United States Air Force
Installation Restoration Program

Flightline (SS-004)

Proposed Plan

Former Plattsburgh Air Force Base
Plattsburgh, New York

Draft-Final
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THE UNITED STATES AIR FORCE ANNOUNCES PROPOSED PLAN

This Proposed Plan identifies the Preferred Alternative for addressing contaminated surface soil along the south and east side of the Flightline (SS-004) on the former Plattsburgh Air Force Base (AFB). In addition, this Proposed Plan includes summaries of alternatives evaluated for use at this site. This Proposed Plan was developed by the United States Air Force (Air Force), the lead agency for the site, in conjunction with the United States Environmental Protection Agency (USEPA) and in consultation with the New York State Department of Environmental Conservation (NYSDEC).

The Air Force is proposing this remedial action to address potential risk to ecological receptors from surface soils found along the south and east side of the flightline ramp. The risk derives from metals contamination in the surface soils resulting from historical flightline activities. SS-004 is wholly included within the boundaries of the Plattsburgh International Airport (Figure 1). A human health risk assessment found that there is no current unacceptable human health risk posed by chemicals in surface or subsurface soil for the current industrial use and future residential use scenarios considered (URS 2007). An ecological risk assessment, however, found that there was a potential risk to ecological receptors from exposure to surface soils along the edge of the ramp. Surface water and sediment contamination also were investigated and found to pose no present or future unacceptable human or ecological risk, so no further action is proposed for these media (URS 2007).

Groundwater contamination at Site SS-004, including potential soil vapor intrusion (SVI) into buildings from groundwater, is being addressed as part of the Fire Training Area/Industrial Area (FT-002/IA) Groundwater Operable Unit (OU). Institutional controls (ICs) required by the FT-002/IA Groundwater OU also apply to Site SS-004 (URS 2014).

The recommended remedial alternative for SS-004 is to implement ICs that specify re-evaluation of the risk to ecological receptors if the land use changes from its current industrial use, aviation/aviation support. The final remedy will be selected after all information submitted during the 30-day public comment period is reviewed and considered. The Preferred Alternative may be modified or another remedial action presented in the Proposed Plan will be selected based on new information or public comments. Therefore, the public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.

MARK YOUR CALENDARS

Public Comment Period
_____,2016 to _____, 2016
The Air Force will accept written comments on the Proposed Plan during the public comment period.

Public Meeting
_____, 2016 at 7:00 P.M.
The Air Force will hold a public meeting to explain the Proposed Plan and the alternatives presented. Oral and written comments will also be accepted at the meeting, which will be held at the Clinton County Government Building, First Floor Meeting Room, 137 Margaret Street, Plattsburgh, New York.

For more information, see the Administrative Record:
Copies of documents supporting this Proposed Plan may be obtained at the following address:

AFCEC
8 Colorado Street, Suite 121
Plattsburgh, New York 12903
(518) 563-2871

The Administrative Record is also available on-line at:

https://afcec.publicadmin-record.us.af.mil

The Air Force is issuing this Proposed Plan as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA) and to the extent possible with the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). This Proposed Plan summarizes information that can be found in greater detail in the SS-004 Remedial Investigation (RI) Report (URS 2007), the SS-004 Focused Feasibility Study (URS 2016), and other documents contained in the Administrative Record for this site. The public is encouraged to review these documents to gain a more comprehensive understanding of the site and the results of investigation activities.

SITE BACKGROUND

The former Plattsburgh AFB is located in Clinton County along the western shore of Lake Champlain in northeastern New York (Figure 1). The base was closed on September 30, 1995 as part of the third round of base closures mandated by the Defense Base Closure and Realignment Act of 1993. As part of the Air Force's Installation Restoration Program (IRP) and the Base Realignment and Closure (BRAC) program, the Air Force initiated activities to identify, evaluate, and remediate identified hazardous material disposal and spill sites. The IRP at the former Plattsburgh AFB was implemented according to a Federal Facilities Agreement, Docket No.: II-CERCLA-FFA-10201, signed on July 10, 1991, by the Air Force, USEPA and NYSDEC. The Air Force is the lead agency for the IRP. Plattsburgh AFB was placed on the National Priorities List in 1989 (USEPA CERCLIS ID: NY4571924774). Cleanup of the base is being funded by the Air Force.

In June 2007, the Clinton County Airport relocated to the base and flight operations began for the Plattsburgh International Airport. The airport property was transferred to Clinton County by deed via a finding of suitability for early transfer (FOSET) in April 2012 (AFRPA 2012). As of September 2012, all of the property within the former base boundaries had been transferred from the Air Force to public and private use.

SS-004 consists of most of the concrete flightline ramp and immediately adjacent grass covered areas to the east, south, and west of the ramp. The most prominent feature within SS-004 is the concrete and asphalt flightline ramp, which was used for aircraft staging and refueling during the period from 1954 to 1995. It is approximately 7,800 feet long by 1,500 feet wide (Figure 1) and slopes from northwest to southeast, with more than 70 feet of relief change between its northern (higher) end and the southern (lower) end. The area of SS-004 is about 266 acres.

The ramp was originally constructed with two parallel trench drains running lengthwise down the ramp approximately 300 feet and 700 feet from its eastern edge (see Figure 2). The trench drains were 12 inches wide by 32 inches deep, constructed of reinforced concrete, and covered with steel grating. Catch basins were located at the intersections of the trench drains with lateral drain lines, which discharged to a storm drain located parallel to the eastern edge of the ramp. The trench drains were filled with concrete in the 1960s (URS 2007).

During four decades of base operations, fuel spills resulted from aircraft fueling and defueling, and from expansion of fuel tanks in aircraft. Solvents were also reportedly used in conjunction with pressure washers to degrease heavily soiled portions of aircraft. Spills that occurred on the flightline ramp could have migrated to longitudinal drainage trenches, to storm sewers along the perimeter of the ramp, or to soils along the perimeter of the ramp. Additional potential contaminant sources include aircraft exhaust particulates (URS 2007). Drainage features in the vicinity of SS-004 are shown on Figure 2.

An underground aircraft refueling system (ARS) was also present beneath the ramp (Figure 3). The distribution system consisted of eight pump houses with underground storage tanks (USTs) located along the western edge of the flightline, and 22 lateral fuel distribution

lines running underneath the ramp from west to east. Fuel stored at the Bulk Fuel Storage Area on Connecticut Road was transmitted underground to the pump houses.

In November 1968, a fire destroyed Pump House 3, located along the ramp's western edge. It was reported that JP-4 jet fuel might have been released as a result of the fire. The USTs associated with Pump House 3 continued to be used until 1994. Beginning in 1956, the tanks were used for jet fuel storage, and from the early 1970s until 1994 they were used to store heating fuel and waste fuels. These tanks were tightness tested annually, from 1991 through 1994, and found to be intact. In 1994, seven USTs at Pump House 3 were removed.

The ARS was dismantled in 1996 and officially closed in 2000 (URS 2007). The buried pipelines from the Bulk Fuel Storage Area to the flightline ramp were abandoned in place and the distribution piping along the west and south sides of the ramp (Figure 3) were removed. All but two of the lateral fuel supply lines under the ramp were filled with grout; two of the laterals were filled with polyurethane foam so that they could be used as utility conduits in the future if needed (URS 2007).

Also, as part of the ARS closure, the remaining seven pump houses (1, 2, and 4 through 8) were demolished and the USTs, anode beds, and transformers associated with the pump houses were removed. An attempt was made to remove all petroleum-contaminated soils which were taken to an on-site treatment cell for bioremediation. More than 17,000 cubic yards of soil were removed during the pump house closures (URS 2007). The SS-004 RI concluded that petroleum-contaminated soil sources at the former pump house sites had been adequately cleaned up even though some confirmation soil samples showed minor and sporadic detections of fuel-related compounds (URS 2007).

Based on environmental sample data gathered during the pump house closures, the most significant issues related to the pump houses appear to be petroleum-contaminated groundwater near the former location of Pump House 2 and residual petroleum-contaminated soil, possibly contributing to groundwater contamination, in the vicinity of the former Pump House 3 (URS 2007). Groundwater monitoring at both sites is included in the FT-002/IA Groundwater OU.

Previous Investigations

Investigation and sampling of groundwater, soil, surface water, and sediment have been ongoing at the SS-004 site since 1985. Historical events related to SS-004 are listed in the historical site chronology in the table that follows. The identified events are illustrative, not comprehensive.

Date	Event
1985	Phase I Records Search (Radian 1985)
1987	Site Inspection (E.C. Jordan 1989)
1993	RI (URS 1995)
1995-1996	ARS Closure (OHM 2000)
1996	Geoprobe Investigation Below Ramp (OHM 1996)
2001/2002	Supplemental RI (URS 2007)
2007	Final RI Report (URS 2007)

The scope of these investigations and the results are detailed in the SS-004 RI Report (URS 2007), a copy of which can be found in the Administrative Record.

SITE CHARACTERISTICS

The discussion below summarizes a few essential features of the geologic setting at SS-004. More detail is provided in the SS-004 RI Report (URS 2007).

Most of SS-004 is covered by the concrete ramp, but below the ramp, site stratigraphy consists of four general geologic units from the top down: sand, silt and clay, glacial till, and bedrock. The sand unit is the predominant

surficial deposit encountered on base. It consists of a poorly graded fine sand with lesser amounts of medium and course sand and silt. The sand is more than 60 feet thick in the northern portion of SS-004 and decreases to less than 10 feet thick at the south end. An unconfined, water table, aquifer is found within the sand unit.

A gray, very soft to stiff clayey silt and silty clay is found underlying the sand. It is estimated to be between 6 and 30 feet thick beneath SS-004. The clay unit forms a low permeability confining layer (aquitard) that separates the sandy unconfined aquifer from the underlying till water-bearing zone and bedrock aquifer.

Underlying the clay is glacial till, a dense mixture of sand, silt, clay, gravel, cobbles, and boulders. The till is a conductive, water-bearing zone confined by the overlying clay unit, but it is in immediate contact with the underlying bedrock aquifer. The bedrock is characterized as a limestone and dolostone. The bedrock is also an aquifer within which groundwater movement is controlled by physical characteristics of the rock such as porosity, fractures, faults, bedding planes, joints, and solution cavities.

NATURE AND EXTENT OF CONTAMINATION

SS-004 is wholly included within the boundaries of the Plattsburgh International Airport. SS-004 consists of most of the concrete flightline ramp and immediately adjacent grass covered areas to the east, south, and west of the ramp.

The primary sources of contamination at SS-004 are fuel spills resulting from fueling and defueling of aircraft when the base was active and also airborne particulates from jet engine exhaust. Residual contaminants from both spills and exhaust particulates have migrated in surface runoff from the flightline ramp to adjacent areas. The cumulative effect of this has been minor contamination of surface soil, subsurface soil, and sediments. Detailed discussion of the contamination detected in these media is provided in the SS-004 RI Report (URS 2007) and the Focused Feasibility Study (URS 2016). Groundwater contamination at SS-004 is being addressed as part of the FT-002/IA Groundwater OU.

During the RI, concentrations of compounds detected in surface and subsurface soil samples were compared to the recommended soil cleanup objectives presented in NYSDEC's *Technical and Administrative Guidance Memorandum (TAGM) 4046* (NYSDEC 1994). In 2010, NYSDEC rescinded the TAGM 4046 soil cleanup objectives (NYSDEC 2010) and replaced them with new soil cleanup objectives presented in *Title 6 of the New York Codes, Rules, and Regulations (6 NYCRR) Part 375* (NYSDEC 2006). The 6 NYCRR Part 375 soil cleanup objectives are dependent upon the intended use of the site, which for SS-004 is aviation/aviation support (i.e., industrial); residential use is prohibited because of institutional controls placed on Site SS-004 as part of the FT-002/IA Groundwater OU.

The statutory authority for 6 NYCRR Part 375, as cited in the regulation, is the New York State Environmental Conservation Law (ECL). Article 27, Title 13, Section 27-1301.b of the ECL excludes as hazardous waste "the residue of emissions from gasoline engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine…" This same language, excluding exhaust emissions as hazardous waste, also appears in 6 NYCRR Part 375. As a result, the regulation and its soil cleanup objectives do not apply at SS-004 for which the RI (URS 2007) concluded that aircraft exhaust emissions were the primary source of contamination (see **Surface Soil** below).

Surface Soil

Low levels of volatile organic compounds (VOCs), pesticides, and polychlorinated biphenyls (PCBs) were sporadically detected in the surface soil samples collected at the edge of the ramp generally from up to six inches below ground surface. The RI concluded that semi-

volatile organic compounds (SVOCs), primarily polycyclic aromatic hydrocarbons (PAHs), and metals contamination observed in surface soils was most likely the result of the combustion of fossil fuel by jet aircraft (USEPA 1979; Shabad 1980; Smirnov 1970). Since jet engines are typically located 8 to 10 feet above the ground surface and the prevailing wind direction is from west to east, airborne exhaust particulates were probably directly transported to areas east of the ramp. These particulates could also accumulate on the flightline ramp and migrate to the eastern edge of the ramp with surface runoff during rain or snow melt events. Aircraft support vehicular traffic (and exhaust emissions) was also generally confined to the eastern edge of the flightline ramp. PAH compounds and metals in the exhaust particulates then became adsorbed to organic matter present in surficial soils around the perimeter of the flightline ramp. Since the PAH and metals contaminants are relatively insoluble, they remain adsorbed to organic material in the surface soil near the edge of the flightline ramp.

The RI also concluded that PAH and metals contamination was probably limited to the top few inches of the soil profile; i.e. zero to six inches. Shallow subsurface soil samples (two to four feet depth) collected on the eastern side of the flightline ramp did not show elevated PAH or metals concentrations (URS 2007).

The human health risk assessment conducted during the RI found that exposure to surface soils along the ramp did not pose an unacceptable risk for the exposure scenarios evaluated (i.e., industrial and residential use). However, an ecological risk assessment, also conducted during the RI, found that there was a unacceptable risk to terrestrial species, primarily the American robin, from exposure to metals mostly due to lead.

The extent of metals-contaminated surface soils along the ramp has not been completely determined, but PAH-contaminated surface soil along the south and east side of the flightline ramp is estimated to extend from roughly the center of the south end of the ramp northward along the east side of the ramp about 8,000 feet (Figure 4). Laterally, the PAH surface soil contamination extends at least 100 feet, and probably more, from the edge of pavement. The extent of the surface soil contamination is based upon surface soil samples collected during the RI that had concentrations exceeding the recommended soil cleanup objectives in NYSDEC's Technical and Administrative Guidance Memorandum (TAGM) 4046 (NYSDEC 1994) in use at the time. Metals-contaminated surface soil is likely co-located with the PAH-contaminated surface soil. Any remaining uncertainty associated with the lateral extent of surface soil contamination will be factored into the remedy assessment.

Subsurface Soil

Generally, low levels of VOCs, SVOCs, pesticides, PCBs, and metals were detected in the subsurface soil samples collected around the ramp at various depths between 2 and 12 feet below ground surface. VOC concentrations were slightly higher in subsurface soil samples as compared to concentrations in surface soil samples. SVOC contamination consisted primarily of PAH compounds. Concentrations of PAHs and metals were significantly lower in subsurface soils as compared to surface soils. Subsurface soils beneath the ramp did not appear to be significantly impacted by fuel spills on the ramp which may have been discharged to the trench drain system in the ramp.

Surface Water and Sediment

Surface water and sediment samples collected around the perimeter of the flightline ramp also appear to show impacts from jet aircraft exhaust particulates. While low concentrations of VOCs and pesticides were detected in some surface water and sediment samples, the primary contaminants of concern in these media are PAH compounds and metals. There were no exceedances of NYSDEC’s surface water quality criteria (NYSDEC 2008) in the surface water samples. There were, however, a number of exceedances of NYSDEC's sediment quality screening criteria (NYSDEC 1999) in sediment samples, but human health risk and ecological risk

assessments determined that there is no unacceptable risk associated with human or terrestrial ecological receptor exposure to the contaminated sediment.

SUMMARY OF SITE RISKS

This section summarizes the results of baseline risk assessments conducted as part of the SS-004 RI. These assessments estimated the risks associated with current and potential future planned industrial and hypothetical residential land use conditions. A baseline risk assessment estimates the human health and ecological risk which could result from contamination at a site if no remedial action is taken. A more detailed discussion of the baseline risk assessments is presented in the SS-004 RI Report (URS 2007) and the SS-004 Focused Feasibility Study (URS 2016.

According to the Final Environmental Impact Statement for the Disposal and Reuse of Plattsburgh AFB (Tetra Tech 1995), the best reuse of SS-004 is as an airfield and associated aviation support in an industrial setting. The airfield is currently being used in this capacity as the Plattsburgh International Airport and it is secured by fencing with locked gates.

Human Health Risk Assessment

A four-step process is utilized for assessing site-related human health risks for a reasonable maximum exposure scenario: Hazard Identification, Exposure Assessment, Toxicity Assessment, and Risk Characterization (see accompanying box "What is Risk and How is it Calculated" for a brief summary of the risk assessment process).

The risk assessment for SS-004 is based upon the analytical results for environmental media summarized in the SS-004 RI Report. Given the current and expected future use of the site as an airport, surface soil and subsurface soil were identified as media of concern. Also included w some of the sediment sample data collected in areas with little or no standing water where potential direct exposure was considered potentially significant (URS 2007).

What is Risk and How is it Calculated?

A baseline human health risk assessment is an analysis of the potential for adverse health effects caused by exposure to hazardous substances at a site if no remedial action is taken. A four-step process is used to assess site-related human health risks for reasonable maximum exposure scenarios.

Hazard Identification: This step identifies the contaminants of potential concern (CPCs) based on factors such as toxicity, frequency of occurrence, and concentration.

Exposure Assessment: This step considers the different ways, called pathways, that people might be exposed to the contaminants identified in Step 1, the concentrations that they might be exposed to, and the frequency and duration of the exposures. Using this information, a "reasonable maximum exposure" scenario is determined which portrays the highest level of human exposure that could reasonably be expected to occur.

Toxicity Assessment: This step determines the types of adverse health effects associated with chemical exposures and the relationship between the magnitude of exposure (dose) and the severity of adverse effects (response). Potential health risks are chemical-specific such as the risk of developing cancer or other non-cancer health effects, such as damage to the normal functions of internal organs.

Risk Characterization: This step summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of site-related risks for all CPCs. Exposures are evaluated considering the potential risk of developing cancer and the potential for non-cancer health hazards. For carcinogens, risks are generally expressed as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the carcinogen. The probability is usually expressed in scientific notation (e.g. $1x10^{-6}$). An excess lifetime cancer risk of $1x10^{-6}$ indicates that an individual has a 1 in 1-million chance of developing cancer as a result of site-related exposure. The risk is referred to as an excess lifetime cancer risk because it would be in addition to the risk of cancer individuals face from other causes. Under current USEPA regulations, acceptable exposure levels are those that represent an excess lifetime cancer risk to an individual of between $1x10^{-4}$ and $1x10^{-6}$, corresponding to a one in ten thousand to one in a million excess cancer risk. Excess cancer risks higher than this range require remediation. For non-cancer health effects, a hazard index is calculated. For a hazard index less than or equal to 1, non-cancer health hazards are not expected to occur.

Exposure pathways for SS-004 were developed for current and potential future land use scenarios. Given the current conditions, adult and teenage trespasser exposure to site-related chemicals of potential concern (CPCs) could occur through incidental ingestion of, or dermal contact with, surface soil (0 to 2 feet depth). However, fencing and security patrols limit trespassing so that the trespasser scenario is marginal. Since the site is almost entirely concrete, inhalation of fugitive dust and soil vapors are unlikely to be a significant pathway, although some exposure through these pathways is possible.

The human health risk assessment considered an airfield/aviation support exposure scenario in two (2) phases. The first phase is a transitional period (short-term exposure) in which new construction and earth-moving activities are possible. Construction workers are identified as the potentially exposed population in this phase. The second phase is long-term (airfield/aviation support) use of the area during which industrial workers are the exposed population. Industrial workers involved in aviation support would likely engage in activities similar to those of base personnel prior to the base's closure.

A future residential scenario was also evaluated in order to determine if deed restrictions prohibiting residential use of the property are required. Pathway analysis for assumed future land use conditions identified potential exposure pathways for construction and industrial workers (aviation/aviation support) and residents through incidental ingestion of, and dermal contact with, excavated or re-graded soil.

Construction workers also could be exposed via inhalation of fugitive dust during intrusive activities, and industrial workers could be exposed during outdoor activities. Inhalation of dust by residents is unlikely to be a significant pathway although some exposure to contaminants from this pathway is possible.

Volatilization of organic compounds from soil at SS-004 also was examined as a potential exposure pathway. During construction activities, construction workers may be exposed to volatile CPCs in soil. Industrial worker and residential exposure to volatiles is possible if vapors were to infiltrate through cracks in foundations of houses or buildings.

The results of the human health risk assessment for exposure to site soils indicates that the total excess cancer risk for each potential receptor considered falls below or within the range of risk (i.e., 10^{-4} to 10^{-6} excess cancer risk) that is acceptable under current USEPA regulations (USEPA 1990). Non-cancer risk for the soil pathway also falls below the USEPA specified hazard index of one. An unacceptable potential non-cancer risk is indicated if the hazard index exceeds one (USEPA 1991).

The concentration of lead in surface soils is elevated above the Plattsburgh AFB background; however, there are no accepted toxicity values to assess the risk posed by lead. The RI qualitatively assessed the human health risk of exposure to lead in soils using the USEPA's screening level concentration of 400 mg/kg for residential scenarios at CERCLA sites (URS 2007). This screening level is based on soil-lead exposure by the most sensitive residential populations, young children (URS 2007). Screening levels are selected to provide human health protection without knowledge of the exposure conditions at the site. The RI concluded that no significant future or current health risk was likely posed by the lead concentrations observed in soils at SS-004 (URS 2007.

The RI also concluded that exposure to surface water and sediment at the SS-004 site is highly unlikely; however, risks posed by these media were examined separately from the primary human health risk assessment. This evaluation indicated that exposure to chemicals in these media do not present an excess non-carcinogenic or an unacceptable carcinogenic risk to human populations (URS 2007).

Ecological Risk Assessment

This section summarizes the results of the screening level risk assessment performed during the SS-004 RI. A more detailed discussion is provided in the SS-004 RI Report (URS 2007) and the focused Feasibility Study (URS 2016).

Six indicator species were selected for the ecological risk assessment: the short-tailed shrew, meadow jumping mouse, red fox, raccoon, the red-tailed hawk, and the American robin. Each of these species was identified as occurring in habitats present around the site (URS 2007). Compounds detected in surface soil and sediment were considered contaminants of potential concern. Because water quality standards were not exceeded in surface water samples, surface water was not considered a media of concern.

How is Ecological Risk Evaluated?

A two-step process is used to evaluate the potential impact to terrestrial species from exposure to surface soils and sediments.

Risk-Based Screening Concentrations: The first step is to compare the maximum concentration for each contaminant in surface soils and sediments to a risk-based screening concentration (RBSC), which is a concentration above which the terrestrial receptor is adversely impacted by exposure. If the concentration exceeds the RBSC, further evaluation of exposure to that compound was made following USEPA's hazard quotient approach (USEPA 1989).

Hazard Quotient Approach: The hazard quotient approach presumes that exposure to a given compound can occur for a given species at levels less than a threshold reference value (TRV) with no measureable effect on the receptor. The hazard quotient is determined by dividing the estimated daily bioaccumulation of a given contaminant into animal tissue by the TRV. The resulting hazard quotient is unitless and a hazard quotient of 1.0 represents the threshold for toxicological effects for that compound; hence a hazard quotient of less than 1.0 indicates that there is no expected risk. When the toxicological endpoints of various compounds are similar, the individual hazard quotients can be added, resulting in a hazard index which can be used to assess the potential risk of a mixture of chemicals having similar effects (URS 2007).

Concentrations in sediment samples were all less than the risk-based screening concentrations (RBSCs) and, consequently there are no potential risks associated with exposure to sediments. For surface soils, all of the concentrations of compounds detected were less than the RBSCs except for the following five metals: arsenic, barium, cadmium, chromium, and lead. These metals were evaluated further using the hazard quotient approach described above in the accompanying box "How is Ecological Risk Evaluated."

The hazard index (the sum of the hazard quotients for the five metals) was less than 1.0 for the red fox, raccoon, and the red-tailed hawk, so there is no risk to these species from surface soils along the flightline. On the other hand, the hazard index for the short-tailed shrew, the meadow jumping mouse, and the American robin were all greater than one, meaning there are potential risks to these species from exposure to surface soils. The potential risks are due to the metals arsenic, barium, cadmium, chromium, and lead.

The potential risk to the American robin was particularly high with a hazard index of 4,875, primarily due to exposure from lead (hazard quotient of 3,500). The risk to the short-tailed shrew and the meadow jumping mouse were two orders of magnitude less than that of the American robin, with hazard indices of 49.4 and 55, respectively, for these two species. Again most of the risk was from exposure to lead in the surface soils.

SCOPE AND ROLE OF OPERABLE UNIT

SS-004 is one of 41 sites administered as part of the Air Force's IRP for Plattsburgh AFB. Records of Decision have been signed for 18 other OUs at the base. SS-004 is the last site for which a Record of Decision will be prepared. This Proposed Plan addresses unacceptable hypothetical future risks to ecological receptors (particularly avian species such as the American robin) from surface soil contamination that has been found at the site. These risks derived from metals contamination in surface soil resulting from historical Air Force flightline activities.

The SS-004 RI (URS 2007) concluded that no risk is posed to human or ecological receptors as a result of potential exposure to subsurface soil, surface water or sediment at SS-004. Therefore, no further action is proposed for these media. Groundwater contamination at SS-004 is being addressed as part of the FT-002/IA Groundwater OU (URS 2014).

What is a "Principal Threat"

The NCP establishes an expectation that treatment will be used to address the principal threats posed by a site whenever practicable [40 CFR 300.430(a)(1)9iii)(A)]. The "principal threat" concept is applied to the characterization of "source" materials at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for migration of contamination to groundwater, surface water, or air, or acts as a source for direct exposure. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur. Source materials constituting principle threats have not been identified at SS-004.

REMEDIAL ACTION OBJECTIVE

The remedial action objective for this site is:

- To control exposure of potentially impacted ecological receptors to metals-contaminated surface soil at the site.

While there is currently limited ecological habitat at Site SS-004, the current land use is not conducive to ecological receptors; therefore, the need for remedial action is triggered by potential future uses of the land that would enhance ecological habitat and attract ecological receptors. These would include, for example, the closing the airport, removing the concrete ramp and runway, and converting the airport to open space/conservation land. A second reuse scenario could be residential redevelopment, because residential landscaping would generally enhance wildlife habitats. Of the potential remediation goals that might be considered for these future use scenarios, New York State's unrestricted use soil cleanup objectives from 6 NYCRR Part 375 (NYSDEC 2006), shown below, are expected to be conservatively protective for the metals that were found to pose unacceptable risk to terrestrial species:

Surface Soil Cleanup Objectives

Compound	6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (mg/kg)
Arsenic	13
Barium	350
Cadmium	2.5
Chromium - Hexavalent	1
Chromium - Trivalent	30
Lead	63

SUMMARY OF REMEDIAL ALTERNATIVES

There is no unacceptable risk posed by site contaminants to human health, but surface soil contamination at the site is a potential threat to ecological receptors, primarily the American robin. Three remedial alternatives are described in this section that address the remedial action objective.

Alternative 1: No Action

Capital Cost: $0
Present Worth of Annual Monitoring: $0
Years of Active Remediation: 0
Years of Monitoring: 0

The Superfund program requires that the "No Action" alternative be included at every site to establish a baseline for comparison. Under this alternative, the Air Force would take no further action at the site to prevent ecological exposure to metals-contaminated surface soil.

Alternative 2: Institutional Controls

Capital Cost: $0
Present Worth of Annual Monitoring $19,600
Years of Active Remediation: 0
Years of Annual Monitoring: 30 or more

The purpose of Alternative 2 is to implement actions that will minimize exposure to ecological receptors by monitoring land use and specifying further evaluation of exposure and risk based on new land use, residential, for instance. Alternative 2 would be implemented by institutional controls (ICs), which are deed restrictions binding the purchaser to act to continue to protect human health and the environment based on the updated evaluation.

The area of metals-contaminated surface soils on the south and east side of the ramp is estimated to extend from approximately the center of the south end of the ramp northward about 8000 feet along the east side of the ramp (Figure 4). The soil contamination was found to extend at least 100 feet from the edge of the ramp. This strip represents about 15 acres of grassed habitat for the potentially impacted ecological receptors; i.e., the meadow jumping mouse, the short-tailed shrew, and the American robin. The area of surface soil contamination is only six percent of the total 266 acres represented by SS-004 (Figure 1). If SS-004 land use changes in the future to non-aviation and the ramp is removed, then the populations of potentially impacted ecological receptors could increase dramatically. Consequently, Alternative 2 includes deed restrictions specifying re-evaluation of the risk posed to ecological receptors should land use change (see Figure 5).

There are no annual operating costs associated with this alternative, but there is an annual cost of monitoring and reporting on continued compliance with the use restriction. The estimated annual cost of $1,000 for a period of 30 years has a present worth of $19,600 at an annual interest rate of three percent.

Alternative 3: Excavation and Offsite Disposal of Contaminated Surface Soil

Capital Cost:	$2,016,000
Present Worth of Annual Monitoring:	$0
Years of Active Remediation:	Less than 1
Years of Monitoring:	0

Alternative 3 controls exposure of potentially impacted ecological receptors to surface soil contamination by removing the contaminated soil and disposing of it off-site.

This alternative involves removing surface soil to a depth of six inches along the south and east side of the flightline ramp over a length of about 8,000 feet. The soil will be removed out to at least 100 feet from the edge of the pavement (Figure 4). The extent of metals-contaminated surface soil was not completely delineated during the RI, so this alternative also includes surface soil sampling before starting the soil removal, as well as confirmation sampling to verify that the soil removal is complete, using the Surface Soil Remediation Goals shown on page 9.

The excavated area will be backfilled with clean soil followed by topsoil and seeding to restore the site. The estimated volume of surface soil that will be removed is 16,000 cubic yards (cy) (URS 2016). When site restoration is complete, no further action is required by the Air Force.

EVALUATION OF ALTERNATIVES

Nine USEPA criteria are used to evaluate the remedial alternatives against each other in order to select a remedy. A brief description of each criterion is shown in the accompanying table and the evaluation of alternatives based on these criteria presented in this section.

1. Overall Protection of Human Health and the Environment

Alternative 1 (No Action) is not protective of the environment because ecological risks posed by the site surface soils for the meadow jumping mouse, the short-tailed shrew and the American robin would remain and the exposure of these receptors to potential hazards associated with these soils would not be mitigated or re-evaluated should land use change.

Alternative 2 (Institutional Controls) protects the environment by monitoring land use, specifying further evaluation of risk posed

to ecological receptors based on any new land use, and prescribing actions based on the updated evaluation. Alternative 3 (Excavation and Offsite Disposal of Contaminated Surface Soil) protects ecological receptors by removing the contaminated surface soil.

Because Alternative 1 (No Action) is not protective of human health and the environment, it was eliminated from further consideration under the remaining eight criteria.

EVALUATION CRITERIA FOR REMEDIAL ALTERNATIVES
Overall Protection of Human Health and the Environment addresses whether a remedy provides adequate protection to potential human and ecological receptors.
Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) addresses whether a remedy will meet all the ARARs of federal and state environmental statutes, and/or provide grounds for invoking a waiver.
Long-Term Effectiveness and Permanence refers to the magnitude of residual risk, and the ability of a remedy to maintain reliable protectiveness of human health and the environment
Reduction of Toxicity, Mobility, or Volume of Contaminants Through Treatment addresses the anticipated performance of treatment technologies used in the remedy.
Short-Term Effectiveness considers the time until the remedy effectively protects human health and the environment, as well as the alternative's potential to create adverse impacts on human health or the environment during its implementation
Implementability considers the ease of implementing the remedy in terms of construction and operation and the availability of services/materials needed to implement the remedy.
Cost includes the capital and monitoring cost of each alternative.
State Acceptance addresses technical and administrative concerns of the State with regard to remediation
Community Acceptance addresses public comments received on the Administrative Record and the Proposed Plan

2. Compliance with ARARs

Alternatives 2 and 3 meet federal and state environmental statutes.

3. Long-Term Effectiveness and Permanence

Alternative 3 (Excavation and Offsite Disposal of Contaminated Surface Soil) is the most permanent solution; contaminated surface soil would be removed from the site. Alternative 2 (Institutional Controls) relies on deed restrictions, which are effective at least as long as monitoring of compliance with ICs is performed.

It should be noted that the general land use for the flightline area; i.e., aviation support, has not changed since the base was an active Air Force facility. Surface soil contamination on the south and east side of the ramp, due mainly to deposition of combustion emissions from Air Force aircraft, could continue in the future. Even if the contaminated soil is removed per Alternative 3, because of Plattsburgh International Airport activities, it does not follow that future deposition of fuel combustion products would be permanently eliminated.

4. Reduction of Toxicity, Mobility, or Volume of Contaminants Through Treatment

Alternatives 2 and 3 do not reduce the toxicity, mobility, or volume of site contaminants; however, with Alternative 3 (Excavation and Offsite Disposal of Contaminated Surface Soil), contaminated soils are removed from the site and disposed of at a secure and engineered facility. Consequently, the toxicity, mobility and volume of contaminants are reduced at the site.

5. Short-Term Effectiveness

Alternative 2 (ICs) achieves protection immediately and Alternative 3 (Excavation and Offsite Disposal of Contaminated Soil) will achieve protection immediately after the surface soils are removed. There is no adverse impact on human health or the environment from measures proposed in these two alternatives.

6. Implementability

Alternative 2 (Institutional Controls) relies on deed restrictions, a control practice that is common and has been similarly implemented at the former Plattsburgh AFB in the past. Alternative 3 utilizes common, readily available construction techniques that can be simply implemented. Alternative 3, which can be implemented immediately, would result in substantial disruptions to current airport operations during implementation - it is still implementable, but not without disruption.

7. Cost

The estimated capital cost needed to implement Alternative 3 (Excavation and Offsite Disposal of Contaminated Surface Soil) is $2,016,000. There are no capital costs associated with Alternative 2 (Institutional Controls), but there is an annual monitoring cost of $1,000 associated with verifying and reporting on continued compliance with the use restriction.

8. State Acceptance

NYSDEC has participated in the RI process and will provide input during the preparation of the Proposed Plan and ROD. NYSDEC concurrence with the preferred alternative is anticipated.

9. Community Acceptance

Community acceptance of the preferred alternative will be evaluated after the public comment period ends and will be described in the Record of Decision, which formalizes the selection of the remedy for the site.

PREFERRED ALTERNATIVE

The Air Force recommends Alternative 2 (Institutional Controls) as the preferred alternative for SS-004. Alternative 2 would implement ICs that include monitoring of land use in the SS-004 area and actions that must be taken should the land use change. The ICs would be implemented by deed restriction. This alternative addresses contaminated surface soils that, under future use scenarios, could result in unacceptable exposure of ecological receptors to site contamination. This alternative provides an acceptable balance between cost and effectiveness and is protective of human health and the environment.

Elements of the Alternative

The preferred alternative for SS-004 is ICs, which are non-technical and non-engineering actions that will be used to minimize the exposure to hazardous substances of future ecological receptors in the Area Subject to Institutional Controls (Figure 5.

The Air Force is ultimately responsible for implementing, maintaining, monitoring and enforcing the ICs. It will exercise this responsibility in accordance with the CERCLA and the NCP. It is anticipated that successful implementation and enforcement of the ICs will achieve protection of human health and the environment and compliance with all legal requirements.

The goal of the ICs is to control exposure of potentially impacted ecological receptors to contamination present in surface soil at the site**.** To achieve this goal the following restrictions will be placed in the deed and will remain and run with the Area Subject to Institutional Controls (Figure 5) until USEPA and NYSDEC approve a change:

- Land use other than aviation or aviation support is prohibited within the SS-004 site area unless the ecological risk posed to ecological receptors from metals contamination in surface soil within the site area is re-evaluated given the proposed land use and the risk is either found to be acceptable under CERCLA and NCP guidelines or remedial measures render the risk acceptable under those guidelines. Evaluation and remedial measures must be coordinated with the appropriate regulatory agencies.

- Access to SS-004 must be allowed for the Air Force, their subcontractors, and regulatory agencies to conduct necessary investigations and/or monitoring activities pending proper airport security clearance.

Comparison of the Preferred Alternative to the Nine USEPA Evaluation Criteria

Comparison of Preferred Alternative 2 (ICs) to USEPA Evaluation Criteria

Criterion	Preferred Alternative
Overall Protection of Human Health and the Environment	Site SS-004 was found not to represent a risk to human health under the current (industrial) use or potential future (residential) use, but it could pose an unacceptable risk to ecological receptors if the current use changed. The preferred alternative protects the environment in the future by monitoring land use and specifying further evaluation of risk posed to ecological receptors based on any new land use. The alternative also prescribes actions based on the updated evaluation.
Compliance with ARARs	The preferred alternative meets federal and state environmental statues.
Long-Term Effectiveness and Permanence	The preferred alternative relies on deed restrictions and land use controls, which are effective at least as long as monitoring is performed and the restrictions are enforced.
Reduction of Toxicity, Mobility, or Volume of Contaminants Through Treatment	The preferred alternative does not reduce the toxicity, mobility, or volume of site contaminants.
Short-Term Effectiveness	The remedy achieves protection immediately and there is no adverse impact caused by its implementation.
Implementability	The preferred alternative relies on land use and institutional control practices that are common and have been similarly implemented at PAFB in the past.
Cost	No capital costs would initially be required to implement the preferred alternative. Nominal costs would be required to monitor and enforce the ICs.
State Acceptance	Concurrence is anticipated
Community Acceptance	Will be evaluated after public comment period

The Air Force will not modify or terminate the above use without approval by USEPA and NYSDEC. The Air Force will seek prior concurrence before any anticipated action that may disrupt the effectiveness of the restrictions/controls, or any action that may alter or negate the need for restrictions.

Additional restrictions have been placed in the deed for the property encompassed by Site SS-004 in association with the larger FT-002/IA Groundwater OU. These restrictions were specified in the FOSET for the Golf Course, Industrial, and Western Areas Properties (AFRPA 2009) and also the FOSET for the Central Air Field (AFRPA 2012). The restrictions include: prohibition of groundwater use, restrictions on groundwater discharge, restriction of land use to non-residential, and soil vapor intrusion (SVI) restrictions that require SVI evaluations and or installation of SVI mitigation systems in the event of building modification and new building construction, prior to occupancy.

5-Year Site Reviews

Every five years (at a minimum) after initiation of the preferred remedial alternative, a review of the selected remedial alternative will be undertaken by the Air Force and USEPA in accordance with Section 121(c) of CERCLA. The need to continue the ICs to protect human health and the environment will be evaluated as part of the review.

COMMUNITY PARTICIPATION

The following paragraphs explain how the public can become involved in the selection process after reviewing the Proposed Plan. Note that the preferred alternative can change in response to public comment or as a result of new information.

Public Comment Period

The former Plattsburgh AFB will hold a 30-day public comment period from _____, 2016 to _____, 2016 to solicit public input. During this period, the public is invited to

review the SS-004 Proposed Plan, and other project documents, and to comment on the proposed action.

The proposed remedial alternative is based on the Administrative Record supporting this decision. Copies of documents may be obtained at the following address:

AFCEC
8 Colorado Street, Suite 121
Plattsburgh, New York 12903
(518) 563-2871

The Administrative Record for SS-004 is also available on-line at:

https://afcec.publicadmin-record.us.af.mil

Public Informational Meeting

The former Plattsburgh AFB will hold a public meeting on _____, 2016 at the Clinton County Government Building, First Floor Meeting Room, 137 Margaret Street, Plattsburgh, New York. The date and time of the meeting will be published in the Plattsburgh *Press Republican*. The meeting will be divided into two segments. In the first segment, data gathered at the site, the preferred alternative, and the decision-making process will be discussed. The public is encouraged to attend this presentation and to ask questions. Immediately after the informational presentation, the Air Force will accept comments about the remedial action being considered for SS-004. The meeting will provide the opportunity for people to comment officially on the plan. Public comments will be recorded and transcribed, and a copy of the transcript will be added to the Administrative Record.

Written Comments

Written comments about the former Plattsburgh AFB's preferred alternative or other issues relevant to the site remediation can be provided to the former Plattsburgh AFB's IRP Coordinator at the Public Meeting or mailed, to be received no later than _____, 2016 to:

Mr. David Farnsworth
BRAC Environmental Coordinator
Air Force Center for Engineering and the Environment
8 Colorado Street, Suite 121
Plattsburgh, NY 12903
(518) 563-2871
david.farnsworth@us.af.mil

Former Plattsburgh AFB's Review of Public Comment

Public comments are part of the process of reaching a final decision on an appropriate remedial alternative for SS-004. The former Plattsburgh AFB's final choice of a remedial alternative will be issued in a ROD for the site and will be submitted to the USEPA for review, approval, and signature and to the NYSDEC for review and concurrence. A Responsiveness Summary of public comments and the former Plattsburgh AFB's responses to them will accompany the ROD. Once the ROD is signed, it becomes part of the Administrative Record.

Additional Public Information

Because the Proposed Plan only summarizes the remedial investigation and remedial alternative for SS-004, the public is encouraged to consult the Administrative Record which contains supporting reports on-line at https://afcec.publicadmin-record.us.af.mil.

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ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
Air Force	United States Air Force
ARARs	applicable or relevant and appropriate requirements
ARS	Aircraft Refueling System
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CPC	chemicals of potential concern
cy	cubic yards
FOSET	Finding of Suitability for Early Transfer
FT-002	Fire Training Area
IA	Industrial Area
IC	institutional control
IRP	Installation Restoration Program
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
6 NYCRR	Title 6 of the New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
OU	Operable Unit
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
RBSC	risk-based screening concentration
RI	remedial investigation
SS-004	Flightline
SVI	soil vapor intrusion
SVOC	semi-volatile organic compound
TAGM	Technical and Administrative Guidance
TRV	threshold reference value
USEPA	United States Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound

GLOSSARY

Administrative Record: A file established and maintained in compliance with section 113(K) of the Comprehensive Environmental Response, Compensation, and Liability Act consisting of information upon which the lead agency bases its final decisions on the selection of remedial method(s) for a Superfund site.

Applicable Requirements: Applicable requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site. Only those state standards that are identified by a state in a timely manner and are more stringent than federal requirements may be applicable. See also Relevant and Appropriate Requirements.

Aquifer: A water-bearing formation or group of formations.

Carcinogenic: Chemicals which, when exposure occurs at a particular level, may produce cancer.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A federal law passed in 1980. The act requires inter alia that federal agencies investigate and remediate abandoned or uncontrolled hazardous waste sites.

Confining Layer: A body of impermeable or distinctly less permeable material adjacent to an aquifer or water-bearing zone.

Feasibility Study (FS): An evaluation to identify and evaluate appropriate remedial goals and remedial alternatives for a site based upon United States Environmental Protection Agency criteria.

Groundwater: Water found beneath the earth's surface that fills pores within materials such as sand, soil, gravel, and cracks in bedrocks, and often serves as a source of drinking water if found in an adequate quantity.

Hazard Index: A quantitative measure of non-carcinogenic risk associated with exposure to chemicals. The hazard index is determined as the sum of hazard quotients for all chemicals of concern affecting a particular organ or acting by a common mechanism. If the hazard index is less than 1 for a particular exposure scenario, the risk of adverse health effects is considered acceptable.

Hazard Quotient. The ratio of a single substance exposure level over a specified time period (e.g., chronic) to a reference dose for that substance derived from a similar exposure period.

Installation Restoration Program (IRP): The United States Air Force subcomponent of the Defense Environment Restoration Program (DERP) that specifically deals with investigating and remediating sites associated with suspected releases of toxic and hazardous materials from past activities. The DERP was established to clean up hazardous waste disposal and spill sites at Department of Defense facilities nationwide.

Monitoring: Ongoing collection of information about the environment that helps gauge the effectiveness of a cleanup action. Information gathering may include groundwater well sampling, surface water sampling, soil sampling, air sampling, and physical inspections.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP): The NCP provides the organization, structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants. The NCP is required under CERCLA and the Clean Water Act, and USEPA has been delegated the responsibility for preparing and implementing the NCP. The NCP is applicable to response actions taken pursuant to the authorities under CERCLA and the Clean Water Act.

National Priorities List: USEPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program.

Operable Unit (OU): A separate and distinct remedial project that is part of a large, complex hazardous waste site. Each OU has its own Record of Decision, remedial investigation, feasibility study, design and construction.

Organic Compounds: Any chemical compounds built on the carbon atom, i.e., methane, propane, phenol, etc.

Polychlorinated Biphenyl (PCB): An organic pollutant that was formerly used in electrical transformers and capacitors, their manufacture was banned in 1979. There are 210 different PCB compounds that typically have 40% to 60% chlorine by weight.

Polycyclic Aromatic Hydrocarbons (PAHs): Compounds often associated with combustion process and distillation tars.

Proposed Plan: A public document that solicits public input on a recommended remedial alternative to be used at a National Priorities List (NPL) site. The Proposed Plan is based on information and technical analysis generated during the RI/FS. The recommended remedial action could be modified or changed based on public comments and community concerns.

Record of Decision (ROD): A public document that explains the remedial alternative to be used at a National Priorities List (NPL) site. The ROD is based on information and technical analysis generated during the remedial investigation, and on consideration of the public comments and community concerns received on the Proposed Plan

Relevant and Appropriate Requirements: These are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal or state environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards that are identified by a state in a timely manner and are more stringent than federal requirements may be relevant and appropriate. See also Applicable Requirements.

Remedial Action: An action that stops or substantially reduces a release or threat of a release of hazardous substances that is serious but not an immediate threat to human health or the environment.

Remedial Alternatives: Options evaluated to address the source and/or migration of contaminants to meet health-based or ecology-based remediation goals.

Remedial Investigation (RI): An investigation that determines the nature and extent and composition of contamination at a hazardous waste site. It is used to assess the types of remedial options that are developed in the feasibility study.

Risk Assessment: A systematic scientific process of determining risk estimates based on the presence of contaminants in the environment and who might be exposed to the contaminants.

Sediment: In the context of the SS-004 RI, sediment refers to unconsolidated deposits in drainage ways and streams on base.

Semi-volatile Organic Compounds (SVOCs): Organic constituents which are generally insoluble in water and are not readily transported in groundwater.

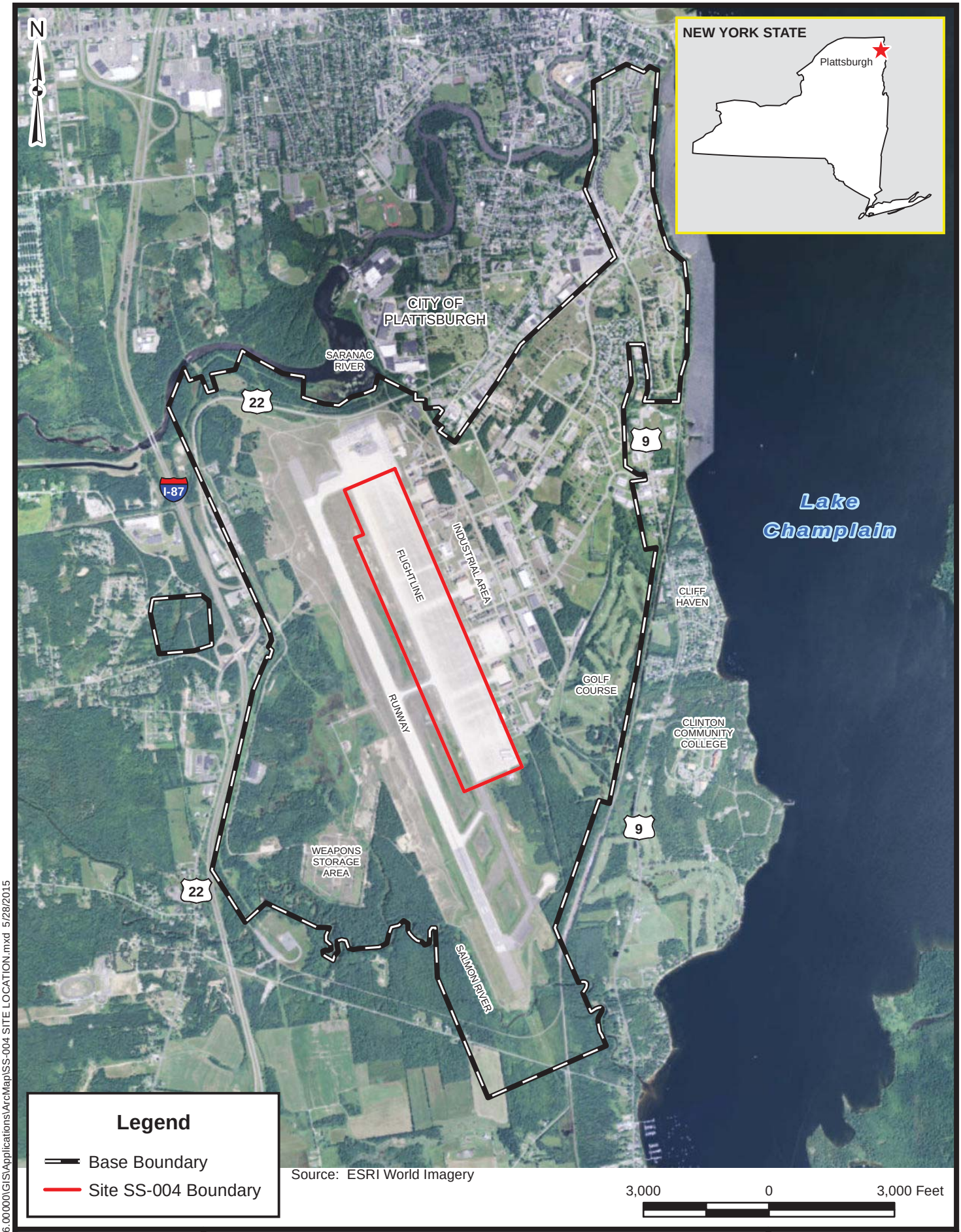
Surface soil: In the context of the SS-004 RI, surface soil generally refers to soil found at 0 to 6 inches below ground surface

Subsurface Soil: In the context of the SS-004 RI, subsurface soil refers to those soils found at greater than 6 inches below ground surface.

Toxicity: The quality or condition of a destructive, deadly, or poisonous substance.

Volatile Organic Compounds (VOCs): Organic constituents that tend to volatilize or to change from a liquid to a gas form when exposed to the atmosphere. Many VOCs are readily transported in groundwater.

Water Table: The surface of a body of unconfined groundwater at which the water pressure is equal to that of the atmosphere.



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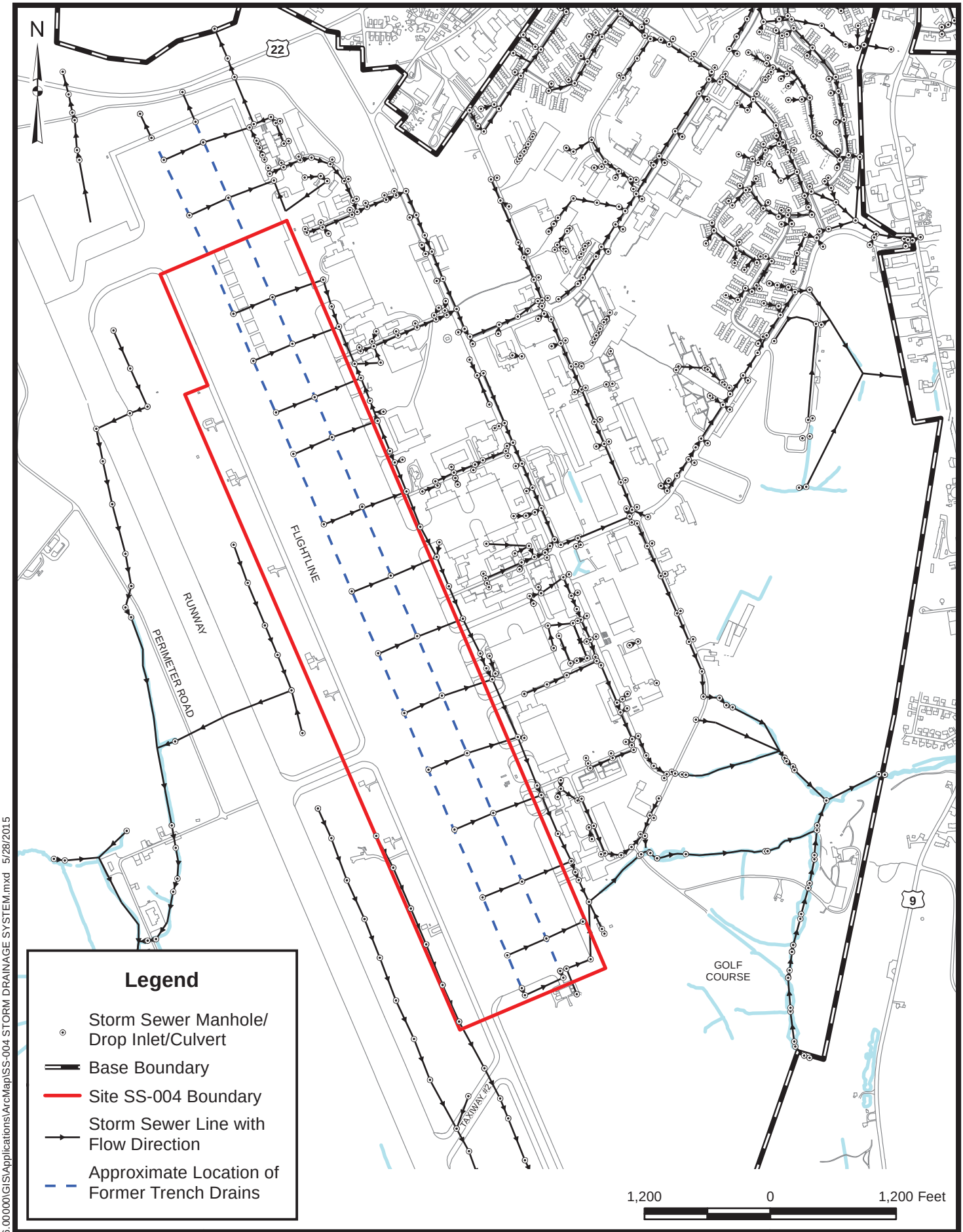
URS

FORMER PLATTSBURGH AIR FORCE BASE
SITE LOCATION

FIGURE 1



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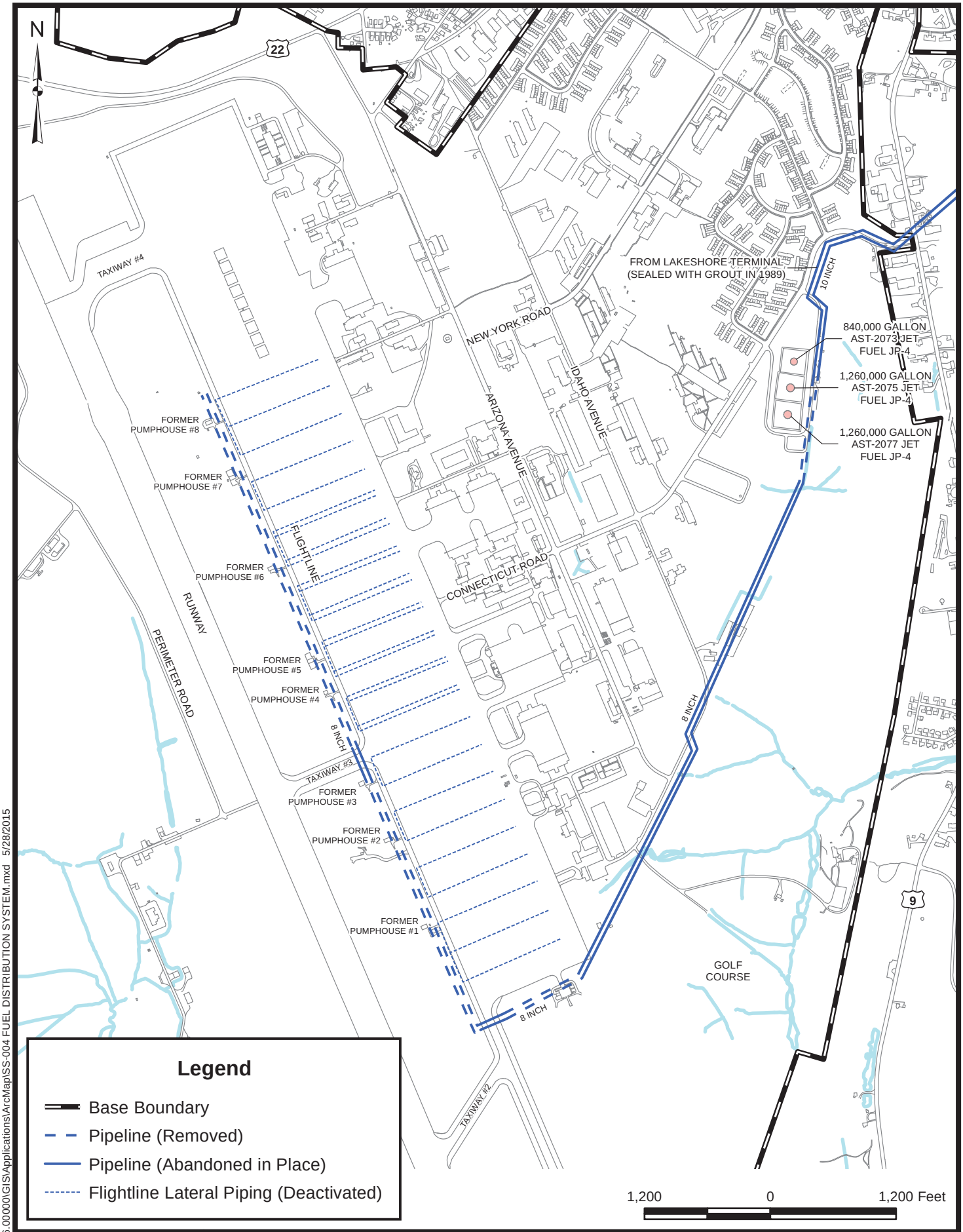
FORMER PLATTSBURGH AIR FORCE BASE - SS-004
SITE DRAINAGE FEATURES

FIGURE 2



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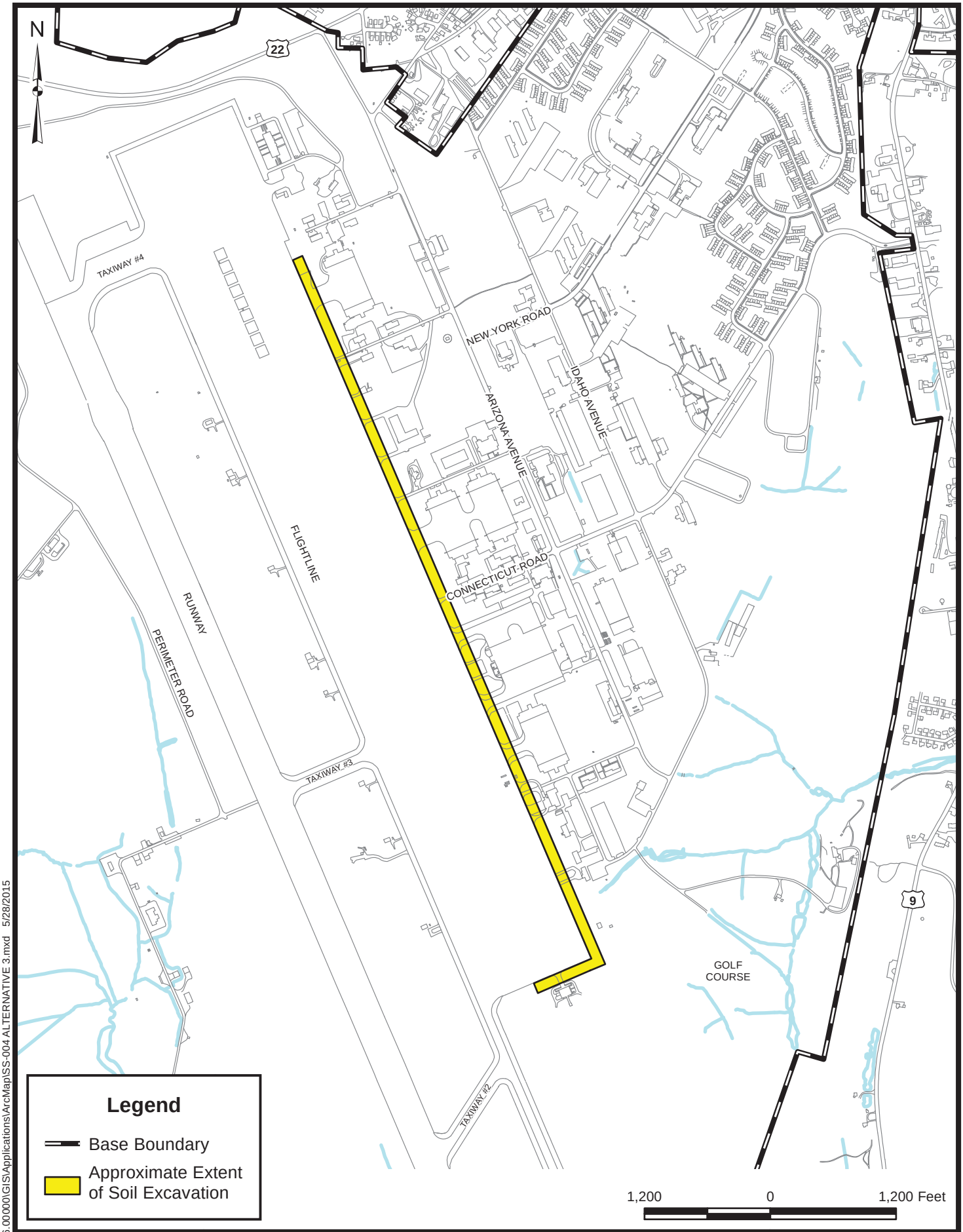
AIRCRAFT REFUELING SYSTEM

FIGURE 3



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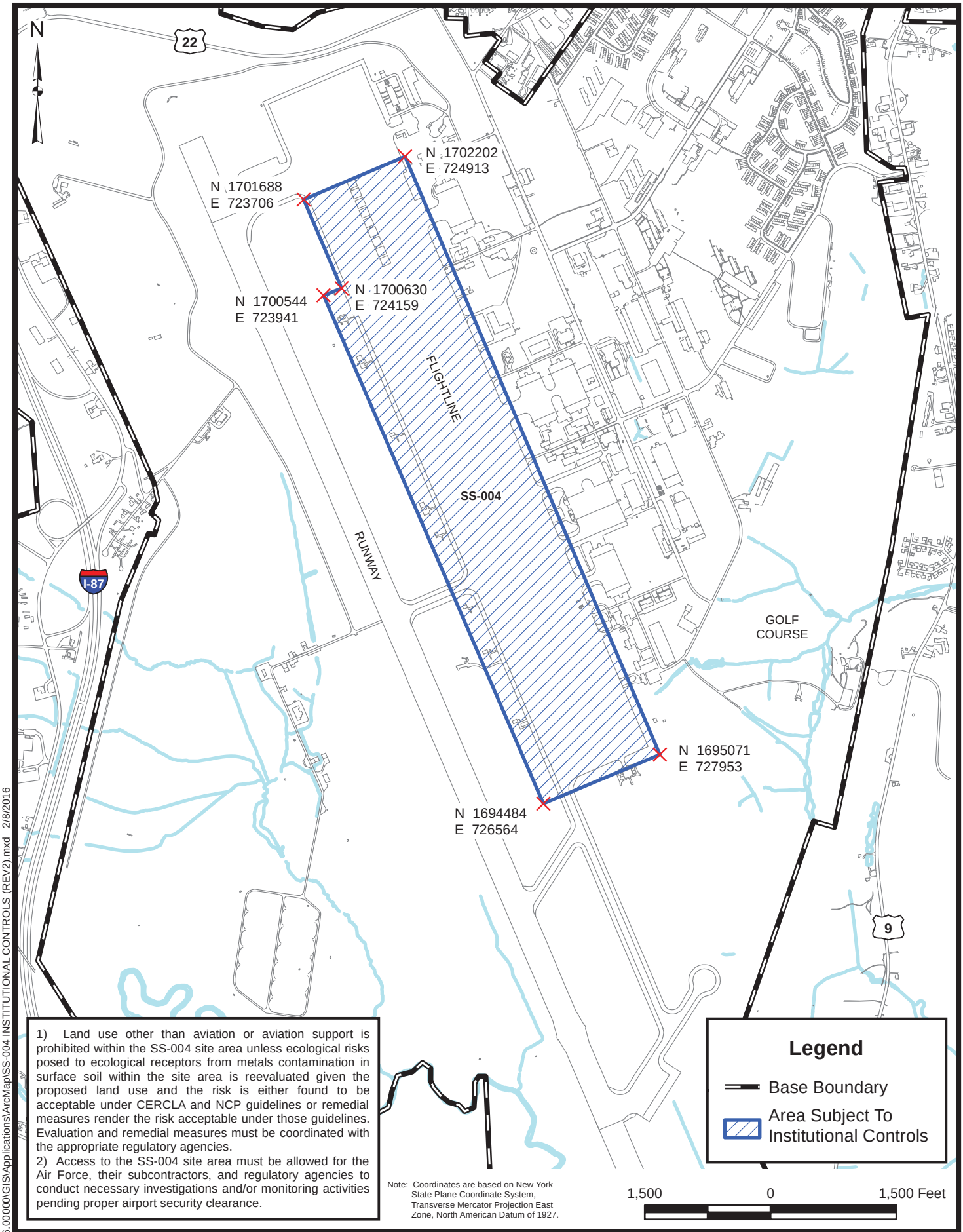
FORMER PLATTSBURGH AIR FORCE BASE - SS-004
ALTERNATIVE 3: EXCAVATION AND OFFSITE
DISPOSAL OF CONTAMINATED SURFACE SOIL

FIGURE 4



1) Land use other than aviation or aviation support is prohibited within the SS-004 site area unless ecological risks posed to ecological receptors from metals contamination in surface soil within the site area is reevaluated given the proposed land use and the risk is either found to be acceptable under CERCLA and NCP guidelines or remedial measures render the risk acceptable under those guidelines. Evaluation and remedial measures must be coordinated with the appropriate regulatory agencies.
2) Access to the SS-004 site area must be allowed for the Air Force, their subcontractors, and regulatory agencies to conduct necessary investigations and/or monitoring activities pending proper airport security clearance.

Note: Coordinates are based on New York State Plane Coordinate System, Transverse Mercator Projection East Zone, North American Datum of 1927.

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FORMER PLATTSBURGH AIR FORCE BASE
SS-004 INSTITUTIONAL CONTROLS

FIGURE 5

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