Final Environmental Assessment for

Constructing and Operating Remoted Target Systems

at Avon Park Air Force Range, Florida

December 2003

Prepared by the
Environmental Flight
Avon Park Air Force Range, Florida

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Avon Park Air Force Range lacks moving targets for helicopter door gunnery training and proposes to build and operate two remoted target systems on Oscar Range. One is a cart and rail system that moves a silhouette of a vehicle, while the other is a series of pop-up targets that simulate infantry targets. The targets are designed to accommodate door gunnery primarily, ground-to-ground machine gun training secondarily.

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Draft Environmental Assessment for
Constructing and Operating Remoted Target Systems
At Avon Park Air Force Range, Florida

Proposed Actions:	Construct and operate moving targets at Avon Park Air Force Range
Type of statement:	Environmental Assessment
Cooperating agencies	None
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Abstract:	Avon Park Air Force Range lacks moving targets for helicopter door gunnery training and proposes to build and operate two remoted target systems on Oscar Range. One is a cart and rail system that moves a silhouette of a vehicle, while the other is a series of pop-up targets that simulate infantry targets. The targets are designed to accommodate door gunnery primarily, ground-to-ground machine gun training secondarily.

CONSTRUCTING AND OPERATING REMOTED TARGET SYSTEMS FINDING OF NO SIGNIFICANT IMPACT

The Environmental Flight at Avon Park Air Force Range (APAFR) prepared an environmental assessment (EA) that considered the impacts of constructing and operating remoted target systems (RETS). RETS are moving targets that are activated off-site, or remotely. The purpose of RETS is to improve realism in gunnery training. The proposals included a proposed action, three action alternatives, and one no action alternative. The proposed action and action alternatives built two RETS on Oscar Range. The actions differed from each other by placing the RETS in different locations and with other minor modifications. The amount of training and the weapon systems remained the same for the proposed action and the action alternatives. This EA was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council of Environmental Quality (CEQ) regulations 40 Code of Federal Regulations (CFR) 1500-1508 *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act,* and the Department of the Air Force's 32 CFR 32-989 *Environmental Impact Analysis Process.*

1.0 NAME OF ACTION

Construct and operate Remoted Target Systems (RETS) at Avon Park Air Force Range (APAFR), Florida.

2.0 DESCRIPTION OF THE PROPOSED ACTION

The proposed action builds and operates two types of RETS that support helicopter door gunnery training and ground-to-ground machine gun training. The first target is a vehicle silhouette mounted on a cart that traverses along a rail system, called an armored moving target carrier (AMTC). The second target is a set of ten, stationary pop-up silhouette or 3-D targets that simulate attacking infantry, called stationary infantry target (SIT). Both target types are constructed on an existing road and strafe pad on Oscar Range. The AMTC is not as long as called for in standard design specifications due to the avoidance of wetlands. Construction entails bringing in road base material for the rail system, and relocating sand from the strafe pad to form a berm for both RETS. Construction includes building retaining walls, a rail line, placing an electric cart on the line, building a block house for storage, and building a small parking area. Weapon safety footprints (WSF) are configured for Oscar Range as per the firing and target locations. The proposed action has the least amount of acreage covered by the WSF.

All helicopter door gunnery training requirements are met for the United States Air Force, Navy, and Marines, but not for the Army requirements. To meet Army requirements, other ranges, not available at APAFR, will have to be used. Ground-to-ground machine gun training requirements are not fully met for any of the services. Other ranges, available at APAFR, will have to used to meet the full requirements.

2.1 DESCRIPTION OF THE ALTERNATIVES

2.1.1 Alternative A

Alternative A locates the RETS on strafe run-in lines. This location allows the AMTC to be built to the correct length as set in the standard design specifications. More road base is required and sand from the strafe pad is transported farther when compared with the proposed action. Due to target location and firing locations, the WSF covers the largest acreage under Alternative A when compared with the proposed action and the other action alternatives.

All helicopter door gunnery training requirements are met for all the services. Ground-to-ground machine gun training requirements are not fully met for any of the services. Other ranges, available at APAFR, will have to be used to meet the full requirements.

2.1.2 Alternative B

Alternative B is very similar to the proposed action, except that a helicopter landing pad is added. The landing pad affords better line of site to the RETS when the helicopter is firing from landing and take-off positions.

All helicopter door gunnery training requirements are met for all the services. Ground-to-ground machine gun training requirements are not fully met for any of the services. Other ranges, available at APAFR, will have to be used to meet the full requirements.

2.1.3 Alternative C

Alternative C minimizes earth moving requirements for construction by building the RETS in the middle of the strafe pad. The AMTC is only about 2/3rds the length as set in the design specifications.

All helicopter door gunnery training requirements are met for all the services. Ground-to-ground machine gun training requirements are not fully met for any of the services. Other ranges, available at APAFR, will have to be used to meet the full requirements.

2.1.4 Alternative D

Alternative D is the no action alternative. RETS are not constructed at APAFR. Existing static, nonmoving targets on other ranges continue to be used.

All helicopter door gunnery training requirements are met for the United States Air Force, Navy, and Marines, but not for the Army. For the Army, other ranges, not available at APAFR, will have to be used. Ground-to-ground machine gun training requirements are not fully met for any of the services. Other ranges, available at APAFR, will have to used to meet the full requirements.

3.0 SUMMARY OF ENVIRONMENTAL IMPACTS

3.1 PROPOSED ACTION

The proposed action minimizes soil and vegetation disturbance during construction and utilizes existing drainage patterns after construction. This is because the RETS are constructed on an existing service road and strafe pad. The WSF occupies a marsh for the most part, and therefore minimally impacts natural resource management activities.

3.2 ALTERNATIVE A

Alternative A disturbs the most soils and vegetation of all the alternatives and affects drainage patterns the most after construction. The WSF is the largest and occupies other locations than the marsh. The WSF has the highest potential for impacting commercial valued trees and recreational activities with munitions.

3.3 ALTERNATIVE B

Alternative B is very similar to the proposed action in terms of impact by constructing the RETS. The WSF is larger than the proposed action and therefore impacts natural resource management activities more.

3.4 ALTERNATIVE C

Alternative C has less impact to the soils and vegetation when compared to Alternatives A and B because the RETS are constructed mostly on the strafe pad. The WSF is still larger than the proposed action and therefore impacts natural resource management activities more.

4.0 FINDING OF NO SIGNIFICANT IMPACT

The attached Environmental Assessment (EA) was prepared and evaluated pursuant to the National Environmental Policy Act of 1969 (Public Law 91-190, 42 U.S.C. 4321 et seq.) and in accordance with 32 CFR 989 *Environmental Impact Analysis Process*. After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101(a) of NEPA and that it will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(C) of NEPA.

29 Dec 2003

Date

W. Uhle, Jr.

WILLIAM W. UHLE, Colonel,
USAF Chairperson, 20FW
Environmental Leadership Board

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1.0 PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

Avon Park Air Force Range (APAFR) proposes to establish and employ remoted target systems (RETS) on their Oscar Range. In the context of this document, remoted targets are defined as targets that move by mechanical means and are set in motion by an individual who is off site. Unlike some RETS, the APAFR RETS do not score gunfire hits via computer. The hits are scored by the reaction of the target or by holes produced by the projectiles - both reactions require visual observation of the targets. Two types of RETS are proposed. The first type is a moving target set up on a rail system. The target is a silhouette of a vehicle that rests upon and is propelled by an electric cart. The second type is a pop-up target, meaning a prone target that is lifted up from a horizontal position to a vertical position by an electric motor. The target is either a single or double silhouette of a person or a 3D model of one person. The targets are designed primarily for helicopter door gunnery training, secondarily for ground-to-ground machine gun training.

This document is an environmental assessment (EA) that determines the environmental consequences of establishing, employing, and maintaining RETS. This EA also determines the environmental consequences of using the helicopters and machine guns on Oscar Range that are targeting the RETS. This EA assess the environmental consequences of three different locations for the RETS on Oscar Range with a proposed action and three different alternatives (Alternatives A, B, and C). There is also a no action alternative (Alternative D).

This EA is prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council of Environmental Quality (CEQ) regulations 40 Code of Federal Regulations (CFR) 1500-1508 *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act,* and the Department of the Air Force's 32 CFR 32-989 *Environmental Impact Analysis Process.*

1.2 Background

Avon Park Air Force Range (APAFR) is located in Polk and Highlands Counties in central Florida (Figure 1.2-1). The range complex covers approximately 106,073 acres and is about 10 miles east of Avon Park and 15 miles northeast of Sebring, Florida. The major highways serving the range are US Highway 27 and State Route 64.

APAFR is the largest bombing and gunnery range east of the Mississippi River. The mission of APAFR is to provide a training infrastructure that allows U.S. air and ground forces to practice the latest combat training techniques and procedures safely, efficiently, and realistically, and to design training facilities that meet training needs. The 18th Air Support Operations Group (ASOG) at Pope Air Force Base, North Carolina, is responsible for the operation and maintenance of APAFR, which is assigned to the Air

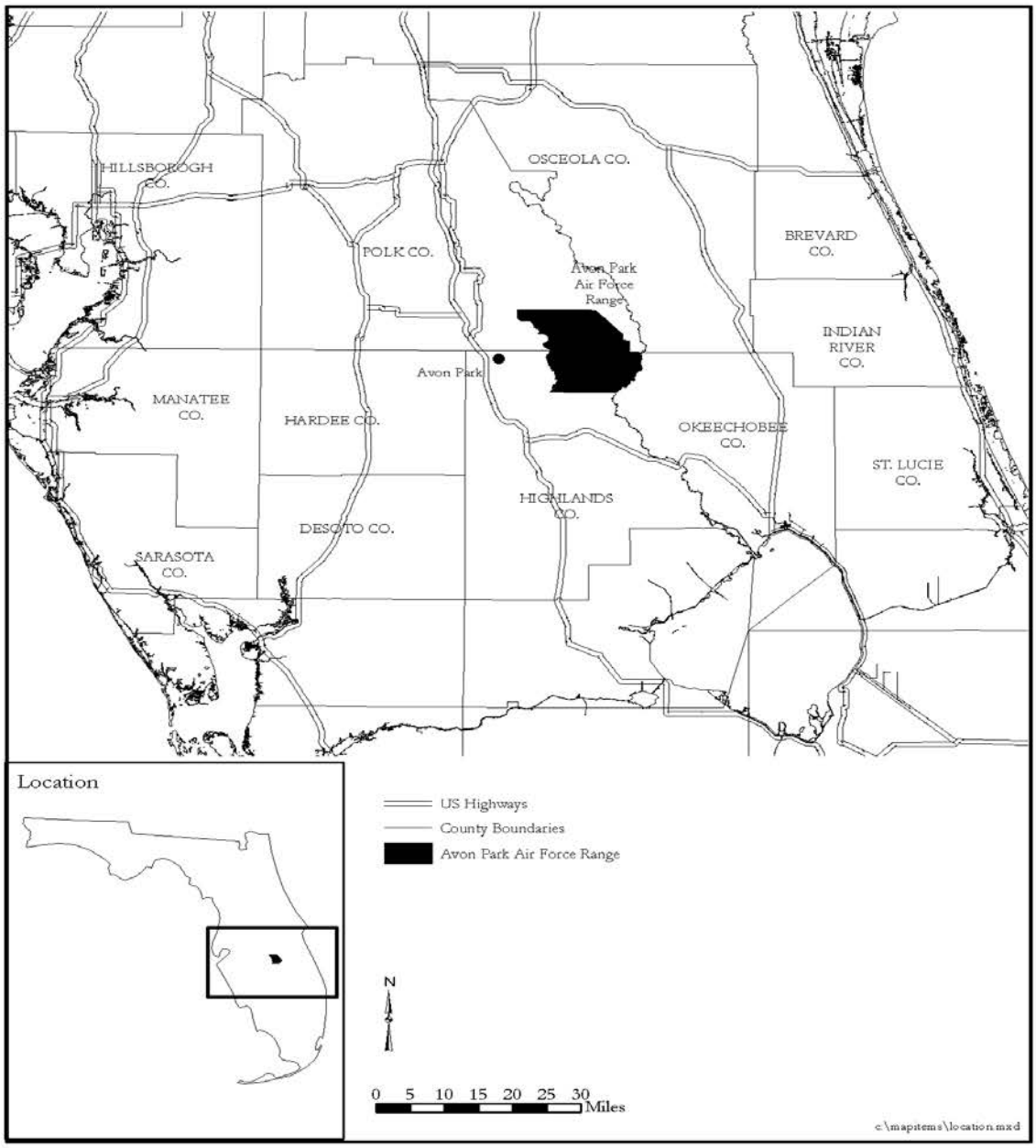

Figure 1.2-1. Avon Park Air Force Range's location in Florida.

Combat Command (ACC). The range is used for bombing practice by U.S. Air Force units from throughout the southeast.

Oscar Range is one of five active air-to-ground training ranges at APAFR. Of the five active air-to-ground training ranges, it was constructed last. It was constructed in 1984 to receive air-to-ground ordnance training for fixed wing aircraft. Its intent was to take some of the training pressure off from the other four ranges so that their static targets could be maintained and replaced. Prior to Oscar Range, the four other ranges were running at capacity and it was difficult to schedule down time for target maintenance while not adversely affecting air-to-ground training schedules at the same time. Oscar Range met the goal of diverting some air-to-ground ordnance training and allowing target maintenance on the other four ranges, but by 1990 training declined overall at APAFR so that Oscar Range was no longer used for air-to-ground ordnance training. Oscar Range is currently used for some air-to-ground (no ordnance or munitions) and ground-to-ground training.

Oscar Range is 5,394 acres in size, 334 acres being the active range itself that contains the targets, while 5,060 makes up the weapon safety footprint outside of the active range. Oscar Range is located in the southwest area of APAFR. It is a conventional range with four strafe targets, a conventional target pad, an observation tower, a flank tower, a hazardous materials storage building, a support building, approximately 8,900 square yards of unpaved target roads, 6,000 square yards of paved road, a well, and a septic system (Figure 1.2-2). The active range is fenced and signed. Power is supplied underground to the towers and the support building. Oscar range is located and designed to accommodate the F4E, F16, and A10 fighters.

The other four ranges supply static targets for helicopter door gunners. Two of the ranges also serve as training locations for ground-to-ground machine gun training. This training is important because proficiency is required for ground-to-ground machine gun use before advancing to helicopter door mounted machine guns.

The proposed RETS are labor intensive. They require much time to construct, employ, and maintain. Because the other four ranges are frequently used by both fixed wing and rotary wing aircraft for other types of training, RETS are poorly suited to these ranges from a scheduling standpoint. Oscar Range was selected for RETS because of scheduling accessibility due to infrequent use.

A number of information resources were consulted before locating and designing the RETS. For location, current jurisdictional wetland delineations of Oscar Range from APAFR's GIS database played a major role in locating sites for the RETS. Also, field surveys with surveying equipment determined elevations and verified locations of firing areas and targets so that line-of-sight requirements were met. These surveys were conducted in April 2003. For design, the *United States Army Corp of Engineers Design Manual for Remoted Target System (RETS) Ranges,CEHNC 1110-1-2 (USACE 1998)* provided the basic design of the targets. The location and design of the targets were influenced by the *Field Manual 1-140 Helicopter Gunnery, Appendix A – Helicopter Door Gunnery (USAR 1996),* and *Field Manual 3-22.68 Crew-Served Machine Guns,*

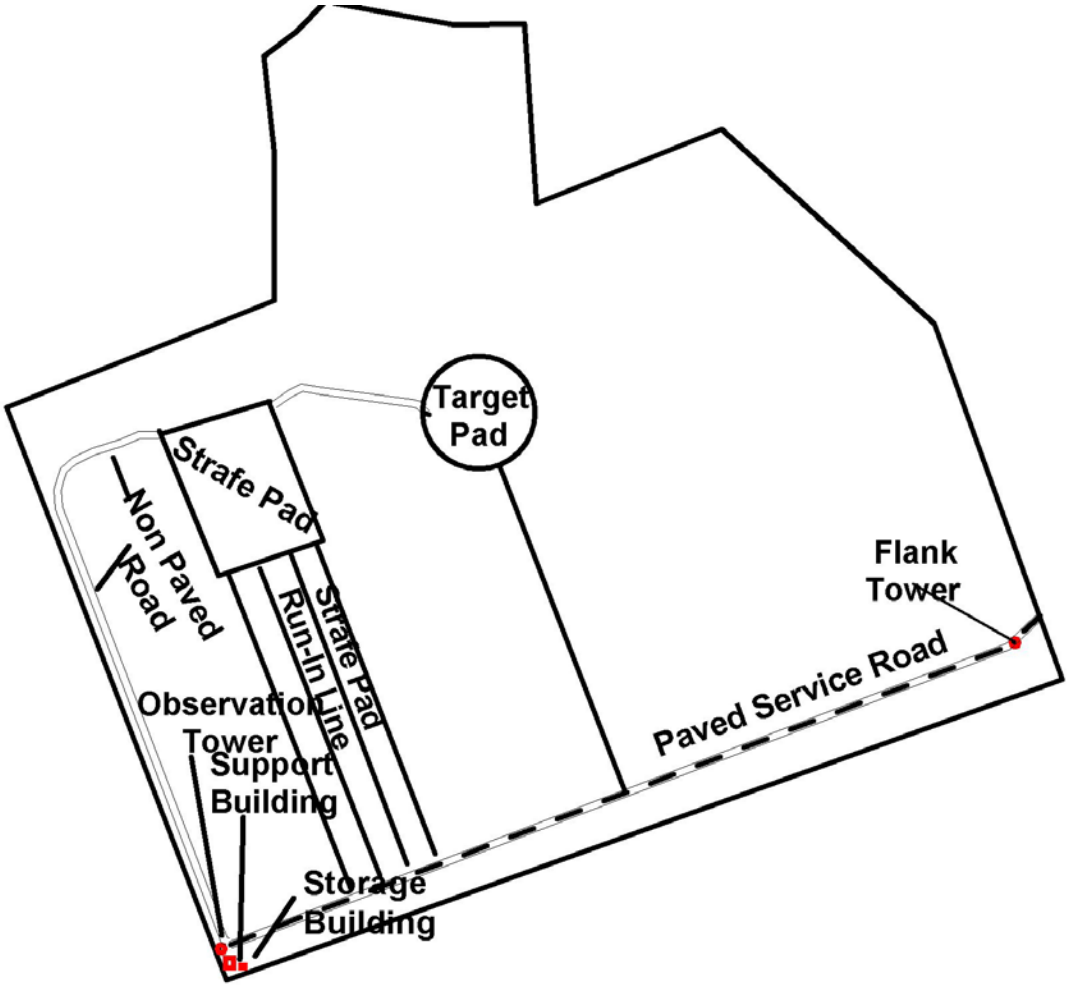

Figure 1.2-2. Oscar Range with Existing Infrastructure.

5.56-mm and 7.62-mm (USAR 2003). Location and design were also influenced by the AF *Manual 36-2227 Volume 2, Combat Arms Training and Maintenance Rifle, Handgun, Shotgun, Grenade Launcher, M72 Light Antitank Weapon, Submachine Gun, and M249 Squad Automatic Weapon Training Programs (USAF 1996) and Manual 36-2227 Volume 3, Combat Arms Training and Maintenance M60 Machine Gun, MK 19 40mm Machine Gun, and M2 .50 Caliber Machine Gun Programs(USAF 1996a), and Army Regulation (AR) 385-63 Policies and Proceedures for Firing Ammunition for Training, Target Practice and Combat (USAR 1983).*

The EA that established Oscar Range, Final Environmental Assessment Construction of Dual Strafe Range, Conventional Targets, and Support Facilities at Sub-Complex X, Avon Park Air Force Range, Florida (JRB Associates 1983), supported the design and location of the RETS when addressing firing safety footprints and airspace.

1.3 Purpose and Need

The purpose of RETS is to supply more realistic targets for helicopter door gunners. Realism is improved by having moving targets and pop-up targets as opposed to the existing static targets. RETS can also be used, to a limited extent, for ground-to-ground machine gun training.

Training needs and qualifications for helicopter door gunnery vary by service. RETS are not required for training qualifications for the Air Force, Navy, and Marines. The current static targets are sufficient for these services. RETS, however, greatly increases realism during training. RETS are required for Army training qualifications. The RETS on Oscar Range are designed to meet the Army door gunnery qualifications.

All the services' helicopter door gunnery training have a prerequisite of proficiency in using machine guns ground-to-ground. These prerequisites can be obtained using static targets only. These ground machine gun qualifications can and are currently met on two existing ranges at APAFR with existing static targets. However, to facilitate flexibility in scheduling other activities with these two ranges, Oscar Range is designed to meet ground-to-ground machine gun qualifications as well. The RETS by themselves cannot meet all the training qualifications, but they can contribute to the target mix.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

There is one proposed action and four alternative actions. The proposed action builds the RETS on Oscar Range on an existing unpaved service road and on an existing strafe pad. Alternative A builds the RETS on Oscar Range on existing strafe pad run-in lines. Alternative B is the same as the proposed action, but adds a helicopter landing pad. Alternative C buildings the RETS on Oscar Range on an existing strafe pad and on adjacent land. Alternative D is the no action alternative; the RETS are not built. The static targets on the other four ranges continue to be used for helicopter door gunnery training while two of the four ranges supply static targets for ground machine gunner training.

2.1 Proposed Action

The proposed action builds two types of RETS on an existing unpaved service road and strafe pad (Figure 2.1-1). One is the moving rail target, technically known as an armor moving target carrier (AMTC). Components of the AMTC consist of a rail line 1,090 feet long, a concrete wall with sand berm running along the rail line, an electrically powered cart that mechanically raises a target above itself, a target, a block house, a hardened parking area near the block house, and a service road following the length of the rail line. The rail line provides a track upon which the cart carrying the target runs.

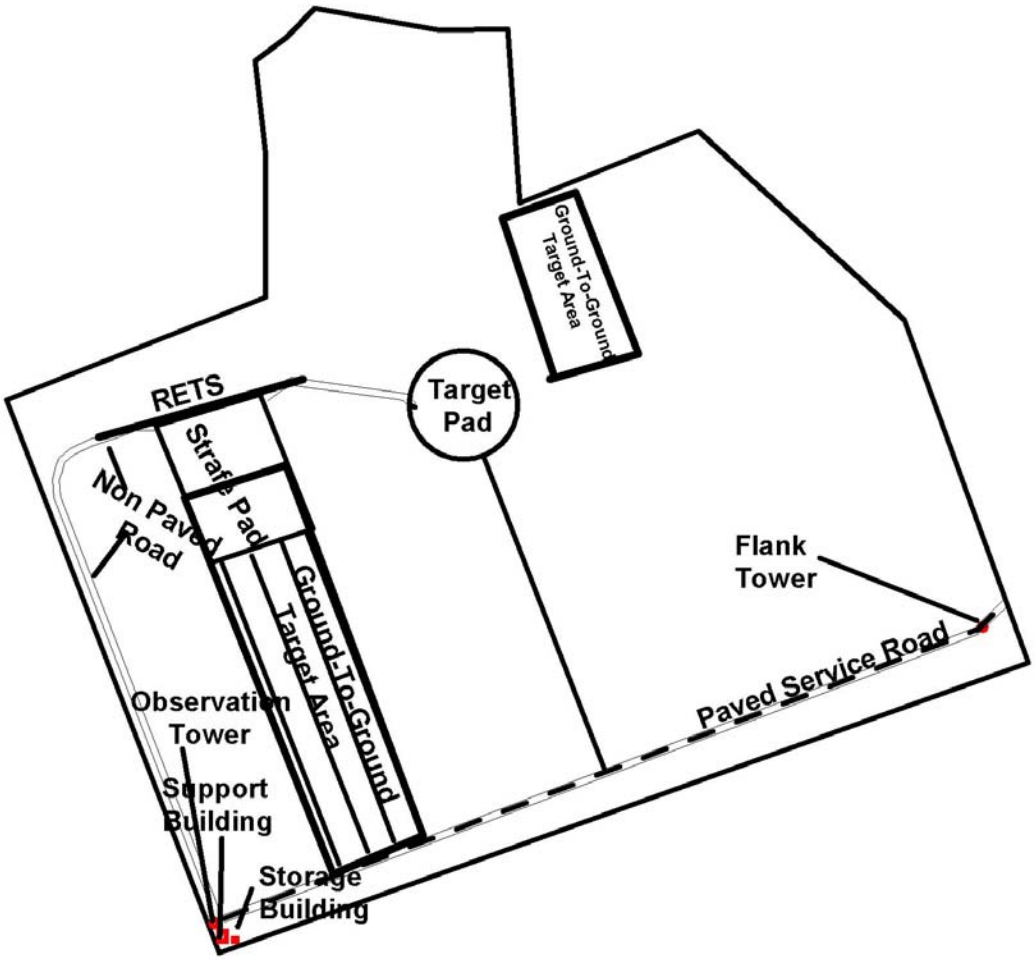

Figure 2.1-1. The Proposed Action's Location of the Remoted Target System (RETS) and Groung-to-Ground Target Areas on Oscar Range.

Due to safety considerations with the existing control tower and avoidance of wetlands, the rail line is not the recommended length of 1,150 feet, rather a shorter length of 1,090 feet, not including the rail line that goes into the block house. The concrete wall is a retaining wall that supports the sand berm. The sand berm separates and protects the rail line and cart from the firing machine gun. The concrete retaining wall and sand berm also separate and protect the blockhouse from the machine gun. The blockhouse secures and protects the cart from weather when not in use.

The other RETS is a pop-up infantry target, known as a stationary infantry target (SIT). Components of the SIT consist of a target lifting mechanism, a target, a concrete box, and a berm. There are ten SITs located equal distance from each other. They are located along the face of the AMTC rail line and share the same berm as the AMTC (Figure 2.1-2).

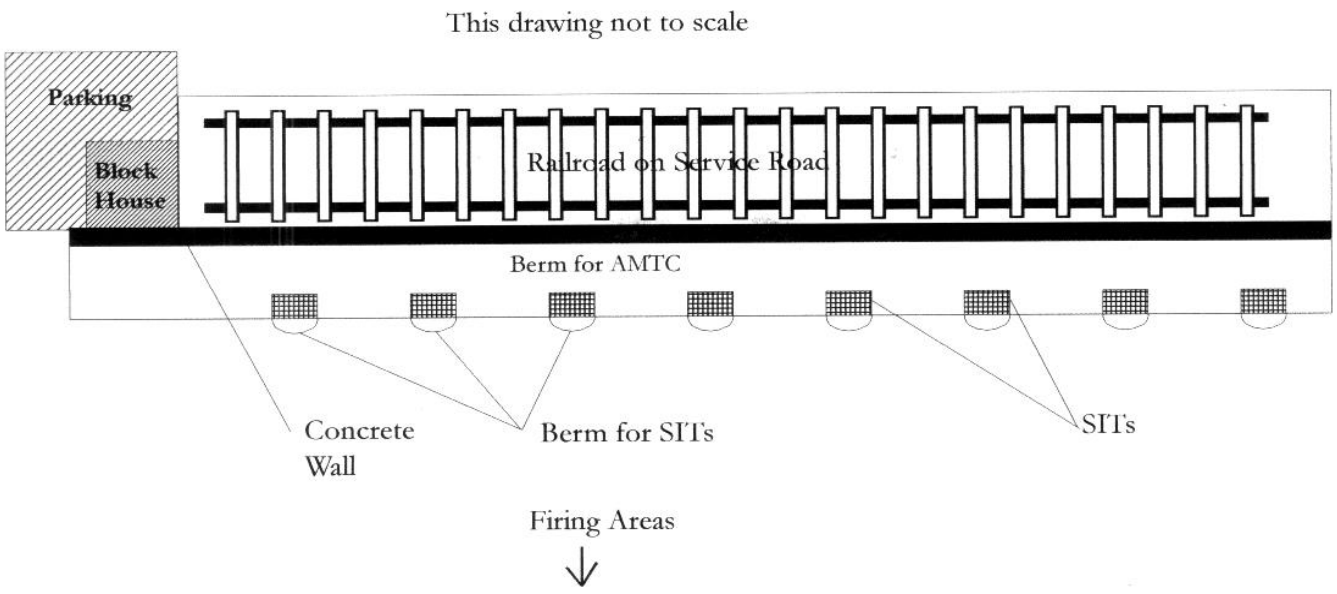

Figure 2.1-2. A Top View of the Stationary Infantry Targets (SITs) in Relation to the Armored Moving Target Carrier.

The AMTC and SITs are located only partially on an existing service road on Oscar Range because not all of the existing road is in line with the proposed rail line. Also, three large culverts are in the existing road. The existing road is approximately 1 ½ feet higher than the rest of the road when crossing at the culverts. Additional road base must be brought in so that the railroad bed is of uniform grade and straight. With the new dimensions of the railroad bed being 3 feet high, 11 feet wide, and 1,100 feet long (10 feet of railroad bed beyond the end of the rail line) and the sides of the bed with a 1:2 slope (road sloped only on the north side), approximately 1,570 cubic yards of road base are trucked in from off the installation. This amount of material includes building on portions of the existing road. The material is the same as the existing road base – a mixture of crustacean shells and clay. Additional road base is trucked in for the parking area and block house. The parking area/block house is 40 feet by 40 feet with the same height and slope as the railroad bed. Approximately 106 cubic yards of road base is required.

With the railroad bed established, the railroad is constructed. The railroad consists of two parallel iron rails secured with chemically treated wood ties. The length of the railroad is 1,090 feet plus an additional 10 feet for rail line leading into the block house. The width of the railroad, when considering clearance for the width of the cart, is 8 feet. The service road that follows the railroad is approximately 8 feet wide, and requires approximately 1,600 cubic yards of road base material.

Adjacent and south of the railroad is a concrete retaining wall. The retaining wall shares the railroad bed with the rail line. The blocks are placed on the south edge of the railroad bed. The retaining wall consists of prefabricated concrete blocks. The blocks are 6 feet

high and placed end to end with a crane. The wall parallels the distance of the railroad for 1,090 feet plus the 15 feet for the block house.

Adjacent and south of the concrete retaining wall is the sand berm. The sand berm protects the cart and the concrete retaining wall from bullets. To further protect the concrete retaining wall, a single line of railroad ties are place about 2 inches adjacent and higher than the wall with sand added to the level of the railroad tie. The purpose of having the elevated railroad tie is to protect the very top of the concrete wall. Otherwise, the top of the sand berm would be level with the top of the concrete retaining wall and close shots that skim the top of the berm will damage the concrete retaining wall. Over time the wall gets worn away. With the extended railroad tie, the wall is futher protected by the sand. Bullets that skim the top of the sand berm hit the railroad tie. As the railroad ties wear away from impacts by the bullets, they are easily replaced with new railroad ties.

With the concrete wall on top of the 3 foot railroad bed, and elevated railroad tie, the sand berm is 9'2" high, 5 feet wide, then slopes south on a 1:3 ratio for a distance of 27'6". The sand berm follows the length of the concrete wall for 1,105 feet. The berm requires approximately 6,305 cubic yards of sand. The sand is acquired from the adjacent strafe pad. This volume of sand is easily supplied by the strafe pad. The volume of sand in the strafe pad was roughly determined with surveying equipment. Retaining the original ground slope below the strafe pad, approximately 18,600 cubic yards of sand is available. The sand is transported by a scraper/belly dumper and contoured and compacted by a tracked bulldozer.

The cart is electrically powered by lead/acid batteries. The batteries are recharged by a generator. Both the batteries and the generator travel on the cart. The cart can lift a flank silhouette of a target. The target is the same scale as the vehicle it represents or smaller. The silhouette can be up to 300 pounds. The target is made of wood or sheet metal or a combination of both. The target is lifted electromechanically – no hydraulics. The lifter is also on the cart. The cart travels down the railroad at an operator set speed and is stopped by the operator with a wireless controller.

At the west end of the railroad is a concrete block house that secures and protects the cart. The rails enter the house so that the cart can be easily stored in the house. The house is also designed so that targets can be placed on the cart while the cart is in the block house. The targets can be placed either horizontally or vertically on the cart. Additional targets are stored in the house. A battery charging unit and batteries for the SITs are also stored in the house. The house is approximately 300 square feet and 12 feet high. Power is supplied to the house for lighting, heating/cooling and outlets. The power originates from the observation tower. The power line is buried and travels from the observation tower north along the unpaved service road, then follows the road as it bends due east and ends at the block house.

The 10 SITs targets are located within the AMTC berm. The berm is modified at each SIT location. The SIT is protected by a poured concrete box placed on a poured concrete slab. The box measures 5.5 feet wide, 7 feet long, and 2'2" feet high. The slab is the same width and length as the box; the thickness of the slab is 3 inches. The box is placed partially in the AMTC berm and partly on the ground in front of the toe of the AMTC

berm. This requires partial excavation of the berm. The berm is excavated 6 feet back from the toe of the berm toward the AMTC retaining wall (Figure 2.1-3).

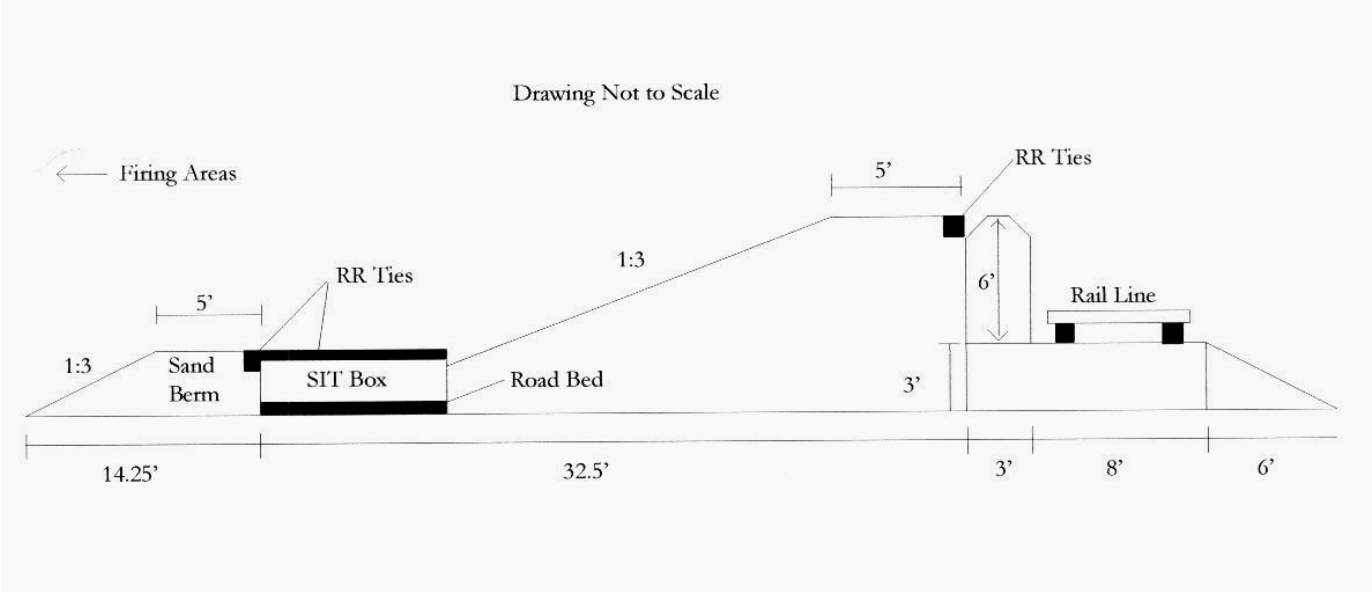

Figure 2.1-3. A Cross Sectional View of the Stationary Infantry Target (SIT) and Armored Moving Target (AMTC) with Dimensions.

The excavation is 5.5 feet wide. Obviously more excavation is required to set forms, but once the box is establish, the AMTC berms are backfilled to meet these dimensions. To facilitate stability of the box and to create a slope for drainage from inside the box, 6 inches of road base material is placed and compacted where the box will be on the ground and within the AMTC berm. The box is built on the road base. The slab is slightly sloped to a drain located at the end of the box closest to the AMTC berm. Drain water is piped underground to the front of the berm where it is exposed above the ground surface. As with the AMTC concrete wall, railroad ties are placed along, and 2 inches above, the rim of the concrete box walls that form the front and sides of the box. A sand berm is created up against the front and side walls of the box with railroad ties. The slope is 1:3 so that the toe of the berm is 14.25 feet from the box. Obviously the berm for the SIT box meets the AMTC berm. Note that the box berm does not extend to the back of the box and the AMTC berm is approximately 9 inches lower than the back end of the box. This prevents eroding soil from the AMTC berm from entering the box. Approximately 87 cu yards of sand is required for the berm for each SIT. This sand is supplied from the excavated AMTC berm and the strafe pad. The AMTC berm is excavated with a backhoe. The shell/clay road base and additional sand for the SIT berm is transported by truck. A bulldozer shapes the SIT berm.

The SIT target is either a flat silhouette or 3 dimensional model of a person approximately 6 feet high. A double silhouette representing two people (machine gun crew) is also available. The lifting mechanism is mechanical (no hydraulics) and

powered by a rechargeable battery. The lifting mechanism is prompted by a wireless control unit operated by a person off site of the target.

The rotary wing aircraft that uses Oscar Range includes the UH-1 (Huey) and UH-60 (Black Hawk) helicopters. These helicopters are used for troop and cargo transport and have door guns on both sides of the helicopter. The guns can be the M60, M60D, M60E, or M240, M240B, M249. The M60 series fires a 7.62mm ball and tracer bullets, the M240 series and M249 fire a 5.56 mm ball and tracer bullets. The helicopters follow the same design approach as the F4E and F16 fighters in restricted area (RA) R2901A airspace. One helicopter uses the range at a time. It enters from the south and fires north. Firing is conducted along the paved service road between the towers in Oscar Range, inside Oscar Range to within 450 meters of the RETS, and outside of Oscar Range to the south behind the paved service road between the two towers, up to 1,300 meters distance from the RETS. The composite weapons safety footprint is designed for the 7.62 ball and tracer ammunition (Fig 2.1-4). This footprint is not as long as the footprint for the fighters that Oscar Range was designed for. This is because the machine gun armament does not fire projectiles as far as the armament found on the fighters. The footprint for the helicopter door gunnery is wider than the fighter's footprint because the helicopters occupy a wider range of firing locations and the target occupies a wider range of targeting locations. Training on Oscar Range is anticipated to average 25 sorties (a sortie is ½ hour of flight time) a month with about 1/3 occurring during the day, 2/3rds occurring during the night with the use of night vision goggles (NVGs). The sorties occur any day of the week and average two days a week. Up to 2,500 rounds are expended per sortie.

The two active ranges to the east, South Tactical and South Conventional, are not active while Oscar Range is active. It is possible, however, at times to have the same helicopter train on all three ranges for one training event.

Training requirements under Army Field Manual 1-140 (FM 1-140) Appendix A consider the mobility of the helicopter, the type of target, and day and night operations. The helicopter door gunner must hit targets when the helicopter is on the ground, during takeoff, hovering, moving, and running. Targets during ground and takeoff are single stationary personnel targets fired at a range of 250-500 meters. With the current design and elevations, the existing strafe pad is too high and obstructs the SITs from the helicopter door gunner at these stations. The current design does not meet qualifications for firing during ground and takeoff status. Targets during hovering, moving, and running are stationary and moving vehicle targets fired at variable ranges of 300 to 1,300 meters. The helicopter's increase in altitude increases visibility by seeing over the strafe pad and allows the door gunner to acquire the vehicle target. The current design meets qualifications for firing during hovering, moving, and running. Hovering and moving are accomplished within Oscar Range on the paved service road or in the interior. Running is accomplished south of Oscar Range.

Ground-to-ground machine gun crew firing qualifications are fairly similar for both the Army and the Air Force. The same type of machine guns are fired on the ground as those found on the helicopter door. The machine guns and crews set up on the paved road on Oscar Range, along the strafe runs that lead to the strafe pad, and fire north. One machine gun at time uses Oscar Range. Portable sandbags are used for gun stability. A.

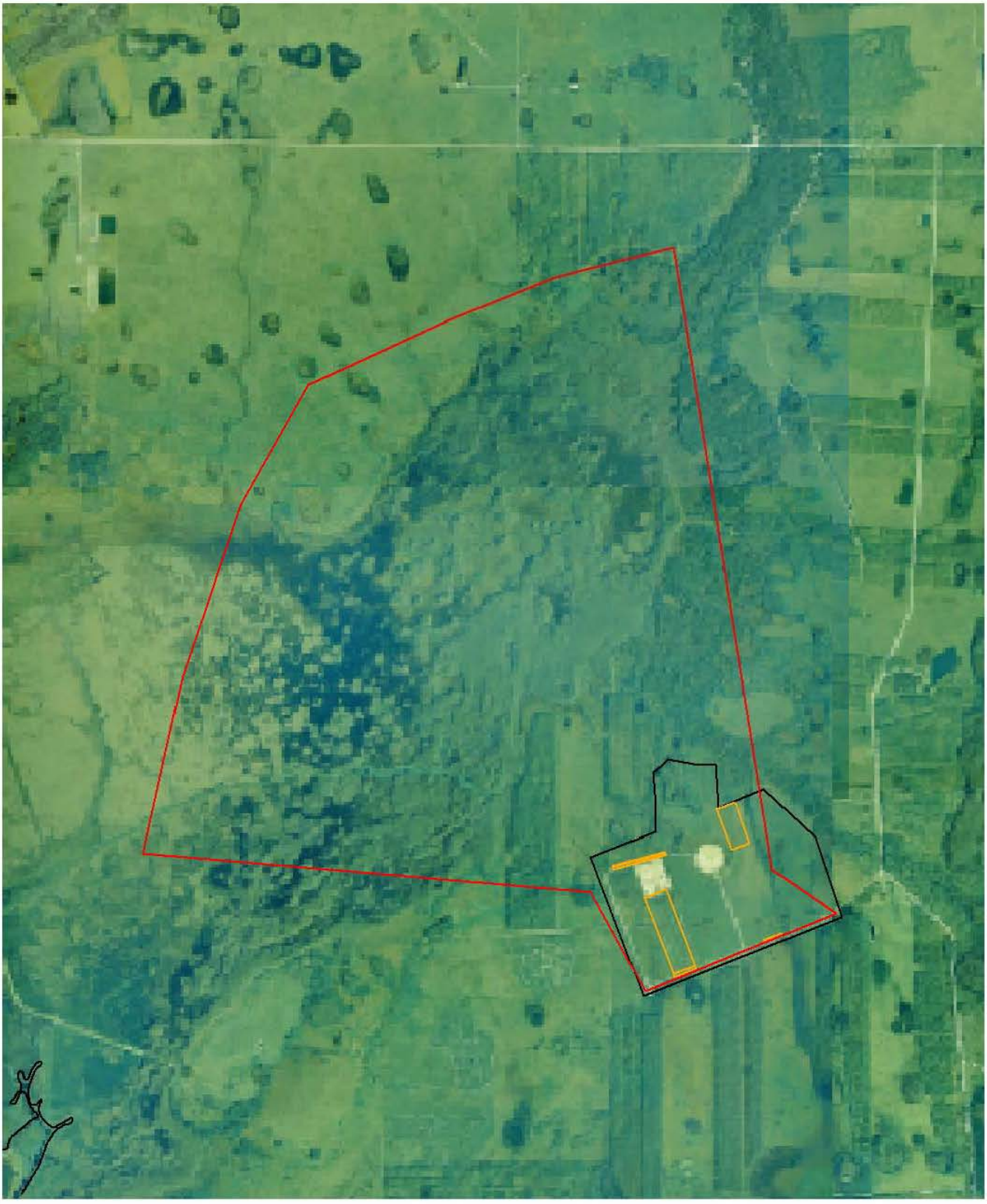

Figure 2.1-4 The Composite Weapon Safety Footprint for the Proposed Action on Oscar Range.

portable platform may also be used to elevate the machine gun crew. Target types vary as do the ranges. The closest targets are 10 meters away from the firer and scored for accuracy by where the firer hit the target on either a square or circular grid. The next set of ranges vary from 300 to 850 meters with the targets consisting of plastic single personnel silhouettes (Single E) or two connected personnel silhouettes (Double E).

They are set up in variable arrays depending on the scenario. Other targets containing nonhazardous materials can be used, as long as they are the same scale as personnel. At these ranges, scores are made if the target is hit on any location of the target. Qualifying ranges and targets are met on this portion of Oscar Range for up to the 600 meters. Past 600 meters the targets are behind the strafe pad and not visible to the firer. Therefore the farthest ranges, from 600 to 850 meters requiring the use of a scope, are met farther east on Oscar Range. Firing is still from the service road, but further west past the target pad run-in line. The targets are located 600 to 850 meters from the firing point on the service road and west of the target pad. Oscar Range is deep enough only for 850 meters, no farther. All the targets are portable and either rest on the ground or are hand pushed in with a stake. They are set up just prior to the training event and removed after the training event. The weapon safety footprints overlaps the helicopter footprint and is incorporated as one footprint in Figure 2.1-4. Training is expected to be approximately one day a month for six to eight hours, 75% of the time during weekends, with night training being rare. Each firer will fire no more than 2,000 rounds with up to 20,000 rounds expended in one day, cumulatively. This accounts for several gun crews training over the course of the day, but only one gun crew at a time firing on Oscar Range. Training for firing over 850 meters will be done on a different range than Oscar Range.

Brush and trees are removed from both firing locations on Oscar Range so that targets can be seen by the firer. The amount of brush and trees are minor and these can removed by hand with chain saws and brush cutters.

Frequent maintenance for the RETS includes replacing targets, charging and replacing batteries, and picking up brass shells from the ground-to-ground machine guns. Less frequent maintenance includes reshaping the berms, replacing railroad ties, repairing roads, fixing the target lifters and repairing railroad tracks, and brush and tree removal. Lead is not recovered from the berms or at any other location on Oscar Range. With RETS established, Oscar Range is no longer used for fixed wing fighter training. The existing suspension poles and cables for fixed wing targets are removed.

2.2 Alternative A

Alternative A is designed very similarly to the proposed action. The AMTC and SITs are the same design as well as the accompanying sand berm, block house, and AMTC service road. The difference is their location and that the railroad line is the recommended 1,150 feet long, not including the block house. Also with the location change, a new access road is built, the route for the power supply is changed, and the firing positions for the helicopter are changed. Target locations are changed for ground-to-ground machine gun training. The SITs are used for some of the ground-to-ground machine gun training qualifications.

Alternative A locates the railroad south of the strafe pad and over the existing strafe pad run-in lines (Figure 2.1-5). This location optimizes the amount of land found outside of jurisdiction wetlands and allows the railroad to be the recommended 1,150 feet long. The railroad is extended another 15 feet to the west to allow the cart to be stored and secured into the block house.

A new shell/clay service road is built for access from the strafe pad to the block house and parking area. This distance is 330 feet. The block house and parking lot occupy 1,600 square feet. The length of the railroad bed is 1,150 feet plus another 10 feet east of the railroad to allow for stability at the end of the railroad line. A shell/clay service road follows the length of the railroad bed having a width of approximately eight feet. The height of the railroad bed, parking area and block house, and service roads are two feet above ground level. The width of the access service road and railroad bed is 12 feet with side slopes having a ratio of 1:2 or four feet out from the road. Note that because the south side of the railroad bed has a sand berm on it, the south side of the railroad bed does not have a road base slope on the south side. With these dimensions, approximately 2,225 cubic yards of road base is required for the railroad bed, parking area, and service roads. The road base is hauled from off the installation. Trucks carrying the road base access the service road from the strafe pad and dump the road base along the service roads, parking lot, and railroad bed. The empty trucks exit the worksite by traveling south along the furthest west strafe pad run in line. Once at the end of the strafe pad run in line, the trucks enter on the southern most Oscar Range service road and exit Oscar Range by heading east. The road base is spread and compacted by bulldozers and graders.

The railroad bed, concrete wall, and sand berm are the same design as with the proposed action. The total amount of sand for the berm is approximately 6,077cubic yards. The sand is taken from the strafe pad by trucks that are loaded by a front end loader. The trucks use the newly established service road to access the railroad line. Dozers build the berm.

The SITs are designed and constructed in the same way as with proposed action. They require the same amount of fill for the sand berm, approximately 87 cubic yards per SIT.

Power is brought in from the southernmost service road on Oscar Range. The buried power line starts at the western most strafe line, runs north until meeting an abandoned road, follows the road west until meeting the eastern most strafe line, then travels north until meeting the block house.

All helicopter qualifications are met under FM 1-140, but some of the firing locations are different than the proposed action because the AMTC and SITs are farther south. Helicopters can land and takeoff on the Oscar Range paved service road and fire on the SITs at approximately 430 meters, thus meeting the required ranges of 300 to 500 meters. Firing during hovering and moving can also be accomplished along the same paved service road as the requirements for these traveling modes are for ranges between 400 and 800 meters. Firing requirements during running are not met because the range is too close. Therefore the helicopters must move off Oscar Range to the south and fire behind

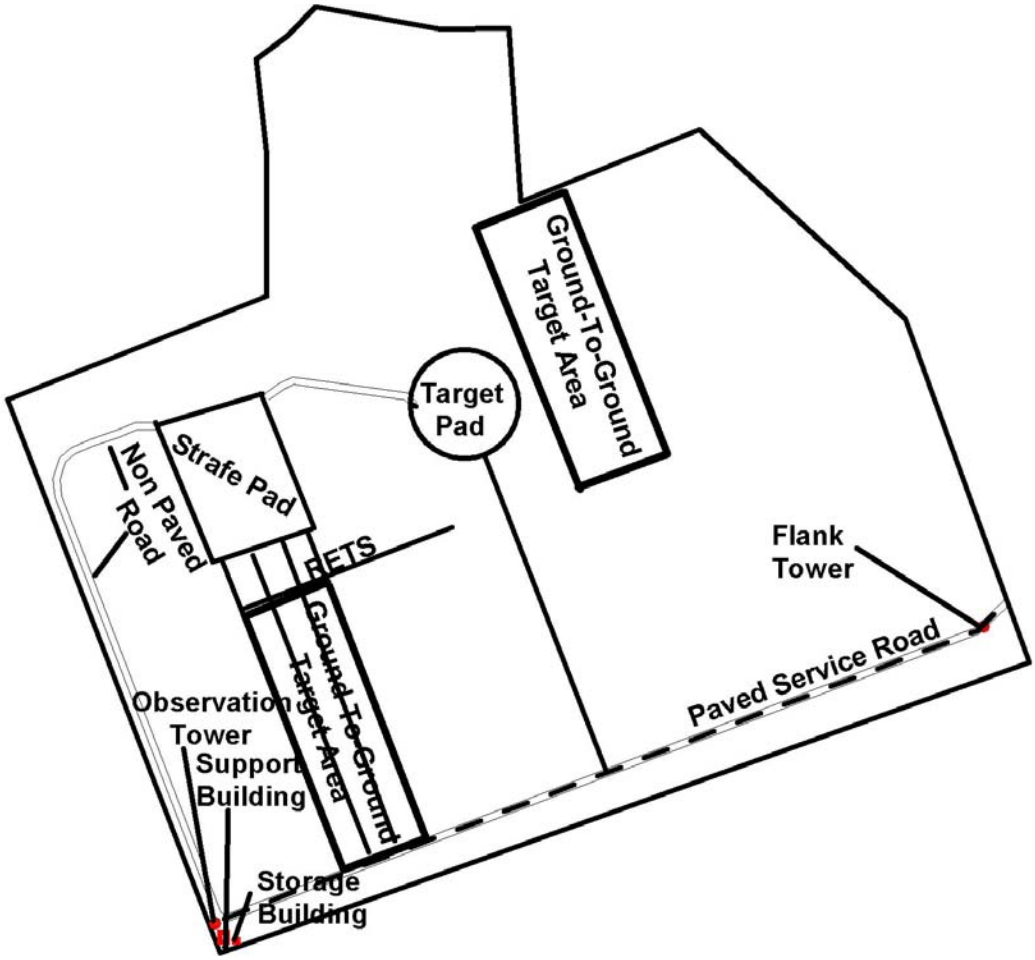

Figure 2.1-5. The Remoted Targets System (RETS) and Ground-To-Ground Target Areas For Alternative A.

the service road to meet the range of 800 to 1300 meters. Firing during hovering, and moving can also be done off Oscar Range and south of the service road.

Alternative A is similar to the proposed action for ground-to-ground machine gun training. The 10 meter targets remain the same. Portable targets can be used at the 300 to 400 meter range as with the proposed action. At just over 400 meters the AMTC berm obstructs the view and no targets can be seen. Therefore, for targets with a range over 400 meters, the machine gun crew relocates to the same location as the long range firing with the proposed action where intermediate and long range fire takes place. Temporary targets are established in these respective locations as well.

The SITs and AMTC are easily available for ground-to-ground machine gun training at approximately 430 meters. The SITs especially lend themselves well as limited time exposed pop-up targets for the 400+ meter range. Both Single and Double E targets are required and used.

The weapon safety footprint for the helicopter and ground-to-ground machine guns does not extend as far north as the weapon safety footprint for the fighters. It is, however, larger east and west due to extended target locations and extended firing locations. (Figure 2.1-6).

Maintenance is the same as with the proposed action. With RETS established, Oscar Range is no longer used for fixed wing fighter training. The suspension poles and cables for fixed wing targets are removed.

2.3 Alternative B

Alternative B is the same as the proposed action. The only difference is that it establishes a helicopter landing pad that elevates the helicopter when it is on the ground and when it is taking off so that the helicopter can fire at the SITs in order to meet the qualifications set out in FM 1-140 (Figure 2.1-7). The pad is located approximately between the second and third strafe run-in line and 300 meters from the SITs. It is a circular pad with a 10 foot radius, 5 feet high, and 1:2 slope. The pad is shell/clay road base. The road base is from off the installation, hauled in by trucks, accessed through the strafe pad and via the second and third strafe run-in line. The total cubic yards of material is approximately 145 cubic yards. Ground-to-ground machine gun targets are not placed behind the pad because they are obstructed.

Maintenance is the same with the proposed action. With RETS established, Oscar Range is no longer used for fixed wing fighter training. The suspension poles and cables for fixed wing targets are removed.

The helicopter landing pad advances the weapons safety footprint farther north than with the proposed action (Figure 2.1-8), but still under what the range was designed for fighters. The east/west extent of the weapon safety footprint is greater with AlternativeB.

2.4 Alternative C

Alternative C builds the RETS on the strafe pad and on land just east and west of the strafe pad (Figure 2.1-9). To avoid wetlands, the RETS are only 775 feet long. The RETS are the same design as the proposed action, except that they are shorter and not built on an existing road. Approximately 1,440 cubic yards of road base is required for the AMTC and adjacent service road. The existing service road leading to the strafe pad serves as access for the road base and construction. Approximately 4,095 cubic yards of sand is required for the berm for the RETS. The sand is acquired from the strafe pad. The existing strafe pad supplies the sand and is easily constructed by bulldozers. Power is brought to the block house from the existing service road, then routed to the existing strafe pad. The SITS are designed and constructed in the same way as the proposed action with 87 cubic yards of sand required per SIT.

All helicopter qualifications are met under FM-140, however, land and takeoff firing requirements at 300 to 500 meters are not met from the paved service road, so the helicopters will have to fly forward into Oscar Range to met these range distances. For longer ranges, the helicopters will have to fire from south of Oscar Range. The weapons

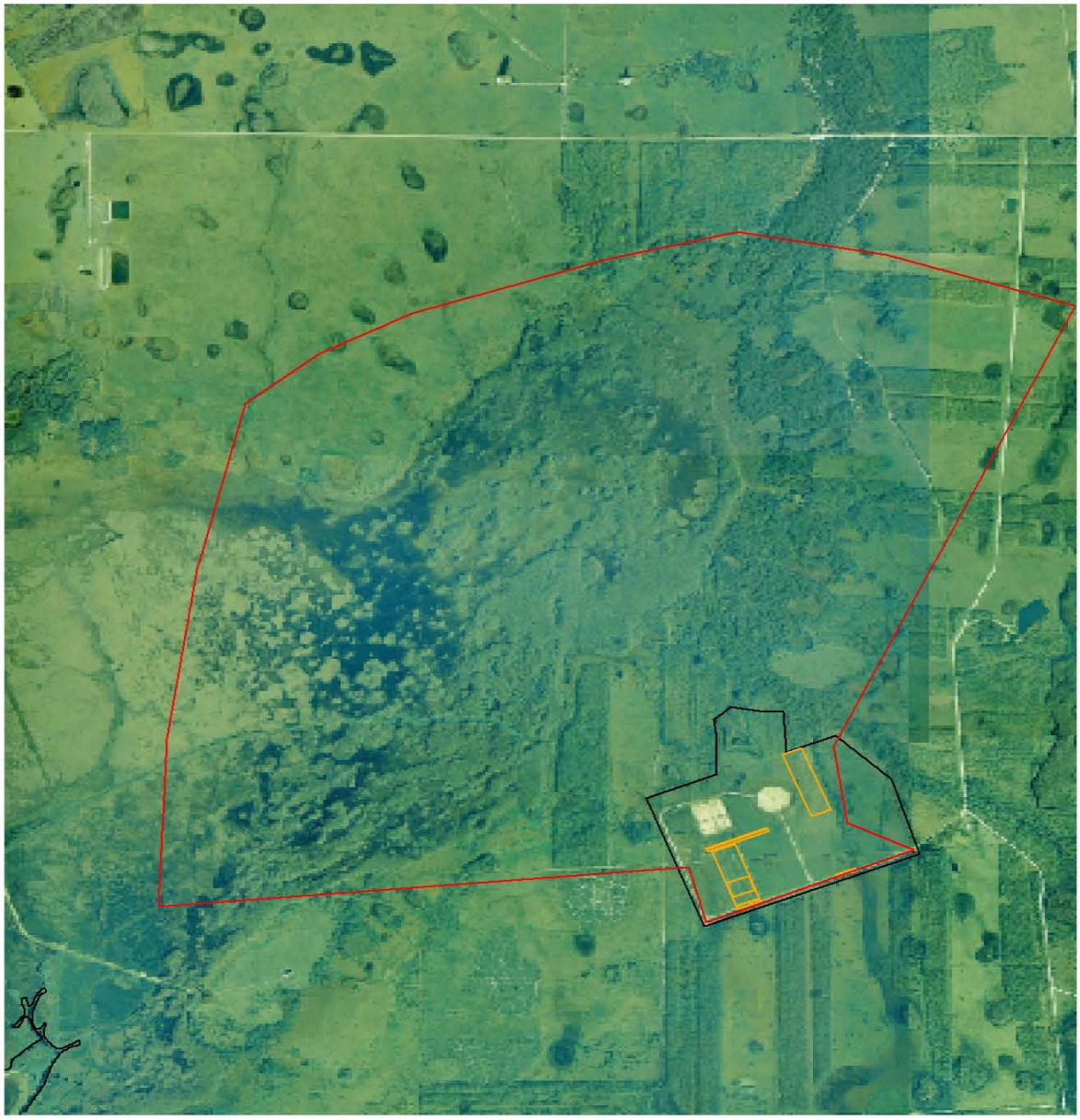

Figure 2.1-6. The Composite Weapon Safety Footprint for Alternative A on Oscar Range.

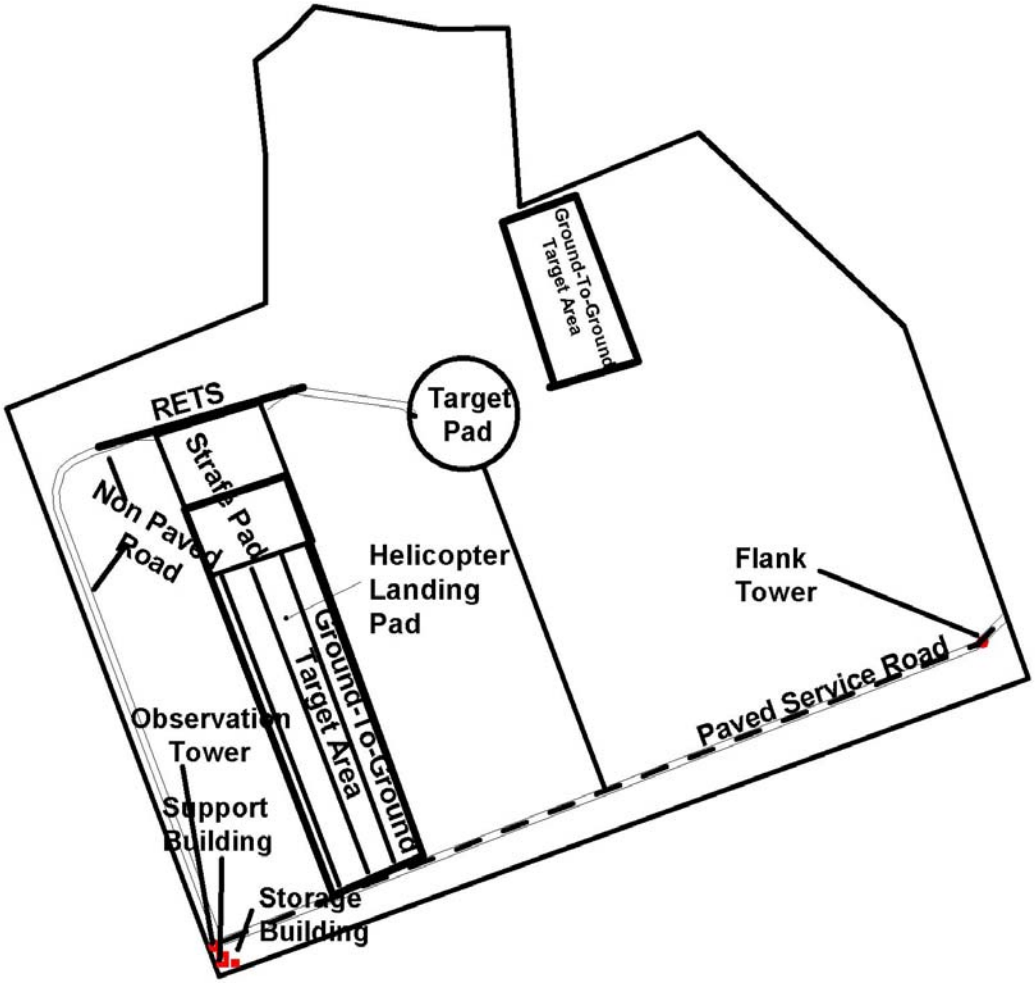

Figure 2.1-7. The Location of the Helicopter Landing Pad Under Alternative B.

safety footprint is shown in Figure 2.1-10.

Ground-to-Ground machine gun fire is the same as the proposed action. The temporary target locations are the same as is the location for firing the machine gun. Unlike the proposed action, Alternative C allows the use of the RETS at approximately 600 meters.

2.5 Alternative D

Alternative D is the no action alternative. None of the RETS are built on Oscar Range. Helicopter door gunnery and ground-to-ground machine training are not conducted on Oscar Range. Helicopter door gunnery is conducted on the other four ranges at APAFR, while ground-to-ground machine gun training is conducted on two of the four ranges. Oscar Range is retained for its original training of fixed wing fighter aircraft.

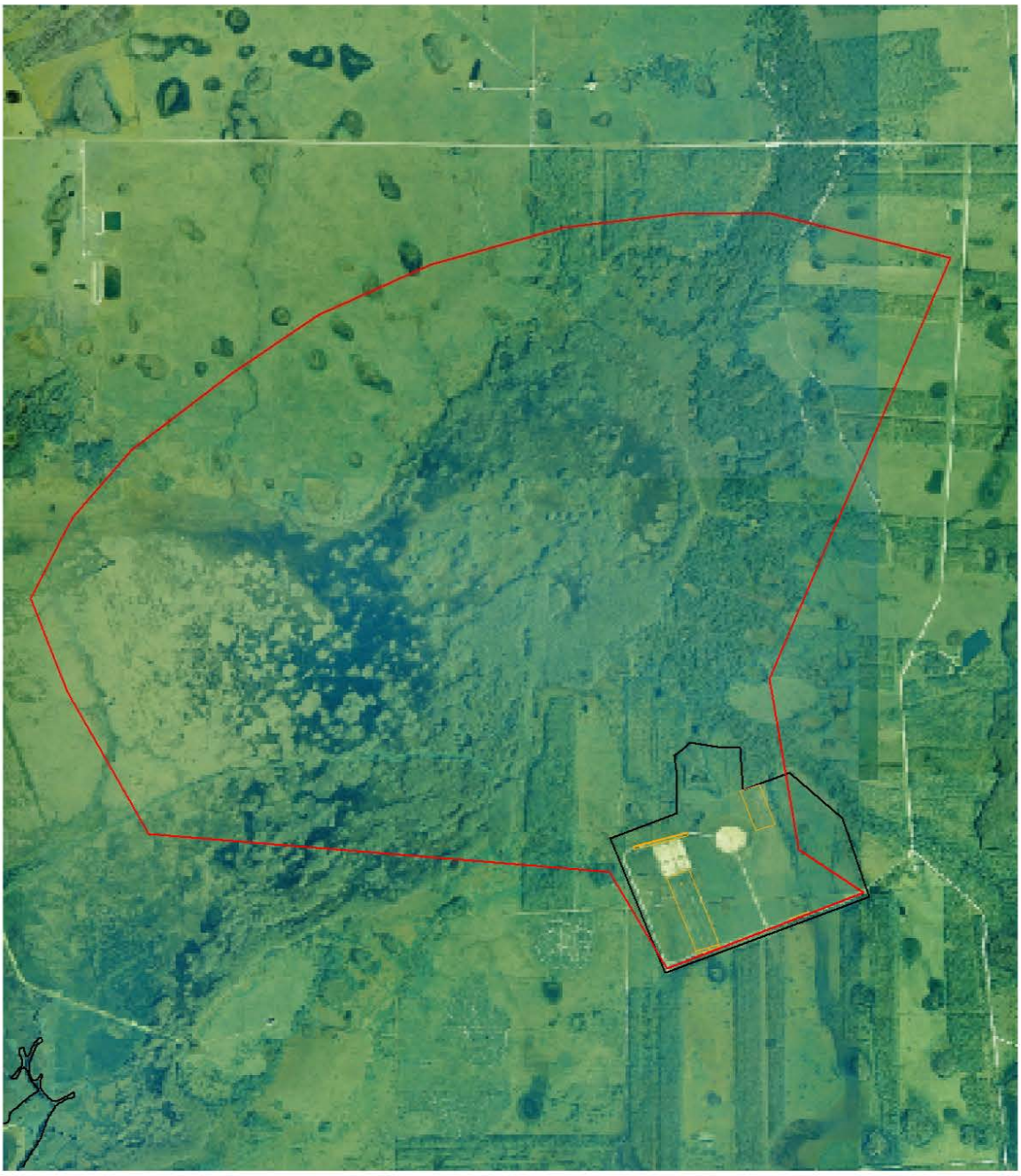

Figure 2.1-8. The Composite Weapons Safety Footprint for Alternative B on Oscar Range.

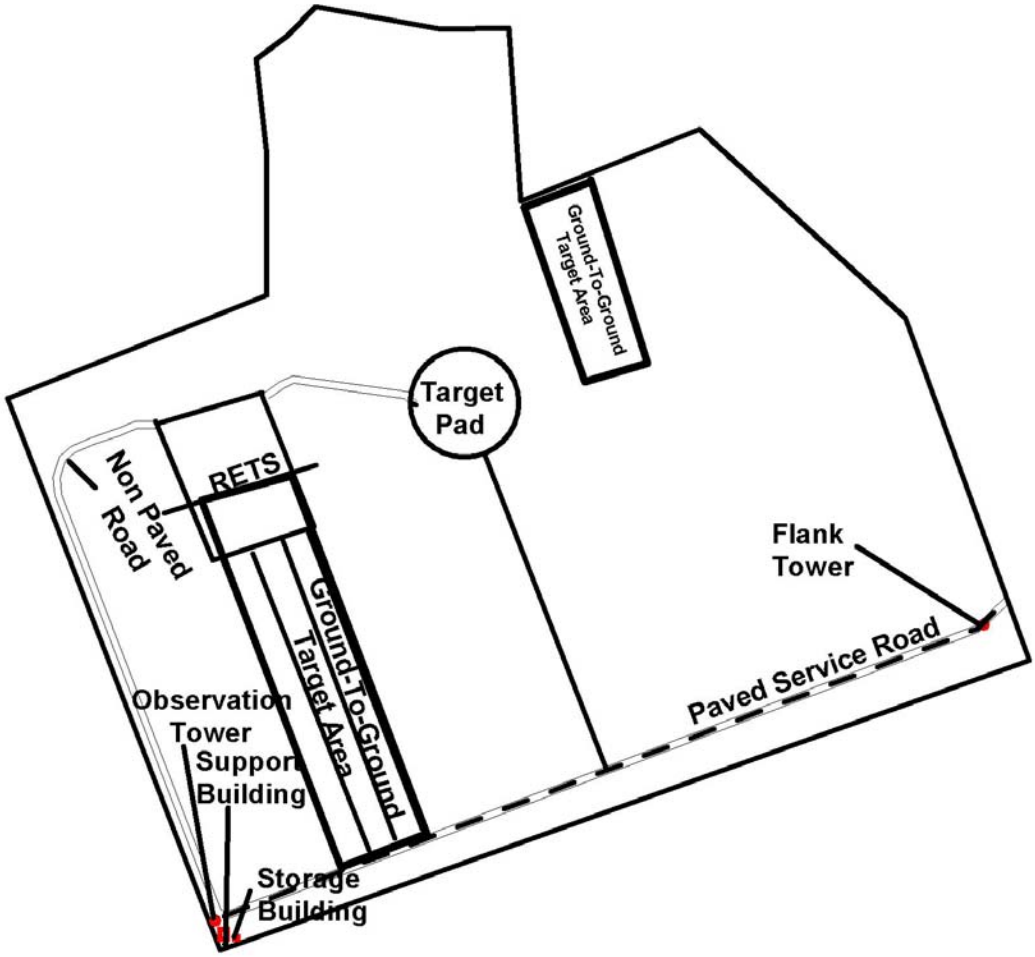

Figure 2.1-9. The Remoted Targets System (RETS) and Ground-To-Ground Target Areas For Alternative C.

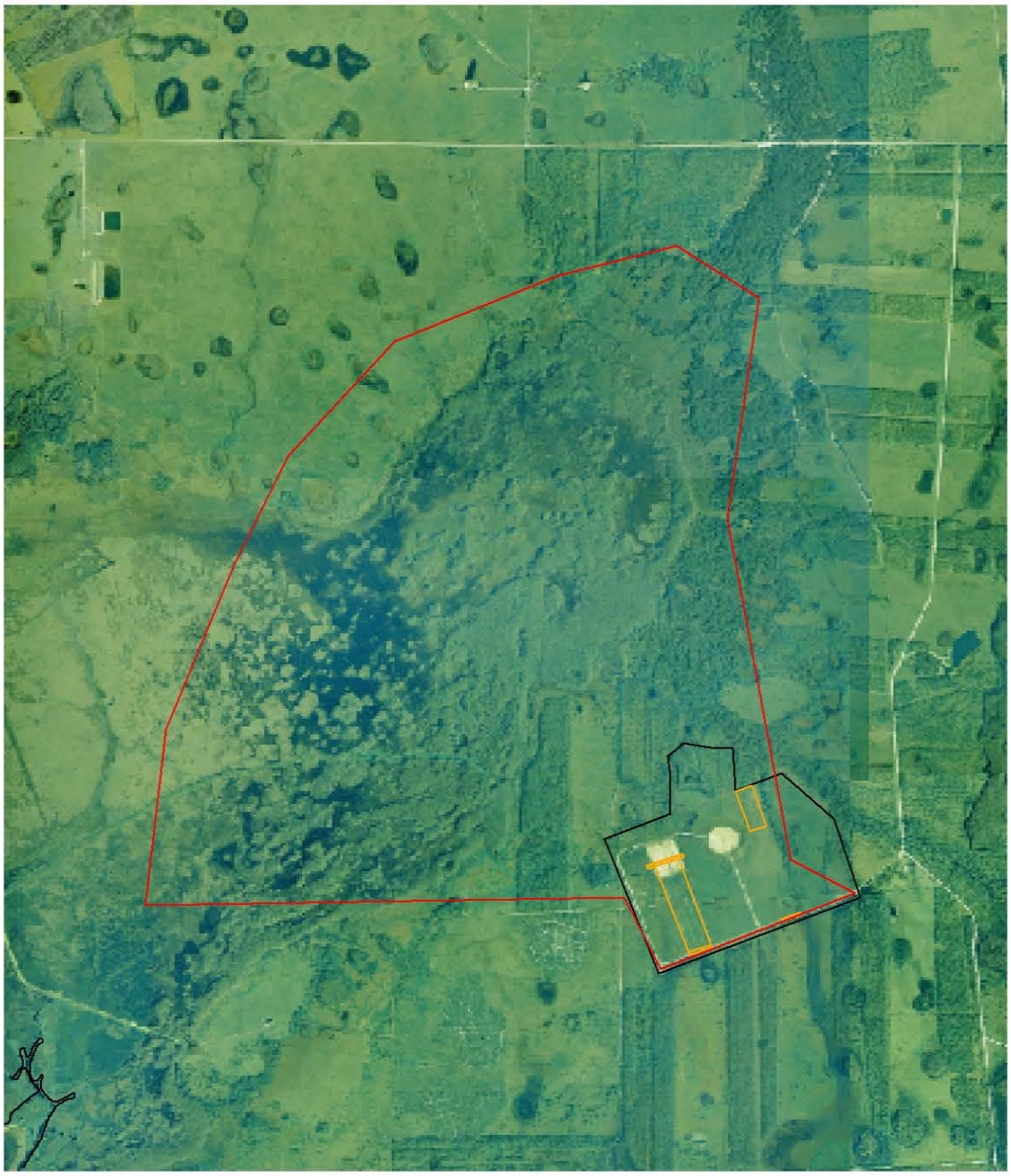

Figure 2.1-10. The Composite Weapons Safety Footprint for Alternative C on Oscar Range.

2.6 Other Regulatory and Permit Requirements

Federal environmental protection statues and executive orders pertaining to this EA are:

- Clean Air Act, as amended (42 USC 7401 et seq)
- Clean Water Act, as amended (33 USC 1251 et seq)
- National Environmental Policy Act (42 USC 4321 et seq)
- National Historic Preservation Act (16 USC 470)
- Federal Noxious Weed Act of 1970 (7 USC 2803 and 2809)
- Federal Aviation Act of 1958 (49 USC1301 et seq)
- Executive Order on Federal Actions to Address Environmental Justice (EO 12898)
- Outleasing for Grazing and Agriculture on Military Lands, as amended (10 USC 2667)
- Archaeological and Historic Preservation Act, as amended (16 USC 469 et seq.)
- Endangered Species Act, as amended (16 USC 1531 et seq.)
- Fish and Wildlife Conservation Act, as amended (16 USC 2901 et seq.)
- Hunting, Fishing, and Trapping on Military Lands (10 USC 2671)
- Migratory Bird Treaty Act (16 USC 703 et seq.)
- Outdoor Recreation on Federal Lands (16 USC 460)
- Sikes Act (16 USC 670)
- Timber Sales on Military Land (10 USC 2665)
- Executive Order on Flood Plain Management (EO11988)
- Executive Order on Protection of Wetlands (EO 11990)
- Executive Order on Federal Actions to Address Environmental Justice (EO 12898)

The Proposed Action and Alternatives A through C require a "Generic Permit for Stormwater Discharge from Construction Activities that Disturb Five or More Acres of Land" through the Florida Department of Environmental Protection. In May of 2003, the permit's required acreage was given a second category of one to five acres – which the RETS falls in.

3.0 Affected Environment

3.1 Airspace and Aircraft Operations

Airspace where the proposed action and alternatives occur is restricted area airspace R-2901A. R-2901A starts at the ground surface and extends to and includes 14,000 feet above MSL. This airspace is available from 0600 – 2400 Monday-Friday, 0800-1800 Saturday-Sunday; other times by NOTAM six hours in advance. Use of Oscar Range requires coordination with the use of the other four active ordnance ranges on APAFR. Oscar Range, however, is not used for air-to-ground deliveries of ordnance or strafing. Limited rotary wing combat search and air rescue is conducted on Oscar Range.

3.2 Safety

Safety follows the original design of Oscar Range for fixed wing aircraft. Safety precludes the use of the South Tactical and South Conventional Ranges when Oscar is being used, while Oscar Range cannot be used when the South Tactical and/or South Conventional Ranges are used. Oscar Range is fenced with a barbed wire fence that designates the boundary of the range and excludes cattle. The perimeter of Oscar Range is signed adequately. Access to and departure from the range must be coordinated through Range Control. Oscar Range is surface cleared for inert bombs by explosive ordnance disposal teams. Oscar Range, however, is currently not used for air-to-ground deliveries of ordnance or strafing. Limited rotary wing combat search and air rescue is conducted on Oscar Range.

3.3 Noise

Noise contours attributed to fixed and rotary wing aircraft on Oscar Range were calculated in a draft EA (U. S Air Force 1996) using NOISEMAP Version 6.5 (U.S. Air Force 1990) software. Noise levels of 65 decibels (dBA– a weighted decibel scale emphasizing frequencies most audible to humans) or greater were considered annoying. Furthermore, this level was determined in context of day-night average sound levels (DNL). DNL considers noise beyond a single event and determines noise impacts cumulatively over a 24 hour period with a night time penalty. The EA described baseline noise on Oscar Range at the time. Then, in 1996, as now, 2003, Oscar Range was not being used for fixed wing aircraft training and only a limited amount for rotary wing – no ordnance or strafing. Noise levels above 65 dBA were not attributed to training from Oscar Range. However, noise of 65 to 70 dBA occurred adjacent to the SE corner of Oscar Range. This noise came from a circular fixed wing flight pattern from another range to the east, the South Tactical Range (aka Echo Range). This flight pattern continues today and attributes this level of noise to Oscar Range.

3.4 Hazardous Materials and Waste

Hazardous materials and waste are stored and generated within the cantonment area, approximately 4 miles to the northwest of Oscar Range. Aside from vehicles traveling through Oscar Range itself, hazardous materials and waste are not found in the area.

3.5 Air Quality

The air quality is classified as attainment for all criteria pollutants in Highlands and Polk Counties by the standards set by the United States Environmental Protection Agency (USEPA) and for more stringent levels for certain criteria pollutants as set by the Florida Department of Environmental Protection (FDEP). Attainment for these counties equates to good air quality with no threats to public health as well as no threats to public welfare (i.e. no threats to vegetation, soils, wildlife). APAFR's most recent air emissions

inventory in 1999 concludes that federal and state air quality standards are met (E2M 2001).

3.6 Geology and Soils

APAFR is located on the Osceola Plain of the Atlantic Coastal Lowlands physiographic province. The surficial geology at APAFR consists of undifferentiated deposits of unconsolidated sands, shell, and silt of Pliocene-Pleistocene age. These deposits range in thickness from 50 to 150 feet (Campbell, 1986). Beneath the surficial sandy deposits lie various Miocene to Eocene-aged limestone formations cemented by carbonates.

The majority of the soils in Oscar Range are either Spodosols or Alfisols. Spodosols soils are characterized by a subsurface zone called a spodic (organic) horizon layer, whereas Alfisols have an argillic subsurface horizon. Spodosols within Oscar Range are predominantly Basinger,, Pomello and Myakka sands. Malabar, Oldsmar and EuGallie are the most prevalent Alfisol soil or spodosol soils with an alfic (clayey) horizon on Oscar Range. All of these soils are poorly drained sands. Within the weapons safety fan footprint the predominant soils are Histosol soils belong to the soil series Kaliga muck, Samsula muck, Hontoon muck, and other mucks classified as Inceptisols such as Sanibel muck. Histosol and other muck classified soil series have the potential to conceal expended ordnance due to their wet mucky nature.

3.6.1 Proposed Alternative – Soils

Approximately 2,884 acres will be affected within the proposed alternative, the least amount of soil acreage. Spodosols and Alfisols are the most affected soils within Oscar Range. Within the weapons safety fan footprint the largest acreage of soils to be affected are muck soils mostly classified as Histosols (organic soils).

3.6.2 Alternative A – Soils

Approximately 4,150 acres will be affected within this alternative. Spodosols and Alfisols are the most affected soils within Oscar Range. Within the weapons safety fan footprint the largest acreage of soils to be affected are muck soils mostly classified as Histosols (organic soils).

3.6.3 Alternative B – Soils

Approximately 4,188 acres will be affected within this alternative, the most amount of soil acreage. Spodosols and Alfisols are the most affected soils within Oscar Range. Within the weapons safety fan footprint the largest acreage of soils to be affected are muck soils mostly classified as Histosols (organic soils).

3.6.4 Alternative C – Soils

Approximately 3,084 acres will be affected within this alternative. Spodosols and Alfisols are the most affected soils within Oscar Range. Within the weapons safety fan footprint the largest acreage of soils to be affected are muck soils mostly classified as Histosols (organic soils).

3.7 Water Resources

3.7.1 Surface Water Hydrology

Oscar Range lies between the Bombing Range Ridge to the east and Arbuckle Marsh to the north and west. Water drains from the ridge to the marsh in a northwest direction in and around the vicinity of Oscar Range. Oscar Range is considered flat with less than a one percent slope facing northwest.

Existing infrastructure on Oscar Range redirects and influences much of the overland water flow. The largest influence is the paved service road on the south border of the Oscar Range. This road intercepts overland flow from all adjacent land to the south and redirects flow east and west to an intermittent stream with a well developed floodplain. The intermittent stream goes under the service road via a culvert and enters Oscar Range. Once on the range the stream looses its floodplain because the stream is strongly entrenched; it appears to have been mechanically ditched sometime in the past. The stream continues north and exits Oscar Range. The stream remains strongly entrenched until reaching a perennial stream. The perennial stream flows northwest and is mildly entrenched – although there is no evidence of mechanical ditching. The perennial stream braids into Arbuckle Marsh. One would suspect that the entrenched intermittent stream coming off Oscar Range may have caused the entrenchment of the perennial stream down below. This is not the case because upstream of the confluence of the intermittent and perennial streams, the perennial stream is also mildly entrenched. Furthermore, at the confluence of the two streams, their channel floors are at the same level with minimal transported sediments – indicating relative stability for entrenched streams.

Other infrastructure on Oscar Range that influences surface flow includes another service road that runs east-west behind the strafe pad and connects to the bombing circle pad, the strafe pad itself, and the bombing circle pad. All of these impede northwest overland flow to a limited degree, but due to three culverts in the service road, the flow eventually continues northwest. While all these infrastructures elevate the ground surface and impede water flow, only where the ground has been ditched does standing water occur. This includes a ditch along the bombing circle pad and service road that connects the strafe pad to the bombing circle pad. The surface water travels northwest under the service road via a culvert, travels northeast into two square man made ponds, then spreads out to overland flow and travels northwest through undisturbed wetlands that lead to Arbuckle Marsh.

Lastly, about half of Oscar Range was bedded pine plantations. While the trees were removed to establish the range, the bedding remains and runs due north. These beds are

well vegetated and show little evidence of erosion. They direct flow in a more northern direction than the natural northwest flow pattern.

The various weapon safety footprints extend over Arbuckle Marsh and the surrounding landscape. All flows empty into Arbuckle Marsh. Most flows are by overland flow or through small, unnamed drainages, except for Arbuckle Creek.

Surface water quality was tested weekly during 1994-96 in Arbuckle Marsh for turbidity, phosphorus, and fecal coliform (Brookshire 1999). Results showed acceptable state levels for these parameters.

3.7.2 Ground Water

Based on the soils within Oscar Range, ground water is within one foot of the soil surface during the summer wet season. The remainder of the year, the ground water is 12 to 40 inches from the soil surface. Water is exposed above the ground surface when excavation has occurred, such as around the bombing circle pad and the intermittent stream. The intermittent stream flowing north has lowered the water table adjacent to it as is evidenced from younger oaks along its banks.

The various weapon safety footprints extend over Arbuckle Marsh and the surrounding landscape. For Arbuckle Marsh, the ground water is above the soil surface during the summer wet season and can remain above the soil surface or just below the soil surface during the remainder of the year. The ground water behaves similarly to Oscar Range for the higher, surrounding areas around Arbuckle Marsh. Adjacent uplands behave similarly as they do for Oscar Range.

3.7.3 Aquifers

APAFR is located in an area of Florida that usually has three aquifers. The deepest aquifer is the Floridan. It typically supplies water for municipalities. Next is the Intermediate that is confined and is above the Floridan. The shallowest aquifer is the Surficial. It is unconfined and includes the water table.

3.8 Vegetation

No state or federally listed currently known to occur within Oscar Range. There is good potential for two state listed plants to be found within Oscar Range. Both are orchids: *Pteroglossaspis ecristata* (a wild cocco) and *Calopogon multiflorus* (many-flowered grass-pink orchid). *Calopogon multiflorus* is listed as state endangered and *P. ecristata* is listed as state threatened. Both have been documented from dry prairie vegetation at Avon Park Air Force Range and therefore may also occur in the remnants of dry prairie vegetation on Oscar Range.

The predominant vegetation of Oscar Range was originally "dry prairie". It is primarily an upland, herbaceous-dominated treeless plant community on poorly-drained flatlands that is maintained by frequent fire. The most common dominant species are wiregrass (*Aristida beyrichiana*), runner oak (*Quercus minima*) and saw-palmetto (*Serenoa repens*). In wetter lower lying areas the dry prairie grades into wet prairie where the wiregrass cover maybe replaced by toothache grass (*Ctenium aromaticum*) and other associated wetland forbs. However much of the native prairie vegetation was altered or disturbed to during the construction of Oscar Range. Vegetation on the disturbed portions is highly variable in species composition, the direct result of periodic discing activities. In general there has been encroachment of woody vegetation, especially wax-myrtle (*Myrica cerifera*) into disturbed wet areas and an invasion of pine trees.

The vegetation of the weapons safety footprint fall outside of Oscar Range within Arbuckle Marsh. Vegetation is a mosaic of plant communities composed of broadleaf marshes (*Sagittaria lancifolia-Pontederia cordata*) , sawgrass (*Cladium jamaicense*) marshes, willow (*Salix caroliniana*) thickets, and maidencane (*Panicum hemitomon)* marsh bordered by cypress (*Taxodium ascendens*).

3.9 Fish and Wildlife

The weapons safety footprint overlays the Morgan Hole Creek/Arbuckle marsh-swamp complex. These areas are normally high in density and diversity of various wildlife species. The footprint does not encroach upon designated Habitat Management Units. No endangered species is known to use this area. However, the American alligator *(Alligator Mississippiensis)* and the Eastern indigo snake (*Drymarchon corais couperi*) which are listed as threatened are likely regular visitors the weapons safety area. Also, species of concern such as the Gopher tortoise (*Gopherus polyphemus*), Gopher frog (*Rana areolata*, and the Florida scrub lizard (*Sceloporus woodi*) are likely to be present in this area.

3.10 Grazing Management

Currently Oscar Range is not leased for cattle grazing purposes. The hazardous footprint outside of the Range is leased for grazing purposes.

3.11 Invasive Plant Management

Oscar Range harbors the invasive plant coogangrass. Within the hazardous footprint of Oscar Range the highly invasive Old World Climbing Fern is found. Fig 3.11-1.

3.12 Timber Management

At present there are no commercial timber operations that occur within Oscar Range. Any timber plantations that would have been affected by the initial building of Oscar

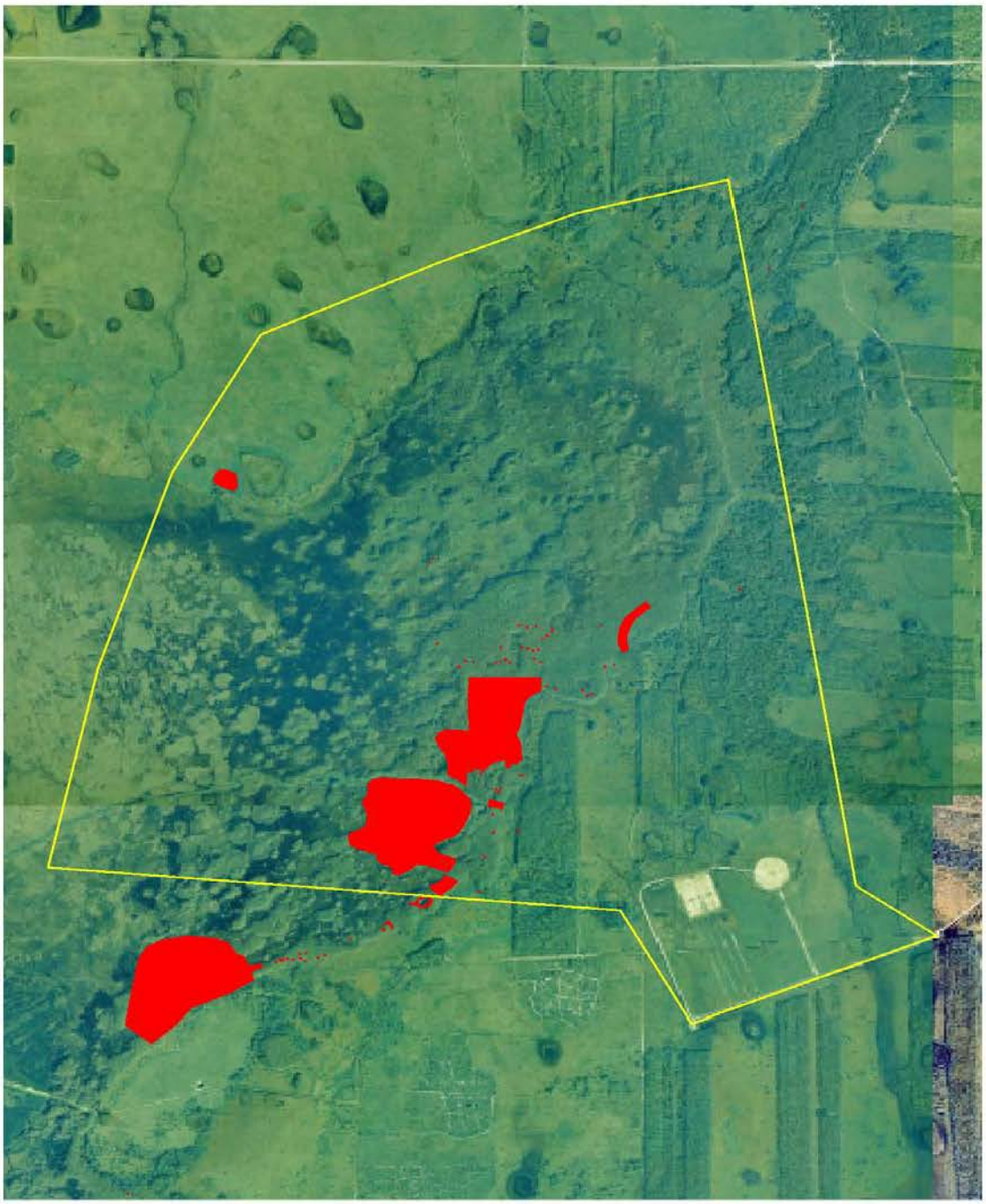

Figure 3.11-1. Depicting known locations of Old World Climbing fern in the Hazardous footprint adjacent to Oscar Range.

Range were removed. Residual trees still exist within the boundaries but are managed naturally by the use of fire and are not being managed for commercial timber production.

3.13 Fire Management

Oscar Range is one burn unit and is burned approximately once every three years. The various weapon safety footprints cover 30 plus burn units consisting of pine plantations, pine flatwoods, marshes, swamps, and dry prairies.

3.14 Recreation

The Outdoor Recreation Program can allow for various activities such as hunting, fishing, hiking and camping by members of the public so long as they can be conducted safely and without interfering with military needs. The entire Avon Park Air Force Range, outside of designated Target Areas such as Oscar Range itself, has been divided into administrative areas called Management Units. These areas may be designated as open or closed individually, allowing public access to some while others are temporarily off limits. The Management Units which are adjacent to Oscar Range are 12, to the south and 13 to the north, with Unit 11 being close enough to be affected by a safety footprint (Figure 3.14-1). There are three stocked fishing ponds which are considered to be within Management Unit 13. Morgan Hole Campground, while not actually part of any Management Unit, extends south far enough to also be affected. The major part of the recreational use takes place on weekends with it often being possible to open Units 12 and 13 on Thursdays, Fridays and Mondays due to their distance from the two larger target complexes. It is necessary for either Management Units 11 or 13 to be open in order to access the southwest part of Management Unit 12 or a fourth stocked fishing pond called Tomlin Hammock Lake.

3.15 Military Training

Military ground training on Oscar Range consists primarily of National Guard and National Guard supported units bivouacking in and around the support building and observation tower, CS gas training and driver training in wheeled vehicles on the paved service road and unpaved/maintained road. Oscar Range also includes a parachute drop zone (Julie) and two helicopter landing zones (Julie and Oscar Utility). Highlands K9 Search and Rescue, a local private organization, also uses Oscar Range for training search dogs and their handlers.

The portion of Training Area 13 covered by the safety footprints of the alternatives under consideration is available for foot travel, but is rarely used for this purpose due to wet conditions. Ground training on Oscar and in Area 13 is usually limited to weekend use. The proposed action may require adjustments to the timing of military ground training

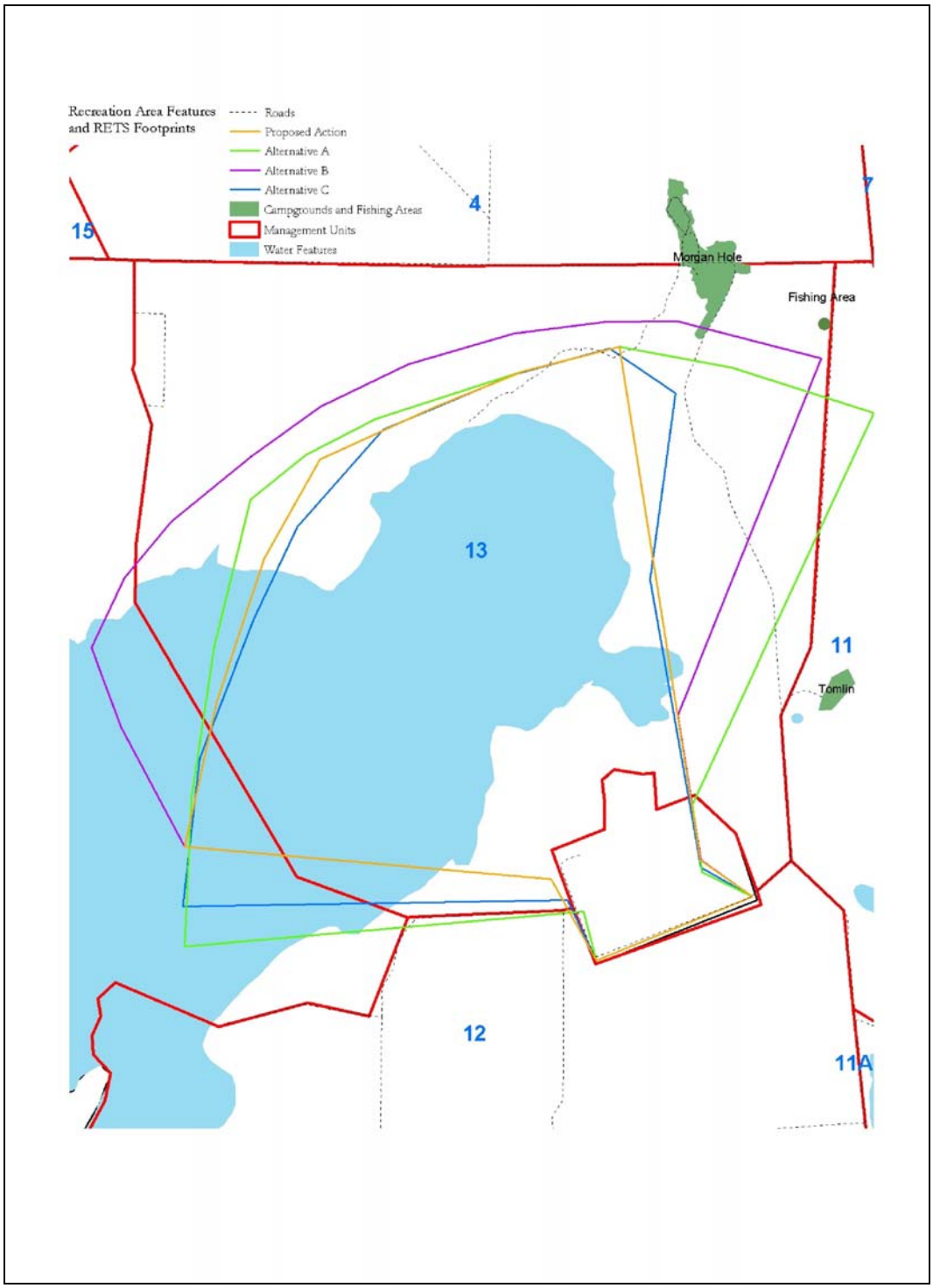

Figure 3.14-1. The Management Units and designated recreation areas affected by the proposed action and alternatives.

3.16 Cultural Resources

To date, over 32,000 acres of APAFR (30%) have been inventoried for cultural resources, resulting in the identification of 143 archeological sites and 25 structures. Of these, 36 sites and all the structures are considered potentially eligible for inclusion in the National Register of Historic Places (NRHP). The remaining unexamined acreage of APAFR is stratified into low, medium, and high potential for containing archeological resources. Low probability areas include areas of previous human disturbance, such as pine plantations, roads, borrow pits, etc. A cultural resources survey was conducted on Oscar Range prior to its construction in 1983 (Piper 1983). No cultural resources were identified in that survey. A cultural resources survey was conducted in the vicinity of Oscar Range in 1999, and six archeological sites, including two eligible for inclusion in the NRHP were identified.

3.17 Socio-economic Resources

APAFR is in Polk and Highlands counties. The United States Census Bureau (USCB 2003) determined Polk County to have a population of 483,924 in 2000, an increase of 19.4% from 1990. In relation to the acreage of the county, the population is distributed at 258.2 people per square mile. Highlands County has a population of 87,366 in 2000, an increase of 27.7% from 1990, with a distribution of 85 people per square mile.

Oscar Range contributes minimally to the economic productivity of APAFR. It currently has limited use for military training and no direct use for revenue generating programs (grazing, forestry, recreation).

4.0 Environmental Consequences

4.1 Airspace

The existing restricted area airspace, R-2910A, accommodates the training required by the proposed action and all alternatives. No changes are required. The proposed action and alternatives (except the no action alternative) converts training from fixed wing aircraft to rotary wing aircraft. This means that flying speeds are reduced and the amount of airspace required to maneuver is reduced. Coordination with the other four ranges is required for other training at these ranges. The no action alternative keeps Oscar Range available for fixed wing aircraft delivering air-to-ground ordnance and strafing, although currently there is no demand for this training on Oscar Range.

4.2 Safety

The current signed and fenced perimeter is acceptable for Oscar Range for the proposed action and all alternatives. The proposed action and Alternative B place the RETS closer to the north boundary fence than the original strafe targets. The proposed action and all

alternatives (except the no action alternative) place some of the ground-to-ground targets closer to the north boundary fence. Despite these adjustments, the weapon safety footprint is large enough to exclude people from the hazardous areas during live fire exercises.

The weapon safety footprint increases east and west for the proposed action and all alternatives (except the no action alternative). This requires additional signing along the weapon safety footprint. Alternative A requires two gates on Van Eeghen Road to prevent vehicle travel while live fire is being conducted.

Safety precludes the use of the South Tactical and South Conventional Ranges when Oscar is being used, while Oscar Range cannot be used when the South Tactical and/or South Conventional Ranges are used. This limitation holds for the proposed action and all alternatives.

The proposed action and all alternatives (except the no action alternative) no longer require surface sweeps for unexploded inert (spotting charge only) ordnance because inert bombs would no longer be used on Oscar Range. These surface sweeps would continue if the no action alternative is selected and air-to-ground ordnance training with inert bombs is renewed.

4.3 Noise

The proposed action and alternatives that train with helicopters all train in roughly the same location. Most of the flight time and firing occurs between the observation and flank towers. Noise contours were developed with noise originating between the towers and at 65 feet above ground level (AGL). Rotorcraft Noise Model (RNM) (Lucas 1998) determined 40-45 dBA between the towers. The noise levels rapidly declined while moving away from the towers. 40-45 dBA are not considered annoying. In summary, the proposed action and alternatives that introduce helicopter door gunnery training increases noise on Oscar Range, but not at a level that is considered annoying. The 65 – 70 dBA level of noise will continue adjacent to the southeast corner of Oscar Range as attributed by the South Tactical Range, even with the no action alternative. There are no human receptors in this area nor threatened and endangered animal species.

4.4 Hazardous Materials and Waste

Hazardous materials and waste are generated on a very small scale with the proposed action and the alternatives that employ the RETS. Lead acid batteries that power the AMTC are on site and remain on site during and after the exercises. Proper use of these batteries should include secondary containment should they leak during the exercise, in storage, or while charging. The block house, where they are stored and charged, needs to have adequate ventilation. The batteries will be recycled when they no longer function.

Hazardous materials associated with vehicles are present on Oscar Range and within the weapon safety footprint, but these are not inherent to Oscar Range. The hazardous materials they use and waste they generate are handled off site.

The ball and tracer ammunition spent on Oscar Range is not considered a hazardous waste because it remains on site according to the purpose it was intended and not moved to a secondary location.

Brass expended from ground-to-ground machine gun use is collected and recycled. Gloves are to be worn while collecting expended brass.

The no action alternative does lack lead acid batteries on site and lacks ammunition expended from helicopter door gunnery or ground-to-ground machine gun training. The range is reserved for existing use with fixed wing aircraft, but this use is not anticipated in the near future.

4.5 Air Quality

Air quality does not change for emissions for the proposed action and all of the alternatives in terms of military training over the whole of APAFR. If the helicopter door gunnery training and ground-to-ground machine gun training does not occur on Oscar Range, then they will occur, where they currently do, on the other ranges on APAFR. Environmental conditions will quickly dissipate emissions.

Air quality does change from increased ground vehicle emissions and dust while constructing the RETS as per the proposed action and alternatives. Emissions are generated from earth moving vehicles and vehicles bringing in supplies. The low amount of emissions and isolated location makes these effects negligible. Dust generally is not a concern at APAFR due to sandy soils that are poorly airborne, low wind speeds, and high humidity. Dust will not be a concern for construction and operation of the RETS, including the rotor wash from the helicopters.

4.6 Geology and Soils

Proposed Action: Impacts to geology and soils on Oscar Range by the proposed action are very minimal. The AMTC and SITS are built primarily on an existing road with disturbed soils and therefore do not change existing soil properties.

Much of the weapon safety footprint overlies the wetland soils of Arbuckle Marsh. These wetland muck soils tend to be anaerobic. Ordnance from the machine guns from Oscar Range has a strong likelihood of landing in these muck soils and thereby hindering any EOD activities.

Alternative A: Impacts to geology/soils on Oscar Range by Alternative A are minimal. The AMTC and SITS are to be built south of the strafe pad. As long as the soil surface around the railroad bed and berm is not excavated, there should only be minimal soil disturbance. Where the strafe pad is modified through excavation there maybe some minimal disruption or alteration of the soils.

The weapon safety footprint overlies Arbuckle Marsh, adjacent wetlands, and adjacent uplands. Ordnance from the machine guns that travels off Oscar Range can either land in organic or mineral soils.

Alternative B: Impacts to Oscar Range are the same as with the Proposed Action except for the weapon safety footprint. The weapon safety footprint is larger with Alternative B and covers more upland areas, thus having the same effect as the weapon safety footprint as Alternative A. Geology and soils impacts are expected to be minimal.

Alternative C: Impacts to Oscar Range by Alternative C are very minimal. The AMTC and SITS are built on the strafe pad and just east and west of the strafe pad. The impact of the weapon safety footprint is essentially the same as with the proposed action. Soils and geology are not expected to be impacted.

Alternative D: Under the no action alternative there are not any impacts.

4.7 Water Resources

4.7.1 Surface Water Hydrology

When assessing the proposed action and alternatives it is important to remember that Oscar Range is an artificial watershed unto itself. The overland flow from the south is redirected by the paved service road to a ditched intermittent stream that runs through Oscar Range. Therefore, much of the overland flow that would normally run over Oscar Range does not occur. Overland flow really does not start on Oscar Range until just north of the paved service road.

Proposed Action: Impacts to surface water hydrology on Oscar Range by the proposed action are very minimal. The AMTC and SITS are built, for the most part, on an existing road and therefore do not change existing water flow patterns. The existing culverts under the existing road, however, are not nearly long enough to accommodate the increased width of the road with the addition of the proposed railroad bed and berm. These culverts are important in that they allow water flow to continue northwest. This is especially true for the eastern most culvert that accommodates continuous surface water. These culverts should either be extended or replaced with longer culverts to maintain existing surface water flow under the railroad bed and berm. The strafe pad is reduced in height, but the water flow pattern remains the same. The portable targets do not change surface water flow.

Much of the weapon safety footprint overlies Arbuckle Marsh and adjacent wetlands. The soils tend to be anaerobic in these wetlands. Ordnance from the machine guns that travels off Oscar Range has a strong likelihood of landing in these wetlands. Anaerobic conditions tend to stabilize the chemical breakdown of the ordnance. Surface water quality is not expected to be impacted.

Alternative A: Impacts to surface water hydrology on Oscar Range by Alternative A are minimal. The AMTC and SITS are built south of the strafe pad. The railroad bed and berm that these targets create will redirect overland flow either east or west. The flow then continues north and northwest to existing flow patterns. Culverts are not recommended for the railroad bed and berm. As long as the soil surface around the railroad bed and berm is not excavated, surface water is not expected to pond. Further justification for not having ponded surface water and the need for culverts is the existing

elevated strafe pad to the north. It too is elevated, lacks excavation in front of it, and does not have ponded surface water. The strafe pad is modified by fill taken from it, but the water flow pattern does not change. The portable targets do not change surface water flow.

The weapon safety footprint overlies Arbuckle Marsh, adjacent wetlands, and adjacent uplands. Ordnance from the machine guns that travels off Oscar Range can either land in wetlands or uplands. Uplands have aerobic soil conditions that lend to faster chemical breakdown of the ordnance. Surface water quality is not expected to be impacted.

Alternative B: Impacts to Oscar Range are the same as with the Proposed Action except for the weapon safety footprint. The weapon safety footprint is larger with Alternative B and covers more upland areas, thus having the same effect as the weapon safety footprint as Alternative A. Surface water quality is not expected to be impacted.

Alternative C: Impacts to surface water hydrology on Oscar Range by Alternative C are very minimal. The AMTC and SITS are built on the strafe pad and just east and west of the strafe pad. The surface water hydrology is minimally impacted. The portable targets do not impact surface water flow. The impact of the weapon safety footprint is essentially the same as with the proposed action. Surface water quality is not expected to be impacted.

Alternative D: The no action alternative has no impacts. There are no known existing situations that if left unaddressed, would result in concerns in the future.

4.7.2 Ground Water

The Proposed Action and all the alternatives, including the no action alternative, do not affect the existing ground water.

4.7.3 Aquifers

The Proposed Action and all the alternatives, including the no action alternative, do not affect existing aquifers.

4.8 Vegetation

Proposed Action: In the proposed action approximately 2,884 acres of natural and/or degraded vegetation will be affected, the least amount of acreage. Of this approximately 1,258 acres of historical dry prairie will be impacted with 44% of the footprint within degraded dry prairie. Since the AMTC and SITS are to be built primarily on an existing road with disturbed vegetation there is only minimal effect on the vegetation. Establishing permanent structures would negate any future attempts to restore the dry prairie ecosystem to that portion of Oscar Range. The remainder of area is predominantly wetland plant communities found within Arbuckle Marsh within the weapons safety footprint. Any live ordnance falling into the wetlands may increase the

likelihood of wildfire. Since the wetland vegetation is adapted to periodic burning no negative impact would be expected on the wetland vegetation.

Alternative A: Approximately 4,150 acres will be affected within this alternative. Of this approximately 2,006 acres of historical dry prairie will be impacted with 48% of the footprint within degraded dry prairie. The AMTC and SITS are to be built south of the strafe pad. As long as the soil surface around the railroad bed and berm is not excavated, there should only be minimal disturbance to the vegetation. The remainder of area that lies within the weapons safety footprint is predominantly wetland plant communities found within Arbuckle Marsh. Any live ordnance falling into the wetlands may increase the likelihood of wildfire. Since the wetland vegetation is adapted to periodic burning no negative impact would be expected on the wetland vegetation.

Alternative B: Approximately 4,188 acres will be affected within this alternative, the most amount of acreage. Of this approximately 2,051 acres of historical dry prairie will be impacted with 49% of the footprint within degraded dry prairie. The remainder of area is predominantly wetland plant communities found within Arbuckle Marsh. Any live ordnance falling into the wetlands may increase the likelihood of wildfire. Since the wetland vegetation is adapted to periodic burning no negative impact would be expected on the wetland vegetation. In Alternative B the weapon safety footprint is larger and covers more upland degraded dry prairie vegetation in contrast to Alternative A.

Alternative C: Approximately 3,084 acres will be affected within this alternative. Of this approximately 1,315 acres of historical dry prairie will be impacted with 43% of the footprint within degraded dry prairie. The AMTC and SITS are built on the strafe pad and just east and west of the strafe pad with little to no effect on the degraded dry prairie vegetation. The remainder of area is predominantly wetland plant communities found within Arbuckle Marsh. Any live ordnance falling into the wetlands may increase the likelihood of wildfire. Since the wetland vegetation is adapted to periodic burning no negative impact would be expected on the wetland vegetation.

Alternative D: Under the no action alternative there are not any impacts.

4.9 Fish and Wildlife

The Proposed Action and all alternatives, including the no action alternative will not have an adverse impact on endangered, threatened, or species of concern. No adverse impacts are foreseen to the fish and wildlife.

4.10 Grazing Management

Oscar Range is not leased for cattle grazing therefore modification of the existing range and construction of the proposed targets in all of the alternatives does not impact current grazing outleasing.

Because Oscar Range is so small, the hazardous footprint immediately outside of the impact area will be subjected to machine gun fire during actual sorties. Use of the range for normal training activities is only for approximately on average 2 ½ days a month.

Historic grazing utilization of the land adjacent to Oscar has been approximately for 49 days per year usually over 2 periods of time approximately 3 weeks in duration sometime from October to May. Because of the low anticipated military use and the low cattle grazing use it is believed that cattle grazing in the hazardous area can be scheduled around normal military training activities. Therefore this proposed action and all of the alternatives have a minimal impact to the grazing program.

4.11 Invasive Plant Management

Under Presidential Executive Order 11987 all federal agencies are required to control the spread of invasive plant and animal species. Oscar Range contains coogangrass. This invasive plant invades disturbed sites and can be expected to show up around these new targets, once construction is completed. Currently there is a coogangrass control program in place that periodically sprays this invasive plant on Oscar Range. Because of ground disturbance activities associated with the construction for this proposal there will be an increased potential for coogangrass occurring on Oscar Range. This may require additional herbicide applications to control coogangrass.

Outside of Oscar Range, in the hazardous footprint there is a large population of Old World Climbing Fern (Figure 3.12).

This fern is highly invasive. If left uncontrolled it quickly engulfs entire forest canopies creating a serious fire hazard. This invasive species, if not regularly herbicided, can expand onto Oscar Range and possibly degrade the military's ability to use this portion of the installation for training.

Currently access into the locations that the fern is found are seasonal – only during the driest times of the year –April, May and early June. Therefore, herbiciding can only be conducted a certain times of the year. Historically herbiciding in this area has been conducted for 5 to 6 weeks during this April to June time period. This proposed action could impact access, therefore precluding proper management and control of this invasive plant. However, given the proposed activity use of 2 ½ days a month, herbiciding can be scheduled around normal military use. Therefore, there is no impact anticipated from this proposed action and all of the alternatives.

4.12 Timber Management

Any construction within the current boundaries of Oscar Range will not have an impact on current timber management practices. However, the safety footprints for the proposed action and all alternatives excluding D could have a slight to heavy impact on timber management in the area. Safety footprints imply that there is a possibility of munitions impact outside the physical boundaries of Oscar Range itself. Therefore, any management of timber will have to account for impacts within timbered areas. Projectiles or objects of any type within a tree can be hazardous during timber harvest operations and/or during the milling process of timber products. This debris can also cause extensive damage to equipment involved in timber harvest operations.

4.13 Fire Management

The proposed action and Alternatives A-C may increase the frequency of fire in Oscar Range and the other burn units within the weapons safety footprint due to the tracer rounds that are used in the training. The frequency of fire may be increased by wildfire or prescribed burning in an effort to reduce wildfire potential. This situation does not adversely affect the prescribed burn program because the burn units would be prescribe burned anyway – the training may only prioritize what units will be burned and when. Also, APAFR has a wildfire suppression team that can address wildfires. Training many be cancelled if wildland fire potential is high or extreme and fuel loads are heavy. The potential for cancellation is highest from February to May.

4.14 Recreation

Use of the RETS as described in any of the Alternatives would cause Management Unit 13 to be closed to the public. The proposed action's safety footprint includes more of the interior portions of the Unit and is further away from the developed recreation areas described in Affected Environment. It would therefore be possible to allow access to Van Eeghan Road and its associated recreation facilities, along with portions of Management Unit 12 to the south. This would have the least impact on recreational use during use of the RETS. The degree of impact on recreational users is greatly dependent on the days of the week and times of the year that the training would take place. The number of people wanting to use the recreation facilities on any given day varies throughout the year, with the winter months being the busiest.

4.15 Military Training

The proposed action and Alternatives A-C could affect the military ground training conducted in Oscar Range and the portion of Training Area 13 covered by the safety footprints by precluding ground training during live fire events. However, by carefully coordinating ground training and live fire training missions through APAFR Operations and Florida National Guard Range Control, conflicts should be minimal.

The No Action Alternative would have no effect on military ground training in the subject area.

4.16 Cultural Resources

Significant impacts to cultural resources could occur when the action alters a resource's characteristics, including relevant features of its environment or use, that qualify it as significant according to the NRHP criteria.

4.16.1 Proposed Action

The proposed action will have no effect upon known cultural resources at APAFR. It is possible that currently buried and unknown archeological resources may be inadvertently uncovered during construction or other ground disturbing activities. Any archeological resources that are encountered as a result of the proposed action would be handled in accordance with the APAFR Cultural Resource Management Plan.

4.16.2 Alternative A

Alternative A will have no effect upon known cultural resources at APAFR. It is possible that currently buried and unknown archeological resources may be inadvertently uncovered during construction or other ground disturbing activities. Any archeological resources that are encountered as a result of the proposed action would be handled in accordance with the APAFR Cultural Resource Management Plan.

4.16.3 Alternative B

Alternative B will have no effect upon known cultural resources at APAFR. It is possible that currently buried and unknown archeological resources may be inadvertently uncovered during construction or other ground disturbing activities. Any archeological resources that are encountered as a result of the proposed action would be handled in accordance with the APAFR Cultural Resource Management Plan.

4.16.4 Alternative C

Alternative C will have no effect upon known cultural resources at APAFR. It is possible that currently buried and unknown archeological resources may be inadvertently uncovered during construction or other ground disturbing activities. Any archeological resources that are encountered as a result of the proposed action would be handled in accordance with the APAFR Cultural Resource Management Plan.

4.16.5 Alternative D

Alternative D will have no effect upon known cultural resources at APAFR. It is possible that currently buried and unknown archeological resources may be inadvertently

uncovered during construction or other ground disturbing activities. Any archeological resources that are encountered as a result of the proposed action would be handled in accordance with the APAFR Cultural Resource Management Plan.

4.17 Socio-economic Resources

The proposed action and the alternatives have no socio-economic impacts on a large scale when considering the two county area. There is a localized impact to the revenue generating timber program within APAFR with the proposed action and Alternatives A-C. These impacts originate from munitions (bullets) leaving Oscar Range and lodging in commercially harvestable trees within the various WSF. The potential of this happening is not known. The least amount of impact is the munitions staying within Oscar Range, while the highest impact would be munitions being within the entire WSF. The proposed action has the smallest WSF and therefore the least potential, while Alternative A has the largest WSF with the highest potential. Munitions in timber effects the APAFR forestry program as well as the industries outside of APAFR that process and sell wood products.

4.18 Environmental Justice

The National Environmental Policy Act requires that federal entities analyze potential impacts to the human environment caused by the proposed actions. Executive Order 12898 (1994) outlaws discrimination against minority and low income populations by federal actions. The Civil Rights Act (1964) also prohibits discrimination by the federal government on the basis of race, color, religion, sex, national origin, marital status, handicap, or family composition.

The proposed action and alternatives do not impact minority or low income populations. The alternatives do not discriminate.

4.19 Comparison of Alternatives

The comparison of the proposed action and alternatives considers how each meets the objectives of the training needs and how each impacts particular environmental concerns. The categories are no, low, medium, and high. No means that the objectives are not met or no impact to the particular environmental concern, while high means the objectives are fully met and there is a high impact to the environmental concern.

	Training/Environment				
Action	AF Training	Army Training	Timber	Recreation	Soils/Vegetation
Proposed	High	Medium	Low-Med	Low	Low
Alt A	High	High	Low-High	Medium	Medium
Alt B	High	High	Low-High	Low	Low
Alt C	High	High	Low-High	Low	Low
No Action	Medium	Low	No	No	No

4.20 Cumulative Impacts

Cumulative impacts caused by building and operating the RETS and conducting RETS training on Oscar Range are minimal. There is currently very little military training occurring on Oscar Range nor any natural resource management activity. Introducing RETS and associated training on Oscar Range does not reach any known thresholds for environmental impacts. The RET WSF does impact some existing activities, but the effects of the RETS are not cumulative impacts with these activities. There is, however, some overlap with the existing WSF of the small arms range found north of Arbuckle Marsh. This overlap is at the extreme ends of both WSFs and are expected to not have cumulative impacts.

4.21 Relationship Between Short Term Use and Long Term Productivity

The proposed action and alternatives are not expected to be a short term use. The RETS could conceivable be used for many years to assist in qualification training for door gunnery and machine guns. Establishing the RETS does, however, eliminate Oscar Range from being used for training by fixed wing aircraft for bombing and strafing. Other military training that Oscar Range is currently accommodating, could continue with the RETS established.

4.22 Irreversible and Irretrievable Commitment of Resources

Fuels and wear and tear on earth moving equipment will be committed to the RETS and cannot be retrieved. Also, some of the construction materials are not retrievable because they have no salvage value. The sand berms are also not retrievable because there is no effort to recycle the expended munitions. Expended munitions within the WSF are also not retrievable. Trees harvested for wood products that contain munitions are also not retrievable. The extent of this impact is not certain.

4.23 Direct and Indirect Effects

Direct effects include impacts to the actual construction of the RETS. These entail noise, air quality, and soil and vegetation disturbance. Direct effects also includes the WSF excluding other uses and administrative actions while military training is ongoing.

Indirect effects include munitions lodged in commercial trees for wood products that would have been harvested for wood products, but are no longer commercially available.

4.24 Conflicts with Other Land Use Plans

The proposed action and Alternatives A-C conflicts with the Avon Park Air Force Range Integrated Natural Resources Plan (INRMP 1997). This plan identifies locations where trees are harvested for wood produces. Some of these locations are overlapped by the WSF created by the RETS and would not be available for harvest once the RETS is in operation.

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7.0 ACRONYMS AND ABBREVIATIONS

ACC	Air Combat Command
AFI	Air Force Instruction
AGL	above ground level
AMTC	armored moving target carrier
APAFR	Avon Park Air Force Range
AR	Army Regulation
ASOG	Air Support Operations Group
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
dB	decibels

EA	environmental assessment
EO	Executive Order
FDEP	Florida Department of Environmental Protection
FM	field manual
FONSI	finding of no significant impact
GIS	geographical information system
NVG	night vision goggles
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
NOTAM	notice to airman
RA	restricted area
RETS	remoted target system
SIT	simulated infantry target
US	United States
USAF	United States Air Force
USCB	United States Census Bureau
USEPA	United State Environmental Protection Agency
USC	United States Code
USAR	United States Army
WSF	weapon safety footprint

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APPENDIX A: RECORD OF CONSULTATION WITH REGULATORY AGENCIES

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. Paul F. Ebersbach
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May 28, 2003

RE: DHR Project File No. 2003-4442
Received by DHR May 19, 2003 LAC 5/28/03
Proposed Laser-Guided-Bomb Safety Buffer and Oscar Range Mobile Targets
Avon Park Air Force Range, Polk and Highlands Counties

05 JUN REC'D

Dear Mr. Ebersbach:

Our office received and reviewed the above referenced projects in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties*. The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing, in the *National Register of Historic Places*), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

Based on the information provided, it is the opinion of this office that the proposed undertakings will have no effect on historic properties.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, by electronic mail *sedwards@dos.state.fl.us*, or at 850-245-6333 or 800-847-7278.

Sincerely,

Barbara C. Mattick
DSHPO for Survey & Registration

for Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 245-6300 • FAX: 245-6435
☐ Archaeological Research (850) 245-6444 • FAX: 245-6436
☑ Historic Preservation (850) 245-6333 • FAX: 245-6437
☐ Historical Museums (850) 245-6400 • FAX: 245-6433
☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

October 6, 2003

Mr. Tod Zechiel
347 RQW, DET 1, OL A/CEV
29 South Boulevard
Avon Park AFR, Florida 33825-5700

RE: Department of the Air Force – Draft Environmental Assessment for Constructing and Operating Remoted Target Systems at Avon Park Air Force Range – Highlands and Polk Counties, Florida.
SAI # FL200310064145C

Dear Mr. Zechiel:

The Florida State Clearinghouse, pursuant to Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the referenced Draft Environmental Assessment.

Based on the information contained in the document and previous comments by the Florida Department of State, Division of Historical Resources, the state has determined that the above-referenced action is consistent with the Florida Coastal Management Program.

Thank you for the opportunity to review this project. If you have any questions regarding this letter, please contact Ms. Lauren P. Milligan at (850) 245-2161.

Sincerely,

Sally B. Mann

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/lm

14 Oct 03

MEMORANDUM FOR RECORD

FROM: 18 ASOG, DET 1, OL A/CEVN
29 South Bovd
Avon Park Air Force Range, FL 33825

SUBJECT: Clearinghouse Response to Draft RETS EA

1. On 29 August 03 I telephoned Ms. Lauren P. Milligan of the Florida State Clearinghouse. The Florida State Clearinghouse had recently transferred to the Florida Department of Environmental Protection and I wanted to ensure that the draft RETS EA would make it to the correct address and personnel. Ms. Milligan inquired of the EA and stated that given the construction was on an existing service road and stafe pad, the EA may qualify as an exemption and may not need to be circulated to the various state agencies for their review. She requested two unbound copies and would make the exemption determination upon reviewing the EA.

2. On 9 Oct 03 I telephoned Ms. Lauren P. Milligan to inquire of the exemption. She responded that indeed the EA qualified as an exemption. It was not forwarded to the respective state agencies for their review. Her only comment was that APAFR needed to apply for a "Generic Permit for Stormwater Discharge from Construction Activities that Disturb Five or More Acres of Land" through to the Florida Department of Environmental Protection. Note that in May 2003, the permit's required acreage was given a second category of one to five acres – which the RETS falls in.

Tod P. Zechiel

TOD P. ZECHIEL
NEPA Coordinator