SLOPE)
- EXISTING VEGETATION
- PROPOSED PHASE FOUR LANDFILL OPERATIONS
- PHASE ONE LANDFILL OPERATIONS
- PHASE TWO LANDFILL OPERATIONS
- PHASE THREE LANDFILL OPERATIONS
- ONGOING LANDFILL OPERATIONS

NOTE:

1. THE APPROXIMATE LOCATIONS OF INTERNAL LANDFILL OPERATIONS ROADS AND LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE ROADS, LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. WITHIN THE LIMITS OF THE VEGETATED BERM/OPERATIONS AREA AS REQUIRED TO CONTINUE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE OPERATIONS AND ALL SUBSEQUENT PHASES. PHASES MAY OVERLAP (SEE GENERAL NOTE 16 ON SHEET 3).
2. VEHICULAR ACCESS AT THE SOUTHERN ENTRANCE IS RIGHT TURN IN ONLY (NO EXIT) AND IS LIMITED TO TRUCKS ONLY.
3. AT THE NORTHERN ENTRANCE LANDFILL OPERATIONS TRUCKS ARE LIMITED TO LEFT TURN OUT ONLY (NO ENTRY).

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SPECIAL EXCEPTION AMENDMENT
PHASE FOUR LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED 9-11-2013	
REVISED 10-7-2013	
REVISED 11-1-2013	
REVISED 12-10-2013	
REVISED 1-22-2014	
REV. 2-20-14	

APPLICANT:
LORTON LANDFILL ASSOCIATES, INC.
11220 ASSETT LOOP
SUITE 201
MANASSAS, VIRGINIA 20109

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DATE: MARCH 22, 2013
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SHEET 42 OF 45

CO. NO. SEA 80-L/V-061-2
CAD NAME: SE5117CIR-PH4
LAYOUT: PH4
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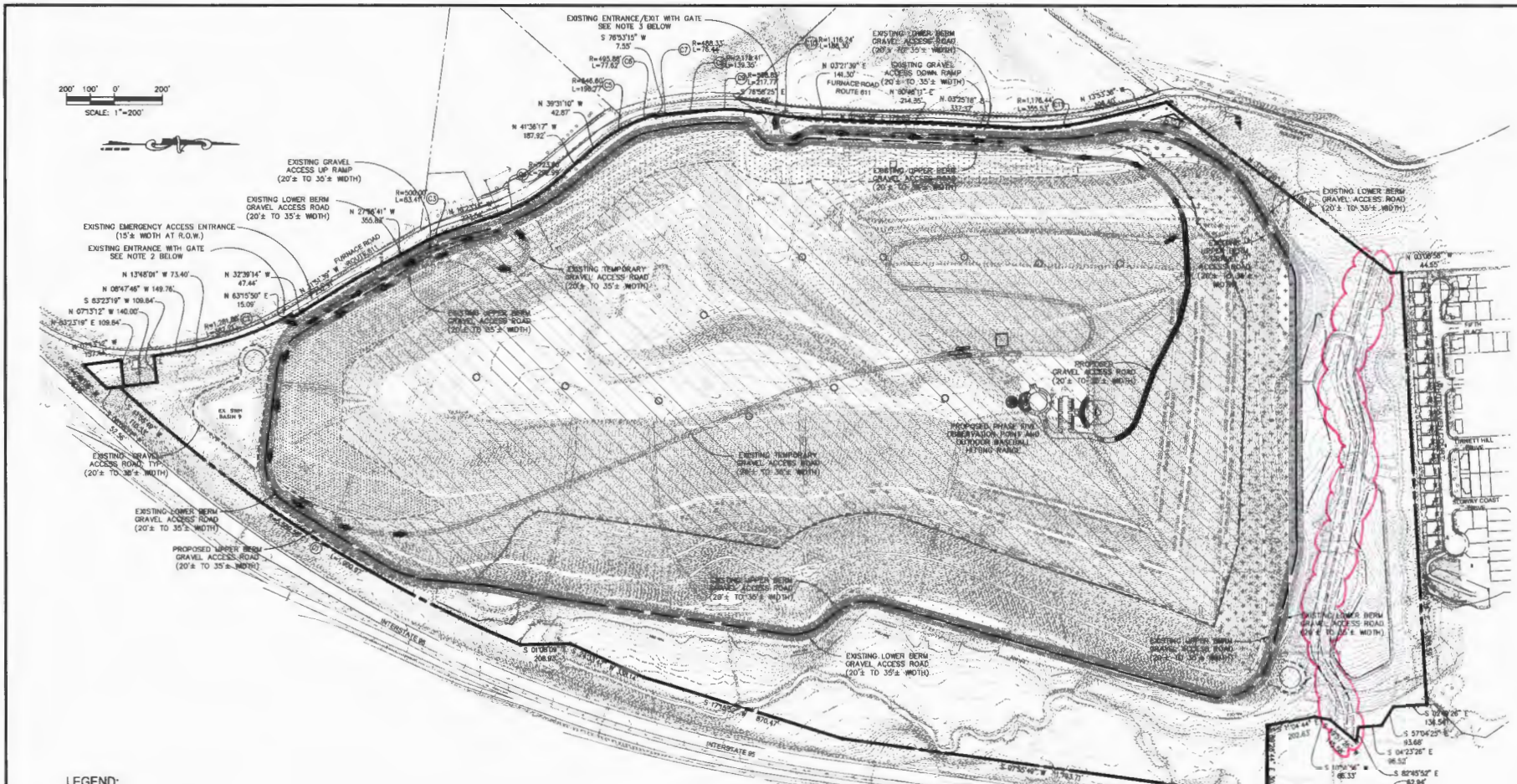

LEGEND:

- APPROXIMATE LIMITS OF CLEARING AND GRADING
- APPROXIMATE LOCATION OF EXISTING VEGETATED LANDFILL BERM
- LANDFILL OPERATIONS TRAFFIC CIRCULATION (ONE WAY)
- GRAVEL ACCESS RAMP (ONE WAY – 10% MAXIMUM SLOPE)
- PROPOSED PHASE FIVE LANDFILL OPERATIONS
- PHASE ONE LANDFILL OPERATIONS
- PHASE TWO LANDFILL OPERATIONS
- PHASE THREE LANDFILL OPERATIONS
- PHASE FOUR LANDFILL OPERATIONS

NOTE:

1. THE APPROXIMATE LOCATIONS OF INTERNAL LANDFILL OPERATIONS ROADS AND LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. ARE SHOWN ON THE PLAT. THE APPLICANT RESERVES THE RIGHT TO MOVE THESE ROADS, LANDFILL SCALE HOUSES, SCALES, TIRE WASHES, TRAILERS, ETC. WITHIN THE LIMITS OF THE VEGETATED BERM/OPERATIONS AREA AS REQUIRED TO CONTINUE THE GENERAL OPERATIONS OF THE LANDFILL DURING THIS PHASE OPERATIONS AND ALL SUBSEQUENT PHASES. PHASES MAY OVERLAP (SEE GENERAL NOTE 16 ON SHEET 3).
2. VEHICULAR ACCESS AT THE SOUTHERN ENTRANCE IS RIGHT TURN IN ONLY (NO EXIT) AND IS LIMITED TO TRUCKS ONLY.
3. AT THE NORTHERN ENTRANCE LANDFILL OPERATIONS TRUCKS ARE LIMITED TO LEFT TURN OUT ONLY.
4. AT NORTHERN ENTRANCE VEHICLES MAY ENTER AND EXIT.

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SPECIAL EXCEPTION AMENDMENT
PHASE FIVE LANDFILL OPERATIONS TRUCK TRAFFIC CIRCULATION
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS: SHEET ADDED 9-17-2013 REVISED 10-7-2013 REVISED 11-15-2013 REVISED 12-10-2013 REVISED 1-22-2014 REV. 2-20-14	
APPLICANT: LORTON & ASSOCIATES, INC. 11220 ASSETT LOOP SUITE 201 MANASSAS, VIRGINIA 20109	
DESIGNED BY: PLR	
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DATE: MARCH 22, 2013	
SCALE: HOR. 1"=200' VERT.	
SHEET 43 OF 45	
CO. NO. SEA 80-L/V-061-2	
CAD NAME: SE5117CIR-PH5	
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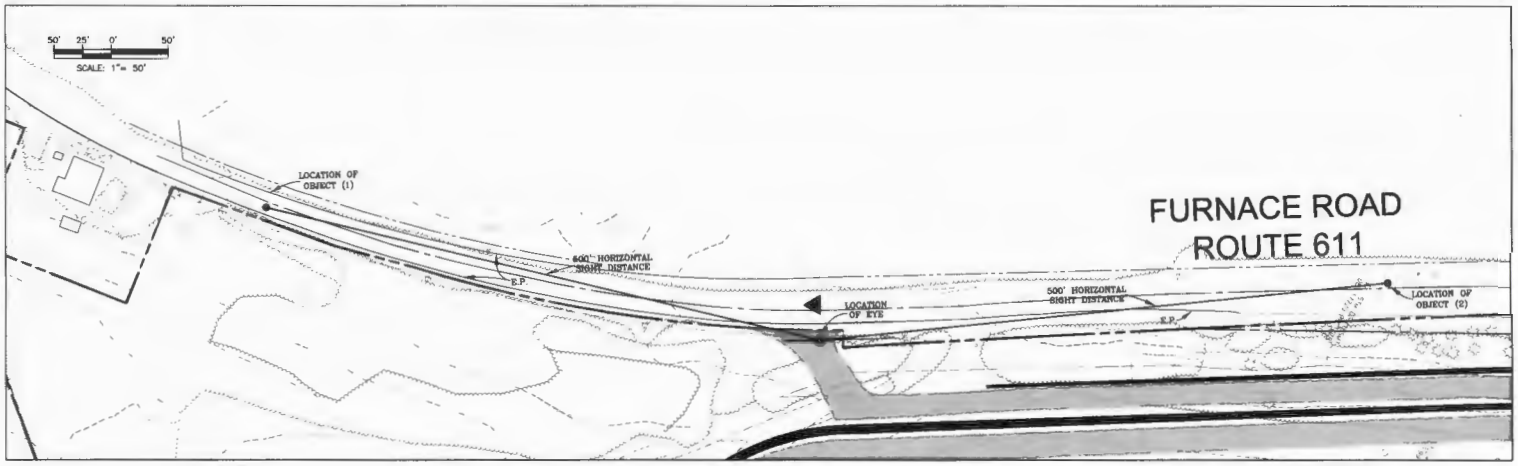

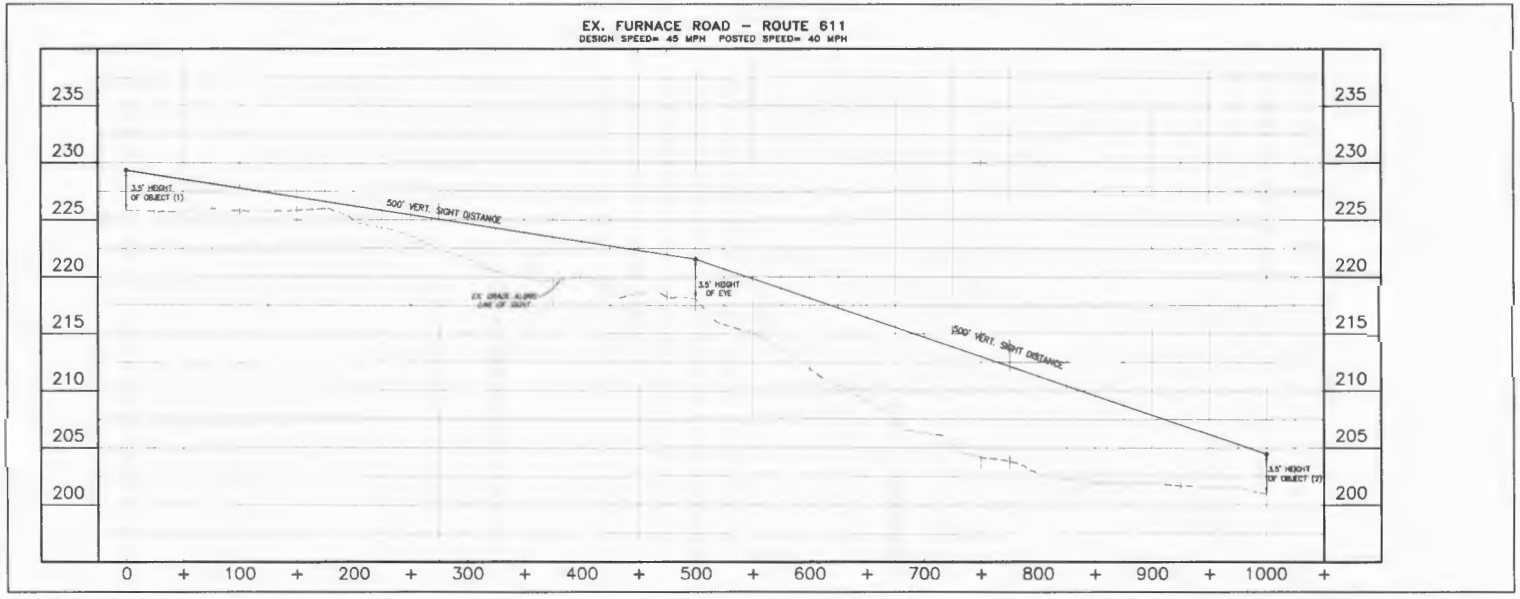

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SPECIAL EXCEPTION AMENDMENT
SIGHT DISTANCE

LORTON GREEN ENERGY PARK & DEBRIS LANDFILL

MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

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SHEET ADDED 9-11-13	REV. 2-20-14
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SHEET 44 OF 45
CO. NO. SEA 60-L/V-061-2
CAD NAME: 05117-AUTOTURN.DE
LAYOUT: SIGHT
FILE NO. 05117.08-00

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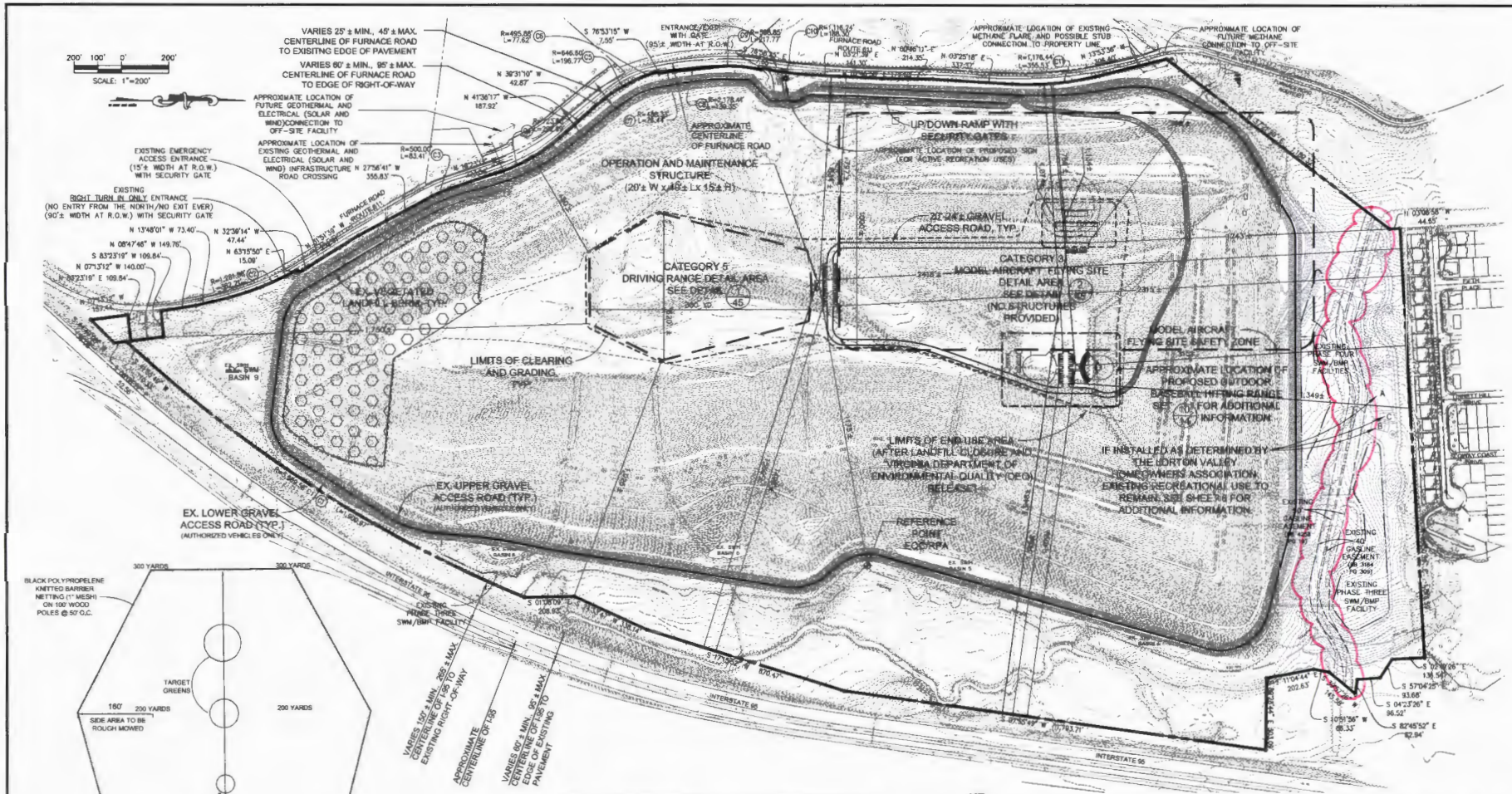

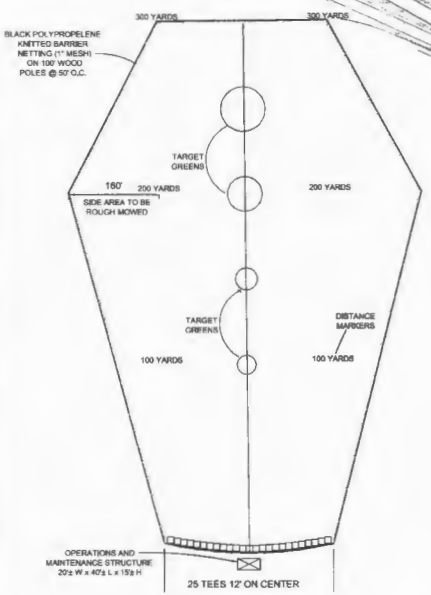

1/45 DRIVING RANGE DETAIL

NOT TO SCALE

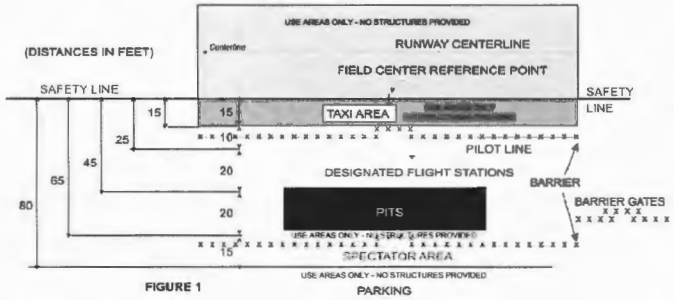

FIGURE 1

3/45 MODEL AIRCRAFT FLYING SITE DETAIL

NO STRUCTURES PROVIDED

NOT TO SCALE

NOTE:

1. PHASE 6 PRIVATE, CONTROLLED ACCESS USES TO BE CONSTRUCTED AND OPERATED BY LESSEES EITHER CONCURRENT WITH, OR SUBSEQUENT TO CESSATION OF, THE "INTERIM" GREEN ENERGY PROGRAM WHICH MAY BE ESTABLISHED BY THE END OF PHASE 5. PHASE 6 MAY NOT BE ESTABLISHED UNTIL AFTER RELEASE OF LANDFILL BY DEQ; GREEN ENERGY USES PREVIOUSLY INSTALLED MAY CONTINUE INTO PHASE 6.
2. ALL ACCESS ROADS AND PARKING AREAS ARE GRAVEL. THE GRAVEL ACCESS ROAD SHALL BE APPROXIMATELY 20' TO 24' FEET IN WIDTH. A WAIVER OF THE DUSTLESS SURFACE REQUIREMENT SHALL BE REQUESTED TO THE DIRECTOR, DPWES, SIMILAR TO THAT SHOWN FOR PHASE 5.
3. THERE IS NO OBSERVATION POINT IN PHASE 6.
4. ONE, TWO AND/OR THREE OF THE ACTIVE RECREATIONAL USES SHOWN MAY BE PROVIDED, AS DETERMINED BY THE LANDOWNER. OR MAY BE ADJUSTED FROM THAT SHOWN.
5. THE NUMBER OF PARKING SPACES SHOWN IS AN ESTIMATE AND SHALL BE PROVIDED AS DETERMINED BY THE DIRECTOR, DPWES, CONSISTENT WITH THE ZONING ORDINANCE REQUIREMENTS.
6. GIVEN THAT THE THREE ALTERNATIVE RECREATION USES SHOWN IN PHASE 6 ARE PROPOSED TO BE LOCATED ABOVE 412 FEET OF ELEVATION IN THE CENTER OF A FORTY ACRE PLATFORM ON TOP OF A CLOSED FILLED LANDFILL WITHIN A 250 ACRE PARCEL WHICH HAS AN EXTENSIVE VEGETATED PERIPHERAL BUFFER AND EXTENSIVE VEGETATED SLOPES ON ALL RESIDENTIAL USE SIDES, A MODIFICATION OF THE 30-FOOT TRANSITIONAL SCREENING FOR THE PROPERTY TO THAT SHOWN ON THE PLAT AND A WAIVER OF THE BARRIER REQUIREMENT FOR RECREATIONAL USES SHOWN IN PHASE 6 IS REQUESTED ON ALL SIDES ABUTTING RESIDENTIAL USES, PURSUANT TO PARAGRAPH 3, 11 AND 12 OF SECTION 13-305 OF THE ZONING ORDINANCE.
7. THESE USES SHALL COMPLY WITH THE LOT SIZE AND BULK REGULATIONS OF THE I-1 ZONING DISTRICT AND ALL REQUIRED PERFORMANCE STANDARDS. PRIOR TO SUCH TIME THAT NIGHT-TIME ILLUMINATION MAY BE PROVIDED FOR THE GOLF DRIVING RANGE AND/OR OUTDOOR BASEBALL HITTING RANGE(S), A SPORTS ILLUMINATION PLAN SHALL BE APPROVED PURSUANT TO PART 6 OF ARTICLE 14. THE OUTDOOR BASEBALL HITTING RANGE(S) AND GOLF DRIVING RANGE SHALL COMPLY WITH THE "ADDITIONAL STANDARDS" SET FORTH IN SECTION 9-527 AND 9-528, RESPECTIVELY, OF THE ZONING ORDINANCE.
8. SIGNAGE SHALL COMPLY WITH ZONING ORDINANCE ARTICLE 12 REQUIREMENTS.
9. EXISTING VEGETATION LOCATED BELOW THE LIMITS OF END RECREATIONAL USE AREA TO REMAIN UNDISTURBED.
10. REFER TO SHEETS 27 THROUGH 38 FOR PHASE 6 SWM/BMP INFORMATION.
11. SEE SHEET 2 FOR PHASE 6 SITE TABULATIONS.
12. SEE DETAIL 10 ON SHEET 14 SHOWING LAYOUT OF OUTDOOR BASEBALL HITTING RANGE.
13. ALL TRAFFIC IN PHASE 6 SHALL BE ALLOWED TO MAKE LEFT TURNS IN AND RIGHT TURNS OUT AT MAIN ENTRANCE.

LEGEND:

EXISTING TREELINE

LIMITS OF CLEARING AND GRADING

POTENTIAL AREAS FOR DEVELOPMENT OF A SOLAR PANEL FARM (BY APPLICANT/OWNER AND/OR BY OTHERS)

SEE SHEET 2 FOR PHASE 6 SITE TABULATION

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VIRGINIA DENIS D. DUCK LICENSED PROFESSIONAL ENGINEER 2-26-2014

SPECIAL EXCEPTION AMENDMENT
PHASE SIX - CATEGORY 3 AND/OR 5 END USES
LORTON GREEN ENERGY PARK & DEBRIS LANDFILL
MOUNT VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED 9-11-2014	REV. 2-26-14
REVISED 10-7-2013	
REVISED 11-1-2013	
REVISED 11-22-2013	
REVISED 12-20-2013	
APPLICANT: E.E. FURNACE ASSOCIATES, INC. 7700 LEESBURG PIKE, SUITE 201 PHONE: 703-356-4300 FAX: 703-356-4301 MANASSAS, VIRGINIA 20109	
DESIGNED BY: PLR	
DRAFTED BY: CAD	
CHECKED BY: NB	
DATE: MARCH 22, 2013	
SCALE: HOR. 1"=200' VERT	
SHEET 45 OF 45	
CO. NO: SEA 80-L/V-061-2	
CAD NAME: SE5117PH6	
LAYOUT: PH6	
FILE NO. 05117.08-00	

APPENDIX 2

STAFF PROPOSED DEVELOPMENT CONDITIONS

SEA 80-L/V-061-02

February ~~13~~24, 2014

If it is the intent of the Board of Supervisors (Board) to approve SEA 80-L/V-061-02 located at Tax Map Parcels 113-1((1)) part 5 ~~part~~, 7, and 8 and 113-3((1)) 1, 2, and 4 (10201, 10209, 10215, 10219, and 10229 Furnace Road) to amend a special exception amendment previously approved for a landfill ~~pursuant to Sect. 3-104~~ to permit modifications to the landfill and development conditions and the addition of electrical generating facilities (wind, solar, methane gas, and geothermal), radio controlled aircraft field, baseball hitting range(s), and golf driving range pursuant to Sections 3-104, 9-201, 9-301, and 9-501 of the Fairfax County Zoning Ordinance ~~in to permit an increase in the maximum height of the landfill from 290 feet above sea level to 412 feet above sea level and other site modifications and to permit a quasi-public park, s~~Staff recommends that the Board condition the approval by requiring conformance with the following development conditions. These development conditions incorporate and supersede all previous development conditions ~~and become effective as of issuance of a non-RUP implementing this SEA by authorizing the maximum height to reach 412 feet above sea level, and thus to exceed 290 feet above sea level or as otherwise specified in these development conditions~~. Previously approved conditions carried forward, some updated, are marked with an asterisk (*).

1. This Special Exception Amendment is granted for the location indicated in the application and is not transferable to other land.*

2. This Special Exception Amendment (SEA) is granted for the location and uses outlined in the application as amended by these conditions. A revised site plan incorporating these conditions shall be submitted to the Department of Public Works and Environmental Services (DPWES).*

3. A copy of this Special Exception Amendment shall be posted in a conspicuous place within the operations trailer and scale houses along with the Non-Residential Use Permit on the property of the use and be made available to all Departments of the County of Fairfax during the hours of operation of the permitted use.*

4. Submission and approval of a site plan prepared in accordance with the provisions of Article 17, is required prior to the start of any landfilling activity approved as part of this Special Exception Amendment ~~in any new operational areas beyond that approved pursuant to SE 80-L/V-061,~~and for the proposed electrical generating facilities (wind, solar, methane, and geothermal), radio controlled aircraft field, baseball hitting range(s), and golf driving range. ~~including elevation greater than 290 feet above sea level.~~ Any site plan submitted pursuant to this special exception amendment shall be in substantial

conformance with the approved Special Exception Amendment Plat (SEA Plat) entitled "Lorton Green Energy Park and Debris Landfill," ~~Overlook Ridge,~~ prepared by BC Consultants, Inc., ~~which is~~ dated ~~February 2006~~March 22, 2013, as revised through ~~November 20, 2006~~ ~~January 22, 2014~~February 20, 2014, and these conditions. Minor modifications to the approved Special Exception may be permitted pursuant to Par. 4 of Sect. 9-004 of the Zoning Ordinance.*

5. Prior to site plan approval, ~~a geotechnical report of the landfill, and~~ the proposed landfill expansion to include the electrical generating facilities proposed in Phase 1, shall be submitted to the Geotechnical Review Board (GRB) for its review and approval. Any and all recommendations of the GRB within its purview shall be implemented; if these recommendations cannot be implemented in substantial conformance with the SEA Plat, this Special Exception Amendment shall be null and void. If the GRB determines that any portion of the review is outside of its purview, that portion shall be forwarded back to DPWES for review prior to site plan approval.

   Prior to site plan approval for the solar panels proposed in Phase 4, the wind turbines and/or solar panels proposed in Phase 5, and for each of the proposed active recreational uses proposed in Phases 5 and 6 (radio controlled aircraft field, baseball hitting range(s), and golf driving range) each use shall require the review and approval by the Geotechnical Review Board (GRB). Any and all recommendations of the GRB within its purview shall be implemented. If these recommendations cannot be implemented for any of the above Phases 4-6 uses then that use shall not be permitted. If the GRB determines that any portion of the review is outside of its purview, that portion shall be forwarded back to DPWES for review prior to site plan approval.

6. No construction of the Phase 5 and Phase 6 active recreational facilities on top of the landfill, as depicted in the SEA Plat, shall take place until the applicant has been released from its post-closure monitoring and maintenance requirements by the Virginia Department of Environmental Quality (DEQ) ends and the following takes place: ~~, except for trails as depicted on each phase of the SEA Plat shall take place until:~~

   - The GRB has determined in writing that any residual post construction settlement will not affect the ~~appearance or~~ structural integrity of the proposed improvements; and

   - ~~The~~ DEQ, the County's Fire and Rescue Department and/or DPWES has determined that the nature and extent of corrosion producing properties, the generation and escape of combustible gases and potential fire hazards of the constituent material, considering its state of decomposition, has been provided for adequately and will not create an unsafe or hazardous condition in or around any of said proposed improvements.

7. If any of the currently undisturbed areas of the landfill along the northern and eastern portion of the site (as depicted on Sheet 3 of the SEA Plat) are proposed to be disturbed for any reason (including installation of utility lines, detention ponds, access roads, etc.), then, prior to any such disturbance, a tight interval (30-foot intervals between shovel tests) Phase I archaeological survey shall be performed prior to site plan approval for those areas proposed to be disturbed and not previously the subject of a Phase 1 archaeological survey using a scope of work approved by the Cultural Resource Management and Protection Section of the Fairfax County Park Authority (FCPA). If any archaeological resources are found by the Phase I survey and are determined to be potentially significant and disturbance of these resources cannot be avoided, then a Phase II study shall be performed to assess the significance of the such resources in the Phase I study area. If deemed necessary by FCPA, a Phase III data recovery shall be performed in accordance with a scope approved by the Cultural Resource Management and Protection Section, FCPA. Any Phase III scopes shall provide for public interpretation of the results. Draft and final archaeological reports produced as a result of the Phase I, II, and/or III studies shall be submitted for the review and approval of by the Cultural Resource Management and Protection Section of FCPA.*

8. Stormwater management and Best Management Practices (BMPs) for the subject property shall be provided as depicted on the SEA Plat and in conformance with the applicable Public Facilities Manual (PFM) standards, unless waived and/or modified by DPWES.*

9. If deemed necessary by DPWES during site plan review, a Water Quality Impact Assessment (WQIA) shall be provided for encroachments into the Resource Protection Area for the purpose of providing adequate outfall and/or redevelopment of the existing stormwater management facilities. Should any such encroachment be necessary, the limits of disturbance shall be no greater than that permitted by these development conditions, irrespective of that shown on the SEA Plat.*

Conditions on the Operation of the Landfill

10. At the time of initialPrior to site plan submission, a copy of the current Closure Plan (which addresses leachate control) approved by the Virginia Department of Environmental Quality (DEQ) shall be provided to the Department of Planning and Zoning (DPZ), the Division of Solid Waste ProgramDisposal and Resource Recovery (DSWRR), DPWES of the Department of Public Works and Environmental Services (DPWES) and the Mount Vernon District Supervisor's office. A copy of the approved Closure Plan shall be maintained on-site and made available. Amended versions of the Closure Plan shall be submitted to the above mentioned agencies and offices as revisions occur and with any subsequent site plan submissions. In addition, the applicant shall initiate its Major Permit Amendment with DEQ. A letter confirming said initiation shall be provided to the above referenced agencies and office. A copy of the Major

Permit Amendment shall be maintained on-site and be made available upon demand. A letter confirming subsequent amendments to said Major Permit Amendment shall be submitted to the above referenced agencies and office as revisions occur and with any subsequent site plan submissions.

If DEQ does not approve the Major Permit Amendment, then this SEA shall be null and void.

11. The landfill shall be operated in conformance with all sections of Virginia Administrative Code (VAC) applicable to the proposed landfill operations, except as waived or modified by DEQ.* ~~There shall be no future expansion of the landfill, beyond that outlined by the SEA Plat and permitted by these development conditions.~~

12. The height of the landfill prior to the installation of final cover (cap) of the landfill, vegetation, and "structures" as shown on the SEA Plat, shall not exceed the proposed final debris elevation, as shown on the SEA Plat. All landfill disposal activities shall cease when the final debris elevation of 412 feet above sea level ~~as shown on the SEA Plat~~ is reached, or ~~January 1, 2019~~December 31, 2040, whichever occurs first. ~~The~~ Such debris height ~~of~~ across the landfill shall not exceed the elevations depicted by the proposed topography shown on the SEA Plat, except for (i) any temporary berms or temporary stockpiles ~~which~~ that may be required or approved by DEQ or by the Director of DPWES for operational reasons, visual screening or noise attenuation or capping and (ii) to provide adequate drainage from the center of the landfill.*

13. The landfill shall receive only construction~~/~~ demolition debris materials, as defined in Section 104 of the County Code and as deemed permissible by Federal, State and County regulations. Unacceptable landfill materials shall be prohibited on-site in accordance with the implementation of the Unauthorized Waste Control Plan as required by Virginia's Solid Waste Management Regulations and approved by ~~the Virginia Department of Environmental Quality~~DEQ.

14. Waste materials shall not be burned nor allowed to be burned at the site.*

15. A liner system shall be installed in all landfill cells as required in accordance with Virginia Solid Waste Management Regulations.*

16. A tire wash system, including a wash rack/grate system to dislodge mud on truck tires, shall be provided as depicted on the SEA Plat in order to ensure that mud is not tracked from the landfill onto the surrounding roads. The tire wash system may move from its location as shown on the SEA Plat. However, the tire wash system shall be in a location that will wash truck tires prior to exit from the subject property. In the event that one of the access points to the subject property becomes an additional truck exit, that exit shall contain a tire wash system as described below. ~~This installation shall occur within 120 days of SEA approval or~~

~~prior to the issuance of the Non-Residential Use Permit (Non-RUP), whichever occurs first.~~ The tire wash system shall be maintained in accordance with the manufacturer's recommendations. Adequate resources (including spare parts) shall be maintained on-site in order to ensure that any needed repairs are made within a 24-hour period. ~~The area between the site's main entrance and the location of the tire wash shall be paved as depicted on the SEA Plat in order to~~ To ensure that the truck tires remain clean after ~~being washed.~~washing, a minimum of 400 feet of pavement shall be installed immediately after the tire wash and shall be followed by gravel between said pavement area and the exit at Furnace Road. In addition, "cattle guards" shall be employed to knock off mud and water in three locations: (i) before the tire wash; (ii) immediately after the tire wash; and (iii) at the landfill exit. Should the tire wash be inoperable, alternative (and equivalent) methods of removing mud from the tires shall be employed. Should said alternative methods be unavailable, no landfill materials shall be accepted until the tire wash is back in operation. Said new tire wash system shall be installed and in operation by December 31, 2014, unless DPWES determines that approval of a site plan revision or site plan amendment is necessary; then it shall be installed within six months after obtaining such approval.

~~17. In order to eliminate standing water from collecting in front of the site's entrance and to convey such water away from the site entrance, a drain (or other such improvement) properly functions to the satisfaction and approval as approved by DPWES shall be installed. This review shall occur prior to improvement shall be made prior to the issuance of the Non-RUP.~~

~~18.~~17. Prior to landfilling in any new operational areas beyond ~~the elevation~~those allowed pursuant to SEA 80-L/V-061 (290 feet above sea level), sediment basins meeting State and County regulations shall be ~~made prior to the issuance of the Non-RUP~~ provided in the Phase shown on the SEA Plat and maintained.*

~~19.~~18. All dikes, basins and stockpiles shall be seeded and mulched as soon as they are constructed.*

~~20.~~19. ~~Along the toes of slopes being worked~~Litter shall be controlled by the use of litter fences at the top of the landfill on each side of the active debris dumping areas along the working face~~, debris shall be controlled by the use of litter fences~~. Furthermore, a Litter Control program shall be prepared and implemented in accordance with Virginia's Solid Waste Management Regulations.*

~~21.~~20. A Groundwater Monitoring Program shall be prepared and implemented in accordance with Virginia's Solid Waste Management Regulations. A copy of all water test results, including groundwater, surface water and water quality, submitted to DEQ, shall also be submitted at the same time to the Fairfax County Health Department and the Solid Waste Program, DPWES. If, upon determination by DEQ and/or Fairfax County, any off-site private well is adversely affected by the landfill operation, the landfill owner will provide an

adequate potable water supply to any affected property within ~~five (5) days~~48 hours of being notified of such a determination.*

~~22.~~21. Dredge soils may be deposited at the landfill so long as the dredge soils entering the site meet the DEQ definition of acceptable waste for Construction and Demolition Debris landfills. Dredge soils from the Lake Barcroft Water District and from the Lorton Station Homeowners' Association, which meet the DEQ definition cited above, shall be accepted at the landfill at no cost. Dredge soils may be accepted after the cessation of landfill disposal activities and during the post-closure period in connection with landscaping improvements and installation of the final cap.*

~~23.~~22. The control of decomposition gases from the landfill shall be monitored through the implementation of a Gas Management Plan in accordance with Virginia's Solid Waste Management Regulations. A coarse aggregate gas collection layer with collection pipe and gas vents above breathing zones shall be installed as part of the cap in areas that are proposed for Phase 5 and Phase 6 recreational uses on top of the landfill, including parking areas~~, exercise stations, the overlook, the amphitheater, the pavilion, and the kite flying area~~, as reviewed and approved by DPWES. All proposed ~~recreational~~ structures on top of the landfill ~~, such as the gazebo, picnic shelters and amphitheater,~~ shall be open air, self-venting construction in order to prevent the buildup of landfill gases. Any closed structures ~~(except restroom facilities)~~, such as the leachate pump houses, shall be locked to prohibit public access.*

23. Recycling of construction and demolition debris (and related materials) shall continue to be carried out on the landfill as an accessory use. Recycling shall include the sorting, separation, storing, and processing (such as chipping, crushing, augmenting) of debris and recyclable materials (including, without limitation, the sorting of cardboard, metal, wood and inert material).

~~24. Cardboard recycling collection containers shall be provided on-site within 120 days of SEA approval or prior to the issuance of the Non-RUP, whichever occurs first. All cardboard must be pre-sorted from other wastes prior to entering the site. In addition, other facilities may be provided on-site within 120 days of SEA approval or prior to the issuance of the Non-RUP, whichever occurs first, as approved by DPWES and DEQ to support the separation, processing and marketing of recyclable materials.~~

~~25.~~24. A yearly contribution of $60,000 shall be provided to the County for use by DPWES for public outreach and education associated with recycling activities applicable to construction and demolition debris. Contributions shall begin August 1, 2009, and shall continue annually until the cessation of landfill disposal activities.*

~~26.~~25. An Emergency Contingency Plan shall be prepared and implemented in accordance with Virginia's Solid Waste Management Regulations. A list of the

landfill's equipment operators and their telephone numbers shall be made available to the County's Emergency Operations Center and kept current by the landfill operator.*

~~27.~~26. Landfill materials may be accepted and clearing or grading of any kind may take place on the site only between the hours of 7:00 A.M. to 5:~~00~~ 30 P.M. Monday through Friday and between 7:00 A.M. and ~~12~~3:00 PM ~~(noon)~~ on Saturdays. ~~However, within 120 days of SEA approval or prior to the issuance of the Non-RUP, whichever occurs first, t~~The landfill gates shall be permitted to open to customers at 5:30 A.M. Monday through Friday and at 6 A.M. on Saturdays to allow customers to queue on-site while waiting for landfill activities to commence. However, in no case shall landfill operations begin until the commencement of the normal business hours listed above. With prior approval from the Director of the Department of Public Works and Environmental Services, or his designated agent, the applicant may operate until 5:00 P.M. on Saturday on an emergency basis. This approval shall not be granted more than ten times per calendar year. In the event of a significant community emergency, as determined in writing by the County Executive, the landfill may temporarily operate outside of normal business hours.*

~~28.~~27. In an effort to solve mutual problems, the operator will work with, and will, as necessary, meet on a regular basis with the Mount Vernon Council and/or the South County Federation and/or any other groups (such as neighboring homeowner associations) as designated by the Mount Vernon District Supervisor.*

~~29.~~28. Per Sect. 9-205 of the Zoning Ordinance, the site shall be made available to the Director of DPWES or his representative in preparation of the annual report to the Board of Supervisors. As a result of the annual inspection, the Director of DPWES may recommend additional restrictions and limitations on the use to the Board.*

Buffering, Landscaping and Screening Conditions

~~30.~~29. Irrespective of the notation on the SEA Plat that says "approximate limits of clearing and grading~~",~~," the limits of clearing and grading as depicted on the SEA Plat shall be strictly adhered to. No new waste (debris) placement activity shall take place within ~~150~~ 75 feet of the greater of the RPA or the 100-year floodplain of Giles Run. There shall be no disturbance within the RPA except in those limited areas depicted on the SEA Plat and/or as permitted under the Chesapeake Bay Preservation Ordinance.*

~~31.~~30. Notwithstanding the limitations of other development conditions, the applicant shall be permitted to encroach into the limits of clearing and grading and/or the RPA without an SEA in order to conduct environmental monitoring and/or remediation activities to ameliorate a potential environmental and/or public health

hazard. Prior to the commencement of any such disturbance, the applicant shall obtain all necessary approvals from DPWES for the actions to be taken, and immediately following any such activities, shall restore the disturbed area to the extent required, subject to the approval of DPWES.*

32.31. All permanent berms located within buffer areas shall be landscaped to the satisfaction of the Urban Forest Management Division (UFMD), DPWESDepartment of Public Works and Environmental Services (DPWES). The materials used and their separation shall be in conformance with the landscaping standards of Article 13 of the Zoning Ordinance as may be applicable and as determined and approved by UFMD.*

33.32. A 50-foot wide continuous transitional screening An undisturbed buffer of existing trees shall be maintained along the northern boundary of the site as depicted on Sheet 21 of the SEA Plat and subject to UFMD approval.*

34.33. Along the southern property boundary, i.e., from the southernmost point of the property to a point approximately: (i) 600 feet along the southwestern boundary and (ii) 1,600800 feet along the southeastern boundary, a landscaped buffer of at least 100 feet shall be maintained. In any area along this boundary where a minimum of 100 feet of natural vegetation does not exist, additional landscaping shall be planted and/or the existing berm extending to provide and eight (8) foot high landscaped berm. BothThe landscaping and the berm shall be designed to the satisfaction of UFMD, DPWES. The materials used and their separation shall comply with the landscaping standards of Article 13 of the Zoning Ordinance, as determined by UFMD, DPWES.*

35. Sound levels emanating from the site shall not exceed those applicable levels specified in Chapter 108, Noise, of the County Code.*

Conditions for the LandscapingRestoration of the Property

36.34. A landscape plan for all phases shall be prepared and submitted for the review and approval of by UFMD, DPWES as part of the site plan approval for the landfill use. prior to each phase of the development and with each submission of the site plan. The landscape plan shall provide for revegetation/reforestation of the landfill as depicted on the SEA Plat and. Reforestation shall include suitable varieties of trees and shrubs which are to the satisfaction of and approval by UFMD, DPWES, consistent with that shown on the SEA Plat.* No new phase may be started prior to approval of its landscape plan.

37.35. Prior to site plan approval of the first site plan for any expansion of the landfill, an invasive species vegetation management plan shall be developed by the applicant's arborist for approval by UFMD and established in order to control non-native, invasive vegetation and promote the establishment of native meadow species. This plan shall be reviewed and approved by UFMD, DPWES, in consultation with FCPA.*

~~38.~~36. All landscaping installed by the applicant shall be maintained in good health by the applicant. Any such landscaping that should die within the initial three growing seasons shall be replaced by the operator/applicant within the first growing season after ~~six months of~~ its death, or as determined appropriate by UFMD.*

~~39.~~37 At the time of site plan approval~~, a~~ cash, bond, or a letter of credit and payable to the County of Fairfax shall be posted to ensure that the approved landscaping and revegetation plans are completed in an amount determined by UFMD, DPWES.*

38. Landscape planting shall be installed according to the landscape plan for each phase as generally depicted on the SEA Plat. Landscaping in one phase may begin before the completion of any prior phase to facilitate ongoing landfill operations. An interim vegetative cover shall be provided in disturbed areas where active landfill operations are complete and an interim landfill cap has been installed for any given area regardless of phase. Final landscaping, according to the approved landscape plan, shall be provided at the beginning of the first full planting season following the installation of the final landfill cap, subject to review and approval by UFMD. Final cover material shall be provided in accordance with DEQ design requirements, as approved in the Major Permit Amendment. Additional soil shall be placed on top of the final cover in those locations where the planting of trees is to occur, subject to the review and approval by UFMD and DEQ.

~~40. The approved revegetation/reforestation program shall be executed. Revegetation and reforestation of disturbed areas shall occur when the active landfilling operation is no more than two lifts above any previous revegetation/reforestation area, or face of the slope. (A lift is defined as the compacted layer of waste and the top layer of cover material.) As the faces of any two lifts are completed, the faces shall be compacted, seeded, mulched and tacked within ten days of the lifts' completion or as soon thereafter as feasible give weather conditions.~~

~~41. During the first full planting season following completion of each phase, the surface of such phase shall be covered with soil and planted with ground cover on an interim basis, and the shall be replanted in accordance with the landscape plan, subject to review and approval by UFM. Final cover material shall be provided in accordance with DEQ design requirements as approved in the Closure Plan. Additional soil shall be placed on top of the final cover in those locations where planting of trees is proposed. The final location, depth and composition of the additional soil shall be subject to the review and approval by UFM and DEQ.~~

~~42.~~39. Final ~~restoration~~ landscaping of the landfill shall be completed within one year after ~~of~~ the termination of landfilling operations on the property and completion of the full landfill cap.*

~~43. The height of the berm along Furnace Road shall not exceed 11 feet and the height of the fence on top of said berm shall not exceed 8 feet. The installation of the proposed berm and fencing shall be subject to VDOT and/or DEQ approval.~~

Transportation Conditions

~~44.~~40. Commercial ~~T~~truck traffic to and from the site ~~from the east, north and south shall be required to use only that portion of Furnace Road between U.S. Route 1 and the site entrance.~~ shall enter the site only from the south. ~~Truck traffic entering the site from the west via Route #123 shall use the section of Furnace Road between the site entrance and Route #123. Truck traffic entering the site from any direction shall avoid that section of Lorton Road between Furnace Road and I-95 (in the vicinity of Lorton School).~~ Commercial truck traffic shall be prohibited from making left turns into and right turns out of the landfill. The applicant shall retain its existing approved design at its main entrance and shall provide a similar restrictive design (as approved by the Virginia Department of Transportation) at its new southern entrance to accomplish this restriction. Signage shall be posted indicating the traffic restrictions at each of the site's entrances/exits. The operator shall ~~post this condition at the site entrance and~~ inform all regular customers of these restrictions in writing at least twice a year.*

~~45.~~41. Right-of-way to 44 feet from the existing centerline along the site's Furnace Road frontage and any ancillary easements shall be reserved for dedication to the Board of Supervisors in fee simple without encumbrances at no cost as shown on the SEA Plat. This right-of-way shall be dedicated upon demand ~~of~~ by Fairfax County and/or the Virginia Department of Transportation (VDOT)~~, but no later than January 1, 2019. Within 180 days following dedication, the proposed berm and fence within the reservation area shall be removed, as will the proposed raised concrete island at the site entrance, subject to approval by, and unless otherwise directed by VDOT~~. Should this right-of-way dedication be required prior to completion of landfill activities, the ~~berm and vegetated screening shall be permitted to remain until cessation of landfill activities subject to the execution of a license agreement between the applicant and Fairfax County~~raised concrete island at the main entrance to the landfill shall be permitted to remain, subject to VDOT approval.

~~46. If prior to site plan submission, an alternative to a left turn land from southbound Furnace Road has not been determined to be acceptable to the Virginia Department of Transportation (VDOT) and the Fairfax County Department of Transportation (FCDOT), a left turn lane into the site entrance shall be provided to a standard required by VDOT. Said turn lane (or alternative as determined acceptable by VDOT and FCDOT) shall be constructed and open to traffic prior to the issuance of the Non-Residential Use Permit (Non-RUP).~~

~~47. A right turn lane into the main entrance shall be provided as reviewed and approved by FCDOT and by VDOT. In order to provide adequate sight distance~~

~~at the main entrance, grading improvements shall be provided as directed by VDOT. These improvements shall be made prior to the issuance of the Non-RUP.~~

~~48.~~42. There shall be no access to the property for any landfilling purpose through the adjoining properties to the north. Pedestrian access shall not be permitted, except a trail connection to Lorton Valley may be provided in Phase 1 solely at the option of the Lorton Valley Homeowners Association, as depicted on the SEA Plat. ~~, as shown on the SEA Plat shall be permitted. *~~

~~49.~~43. Effective dust and gravel control measures shall be installed and maintained by the operator of the landfill. At a minimum, these measures shall include the full-time availability of a water tank truck and sweeper vehicle on-site.*

44. As depicted on the SEA Plat, beginning at the end of Phase 1 of operations after the berm is completed in that area, a second right turn in-only lane shall be constructed by the applicant, as approved by VDOT, as a new southern entrance-only for truck traffic travelling north on Furnace Road. No left turn into nor exits from the landfill shall be permitted at this second/southern entrance.

~~50. Prior to site plan approval, it shall be demonstrated that no trucks will be able to leave the site in a northbound direction. Any improvements needed to ensure the provision of an adequate turning radius at the site entrance for a right in and left out turn only for trucks shall be made prior to the issuance of the Non-RUP.~~

~~51. Subject to VDOT approval, maintenance of the existing ditch on the east side of the Furnace Road right-of-way shall be performed by the applicant prior to the issuance of the Non-RUP. Maintenance shall be limited to removing silted debris from the existing ditch sections for a portion from the site entrance to a point approximately 200 yards south to improve their ability to convey stormwater runoff from the surface of Furnace Road. This maintenance shall only be performed by the applicant once. The applicant shall diligently pursue permission from VDOT to perform this maintenance and shall commence such pursuit prior to the submission of any site plan. If unable to obtain such permission, the applicant shall demonstrate the failed attempts in writing to DPWES. Should VDOT not permit the applicant to perform this maintenance within 120 days of SEA approval, this development condition shall be null and void.~~

Renewable Energy Program

45. The applicant shall establish a Green Energy Park (GEP) on portions of the landfill as generally shown on the SEA Plat. Said GEP shall consist of renewable energy generation facilities including wind, geothermal infrastructure and methane gas collection systems and potentially solar panels, as interim uses during both the landfill operations and post-closure periods, as described below:

A. The applicant shall erect three wind turbines by the end of Phase 1 (the Phase 1 wind turbines, as depicted on Sheet 6 of the SEA Plat). Each of

the three wind turbines to be installed on-site by the applicant during Phase 1 shall be capable of producing at least one-quarter megawatt peak of electricity. The first turbine shall be installed no later than 18 months after all necessary Federal, Virginia, and Fairfax County approvals are obtained for the wind turbine, to include, but not limited to: (i) FAA and/or other Federal, State and County approvals; (ii) all requisite DEQ approvals, including the Major Permit Amendment; (iii) all requisite County approvals such as GRB, site plan, land development and structure permits, non-DEQ bonding, and Non-RUP, have been obtained; (iv) and any other approvals not noted for the wind turbines to operate on the landfill. The above referenced approvals are collectively referred to as Necessary Approvals. Necessary Approvals shall diligently be pursued by the applicant. The second and third turbines shall be installed within 36 months after having received all Necessary Approvals.

The applicant shall install an inverter or similar device in order to convert the electricity produced by the Phase 1 wind turbines from direct current to alternate current. During Phase 2 of development, at least 75% of electricity generated by the Phase 1 wind turbines after conversion to alternate current shall be consumed on-site by landfill facilities or activities.

Fifty percent of any revenue, in excess of 2.5 cents per kilowatt hour, the applicant receives from the sale of the electricity produced shall be contributed to the County of Fairfax (the County) within 30 days after receipt of such revenue. The applicant shall submit a quarterly report to DPWES documenting the electricity produced.

For any electricity produced by the Phase 1 wind turbines and consumed on-site, the applicant shall contribute to the County 50% of the price (over 2.5 cents) it would have paid to a third party provider for the 'electricity supply service' net of taxes and distribution charges.

The applicant shall construct a foundation for the Phase 1 wind turbines, the design for which shall be reviewed and approved by DEQ. The Phase 1 wind turbines shall be operated for their useful life or until the initiation of Phase 5 landfilling activities requires their removal.

B. The applicant also shall install a methane gas recovery system within the landfill and shall deliver to the County, at a mutually agreed upon nearby location (such as Landfill Energy Systems, Inc.), methane gas sufficient to generate the equivalent of an average of two million kilowatt hours annually of electricity, with the intent that it will be used by the County to generate electricity sufficient for the normal operating needs of County-owned facility(ies) and/or for use by County-owned facilities as a fuel for operations, such as the Noman Cole Water Pollution Control Plant. The applicant shall pay the incremental cost, if any, of processing the methane

gas so that it is suitable for combustion by industry-standard co-generation infrastructure. Delivery of the methane gas shall begin within 18 months of site plan, Non-RUP, and DEQ approvals for the SEA landfill expansion and continue until the cessation of landfill activities or until December 31, 2040, whichever occurs first. Should the applicant fail to provide sufficient methane gas to generate the 2 million kilowatt hours in any given calendar year, it must pay the County $0.125 for each equivalent kilowatt of electricity that cannot be generated due to the unsupplied methane gas, up to a maximum payment of $250,000 in any given calendar year. After 2040, the applicant shall provide to the County 50% of the methane gas that is recovered from the methane recovery system and will continue to do so each year until the DEQ post-closure period ends.

C. Within 24 months after having received all necessary approvals for implementation of the SEA landfill expansion and approval of PCA 2000-MV-034 at Tax Map Parcel 113-1 ((1)) 12 and 13 (the PCA Property), as proposed, the applicant shall install a geothermal recovery infrastructure at the landfill with capacity to support 1 million square feet of building structure(s) and shall provide an access point for hook-up to such systems by the County on the boundary of the PCA Property. The Applicant shall maintain the geothermal recovery infra-structure and related access point until the end of the DEQ post-closure period ends.

D. As depicted on the SEA Plat, in Phase 4, the applicant shall create an approximately 10-acre platform within the southern portion of the operations area to facilitate the provision of solar panels by the applicant and/or others.

E. By the end of Phase 5, the applicant shall have established an approximately 40-acre platform to facilitate future creation of a larger GEP, which may include the potential for up to 12 wind turbines (or wind infrastructure sufficient to produce at least 3 megawatt peak electric power capacity), solar panels (or solar conversion infrastructure sufficient to produce at least 7.5 megawatt peak electric power capacity) and/or more advanced technologies (referred to as the Full Green Energy Park "Full GEP") to be provided by public and/or private entities with the applicant's agreement.

F. Prior to establishment of the Phase 5 wind turbines, the applicant and/or others, as appropriate, shall file a variance request to allow the wind turbine to exceed the height limitation in the R-1 District or should the Board of Supervisors amend the Zoning Ordinance to permit an increase in height for Category 2 electrical generating facilities the applicant shall be subject to the approved Zoning Ordinance Amendment.

46. Wind turbines on the subject property shall not exceed 180 feet in height (to include the rotor blades) and shall be in general accordance with the maximum dimensions, as shown on Sheet 14 of the SEA Plat.

47. The following shall be paid by the applicant to the Fairfax County Board of Supervisors for the respective renewable energy generating facility not provided within the timeframe specified, in the following amounts in lieu of said facility: (i) $1,000,000 for each Phase 1 wind turbine not installed within 4 years of necessary approvals for the landfill expansion; (ii) $6,000,000 should the methane recovery system not be installed within 4 years of receiving the necessary approvals for the landfill expansion (while still being committed to pay $250,000 or to supply two million kilowatt hours annually); and (iii) $1,000,000 should the geothermal not be installed as approved by DEQ within 4 years of receiving the necessary approvals for the landfill expansion. In lieu of said payment penalty, the applicant may expend one or more of the penalty amounts on installation on-site of renewable energy technology other than that technology not timely provided, subject to a Board motion authorizing such expenditure and installation. Said funds shall be payable to Fairfax County with consideration toward local community needs in the Lorton/South County area, as determined by the Board. The Zoning Administrator may grant extensions to the above penalty payment periods if it is determined that the applicant diligently has pursued said necessary approvals.

Other Public Contributions by the Applicant

48. Subject to the receipt of the necessary approvals for the landfill expansion, the applicant has agreed to contribute $15,000,000 to the Board in installments of $750,000 each per year beginning no later than January 31, 2019, and ending no later than January 31, 2038. Said funds shall be payable to Fairfax County with consideration toward local community needs in the Lorton/South County area, as determined by the Board. These funds shall be in addition to the separate recreation contribution below and the other Green Energy Program expenditures and contributions to the County committed herein by this applicant.

49. In addition to the above contribution, the applicant shall contribute $3,200,000 to the Fairfax County Park Authority no later than January 31, 2019, for use for recreational facilities in the Lorton/South County area subject to all necessary approvals for the landfill expansion.

50. As shown on Sheets 6 through 14 of the SEA Plat and subject to DEQ approval, an "Observation Point" shall be installed by the applicant during Phase 1 in the general location of the Phase 1 wind turbines and be open for visitors within 120 days after the three turbines begin operation. The Observation Point and an ancillary shuttle service shall only be available for controlled access and remain in operation until the DEQ post-closure period ends, in accordance with the following:

A. Access to the Observation Point shall be controlled solely by the applicant via shuttle service at no cost to visitors. The applicant may require that each visitor execute a liability waiver and release. Visitors shall park at the solar farm located on the contiguous PCA 2000-MV-034 property located at Tax Map Parcels 113-1((1)) 12 and 13 (PCA Property) and travel on-site via the applicant's shuttle service and escorted by the landowner up to the Observation Point.

B. The applicant shall provide a parking easement at the PCA Property for the duration of the operation of the off-site visitor parking/shuttle service area. The parking easement shall be recorded in the land records with a copy provided to DPWES.

C. Parking at the off-site parking area on the PCA Property shall only be permitted for the Observation Point visitors and shuttle service and for maintenance vehicles while providing maintenance to the electrical generating facilities at the PCA Property and to the PCA property.

D. The applicant shall provide for two established times (and duration) for tours each month from April 1 to November 30 and also allow a limited number of additional tours to be scheduled with ample notice. Each regular and additional tour may require a minimum of five (5) and may be limited to no more than twenty (20) visitors to occur. The frequency of regularly scheduled tours may be reduced upon demonstration by the applicant to the Zoning Administrator to reflect actual demand and/or current weather conditions. The applicant may implement a pre-registration system.

E. In addition to the above tours, the applicant shall collaborate with the County upon request by any member of the Board of Supervisors to host pre-scheduled community special events at the Observation Point. For each special event considered, the applicant shall determine whether the proposed scope, timing and number of participants may be accommodated in a safe manner that does not interfere with landfill and other operations, including the Green Energy Park. Scheduling shall be proposed through the applicant and shall be limited as to the number of special events (not to exceed three in any calendar year) and the number of participants at each, as determined by the applicant. Special events shall be restricted to the Observation Point area and occur only from April 15 to November 15, outside of landfill operating hours (unless otherwise agreed to by the applicant). The County shall be responsible for security and all other logistics. The events shall be consistent with the nature of a working landfill and the GEP, and shall not involve erection of tents or other structures, or involve food or alcohol. Each participant may be required to execute a release of liability in favor of the applicant and shall be transported to and from the site only in shuttle-type vehicles approved by the applicant and the applicant shall not be responsible to provide such

transportation. The applicant, in its sole discretion, may decline or cancel proposed special events due to safety, inclement weather and/or other conditions or concerns related to landfill and other operations. The applicant shall attempt to accommodate such special events until the DEQ post-closure period ends.

F. Outdoor style wooden bench seating shall be provided for up to 20 visitors, with a lectern at the head of the benches to provide for speakers.

G. Tourist style telescopes (on posts) shall be provided at the east and west flanks of the Observation Point area. Actual location of each telescope could vary from edge of the seating area to ridges of the elevation.

H. Information signs describing the "Green Energy Triangle," history of the area and local attractions shall be provided.

I. The Observation Point shall be open for tours beginning during Phase 1 (as provided above) until the beginning of Phase 5, generally as depicted on the SEA Plat. At the beginning of Phase 5, when the Phase 1 wind turbines are removed (to permit filling and capping within the southern platform area), the Observation Point and its related features shall be relocated northward, with the understanding that its location likely will need to be further moved as Phase 5 landfill operations and capping proceed toward closure. Thus, during Phase 5 there may be gaps and transition periods (not to exceed 18 months cumulatively) during which no Observation Point shall be available due to filling, settling and capping activities.

51. The applicant shall provide, within 12 months of having received all necessary approvals for the Phase 1 wind turbines, $200,000 to the Board as a contribution toward an educational feature available to the public which describes the renewable energy operations on the applicant's properties as well as those renewable energy activities occurring on neighboring County land, and provides information on renewable energy.

52. The applicant shall provide to the County operational data (operating cost, productivity, weather and revenue information) equipment specifications, and maintenance data related to its renewable energy park on an annual basis over the GEP's operating life. Said data shall be available electronically for access and use by the general public and academic bodies, and for research.

53. The applicant's consultant shall prepare a study, consistent with U.S. Fish & Wildlife Service's Land-Based Wind Energy Guidelines (Guidelines), which provide a structured, scientific process for addressing wildlife conservation concerns at all stages of land-based wind energy development and examines migratory bird patterns, including endangered species. The Guidelines consist

of 5 tiers and the applicant shall submit a report based on each tier to the Department of Planning and Zoning (DPZ) and to DPWES with Tiers 1-3 submitted prior to the issuance of the building permit for installation of the first Phase 1 wind turbine. Tiers 4-5 shall be submitted prior to the end of Phase 5. Should the 12 wind turbines be installed in Phase 5, the applicant or operator shall be subject to the Guidelines and shall submit reports in accordance with each of the five tiers.

Recreational Uses

54. As generally depicted on Sheet 21 of the SEA Plat, in Phase 1 an approximately 5.2 acre private recreation area shall be provided by the applicant at the sole option of the Lorton Valley Homeowners' Association (LVHOA) and made available for use solely by LVHOA residents and their guests; if provided, said private recreation area and land area shall be conveyed in fee simple to LVHOA. In the event LVHOA chooses not to accept said private recreation area, then the recreation area shall not be constructed and this land shall not be conveyed, and shall remain in undisturbed open space. Regardless of conveyance, a 50-foot-wide treed buffer shall be provided along the entire northern property boundary and consist of a combination of existing, mature trees and supplemental plantings shall be installed by the applicant and shall be subjected to a conservation easement prior to conveyance of the recreation area to LVHOA. Grading shall be permitted within this buffer area, as determined by UFMD, as necessary for installation of the adjacent natural surface trail and/or other improvements identified immediately below. Adjacent to this buffer area, a natural trail and any off-site trail connection, exercise stations along the trail, a multi-purpose open space area, a dog park, and/or picnic tables shall be provided by the applicant at the sole option of and if agreed to by the LVHOA at any time prior to installation of the third Phase 1 wind turbine.

55. As generally depicted on Sheets 10 and 14 of the SEA Plat, an outdoor baseball hitting range/cages may be provided during the Phase 5 DEQ post-closure period, if permitted by DEQ, or after the DEQ post-closure period ends. No outdoor lighting shall be permitted.

56. As generally depicted on Sheet 45 of the SEA Plat, and as approved by DPWES on separate site plan submission(s), active recreation uses consisting of baseball hitting range(s), a golf driving range and/or a radio controlled aircraft field may be provided by the applicant or lessee during Phase 6 of development either: (a) subsequent to cessation of the potential 12 wind turbines and/or solar panels on the 40-acre platform or a portion thereof, or (b) upon the end of DEQ post-closure period. There shall be no outdoor lighting permitted for these uses.

57. If requested, the applicant shall assist with site preparation for a 2 to 3-acre area designated in Apple Orchard Recreation Area or in the vicinity of Laurel Hill Park, for community garden use. Site preparation shall be limited solely to

clearing and grading no more than three acres of land to be used for such garden. The applicant shall not be responsible for any additional support (except as specifically provided below), including any road improvements or impervious surface improvements, construction of any structure or any other site improvements. In collaboration with the entity managing said community garden, the applicant shall provide for use at the community garden throughout the landfill's operating life, from its recycling operation, reasonable amounts of recovered soils, crushed stone, mulch and other recovered materials to support garden activities. The applicant shall make a onetime contribution of $50,000 to the entity managing the garden operation for the materials and fees related to creation of the garden if and when all County approvals have been secured by such entity to construct and operate the garden. As may be requested by such entity, the applicant shall provide soil testing on a one time basis for quality, composition, and drainage provided such testing occurs in conjunction with any testing the applicant carries out as part of its landfill site plan approval process. This development condition shall be null and void and the applicant shall not be bound to provide such support if the garden is not established prior to January 1, 2019.

~~52. The proposed park is for passive recreation use only. All park improvements shall be provided by the applicant as depicted on the SEA Plat with each applicable phase of development and shall be constructed to FCPA standards in consultation with FCPA staff.~~

~~53. Written notice shall be given to FCPA, DPWES, and the Department of Planning and Zoning (DPZ) when formal release of the landfill property owner from liability is granted by DEQ. The entire site shall be dedicated in fee simple to the FCPA within 30 days following the formal release of the landfill property owner from liability by DEQ. Prior to the site becoming a public park, a 2232 shall be submitted by FCPA for the review and approval of the Planning Commission.~~

~~54. Interim public access easements shall be provided over all trails and those on-site park facilities intended for public access as depicted on the SEA Plat, prior to transfer of the entire site in fee simple to FCPA. Prior to site plan approval, an agreement shall be executed between FCPA and the applicant regarding issues such as liability and maintenance for areas subject to public access prior to dedication of the property to FCPA.~~

~~55. Off-site trail connections to the north and west shall be provided by the applicant as depicted on the SEA Plat and the attached exhibit. The connection to the north is subject to the granting of necessary easements from the Lorton Valley Homeowners Association (HOA). In addition, an off-site trail shall be constructed to the Laurel Hill parkland, Greenway, and Sportsplex area, subject to the granting of rights of entry by Fairfax County. This proposed public access trail shall be an eight-foot wide asphalt trail (Type I) within a public access trail easement of 12 feet. The exact location of the trail connection to portion of Laurel Hill Park shall be determined in cooperation with the FCPA Trails Coordinator and FCPA. Prior to site plan submission, the applicant shall~~

~~diligently pursue acquisition of these easements and permissions, and, if unable to obtain such permission, shall demonstrate the failed attempts in writing to DPWES. Should the necessary easements and permissions not be provided to permit the off-site trail connections within 90 days of site plan approval, the applicant shall be relieved of this commitment.~~

~~56. If the proposed restroom facilities are to be served by anything other than public sewer and water (such as an onsite sewage disposal system and/or a water well system), then installation of these facilities shall be coordinated with and approved by the Health Department.~~

The above proposed conditions are staff recommendations and do not reflect the position of the Board of Supervisors (Board) unless and until adopted by the Board.

This approval, contingent on the above noted conditions, shall not relieve the applicant from compliance with the provisions of any applicable ordinances, regulations, or adopted standards. The applicant ~~himself~~ shall be responsible for obtaining the required Non-Residential Use Permit through established procedures, and this Special Exception Amendment shall not be valid until this has been ~~complied with~~ accomplished.

Pursuant to Section 9-015 of the Zoning Ordinance, this special exception amendment shall automatically expire, without notice, ~~30~~ 48 months after the date of approval unless ~~a site plan has been approved for landfilling in any new operational areas beyond the elevation allowed pursuant to SE 80-L/V-061 (290 feet above sea level).~~ the use has been established or construction has commenced and been diligently prosecuted. The Board of Supervisors may grant additional time to establish the use or to commence construction if a written request for additional time is filed with the Zoning Administrator prior to the date of expiration of the special exception amendment. The request must specify the amount of additional time requested, the basis for the amount of time requested and an explanation of why additional time is required.

SPECIAL EXCEPTION AFFIDAVIT

DATE: February 12, 2014
(enter date affidavit is notarized)

I, Charles B. Fromm, do hereby state that I am an
(enter name of applicant or authorized agent)

121265b

(check one) [ ] applicant
[✓] applicant's authorized agent listed in Par. 1(a) below

in Application No.(s): SEA 80-L/V-061-2
(enter County-assigned application number(s), e.g. SE 88-V-001)

and that, to the best of my knowledge and belief, the following information is true:

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1(a). The following constitutes a listing of the names and addresses of all **APPLICANTS, TITLE OWNERS, CONTRACT PURCHASERS,** and **LESSEES** of the land described in the application,* and, if any of the foregoing is a **TRUSTEE,**** each **BENEFICIARY** of such trust, and all **ATTORNEYS** and **REAL ESTATE BROKERS,** and all **AGENTS** who have acted on behalf of any of the foregoing with respect to the application:

(**NOTE:** All relationships to the application listed above in **BOLD** print are to be disclosed. Multiple relationships may be listed together, e.g., **Attorney/Agent, Contract Purchaser/Lessee, Applicant/Title Owner**, etc. For a multiparcel application, list the Tax Map Number(s) of the parcel(s) for each owner(s) in the Relationship column.)

NAME (enter first name, middle initial, and last name)	**ADDRESS** (enter number, street, city, state, and zip code)	**RELATIONSHIP(S)** (enter applicable relationships listed in **BOLD** above)
Furnace Associates, Inc.(1) Agents: Charles B. Fromm Conrad R. Mehan Gary R. Hewes Edward Paul Farrell, Jr. Clayton L. Walton Eric K. Wallace Marc L. Bourhis Larry W. Bayne David R. Howard, Jr.	11220 Assett Loop, Suite 201 Manassas, VA 20109	Applicant/Title Owner of Parcels 113-1-((1))-5, 7, 8 and 113-3-((1))-1, 2, 4
Hunton & Williams LLP(10)	1751 Pinnacle Drive, Suite 1700 McLean, VA 22102	Attorneys/Agents for Applicant
Francis A. McDermott John C. McGranahan, Jr. Nicholas H. Grainger	1751 Pinnacle Drive, Suite 1700 McLean, VA 22012	Attorneys/Agents for Applicant

(check if applicable) [✓] There are more relationships to be listed and Par. 1(a) is continued on a "Special Exception Attachment to Par. 1(a)" form.

* In the case of a condominium, the title owner, contract purchaser, or lessee of 10% or more of the units in the condominium.

** List as follows: Name of trustee, Trustee for (name of trust, if applicable), for the benefit of: (state name of each beneficiary).

121265b

Special Exception Attachment to Par. 1(a)

DATE: February 12, 2014
(enter date affidavit is notarized)

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

(**NOTE**: All relationships to the application are to be disclosed. Multiple relationships may be listed together, e.g., **Attorney/Agent, Contract Purchaser/Lessee, Applicant/Title Owner**, etc. For a multiparcel application, list the Tax Map Number(s) of the parcel (s) for each owner(s) in the Relationship column.)

NAME (enter first name, middle initial, and last name)	**ADDRESS** (enter number, street, city, state, and zip code)	**RELATIONSHIP(S)** (enter applicable relationships listed in **BOLD** above)
Elaine O'Flaherty Cox Susan K. Yantis	1751 Pinnacle Drive, Suite 1700 McLean, VA 22102	Planners/Agents for Applicant
Jeannie A. Mathews	1751 Pinnacle Drive, Suite 1700 McLean, VA 22102	Paralegal/Agent for Applicant
The BC Consultants, Inc.(11) Agents: James H. Scanlon Matthew S. Lawrence Dennis D. Dixon	12600 Fair Lakes Circle, Suite 100 Fairfax, VA 22033	Engineers/Agents for Applicant
Geosyntec Consultants, Inc.(12) Agents: Scott K. Sheridan Kyle E. LaClair Thomas B. Ramsey Jeremy W. F. Morris	9211 Arboretum Parkway, Suite 200 Richmond, VA 23832	Environmental Engineers/Agents for Applicant
Lecos & Associates, LLC(13) Agent: William D. Lecos	6324 Beachway Drive Falls Church, VA 22044	Consultant/Agent for Applicant
M. J. Wells & Associates, Inc.(14) Agents: William F. Johnson Robin L. Antonucci Kevin R. Fellin Brian J. Horan	1420 Spring Hill Road, Suite 600 McLean, VA 22102	Traffic Consultants/Agents for Applicant
Wetland Studies and Solutions, Inc.(15) Agents: Michael S. Rolband • Kimberly A. Snyder Mark W. Headley Benjamin N. Rosner	5300 Wellington Branch Drive, Suite 100 Gainesville, VA 20155	Cultural and Natural Resource Consultants/Agents for Applicant

(check if applicable) [ ] There are more relationships to be listed and Par. 1(a) is continued further on a "Special Exception Attachment to Par. 1(a)" form.

 • Added since the printing of the 2/13/14 Staff Report.

SPECIAL EXCEPTION AFFIDAVIT

121265b

DATE: February 12, 2014
(enter date affidavit is notarized)

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number(s))

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1(b). The following constitutes a listing*** of the **SHAREHOLDERS** of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 10 or less shareholders, a listing of all of the shareholders:

(**NOTE**: Include **SOLE PROPRIETORSHIPS, LIMITED LIABILITY COMPANIES,** and **REAL ESTATE INVESTMENT TRUSTS** herein.)

CORPORATION INFORMATION

NAME & ADDRESS OF CORPORATION: (enter complete name and number, street, city, state, and zip code) (1)Furnace Associates, Inc.
11220 Assett Loop, Suite 201
Manassas, VA 20109

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.

[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.

[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF SHAREHOLDERS: (enter first name, middle initial and last name)
EnviroSolutions Real Property Holdings, Inc.(2)

(check if applicable) [✓] There is more corporation information and Par. 1(b) is continued on a "Special Exception Affidavit Attachment 1(b)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. ***In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.*** Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

121265b

Special Exception Attachment to Par. 1(b)

DATE: February 12, 2014
(enter date affidavit is notarized)

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

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NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(2)EnviroSolutions Real Property Holdings, Inc.
11220 Assett Loop, Suite 201
Manassas, VA 20109

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
EnviroSolutions Holdings, Inc.(3)

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NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(3)EnviroSolutions Holdings, Inc.
11220 Assett Loop, Suite 201
Manassas, VA 20109

DESCRIPTION OF CORPORATION: (check one statement)

[ ] There are 10 or less shareholders, and all of the shareholders are listed below.
[✓] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
ASOF II Investments, LLC(4)
NZC Guggenheim Master Fund Limited(6)
PennantPark Investment Corporation(9)

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(check if applicable) [✓] There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

121265b

Special Exception Attachment to Par. 1(b)

DATE: February 12, 2014
(enter date affidavit is notarized)

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

==========

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(4)ASOF II Investments, LLC
299 Park Avenue, 34th Floor
New York, NY 10171

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
American Securities Opportunities Fund II (B), L.P. (Does not own 10% of Furnace Associates, Inc.)
American Securities Opportunities Fund II, L.P.(5)

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NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(6)NZC Guggenheim Master Fund Limited (a Cayman Islands exempted company)
c/o Guggenheim Investment Management, LLC
135 East 57th Street
New York, NY 10022

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
NZC Guggenheim Fund LLC(7)
NZC Guggenheim Fund Ltd.(8)

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(check if applicable) [✓] There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

Special Exception Attachment to Par. 1(b)

121265

DATE: February 12, 2014
(enter date affidavit is notarized)

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

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NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(7)NZC Guggenheim Fund LLC
c/o Guggenheim Investment Management, LLC
135 East 57th Street
New York, NY 10022

DESCRIPTION OF CORPORATION: (check one statement)

[ ] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[✓] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)

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NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(8)NZC Guggenheim Fund Ltd.
c/o Guggenheim Investment Management, LLC
135 East 57th Street
New York, NY 10022

DESCRIPTION OF CORPORATION: (check one statement)

[ ] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[✓] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)

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(check if applicable) [✓] There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

Special Exception Attachment to Par. 1(b)

DATE: February 12, 2014
(enter date affidavit is notarized)

121265b

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

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NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(9)PennantPark Investment Corporation
590 Madison Avenue, 15th Floor
New York, NY 10022

DESCRIPTION OF CORPORATION: (check one statement)

[ ] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[✓] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
Publicly Traded

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NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(11)The BC Consultants, Inc.
12600 Fair Lakes Circle, Suite 100
Fairfax, VA 22033

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
James H. Scanlon (sole shareholder)

==========

(check if applicable) [✓] There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

Special Exception Attachment to Par. 1(b)

DATE: February 12, 2014
(enter date affidavit is notarized)

121265b

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

==========

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(12)Geosyntec Consultants, Inc.
9211 Arboretum Parkway, Suite 200
Richmond, VA 23832

DESCRIPTION OF CORPORATION: (check one statement)

[ ] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[✓] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)

==========

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(13)Lecos & Associates, LLC
6324 Beachway Drive
Falls Church, VA 22044

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
William D. Lecos

==========

(check if applicable) [✓] There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

Special Exception Attachment to Par. 1(b)

1212656

DATE: February 12, 2014
(enter date affidavit is notarized)

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

==========

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(14)M. J. Wells & Associates, Inc.
1420 Spring Hill Road, Suite 600
McLean, VA 22102

DESCRIPTION OF CORPORATION: (check one statement)

[ ] There are 10 or less shareholders, and all of the shareholders are listed below.
[✓] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
M. J. Wells & Associates, Inc. Employee Stock Ownership Trust (ESOT) (All employees are eligible Plan participants; however, none owns 10% or more of any class of stock.)

==========

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
(15)Wetland Studies and Solutions, Inc.
5300 Wellington Branch Drive, Suite 100
Gainesville, VA 20155

DESCRIPTION OF CORPORATION: (check one statement)

[✓] There are 10 or less shareholders, and all of the shareholders are listed below.
[ ] There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
[ ] There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF THE SHAREHOLDERS: (enter first name, middle initial, and last name)
Michael S. Rolband

==========

(check if applicable) [ ] There is more corporation information and Par. 1(b) is continued further on a "Special Exception Attachment to Par. 1(b)" form.

1212656

SPECIAL EXCEPTION AFFIDAVIT

DATE: February 12, 2014
(enter date affidavit is notarized)

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number(s))

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1(c). The following constitutes a listing*** of all of the **PARTNERS,** both **GENERAL** and **LIMITED**, in any partnership disclosed in this affidavit:

PARTNERSHIP INFORMATION

PARTNERSHIP NAME & ADDRESS: (enter complete name, and number, street, city, state, and zip code)
(5)American Securities Opportunities Fund II, L.P.
299 Park Avenue, 34th Floor
New York, NY 10171

(check if applicable) [ ] The above-listed partnership has no limited partners·

NAMES AND TITLE OF THE PARTNERS (enter first name, middle initial, last name, and title, e.g. **General Partner, Limited Partner, or General and Limited Partner)**

GENERAL PARTNER:

ASOF Associates II, LLC (Does not own 10% of Furnace Associates, Inc.)

LIMITED PARTNERS:

There are 83 limited partners/private equity investors, none of whom owns 10% or more of Furnace Associates, Inc.

(check if applicable) [✓] There is more partnership information and Par. 1(c) is continued on a "Special Exception Affidavit Attachment to Par. 1(c)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. ***In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.*** Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

Special Exception Attachment to Par. 1(c)

121265b

DATE: February 12, 2014
(enter date affidavit is notarized)

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

PARTNERSHIP NAME & ADDRESS: (enter complete name & number, street, city, state & zip code)

(10)Hunton & Williams LLP
1751 Pinnacle Drive, Suite 1700
McLean, VA 22102

(check if applicable) [✓] The above-listed partnership has no limited partners·

NAMES AND TITLES OF THE PARTNERS: (enter first name, middle initial, last name, and title, e.g., **General Partner, Limited Partner, or General and Limited Partner**)

Robert A. Acosta-Lewis
Lawrence C. Adams
Michael F. Albers
Kenneth J. Alcott
Fernando C. Alonso
Walter J. Andrews
Charles E. G. Ashton
Chinawat Assavapokee (nmi)
L. Scott Austin
Ian Phillip Band
Sean M. Beard
John J. Beardsworth, Jr.
Ryan A. Becker
Steven H. Becker
Stephen John Bennett
Melinda R. Beres
Lucas Bergkamp (nmi)
Lon A. Berk
Mark B. Bierbower
Stephen R. Blacklocks
Jeffry M. Blair
Matthew P. Bosher
James W. Bowen
Lawrence J. Bracken, II
James P. Bradley
Sheldon T. Bradshaw
David F. Brandley, Jr.
Craig A. Bromby
Benjamin P. Browder
A. Todd Brown, Sr.
Tyler P. Brown
F. William Brownell
Kevin J. Buckley
Kristy A. Niehaus Bulleit
Joseph B. Buonanno
Nadia S. Burgard
Eric R. Burner
M. Brett Burns
P. Scott Burton
Ellis M. Butler
Ferdinand A. Calice
Matthew J. Calvert
Daniel M. Campbell
Thomas H. Cantrill
Curtis G. Carlson
Jean Gordon Carter
Charles D. Case
James N. Christman
Whittington W. Clement
Herve' Cogels (nmi)
Cassandra C. Collins
Stacy M. Colvin
S. Gregory Cope
Ashley Cummings (nmi)
Alexandra B. Cunningham
Samuel A. Danon
Barry R. Davidson
John A. Decker
John J. Delionado
Stephen P. Demm
Dee Ann Dorsey
Edward L. Douma
Colleen P. Doyle
Alison M. Dreizen
Sean P. Ducharme
Deidre G. Duncan
Roger Dyer (nmi)
Frederick R. Eames
Heather Archer Eastep
Maya M. Eckstein
W. Jeffery Edwards
John C. Eichman
Emmett N. Ellis
Edward W. Elmore, Jr.
Frank E. Emory, Jr.
Juan C. Enjamio
John D. Epps
Phillip J. Eskenazi
Joseph P. Esposito
Kelly L. Faglioni
Susan S. Failla
Eric H. Feiler
Kevin C. Felz
Edward F. Fernandes
Jamillia Padua Ferris
Norman W. Fichthorn
Andrea Bear Field
Kevin J. Finto
Melanie Fitzgerald (nmi)
Michael F. Fitzpatrick, Jr.
Robert N. Flowers
William M. Flynn
Laura M. Franze
David S. Freed
Lauren E. Freeman
Steven C. Friend
Edward J. Fuhr
Charles A. Gall
Daniel C. Garner
Douglas M. Garrou
Richard D. Gary
Kevin M. Georgerian
John T. Gerhart, Jr.
Jeffrey W. Giese
Neil K. Gilman
C. Christopher Giragosian
Douglas S. Granger
Laurie A. Grasso
J. William Gray, Jr.
Charles E. Greef
Christopher C. Green
Robert J. Grey, Jr.
Greta T. Griffith
Brett L. Gross
Bradley W. Grout
Steven M. Haas
Brian L. Hager
Robert J. Hahn
Jarrett L. Hale
Leslie S. Hansen
Eric J. Hanson
Ronald M. Hanson
Jason W. Harbour

(check if applicable) [✓] There is more partnership information and Par. 1(c) is continued further on a "Special Exception Attachment to Par. 1(c)" form.

Special Exception Attachment to Par. 1(c)

DATE: February 12, 2014
(enter date affidavit is notarized)

121265b

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

PARTNERSHIP NAME & ADDRESS: (enter complete name & number, street, city, state & zip code)

(10)Hunton & Williams LLP (continued)
1751 Pinnace Drlive, Suite 1700
McLean, VA 22102

(check if applicable) [✓] The above-listed partnership has no limited partners.

NAMES AND TITLES OF THE PARTNERS: (enter first name, middle initial, last name, and title, e.g., **General Partner, Limited Partner, or General and Limited Partner**)

Jeffrey L. Harvey
John D. Hawkins
Rudene Mercer Haynes
Mark S. Hedberg
Gregory G. Hesse
David A. Higbee
Thomas Y. Hiner
D. Bruce Hoffman
Robert E. Hogfoss
John R. Holzgraefe
Cecelia Philipps Horner
George C. Howell, III
Paul C. Huck, Jr.
Kevin F. Hull
Donald P. Irwin
Jamie Zysk Isani
Judith H. Itkin
Makram B. Jaber
Timothy L. Jacobs
Lori Elliott Jarvis
Matthew D. Jenkins
Harry M. Johnson, III
James A. Jones, III
Kevin W. Jones
Laura Ellen Jones
Dan J. Jordanger
Roland Juarez (nmi)
Thomas R. Julin
W. Alan Kailer
Andrew Kamensky (nmi)
Michael G. Keeley
G. Roth Kehoe, II
David A. Kelly
Douglas W. Kenyon
Michael C. Kerrigan
Ryan T. Ketchum
Scott H. Kimpel
Robert A. King
Edward B. Koehler
John T. Konther
Torsten M. Kracht
Christopher G. Kulp
David Craig Landin
Gregory F. Lang
Andrew W. Lawrence
Daniel M. LeBey
Bradley T. Lennie
L. Steven Leshin
Catherine D. Little
Steven R. Loeshelle
David C. Lonergan
Nash E. Long, III
Kirk A. Lovric
David S. Lowman, Jr.
Kimberly C. MacLeod
Michael J. Madden, Jr.
Tyler Maddry (nmi)
Manuel E. Maisog
Douglas M. Mancino
Alan J. Marcuis
• Rori H. Malech
Brian R. Marek
Fernando Margarit (nmi)
Laura C. Marshall
Thelma Marshall (nmi)
Jeffrey N. Martin
John S. Martin
J. Michael Martinez de Andino
Walfrido J. Martinez
Laurie Uustal Mathews
John Gary Maynard, III
William H. McBride
Michael C. McCann
T. Allen McConnell
Francis A. McDermott
Alexander G. McGeoch
John C. McGranahan, Jr.
Gustavo J. Membiela
Mark W. Menezes
Gary C. Messplay
Peter J. Mignone
Patrick E. Mitchell
Jack A. Molenkamp
T. Justin Moore, III
Thurston R. Moore
Robert J. Morrow
Ann Marie Mortimer
Michael J. Mueller
Eric J. Murdock
Ted J. Murphy
Thomas P. Murphy
David A. Mustone
James P. Naughton
Wim Nauwelaerts (nmi)
Eric J. Nedell
Michael Nedzbala (nmi)
William L. Newton
Henry V. Nickel
Lonnie D. Nunley, III
Michael A. Oakes
Peter K. O'Brien
John T. O'Connor
Leslie A. Okinaka
John D. O'Neill, Jr.
Michael A. O'Shea
Brian V. Otero
Raj Pande (nmi)
Randall S. Parks
Peter S. Partee, Sr.
J. Steven Patterson
William S. Patterson
Eric R. Pogue
Robert Dean Pope
Laurence H. Posorske
Kurtis A. Powell
Lewis F. Powell, III
J. Waverly Pulley, III
Robert T. Quackenboss
Dionne C. Rainey
Katherine E. Ramsey
John Jay Range
Robert S. Rausch
Belynda B. Reck

(check if applicable) [✓] There is more partnership information and Par. 1(c) is continued further on a "Special Exception Attachment to Par. 1(c)" form.

 • Added since the printing of the 2/13/14 Staff Report.

Special Exception Attachment to Par. 1(c)

DATE: February 12, 2014
(enter date affidavit is notarized)

1212656

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number (s))

PARTNERSHIP NAME & ADDRESS: (enter complete name & number, street, city, state & zip code)

(10)Hunton & Williams LLP (continued)
1751 Pinnace Drlive, Suite 1700
McLean, VA 22102

(check if applicable) [✓] The above-listed partnership has no limited partners.

NAMES AND TITLES OF THE PARTNERS: (enter first name, middle initial, last name, and title, e.g., **General Partner, Limited Partner, or General and Limited Partner**)

Baker R. Rector
Shawn Patrick Regan
Sona Rewari (nmi)
Thomas A. Rice
Michael P. Richman
Jennings G. ("J. G.") Ritter, II
Kathy E. B. Robb
Daryl B. Robertson
Gregory B. Robertson
Patrick L. Robson
Robert M. Rolfe
Ronald D. Rosener
Trevor K. Ross
Brent A. Rosser
William L. S. Rowe
Ronald L. Rubin
Marguerite R. ("Rita") Ruby
D. Alan Rudlin
Mary Nash K. Rusher
D. Kyle Sampson
Karen M. Sanzaro
Stephen M. Sayers
Arthur E. Schmalz
Gregory J. Schmitt
John R. Schneider
Howard E. Schreiber
Jeffrey P. Schroeder
Robert M. Schulman
Carl F. Schwartz
P. Watson Seaman
James S. Seevers, Jr.
Douglass P. Selby
Joel R. Sharp
Michael R. Shebelskie
Rita A. Sheffey
Ryan A. Shores
George P. Sibley, III
Donald F. Simone
Aaron P. Simpson
Jo Anne E. Sirgado
Laurence E. Skinner
Thomas G. Slater, Jr.
Caryl Greenberg Smith
John R. ("J. R.") Smith
Yisun Song (nmi)
Lisa J. Sotto
Joseph C. Stanko, Jr.
Todd M. Stenerson
John J. Stenger
Gregory N. Stillman
Fradyn Suarez (nmi)
Yeongyo Anna Suh
C. Randolph Sullivan
Jeffrey M. Sullivan
Andrew J. Tapscott
Robert M. Tata
Rodger L. Tate
W. Lake Taylor, Jr.
Wendell L. Taylor
John Charles Thomas
Gary E. Thompson
Paul M. Tiao
B. Cary Tolley, III
Bridget C. Treacy
Andrew J. Turner
Julie I. Ungerman
Daniel E. Uyesato
Surasak Vajasit (nmi)
Mark C. Van Deusen
Emily Burkhardt Vicente
Daniel G. Vivarelli, Jr.
Mark R. Vowell
Amanda L. Wait
Linda L. Walsh
William A. Walsh, Jr.
William L. Wehrum
Peter G. Weinstock
Malcolm C. Weiss
Kevin J. White
Amy McDaniel Williams
Mitchell G. Williams
Holly H. Williamson
Michael G. Wilson
Allison D. Wood
David C. Wright
Richard L. Wyatt, Jr.
David R. Yates
Lee B. Zeugin
Manida Zinmerman (nmi)

FORMER PARTNERS:

Thomas J. Cawley
Cameron N. Cosby
Cyane B. Crump
• Ray V. Hartwell, III
Andrew E. Jillson
Stephen S. Maris
Fraser A. McAlpine
• Frank J. Murphy, Jr.
• Pam Gates O'Quinn
• Curtis D. Porterfield
• Stuart A. Raphael
Brooks M. Smith
Lynnette R. Warman
Evan D. Wolff

(check if applicable) [ ] There is more partnership information and Par. 1(c) is continued further on a "Special Exception Attachment to Par. 1(c)" form.

 • Added since the printing of the 2/13/14 Staff Report.

SPECIAL EXCEPTION AFFIDAVIT

DATE: February 12, 2014
(enter date affidavit is notarized)

1212656

for Application No. (s): SEA 80-L/V-061-2
(enter County-assigned application number(s))

==========

1(d). One of the following boxes **must** be checked:

[ ] In addition to the names listed in Paragraphs 1(a), 1(b), and 1(c) above, the following is a listing of any and all other individuals who own in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER,** or **LESSEE*** of the land:

[✓] Other than the names listed in Paragraphs 1(a), 1(b), and 1(c) above, no individual owns in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER,** or **LESSEE*** of the land.

2. That no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household owns or has any financial interest in the subject land either individually, by ownership of stock in a corporation owning such land, or through an interest in a partnership owning such land.

EXCEPT AS FOLLOWS: (**NOTE**: If answer is none, enter "**NONE**" on the line below.)

NONE

(check if applicable) [ ] There are more interests to be listed and Par. 2 is continued on a "Special Exception Attachment to Par. 2" form.

Application No.(s): SEA 80-L/V-061-2
(county-assigned application number(s), to be entered by County Staff)

SPECIAL EXCEPTION AFFIDAVIT

DATE: ~~January~~ February 12, 2014
(enter date affidavit is notarized)

1212656

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3. That within the twelve-month period prior to the public hearing of this application, no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household, either directly or by way of partnership in which any of them is a partner, employee, agent, or attorney, or through a partner of any of them, or through a corporation in which any of them is an officer, director, employee, agent, or attorney or holds 10% or more of the outstanding bonds or shares of stock of a particular class, has, or has had any business or financial relationship, other than any ordinary depositor or customer relationship with or by a retail establishment, public utility, or bank, including any gift or donation having a value of more than $100, singularly or in the aggregate, with any of those listed in Par. 1 above.

EXCEPT AS FOLLOWS: (**NOTE**: If answer is none, enter "**NONE**" on line below.)

- Conrad R. Mehan, Agent for Applicant, contributed in excess of $100 each to Supervisors Herrity and McKay.
- Francis A. McDermott of Hunton & Williams LLP, Attorneys for Applicant, contributed in excess of $100 to Supervisor Herrity.

NOTE: Business or financial relationships of the type described in this paragraph that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings. See Par. 4 below.)

(check if applicable) [ ] There are more disclosures to be listed and Par. 3 is continued on a "Special Exception Attachment to Par. 3" form.

4. **That the information contained in this affidavit is complete, that all partnerships, corporations, and trusts owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land have been listed and broken down, and that prior to each and every public hearing on this matter, I will reexamine this affidavit and provide any changed or supplemental information, including business or financial relationships of the type described in Paragraph 3 above, that arise on or after the date of this application.**

==========

WITNESS the following signature:

(check one) [ ] Applicant [✓] Applicant's Authorized Agent

Charles B. Fromm, Agent for Applicant
(type or print first name, middle initial, last name, and & title of signee)

Subscribed and sworn to before me this 12th day of February 20 14, in the State/Comm. of Virginia, County/City of Fairfax.

Mary Beth Vincent
Notary Public

My commission expires: 7/31/17
Reg No. 299668

MARY BETH VINCENT ★ NOTARY PUBLIC ★ REG. # 299668 ★ COMMONWEALTH OF VIRGINIA

FORM SEA-1 Updated (7/1/06) • Information updated since the printing of the 2/13/14 Staff Report.

SIERRA CLUB

VIRGINIA CHAPTER
MOUNT VERNON AND GREAT FALLS GROUPS

October 2, 2012

To: Fairfax County Board of Supervisors: Sharon Bulova, Chair;
Penelope A. Gross, Vice Chair; Supervisors John C. Cook, John W. Foust,
Michael R. Frey, Pat Herrity, Catherine M. Hudgins, Gerald W. Hyland, Jeffrey C. McKay,
Linda Q. Smyth

Subject: Support for the Lorton Energy Triangle Project

We, the Sierra Club Virginia Chapter Groups that represent members based in Northern Virginia, join in supporting the proposed Lorton Energy Triangle project. EnviroSolutions (ESI) has briefed members of our respective Executive Committees on the details of this proposed project, and select members toured the area in Lorton where the landfill is located. We view this project as an excellent opportunity to convert an environmentally degraded area into one that has positive renewable energy implications. It would also help educate the public on the appearance and benefits of renewable energy. This project would involve participation of private, public and community sectors in an undertaking that would demonstrate the effectiveness of a mix of renewable energy sources -- solar, geothermal, wind, recovered methane gas and perhaps thermal energy. The addition of a horticultural park to the property, with community gardens, a community pavilion and greenhouses enhances the value of the project for local residents.

The ESI proposal includes a request that portions of the landfill be available to the company for continued use beyond the current planned termination date in 2019. While supporting the concepts and planned implementation of the Lorton Energy Triangle Project we believe that a careful study of the environmental effects of such an extension, including any implications for ground water, should be done before the project is approved. State law also requires that ESI reach agreement with Dominion Virginia Power regarding a number of grid interconnection related issues. We believe the County has a role to play in these negotiations and should work with ESI and Dominion to reach resolutions that share the substantial benefits of this proposed project across all involved sectors, including the public. The Sierra Club stands ready to provide input to the County on specific interconnection matters as these discussions develop.

This project is an opportunity for local energy generation and use (the Lorton Arts Workhouse could, for example, be powered by the combined wind and solar energy created) and to educate the public about renewable energy (ESI has included in its plans the placement of education kiosks within the project that would display operating data and explain how the energy is produced). Given the visibility of the proposed wind turbines from I-95 and the energy and education benefits, this would provide a great opportunity for the County to demonstrate to the public its commitment to renewable energy and the environment.

Respectfully,

Dean Amel, Chair Mount Vernon Group damel@alum.mit.edu
Linda Burchiel, Chair Great Falls Group linda@lburchfiel.com