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Tree Removal Work Plan and Waste Characterization Soil Sampling Plan for the 2016 Construction Season

West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

October 2015

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1.0 Introduction

This Tree Removal Work Plan (TRWP) and Waste Characterization Soil Sampling Plan (WCSSP) provides the procedures for the removal of trees and characterization of waste soils associated with the remediation activities proposed to be conducted in 2016 at the West Branch of Bloody Brook (WBBB) Site (hereinafter referred to as the "Site" and shown on Figure 1). For the purposes of this TRWP and WCSSP, the Site is defined as that portion of the WBBB and the surrounding area commencing on the southern boundary of the New York State Thruway (Thruway) and ending at Onondaga Lake Parkway. The Site is located in the Town of Salina and Village of Liverpool, Onondaga County, New York. The remedial action activities at the Site will be performed pursuant to a Voluntary Cleanup Agreement (VCA) between Lockheed Martin Corporation (Lockheed Martin) and New York State Department of Environmental Conservation (NYSDEC) (Index #: D7-0001-01-09, effective July 20, 2002) and in accordance with the February 2013 *Remedial Action Work Plan* (RAWP) and NYSDEC's March 2014 *Decision Document*.

All tree removal and soil sampling activities will be conducted in conformance with the site *Health and Safety Plan* (HASP). All sampling proposed in the TRWP and WCSSP will be conducted in conformance to the site *Community Air Monitoring Plan* (CAMP).

2.0 Tree Removal

Tree removal, as described in this section and Sections 3 through 6, is required to complete excavation activities planned for 2016 at the Site. Tree removal and brush clearing will be performed by AECOM personnel experienced in these tasks for smaller trees, and a New York State licensed tree removal service will be contracted to remove larger trees.

2.1 Tree Survey

A tree survey was performed by AECOM during July 2015. The results of the tree survey include the identification of trees present within the Onondaga County Bloody Brook Drainage District easement (Bloody Brook Drainage District easement) and the Site beginning at Town Gardens Drive and

ending at Onondaga Lake Parkway. The information used to identify the condition of each tree included:

- Species;
- Stem;
- Diameter at Breast Height (for three largest stems);
- Height;
- Condition; and
- Critical Root Zone.

The trees identified for removal are provided in Figure 2a and Figure 2b. Additional details about each tree are provided in Table 1.

2.2 Tree Leveling

Tree leveling activities include the cutting of trees to a minimum of 3 feet above ground surface and will be completed using hand tools and equipment. No significant soil disturbance is expected. Any damage that may occur to the ground level vegetated areas and results in significant soil disturbance will be repaired following the completion of the field activities.

Tree leveling activities must be completed between November 15, 2015 and March 31, 2016 to confidently avoid any disturbance to endangered species. Prior to tree leveling activities, each tree identified for removal will be marked. Any trees currently identified for removal will be leveled after obtaining NYSDEC and property owner approval.

2.3 Tree Removal/Disposal

Following tree leveling activities, the trees will be properly broken down for removal by disposal or recycling. Stump removal will be completed as part of the 2016 excavation activities to implement the remedial action proposed for the Site and disposed of as impacted material.

The trees will be cut down and downsized to manageable pieces. The trees will either be chipped, (and the chips will be stored and reused on-Site) or be transported to a recycling facility.

3.0 Temporary Access Road Installation

AECOM is proposing to install temporary construction access roads adjacent to the Bloody Brook channel between the Old Liverpool Road culvert and the CSX rail culvert**.** Leveled trees and tree debris will be moved for chipping/disposal as discussed in Section 2.3 using the access roads.

The access roads, with approximate dimensions of 12 feet wide by 12 to 15 inches thick, are expected to be installed in winter 2015/2016 and will be constructed using crusher run underlain by a geotextile fabric. The access road will remain in place to be used during the 2016 construction and restoration activities.

4.0 Tree Removal Contingency Plan

This section of the TRWP has been developed to identify steps that will be taken in response to events that may reasonably occur during this work. These events include weather conditions and access.

4.1 Weather Conditions

Heavy rainfall events may hinder safe conditions. Therefore, to protect the safety of personnel, work activities will be canceled on days where forecasts predict significant rainfall. Work will resume when the rain event ceases. In addition, in the event that rainfall conditions result in restricted access to the Site (as determined in the field), work activities will be suspended until conditions improve. Similar work restrictions will apply during periods of heavy snowfall.

4.2 Access

The work described herein will be conducted within the Bloody Brook Drainage District easement granted to Onondaga County and on private property. Lockheed Martin and Onondaga County have an access agreement to perform activities within the Bloody Brook Drainage District easement.

Several trees to be removed are located on privately owned properties and are not within the Bloody Brook Drainage District easement. Temporary access to those properties will be required to remove the trees. Lockheed Martin will coordinate the tree removal with each property owner.

5.0 Tree Removal Schedule and Reporting

Tree removal activities within the Bloody Brook Drainage District easement will begin upon receiving NYSDEC approval of this TRWP, obtaining approval from the property owners and Onondaga County, and after November 15, 2015. Lockheed Martin is currently contacting private property owners to gain approval and access to complete the tree removal activities within their property limits. It is unknown how long it will take to obtain approval and access to private properties. Once approval and access have been granted, Lockheed Martin will initiate private property tree removal activities to allow them to be completed by March 31, 2016. Lockheed Martin will verbally communicate progress, schedule, and potential access issues to the NYSDEC Project Manager and report tree removal activity progress in the monthly project progress reports.

6.0 Tree Removal Green and Sustainable Remediation

As summarized in this section, the implementation of green and sustainable practices has been considered in the development of this TRWP and will be utilized during the tree removal activities. Completing these activities during “hard-earth” periods (i.e., when the ground is moderately dry and or frozen) will also minimize disruption to the environment by preventing unintended damage of the groundcover and soil. In addition, vehicle idling will be reduced with the requirement that all vehicles and equipment will be shut off when not in use for more than five minutes. Mobilization and demobilization to and from the Site by field personnel will be minimized, and car-pooling will be used when feasible.

7.0 Waste Characterization Sampling

This section and Sections 8 through 12 provide the sampling procedures to be followed for the characterization of waste soils, including side bank soils and sediment associated with remedial activities planned for the 2016 construction season. Sampling and analysis of soil and sediment will

be conducted in conformance with applicable regulatory requirements for waste characterization and the requirements of the permitted off-Site treatment/disposal and/or recycling facility/facilities. Waste characterization activities will be conducted in accordance with the site CAMP and HASP.

Soil and sediment samples will be collected from the proposed excavation areas to confirm that the excavated material meets the requirements of the receiving facility. Analytical methods, frequency of sampling, and method of sample collection are specified in the following sections.

7.1 Sample Collection

Sample collection will be performed between the hours of 8:00 am and 5:00 pm, and every effort will be made to minimize any inconvenience (e.g., noise) to residents and property owners. Samples will be collected in accordance with the methods and frequency described herein. For the collection of each sample, material will be collected from five locations. Samples collected for volatile organic compound (VOC) analysis will be collected from one location per approximately 650 cubic yards (CY), which is about one sample per 1,000 tons of soil for the Site. All other samples will be collected from four locations per 650 CY and homogenized into one sample per 650 CY. Methods for VOC sample collection are further discussed in Section 7.2. Homogenization of soil and sediment for analyses other than VOCs is described in Section 7.3. Figure 3a and Figure 3b provide the proposed sample location points for each area within the excavation limits.

7.2 Collection of VOC samples

Soil and sediment to be sampled for VOC analysis will be collected using appropriate sampling tools (e.g., stainless steel hand auger) from the proposed central sample location points shown on Figure 3a and Figure 3b. Samples will be collected from the average depth of excavation planned at each sample location. Specifically, a sample location within a 2-foot excavation will require a VOC sample collected from soils 1-foot below ground surface (bgs), and a sample location within a sediment excavation will require a sample from approximately midway between the surface of the sediment to the underlying clay layer within the brook. Samples will be collected using new, disposable nitrile gloves and placed directly into a sample jar provided by a New York State certified laboratory.

7.3 Field Sample Homogenization

Samples collected for analysis other than VOCs and listed in Section 7.7 will be field composited from four composite sample locations within each sampling area. Grab samples will be collected from each one-foot interval from each composite soil sample location and from the sediment sample location, where applicable. For example, a sample from a composite location within a 2-foot excavation area will require collection of a grab sample from the 0- to 1-foot and 1- to 2-foot intervals. Collected grab samples from each sample area will be transferred from the sampler to a large plastic bag and will be homogenized using new, disposable nitrile gloves. An appropriate mass of the homogenized material will be transferred to a laboratory-supplied sample container(s) for shipment to the laboratory. Samples will be stored and handled according to procedures outlined in this WCSSP.

7.4 Spoils

Soil collected from borings that are not sent to a laboratory for analysis will be placed in the open boring from which it came. The remaining void space left from the boring will be filled with sand or soil purchased from a garden center. Sediment collected from the stream and not sent to the laboratory will be placed back in the brook from the location it was removed. Caution will be taken to minimize disturbance to the sediment in the brook and to place the spoils in a manner that minimizes turbidity downstream of the sample location. Equipment and tools that have come in contact with samples and non-contact sampling equipment will either be disposed of after each use or will be decontaminated and re-used according to the procedure described in Section 8.3.

7.5 Ground Surface Restoration

All efforts will be made to limit the amount of surficial disturbance potentially caused by the sampling crew and equipment. At each soil sample location, a patch of the vegetative cover will be removed down to the root and set aside to be replaced on the surface of the sample location after the boring has been backfilled. Any damage that may occur to the vegetated areas where soil borings are advanced will be repaired and seeded following the completion of the field activities.

7.6 Field Observation and Documentation of Samples

Field observations regarding each sample will be recorded on a field log. In addition, sampling documentation will consist of detailed notes made during sampling activities that include recording of sample locations, sample depth, and Site conditions (e.g., weather). Sample locations will be identified using a small flag or similar article and surveyed prior to demobilization from the Site.

7.7 Sample Analysis

Analyses conducted under this WCSSP will be conducted by a laboratory certified under the NYSDOH Environmental Laboratory Approval Program (ELAP) for the constituents to be analyzed and to the extent that such certification is available. The samples described in Section 7.3 will be submitted for laboratory analysis for the parameters presented in the table below.

Analyte(s)	Analytical Method
Sulfide (Reactive)	SW-846-C7
Reactivity	SW-846-C7
Ignitability	SW-846-C7
TCLP RCRA 8 Metals	SW-846-1311/SW846-7470 (Mercury); SW-846-1311/SW-846-6010 (other RCRA metals)
PCBs	SW-846-1311/SW-846-8082
TCLP SVOCs	SW-846-1311/SW-846-8270
TCLP VOCs	SW-846-1311/SW-846-8260
TCLP Pest/Herb	SW-846-1311/SW-846-8081
Percent Solids	SM-2540.B

8.0 Sample Handling and Equipment Decontamination

This section summarizes the sample identification, containerization and shipping, and equipment decontamination activities for the waste characterization sampling.

8.1 Sample Identification

Collected samples will be identified on sample containers and chains of custody immediately following sample collection. The chain of custody will, at a minimum, identify the following:

- A unique sample number;
- The date the sample was collected;
- The name of the project;
- Analyses requested; and
- Sampling personnel.

Sample identification for waste characterization samples will be as follows: “LMC-WBBB-WC-SAMPLENUMBER-DATE”, beginning with the consecutive sample number from the previous waste characterization sampling. Specifically, the thirty-fourth waste characterization sample (as numbered on Figure 3A) collected on December 1, 2014 was identified as “LMC-WBBB-WC-034-120114.”

8.2 Sample Containerization and Shipping

Prior to the soil sampling activities, sample containers will be pre-cleaned by the laboratory and delivered to the field representative. The field representative will place a label on the sample containers. As soil samples are collected, the label will be used to record the sample identifier, date and time of sample collection, and the name of the person collecting the sample. After the samples have been collected, they will be kept in a cooler with ice, as needed, and will be delivered to the laboratory under proper chain of custody.

8.3 Equipment Decontamination

Field decontamination for the waste characterization sampling will be minimized to the extent practical by using disposable equipment or pre-cleaned reusable equipment. However, as necessary, reusable sampling equipment will be decontaminated before use. The decontamination procedure will consist of a wash with a phosphate-free detergent and potable water, a potable water rinse, and a final distilled water rinse.

9.0 Investigation Derived Waste Management

Decontamination wastewater will be containerized and transported to Veolia Environmental Services located at the Lockheed Martin Electronics Park facility for proper identification and disposal or to the Site and treated using the on-Site construction water treatment system. Used personal protective equipment (PPE) and general trash will be containerized and transported to the Lockheed Martin Electronics Park facility or the Site for proper disposal as de minimis sampling waste.

10.0 Waste Characterization Sampling Green and Sustainable Remediation

As summarized in this section, the implementation of green and sustainable practices has been considered in the development of this WCSSP and will be utilized during the investigation activities. By using a hand auger to collect soil samples where possible, energy consumption will be minimized and less greenhouse gases or pollutants will be emitted. The use of less intrusive sampling equipment will also minimize disruption to the environment by preventing unintended damage of the groundcover and soil. In addition, vehicle idling will be reduced with the requirement that all vehicles and equipment will be shut off when not in use for more than five minutes. Mobilization and demobilization to and from the Site by field personnel will be minimized, and car-pooling will be used when feasible. Material management and waste reduction practices will be implemented for the project. For example, paper usage and disposal/recycling will be minimized by requesting that all analytical data and analytical reports be delivered in an electronic format.

11.0 Waste Characterization Sampling Contingency Plan

This section of the WCSSP has been developed to identify steps that will be taken in response to events that may reasonably occur during this work. These events include weather conditions, sample refusal or limited sample recovery, and access.

11.1 Weather Conditions

During heavy rainfall events, certain sampling points will not be accessible. Therefore, to protect the safety of sampling personnel, work activities will be canceled on days where forecasts predict significant rainfall. Work will resume when the rain event stops. In addition, in the event that rainfall conditions result in restricted access to sampling locations (as determined in the field), work activities will be suspended until conditions improve. Similar work restrictions will apply during periods of heavy snowfall, and work will not be scheduled during periods of snow cover.

11.2 Sample Refusal or Limited Sample Recovery

In the event that sampling equipment cannot penetrate the subsurface at the designated sampling location or where limited sample recovery will affect field and analytical data, at least three additional attempts will be made to advance the sampler within the same general location as that proposed in this WCSSP. In the event of refusal, limited sample recovery, or the presence of obstructions, Lockheed Martin will not collect the sample and will document the reason for not collecting it.

11.3 Access

The soil sampling described herein will be conducted within the Bloody Brook drainage district easement and on private property. Lockheed Martin and Onondaga County have an access agreement to perform activities within the Bloody Brook Drainage District easement. However, many of the sampling locations are located outside of the Bloody Brook drainage district easement. Lockheed Martin will attempt to obtain access for the collection of soil samples at those locations.

If access to complete the scope of investigations described herein is denied, Lockheed Martin will consult with the NYSDEC regarding potential relocation of any affected sampling location(s). If relocation is not an option, Lockheed Martin will engage in discussions regarding access with the property owner(s) and may collect the sample(s) at a later date. If these discussions are unsuccessful, Lockheed Martin will notify the NYSDEC in accordance with paragraph XIV.C. of the VCA for assistance in obtaining access.

12.0 Waste Characterization Sampling Schedule and Reporting

Upon NYSDEC approval of this WCSSP, implementation of the waste characterization sampling will begin. Within 30 days of approval, Lockheed Martin will begin organizing the field team as well as begin contacting property owners to gain access for sampling activities. It is unknown how long it will take to obtain access; however, once access has been granted, Lockheed Martin anticipates that sampling activities will take approximately one to two weeks to complete. Lockheed Martin will verbally communicate progress, schedule, and potential access issues to the NYSDEC Project Manager and summarize the activities in the monthly project progress reports.

For the waste characterization samples collected to facilitate the remedial activities planned for the 2016 construction season, Lockheed Martin will include a sample location figure and analytical data summary table in the work plan that will be created to summarize the 2016 construction and restoration activities.

TABLE

Table 1
Details for Trees to be Removed for the 2016 Construction Season
West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

Tree ID	Species	Common Name	Stem	DBH[1] of Four Largest Stems (inches)				HEIGHT (feet)	CONDITION[2]	CRZ[3] (radial feet from trunk)
				DBH	DBH	DBH	DBH			
T2000	Acer negundo	Box elder	2	12.60	18.75	-	-	40	5	16
T2001	Acer negundo	Box elder	11	12.00	12.75	10.60	11.00	22	3	27
T2002	*Juglans nigra*	Black walnut	1	14.50	-	-	-	52	3	25
T2003	*Acer saccharinum*	Silver maple	2	13.00	13.00	-	-	60	3	25
T2004	*Acer saccharinum*	Silver maple	1	10.75	-	-	-	52	6	-
T2005	Acer negundo	Box elder	1	3.50	-	-	-	12	4	7
T2006	*Tilia americana*	Basswood	2	13.50	9.50	-	-	55	4	18
T2007	*Acer saccharum*	Red sugar maple	1	12.25	-	-	-	34	2	10
T2008	*Acer negundo*	Box elder	1	26.25	-	-	-	48	2	20
T2009	*Catalpa bignonioides*	Catalpa	1	4.25	-	-	-	16	3	8
T2010	*Populus deltoids*	Cottonwood	1	17.50	-	-	-	30	5	8
T2011	*Ulmus americana*	Elm	1	8.50	-	-	-	38	3	8
T2012	*Acer negundo*	Box elder	3	11.00	5.50	10.25	-	51	4	15
T2013	*Ulmus americana*	Elm	1	14.25	-	-	-	50	5	12
T2014	*Ulmus americana*	Elm	1	17.00	-	-	-	38	6	-
T2015	*Acer negundo*	Box elder	1	9.50	-	-	-	-	6	-
T2016	*Acer negundo*	Box elder	1	13.25	-	-	-	50	3	15

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				DBH	DBH	DBH	DBH			
T2017	*Acer saccharinum*	Silver maple	3	10.00	17.50	20.00	-	70	4	15
T2018	*Acer negundo*	Box elder	2	5.25	7.50	-	-	25	3	10
T2019	*Acer negundo*	Box elder	4	10.25	7.50	9.00	11.25	19	3	15
T2020	*Acer negundo*	Box elder	1	4.00	-	-	-	26	3	8
T2021	*Acer saccharinum*	Silver maple	3	3.00	2.50	2.50	-	15	3	8
T2022	*Acer negundo*	Box elder	1	4.00	-	-	-	24	3	8
T2023	*Acer negundo*	Box elder	6	4.25	3.25	3.75	2.50	16	4	8
T2024	*Acer negundo*	Box elder	1	11.00	-	-	-	17	2	9
T2025	*Gleditisia triacanthus*	Honey locust	2	6.25	6.50	-	-	22	3	6
T2026	*Populus deltoids*	Cottonwood	1	5.50	-	-	-	30	3	5
T2027	*Populus deltoids*	Cottonwood	1	5.00	-	-	-	30	3	5
T2028	*Populus deltoids*	Cottonwood	1	7.50	-	-	-	55	3	10
T2029	*Populus deltoids*	Cottonwood	1	9.00	-	-	-	53	3	10
T2030	*Populus deltoids*	Cottonwood	1	11.25	-	-	-	55	3	10
T2031	*Populus deltoids*	Cottonwood	1	12.00	-	-	-	55	3	10
T2032	*Acer negundo*	Box elder	3	9.50	2.25	2.25	-	50	3	12
T2033	*Acer negundo*	Box elder	7	8.50	8.00	7.50	8.25	50	3	12

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				DBH	DBH	DBH	DBH			
T2034	*Acer negundo*	Box elder	2	6.50	7.25	-	-	45	3	12
T2035	*Acer negundo*	Box elder	1	10.00	-	-	-	45	4	12
T2036	*Acer negundo*	Box elder	1	8.75	-	-	-	50	3	12
T2037	*Acer negundo*	Box elder	5	10.50	6.25	4.25	5.50	50	4	12
T2038	*Acer negundo*	Box elder	4	5.00	4.50	2.50	2.25	38	4	12
T2039	*Gleditisia triacanthus*	Honeylocust	1	5.75	-	-	-	35	3	9
T2040	*Acer negundo*	Box elder	6	3.75	2.25	3.00	2.75	33	5	5
T2041	*Acer negundo*	Box elder	1	6.50	-	-	-	45	3	12
T2042	*Juglans nigra*	Black walnut	1	6.75	-	-	-	45	3	13
T2043	*Acer negundo*	Box elder	3	3.25	4.00	5.25	-	35	4	12
T2044	*Acer negundo*	Box elder	1	3.25	-	-	-	35	3	10
T2045	*Rhamnus*	Buckthorn	3	4.00	2.75	2.75	-	40	2	12
T2046	*Acer negundo*	Box elder	1	4.75	-	-	-	40	4	12
T2047	*Acer negundo*	Box elder	3	4.75	4.00	6.00	-	40	4	12
T2048	*Acer negundo*	Box elder	1	3.75	-	-	-	30	4	10
T2049	*Acer negundo*	Box elder	3	6.00	6.50	7.00	-	30	3	12
T2050	*Acer negundo*	Box elder	1	4.75	-	-	-	30	3	10

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				DBH	DBH	DBH	DBH			
T2051	*Acer negundo*	Box elder	1	6.25	-	-	-	30	4	12
T2052	*Acer negundo*	Box elder	1	7.25	-	-	-	38	3	12
T2053	*Acer negundo*	Box elder	1	4.25	-	-	-	25	4	10
T2054	*Acer negundo*	Box elder	1	3.50	-	-	-	30	5	10
T2055	*Acer negundo*	Box elder	1	3.50	-	-	-	40	3	12
T2056	*Acer negundo*	Box elder	1	7.50	-	-	-	45	4	12
T2057	*Acer negundo*	Box elder	1	4.75	-	-	-	30	3	12
T2058	*Acer negundo*	Box elder	1	8.75	-	-	-	45	3	12
T2059	*Acer negundo*	Box elder	1	5.25	-	-	-	40	3	12
T2060	*Acer negundo*	Box elder	1	3.50	-	-	-	35	3	10
T2061	*Acer negundo*	Box elder	1	7.25	-	-	-	45	3	12
T2062	*Acer negundo*	Box elder	1	3.75	-	-	-	40	3	12
T2063	*Acer negundo*	Box elder	1	7.00	-	-	-	40	3	12
T2064	*Acer negundo*	Box elder	1	6.25	-	-	-	35	3	10
T2065	*Acer negundo*	Box elder	3	4.00	3.00	2.75	-	35	4	10
T2066	*Acer negundo*	Box elder	1	5.25	-	-	-	35	3	10
T2067	*Acer negundo*	Box elder	3	4.25	3.25	2.75	-	35	3	11

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				DBH	DBH	DBH	DBH			
T2068	*Acer negundo*	Box elder	1	9.50	-	-	-	45	4	13
T2069	*Acer negundo*	Box elder	1	4.25	-	-	-	45	3	12
T2070	*Gleditisia triacanthus*	Honey locust	1	6.00	-	-	-	40	3	12
T2071	*Acer negundo*	Box elder	1	4.50	-	-	-	46	3	12
T2072	*Acer negundo*	Box elder	1	6.00	-	-	-	45	3	12
T2073	*Acer negundo*	Box elder	1	3.75	-	-	-	15	3	5
T2074	*Acer negundo*	Box elder	1	4.50	-	-	-	40	3	8
T2075	*Acer negundo*	Box elder	1	5.50	-	-	-	45	3	8
T2076	*Acer negundo*	Box elder	1	3.25	-	-	-	30	3	6
T2077	*Acer negundo*	Box elder	1	4.00	-	-	-	30	3	6
T2078	*Acer negundo*	Box elder	1	3.50	-	-	-	25	3	5
T2079	*Acer negundo*	Box elder	1	5.25	-	-	-	35	3	6
T2080	*Acer negundo*	Box elder	2	5.25	5.50	-	-	30	3	7
T2081	*Acer negundo*	Box elder	1	7.50	-	-	-	20	4	8
T2082	*Acer negundo*	Box elder	1	4.50	-	-	-	35	3	6
T2083	*Acer negundo*	Box elder	1	4.25	-	-	-	15	4	7
T2084	*Acer negundo*	Box elder	3	3.25	2.00	1.75	-	25	4	4

Table 1
Details for Trees to be Removed for the 2016 Construction Season
West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

Tree ID	Species	Common Name	Stem	DBH[1] of Four Largest Stems (inches)				HEIGHT (feet)	CONDITION[2]	CRZ[3] (radial feet from trunk)
				DBH	DBH	DBH	DBH			
T2085	*Acer negundo*	Box elder	1	5.75	-	-	-	40	3	5
T2086	*Acer negundo*	Box elder	1	4.00	-	-	-	35	3	6
T2087	*Acer negundo*	Box elder	1	7.75	-	-	-	35	4	7
T2088	*Acer negundo*	Box elder	1	5.00	-	-	-	35	3	6
T2089	*Gleditisia triacanthus*	Honey locust	1	3.50	-	-	-	25	3	5
T2090	*Acer negundo*	Box elder	1	3.75	-	-	-	25	3	4
T2091	*Acer negundo*	Box elder	1	3.25	-	-	-	30	3	5
T2092	*Acer negundo*	Box elder	1	4.00	-	-	-	20	3	4
T2093	*Acer negundo*	Box elder	1	4.50	-	-	-	30	4	4
T2094	*Acer negundo*	Box elder	1	5.00	-	-	-	30	3	6
T2095	*Acer negundo*	Box elder	2	5.25	3.50	-	-	45	3	6
T2096	*Acer negundo*	Box elder	1	6.50	-	-	-	18	4	5
T2097	*Acer negundo*	Box elder	3	4.50	4.00	2.25	-	30	3	7
T2098	*Populus deltoids*	Cottonwood	1	10.25	-	-	-	50	3	12
T2099	*Acer negundo*	Box elder	1	4.00	-	-	-	20	4	6
T2100	*Acer negundo*	Box elder	1	5.00	-	-	-	12	4	8
T2101	*Gleditisia triacanthus*	Honey locust	1	5.00	-	-	-	35	3	10

Table 1
Details for Trees to be Removed for the 2016 Construction Season
West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

Tree ID	Species	Common Name	Stem	DBH[1] of Four Largest Stems (inches)				HEIGHT (feet)	CONDITION[2]	CRZ[3] (radial feet from trunk)
				DBH	DBH	DBH	DBH			
T2102	*Acer negundo*	Box elder	1	4.00	-	-	-	30	3	6
T2103	*Acer negundo*	Box elder	1	3.25	-	-	-	15	5	5
T2104	*Acer negundo*	Box elder	1	6.00	-	-	-	30	3	6
T2105	*Acer negundo*	Box elder	1	4.00	-	-	-	25	3	5
T2106	*Acer negundo*	Box elder	2	5.25	2.25	-	-	25	3	5
T2107	*Acer negundo*	Box elder	1	4.75	-	-	-	30	3	6
T2108	*Acer negundo*	Box elder	1	5.50	-	-	-	35	3	8
T2109	*Acer negundo*	Box elder	2	7.25	4.25	-	-	25	3	8
T2110	*Acer negundo*	Box elder	2	11.25	4.75	-	-	35	3	10
T2111	*Acer negundo*	Box elder	1	6.25	-	-	-	35	3	7
T2112	*Acer negundo*	Box elder	1	3.75	-	-	-	18	5	6
T2113	*Juglans nigra*	Black walnut	1	4.00	-	-	-	20	3	7
T2114	*Robinia Pseudoacacia*	*Black locust*	1	15.50	-	-	-	50	2	15
T2115	*Acer negundo*	Box elder	1	6.00	-	-	-	30	3	9
T2116	*Acer negundo*	Box elder	1	4.25	-	-	-	20	3	5
T2117	*Acer negundo*	Box elder	1	4.50	-	-	-	20	3	5
T2118	*Juglans nigra*	Black walnut	1	3.25	-	-	-	18	3	5

Table 1
Details for Trees to be Removed for the 2016 Construction Season
West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

Tree ID	Species	Common Name	Stem	DBH[1] of Four Largest Stems (inches)				HEIGHT (feet)	CONDITION[2]	CRZ[3] (radial feet from trunk)
				DBH	DBH	DBH	DBH			
T2119	*Acer negundo*	Box elder	1	7.00	-	-	-	30	4	7
T2120	*Acer negundo*	Box elder	2	8.25	3.75	-	-	40	3	10
T2121	*Acer negundo*	Box elder	1	7.00	-	-	-	35	3	7
T2122	*Acer negundo*	Box elder	1	11.75	-	-	-	50	3	13
T2123	*Acer negundo*	Box elder	1	7.00	-	-	-	40	3	10
T2124	*Acer negundo*	Box elder	1	6.75	-	-	-	35	3	9
T2125	*Acer negundo*	Box elder	1	6.00	-	-	-	30	3	8
T2126	*Acer negundo*	Box elder	1	3.75	-	-	-	10	3	4
T2127	*Acer negundo*	Box elder	1	4.50	-	-	-	30	3	7
T2128	*Acer negundo*	Box elder	1	3.50	-	-	-	30	3	6
T2129	*Acer negundo*	Box elder	1	12.50	-	-	-	50	3	16
T2130	*Acer negundo*	Box elder	3	6.00	3.00	2.25	-	30	3	8
T2131	*Acer negundo*	Box elder	1	3.75	-	-	-	30	3	7
T2132	*Acer negundo*	Box elder	1	3.25	-	-	-	28	3	6
T2133	*Acer negundo*	Box elder	2	5.50	7.50	-	-	30	3	7
T2134	*Acer negundo*	Box elder	1	5.75	-	-	-	40	3	8
T2135	*Acer negundo*	Box elder	1	8.50	-	-	-	40	3	8

Table 1
Details for Trees to be Removed for the 2016 Construction Season
West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

Tree ID	Species	Common Name	Stem	DBH[1] of Four Largest Stems (inches)				HEIGHT (feet)	CONDITION[2]	CRZ[3] (radial feet from trunk)
				DBH	DBH	DBH	DBH			
T2136	*Acer negundo*	Box elder	1	6.25	-	-	-	25	3	7
T2137	*Acer negundo*	Box elder	1	7.50	-	-	-	30	3	8
T2138	*Acer negundo*	Box elder	1	5.25	-	-	-	30	3	9
T2139	*Acer negundo*	Box elder	1	6.25	-	-	-	35	3	8
T2140	*Acer negundo*	Box elder	2	6.50	3.50	-	-	35	3	8
T2141	*Acer negundo*	Box elder	1	6.00	-	-	-	35	3	8
T2142	*Acer negundo*	Box elder	1	5.00	-	-	-	35	3	8
T2143	*Acer negundo*	Box elder	2	7.00	5.00	-	-	35	3	8
T2144	*Acer negundo*	Box elder	1	8.50	-	-	-	35	3	8
T2145	*Acer negundo*	Box elder	1	4.00	-	-	-	12	3	6
T2146	*Acer negundo*	Box elder	1	4.00	-	-	-	5	5	2
T2147	*Acer negundo*	Box elder	1	7.50	-	-	-	40	3	9
T2148	*Acer negundo*	Box elder	1	4.75	-	-	-	30	5	8
T2149	*Acer negundo*	Box elder	1	4.25	-	-	-	35	3	8
T2150	*Acer negundo*	Box elder	1	4.50	-	-	-	35	3	3
T2151	*Acer negundo*	Box elder	3	7.25	25.00	5.00	-	40	4	9
T2152	*Acer negundo*	Box elder	1	7.75	-	-	-	35	3	8

Table 1
Details for Trees to be Removed for the 2016 Construction Season
West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

Tree ID	Species	Common Name	Stem	DBH[1] of Four Largest Stems (inches)				HEIGHT (feet)	CONDITION[2]	CRZ[3] (radial feet from trunk)
				DBH	DBH	DBH	DBH			
T2153	*Acer negundo*	Box elder	3	4.50	4.50	2.50	-	35	4	8
T2154	*Acer negundo*	Box elder	1	7.25	-	-	-	40	3	9
T2155	*Acer negundo*	Box elder	1	4.25	-	-	-	30	3	8
T2156	*Acer negundo*	Box elder	1	5.50	-	-	-	40	3	8
T2157	*Acer negundo*	Box elder	1	6.50	-	-	-	40	3	8
T2158	*Acer negundo*	Box elder	2	6.75	6.75	-	-	35	3	8
T2159	*Populus deltoids*	Cottonwood	1	3.75	-	-	-	20	3	4
T2160	*Populus deltoids*	Cottonwood	1	3.50	-	-	-	25	3	4
T2161	*Ulmus americana*	Elm	1	4.00	-	-	-	20	3	4
T2162	*Populus deltoids*	Cottonwood	5	5.75	7.00	5.00	3.00	40	3	6
T2163	*Populus deltoids*	Cottonwood	3	6.50	5.25	4.25	-	40	3	6
T2164	*Populus deltoids*	Cottonwood	2	4.75	6.25	-	-	40	3	6
T2165	*Populus deltoids*	Cottonwood	1	4.00	-	-	-	35	3	5
T2166	*Acer negundo*	Box elder	1	4.25	-	-	-	35	3	7
T2167	*Acer negundo*	Box elder	1	4.50	-	-	-	35	3	6
T2168	*Populus grandidentata*	Large toothed Poplar	1	8.25	-	-	-	50	3	10
T2169	*Populus grandidentata*	Large toothed Poplar	1	8.50	-	-	-	50	3	10

Table 1
Details for Trees to be Removed for the 2016 Construction Season
West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

Tree ID	Species	Common Name	Stem	DBH[1] of Four Largest Stems (inches)				HEIGHT (feet)	CONDITION[2]	CRZ[3] (radial feet from trunk)
				DBH	DBH	DBH	DBH			
T2170	*Acer negundo*	Box elder	1	5.00	-	-	-	35	3	7
T2171	*Acer negundo*	Box elder	1	4.25	-	-	-	30	3	6
T2172	*Acer negundo*	Box elder	4	2.50	2.25	4.00	4.75	35	3	8
T2173	*Acer negundo*	Box elder	1	3.25	-	-	-	35	4	7
T2174	*Acer negundo*	Box elder	1	17.25	-	-	-	40	3	13
T2175	*Acer negundo*	Box elder	1	8.25	-	-	-	45	3	8
T2176	*Acer negundo*	Box elder	3	4.75	4.75	2.75	-	30	3	8
T2177	*Acer negundo*	Box elder	1	7.00	-	-	-	35	3	8
T2178	*Rhamnus sp.*	Buckthorn	1	7.75	-	-	-	18	3	6
T2179	*Acer negundo*	Box elder	2	3.25	7.50	-	-	35	3	8
T2180	*Acer negundo*	Box elder	1	7.50	-	-	-	35	3	8
T2181	*Acer negundo*	Box elder	1	4.50	-	-	-	20	6	-
T2182	*Acer negundo*	Box elder	1	13.50	-	-	-	35	3	10
T2183	*Acer negundo*	Box elder	1	7.00	-	-	-	40	3	8
T2184	*Acer negundo*	Box elder	1	6.75	-	-	-	35	3	18
T2185	*Acer negundo*	Box elder	1	3.75	-	-	-	30	4	2
T2186	*Acer negundo*	Box elder	2	6.75	3.25	-	-	35	3	8

Table 1
Details for Trees to be Removed for the 2016 Construction Season
West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

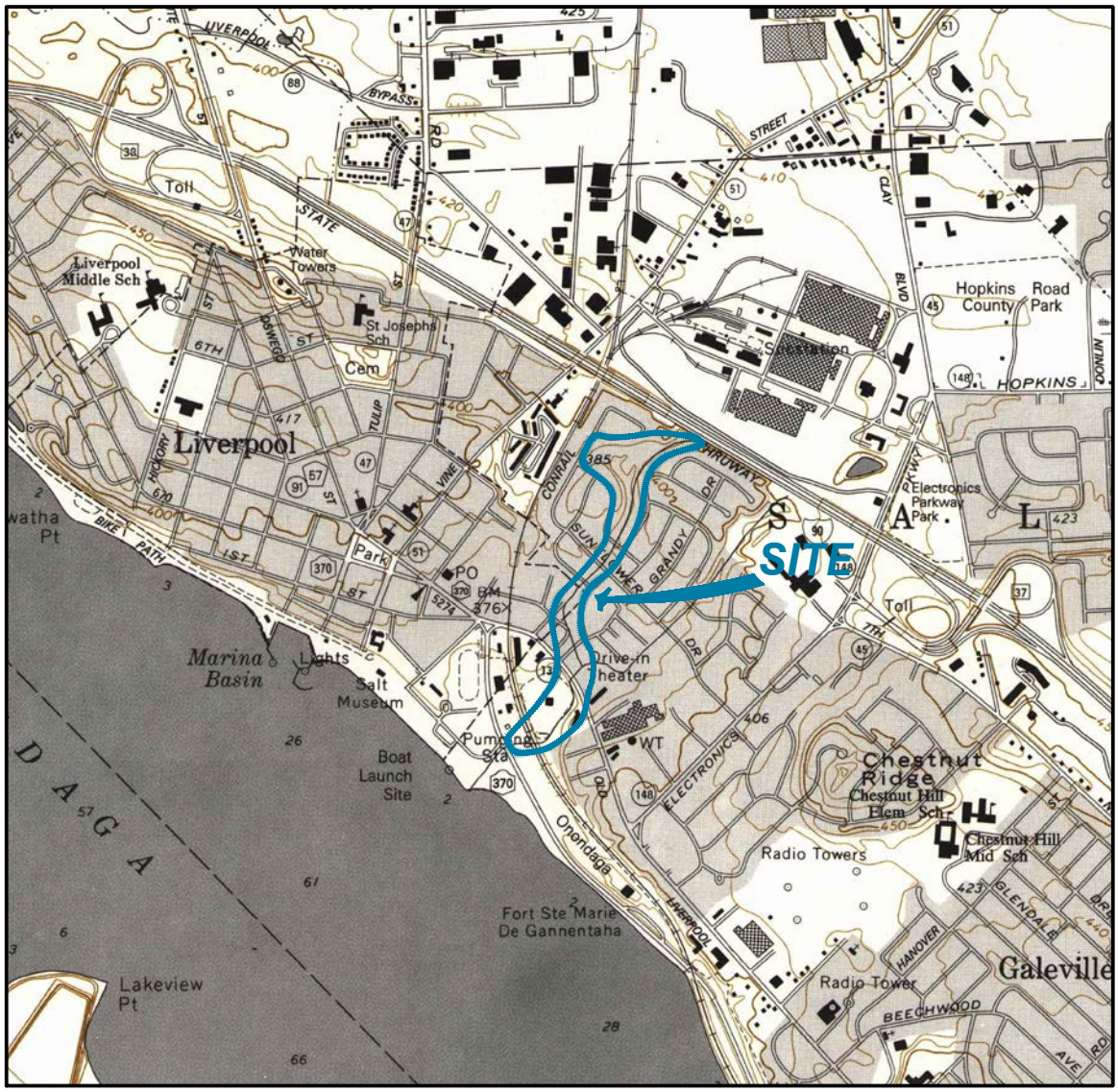
Tree ID	Species	Common Name	Stem	DBH[1] of Four Largest Stems (inches)				HEIGHT (feet)	CONDITION[2]	CRZ[3] (radial feet from trunk)
				DBH	DBH	DBH	DBH			
T2187	*Acer negundo*	Box elder	1	5.75	-	-	-	35	3	8
T2188	*Acer negundo*	Box elder	1	5.50	-	-	-	35	3	8
T2189	*Acer negundo*	*Box elder*	1	8.50	-	-	-	35	3	8
T2190	*Acer negundo*	*Box elder*	1	9.00	-	-	-	40	3	11
T2191	*Acer negundo*	*Box elder*	1	6.00	-	-	-	45	4	11
T2192	*Acer negundo*	*Box elder*	1	6.50	-	-	-	35	4	9
T2193	*Acer negundo*	*Box elder*	1	7.00	-	-	-	40	3	10
T2194	*Acer negundo*	Box elder	1	4.50	-	-	-	25	3	6
T2195	*Acer negundo*	Box elder	1	6.25	-	-	-	35	3	7
T2196	*Acer negundo*	Box elder	1	3.50	-	-	-	20	4	6
T2197	*Acer negundo*	Box elder	1	10.50	-	-	-	45	3	8
T2198	*Acer negundo*	Box elder	1	3.50	-	-	-	12	4	3
T2199	*Acer negundo*	Box elder	1	8.25	-	-	-	35	3	8
T2200	*Acer negundo*	Box elder	5	10.25	7.25	11.50	6.00	35	4	8
T2201	*Acer negundo*	Box elder	1	14.25	-	-	-	35	3	8
T2202	*Fraxinus Americana*	Green Ash	1	7.50	-	-	-	35	3	8
T2203	*Fraxinus Americana*	Green Ash	1	6.25	-	-	-	30	3	7

Table 1
Details for Trees to be Removed for the 2016 Construction Season
West Branch of Bloody Brook
Bloody Brook Voluntary Cleanup Program
Onondaga County, New York

Tree ID	Species	Common Name	Stem	DBH[1] of Four Largest Stems (inches)				HEIGHT (feet)	CONDITION[2]	CRZ[3] (radial feet from trunk)
				DBH	DBH	DBH	DBH			
T2204	*Morus alba*	White Mulberry	3	7.75	5.25	6.50	-	25	3	10
T2205	*Populus deltoids*	Cottonwood	1	12.00	-	-	-	55	3	15
T2206	*Populus deltoids*	Cottonwood	1	18.00	-	-	-	50	4	18
T2207	*Acer negundo*	Box elder	1	12.00	-	-	-	40	3	12

DBH - Diameter at Breast Height
Surveyed condition of a Tree
1 - Specimen tree of quality similar to those found in arboretum
2 - Park tree – tree of high quality, maintained, free of competition and nuisance species (e.g., climbing vines, etc.)
3 - Average tree – some minor defects
4 -Tree with some damage, decay, or structural flaws
5 - Tree with major damage, decay, or structural flaws
6 - Dead tree
CRZ - Critical Root Zone refers to the area at which soil disturbance will result in potential damage to the tree
"-" - Not Applicable

FIGURES



0' 2000' 4000'

APPROXIMATE SCALE

REFERENCE:

1. NYSDOT 7.5 MIN TOPOGRAPHIC MAP OF SYRACUSE WEST, QUADRANGLE 1990, SCALE: 1" = 2000'.

AECOM

LOCKHEED MARTIN CORPORATION

SITE LOCATION MAP

WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
A1FIG1.dwg	RNB	60338140	9 / 2015	1

Plotted By: Bookasr
Layout-Sheet Name: LAYOUT1
Plot File Date Created: Sep/17/2015 8:46 AM

Filename: N:\MARKETING\PROPOSALS\LOCKHEED MARTIN – BLOODY BROOK\CAD\A1FIG1.DWG

ROYAL DRIVE

BROOKVIEW LANE

TOWN GARDENS DRIVE
(PRIVATE ROAD)

SUNFLOWER DRIVE

FLORADALE ROAD

OLD LIVERPOOL ROAD
(C.R. No. 137)

PEARL STREET

SALINA STREET

TOWN OF SALINA
VILLAGE OF LIVERPOOL

N 1,131,000

N 1,130,500

N 1,130,000

E 923,500

E 923,000

E 922,500

MATCHLINE TO SHEET 2 OF 2

2015 CONSTRUCTION LIMITS

INV.=370.0

CSP 5'x7" WIDE

INV.12"CSP=371.68
DRAINAGE PIPE

INV.=368.1

BL=201.2

INV.=367.6

INV.12"CSP=371.9

CSP 5'x7" WIDE

INV.12"CSP=370.2

INV.=366.1

CSP 6'x8" WIDE

INV.=366.3

INV.12"CSP=369.1

INV.=364.4

CSP 7'x9' WIDE

INV.12"=367.8

RIM=373.25

RIM=373.3

INV.=364.3

CSP 6'x9" WIDE

INV.=364.3

INV.48"CSP=365.6
DRAINAGE PIPE

INV.10"VCP=367.5

DRAINAGE PIPE
42"D

T2000

T2001

T2002

T2003

T2004

T2005

T2006

T2007

T2008

T2009

REFERENCES:

1. BASE MAP SOURCE: IANUZI & ROMANS, P.C. AND CT MALE ASSOCIATES P.C.
2. THE VALUES SHOWN ARE BASED ON NEW YORK (CENTRAL ZONE) STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM 1983.

NOTE

1. SEE FIGURE 2B FOR IDENTIFICATION OF ADDITIONAL MAP SYMBOLS.

LEGEND

- TOWN/VILLAGE BORDER
- LOCATION HISTORIC BROOK ALIGNMENT
- LIMITS OF PROPOSED REMEDIAL ACTION (2FT MAX. DEPTH BGS)
- LIMITS OF PROPOSED REMEDIAL ACTION WITHIN EXISTING BROOK CHANNEL
- LIMITS OF PROPOSED REMEDIAL ACTION (4FT MAX. DEPTH BGS)
- T-2006 ▲ TREES TO BE REMOVED FOR THE 2016 CONSTRUCTION SEASON

0' 50' 100'

APPROXIMATE SCALE

AECOM

LOCKHEED MARTIN CORPORATION
TREES TO BE REMOVED FOR
2016 CONSTRUCTION
SHEET 1 OF 2
WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
TreeSurvLoc 20150917.dwg	RNB	60338140	10 / 2015	2A

Plotted By: Brookner
Plot Scale: 1 = 1 Plot Date: FIGURE 2A
Plot File Date Created: OCT 15 2015 10:01 AM

Filename: N:\MARKETING\PROPOSALS\LOCKHEED MARTIN - BLOODY BROOK\CAD\TREESURVLOC 20150917.DWG

33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

A B C D E F G H I J

N 1,129,500

N 1,129,000

N 1,128,500

E 923,000

E 922,500

E 922,000

OLD LIVERPOOL ROAD (C.R. No. 137)

MATCHLINE TO SHEET 1 OF 2

ONONDAGA LAKE PARKWAY

PARKING

CONSTRUCTION AREA

PATIO

BRUSH

OPEN STORAGE

ASPHALT PARKING LOT

SHED

STORM SEWER

CSP 5'x7' WIDE

CONCRETE BOX CULVERT (NO BASE FND.)

54" RCP

ARCH BOX CULVERT INV.±=362.0

INV.24"=362.51

INV.±=361.2

INV.±=360.8

INV.±=360.9

INV.±=364.4

INV.±=364.0

BL-127

BL-115

LEGEND

- BLOODY BROOK DRAINAGE DISTRICT EASEMENT
- PROPERTY BORDER
- 365 TOPOGRAPHIC CONTOUR LINE
- WEST BRANCH OF BLOODY BROOK CENTERLINE
- STREAM/WATER EDGE
- UNDERGROUND DRAIN LINE
- OHW OVERHEAD WIRES
- RW RETAINING WALL
- GUARD RAIL
- UMH UTILITY MANHOLE
- DMH DRAINAGE MANHOLE
- SMH SANITARY MANHOLE
- RAILROAD TRACKS
- CB CATCH BASIN
- DS DRAINAGE STRUTURES
- FP FLAG POLE
- CULVERT
- E 924,000 NYS PLANE COORDINATE SYSTEM EASTING
- N 1,131,000 NYS PLANE COORDINATE SYSTEM NORTHING
- BL-115 AERIAL SURVEY GROUND CONTROL POINT
- 7+50 CHANNEL CENTERLINE SURVEY STATION
- 367.4 TOPOGRAPHIC SPOT ELEVATION
- CONIFEROUS TREE
- DECIDUOUS TREE
- LIGHT POLE
- UTILITY POLE / GUY WIRE
- LOCATION HISTORIC BROOK ALIGNMENT
- LIMITS OF PROPOSED REMEDIAL ACTION (2FT MAX. DEPTH BGS)
- LIMITS OF PROPOSED REMEDIAL ACTION WITHIN EXISTING BROOK CHANNEL
- PROPOSED ACCESS ROAD LOCATION
- T-2006 TREES TO BE REMOVED FOR THE 2016 CONSTRUCTION SEASON

REFERENCES:

1. BASE MAP SOURCE: IANUZI & ROMANS, P.C. AND CT MALE ASSOCIATES P.C.
2. THE VALUES SHOWN ARE BASED ON NEW YORK (CENTRAL ZONE) STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM 1983.

0' 50' 100'

APPROXIMATE SCALE

AECOM

LOCKHEED MARTIN CORPORATION
TREES TO BE REMOVED FOR 2016 CONSTRUCTION
SHEET 2 OF 2
WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
TreeSurvLoc 20150917.dwg	RNB	60338140	10 / 2015	2B

Plotted By: Brooker
Plot Scale: 1=1 FARE 28
Plot File Date Created: Oct/19/2015 9:12 AM

Filename: N:\MARKETING\PROPOSALS\LOCKHEED MARTIN - BLOODY BROOK\CAD\TREESURVLOC 20150917.DWG

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

A B C D E F G H I J

ROYAL DRIVE

BROOKVIEW LANE

TOWN GARDENS DRIVE
(PRIVATE ROAD)

SUNFLOWER DRIVE

FLORADALE ROAD

PEARL STREET

SALINA STREET

OLD LIVERPOOL ROAD
(C.R. No. 137)

TOWN OF SALINA
VILLAGE OF LIVERPOOL

N 1,131,000

N 1,130,500

N 1,130,000

E 923,000

E 922,500

E 923,500

LMC-WBBB-WC-24A
LMC-WBBB-WC-24B
LMC-WBBB-WC-24
LMC-WBBB-WC-24C
LMC-WBBB-WC-24D
LMC-WBBB-WC-25A
LMC-WBBB-WC-25B
LMC-WBBB-WC-25
LMC-WBBB-WC-25C
LMC-WBBB-WC-25D
LMC-WBBB-WC-26A
LMC-WBBB-WC-26B
LMC-WBBB-WC-26
LMC-WBBB-WC-26C
LMC-WBBB-WC-26D
LMC-WBBB-WC-27A
LMC-WBBB-WC-27B
LMC-WBBB-WC-27
LMC-WBBB-WC-27C
LMC-WBBB-WC-27D
LMC-WBBB-WC-28A
LMC-WBBB-WC-28B
LMC-WBBB-WC-28
LMC-WBBB-WC-28C
LMC-WBBB-WC-28D
LMC-WBBB-WC-29A
LMC-WBBB-WC-29B
LMC-WBBB-WC-29
LMC-WBBB-WC-29C
LMC-WBBB-WC-29D
LMC-WBBB-WC-30A
LMC-WBBB-WC-30
LMC-WBBB-WC-30B
LMC-WBBB-WC-30C
LMC-WBBB-WC-30D
LMC-WBBB-WC-31A
LMC-WBBB-WC-31B
LMC-WBBB-WC-31
LMC-WBBB-WC-31C
LMC-WBBB-WC-31D
LMC-WBBB-WC-32A
LMC-WBBB-WC-32B
LMC-WBBB-WC-32
LMC-WBBB-WC-32C
LMC-WBBB-WC-32D
LMC-WBBB-WC-33A
LMC-WBBB-WC-33B
LMC-WBBB-WC-33
LMC-WBBB-WC-33C
LMC-WBBB-WC-33D
LMC-WBBB-WC-34A
LMC-WBBB-WC-34B
LMC-WBBB-WC-34
LMC-WBBB-WC-34C
LMC-WBBB-WC-34D
LMC-WBBB-WC-35A
LMC-WBBB-WC-35B
LMC-WBBB-WC-35
LMC-WBBB-WC-35C
LMC-WBBB-WC-35D
LMC-WBBB-WC-36A
LMC-WBBB-WC-36B
LMC-WBBB-WC-36
LMC-WBBB-WC-36C
LMC-WBBB-WC-36D

2015 REMEDIAL EXCAVATION LIMITS

INV.=370.0
INV.=367.6
INV.12"CSP=371.9
INV.12"CSP=370.2
INV.=366.1
INV.=366.3
INV.12"CSP=369.1
INV.=364.4
INV.=364.6
INV.12"=367.8
INV.=364.3
INV.10"VCP=367.5
INV.48"CSP=365.6
DRAINAGE PIPE
INV.=364.4
INV.=364.3
RIM=373.25
RIM=373.3

CSP 7'x9' WIDE
CSP 6'x8' WIDE
DRAINAGE PIPE 42"D

LEGEND

- TOWN/VILLAGE BORDER
- LOCATION HISTORIC BROOK ALIGNMENT
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (2FT MAX. DEPTH BGS)
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION WITHIN EXISTING BROOK CHANNEL
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (4FT MAX. DEPTH BGS)

LMC-WBBB-WC-24 — PREVIOUSLY SAMPLED WASTE CHARACTERIZATION CENTRAL SAMPLE LOCATION

LMC-WBBB-WC-24B — PREVIOUSLY SAMPLED WASTE CHARACTERIZATION COMPOSITE SAMPLE LOCATION

LMC-WBBB-WC-35 — PROPOSED WASTE CHARACTERIZATION CENTRAL SAMPLE LOCATION

LMC-WBBB-WC-35B — PROPOSED WASTE CHARACTERIZATION COMPOSITE SAMPLE LOCATION

SOIL CHARACTERIZATION BOUNDARY

NOTE

1. SEE FIGURE 3B FOR IDENTIFICATION OF ADDITIONAL MAP SYMBOLS.

REFERENCES:

1. BASE MAP SOURCE: IANUZI & ROMANS, P.C. AND CT MALE ASSOCIATES P.C.
2. THE VALUES SHOWN ARE BASED ON NEW YORK (CENTRAL ZONE) STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM 1983.

0' 50' 100'

APPROXIMATE SCALE

AECOM

LOCKHEED MARTIN CORPORATION
WASTE CHARACTERIZATION SAMPLES FOR 2016 CONSTRUCTION
SHEET 1 OF 2

WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
WCS FOR 2016 CON.dwg	RNB	60338140	9 / 2015	3A

Plotted By: Brookner
Plot Scale: 1 = 1 Inches
Plot File Date Created: Sep 17 2015 8:53 AM

Filename: N:\MARKETING\PROPOSALS\LOCKHEED MARTIN - BLOODY BROOK\CAD\WCS FOR 2016 CON.DWG

MATCHLINE TO SHEET 2 OF 2

33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

A B C D E F G H I J

N 1,129,500

N 1,129,000

E 923,000

N 1,128,500

E 922,500

OLD LIVERPOOL ROAD (C.R. No. 137)

MATCHLINE TO SHEET 1 OF 2

LMC-WBBB-WC-36
LMC-WBBB-WC-36B
INV.=364.4
LMC-WBBB-WC-36C
INV.±=364.0
BL-127
BL-115
5'x7' CSP WIDE
CONCRETE BOX CULVERT (NO BASE FND.)
INV.±=364.0
LMC-WBBB-WC-37A
INV.=364.0
LMC-WBBB-WC-37B
LMC-WBBB-WC-37C
LMC-WBBB-WC-37
LMC-WBBB-WC-37D
LMC-WBBB-WC-38A
LMC-WBBB-WC-38B
LMC-WBBB-WC-38C
LMC-WBBB-WC-38
INV.24"=362.51
INV.±=361.2
INV.±=360.8
INV.±=360.9
54" RCP
LMC-WBBB-WC-39A
INV.±=360.9
INV.±=360.8
LMC-WBBB-WC-39D
LMC-WBBB-WC-39
LMC-WBBB-WC-39C
LMC-WBBB-WC-39B
LMC-WBBB-WC-40A
LMC-WBBB-WC-40B
LMC-WBBB-WC-40D
LMC-WBBB-WC-40
LMC-WBBB-WC-40C
ARCH BOX CULVERT INV.±=362.0
BOX CULVERT
ONONDAGA LAKE PARKWAY
PATIO
ASPHALT PARKING LOT
CONSTRUCTION AREA
PARKING
OPEN STORAGE
BRUSH
SHED
UMH
DS
FP
CB
OHW
RW

LEGEND

- BLOODY BROOK DRAINAGE DISTRICT EASEMENT
- PROPERTY BORDER
- 365 TOPOGRAPHIC CONTOUR LINE
- WEST BRANCH OF BLOODY BROOK CENTERLINE
- STREAM/WATER EDGE
- OHW UNDERGROUND DRAIN LINE
- OVERHEAD WIRES
- RW RETAINING WALL
- GUARD RAIL
- UMH UTILITY MANHOLE
- DMH DRAINAGE MANHOLE
- SMH SANITARY MANHOLE
- RAILROAD TRACKS
- CB CATCH BASIN
- DS DRAINAGE STRUTURES
- FP FLAG POLE
- CULVERT
- E 924,000 NYS PLANE COORDINATE SYSTEM EASTING
- N 1,131,000 NYS PLANE COORDINATE SYSTEM NORTHING
- BL-115 AERIAL SURVEY GROUND CONTROL POINT
- 7+50 CHANNEL CENTERLINE SURVEY STATION
- 367.4 TOPOGRAPHIC SPOT ELEVATION
- CONIFEROUS TREE
- DECIDUOUS TREE
- LIGHT POLE
- UTILITY POLE / GUY WIRE
- LOCATION HISTORIC BROOK ALIGNMENT
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION (2FT MAX. DEPTH BGS)
- APPROXIMATE LIMITS OF PROPOSED REMEDIAL ACTION WITHIN EXISTING BROOK CHANNEL
- LMC-WBBB-WC-37 PROPOSED WASTE CHARACTERIZATION CENTRAL SAMPLE LOCATION
- LMC-WBBB-WC-37B PROPOSED WASTE CHARACTERIZATION COMPOSITE SAMPLE LOCATION
- SOIL CHARACTERIZATION BOUNDARY

REFERENCES:

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2. THE VALUES SHOWN ARE BASED ON NEW YORK (CENTRAL ZONE) STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM 1983.

0' 50' 100'

APPROXIMATE SCALE

AECOM

LOCKHEED MARTIN CORPORATION
WASTE CHARACTERIZATION SAMPLES
FOR 2016 CONSTRUCTION
SHEET 2 OF 2

WEST BRANCH OF BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
WCS FOR 2016 CON.dwg	---	60338140	9 / 2015	3B

Plotted By: Bodziar
Plot Scale: 1 = 1 Drawing Units
Plot File Date: Created: Sep./17/2015 8:53 AM

Filename: N:\MARKETING\PROPOSALS\LOCKHEED MARTIN - BLOODY BROOK\CAD\WCS FOR 2016 CON.DWG