

**Final**

14 March 2014

Land Use Controls Implementation Plan

NAS Whidbey Island

Oak Harbor, Washington

Department of the Navy**Naval Facilities Engineering Command Northwest**

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Silverdale, WA 98315

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**FINAL
LAND USE CONTROLS IMPLEMENTATION PLAN
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON**

OFFICE OF
ENVIRONMENTAL CLEANUP

**Prepared by
URS Group, Inc.
Seattle, Washington**

**Prepared for
Naval Facilities Engineering Command Northwest
Silverdale, Washington**

**U.S. Navy Contract No. N44255-09-D-4001
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FINAL LUC IMPLEMENTATION PLAN
Naval Air Station Whidbey Island
Naval Facilities Engineering Command Northwest
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ABBREVIATIONS AND ACRONYMS

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ESD	Explanation of Significant Differences
GIS	geographic information system
GW	groundwater
IC	institutional control
LUC	land use control
IEPM	Installation Environmental Program Manager
MC	munitions constituent
MGR	Machine Gun Range
MRP	Munitions Response Program
MTTR	Mobile Turret Tower Range
NAS	Naval Air Station
Navy	U.S. Navy
NAVFAC	Naval Facilities Engineering Command
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NTCRA	non-time-critical removal action
OU	operable unit
PAH	polycyclic aromatic hydrocarbon
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act

1.0 INTRODUCTION

This Land Use Control (LUC) Implementation Plan describes the procedures for implementing institutional, engineering, and administrative controls at specific areas of Naval Air Station (NAS) Whidbey Island, Washington. LUCs are implemented under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at Operable Units (OUs) 1 through 5 as required by the applicable Records of Decision (RODs) and Explanation of Significant Differences (ESD) (U.S. Navy 2007). LUCs are implemented under the Munitions Response Program (MRP) at two former gun ranges at the former Aviation Fleet Gunnery School as documented by an Action Memorandum (U.S. Navy 2013). The purpose of this Plan is to:

- Document how the U.S. Navy (Navy) will implement LUCs and supporting requirements specified in the RODs, ESD, and Action Memorandum
- Support the continuation of LUCs if property requiring continuation of these LUCs is transferred from Navy custody

This LUC Implementation Plan is a revision of the original Final Land Use Controls Implementation Plan, dated 9 June 2009.

1.1 BACKGROUND

1.1.1 CERCLA Sites

The U.S. Environmental Protection Agency (EPA) placed two areas of NAS Whidbey Island, Ault Field and Seaplane Base, on the National Priorities List (NPL) in 1990. Following CERCLA and Superfund Amendments and Reauthorization Act (SARA) guidelines, various areas at NAS Whidbey Island were grouped into five OUs, each addressed by an individual ROD. The RODs for OUs 1 through 5 were signed by the U.S. Navy, the EPA, and the Washington State Department of Ecology (Ecology) and specified LUCs for individual areas of the OUs. The five RODs specifically addressed are the following:

- OU 1, Ault Field, 20 December 1993, EPA/ROD/R10-94/075
- OU 2, Ault Field, 2 June 1994, EPA/ROD/R10-94/077
- OU 3, Ault Field, 29 March 1995, EPA/ROD/R10-95/113
- OU 4, Seaplane Base, 20 December 1993, EPA/ROD/R10-94/074
- OU 5, Ault Field, 10 July 1996, EPA/ROD/R10-96/142

At the time the NAS Whidbey Island RODs were signed, some LUC requirements included in the RODs were vague and lacked both detailed objectives and specific requirements. An ESD was completed in December 2007 (U.S. Navy 2007). The ESD clarifies LUCs, reporting requirements, and responsibilities for OUs 1 through 5.

1.1.2 MRP Sites

The Department of Defense (DoD) established the MRP in response to Defense Environmental Restoration Program (DERP) guidance in 2001 to address munitions and explosives of concern and munitions constituents (MCs) at “other than operational” military ranges. MCs are munitions-related chemical contaminants. The former Machine Gun Ranges (MGRs) B and C and former Mobile Turret Tower Range (MTTR) at the former Aviation Fleet Gunnery School, NAS Whidbey Island, were identified as MRP sites. The primary MCs are lead from small arms ammunition at both sites and polycyclic aromatic hydrocarbons (PAHs) from target clay pigeons at the former MTTR. The Navy prepared an Action Memorandum (U.S. Navy 2013) to document approval of a non-time-critical removal action (NTCRA) for the two former gun ranges. The purpose of the NTCRA is to select and implement LUCs that restrict future land uses at the former MGRs B and C and MTTR for long-term protection of human health and the environment from MCs while maintaining current recreational opportunities for Whidbey Island residents.

1.2 DEFINITION OF LAND USE CONTROLS

The term “land use control” means “any restriction or administrative action, including engineering and institutional controls, arising from the need to reduce risk to human health and the environment” (U.S. Navy 2003).

The Department of Defense further clarifies the meaning of land use controls as follows:

LUCs include any type of physical, legal, or administrative mechanism that restricts the use of, or limits access to, real property to prevent or reduce risks to human health and the environment. Physical mechanisms encompass a variety of engineered remedies to contain or reduce contamination and/or physical barriers to limit access to property, such as fences or signs. The legal mechanisms used for LUCs are generally the same as those used for institutional controls (ICs) as discussed in the National Contingency Plan (NCP). ICs are a subset of LUCs and are primarily legal mechanisms imposed to ensure the continued effectiveness of land use restrictions imposed as part of a remedial decision. Legal mechanisms include restrictive covenants, negative easements, equitable servitudes, and deed

notices. Administrative mechanisms include notices, adopted local land use plans and ordinances, construction permitting or other existing land use management systems that may be used to ensure compliance with use restrictions (Department of Defense 2001).

1.3 CONTENTS AND USE OF THE LUC IMPLEMENTATION PLAN

The LUC Implementation Plan contains the following:

- Description of the LUCs required by the OU 1 through OU 5 RODs and ESD
- Description of the LUCs documented in the Action Memorandum for the Former Aviation Fleet Gunnery School Sites
- Current map of NAS Whidbey Island showing the areas subject to LUCs
- Listing of LUC requirements and a designation of responsibility for meeting these requirements
- Description of the mechanisms that will be used by the Navy to meet the LUC requirements
- Schedule and process for inspecting and reporting ongoing compliance with LUC requirements

This LUC Implementation Plan is to be used as a reference for Navy personnel tasked with implementing and maintaining the LUC requirements.

1.4 RESPONSIBILITIES

As the lead agency, the Navy is responsible for ensuring the effectiveness of the LUCs as long as the Navy controls the property, or until LUCs are no longer needed. The Navy has designated the Commanding Officer, NAS Whidbey Island, as responsible for enforcing LUCs. The Naval Facilities Engineering Command (NAVFAC) Northwest is responsible for assisting the Commanding Officer in that enforcement and inspecting for LUC effectiveness at NAS Whidbey Island. EPA and Ecology are responsible for regulatory review of LUC effectiveness.

The NAVFAC Northwest Remedial Project Managers (RPMs) will be responsible for the following:

- Planning and securing funding to support LUC management
- Identifying LUC deficiencies or failures and planning and implementing corrective actions
- All communication with state and federal agencies as they pertain to LUC effectiveness, maintenance, and management (including any LUC failures, proposed corrective actions, and land use changes).
- Notifying and consulting with Ecology and EPA prior to making substantive changes to the LUC Implementation Plan
- Notifying Ecology and EPA 6 months prior to any conveyance of property subject to LUCs, including federal-to-federal transfers
- Reviewing any planned actions, programs, or construction that will take place on sites or in areas at which LUCs have been implemented and specifying compliance requirements or conditions for these planned actions, programs, or construction
- Planning, conducting, and reporting annual and 5-year review LUC inspections
- Reviewing and assessing inspection reports compiled during each 5-year period and making recommendations regarding LUCs based on the evaluation of LUC effectiveness

The NAVFAC Northwest Installation Environmental Program Manager (IEPM) at NAS Whidbey Island will be responsible for the following:

- Monitoring on-station activities, programs, and projects to ensure that LUC requirements are maintained and LUCs remain protective
- Conducting CERCLA training at bimonthly and quarterly Activity Environmental Coordinator and Manager meetings
- Conducting CERCLA training at Building Manager meetings as necessary
- Ensuring land use control slides in web-based training for all base personnel and contractors are updated as necessary

- In conjunction with the RPM, identifying any LUC deficiencies or failures and planning and implementing corrective actions
- Communicating any LUC deficiencies or failures to the RPM as they are identified
- Identifying planned projects, programs, or construction that will occur in areas for which LUCs have been implemented and informing the RPM of these plans
- Reviewing and approving any planned actions, programs, or construction (in conjunction with the RPM) that will take place on sites or in areas at which LUCs have been implemented and assisting the RPM in specifying compliance requirements for these planned actions, programs, or construction
- Assisting the RPM with conducting and reporting annual and 5-year review LUC inspections
- Notifying the RPM prior to any conveyance of property subject to LUCs required by a ROD or Action Memorandum
- Ensuring that relevant LUC information is incorporated into the NAS Whidbey Island GIS database to allow for routine considerations in making land use and planning decisions
- Ensuring that the access controls, as defined in NAS Whidbey Island Security Procedures, are maintained and providing the RPM reports summarizing annual security trespasses

The EPA Remedial Project Manager and the Ecology Project Manager will be responsible for the following:

- Review of annual LUC inspection reports
- Providing the RPM with assistance to address identified LUC deficiencies or failures

Responsible organizations and points of contact, at the time of this writing, are identified in Table 1-1.

1.5 INSPECTIONS, REPORTING, AND NOTIFICATIONS

The Navy will perform an annual inspection of the NAS Whidbey Island land areas discussed in this Plan. Inspections will include field inspection, document review, and review of administrative controls in place, such as the approval of projects for each site. Inspection procedures are discussed further in Section 4.6.

The findings of the inspection will be discussed and evaluated in a report to be forwarded annually to EPA and Ecology. The LUC/IC monitoring report will assess the need for any additions to, or reductions in, inspection requirements, as well as determine whether the LUCs in place are effective. The LUC/IC monitoring report, at a minimum, shall contain the following:

- A description of how the facility is meeting the facility-wide LUC/IC requirements
- A description of how the facility is meeting the OU-specific and MRP site-specific objectives, including results of visual field inspections of all areas subject to OU-specific and MRP site-specific restrictions
- An evaluation of whether or not all the OU-specific, MRP site-specific, and facility-wide LUC/IC requirements are being met
- A description of any deficiencies and what efforts or measures have been or shall be taken to correct problems

If any activity is observed during the inspection that is inconsistent with the OU-specific or MRP-specific LUC objectives or restrictions, or is potentially compromising the effectiveness of the LUCs, the observation will be reported to the RPM and IEPM within 24 hours. An electronic mail with a description and photograph of the observation will also be sent to the RPM and IEPM. The RPM will notify EPA and Ecology via electronic mail with a description of the potential LUC compromise no later than 10 calendar days after the inspection observation. Table 1-1 provides a list of contacts for reporting any potential LUC compromises.

The RPM will work together with EPA and Ecology to determine a plan of action to rectify the situation. The RPM will also identify what went wrong with the LUC/IC process, evaluate how to correct the process to avoid future problems, and implement these changes after consulting with EPA and Ecology. The RPM will notify EPA and Ecology regarding how the facility has addressed, or will address, the activity within 10 days of sending EPA and Ecology notification of the activity.

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The IEPM will notify the RPM at least 6 months prior to any transfer, sale, or lease of any property subject to LUCs/ICs required by a ROD or Action Memorandum, and the RPM will notify EPA and Ecology so that EPA and Ecology can be involved in discussions to ensure that appropriate provisions are included in the conveyance documents to maintain effective LUCs/ICs. If it is not possible for the RPM to notify EPA and Ecology at least 6 months prior to any transfer, sale, or lease, then the RPM will notify EPA and Ecology as soon as possible but no later than 60 days prior to the transfer, sale, or lease of any property subject to LUCs/ICs. The Navy has further agreed to provide EPA and Ecology with similar notice, within the same time frames, as to federal-to-federal transfer of property. The Navy will provide a copy of executed deed or transfer documents to EPA and Ecology.

The requirements for these annual inspections will end when the Navy, Ecology, and EPA determine that inspections are no longer needed as a component of the selected remedy to maintain the protectiveness of the remedy, and that site conditions allow for unlimited use and unrestricted exposures based on CERCLA criteria.

Table 1-1
Responsibilities and Contact Information

Contact	Organization	Title	Contact Information
Sherry Rone	NAVFAC Northwest	Remedial Project Manager (RPM) for OUs	1101 Tautog Circle Silverdale, Washington 98315 (360) 396-1030 – Telephone (360) 396-0857 - FAX sherry.rone1@navy.mil
Melissa Holcomb Palmer	NAVFAC Northwest	RPM for MRP Sites	1101 Tautog Circle Silverdale, Washington 98315 (360) 315-5420 - Telephone (360) 396-0857 - FAX melissa.palmer@navy.mil
Allison Crain	NAVFAC Northwest NAS Whidbey Island Public Works, Environmental Division	Installation Environmental Program Manager (IEPM)	1115 West Lexington Street Oak Harbor, WA 98278-3800 (360) 257-4025 – Telephone (360) 257-5175 – FAX allison.crain@navy.mil
Karen Campbell	NAVFAC Northwest NAS Whidbey Island Public Works, Environmental Division	Installation Point of Contact for CERCLA Sites	1115 West Lexington Street Oak Harbor, WA 98278-3800 (360) 257-6561 – Telephone (360) 257-5175 – FAX karen.j.campbell@navy.mil
Jackie Queen	NAVFAC Northwest NAS Whidbey Island Public Works, Environmental Division	Installation Environmental Point of Contact for Ranges	1115 West Lexington Street Oak Harbor, WA 98278-3800 (360) 257-5320 – Telephone (360) 257-5175 – FAX jackie.queen@navy.mil
Nancy Harney	EPA	EPA Remedial Project Manager	1200 6th Avenue, ECL-115 Seattle, Washington 98101 (206) 553-6635 harney.nancy@epamail.epa.gov
Ben Forson	Ecology	Ecology Project Coordinator	P.O. Box 47600 Olympia, WA 98504-7600 (360) 407-7227 bfor461@ecy.wa.gov

Notes:

Ecology - Washington State Department of Ecology
 EPA - U.S. Environmental Protection Agency
 MRP - Munitions Response Program
 NAS - Naval Air Station
 OUs - Operable Units
 NAVFAC - Naval Facilities Engineering Command

2.0 FACILITY AND LAND USE AREA DESCRIPTION

2.1 FACILITY DESCRIPTION

NAS Whidbey Island is located on Whidbey Island in Island County, Washington, at the northern end of Puget Sound and the eastern end of the Strait of Juan de Fuca (Figure 2-1). Whidbey Island is a north-south oriented island approximately 40-miles in length, ranging from 1 to 10 miles in width.

NAS Whidbey Island is a Department of the Navy facility encompassing approximately 8,000 acres and four discrete geographic areas. This plan applies to two of the areas, Ault Field and Seaplane Base, operating approximately 5 miles apart. NAS Whidbey Island is bordered primarily by residential and agricultural land uses and is located near the city of Oak Harbor, a city with a population of approximately 21,000.

2.2 CERCLA OPERABLE UNITS/AREAS WITH LAND USE CONTROLS

Areas of OUs 1 through 5 with ROD-specified LUCs are listed below. Detailed descriptions of individual RODs, OUs, areas, and LUCs are provided in the ESD (U.S. Navy 2007). Figures 2-2 and 2-3 show an overview of the LUC boundaries for the CERCLA OU areas at Ault Field and Seaplane Base, respectively. Figures 2-4 through 2-9 provide close-up views of the LUC areas. The LUC boundaries for the CERCLA OU areas shown on Figures 2-2 through 2-9 are based on a survey conducted in June 2013 and were modified from the LUC site boundaries shown in the ESD based on the 2013 survey. The survey maps and coordinates are provided in Appendix A for reference.

2.2.1 Operable Unit 1

- Area 5, Highway 20/Hoffman Road (surface) Landfill (Figure 2-4)
- Area 6, Current (1969–1980s) Landfill (Figure 2-4)

2.2.2 Operable Unit 2

- Area 2, Western Highlands Landfill (Figure 2-5)
- Area 3, 1969 to 1970 Landfill (Figure 2-5)
- Area 4, Walker Barn Storage Area (Figure 2-5)
- Area 29, Clover Valley Fire School (Figure 2-5)

2.2.3 Operable Unit 3

- Area 31, Former Runway Fire Training School, is addressed as part of OU 5
- Area 16, Runway Ditches (Figure 2-6)

2.2.4 Operable Unit 4

- Areas 48/49, Seaplane Base Landfill (Figure 2-7)

2.2.5 Operable Unit 5

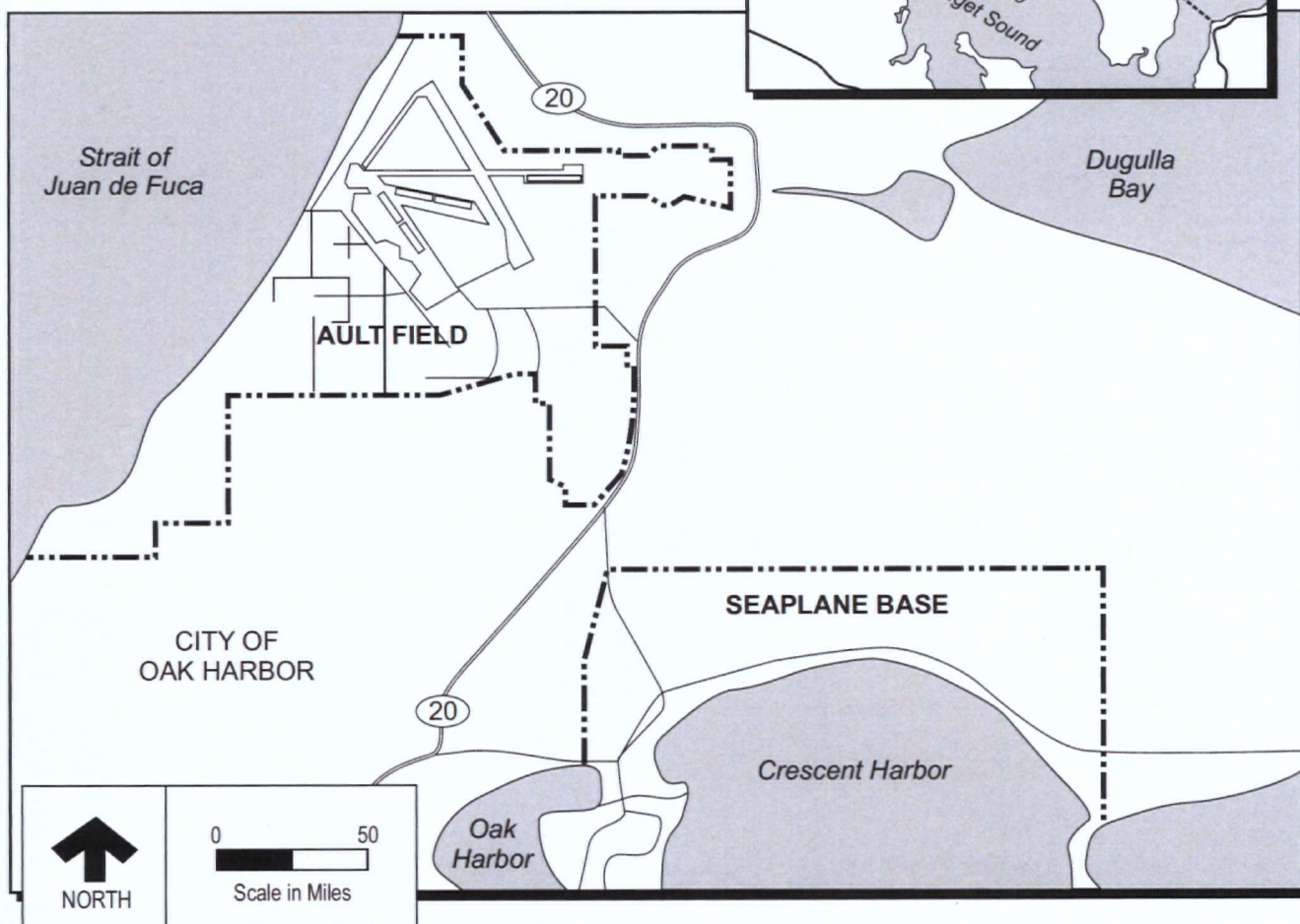
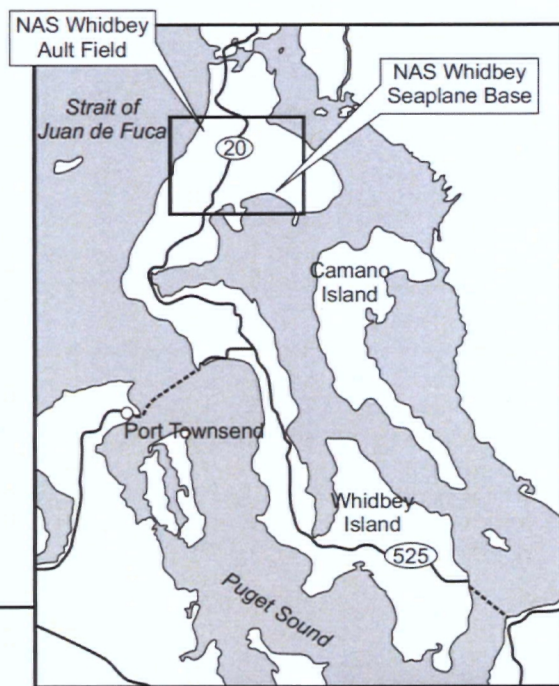
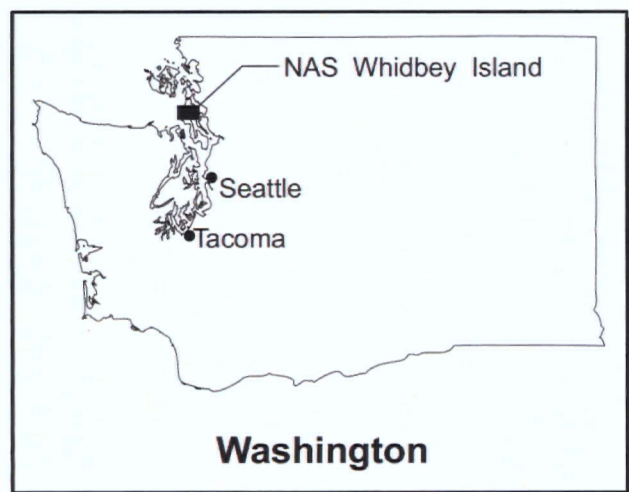
- Area 1, Beach Landfill (Figure 2-8)
- Area 31, Former Runway Fire Training School (Figure 2-9)
- Area 52, Jet Engine Test Cell (Figure 2-8)

2.3 MUNITIONS RESPONSE PROGRAM SITES WITH LAND USE CONTROLS

MRP sites former MGRs B and C and MTTR are located in the southwest corner of Ault Field, as shown on Figure 2-2. Detailed descriptions of the MRP sites and LUCs are provided in the Action Memorandum (U.S. Navy 2013). Figures 2-10 and 2-11 provide close-up views of the LUC areas. The LUC boundaries for the former MGRs B and C and MTTR shown on Figures 2-2, 2-10, and 2-11 are based on a survey conducted in June 2013. The survey maps and legal descriptions are provided in Appendix B for reference. The LUC boundaries surveyed in June 2013 were modified from the site boundaries shown in the Action Memorandum, as described in the remainder of this section.

The boundary of the former MGRs B and C shown in the Action Memorandum and defined in previous assessment reports was estimated based upon the area potentially affected by the former firing practices. The southeast corner of the former MGRs B and C shown in the Action Memorandum overlaps a Crosby Road grant of easement. The eastern portion of the former MGRs B and C shown in the Action Memorandum overlaps Transmitter Road. The MGR firing line was located west of Transmitter Road, firing was directed toward the west, and no MCs were found at levels of concern in the area of the firing line. Therefore, for the purposes of the LUC boundary survey and LUC implementation at the former MGRs B and C, the Crosby Road easement, Transmitter Road, and the narrow area of land east of Transmitter Road are excluded from the former MGRs B and C. The LUC area, as shown on Figure 2-10, ends at the easement and 9 feet west of the center line of Transmitter Road. The Crosby Road grant of easement and Transmitter Road are shown on survey Sheet 2 in Appendix B.

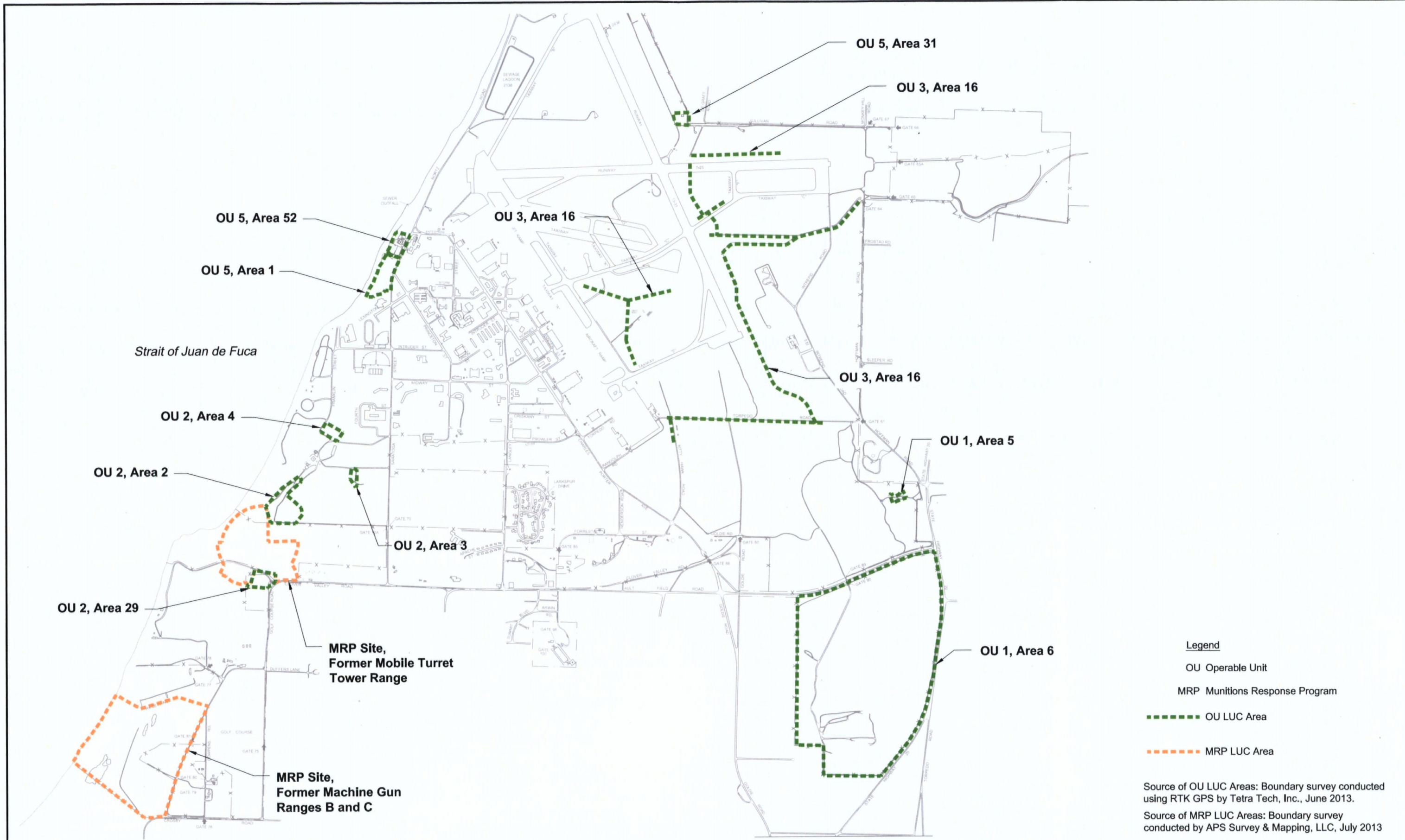
The boundary of the former MTTR shown in the Action Memorandum and defined in previous assessment reports was estimated based upon the area potentially affected by the former firing practices. The northern corner of the former MTTR shown in the Action Memorandum overlaps the CERCLA OU 2 Area 2 Western Highlands Landfill. The southern portion of the former MTTR shown in the Action Memorandum overlaps the CERCLA OU 2 Area 29 Clover Valley Fire School, an existing public golf course, and a Clover Valley Road grant of easement, and extends beyond the Navy property boundary south of Clover Valley Road. Area 2 and Area 29 are included in this Plan as CERCLA OU areas and have remedies in place that include more stringent LUCs, with ongoing 5-year reviews to monitor the performance of the remedies. The public golf course underwent a high degree of disturbance during the course of construction and has been landscaped since the use of the land for a firing range. The area that extends beyond Navy property has not been separately evaluated for contamination. The southeast corner of the LUC area, as shown on Figure 2-11, ends at the Clover Valley Road grant of easement. Therefore, for the purposes of the LUC boundary survey and LUC implementation at the former MTTR, Area 2, Area 29, the public golf course, the Clover Valley Road easement, and the area that extends beyond Navy property are excluded from the former MTTR. Area 2, Area 29, the public golf course, the Clover Valley Road grant of easement, and the Navy property boundary are shown on survey Sheet 1 in Appendix B.

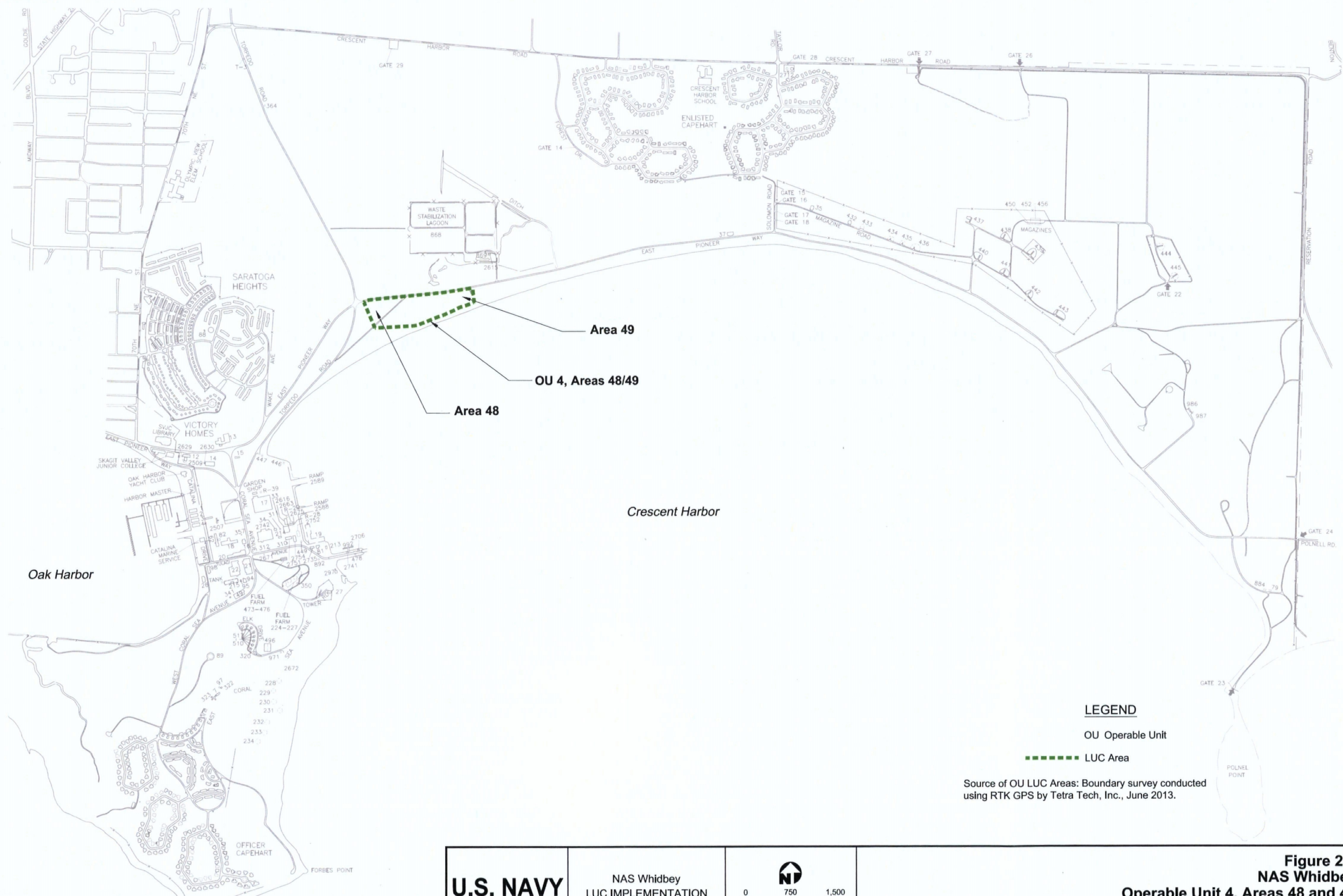


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Figure 2-1
Location Map for NAS Whidbey Island

NAS Whidbey
LUC IMPLEMENTATION
PLAN





LEGEND

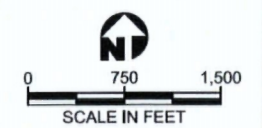
OU Operable Unit

----- LUC Area

Source of OU LUC Areas: Boundary survey conducted using RTK GPS by Tetra Tech, Inc., June 2013.

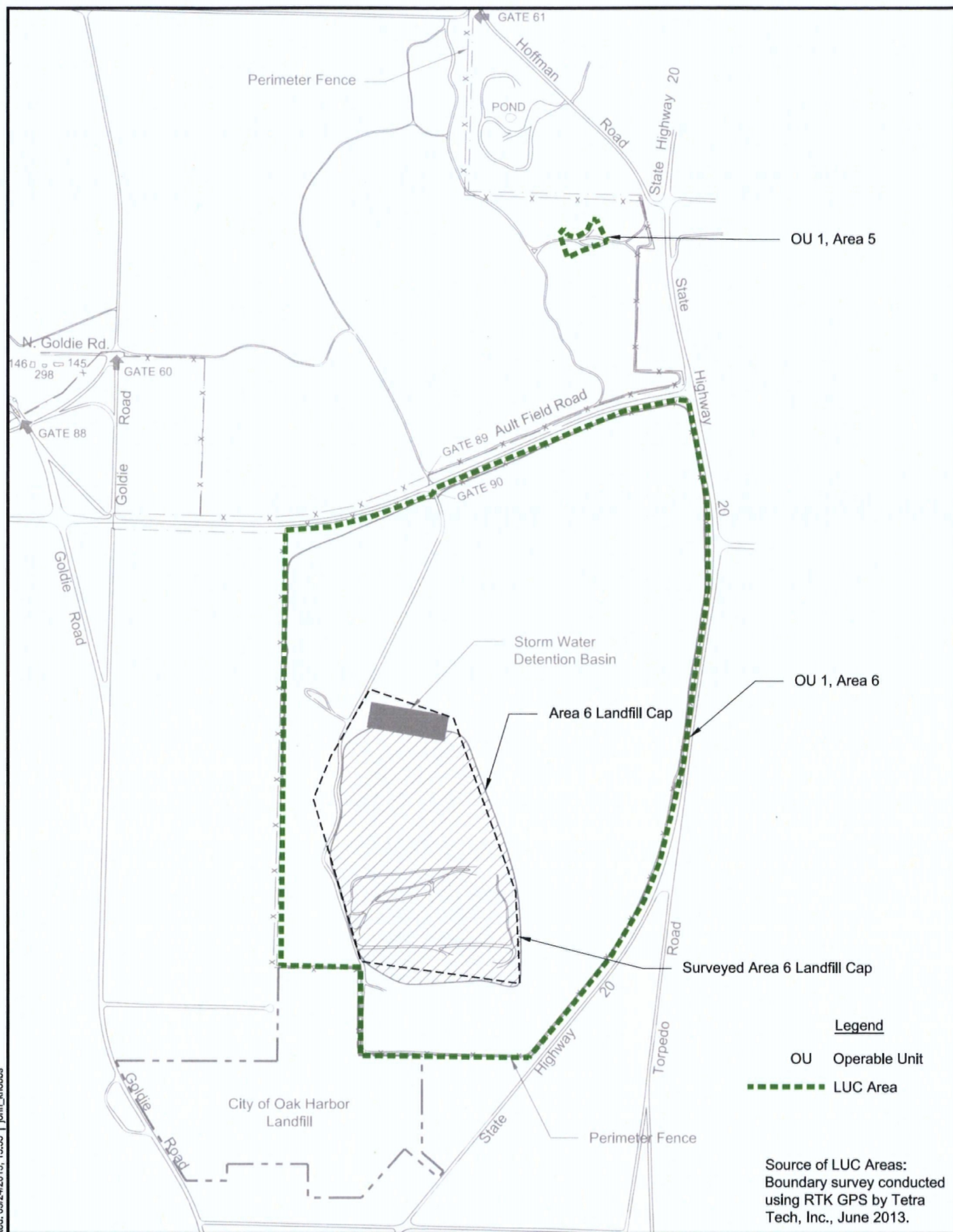
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**Figure 2-3
NAS Whidbey
Operable Unit 4, Areas 48 and 49**

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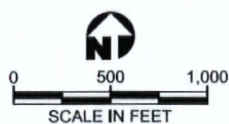
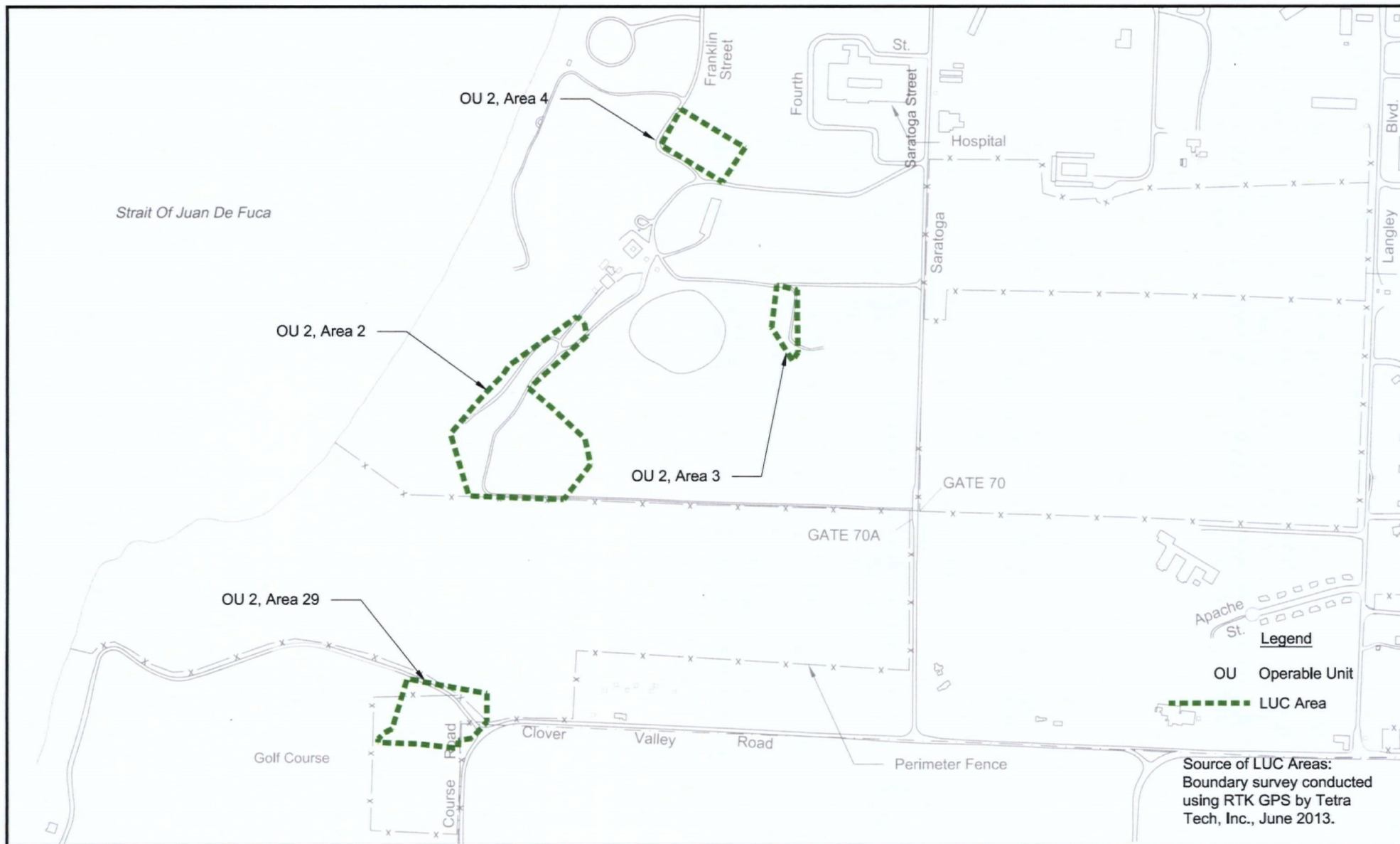


Figure 2-4
NAS Whidbey
OU 1, Areas 5 and 6

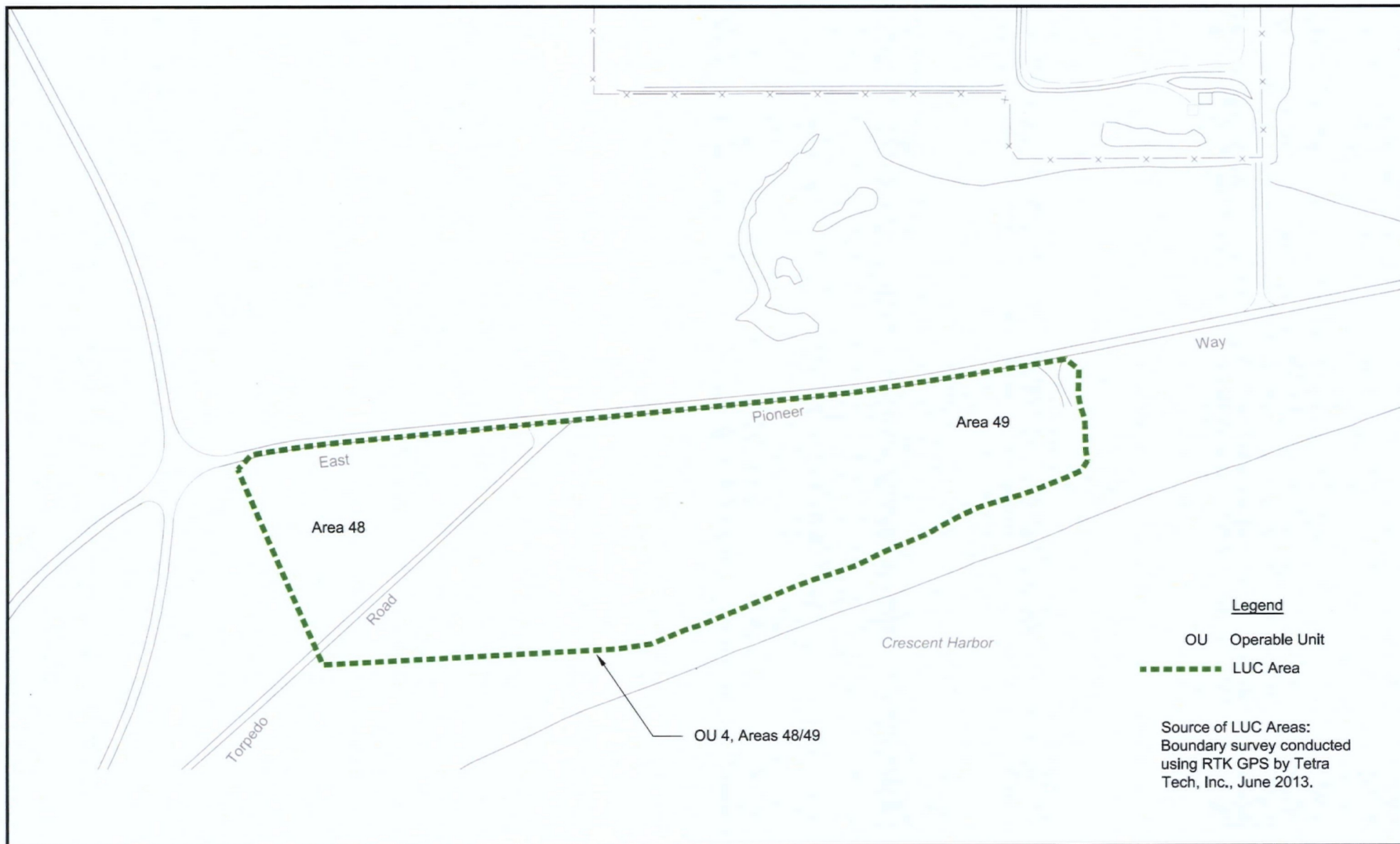


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Figure 2-5
NAS Whidbey, OU 2, Areas 2, 3, 4, and 29

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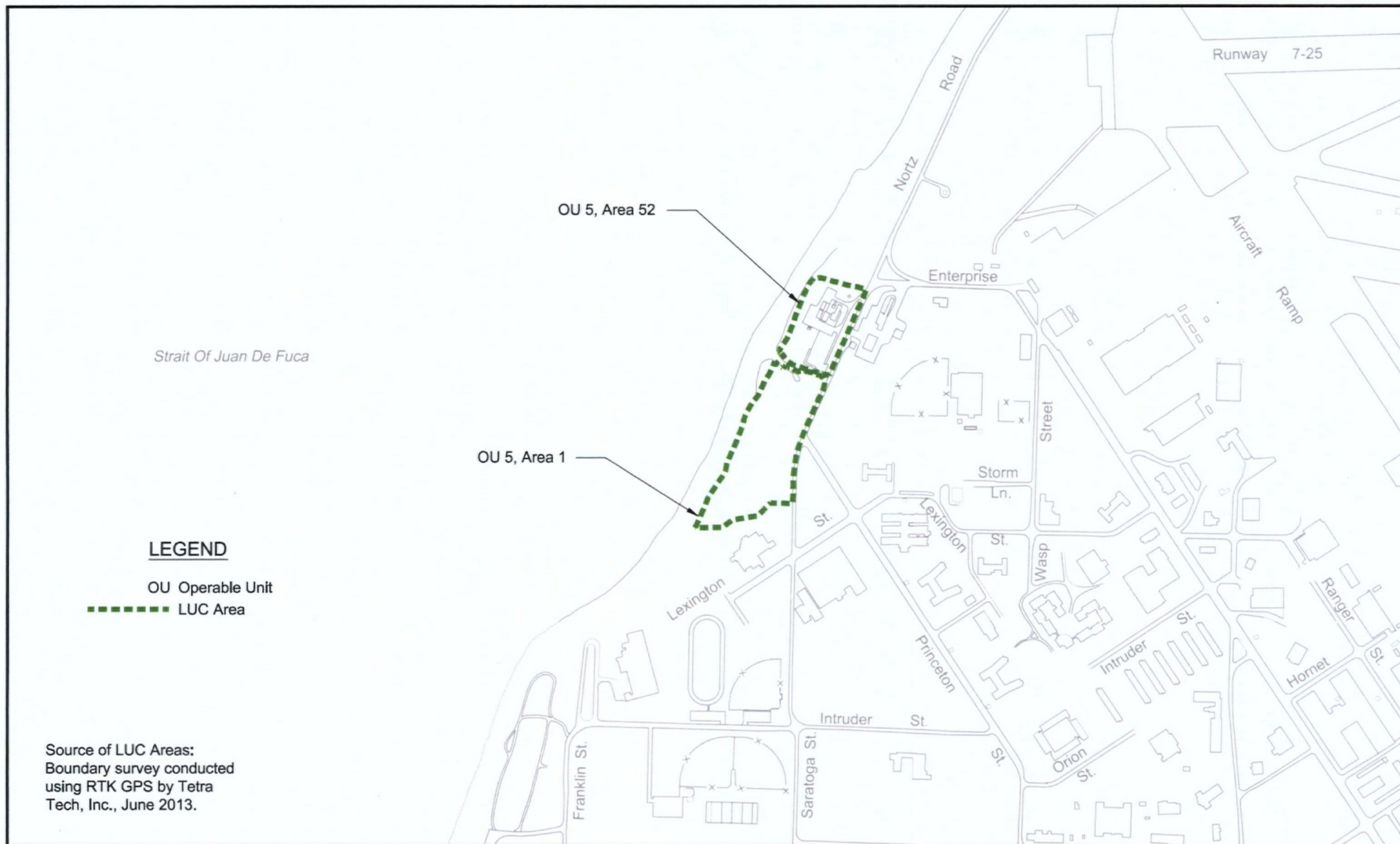


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Figure 2-7
NAS Whidbey, OU 4, Areas 48 and 49

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Figure 2-8
NAS Whidbey, OU 5, Areas 1 and 52

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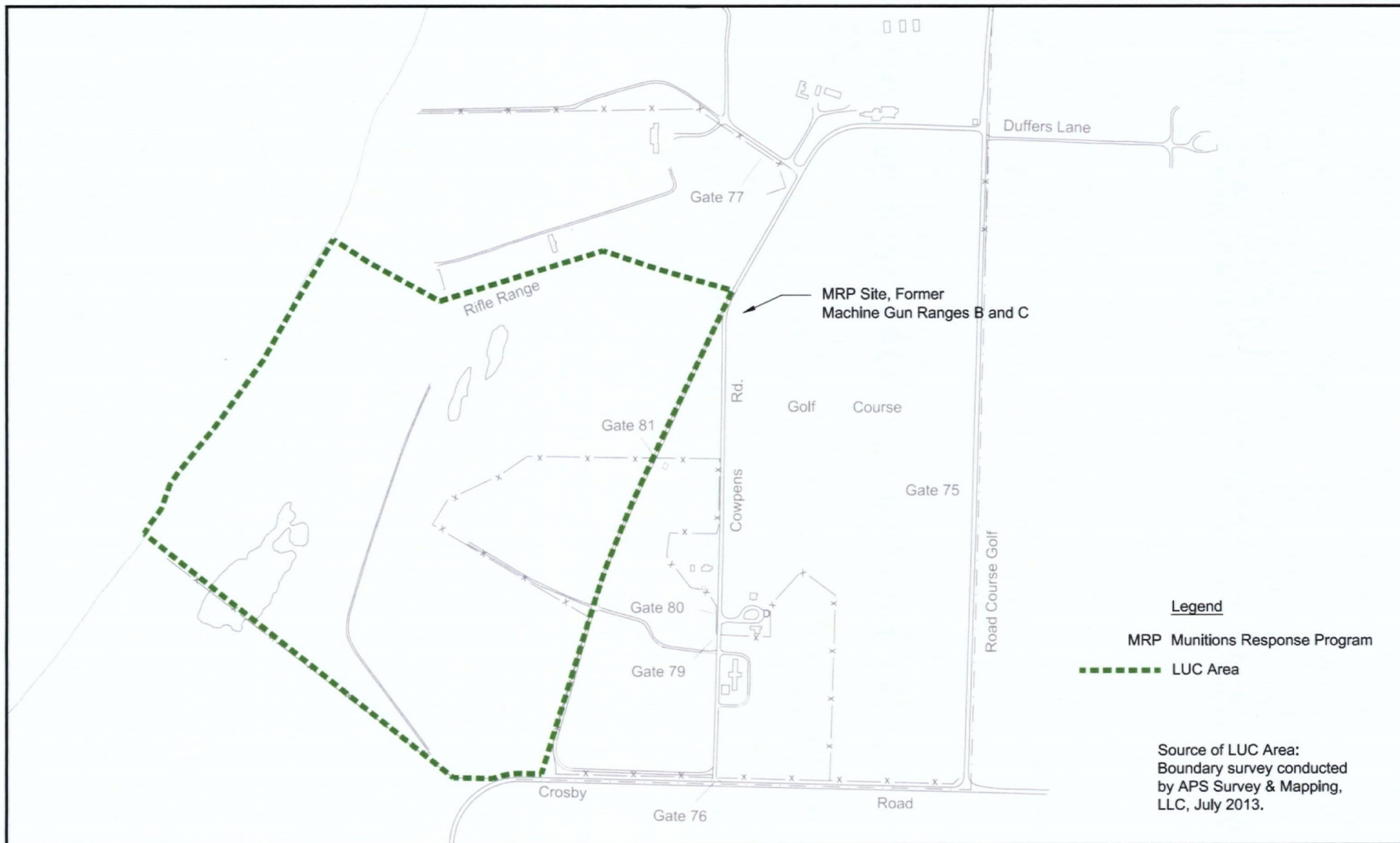


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Figure 2-9
NAS Whidbey, OU 5, Area 31

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U.S. NAVY



Figure 2-10
NAS Whidbey, MRP Site, Former Machine Gun Ranges B and C

NAS Whidbey
 LUC IMPLEMENTATION
 PLAN



U.S. NAVY



Figure 2-11
NAS Whidbey, MRP Site, Former Mobile Turret Tower Range

NAS Whidbey
LUC IMPLEMENTATION
PLAN

3.0 DESCRIPTION OF REQUIRED LAND USE CONTROLS

Specific LUC requirements and objectives for each OU and area that requires LUCs are fully described in the ESD. Specific LUC requirements and objectives for the two MRP sites that require LUCs are fully described in the Action Memorandum. These requirements define the geographic location where each LUC/IC is required, the objective of the control or restriction, and a description of the types of restrictions that need to be in place. A summary list of CERCLA areas, MRP sites, and corresponding LUCs is provided as Table 3-1.

The Navy will use existing site approval procedures (described in NASWHIDBEY Instruction 11013.2B, Site Approval Procedures, dated 7 November 2005), NAS Whidbey Island Security Procedures, a geographic information system (GIS) database and annual inspections as implementation tools to administer these LUC requirements.

The Navy will not modify or terminate land use controls or implementation actions, nor modify land use without approval by EPA and Ecology. The Navy will seek prior concurrence before any anticipated action that may disrupt the effectiveness of the LUCs or any action that may alter or negate the need for LUCs.

Table 3-1
Land Use Control Sites, NAS Whidbey Island

Site ID	LUC Area ^a	LUC or Restriction
All Sites	All Sites	Ensure site signage is intact, secure and readable.
OU 1 Area 5	A surface disposal area in the eastern portion of Ault Field located north of Ault Field Road and west of State Highway 20 (Figure 2-4)	Ensure that land use remains commercial and/or industrial ^b . Ensure that all disturbed or excavated soils at or from the area are properly categorized and disposed of, and that workers are protected during any such disturbance or excavation.
OU 1 Area 6	A landfill in the southeastern portion of Ault Field located south of Ault Field Road, west of State Highway 20, and north of the Oak Harbor Landfill (Figure 2-4)	Ensure that land use remains commercial and/or industrial ^b . No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans. Protect existing monitoring wells. No use of groundwater from, or downgradient of, the area except for monitoring and remediation as approved by EPA and Ecology. Prevention of any disturbance to the landfill cap, except as necessary for authorized cap maintenance activities.
OU 2 Area 2	A former landfill in the western portion of Ault Field located southwest of the current Fire Training School (Figure 2-5)	Ensure that land use remains commercial and/or industrial ^b . No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology. No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans. Protect existing monitoring wells. Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill.

Table 3-1 (Continued)
Land Use Control Sites, NAS Whidbey Island

Site ID	LUC Area ^a	LUC or Restriction
OU 2 Area 3	A former landfill in the western portion of Ault Field located southeast of the current Fire Training School (Figure 2-5)	<p>Ensure that land use remains commercial and/or industrial^b.</p> <p>No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology.</p> <p>No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans.</p> <p>Protect existing monitoring wells.</p> <p>Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill.</p>
OU 2 Area 4	A former electrical equipment storage area in the western portion of Ault Field located approximately 400 yards west of Saratoga Street (Figure 2-5)	<p>Ensure that land use remains commercial and/or industrial^b.</p> <p>No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology.</p> <p>No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans.</p> <p>Protect existing monitoring wells.</p>
OU 2 Area 29	A constructed wetland in the southwestern portion of Ault Field located west of the intersection of Clover Valley Road and Golf Course Road (Figure 2-5)	<p>No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology.</p> <p>No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans.</p> <p>Protect existing monitoring wells.</p> <p>Prevent ground disturbance or construction activities.</p>
OU 3 Area 16	Runway open ditch banks within 50 feet of centerline of ditches located in the northeastern portion of Ault Field (Figure 2-6)	<p>Ensure that land use remains commercial and/or industrial^b.</p> <p>Limit adjoining ditch banks to disposal of dredged sediments meeting Model Toxics Control Act Industrial Soils criteria and/or industrial use.</p>

Table 3-1 (Continued)
Land Use Control Sites, NAS Whidbey Island

Site ID	LUC Area ^a	LUC or Restriction
OU 4 Areas 48/49	A landfill in the western portion of Seaplane Base located south of East Pioneer Way along Crescent Harbor (Figure 2-7)	Ensure that land use remains commercial and/or industrial ^b . Use restrictions to prevent ground disturbance via excavation or other ground disturbing activities in the area of former construction debris landfill.
OU 5 Area 1	A former construction debris landfill in the western portion of Ault Field located west of the intersection of Saratoga Street and Princeton Street along the Strait of Juan de Fuca (Figure 2-8)	Ensure that land use remains commercial and/or industrial ^b . No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology. No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans. Protect existing monitoring wells. Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill. Ensure that shoreline armoring is in place and functioning as intended.
OU 5 Area 31	A former Runway Fire Training School in the northern portion of Ault Field located west of the intersection of De Graff Road and Sullivan Road (Figure 2-9)	Ensure that land use remains commercial and/or industrial ^b . No use of groundwater from, or downgradient of, the area except for monitoring and remediation, as approved by EPA and Ecology. No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans. Protect existing monitoring wells.
OU 5 Area 52	A jet engine test cell in the western portion of Ault Field located southwest of the intersection of Nortz Road and Enterprise Road and along the Strait of Juan de Fuca (Figure 2-8)	Ensure that land use remains commercial and/or industrial ^b . No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology. No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans. Protect existing monitoring wells.

Table 3-1 (Continued)
Land Use Control Sites, NAS Whidbey Island

Site ID	LUC Area ^a	LUC or Restriction
MRP Site Former MGRs B and C	A former machine gun range in the southwestern portion of Ault Field located west of Cowpens Road and along the Strait of Juan de Fuca (Figure 2-10)	Ensure that site is used for non-residential ^c purposes only. Ensure that all disturbed or excavated soils at or from the area are properly categorized and disposed of, and that workers are protected during any such disturbance or excavation.
MRP Site Former MTTR	A former mobile turret tower range in the southwestern portion of Ault Field located northwest of the intersection of Clover Valley Road and Golf Course Road (Figure 2-11)	Ensure that site is used for non-residential ^c purposes only. Ensure that all disturbed or excavated soils at or from the area are properly categorized and disposed of, and that workers are protected during any such disturbance or excavation.

^aLUC areas are based on the boundary surveys performed in June 2013 and shown on Figures 2-2 through 2-11.

^bCommercial includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child-care facilities, and playgrounds.

^cNon-residential land uses may include recreational, industrial, commercial, office, and educational uses. Commercial land uses are defined above in note c.

Notes:

Ecology - Washington State Department of Ecology

EPA - U.S. Environmental Protection Agency

GW - groundwater

LUC - land use control

MGRs - Machine Gun Ranges

MRP - Munitions Response Program

MTTR - Mobile Turret Tower Range

OU - Operable Unit

4.0 IMPLEMENTING MECHANISMS

The Commanding Officer, NAS Whidbey Island, with the assistance of NAVFAC Northwest will implement and enforce the LUCs specified in the ESD and Action Memorandum. Implementing actions will consist of the following:

- Maintaining and inspecting the existing subarea fencing to control access
- Conducting annual inspections to verify that the LUCs are implemented
- Evaluating protectiveness of LUCs during 5-year reviews

Site approval procedures (NASWHIDBEY Instruction 11013.2B) include requirements in this LUC Implementation Plan. A layer has been added to the NAS Whidbey Island GIS database for the installation to identify sites with LUCs and their boundaries.

4.1 LAND USE CONTROLS IMPLEMENTATION PLAN

The purpose of this Plan is to establish responsibilities and requirements for maintaining LUCs at NAS Whidbey Island to protect human health, the environment, and the integrity of remedies specified by the RODs for OUs 1 through 5 and the Action Memorandum for MRP sites former MGRs B and C and MTTR. This Plan will apply to all employees and organizations at NAS Whidbey Island and to all contractors doing work at NAS Whidbey Island.

This Plan indicates general responsibilities that apply to all entities of NAS Whidbey Island and that these organizations will do the following:

- Comply with the requirements of this Plan.
- Contact the NAS Whidbey Island Public Works, Environmental Division, whenever questions or concerns associated with LUCs arise. The Environmental Division will coordinate responses to these concerns or questions with the appropriate RPM.

This Plan will be reviewed annually for applicability and revised as required by NAS Whidbey Island needs and with respect to changes required to maintain compliance with LUCs. RPMs will be included as one of the annual reviewing entities.

4.2 RESPONSIBILITIES

The NAVFAC Northwest RPMs will be responsible for the following:

- Planning and securing funding to support LUC management
- Identifying LUC deficiencies or failures and planning and implementing corrective actions
- All communication with state and federal agencies as they pertain to LUC effectiveness, maintenance, and management (including any LUC failures, proposed corrective actions, and land use changes)
- Notifying and consulting with Ecology and EPA prior to making substantive changes to the LUC Implementation Plan
- Notifying Ecology and EPA 6 months prior to any conveyance of property subject to LUCs, including federal-to-federal transfers
- Reviewing any planned actions, programs, or construction that will take place on sites or in areas at which LUCs have been implemented and specifying, by signature, compliance requirements or conditions for these planned actions, programs, or construction
- Planning, conducting, and reporting annual and 5-year review LUC inspections
- Reviewing and assessing inspection reports compiled during each 5-year period and making recommendations regarding LUCs based on the evaluation of LUC effectiveness

The NAVFAC Northwest IEPM at NAS Whidbey Island will be responsible for the following:

- Monitoring on-station activities, programs, and projects to ensure that LUC requirements are maintained and LUCs remain protective
- Conducting CERCLA training at bimonthly and quarterly Activity Environmental Coordinator and Manager meetings
- Conducting CERCLA training at Building Manager meetings as necessary

- Ensuring land use control slides in web-based training for all base personnel and contractors are updated as necessary
- In conjunction with the RPM, identifying any LUC deficiencies or failures and planning and implementing corrective actions
- Communicating any LUC deficiencies or failures to the RPM as they are identified
- Identifying planned projects, programs, or construction that will occur in areas for which LUCs have been implemented and informing the RPM of these plans
- Reviewing and approving any planned actions, programs, or construction (in conjunction with the RPM) that will take place on sites or in areas at which LUCs have been implemented and assisting the RPM in specifying compliance requirements for these planned actions, programs, or construction
- Assisting the RPM with conducting and reporting annual and 5-year review LUC inspections
- Notifying the RPM prior to any conveyance of property subject to LUCs required by a ROD or Action Memorandum
- Ensuring that relevant LUC information is incorporated into the NAS Whidbey Island GIS database to allow for routine considerations in making land use and planning decisions
- Ensuring that the access controls, as defined in NAS Whidbey Island Security Procedures, are maintained and providing the RPM reports summarizing annual security trespasses

4.3 SITE APPROVAL PROCEDURES

NAS Whidbey Island has established site approval procedures (described in NASWHIDBEY Instruction 11013.2B, Site Approval Procedures, dated 7 November 2005), that require site approval when a project involves or is encumbered by ammunition and explosive safety criteria, electromagnetic radiation, airfield safety or Air Installations Compatible Use Zone criteria, or when the project changes or has the potential to change the land use or physical layout of the activity.

This instruction requires that all new projects or construction will be reviewed for compliance with LUC requirements.

This instruction requires the IEPM to review all projects identified by NAS Whidbey Island Public Works and Environmental Affairs Departments, to be at or adjacent to sites identified as encumbered by LUCs and to notify the RPM of all projects, programs, or construction that will occur on sites or in areas at which LUCs have been implemented.

A process flow chart for site approval review is shown on Figure 4-1.

4.4 NAS WHIDBEY ISLAND GIS DATABASE REVISION

NAS Whidbey Island Public Works maintains a GIS database. This database includes a layer that identifies all sites at which LUCs apply and their boundaries. This data will be updated as needed if LUCs or boundaries change and act as a tracking mechanism for all land areas under restriction or control.

4.5 ACCESS CONTROL

Warning signs are installed at site access points, including vehicle entry points, which prohibit disturbance without prior approval.

With two exceptions, CERCLA sites for which LUCs have been prescribed are within the security patrolled fence of NAS Whidbey Island. Access control on all Navy property is the responsibility of NAS Whidbey Island Security. If requested to open the perimeter gate, Base Security will advise the Environmental Department.

The exceptions are OU 1 Area 6 and OU 2 Area 29. Both areas are fenced, but are not routinely patrolled by NAS Whidbey Island Security. OU 2 Area 29 is a constructed wetland. It is posted "No Trespassing" and has little attraction for unauthorized personnel.

Maintenance of all fencing and signage is the responsibility of NAS Whidbey Island Public Works. Existing LUC-area fencing and signage will be inspected, as it pertains to individual LUC sites, during annual inspections described in Section 4.6.

OU 1 Area 6 is maintained by contractor personnel responsible for operating the groundwater extraction, treatment, and recharge system. NAS Whidbey Island Recycling also operates the composting facility within the fenced area for OU 1 Area 6. NAS Whidbey Island Security does

not routinely patrol this area. In the event of trespass, on-site personnel are expected to contact NAS Whidbey Island Security to escort the trespasser off site.

MRP sites former MGRs B and C and MTTR are located within the NAS Whidbey Island boundary but not within the security patrolled installation fence line. Except for a restricted area near a fenced transmitter array at the former MGRs B and C, access to the site is not actively restricted. A barbed wire fence reduces access to the northern and western ends of the former MTTR, but access to the eastern portion of the site is not restricted. The sites are currently used for limited recreational purposes. Implementation of the MRP site LUCs, which restrict residential development and impose soil excavation requirements, does not alter the current recreational uses or require strict access control at these sites.

4.6 ANNUAL INSPECTIONS

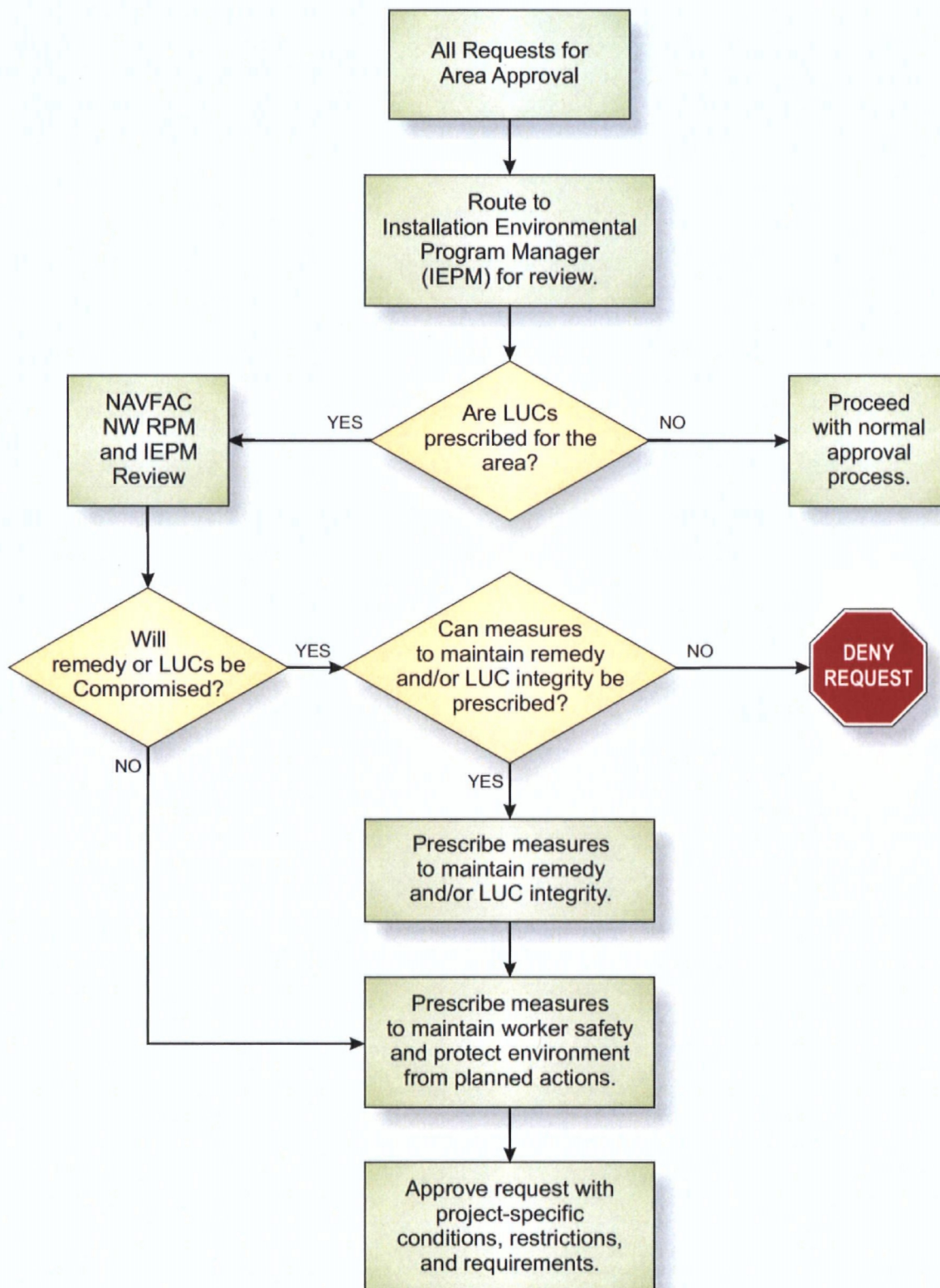
The LUCs identified in this Plan will be inspected as necessary as part of the operation and maintenance of the LUCs. Site inspections are an important element in ensuring the effectiveness of the LUCs in place at the sites. The findings of the inspection will be discussed and evaluated in a report forwarded to Ecology and EPA. The general content of the inspection report is described in Section 1.5. Annual inspections have been performed and reports have been submitted in accordance with this Plan since 2009. Inspection reports will continue to be submitted annually.

Inspections will include field inspection, document review, and review of administrative controls in place, such as the approval of projects for each site. The inspection will also document the current land use. The condition of monitoring wells, fences, landfill caps, and signage will be reviewed and reported in the inspection report. Representative photographs will be taken to document site conditions and visual evidence of LUC deficiencies or failures.

Site-specific checklists will be used to guide inspectors and assist in capture of all data necessary to assess and report on the effectiveness of LUCs at NAS Whidbey Island and develop enhancements as appropriate. These area-specific checklists are provided as Appendix C. A general checklist for inspection of monitoring wells is also provided at the end of the appendix. This checklist will be employed by the sampling entity during monitoring conducted at the sites where "protection of existing monitoring wells" is a required LUC. Completed checklists will be provided to the inspection entity prior to the site inspection visit.

4.7 FIVE-YEAR REVIEW EVALUATION

Because of the presence of chemicals above non-restrictive land use cleanup levels at some OU sites, NAS Whidbey Island will continue to be subject to 5-year reviews pursuant to CERCLA and the NCP, 40 Code of Federal Regulations (CFR) 300.430(f)(4)(ii). The effectiveness of LUCs will be evaluated during the 5-year reviews of RODs. The MRP sites will be evaluated with the OU areas as part of the 5-year review process. The annual inspection reports will be the basis for evaluating the effectiveness of the LUCs as part of the CERCLA 5-year review process. Inspection reports compiled during each 5-year period will be reviewed and assessed, and recommendations regarding LUCs will be made, as appropriate.



5.0 REFERENCES

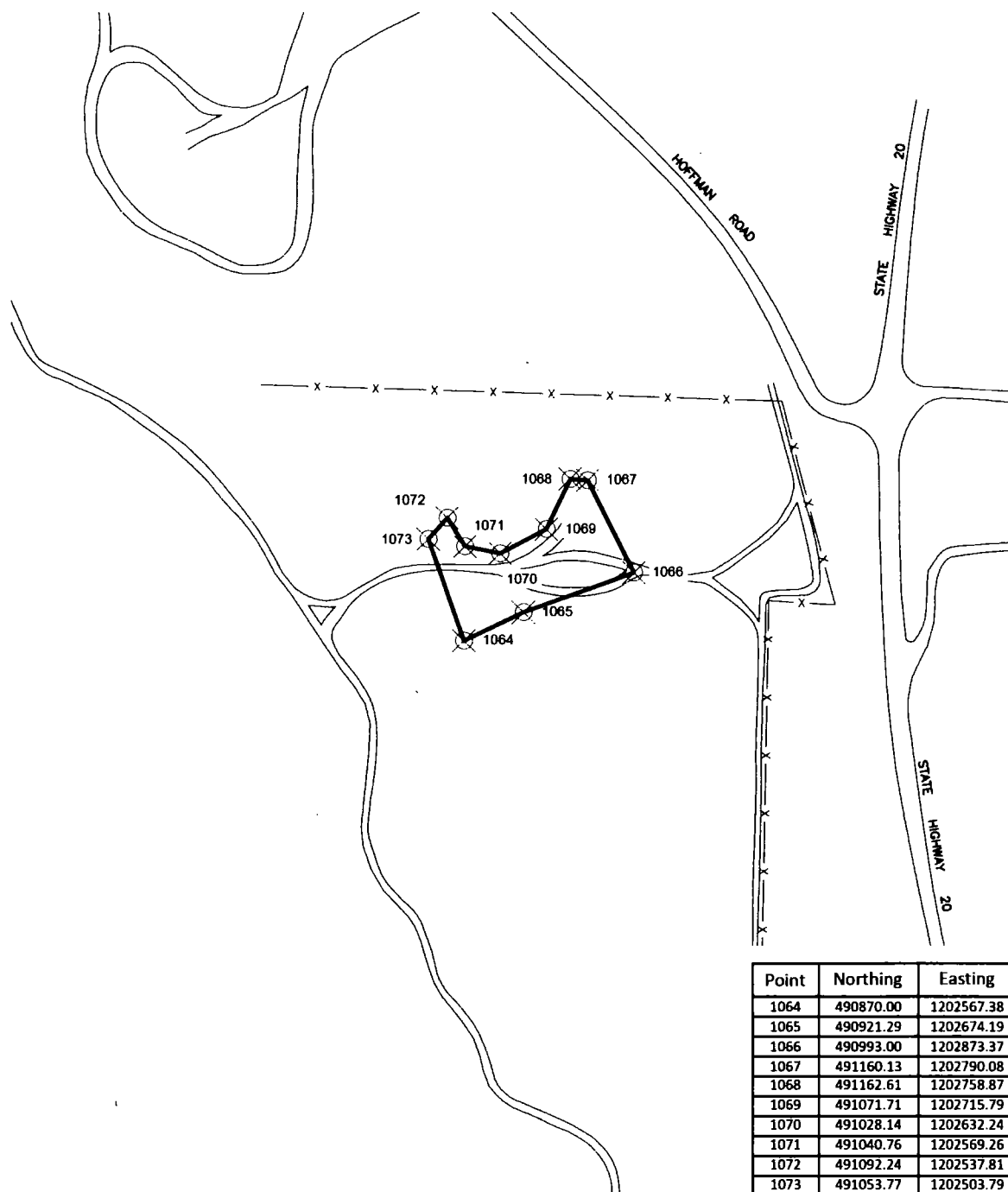
- U.S. Department of Defense. 2001. *Policy on Land Use Controls Associated with Environmental Restoration Activities*. Memorandum for Assistant Secretaries of the Army, Navy, Air Force, and Director, Defense Logistics Agency. January 17, 2001.
- U.S. Navy. 2013. *Action Memorandum, Former Aviation Fleet Gunnery School, Naval Air Station Whidbey Island, Oak Harbor, Washington*. Prepared by Naval Facilities Engineering Command Northwest, Silverdale, Washington. 9 July 2013.
- _____. 2009. *Final Land Use Controls Implementation Plan, NAS Whidbey, Oak Harbor, Washington*. Prepared by Naval Facilities Engineering Command Northwest, Silverdale, Washington. June 2009.
- _____. 2007. *Explanation of Significant Differences to the Records of Decision for Operable Units 1, 2, 3, 4, & 5 at Naval Air Station Whidbey Island*. Prepared by Naval Facilities Engineering Command Northwest, Silverdale, Washington. December 2007.
- _____. 2003. *Monitoring and Enforcement of Land Use Controls, Memorandum for Undersecretary of Defense (Installations and Environment)*. April 2003.

APPENDIX A

Survey Maps and Coordinates for CERCLA OU Area LUC Boundaries, June 2013

From ROD Description 12/93:

Area 5 is approximately 500 feet long by 500 feet wide and was used for gravel excavation. It is located just north of Ault Field Road and west of State Highway 20.



NOTES:

1. Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29

LEGEND:

- LUC BOUNDARY
- == ROAD
- x - FENCE



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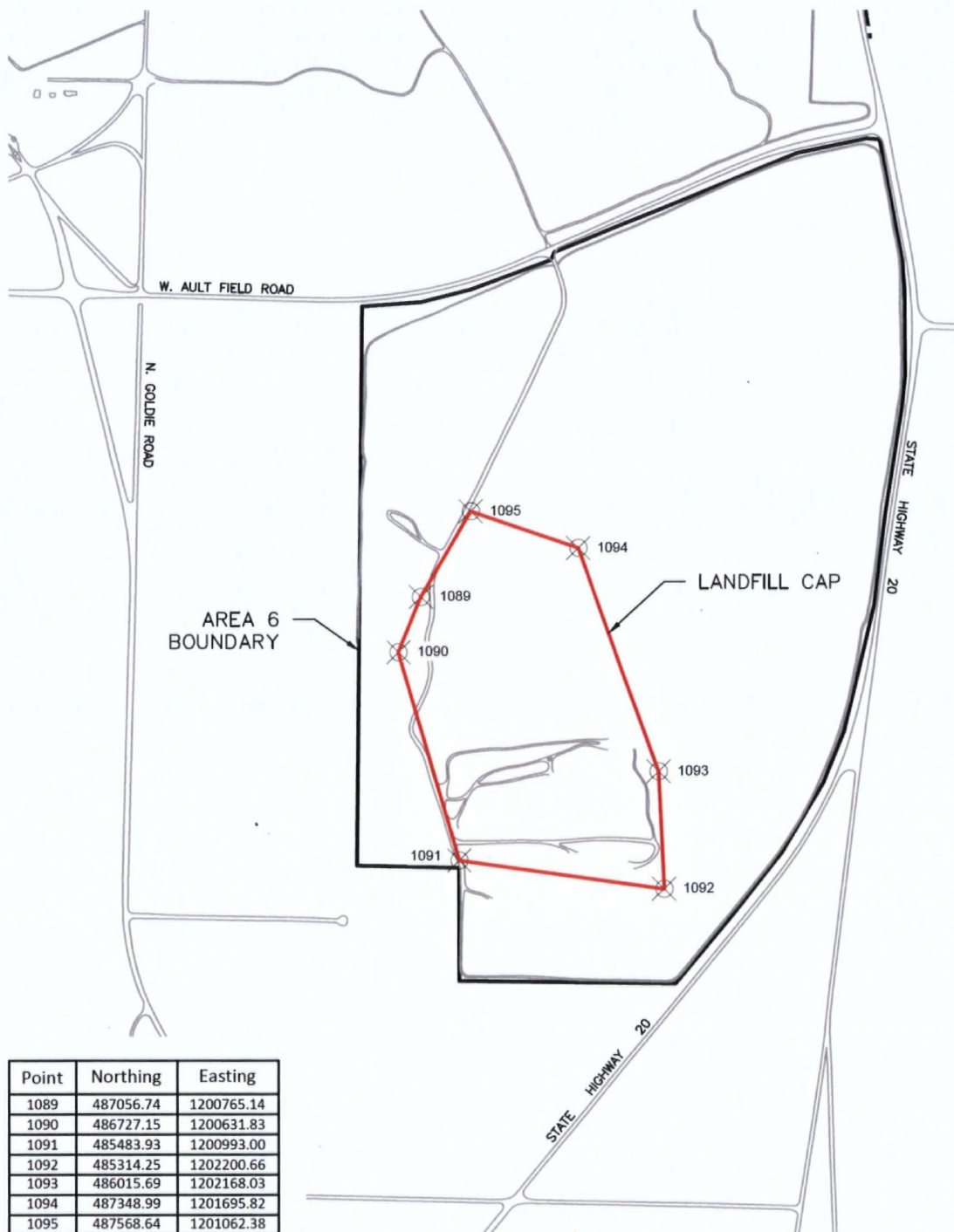
JUNE 2013

**FIGURE A-1
OU 1 AREA 5**

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS

From ROD Description 12/93:

Area 6 is a 260-acre tract in the southeast corner of Ault Field. The former hazardous waste storage area is approximately 15 feet by 40 feet. A separate portion of Area 6 was used for Navy household municipal waste and is currently accepting construction debris and yard waste. This landfill operations area is approximately 40 acres and is now covered with soil and natural vegetation. Area 6 is bordered by Ault Field Road to the north, State Highway 20 to the east, and the Oak Harbor Landfill on the south and southwest boundaries.



Point	Northing	Easting
1089	487056.74	1200765.14
1090	486727.15	1200631.83
1091	485483.93	1200993.00
1092	485314.25	1202200.66
1093	486015.69	1202168.03
1094	487348.99	1201695.82
1095	487568.64	1201062.38

NOTES:

1. Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29

LEGEND:

ROAD



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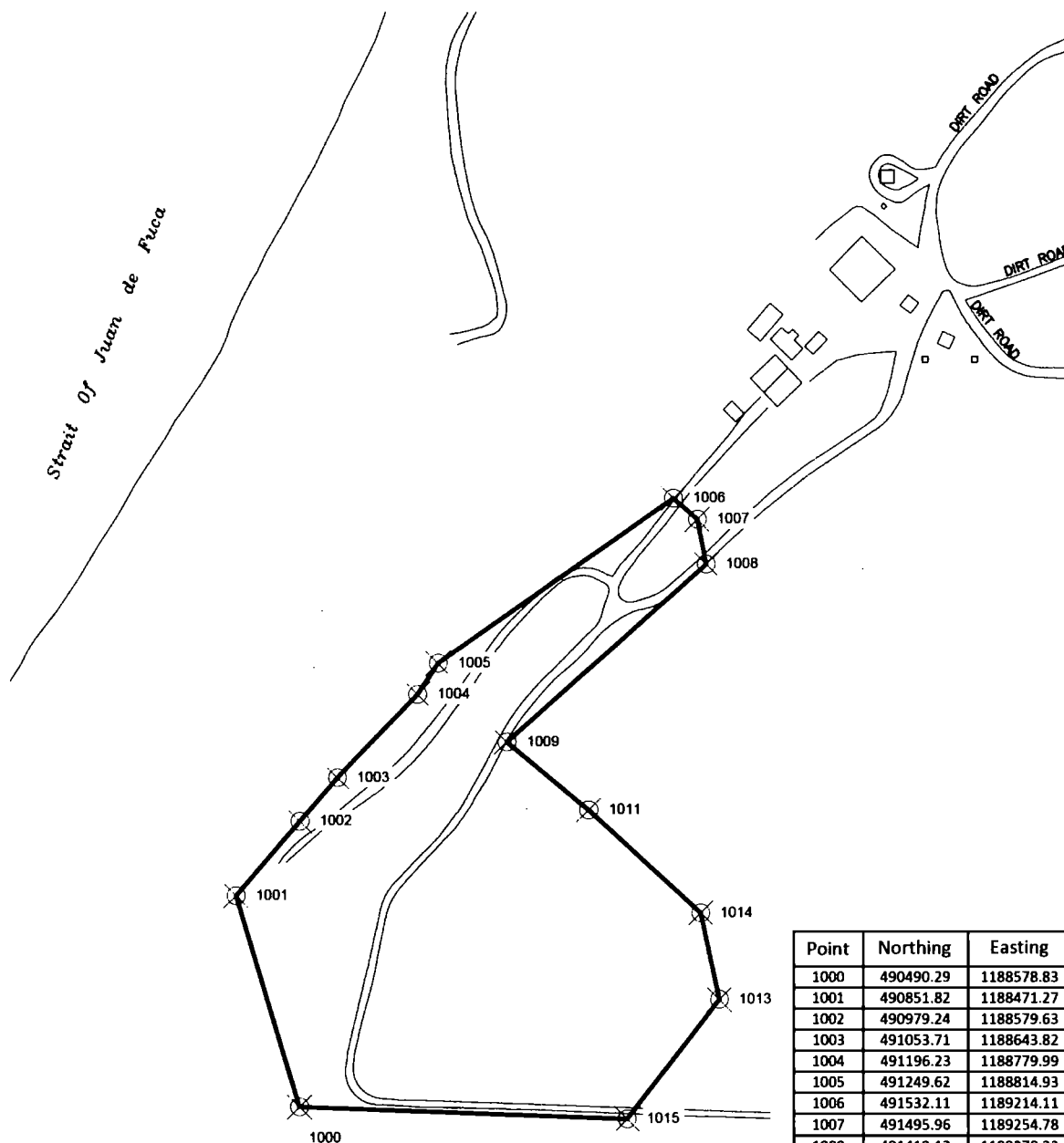
JUNE 2013

**FIGURE A-2
OU 1 AREA 6 LANDFILL**

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS

From ROD Description 4/26/94:

Area 2 is a 13 acre former landfill located southwest of the current fire training school. The site is situated on a topographic high of 118 feet above mean sea level and slopes eastward. The western boundary of Area 2, which is covered with mixed evergreens, slopes toward the Strait of Juan de Fuca. A gravel road and a fence define the southern boundary of Area 2. A wetland is located near the eastern boundary of the site.



Point	Northing	Easting
1000	490490.29	1188578.83
1001	490851.82	1188471.27
1002	490979.24	1188579.63
1003	491053.71	1188643.82
1004	491196.23	1188779.99
1005	491249.62	1188814.93
1006	491532.11	1189214.11
1007	491495.96	1189254.78
1008	491419.12	1189270.22
1009	491114.95	1188931.37
1011	490998.28	1189070.20
1013	490673.59	1189291.79
1014	490821.95	1189260.18
1015	490469.13	1189134.66

NOTES:

1. Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29

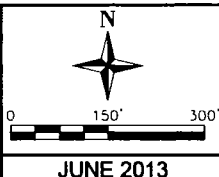
LEGEND:

- LUC BOUNDARY
- ROAD
- BUILDING



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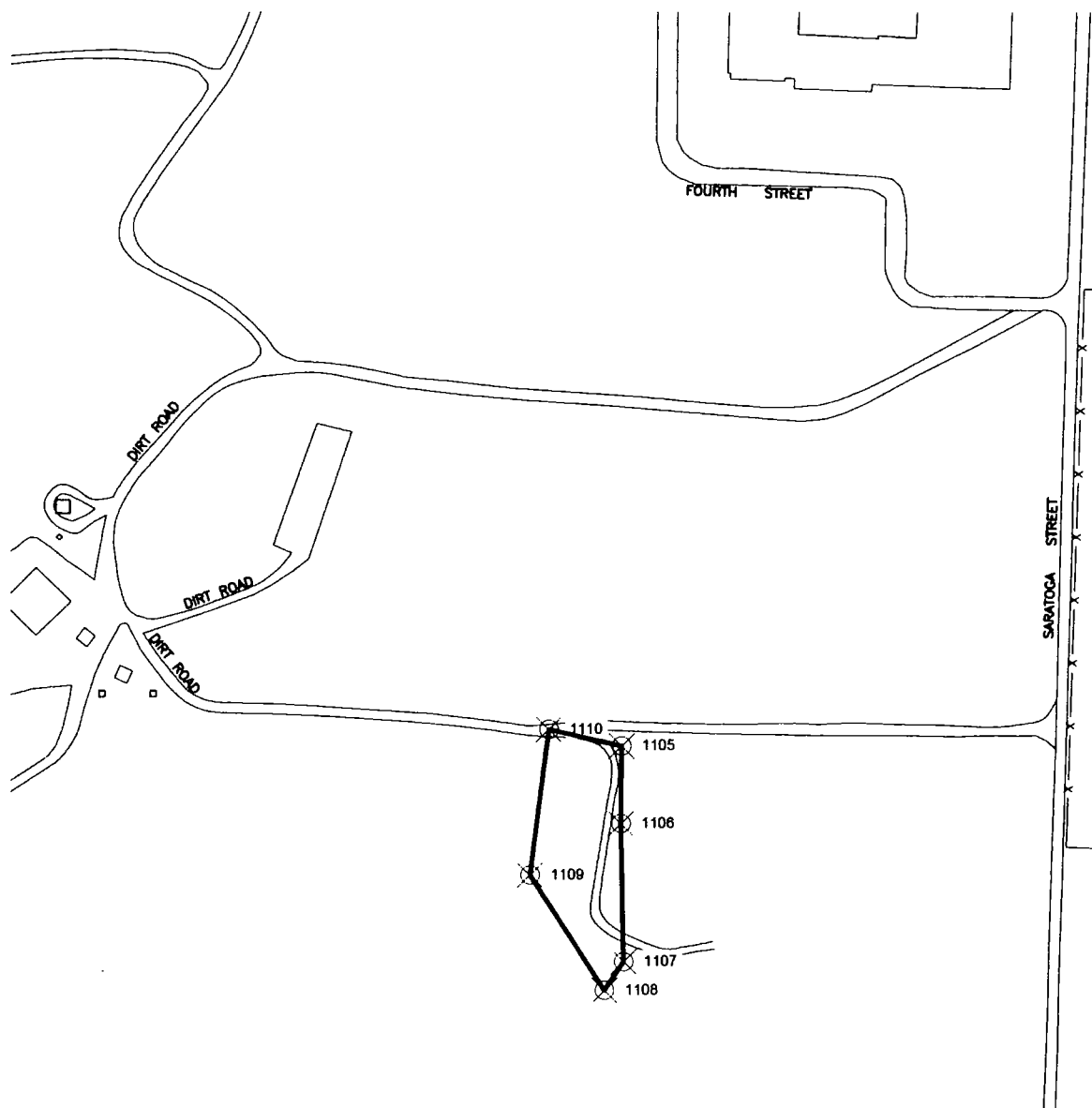
**FIGURE A-3
OU 2 AREA 2**

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS

JUNE 2013

From ROD Description 4/26/94:

Area 3 is a 1.5 acre parcel located east of Area 2 and southeast of the current fire training school. The site is situated on a small knoll approximately 94 feet above mean sea level. Several remnant house foundations are present at the south end of the knoll, and an evergreen forest is located to the north. The ground slopes to the west and south, into the wetland east of Area 2.



Point	Northing	Easting
1105	491683.25	1190505.63
1106	491553.85	1190504.61
1107	491323.67	1190509.07
1108	491275.78	1190477.57
1109	491467.93	1190354.46
1110	491710.78	1190385.47

NOTES:

1. Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29

LEGEND:

- LUC BOUNDARY
- == ROAD
- BUILDING



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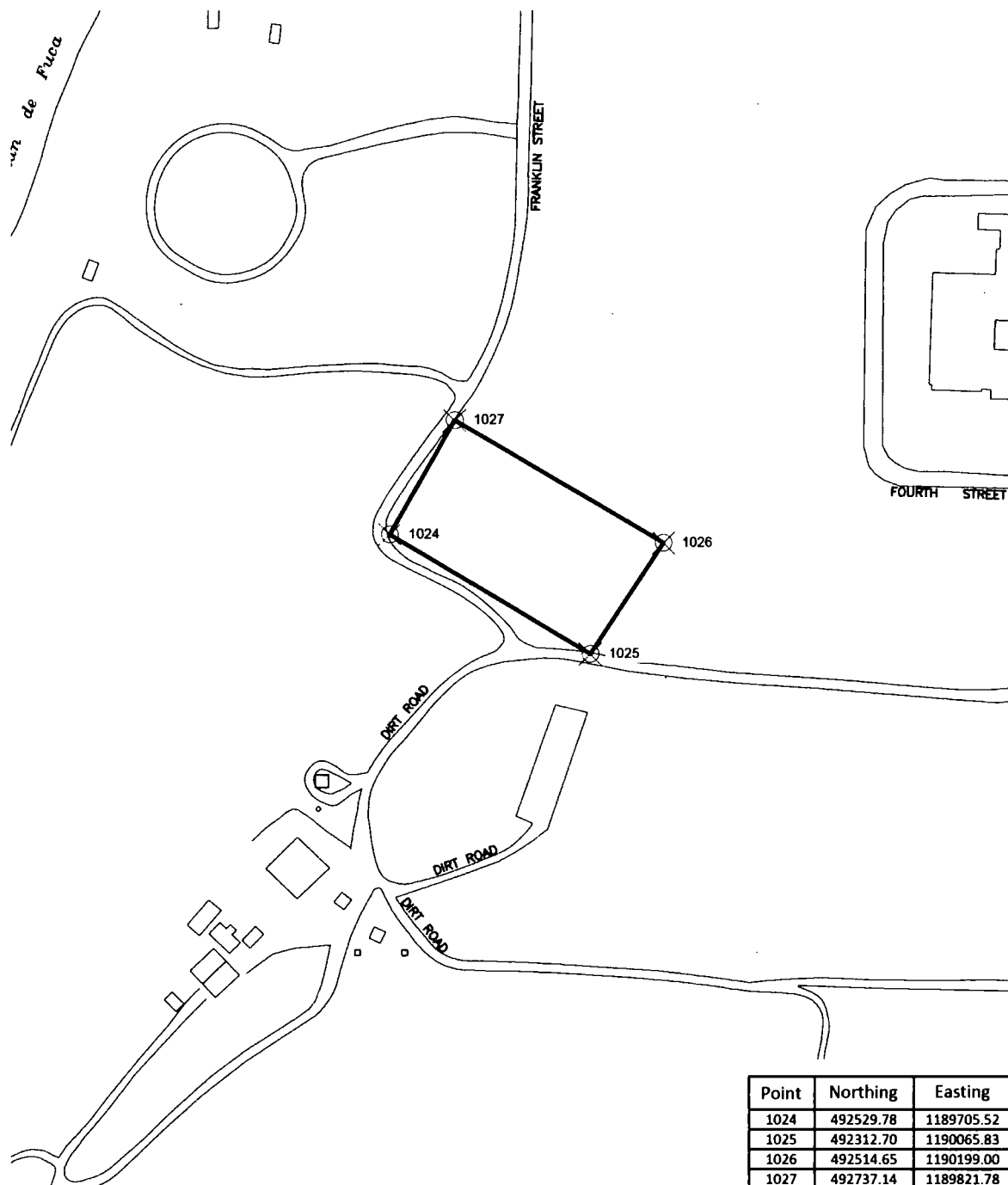
JUNE 2013

**FIGURE A-4
OU 2 AREA 3**

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS

From ROD Description 4/26/94:

Area 4 is located approximately 400 yards west of Saratoga Street in the southwest-central part of Ault Field. The current fire training school is located to the southwest, and the Navy hospital is approximately 300 yards to the north. A gravel parking lot is located on the site of the former Walker Barn in the southern portion of the area. Area 4 is flat, partially covered with native grasses, and approximately 240 feet wide and 440 feet long.



NOTES:

1. Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29

LEGEND:

- LUC BOUNDARY
- == ROAD
- BUILDING



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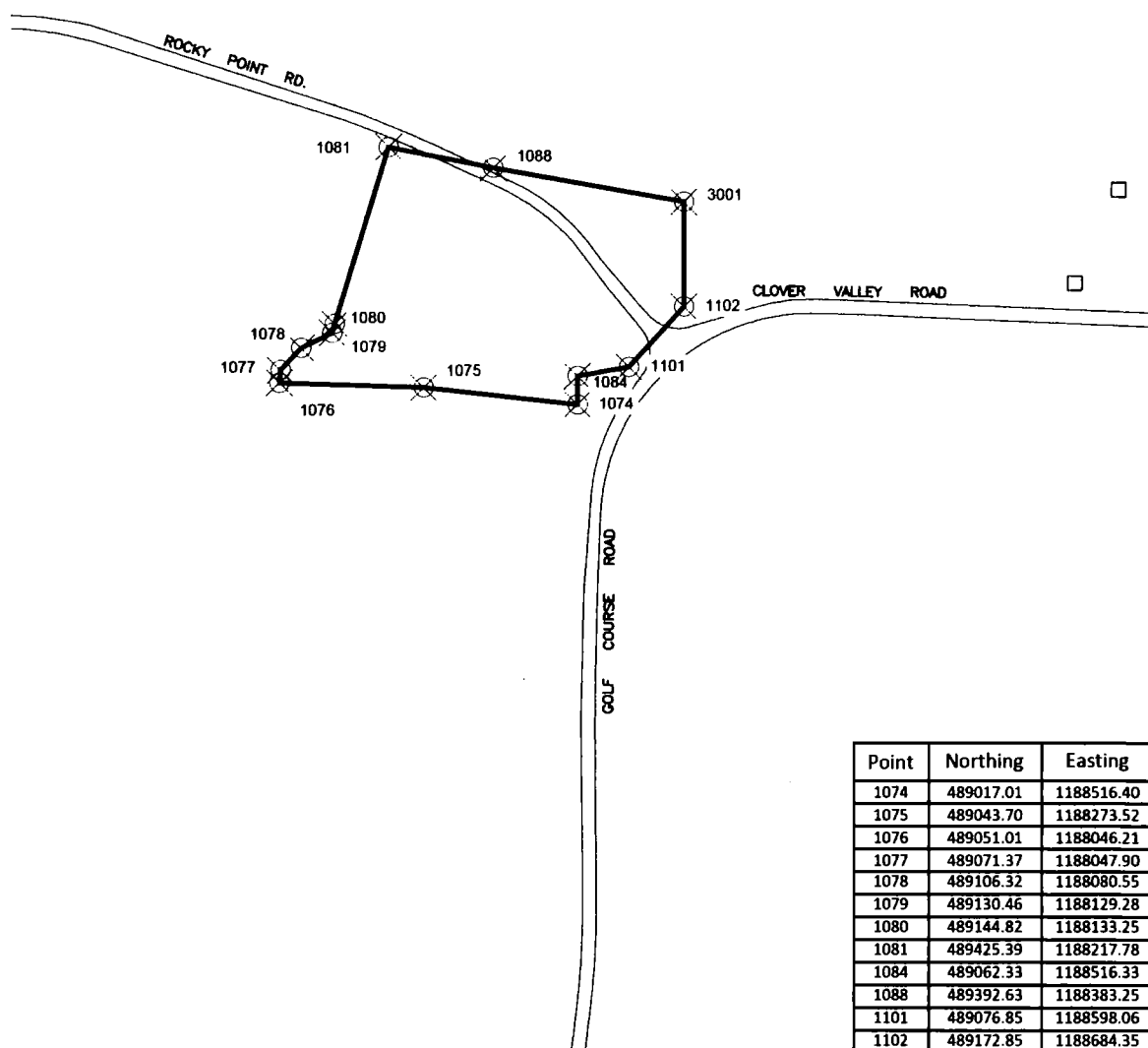
JUNE 2013

**FIGURE A-5
OU 2 AREA 4**

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS

From ROD Description 4/26/94:

Area 29 consists of a 4-acre parcel located west of the intersection of Clover Valley Road and Golf Course Road in the southwestern portion of Ault Field. The site is bordered by evergreen trees to the west, the Navy golf course to the south, Clover Valley Road to the north, and Golf Course Road to the east. a 1,600-square-foot concrete pad is located in the center of the area. A small ditch extends northeastward from the concrete pad to a ditch along Clover Valley Road.



Point	Northing	Easting
1074	489017.01	1188516.40
1075	489043.70	1188273.52
1076	489051.01	1188046.21
1077	489071.37	1188047.90
1078	489106.32	1188080.55
1079	489130.46	1188129.28
1080	489144.82	1188133.25
1081	489425.39	1188217.78
1084	489062.33	1188516.33
1088	489392.63	1188383.25
1101	489076.85	1188598.06
1102	489172.85	1188684.35
3001	489339.17	1188684.35

NOTES:

1. Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29
5. Point 3001 is a calculated position 247.00 ft north of Point 1083.

LEGEND:

- LUC BOUNDARY
- == ROAD
- BUILDING



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0 150' 300'

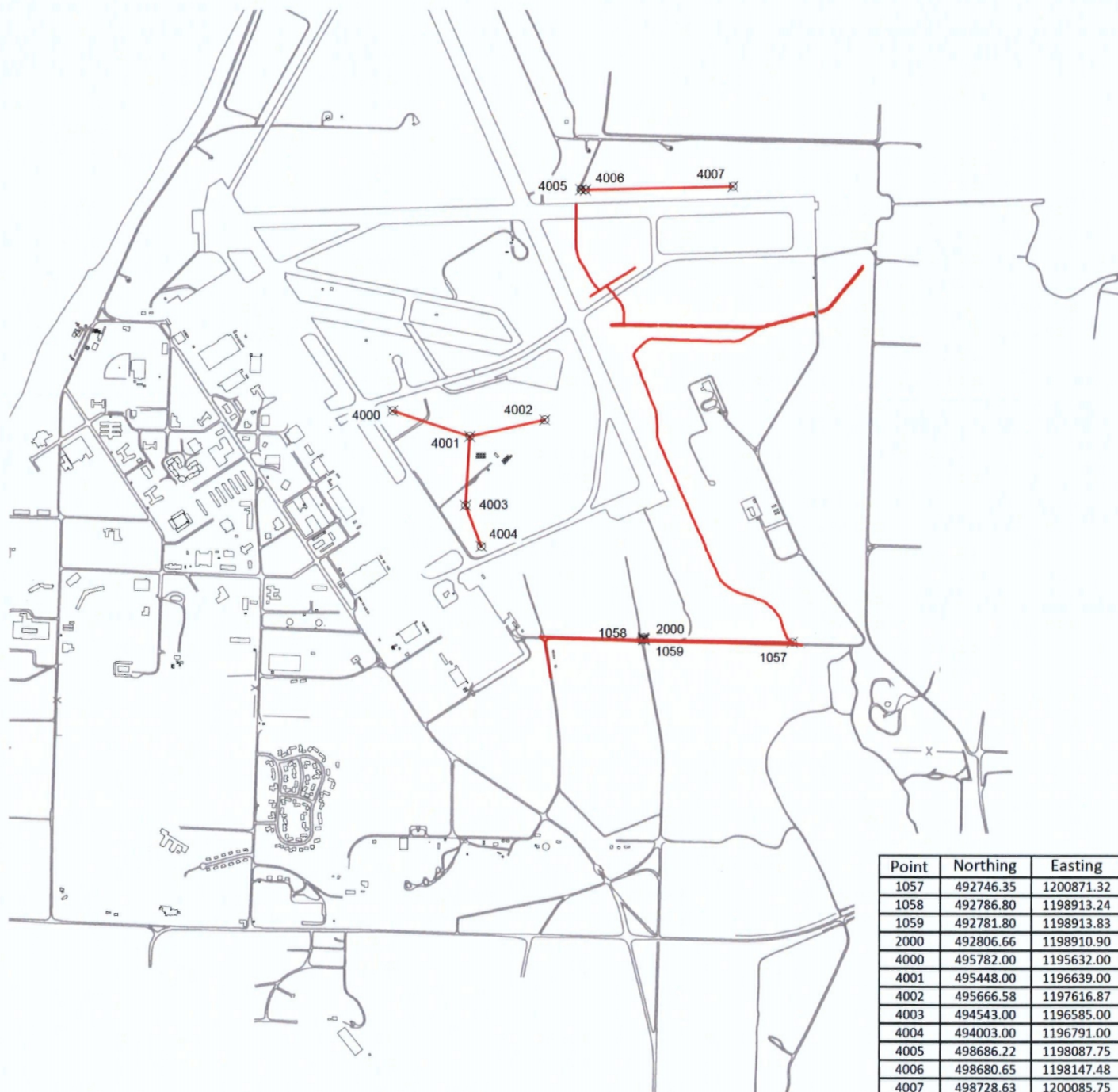
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**FIGURE A-7
OU 2 AREA 29**

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS

From ROD Description 3/12/95:

Area 16 comprises the eastern portion of Ault Field, including the flightline area and the on-site drainage areas through Clover Valley. The Ault Field Runway Ditches consist of approximately 9 miles of connected ditches and 1 mile of culverts that drain the runway area.



Point	Northing	Easting
1057	492746.35	1200871.32
1058	492786.80	1198913.24
1059	492781.80	1198913.83
2000	492806.66	1198910.90
4000	495782.00	1195632.00
4001	495448.00	1196639.00
4002	495666.58	1197616.87
4003	494543.00	1196585.00
4004	494003.00	1196791.00
4005	498686.22	1198087.75
4006	498680.65	1198147.48
4007	498728.63	1200085.75

NOTES:

1. Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29
5. Points 4000 through 4004 are approximate based on aerial imagery.
6. Point 2000 is a calculated point 20 feet north of Point 1058.

LEGEND:

- DITCHES
- ROAD
- BUILDING



TETRA TECH

www.tetratech.com
19803 North Creek Parkway
Bothell, Washington 98011
Phone: 425-482-7600 Fax: 425-482-7652



0 1000' 2000'

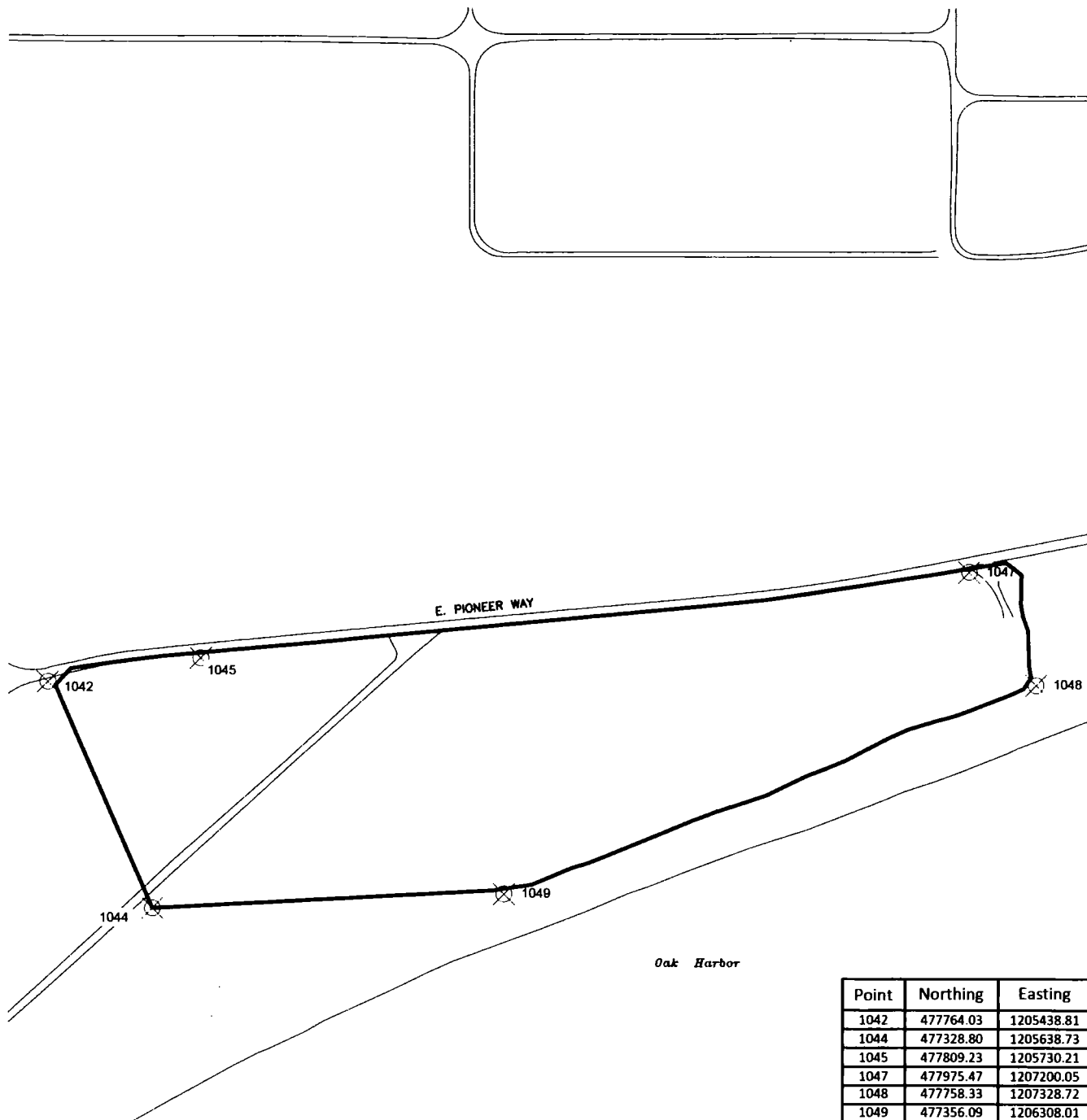
JUNE 2013

FIGURE A-8 OU 3 AREA 16

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS

From ROD Description 12/15/93:

Area 48 was located southeast of the intersection of Torpedo Road and East Pioneer way. Area 49 was a 3- to 4-acre landfill that was located farther east along Crescent Harbor.



NOTES:

1. Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29.

LEGEND:

- LUC BOUNDARY
- == ROAD



TETRA TECH

www.tetrattech.com
19803 North Creek Parkway
Bothell, Washington 98011
Phone: 425-482-7600 Fax: 425-482-7652



0 150' 300'

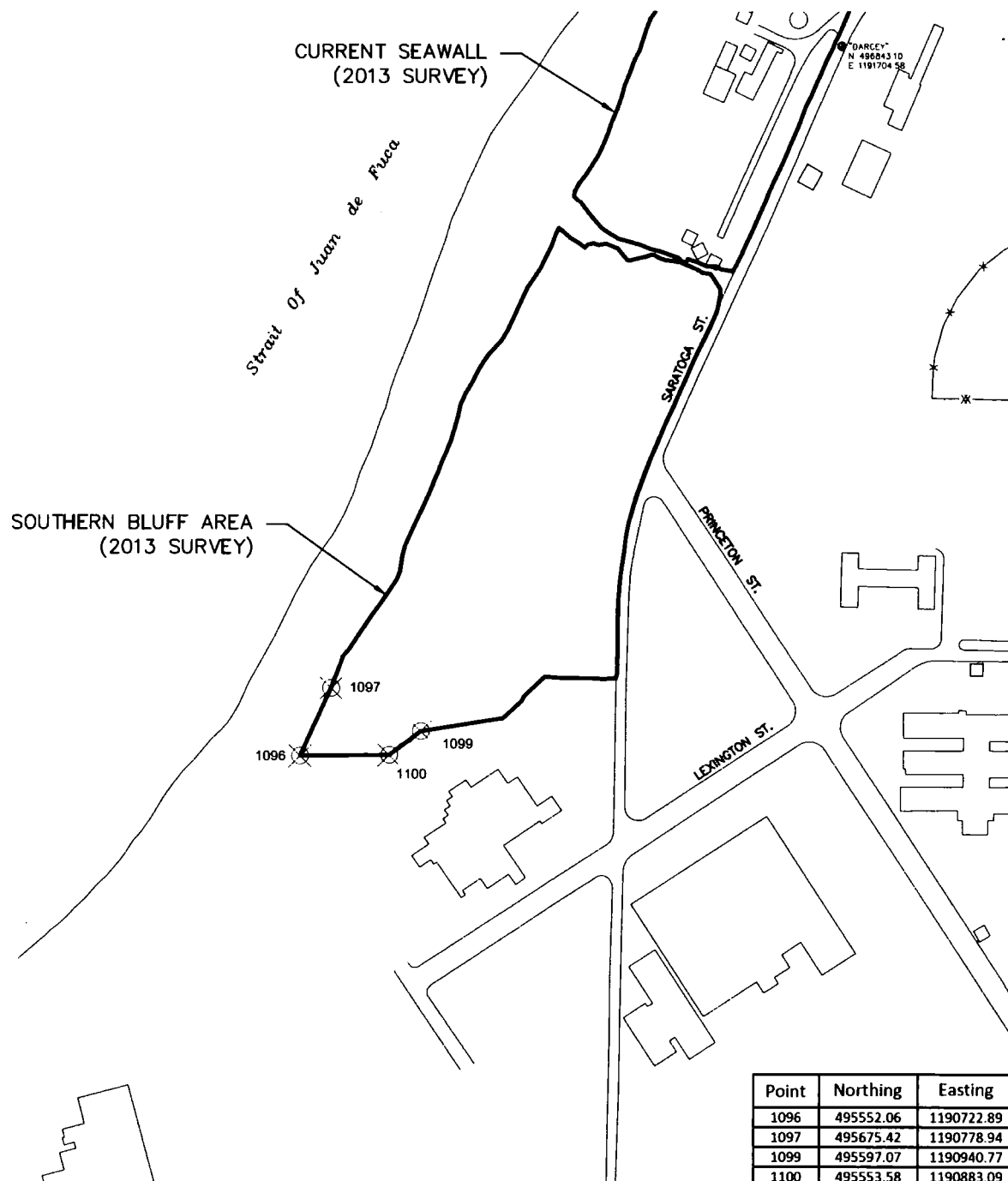
JUNE 2013

**FIGURE A-9
OU 4 AREA 48/49**

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS

From ROD Description 4/5/96:

Area 1, a 6-acre landfill running parallel to the strait of Juan de Fuca, is located west of the intersection of Saratoga and Princeton Streets, between the Norwester Club and the Jet Engine Test Cell.



NOTES:

1. 2013 Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29
5. Seawall survey conducted by APS, Sept. 7, 2012.

LEGEND:

- LUC BOUNDARY
- ROAD
- BUILDING



TETRA TECH

www.tetratech.com
19803 North Creek Parkway
Bothell, Washington 98011
Phone: 425-482-7600 Fax: 425-482-7652



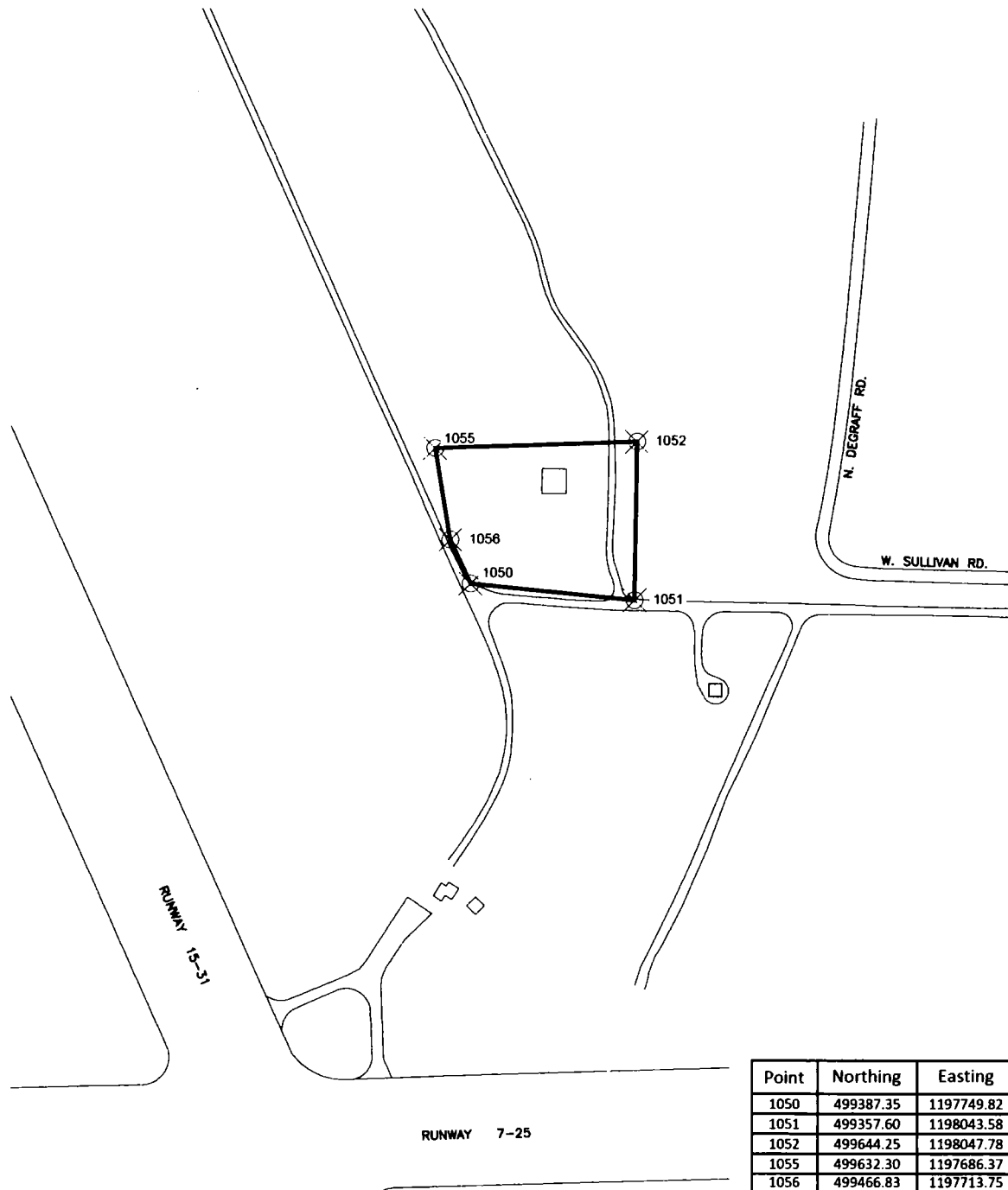
**FIGURE A-10
OU 5 AREA 1**

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS

Z:\PROJECTS\WHIDBEY NAS\BOUNDARIES\LUC\MAPS\SHEET FILES\AREA 1.DWG
PLOT DETAILS: VANBUCKEN, NICH September 13, 2013 2:51 PM TT-BOTH-MAIN-MONO CTB

From ROD Description 4/5/96:

Area 31 is located approximately 400 yards northeast of the intersection of Runways 13-31 and 7-25. The entire drill area consists of 1 to 2 acres, sloping gently southwest. The burn pad, roughly 50 by 50 feet, consists of a retaining lip around its perimeter and a floor that slopes toward a drain in the center. A mixture of flammable liquids used for firefighting training was stored in the southeast corner of the drill area (175 feet from the burn pad). Oily water from the burn pad was drained through an oil/water separator in the southwest corner of the drill area (200 feet from the burn pad).



NOTES:

1. Boundary survey conducted using RTK GPS by Tetra Tech, Inc.
2. Units = US Survey Feet, Washington State Plane, North Zone
3. Horizontal Datum = NAD83/91
4. Vertical Datum = NGVD 29

LEGEND:

- LUC BOUNDARY
- == ROAD
- BUILDING



TETRA TECH

www.tetratech.com
19803 North Creek Parkway
Bothell, Washington 98011
Phone: 425-482-7600 Fax: 425-482-7652

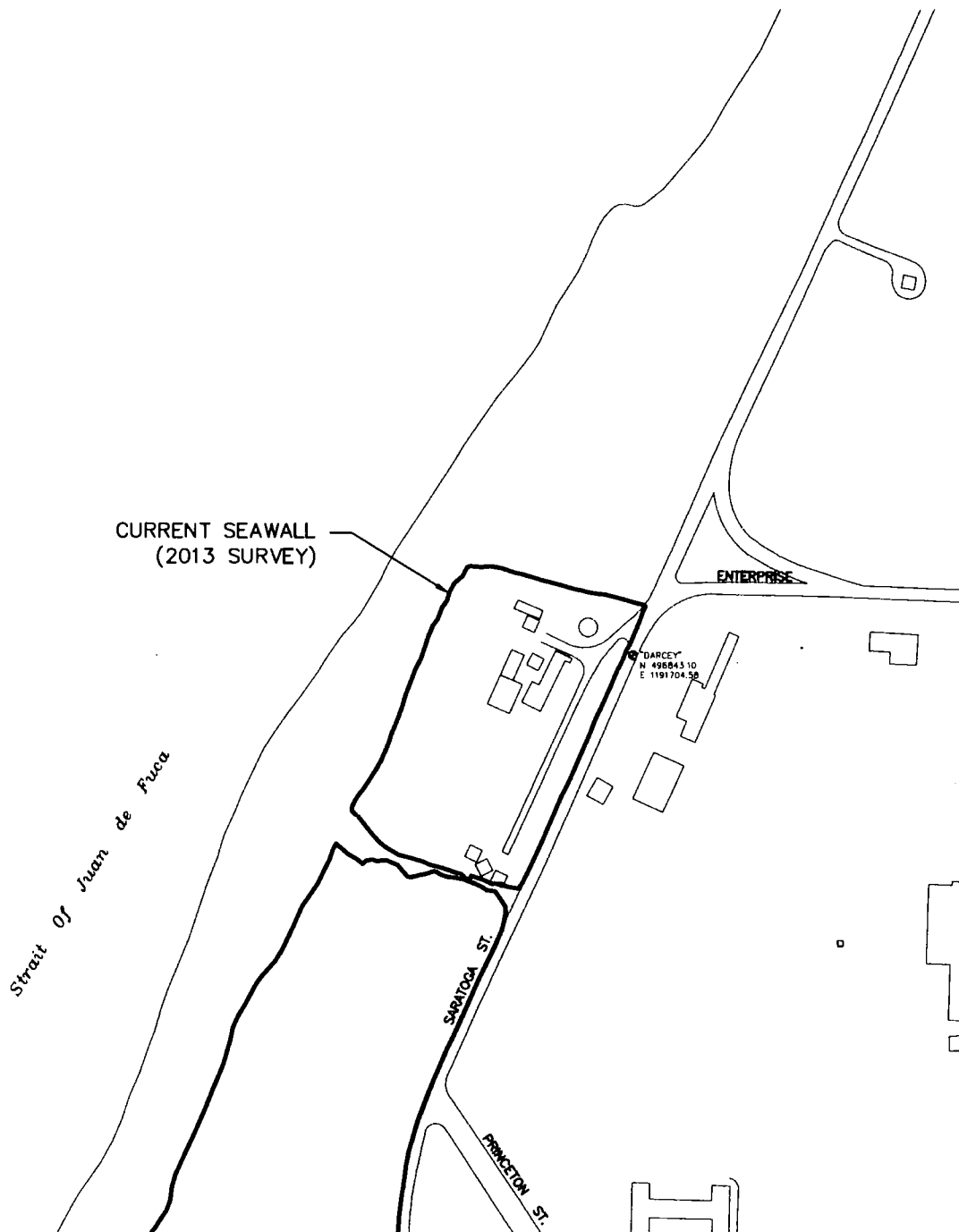


0 150' 300'

JUNE 2013

**FIGURE A-11
OU 5 AREA 31**

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WASHINGTON
LUC SITE SURVEYS



NOTES:

1. Units = US Survey Feet, Washington State Plane, North Zone
2. Horizontal Datum = NAD83

LEGEND:

- LUC BOUNDARY
- ROAD
- BUILDING



TETRA TECH

www.tetratech.com
 19803 North Creek Parkway
 Bothell, Washington 98011
 Phone: 425-482-7600 Fax: 425-482-7652



0 150' 300'

JUNE 2013

**FIGURE A-12
 OU 5 AREA 52**

NAVAL AIR STATION WHIDBEY ISLAND
 OAK HARBOR, WASHINGTON
 LUC SITE SURVEYS

APPENDIX B

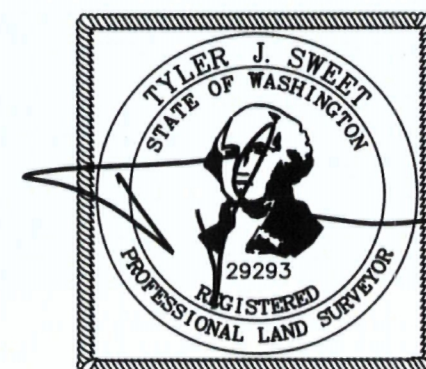
Survey Maps and Legal Descriptions for MRP Site LUC Boundaries, July 2013

STRAITS OF JUAN DE FUCA

DATUM & BASIS OF BEARING:
NAD 83/91 WASHINGTON STATE PLANE COORDINATES
NORTH ZONE, EXPRESSED IN U.S. SURVEY FEET
REFERENCE R.O.S. AS RECORDED UNDER AFN 4340761
IN THE RECORDS OF ISLAND COUNTY, WASHINGTON.



0 200 400
SCALE: 1" = 400'
T33N, R01E, W.M.



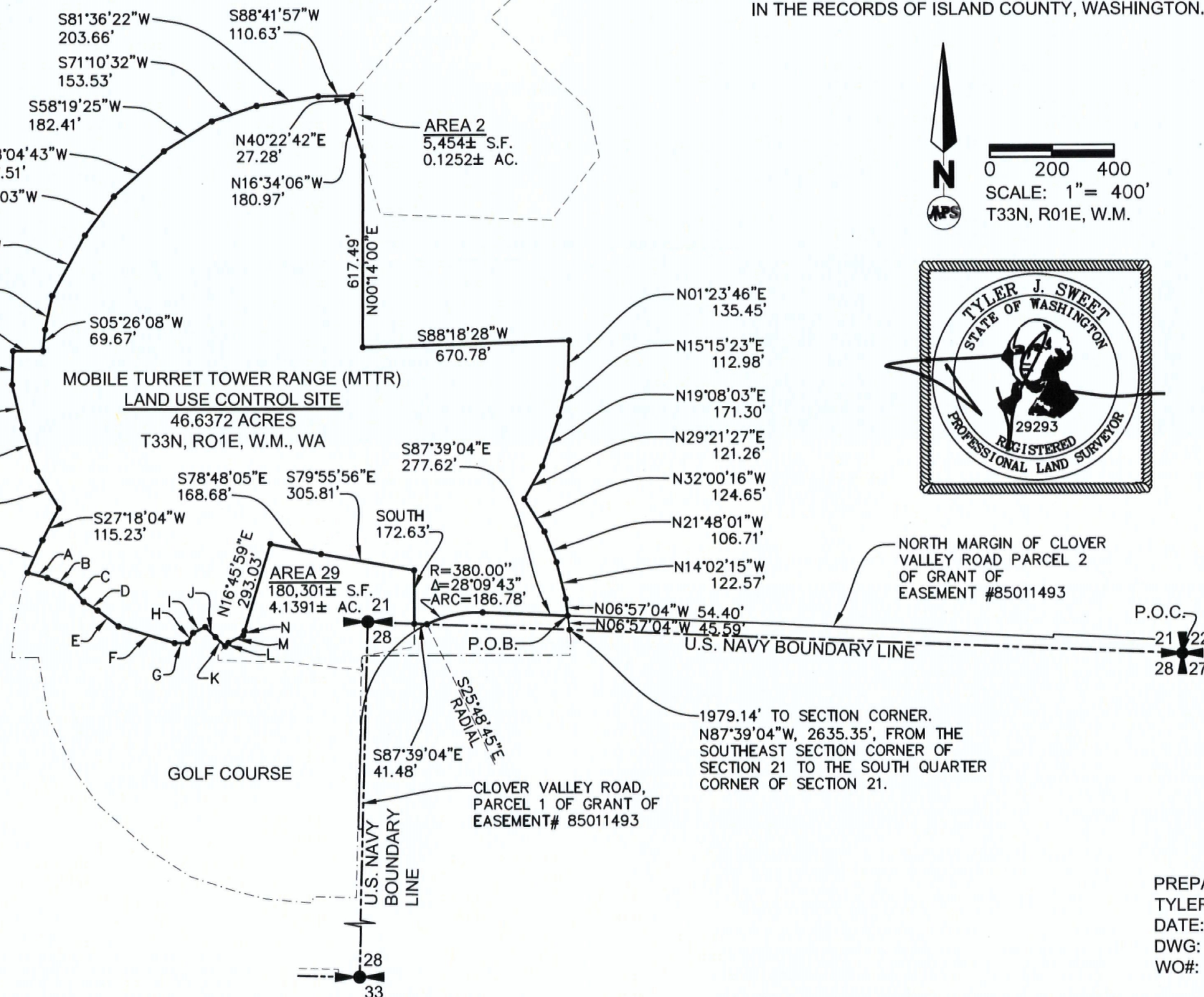
APS
SURVEY & MAPPING
13221 S.E. 26TH STREET, SUITE A
BELLEVUE, WASHINGTON 98005
TEL: (425) 746-3200
FAX: (425) 746-3342

EXHIBIT OF LUC SITE
MOBILE TURRET TOWER RANGE
NAS WHIDBEY ISLAND
for URS CORP.

SCALE: 1" = 400'
PROJECT NO. 1120004
DRAWING FILE NAME: 1120004EXHIBIT9-11-13

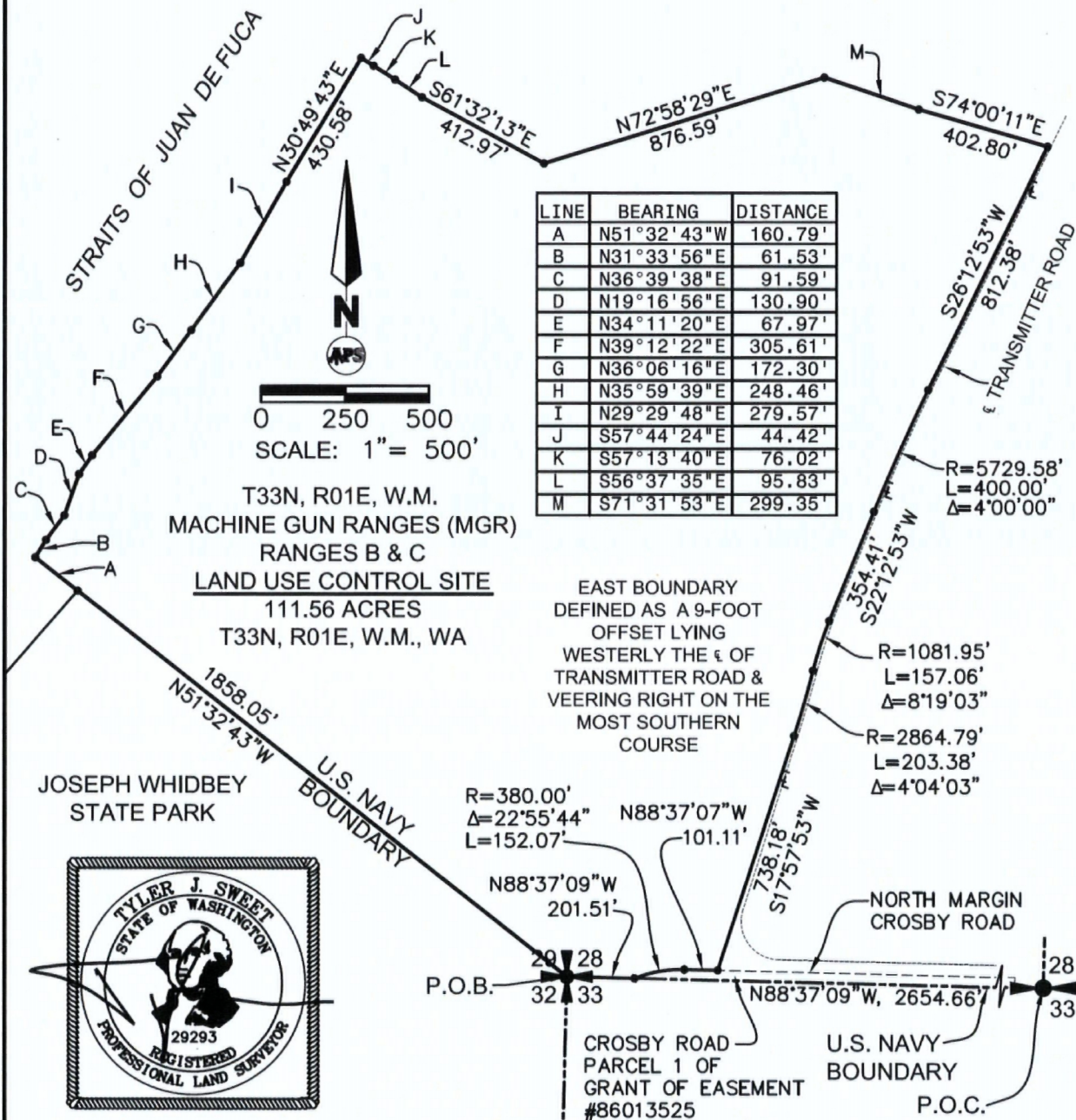
SURVEYED BY: _____	CHK'D BY: _____
DRAWN BY: _____	APPR'D BY: _____
DATE BY: _____	REVISION _____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

LINE	BEARING	DISTANCE
A	S74°54'37"E	64.88'
B	S69°38'28"E	78.27'
C	S40°42'39"E	66.46'
D	S58°04'29"E	52.44'
E	S52°20'55"E	84.49'
F	S73°12'51"E	188.77'
G	N89°17'09"E	41.58'
H	N29°23'34"E	37.09'
I	N63°44'07"E	43.41'
J	S45°11'48"E	46.99'
K	S46°56'55"E	43.07'
L	N43°03'05"E	14.65'
M	N63°38'49"E	54.38'
N	N15°27'15"E	14.90'



PREPARED BY
TYLER SWEET, PLS
DATE: 09/11/2013
DWG: 1120004E
WO#: 1120004

DATUM & BASIS OF BEARING:
 NAD 83/91 WASHINGTON STATE PLANE COORDINATES, NORTH ZONE,
 EXPRESSED IN U.S. SURVEY FEET REFERENCE R.O.S. AS RECORDED UNDER
 AFN 4340761 IN THE RECORDS OF ISLAND COUNTY, WASHINGTON



SHEET
 2
 OF
 2

PREPARED BY
 TYLER SWEET, PLS
 DATE: 12/18/2013
 DWG: 1120004EX121713
 WO#: 1120004

EXHIBIT OF LUC SITE
 MACHINE GUN RANGE
 NAS WHIDBEY ISLAND
 for URS CORP.

APS
 SURVEY & MAPPING
 13221 S.E. 26TH STREET, SUITE A
 BELLEVUE, WASHINGTON 98006
 TEL: (425) 746-3200
 FAX: (425) 746-3342



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APS Survey & Mapping, Inc

Parcel name: MTTR - LOT CLOSURE

North: 489191.06 East : 1189184.22
 Line Course: N 06-57-04 W Length: 54.40
 North: 489245.06 East : 1189177.64
 Line Course: N 14-02-15 W Length: 122.57
 North: 489363.97 East : 1189147.91
 Line Course: N 21-48-01 W Length: 106.71
 North: 489463.05 East : 1189108.28
 Line Course: N 32-00-16 W Length: 124.65
 North: 489568.75 East : 1189042.22
 Line Course: N 29-21-27 E Length: 121.26
 North: 489674.44 East : 1189101.67
 Line Course: N 19-08-03 E Length: 171.30
 North: 489836.28 East : 1189157.82
 Line Course: N 15-15-23 E Length: 112.98
 North: 489945.27 East : 1189187.54
 Line Course: N 01-23-46 E Length: 135.45
 North: 490080.68 East : 1189190.85
 Line Course: S 88-18-28 W Length: 670.78
 North: 490060.88 East : 1188520.36
 Line Course: N 00-14-00 E Length: 617.49
 North: 490678.36 East : 1188522.87
 Line Course: N 16-34-06 W Length: 180.97
 North: 490851.82 East : 1188471.27
 Line Course: N 40-22-42 E Length: 27.28
 North: 490872.60 East : 1188488.94
 Line Course: S 88-41-57 W Length: 110.63
 North: 490870.09 East : 1188378.34
 Line Course: S 81-36-22 W Length: 203.66
 North: 490840.36 East : 1188176.86
 Line Course: S 71-10-32 W Length: 153.53
 North: 490790.82 East : 1188031.54
 Line Course: S 58-19-25 W Length: 182.41
 North: 490695.03 East : 1187876.31
 Line Course: S 48-04-43 W Length: 217.51
 North: 490549.71 East : 1187714.47
 Line Course: S 36-23-03 W Length: 155.90
 North: 490424.20 East : 1187621.99
 Line Course: S 28-28-29 W Length: 221.70
 North: 490229.32 East : 1187516.29
 Line Course: S 11-58-36 W Length: 111.42
 North: 490120.33 East : 1187493.16
 Line Course: S 05-26-08 W Length: 69.67
 North: 490050.97 East : 1187486.57
 Line Course: N 90-00-00 W Length: 95.79
 North: 490050.97 East : 1187390.78
 Line Course: S 01-44-03 W Length: 109.05
 North: 489941.97 East : 1187387.48

Line Course: S 13-05-34 E Length: 145.81
 North: 489799.95 East : 1187420.51
 Line Course: S 18-26-06 E Length: 146.22
 North: 489661.23 East : 1187466.74
 Line Course: S 30-15-18 E Length: 137.66
 North: 489542.32 East : 1187536.10
 Line Course: S 27-18-04 W Length: 115.23
 North: 489439.93 East : 1187483.25
 Line Course: S 24-20-23 W Length: 115.78
 North: 489334.44 East : 1187435.53
 Line Course: S 74-54-37 E Length: 64.88
 North: 489317.55 East : 1187498.18
 Line Course: S 69-38-28 E Length: 78.27
 North: 489290.32 East : 1187571.56
 Line Course: S 40-42-39 E Length: 66.46
 North: 489239.94 East : 1187614.91
 Line Course: S 58-04-29 E Length: 52.44
 North: 489212.21 East : 1187659.41
 Line Course: S 52-20-55 E Length: 84.49
 North: 489160.60 East : 1187726.31
 Line Course: S 73-12-51 E Length: 188.77
 North: 489106.08 East : 1187907.03
 Line Course: N 89-17-09 E Length: 41.58
 North: 489106.60 East : 1187948.61
 Line Course: N 29-23-34 E Length: 37.09
 North: 489138.92 East : 1187966.81
 Line Course: N 63-44-07 E Length: 43.41
 North: 489158.13 East : 1188005.74
 Line Course: S 45-11-48 E Length: 46.99
 North: 489125.02 East : 1188039.08
 Line Course: S 46-56-55 E Length: 43.07
 North: 489095.61 East : 1188070.56
 Line Course: N 43-03-05 E Length: 14.65
 North: 489106.32 East : 1188080.56
 Line Course: N 63-38-49 E Length: 54.38
 North: 489130.46 East : 1188129.29
 Line Course: N 15-27-15 E Length: 14.90
 North: 489144.82 East : 1188133.26
 Line Course: N 16-45-59 E Length: 293.03
 North: 489425.39 East : 1188217.79
 Line Course: S 78-48-05 E Length: 168.68
 North: 489392.63 East : 1188383.25
 Line Course: S 79-55-56 E Length: 305.81
 North: 489339.17 East : 1188684.36
 Line Course: S 00-00-00 W Length: 172.63
 North: 489166.54 East : 1188684.36
 Line Course: S 87-39-04 E Length: 41.48



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APS Survey & Mapping, Inc

North: 489164.84 East : 1188725.80
Curve Length: 186.78 Radius: 380.00
Delta: 28-09-43 Tangent: 95.32
Chord: 184.90 Course: N 78-16-04 E
Course In: S 25-48-45 E Course Out: N 02-20-56 E
RP North: 488822.76 East : 1188891.27
End North: 489202.44 East : 1188906.84
Line Course: S 87-39-04 E Length: 277.62
North: 489191.06 East : 1189184.23

Perimeter: 7015.22 Area: 2,031,516 sq. ft. 46.64 acres

Mapcheck Closure - (Uses listed courses, radii, and deltas)

Error Closure: 0.01 Course: N 59-27-36 E
Error North: 0.003 East : 0.006
Precision 1: 701,522.00





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APS Survey & Mapping, Inc

Parcel name: MGR - LOT CLOSURE

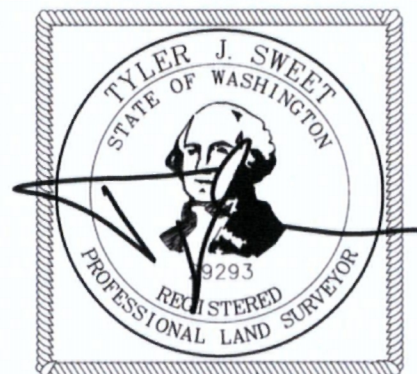
North: 483889.40 East : 1185732.38
 Line Course: N 51-32-43 W Length: 1858.05
 North: 485044.92 East : 1184277.34
 Line Course: N 51-32-43 W Length: 160.79
 North: 485144.91 East : 1184151.42
 Line Course: N 31-33-56 E Length: 61.53
 North: 485197.34 East : 1184183.63
 Line Course: N 36-39-38 E Length: 91.59
 North: 485270.81 East : 1184238.32
 Line Course: N 19-16-56 E Length: 130.90
 North: 485394.37 East : 1184281.54
 Line Course: N 34-11-20 E Length: 67.97
 North: 485450.59 East : 1184319.74
 Line Course: N 39-12-22 E Length: 305.61
 North: 485687.40 East : 1184512.92
 Line Course: N 36-06-16 E Length: 172.30
 North: 485826.61 East : 1184614.45
 Line Course: N 35-59-39 E Length: 248.46
 North: 486027.63 East : 1184760.47
 Line Course: N 29-29-48 E Length: 279.57
 North: 486270.97 East : 1184898.12
 Line Course: N 30-49-43 E Length: 430.58
 North: 486640.71 East : 1185118.78
 Line Course: S 57-44-24 E Length: 44.42
 North: 486617.00 East : 1185156.34
 Line Course: S 57-13-40 E Length: 76.02
 North: 486575.85 East : 1185220.26
 Line Course: S 56-37-35 E Length: 95.83
 North: 486523.13 East : 1185300.29
 Line Course: S 61-32-13 E Length: 412.97
 North: 486326.31 East : 1185663.34
 Line Course: N 72-58-29 E Length: 876.59
 North: 486582.97 East : 1186501.52
 Line Course: S 71-31-53 E Length: 299.35
 North: 486488.14 East : 1186785.45
 Line Course: S 74-00-11 E Length: 402.80
 North: 486377.14 East : 1187172.65
 Line Course: S 26-12-53 W Length: 812.38
 North: 485648.32 East : 1186813.79
 Curve Length: 400.00 Radius: 5729.58
 Delta: 4-00-00 Tangent: 200.08
 Chord: 399.92 Course: S 24-12-53 W
 Course In: S 63-47-07 E Course Out: N 67-47-07 W
 RP North: 483117.35 East : 1191954.06
 End North: 485283.58 East : 1186649.76
 Line Course: S 22-12-53 W Length: 354.41
 North: 484955.48 East : 1186515.77
 Curve Length: 157.06 Radius: 1081.95
 Delta: 8-19-03 Tangent: 78.67
 Chord: 156.93 Course: S 18-03-22 W

Course In: S 67-47-07 E Course Out: N 76-06-10 W
 RP North: 484546.42 East : 1187517.41
 End North: 484806.28 East : 1186467.13
 Curve Length: 203.38 Radius: 2864.79
 Delta: 4-04-03 Tangent: 101.73
 Chord: 203.33 Course: S 15-55-51 W
 Course In: N 76-06-10 W Course Out: S 72-02-07 E
 RP North: 485494.35 East : 1183686.20
 End North: 484610.76 East : 1186411.32
 Line Course: S 17-57-53 W Length: 738.18
 North: 483908.57 East : 1186183.64
 Line Course: N 88-37-07 W Length: 101.11
 North: 483911.00 East : 1186082.56
 Curve Length: 152.07 Radius: 380.00
 Delta: 22-55-44 Tangent: 77.07
 Chord: 151.06 Course: S 79-55-01 W
 Course In: S 01-22-53 W Course Out: N 21-32-51 W
 RP North: 483531.11 East : 1186073.40
 End North: 483884.56 East : 1185933.84
 Line Course: N 88-37-09 W Length: 201.51
 North: 483889.41 East : 1185732.39

Perimeter: 9135.42 Area: 4,859,551 sq. ft. 111.56 acres

Mapcheck Closure - (Uses listed courses, radii, and deltas)

Error Closure: 0.02 Course: N 46-38-26 E
 Error North: 0.011 East : 0.012
 Precision 1: 456,771.50



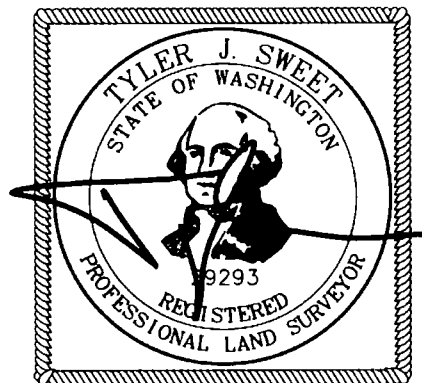
MTTR LEGAL DESCRIPTION

A parcel of land being within a portion of the South Half of Section 21 and the Northeast Quarter of the Northwest Quarter of Section 28, within Township 33 North, Range 01 East, W.M. Excepting that portion lying within Clover Valley Road Right-of-Way, Excepting therefrom any public or private Right-of-Ways therein; situated in the County of Island, in the State of Washington
Said parcel is more particularly described as follows:

Commencing at the Southeast Section Corner of Said Section 21, from which the South Quarter Corner of Said Section 21 bears N87°39'04"W for 2635.35 feet;
Thence N87°39'04"W along the South Section line of Said Section 21 for 1979.14 feet to an angle point;
Thence N06°57'04"W for 45.59 feet to the North margin of Clover Valley Road and the TRUE POINT OF BEGINNING;
Thence N06°57'04"W for 54.40 feet;
Thence N14°02'15"W for 122.57 feet;
Thence N21°48'01"W for 106.71 feet;
Thence N32°00'16"W for 124.65 feet;
Thence N29°21'27"E for 121.26 feet;
Thence N19°08'03"E for 171.30 feet;
Thence N15°15'23"E for 112.98 feet;
Thence N01°23'46"E for 135.45 feet;
Thence S88°18'28"W for 670.78 feet;
Thence N00°14'00"E for 617.49 feet to a point intersecting the LUC Boundary referred to as AREA 2;
Thence N16°34'06"W along said LUC Boundary for 180.97 feet;
Thence N40°22'42"E continuing along said LUC Boundary for 27.28 feet;
Thence leaving said LUC Boundary S88°41'57"W for 110.63 feet;
Thence S81°36'22"W for 203.66 feet;
Thence S71°10'32"W for 153.53 feet;
Thence S58°19'25"W for 182.41 feet;
Thence S48°04'43"W for 217.51 feet;
Thence S36°23'03"W for 155.90 feet;
Thence S28°28'29"W for 221.70 feet;
Thence S11°58'36"W for 111.42 feet;
Thence S05°26'08"W for 69.67 feet;
Thence West for 95.79 feet;
Thence S01°44'03"W for 109.05 feet;
Thence S13°05'34"E for 145.81 feet;
Thence S18°26'06"E for 146.22 feet;
Thence S30°15'18"E for 137.66 feet;
Thence S27°18'04"W for 115.23 feet;

Thence S24°20'23"W for 115.78 feet to a point on the Northerly boundary of the Golf Course;
Thence S74°54'37"E along the Northerly boundary of the Golf Course for 64.88 feet;
Thence S69°38'28"E along the Northerly boundary of the Golf Course for 78.27 feet;
Thence S40°42'39"E along the Northerly boundary of the Golf Course for 66.46 feet;
Thence S58°04'29"E along the Northerly boundary of the Golf Course for 52.44 feet;
Thence S52°20'55"E along the Northerly boundary of the Golf Course for 84.49 feet;
Thence S73°12'51"E along the Northerly boundary of the Golf Course for 188.77 feet;
Thence N89°17'09"E along the Northerly boundary of the Golf Course for 41.58 feet;
Thence N29°23'34"E along the Northerly boundary of the Golf Course for 37.09 feet;
Thence N63°44'7"E along the Northerly boundary of the Golf Course for 43.41 feet;
Thence S45°11'48"E along the Northerly boundary of the Golf Course for 46.99 feet;
Thence S46°56'55"E along the Northerly boundary of the Golf Course for 43.07 feet to a point intersecting the LUC Boundary referred to as AREA 29;
Thence N43°03'05"E along said LUC Boundary for 14.65 feet;
Thence N63°38'49"E along said LUC Boundary for 54.38 feet;
Thence N15°27'15"E along said LUC Boundary for 14.90 feet;
Thence N16°45'59"E along said LUC Boundary for 293.03 feet;
Thence S78°48'05"E along said LUC Boundary for 168.68 feet;
Thence S79°55'56"E along said LUC Boundary for 305.81 feet;
Thence South along said LUC Boundary for 172.63 feet to a point on the South Section line of Said Section 21, from which the South Quarter Corner of Said Section 21 bears N87°39'04"W at distance of 150.40 feet;
Thence S87°39'04"E along said South Section line for 41.48 feet to a point on the Northwesterly margin of Clover Valley Road and to a non-tangent curve to the right from which the radius point bears S25°48'45"E at a distance of 380.00 feet;
Thence along said curve to the right having a radius of 380.00 feet and a central angle of 28°09'43", for an arc length of 186.78 feet to a point of tangency,
Thence S87°39'04"E along said North Margin for 277.62 feet to the TRUE POINT OF BEGINNING.

Said parcel contains 46.6372 acres, more or less.



MGR LEGAL DESCRIPTION

A parcel of land being within a portion of the West Half of Section 28 and within a portion of the East Half of Section 29, all in Township 33 North, Range 01 East, W.M., situated in the County of Island, in the State of Washington.

Excepting that portion lying within Crosby Road Right-of-Way,
Excepting therefrom any public or private Right-of-Ways therein.

Said parcel is more particularly described as follows:

Commencing at the South Quarter Corner of Said Section 28;

Thence N88°37'09"W along the South Section line of Said Section 28 for plus or minus 2654.66 feet to the Southwest Section Corner of Said Section 28 to the TRUE POINT OF BEGINNING;

Thence N51°32'43"W along the Northeasterly boundary line of Joseph Whidbey State Park for 1858.05 feet;

Thence N51°32'43"W for 160.79 feet;

Thence N31°33'56"E for 61.53 feet;

Thence N36°39'38"E for 91.59 feet;

Thence N19°16'56"E for 130.9 feet;

Thence N34°11'20"E for 67.97 feet;

Thence N39°12'22"E for 305.61 feet;

Thence N36°06'16"E for 172.30 feet;

Thence N35°59'39"E for 248.46 feet;

Thence N29°29'48"E for 279.57 feet;

Thence N30°49'43"E for 430.58 feet;

Thence S57°44'24"E for 44.42 feet;

Thence S57°13'40"E for 76.02 feet;

Thence S56°37'35"E for 95.83 feet;

Thence S61°32'13"E for 412.97 feet;

Thence N72°58'29"E for 876.59 feet;

Thence S71°31'53"E for 299.35 feet;

Thence S74°00'11"E for 402.80 feet to a point 9-foot offset lying westerly of the centerline of Transmitter Road;

Thence S26°12'53"W along said 9-foot offset for 812.38 feet to a point of curvature;

Thence continuing on the said 9-foot offset on a curve to the left having a radius of 5729.58 feet and a central angle of 04°00'00" through an arc of 400.00 feet to a point of tangency;

Thence S22°12'53"W along said 9-foot offset for 354.41 feet to a point of curvature;

Thence continuing on the said 9-foot offset on a curve to the left having a radius of 1081.95 feet and a central angle of 08°19'03" through an arc of 157.06 feet to a point of reverse curvature;

Thence continuing on the said 9-foot offset on a curve to the right having a radius of 2864.79 feet and a central angle of 04°04'03" through an arc of 203.38 feet to a point of tangency;

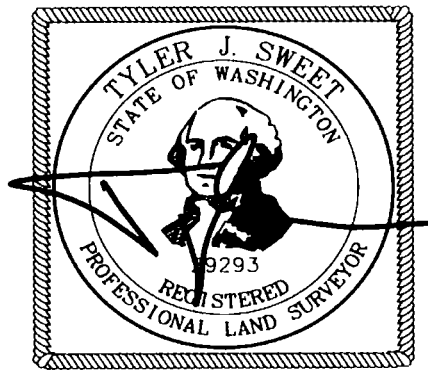
Thence S17°57'53"W veering to the right of the said 9-foot offset for 738.18 feet to a point on the North Margin of Crosby Road;

Thence N88°37'07"W along said North Margin for 101.11 feet to a point of curvature;

Thence following said North Margin along a curve to the left having a radius of 380.00 feet and a central angle of $22^{\circ}55'44''$, for an arc length of 152.07 feet to a point on the South Section line of Said Section 28,

Thence $N88^{\circ}37'09''W$ continuing along said South Section line for 201.51 feet to the TRUE POINT OF BEGINNING.

Said Parcel contains 111.56 acres, more or less.



APPENDIX C

Site LUC Inspection Checklists

Operable Unit 1, Area 5
Land Use Controls (LUCs) Inspection Checklist
Page 1 of 1

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 1, Area 5 Land Use Controls

- Ensure that land use at Area 5 remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities and playgrounds
- Ensure that all disturbed or excavated soils at or from the area are properly categorized and disposed of, and that workers are protected during any such disturbance or excavation

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual or administrative evidence of excavation or soil disturbance? If so, determine if site approval process has been followed.			
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 1, Area 5 on the inspection date were as reported above.

Inspector: _____ Date: _____

**Operable Unit 1, Area 6
Land Use Controls (LUCs) Inspection Checklist**

Page 1 of 2

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 1, Area 6 Land Use Controls

- Ensure that land use at Area 6 remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities and playgrounds
- No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans
- Protect existing monitoring wells
- No use of groundwater from, or downgradient of, the area except for monitoring and remediation as approved by EPA and Ecology
- Prevention of any disturbance to the landfill cap, except as necessary for authorized cap maintenance activities

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual evidence of unauthorized on-site or downgradient well installation or groundwater use?			
Have any well construction applications been submitted to or approved by Island County in areas downgradient of the site? (Island County contact required)			
Are all monitoring wells in good condition and accessible? (refer to completed monitoring well inspection checklists or annual on-site inspections)			
Is there visual or administrative evidence of excavation or soil disturbance? If so, determine if site approval process has been followed.			

Operable Unit 1, Area 6
Land Use Controls (LUCs) Inspection Checklist
Page 2 of 2

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Is there visual or administrative evidence that the landfill cap integrity has been compromised?			
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 1, Area 6 on the inspection date were as reported above.

Inspector: _____ Date: _____

Operable Unit 2, Area 2
Land Use Controls (LUCs) Inspection Checklist

Page 1 of 2

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 2, Area 2 Land Use Controls

- Ensure that land use at Area 2 remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities and playgrounds
- No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology
- No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans
- Protect existing monitoring wells
- Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual evidence of unauthorized on-site or downgradient well installation or groundwater use?			
Have any well construction applications been submitted to or approved by Island County in areas downgradient of the site? (Island County contact required)			
Are all monitoring wells in good condition and accessible? (refer to routine monitoring well inspection checklists or annual on-site inspections)			

Operable Unit 2, Area 2
Land Use Controls (LUCs) Inspection Checklist
Page 2 of 2

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Is there visual or administrative evidence of excavation or soil disturbance? If so, determine if site approval process has been followed.			
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 2, Area 2 on the inspection date were as reported above.

Inspector: _____ Date: _____

Operable Unit 2, Area 3
Land Use Controls (LUCs) Inspection Checklist
Page 1 of 2

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 2, Area 3 Land Use Controls

- Ensure that land use at Area 3 remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities and playgrounds
- No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology
- No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans
- Protect existing monitoring wells
- Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual evidence of unauthorized on-site or downgradient well installation or groundwater use?			
Have any well construction applications been submitted to or approved by Island County in areas downgradient of the site? (Island County contact required)			
Are all monitoring wells in good condition and accessible? (refer to completed monitoring well inspection checklists or annual on-site inspections)			
Is there visual or administrative evidence of excavation or soil disturbance? If so, determine if site approval process has been followed.			

Operable Unit 2, Area 3
Land Use Controls (LUCs) Inspection Checklist
Page 2 of 2

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 2, Area 3 on the inspection date were as reported above.

Inspector: _____ Date: _____

Operable Unit 2, Area 4
Land Use Controls (LUCs) Inspection Checklist
Page 1 of 1

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 2, Area 4 Land Use Controls

- Ensure that land use at Area 4 remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities and playgrounds
- No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology
- No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans
- Protect existing monitoring wells

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual evidence of unauthorized on-site or downgradient well installation or groundwater use?			
Have any well construction applications been submitted to or approved by Island County in areas downgradient of the site? (Island County contact required)			
Are all monitoring wells in good condition and accessible? (refer to routine monitoring well inspection checklists or annual on-site inspections)			
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 2, Area 4 on the inspection date were as reported above.

Inspector: _____ Date: _____

Operable Unit 2, Area 29
Land Use Controls (LUCs) Inspection Checklist
Page 1 of 2

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 2, Area 29 Land Use Controls

- No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology
- Protect existing monitoring wells
- No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans
- Prevent ground disturbance or construction activities

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual evidence of unauthorized on-site or downgradient well installation or groundwater use?			
Have any well construction applications been submitted to or approved by Island County in areas downgradient of the site? (Island County contact required)			
Are all monitoring wells in good condition and accessible? (refer to routine monitoring well inspection checklists or annual on-site inspections)			
Is there visual or administrative evidence of excavation or soil disturbance? If so, determine if site approval process has been followed.			

Operable Unit 2, Area 29
Land Use Controls (LUCs) Inspection Checklist
Page 2 of 2

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 2, Area 29 on the inspection date were as reported above.

Inspector: _____ Date: _____

Operable Unit 3, Area 16
Land Use Controls (LUCs) Inspection Checklist
Page 1 of 1

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 3, Area 16 Land Use Controls

- Ensure that land use at Area 16 remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities and playgrounds
- Limit adjoining ditch banks to disposal of dredged sediments meeting Model Toxics Control Act Industrial Soils criteria and/or industrial use

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 3, Area 16 on the inspection date were as reported above.

Inspector: _____ Date: _____

Operable Unit 4, Areas 48/49
Land Use Controls (LUCs) Inspection Checklist
Page 1 of 1

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 4, Areas 48/49 Land Use Controls

- Ensure that land use at Areas 48/49 remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities and playgrounds
- Use restrictions to prevent ground disturbance via excavation or other ground disturbing activities in the area of former construction debris landfill

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual or administrative evidence of excavation of soil disturbance? If so, determine if site approval process has been followed.			
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 4, Areas 48/49 on the inspection date were as reported above.

Inspector: _____ Date: _____

Operable Unit 5, Area 1
Land Use Controls (LUCs) Inspection Checklist
Page 1 of 2

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 5, Area 1 Land Use Controls

- Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary, and secondary schools, child care facilities and playgrounds
- No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology
- No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans
- Protect existing monitoring wells
- Use restrictions to prevent ground disturbance via digging and/or construction activities in the area of former construction debris landfill
- Ensure that shoreline armoring is in place and functioning as intended

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual evidence of unauthorized on-site or downgradient well installation or groundwater use?			
Have any well construction applications been submitted to or approved by Island County in areas downgradient of the site? (Island County contact required)			
Are all monitoring wells in good condition and accessible? (refer to completed monitoring well inspection checklists or annual on-site inspections)			

Operable Unit 5, Area 1
Land Use Controls (LUCs) Inspection Checklist
Page 2 of 2

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Is there visual or administrative evidence of excavation or soil disturbance? If so, determine if site approval process has been followed.			
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			
Is there any material exposed along the shoreline side of landfill that could be hazardous?			

I certify that the conditions of Operable Unit 5, Area 1 on the inspection date were as reported above.

Inspector: _____ Date: _____

Operable Unit 5, Area 31
Land Use Controls (LUCs) Inspection Checklist
Page 1 of 1

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 5, Area 31 Land Use Controls

- Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities and playgrounds
- No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology
- No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans
- Protect existing monitoring wells

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual evidence of unauthorized on-site or downgradient well installation or groundwater use?			
Have any well construction applications been submitted to or approved by Island County in areas downgradient of the site? (Island County contact required)			
Are all monitoring wells in good condition and accessible? (refer to routine monitoring well inspection checklists or annual on-site inspections)			
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 5, Area 31 on the inspection date were as reported above.

Inspector: _____ Date: _____

Operable Unit 5, Area 52
Land Use Controls (LUCs) Inspection Checklist
Page 1 of 1

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

Operable Unit 5, Area 52 Land Use Controls

- Ensure that land use remains commercial and/or industrial, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities and playgrounds
- No use of groundwater from, or downgradient of, the area except for monitoring and remediation, except as approved by EPA and Ecology
- No downgradient well drilling except for monitoring wells and/or remediation system wells authorized by EPA and Ecology in approved plans
- Protect existing monitoring wells

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual evidence of unauthorized on-site or downgradient well installation or groundwater use?			
Have any well construction applications been submitted to or approved by Island County in areas downgradient of the site? (Island County contact required)			
Are all monitoring wells in good condition and accessible? (refer to routine monitoring well inspection checklists or annual on-site inspection)			
Has access control been maintained? (refer to security incident reports) Is signage intact and readable?			

I certify that the conditions of Operable Unit 5, Area 52 on the inspection date were as reported above.

Inspector: _____ Date: _____

**Munitions Response Program Site, Former Machine Gun Ranges B and C
Land Use Controls (LUCs) Inspection Checklist**

Page 1 of 1

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

MRP Site, Former MGRs B and C Land Use Controls

- Ensure that land use at the former MGRs B and C remains non-residential, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities, and playgrounds
- Ensure that all disturbed or excavated soils at or from the area are properly categorized and disposed of, and that workers are protected during any such disturbance or excavation

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual or administrative evidence of excavation or soil disturbance? If so, determine if site approval process has been followed.			
Is signage intact and readable?			

I certify that the conditions of MRP Site, former MGRs B and C on the inspection date were as reported above.

Inspector: _____ Date: _____

**Munitions Response Program Site, Former Mobile Turret Tower Range
Land Use Controls (LUCs) Inspection Checklist**

Page 1 of 1

Inspected by: _____
Company or Organization _____
Date of Inspection: _____

MRP Site, Former MTTR Land Use Controls

- Ensure that land use at the former MTTR remains non-residential, which includes a prohibition on development and use of this property for residential housing, elementary and secondary schools, child care facilities, and playgrounds
- Ensure that all disturbed or excavated soils at or from the area are properly categorized and disposed of, and that workers are protected during any such disturbance or excavation

Inspection Item	Y/N/NA	Summary of Inspection Performed	Finding No.
Has site or adjacent land use changed since last inspection?			
Is there visual or administrative evidence of excavation or soil disturbance? If so, determine if site approval process has been followed.			
Is signage intact and readable?			

I certify that the conditions of MRP Site, former MTTR on the inspection date were as reported above.

Inspector: _____ Date: _____

**Monitoring Well (GW) Sampling
Visual Inspection Checklist**
Page 1 of 1

Area: _____ Well ID: _____

Inspectors: _____ Date/Time: _____

Company: _____

Weather/Temperature: _____

- | | Yes | No |
|---|--------------------------|--------------------------|
| A. Was the monitoring well located?..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the well clearly labeled? If not, please relabel | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there a cap on the monitoring well? | <input type="checkbox"/> | <input type="checkbox"/> |
| Specify type of cap: | | |
| Specify size and number of bolts on flush-mount cap: | | |
| Is there any evidence of tampering with the cap or well casing?..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the monument in good condition? | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the casing in good condition? | <input type="checkbox"/> | <input type="checkbox"/> |
| Are there any odors (e.g., solvent or sulfide/rotten egg)? If yes, describe the odor and intensity..... | <input type="checkbox"/> | <input type="checkbox"/> |
- _____
- _____

- | | | |
|--|--------------------------|--------------------------|
| Is the well dry? | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the well depth consistent with past depth measurements? | <input type="checkbox"/> | <input type="checkbox"/> |
| Was a GW sample collected from the well? | <input type="checkbox"/> | <input type="checkbox"/> |

B. Previous well depth _____ Date _____ Current well depth _____

Additional notes: _____

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