CHAPTER 2

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

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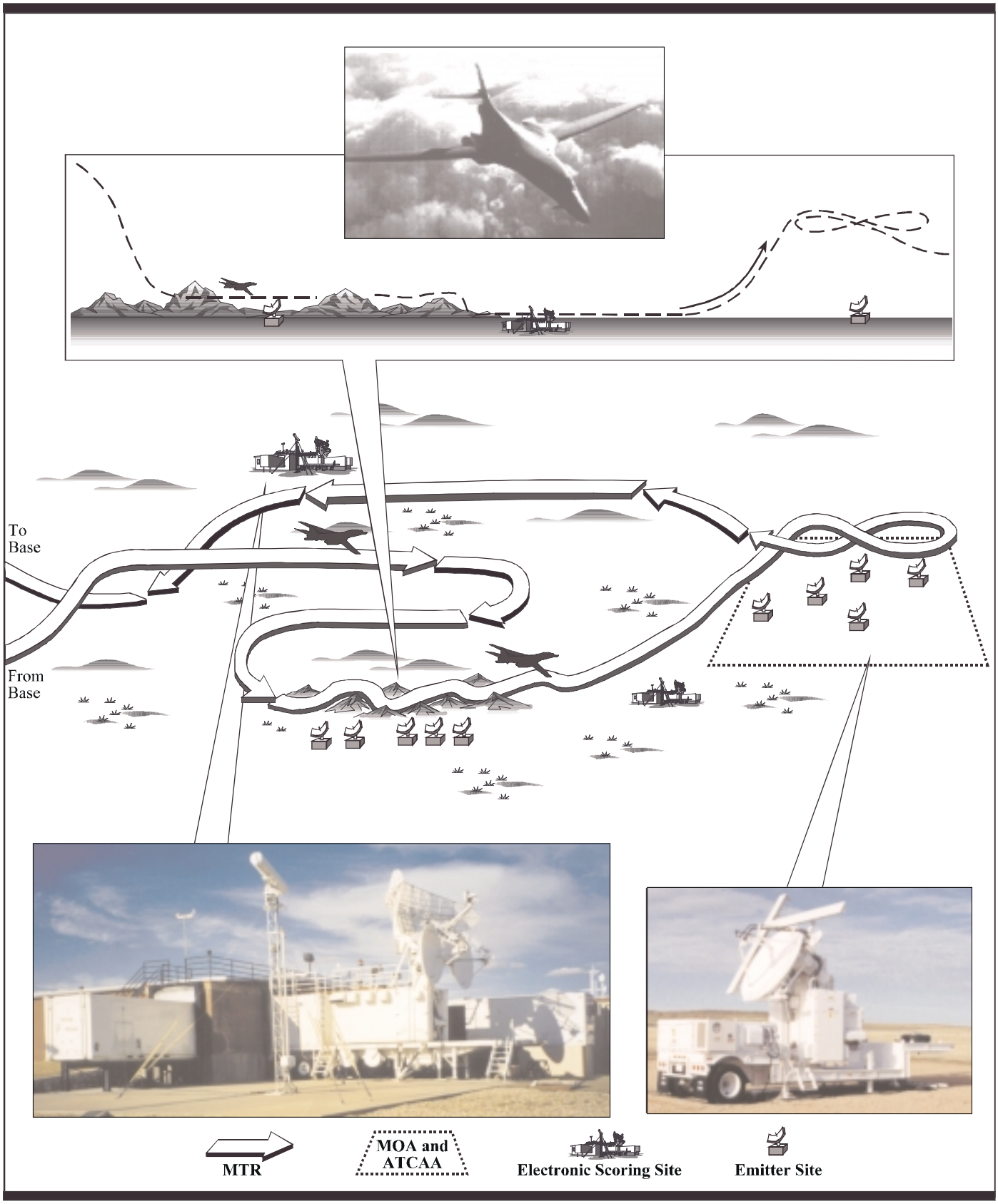
This chapter describes the RBTI proposal and the action alternatives that would meet the need defined by the proposal. The proposed action is to establish a set of linked training assets comprising an ESS system (Figure 2.0-1) to provide realistic, integrated bomber training close enough to Barksdale and Dyess AFBs to efficiently use limited flying hours. Based on an examination of training needs, a maximum distance of approximately 600 nm was determined to be needed to efficiently and effectively use allocated flying hours. See Section 2.1.2 and Appendix A for discussions of training and flying time.

The proposed action has three alternative locations, two in western Texas and one in northeastern New Mexico. Each of these three action alternatives meets the operational requirements outlined in Chapter 1. In conformance with the Council on Environmental Quality (CEQ) regulations (40 CFR 1502.14(e)), the Air Force has used the results of the analysis in the draft Environmental Impact Statement (EIS), as well as public and agency comments, to identify a preferred and environmentally preferred alternative in this final EIS. The Air Force has identified Alternative B, IR-178/Lancer MOA, as both the preferred and environmentally preferred alternative. Appendix K presents the analysis leading to this identification.

Integrated training means that aircrews perform their mission roles together as a team, under conditions similar to those in combat.

The three action alternatives (Alternatives B, C, and D) and the No-Action Alternative (Alternative A) are described in detail in this chapter. The No-Action Alternative reflects the status quo, without development of any new linked training assets. CEQ regulations (40 CFR 1502.14(d)) require analysis of the No-Action Alternative.



Realistic Bomber Training Initiative **Figure 2.0-1**

PROPOSED ACTION OVERVIEW

The proposed action for RBTI is to establish an ESS system consisting of linked airspace and ground-based training assets to conduct realistic, integrated bomber training operations within approximately 600 nm of Barksdale AFB, Louisiana, and Dyess AFB, Texas. The ESS system would include:

Airspace Assets

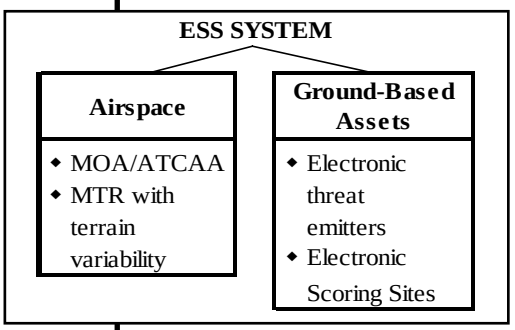
- ✔An MTR allowing flight down to 300 feet AGL in some segments, offering high to moderate terrain variability for use in terrain following and avoidance, overlying lands capable of supporting electronic threat emitters and ESSs, and linked to a MOA.
- ✔A MOA and overlying ATCAA measuring at least 40 by 80 nm with a floor (lower) altitude of 3,000 feet AGL and an available ceiling (upper) altitude up to 40,000 feet MSL.

Ground-Based Assets

- ✔Five locations (15 acres each) for placing electronic threat emitters under or near the MTR corridor and five additional locations (15 acres each) for placing emitters under the MOA to simulate the variety of realistic threats expected in combat.
- ✔Two Electronic Scoring Sites co-located with operations and maintenance centers, one under or near the MTR corridor and the other en route from the training airspace to Barksdale and Dyess AFBs where bomber aircrews can simulate ordnance delivery and conduct electronic combat at a variety of altitudes.

All three of the action alternatives (Alternatives B, C, and D) provide these linked assets and could fulfill the need defined under the proposed action. Operationally and environmentally, Alternative B is the preferred alternative.

This EIS also presents the rigorous process used to identify and screen candidate alternatives and a description of alternatives considered but not carried forward for further analysis in Section 2.1. Readers interested in the descriptions of the alternatives can begin with Section 2.2 for a discussion of the RBTI study area and Sections 2.3 and 2.4 for Alternatives A, B, C, and D. Section 2.5 presents the approach to the analysis and the major issues identified through the scoping process. Section 2.6 summarizes the project impacts identified in Chapter 4 and presents a comparison of the effects of all four alternatives. Section 2.6.2 presents both mitigation measures and management actions directed at reducing impacts or addressing concerns raised by the public and agencies.



2.1 ALTERNATIVE IDENTIFICATION PROCESS

2.1.1 Requirements for Electronic Scoring Site System

Currently available training assets have numerous limitations affecting their ability to support realistic training for bomber aircrews. Existing assets near Barksdale and Dyess AFBs (i.e., approximately 600 nm) do not include linked, sequenced airspace and ground-based assets (refer to Figure 1.3-2). All existing assets are either dispersed and cannot provide a package of sequenced training or lie too far from the bases to maximize combat training time. The Air Force proposes to

remedy this situation by establishing an ESS system linking airspace and ground-based training assets within approximately 600 nm of Barksdale and Dyess AFBs. To select alternatives that would meet the need, the Air Force used the following considerations:

- Alternatives should accommodate an ESS system providing for realistic, sequenced, integrated training;
- Alternatives considered for RBTI should offer the potential to establish linked airspace and ground-based assets located near to one another and in sufficient proximity to Barksdale and Dyess AFBs to maximize combat training time and minimize low-value transit time that does not achieve training goals; and
- Alternatives should use existing military airspace and other assets to the maximum extent feasible while also meeting training needs.

Required Airspace Assets

To support realistic training for various missions while maximizing combat training time, RBTI would require airspace located over land within approximately 600 nm of both Barksdale and Dyess AFBs. The types of airspace required include both an MTR and a MOA with an overlying ATCAA.

An MTR is essentially a three-dimensional "aerial highway" used for different kinds of military flight training.

MTR Requirements. In order to meet training requirements, an MTR comprising part of an RBTI alternative should be large enough horizontally to allow bomber aircraft to practice offensive and defensive maneuvers to hide from enemy defenses while accomplishing the simulated ordnance delivery. These maneuvers require aircrews to start at a specific entry point in the MTR, proceed through the MTR corridor in a manner that realistically simulates combat conditions, use terrain masking and threat avoidance through variable terrain, and practice simulated ordnance delivery.

Realistic, integrated combat training begins at an entry point to an MTR outside the range of the simulated radar threat with the aircraft at a typical altitude of 15,000 to 25,000 feet MSL. The aircraft descends below the threat radar horizon and continues the mission undetected. Flight continues to the area of variable terrain and the aircraft maneuvers at low altitude using terrain following (B-1) or terrain avoidance (B-52). The aircraft proceeds along the MTR avoiding threats and minimizing exposure when threat avoidance is not possible. The aircrew uses the terrain to mask the aircraft from threat emitters and to avoid detection, then focuses on simulated ordnance delivery using a preplanned target, such as a bridge or other feature of the landscape. After simulated ordnance delivery, where nothing is released from the aircraft, the aircrew can fly along the MTR directly to the MOA to practice higher-altitude maneuvers. Or the aircrew can fly along the MTR to a re-entry route that allows the aircraft to return to the MTR and repeat a portion of the training sequence again. Given this sequence of activities, an MTR for RBTI should:

- Provide a minimum of 300 nm of length to support the bomber training activities.
- Permit bomber flight training at altitudes ranging from 300 to 3,000 feet AGL or higher.
- Have sufficient width (8 to 16 nm) so that bomber aircrews can practice maneuvers (only turns of less than 90 degrees are permitted in MTRs).
- Overlie lands that:
  - offer 240 nm of contiguous high to moderate terrain variability that lets aircrews conduct terrain following or avoidance training and

  - support siting of a set of five electronic emitters and an Electronic Scoring Site arrayed under or near the MTR to provide a realistic threat environment and the ability for aircrews to simulate ordnance delivery and electronic combat.
- Accommodate a re-entry route along the MTR to allow bomber aircrews to loop back to the MTR and use the Electronic Scoring Site more than once during a single sortie-operation.
- Provide direct exits to a MOA.

The 300 nm minimum length for an RBTI MTR is based on the need for bomber aircrews to set up for terrain following or avoidance, fly through variable terrain while defeating or avoiding simulated threats from electronic emitters, conduct simulated ordnance delivery and receive feedback from an Electronic Scoring Site, and exit the threat area. On average, B-52s fly at 360 nm/hour and B-1s fly at 420 to 550 nm/hour on these routes. Completing all of these training activities in a linked and integrated manner requires a minimum of between 40 and 50 minutes for bomber aircrews, depending upon the aircraft's speed. This amount of time ensures sufficient training opportunities while maximizing the value of limited flight hours.

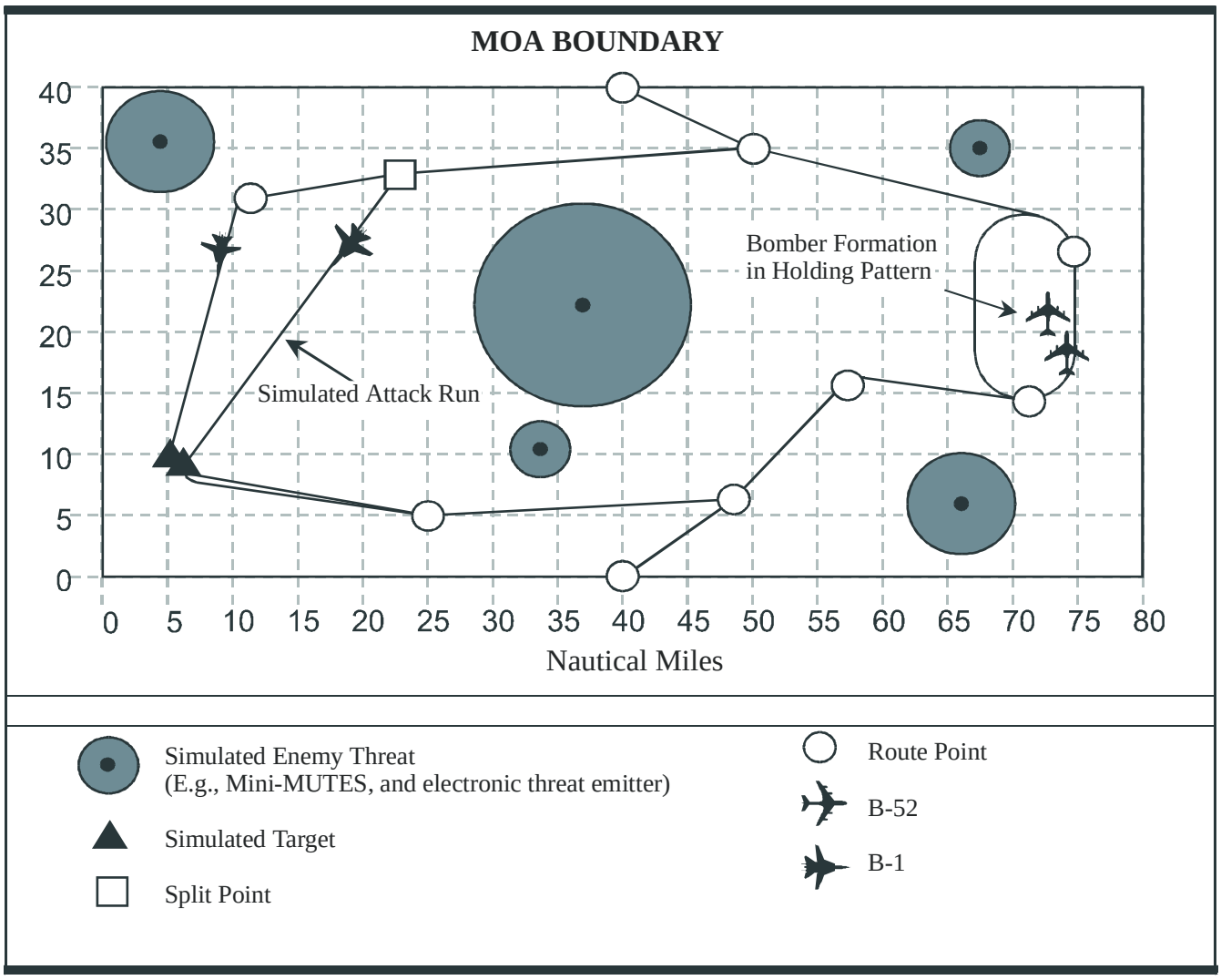
High to moderate terrain variability under an MTR is important to realistic aircrew training.

To support realistic integrated training, an RBTI MTR should overlie a minimum of 240 nm of contiguous terrain with high to moderate variability. With 240 nm of this type of contiguous variable terrain, a bomber pilot and copilot can practice critical low-altitude training for 15 to 20 minutes each. Terrain variability, as a measure of training value, represents a combination of slope differences and elevation differences. Appendix A includes further details on how differences in terrain were determined. Moderate to high terrain variability generally consists of a mix of hills and/or mountains interspersed with lower elevation areas; it must have peaks and valleys so that the aircraft can fly up and down or around them. The differences between high and low points, and the distance between those points, define terrain variability. Continuous high points, like a mesa, or low points, like a plain, do not offer the variability aircrews need to hone their reactions.

MOA and ATCAA Requirements. The MOA and overlying ATCAA for RBTI should meet the following minimum characteristics based on training requirements:

A MOA is a large "box" or airspace designed to allow military aircraft to conduct a range of nonhazardous training activities.

- *A Size of 40 nm by 80 nm.* A MOA/ATCAA must be large enough horizontally to accommodate multiple aircraft performing all of the combat maneuvering training requirements that cannot be accomplished in an MTR while permitting responses to simulated enemy defenses (i.e., electronic emitters). The horizontal extent of this airspace must allow bomber aircraft to practice offensive and defensive maneuvers to neutralize enemy defenses and simulate ordnance delivery. The size of the MOA/ATCAA is determined by the amount of space needed relative to the aircraft speed, maneuvering capability, ordnance delivery systems, and threat avoidance tactics. A MOA/ATCAA measuring 40 nm by 80 nm allows bombers to maneuver against a ground-based simulated threat (electronic emitter) and successfully line up on the proper heading to simulate ordnance delivery (Figure 2.1-1). First, aircrews would plan for a 5 nm buffer between the limits of maneuvers and the edge of the MOA/ATCAA. This prevents aircraft from "spilling out" of the MOA/ATCAA but reduces the usable MOA/ATCAA dimensions to 30 nm by 70 nm. Second, bomber aircrews need approximately 70 nm to set up and simulate an attack on a target. Third, neither under combat conditions nor during combat training would an aircrew enter and exit a target area by the same route. Such a move could



Bomber Operations in MOAs/ATCAAs **Figure 2.1-1**

subject the aircrew to attacks from already alerted enemy defenses and could interfere with other aircraft attacking the target area. So, realistic combat training activities in a MOA/ATCAA would require about 30 nm in width to accommodate both entry and exit from a target area.

- *Available altitudes from 3,000 feet AGL up to 40,000 feet MSL.* A MOA/ATCAA combination should offer sufficient vertical maneuvering space to permit all of the activities described above. To evade simulated threats and simulate different ordnance delivery events, bombers need to use a wide range of altitudes as part of a maneuver. Thousands of vertical feet of altitude are required to accomplish these activities and maneuvers.

- *Accessible from an MTR.* Because the training assets should be linked and in an appropriate sequence, the MOA/ATCAA must be accessible from an MTR so that higher altitude training activities can be sequenced realistically with lower altitude training in the MTR in the same sortie.

- *Overlie lands suitable for the placement of electronic threat emitters.* Electronic emitters should be dispersed effectively on land under the MOA/ATCAA to provide a threat environment requiring aircrews to react realistically. To be effective, the underlying lands for each emitter would need to allow unobstructed tracking of aircraft in the MOA/ATCAA.

REQUIRED GROUND-BASED ASSETS

A realistic training environment requires both an array of simulated threats as well as a means of determining how well aircrews respond to and defeat those threats while simulating on-target ordnance delivery. These assets must also be linked to reflect the kinds of situations aircrews might encounter in actual combat. Under RBTI, the ground-based assets of the ESS system would need to consist of:

Linked airspace and ground-based training assets permit aircrews to conduct training in a manner mirroring the sequence of events used in combat.

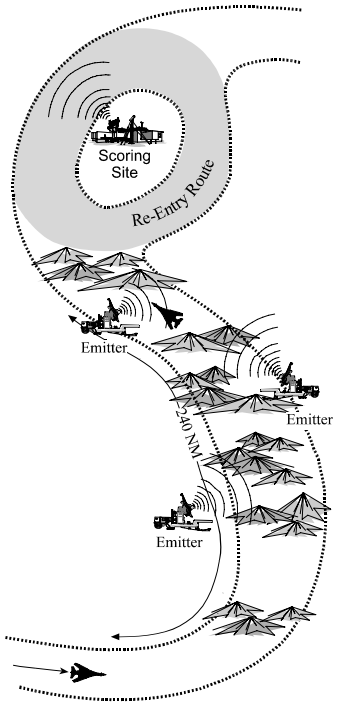
- A set of five electronic emitters situated under or near the MTR;
- An Electronic Scoring Site located under or near the MTR in the vicinity of the re-entry route;
- A set of five electronic emitters dispersed effectively under the MOA/ATCAA; and
- An Electronic Scoring Site located en route between the MTR and MOA/ATCAA and Barksdale and Dyess AFBs.

To meet the defined need, an alternative must offer appropriate locations for these linked sets of electronic emitters and Electronic Scoring Sites. The criteria used by the Air Force to identify such locations are detailed below. Minimizing the amount of construction needed and ensuring that the locations of the emitters and Electronic Scoring Sites would permit their proper function formed overriding considerations for identifying alternatives. In addition, sites for all electronic emitters and Electronic Scoring Sites need to meet these basic requirements:

- Access to pre-existing roads and on land having no more than 5 percent slope;
- Ability to connect to pre-existing telephone and power lines;
- Avoidance of electromagnetic interference with established radio observatories; and
- Land that can be leased, purchased, or withdrawn.

MTR Emitter Sites. Based on the size of the emitters themselves and safety requirements (see Section 2.4.1 Ground Operations), the MTR emitters need to be located in 15-acre parcels. Emitter sites also require unobstructed radar tracking distances of at least 30 nm; positioned ideally within 15 nm of the MTR centerline; and separated by approximately 20 to 50 nm.

MTR Electronic Scoring Site. Within the 15-acre site, an Electronic Scoring Site provides for scoring of ordnance delivery, simulates threats from an electronic emitter, and provides feedback on electronic combat training by bomber aircrews. The MTR Electronic Scoring Site also needs to be co-located with headquarters and maintenance facilities for the MTR emitters. To fulfill the need, an alternative must offer a site for an MTR Electronic Scoring Site that is offset from the MTR centerline, but approximately centered relative to the MTR re-entry route. The MTR Electronic Scoring Site must be positioned to permit the electronic equipment to track low-altitude aircraft to at least 50 nm.



MOA Emitter Sites. The 15-acre MOA emitter sites need to be located on lands that ideally allow radar-tracking in all directions for 30 nm. These five sites should be dispersed effectively throughout the lands under a MOA to provide coverage of most of the area and to offer the potential to vary the threat environment to enhance aircrew training realism.

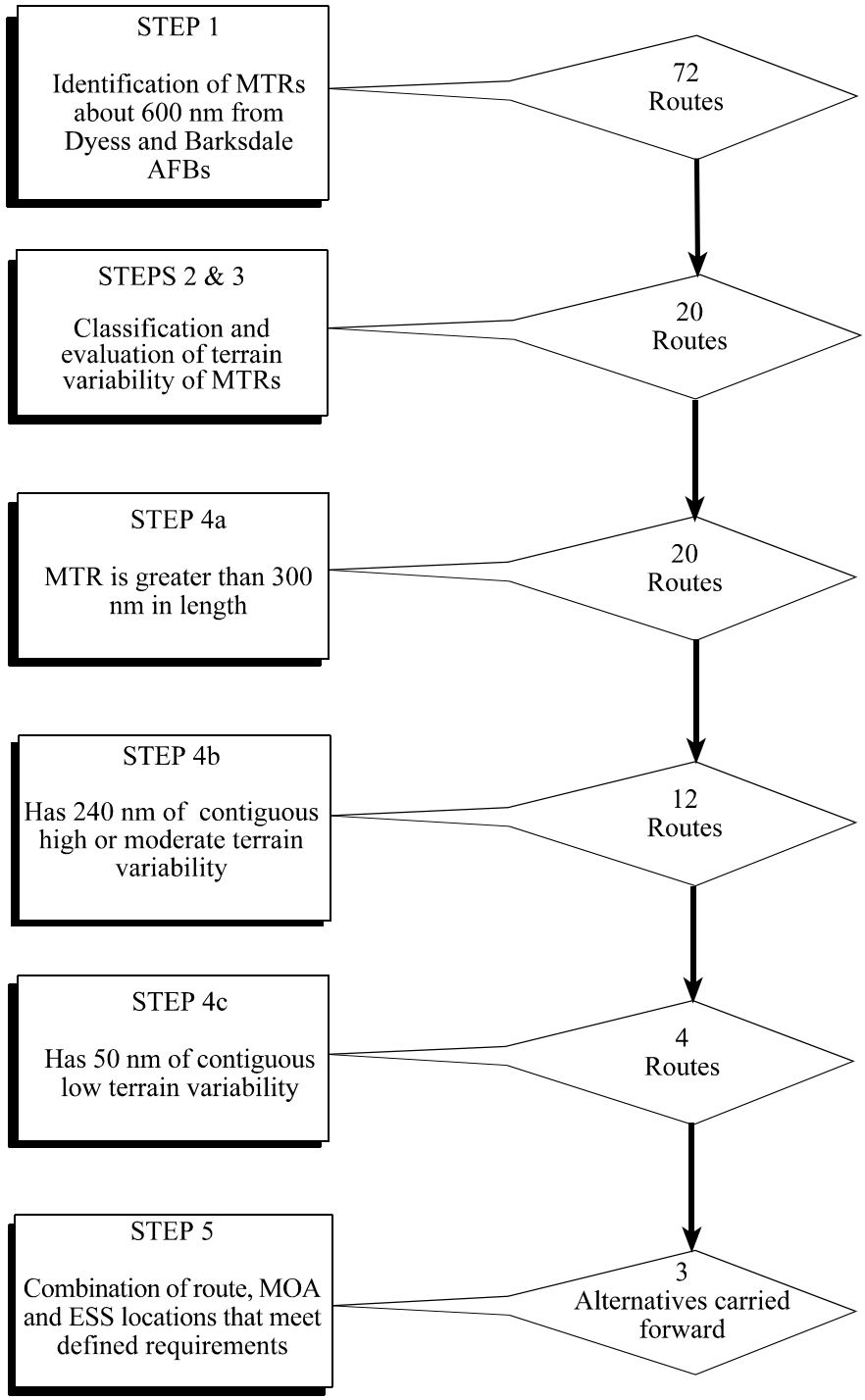
En Route Electronic Scoring Site. To optimize the use of finite flight hours for training, an alternative needs to offer a site for an Electronic Scoring Site situated en route to or from Barksdale or Dyess AFBs and the other training assets. This 15-acre Electronic Scoring Site must fulfill all of the same criteria as the MTR Electronic Scoring Site, although permitting low-angle tracking distances is not as important for this en route Electronic Scoring Site. No special use airspace, like a MOA, would be required over this Electronic Scoring Site, since aircraft would fly at high altitudes and according to standard FAA rules.

2.1.2 Alternative Identification Methodology

To maximize training time, an alternative must be within approximately 600 nm of Barksdale and Dyess AFBs.

The requirements detailed above, along with the overall considerations related to fulfilling the need, were applied through an alternative identification methodology. The first criterion in the identification of the alternatives was nearness to Barksdale and Dyess AFBs. The overlapping area within approximately 600 nm was defined as the search area for identifying the alternatives. This distance represents the maximum extent that a B-52 or B-1 aircraft conducting a training sortie could travel and still achieve the defined training goal while minimizing transit time (refer to Section 1.3.3). Individual units at bases must complete a specified number and type of sorties based on the mission, training program, available aircraft, and personnel. These sorties must be completed using the allocated flying hours based on funding from Congress. Dividing the number of required sorties into the flying hours yields an average sortie duration. The average sortie durations for the B-52 from Barksdale AFB and the B-1 from Dyess AFB are 4.6 and 4.3 hours, respectively. In that time, the bombers must take off, conduct training, and return to base. This allows the bombers to fly about 600 nm each way (out to train and back to base) while accomplishing training. As such, the search area for alternatives needed to fall within the overlapping area encompassed by approximately 600 nm from Barksdale and Dyess AFBs (see Appendix A for further discussion). After definition of the search area, five steps were performed to identify final candidate alternatives (Figure 2.1-2).

Step 1. Identification of existing MTRs within approximately 600 nm: Since the focus of this effort was to use existing airspace assets to the maximum extent feasible, the alternative identification process first considered existing MTRs within



The Air Force examined 72 routes within approximately 600 nm of Barksdale and Dyess AFBs to choose the three action alternatives carried forward.

RBTI Alternative Identification Process **Figure 2.1-2**

the search area. This step in the identification process yielded 72 existing MTRs within the 3.3 million-square-mile search area consisting of the overlapping zone within approximately 600 nm of the two bases.

Step 2. Terrain Variability MTR Classification: Sufficient high to moderate terrain variability along the MTR for performing low-altitude maneuvers is critical for realistic training. Terrain variability ranking included the combination of slope variability and elevation differences. Based on this analysis and modeling, three classes of terrain variability (low, moderate, and high) were defined, as discussed above and in Appendix A.

Step 3. Identification and Evaluation of Terrain Variability for Individual MTRs: To determine those MTRs that could meet the training objectives under RBTI, all 72 routes within the study area were analyzed using the terrain variability model. The analysis yielded 20 MTRs that possessed moderate or high terrain variability. A total of 52 MTRs offered only low terrain variability, excluding them from further consideration.

Step 4. Refinement of Possible Candidate Alternatives: In this step, the process shifted from a focus solely on MTRs to developing candidate alternatives consisting of a combination of linked training components. The analysis evaluated each of the 20 MTRs according to the following hierarchy of required characteristics:

a) The MTRs must be more than 300 nm long in order to provide adequate flight time for all training elements to be accomplished. All 20 MTRs met this characteristic.
b) The MTRs must overlie at least a total of 240 nm of contiguous high or moderate terrain variability. A total of 12 MTRs offered the required extent of terrain variability.
c) The location for the Electronic Scoring Site associated with the MTR requires unimpeded, low angle line-of-sight for 50 nm along the MTR. As such, a 50-nm zone of contiguous low terrain variability must follow the section of high or moderate terrain variability. Four MTRs met this requirement.

Step 5. Final Development of Alternatives: The Air Force developed three alternatives, using the most operationally suitable elements of the four candidate alternatives from Step 4 as the framework. One MTR derived in Step 4 was eliminated because it was essentially identical to one of the other alternatives considered. The three alternatives developed by the Air Force included:

The action alternatives developed by the Air Force maximized the use of existing airspace.

- General locations for a set of MTR emitters and an MTR Electronic Scoring Site;
- A zone in which an en route Electronic Scoring Site could be located;
- MOA airspace and general locations for a set of five MOA emitters; and
- Connection of the MTR to a MOA.

The final candidate alternatives included MTRs that were already linked or near one another to maximize the amount of existing airspace in an alternative. Combining two or more routes also permitted inclusion of those segments from each route that best supported training objectives. The alternatives also linked MTRs with existing MOAs, although some modification of the MOAs was necessary to meet the size characteristic of 40 nm by 80 nm.

2.1.3 Alternatives Considered but not Carried Forward

Application of the alternative identification methodology resulted in the elimination of 69 MTRs. These 69 MTRs were not carried forward for further detailed analysis.

Additional potential alternatives, including concepts raised during scoping, were evaluated but either did not meet the fundamental purpose and need for RBTI or were not reasonable alternatives. The following describes why each of these concepts was not carried forward for detailed analysis in this EIS.

Increase Funding to Provide More Flight Hours: Members of the public have suggested that the Air Force consider increased funding as an alternative to implementing RBTI. It was reasoned that increased funding would allow increases in average sortie durations, thereby permitting bomber aircrews from Barksdale and Dyess AFBs to fly to distant training assets more frequently. In this way, according to the public commentors, development and use of RBTI would not be needed.

This concept does not represent a reasonable alternative for several reasons. First, Congress and the President set funding levels for the Air Force through the federal budget process. Setting these levels involves accounting for numerous factors and variables outside the control of the Air Force. Second, longer average sortie durations would still use large amounts of transit time that do not contribute to achieving training goals. Third, longer durations would affect aircraft maintenance and associated costs. Maintenance activities on aircraft are phased according to hours of use. With longer average sortie durations, aircraft would require phased maintenance more frequently relative to the combat training time achieved during the sorties. Lastly, longer duration sorties reduce aircrew availability.

Use of Simulators: Use of nonflying simulators represented an often repeated suggestion to provide the training sought in implementing RBTI. While simulators have improved over the years and represent a valuable training aid, they cannot meet the bomber aircrew training requirements and do not comprise a reasonable alternative warranting further analysis.

Simulators cannot provide the training or physical challenges aircrews need to be ready for combat.

Simulators lack the realism of actual flying. Aircrews do not receive the same physical or training challenges in simulators that occur in actual flight. Simulators cannot replicate the problems and teamwork associated with flying with other aircraft. Using simulators also excludes other parts of the Air Force team essential in completing actual missions, including maintenance, supply, and weather analysis. In summary, relying on simulators for the type of training proposed under RBTI would not fulfill the need as described in Chapter 1.

Move Bombers: Through public involvement, commentors suggested relocating the bombers from Barksdale and Dyess AFBs to other bases nearer to assets that might meet training needs. As noted in Chapter 1, only two ESS systems exist that might meet those needs: Belle Fourche in South Dakota and Granite Peak in Utah. Relocation of the bombers to bases near these ESS systems does not, however, represent a reasonable alternative. Congress and the President, through the Base Realignment and Closure process, made the decision to base additional bombers at Barksdale and Dyess AFBs. Shifting the bombers to a new location would require similar authorization or basing decisions outside the scope of this analysis.

2.1.4 Alternatives Carried Forward for Detailed Analysis

Application of the alternative identification methodology (see Section 2.1.2) defined three action alternatives in addition to the No-Action Alternative:

- Alternative A: No-Action
- Alternative B: IR-178/Lancer MOA
- Alternative C: IR-178/Texon MOA
- Alternative D: IR-153/Mt. Dora MOA

As its designation implies, Alternative A: No-Action would not involve changes to the current situation. Alternatives B, C, and D would use existing airspace to the degree feasible but would require modifications to existing airspace structure and use, as well as establishment of ground-based assets. Each of the three action alternatives meet the criteria used in the alternative identification process, including distance from the bases, MTR length, 240 nm high to moderate contiguous terrain variability, lands suitable to accommodate electronic emitters, and locations for the Electronic Emitter Sites. For a few segments (or parts) of the MTRs in Alternatives B, C, and D, the proposed width is less than the desired 8 nm. These smaller route widths, which do not impede the training value of the MTR, were defined for both operational and environmental reasons.

MTRs are composed of segments that vary in length and width; segments are given letter designations like AB.

2.1.5 Identification of the Preferred and Environmentally Preferred Alternatives

Identification of the preferred and the environmentally preferred action alternative used independent processes (see Appendix K). Both processes involved review of the technical and/or environmental analysis, as well as public and agency comments on the draft EIS. For the preferred alternative, the Air Force first conducted a coarse screening followed by a fine screening. These screenings indicated that Alternatives B and C provide somewhat more combat training time than Alternative D. Alternative D has a greater potential for training to be constrained by weather. The northeastern New Mexico area, where Alternative D is located, is prone to afternoon thunderstorms during summer months and severe snowstorms during the winter months. Further, the FAA indicated that the proposed Texon MOA in Alternative C could significantly impair certain types of civil and commercial aviation traffic, require rigid management, and limit operational flexibility. For these reasons, the Air Force has identified Alternative B as the preferred alternative.

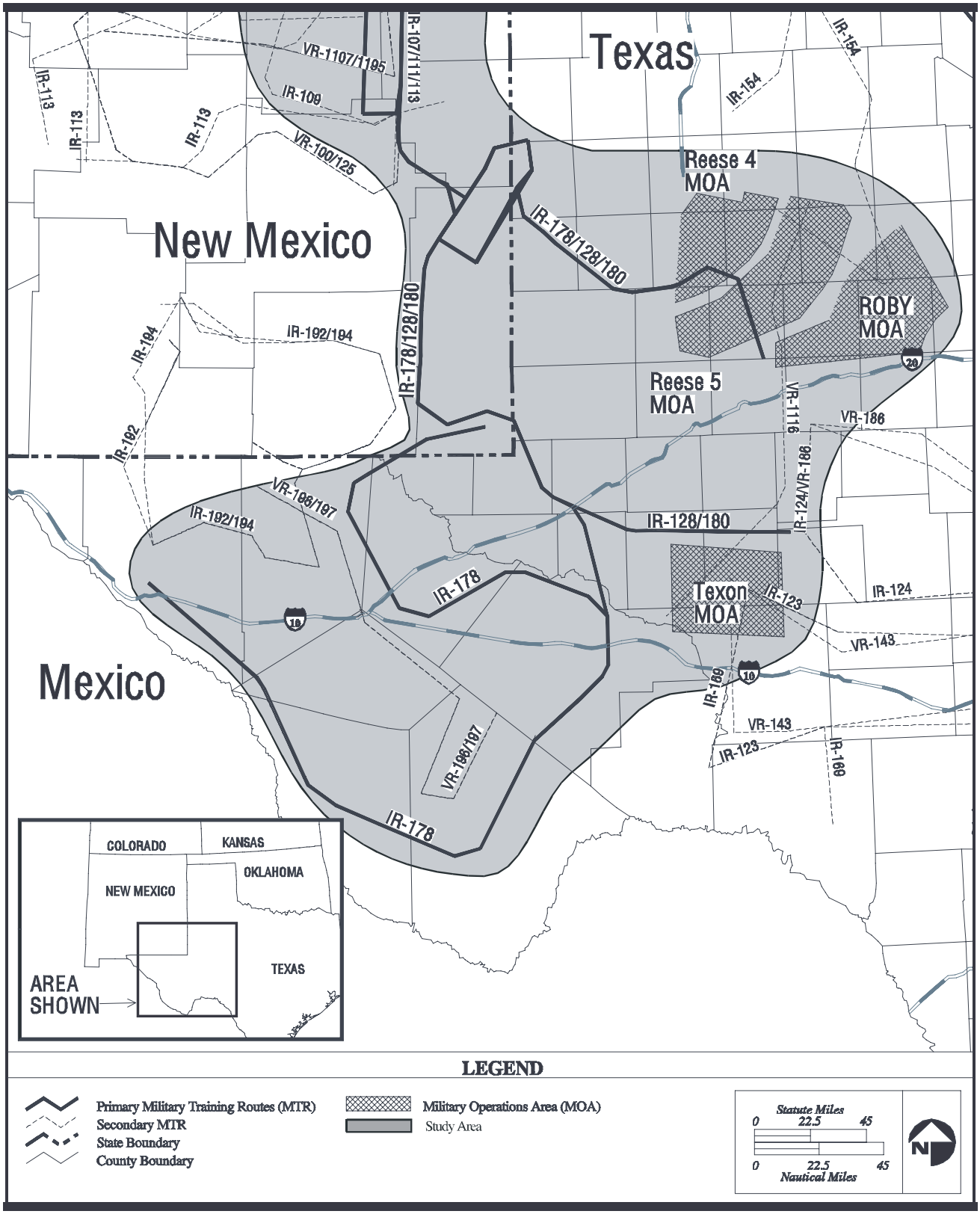
Coarse and fine screenings were used to identify the environmentally preferred action alternative. At the coarse level, the analysis demonstrated Alternative D would result in impacts whose magnitude exceeded those defined for Alternatives B and C. Fine screening revealed that Alternative B would result in somewhat less potential for environmental impacts than Alternative C. These factors led the Air Force to identify Alternative B as the environmentally preferred alternative.

2.2 DESCRIPTION OF STUDY AREA

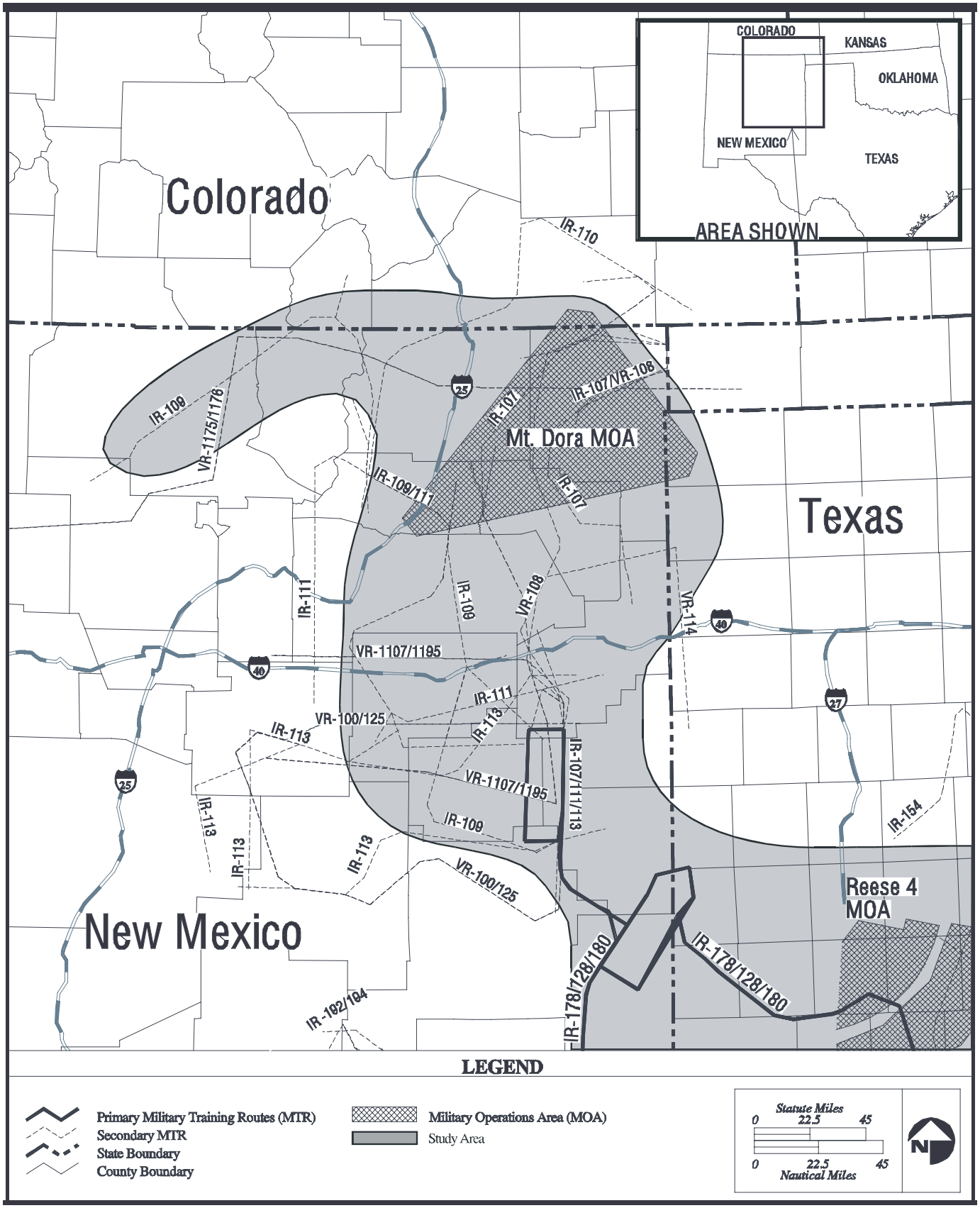
The study area for the RBTI proposal extends from western Texas to northeastern New Mexico (Figures 2.2-1a and 2.2-1b), and includes geographically separated locations in Colorado and Arkansas (Figure 2.2-2). The study area provides an overall context for portraying general military aircraft activities (Table 2.2-1) that could affect or be affected by RBTI alternatives. The definition of the study area derives from a combination of the areas potentially affected under each of the four alternatives, including the No-Action Alternative. These potentially affected areas are formed by primary airspace (i.e., MTRs and MOA) used by the bombers from Barksdale and Dyess AFBs, as well as secondary airspace that interacts (i.e., overlaps or intersects) with primary airspace. The following summarizes the affected environment within the study area for each alternative:

The study area for RBTI includes the locations of the No-Action and three action alternatives.

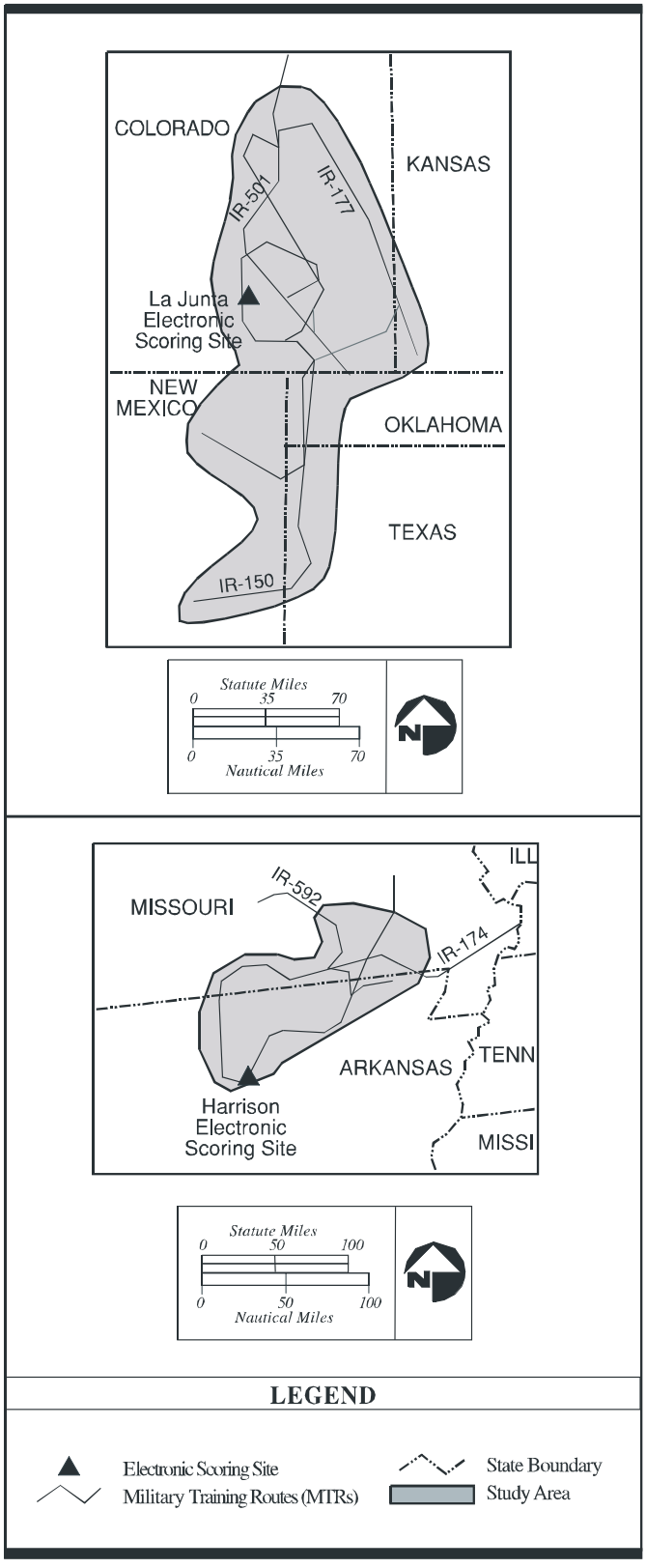
- Alternative A: No-Action. Based on primary airspace, the No-Action Alternative focuses on west Texas, centered on the existing MTR designated as IR-178. This alternative's primary airspace also extends into New Mexico (IR-128/180) and includes the airspace associated with the Harrison and La Junta Electronic Scoring Sites in Arkansas and Colorado, respectively. Within the Texas and New Mexico portion of the affected area, many secondary airspace units interact with primary airspace and form a part of the affected area (refer to Figures 2.2-1a and 2.2-1b).



RBTI Study Area: Texas **Figure 2.2-1a**



RBTI Study Area: New Mexico **Figure 2.2-1b**



RBTI Study Area: Harrison, Arkansas and La Junta, Colorado

Figure 2.2-2

Table 2.2-1
Baseline Airspace Use in Study Area

		Bomber Aircraft Annual Sortie-Operations			*Other Aircraft Annual Sortie-Operations*						
Airspace Units	*Class*	*B-1s: Dyess*	*B-52s: Barksdale*	*Bombers: Other Bases*	*Air Force Fighter Aircraft* [1]	*Navy Aircraft* [2]	*GAF Aircraft* [3]	*RSAF Aircraft* [4]	*Trainer Aircraft* [5]	*Other Aircraft* [6]	*Total*
MTRs											
VR-100/125	S				964	8	100	188	1	4	1,265
VR-108	S				97	25		18	3		143
VR-114	S				805			146	56	7	1,014
VR-143	S			100	50	400			70		620
VR-186	S			100	50	400			625		1,175
VR-196/197	S								512		512
VR-1107/1195	S				1,050						1,050
VR-1116	S			30							30
VR-1175/1176	S			50							50
IR-107	S			10	71			13	10		104
IR-109	S			50	188	28		33		11	310
IR-110	S										0
IR-111	S				80		9	14	18	9	130
IR-113	S				110	170		20			300
IR-123	S			1	1	35			13		50
IR-124	S			10	10	20			40	60	140
IR-128/180	**P**	**25**	**25**						**150**		**200**
IR-150	**P**	**200**	**80**								**280**
IR-154	S				10					60	70
IR-169	S								465		465
IR-174	**P**	**40**	**25**	**121**							**186**
IR-177/501	**P**	**275**	**150**								**425**
IR-178[7]	**P**	**805**	**555**	**150**	**50**						**1,560**
IR-192/194	S						637			21	658
IR-592	**P**		**190**	**317**						**3**	**510**
MOAs											
Reese 4	**P**	**3**									**3**
Reese 5	**P**	**3**									**3**
Roby	**P**	**100**									**100**
Texon	S				15	30			40	15	100
Mt. Dora	**P**	**6**	**5**		**321**	**4**		**33**		**10**	**379**

Class: P = Primary airspace used by B-1s from Dyess AFB and/or B-52s from Barksdale AFB.
Class: S = Secondary airspace unit intersects with airspace unit used by B-1s from Dyess AFB and/or B-52s from Barksdale.
VR = Visual Route
IR = Instrument Route
[1] Consists predominantly of F-16s
[2] Consists of F-14s and F-18s
[3] German Air Force Tornados at Holloman AFB
[4] Republic of Singapore F-16s at Cannon AFB
[5] T-38 and T-1 trainers
[6] Includes primarily transport aircraft such as C-141s and C-17s
[7] Total sortie-operations represent maximum for segments of MTR; other segments are used less.

- Alternative B: IR-178/Lancer MOA. The affected area for Alternative B is very similar to that described for Alternative A: No-Action, with the exception of proposed airspace changes to create the Lancer MOA/ATCAA. The affected area also includes airspace associated with the Harrison and La Junta Electronic Scoring Sites.

- Alternative C: IR-178/Texon MOA. With the exception of the proposed modifications to the existing Texon MOA (instead of establishment of the

Lancer MOA/ATCAA), the affected area for Alternative C matches that described for Alternatives A and B. An ATCAA would be established atop the proposed Texon MOA.

- Alternative D: IR-153/Mt. Dora MOA. Alternative D is focused in northeastern New Mexico and centers on the proposed MTR designated IR-153 and the Mt. Dora MOA/ATCAA. Secondary airspace associated with Alternative D differs from that in Alternatives A, B, and C. Reduced use of primary airspace associated with the Harrison and La Junta Electronic Scoring Sites would continue, so this airspace would remain part of the affected area.

Changes resulting from the alternatives are evaluated against the baseline. Baseline conditions include both current operations and already approved actions that would occur at the same time as the proposed RBTI.

Existing airspace in the study area already receives considerable use. Table 2.2-1 above presents baseline sortie-operations for the primary and secondary airspace within the study area (also see Appendix B). Baseline sortie-operations were derived by incorporating current and approved impending actions in the study area as described below. Approved impending actions would be implemented by the time RBTI would start. Baseline sortie-operations include activities by all aircraft users, irrespective of organization or service affiliation.

Actual Sortie-Operations Fiscal Year (FY) 97: Actual counts of aircraft activities based on scheduling and usage information maintained by airspace managers formed the foundation for annual baseline sortie-operations. Airspace managers at Cannon AFB, Barksdale AFB, Dyess AFB, Tinker AFB, Holloman AFB, and others supplied these data. Sortie-operations by all aircraft types (e.g., B-1s, B-52s, F-16s, F-18s) documented as users of primary or secondary airspace are reflected in the FY 97 counts.

A sortie-operation is a way to count airspace use. A sortie-operation is the use of any part of one specific MTR or MOA by one aircraft.

German Air Force (GAF) Training Activities: The GAF has been conducting sortie-operations within airspace in the study area since 1992. These sortie-operations, as conducted by GAF F-4 and Tornado aircraft, form part of the FY 97 data. In addition, the total baseline sortie-operations used in this EIS account for GAF flight activities resulting from the decision to beddown 30 additional GAF Tornados at Holloman AFB. This decision also affects secondary airspace in the study area. Use of IR-102/141, as proposed in the Environmental Assessment on Airspace Modifications to Support Units at Holloman AFB (USAF 1997a), has been eliminated by the Air Force. Other than activity on IR-102/141, the GAF sortie-operations were integrated into the baseline for RBTI, since the action is anticipated to be fully implemented by the time RBTI would be established.

Force Structure and Foreign Military Sales at Cannon AFB: As part of the Department of Defense (DOD) Quadrennial Defense Review, Cannon AFB, New Mexico, was selected to undergo a conversion of one type of F-16s for another type, and to support F-16 training for Republic of Singapore Air Force (Foreign Military Sales) personnel. These changes resulted in the addition of 12 F-16 aircraft at Cannon AFB and increases in sortie-operations in secondary airspace within the RBTI study area. An Environmental Assessment (USAF 1998b) was prepared. A Finding of No Significant Impact was signed for this action which was initially implemented in Fall 1998. Projected Cannon AFB F-16 sortie-operations in the affected secondary airspace were incorporated into the RBTI baseline since they have begun and would be fully implemented before any action relating to RBTI would be taken.

Force Structure Changes at Dyess AFB: As documented in an Environmental Assessment (USAF 1996) and Finding of No Significant Impact, addition of eight more B-1s to Dyess AFB was approved in 1994. This action, which is expected to be implemented by 2000, generates sortie-operations in primary airspace that are incorporated into the baseline for the RBTI study area.

2.3 ALTERNATIVE A: NO-ACTION

Under NEPA, "No-Action" means that a proposed action would not take place, and the resulting environmental effects from taking no action would be compared with the effects of allowing the proposed activity to go forward. Under Alternative A: No-Action, the Air Force would not establish an ESS system in proximity to Barksdale and Dyess AFBs. No additional airspace, emitter, or scoring sites would be developed and no airspace would be eliminated. Bombers from Barksdale and Dyess AFBs would continue to use existing Electronic Scoring Sites at Harrison and La Junta, in addition to the remote training assets throughout the U.S. MTR and MOA use would continue unchanged relative to baseline conditions (refer to Table 2.2-1 and Section 2.2).

2.3.1 Airspace and Flight Operations

The affected area for Alternative A would comprise a subset of the primary and secondary airspace (MOAs and MTRs) within the study area in Texas and New Mexico (Figure 2.3-1) and would include the MTRs associated with the Harrison, Arkansas, and La Junta, Colorado, and Electronic Scoring Sites (refer to Figure 2.2-2). Aircrews from Barksdale and Dyess AFBs would not use secondary airspace in the study area; other Air Force, Navy, and National Guard, as well as GAF and Republic of Singapore aircrews, use the secondary airspace.

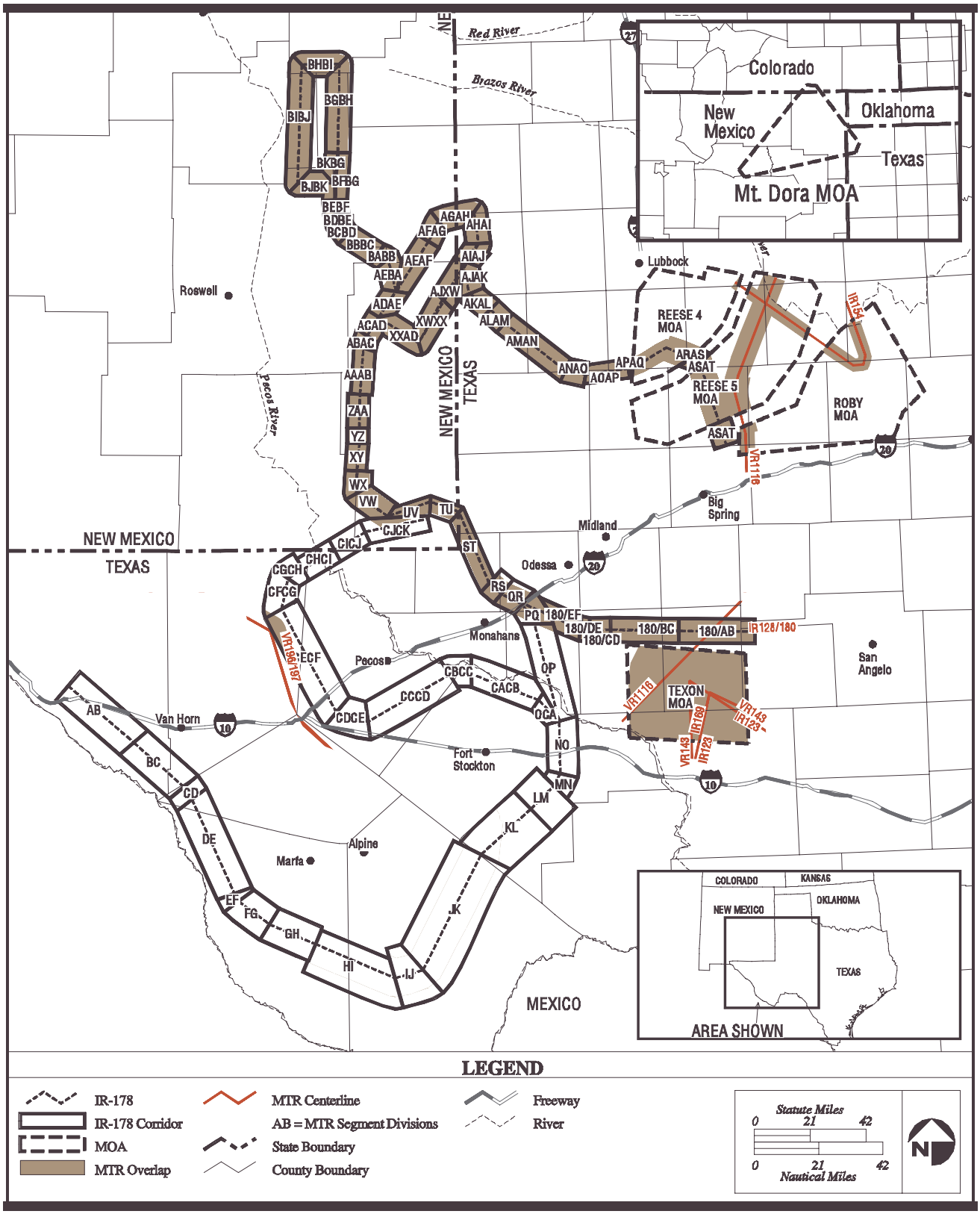
Sortie-operations (Table 2.3-1) on MTRs by Barksdale and Dyess AFBs would continue to focus on IR-178 (Texas and New Mexico), with lesser emphasis on the routes associated with the Harrison (IR-174, IR-592) and La Junta (IR-150, IR-177/501) Electronic Scoring Sites. MOA use in the study area centers on the Roby MOA, but this use is limited with only 100 sortie-operations per year. Use of the three other primary airspace MOAs (Reese 4, Reese 5, and Mt. Dora) is 11 or fewer bomber sortie-operations per year.

Primary airspace consists of those MTRs and MOAs used by bombers from Barksdale and Dyess AFBs. Secondary airspace includes MTRs and MOAs that overlap or intersect with primary airspace and are not used by Barksdale and Dyess AFBs.

Of the primary MTRs in the affected area for Alternative A, IR-178 receives the most annual use by the bombers. This use differs by segment, which is a defined portion of the corridor (e.g., AB or CD) with a length, width, as well as floor and ceiling altitudes (see Appendix C). A total of 71 segments comprise IR-178 for Alternative A. Within IR-178, the most annual sortie-operations (1,560) occur in segments AB to LM (Table 2.3-2), whereas other segments receive much less use. B-1s and B-52s account for 97 to 100 percent of the sortie-operations in all segments (see Appendix B). F-16 fighters also use segments AB to LM, but only account for about 3 percent of total sortie-operations.

Other primary and secondary MTRs overlap or intersect with IR-178. Overlapping applies when two or more MTRs or MOAs coincide or mostly coincide horizontally and vertically (Figure 2.3-2). For IR-178, segments PQ to BIBJ overlap completely with IR-128/180. Intersections occur when one or more MTRs cross a part of another MTR, like IR-178 (Figure 2.3-3). In segments CECF and CFCG, VR-196/197 intersects IR-178.

These overlapping and intersecting MTRs receive use distinct from IR-178. Where these overlaps and intersections occur, the total sortie-operations for that finite area include the combined use of IR-178 and use of the overlapping or intersecting MTR. For example, in segments ZAA to AGAH of IR-178, 765 baseline sortie-operations occur annually; IR-128/180 overlaps this segment and supports 200 sortie-operations per year. Considered together, 965 sortie-operations fly through the area defined by segments ZAA to AGAH of IR-178. Table 2.3-2 presents the total sortie-operations for each segment of IR-178.



Alternative A: No-Action

Figure 2.3-1

2.0 Description of Proposed Action and Alternatives: Alternative A

Table 2.3-1
Alternative A: No-Action (Baseline) Airspace Use

		Bomber Aircraft Annual Sortie-Operations			*Other Aircraft Annual Sortie-Operations*						
Airspace Units	*Class*	*B-1s: Dyess*	*B-52s: Barksdale*	*Bombers: Other Bases*	*Air Force Fighter Aircraft*[1]	*Navy Aircraft*[2]	*GAF Aircraft*[3]	*RSAF Aircraft*[4]	*Trainer Aircraft*[5]	*Other Aircraft*[6]	*Total*
MTRs											
VR-100/125	S				964	8	100	188	1	4	1,265
VR-108	S				97	25		18	3		143
VR-114	S				805			146	56	7	1,014
VR-143	S			100	50	400			70		620
VR-186	S			100	50	400			625		1,175
VR-196/197	S								512		512
VR-1107/1195	S				1,050						1,050
VR-1116	S			30							30
VR-1175/1176	S			50							50
IR-107	S			10	71			13	10		104
IR-109	S			50	188	28		33		11	310
IR-110	S										0
IR-111	S				80		9	14	18	9	130
IR-113	S				110	170		20			300
IR-123	S			1	1	35			13		50
IR-124	S			10	10	20			40	60	140
IR-128/180	**P**	**25**	**25**						**150**		**200**
IR-150	**P**	**200**	**80**								**280**
IR-154	S				10					60	70
IR-169	S								465		465
IR-174	**P**	**40**	**25**	**121**							**186**
IR-177/501	**P**	**275**	**150**								**425**
IR-178[7]	**P**	**805**	**555**	**150**	**50**						**1,560**
IR-192/194	S						637			21	658
IR-592	**P**		**190**	**317**						**3**	**510**
MOAs											
Reese 4	**P**	**3**									**3**
Reese 5	**P**	**3**									**3**
Roby	**P**	**100**									**100**
Texon	S				15	30			40	15	100
Mt. Dora	**P**	**6**	**5**		**321**	**4**		**33**		**10**	**379**

Class: P = Primary airspace used by B-1s from Dyess AFB and/or B-52s from Barksdale AFB.
Class: S = Secondary airspace unit intersects with airspace unit used by B-1s from Dyess AFB and/or B-52s from Barksdale AFB.
VR = Visual Route
IR - Instrument Route
[1] Consists predominantly of F-16s
[2] Consists of F-14s and F-18s
[3] German Air Force Tornados at Holloman AFB
[4] Republic of Singapore F-16s at Cannon AFB
[5] T-38 and T-1 trainers
[6] Includes primarily transport aircraft such as C-141s and C-17s
[7] Total sortie-operations represent maximum for segments of MTR; other segments are used less.

2.0 Description of Proposed Action and Alternatives: Alternative A

Table 2.3-2
Alternative A: No-Action Existing Annual Sortie-Operations IR-178[1]

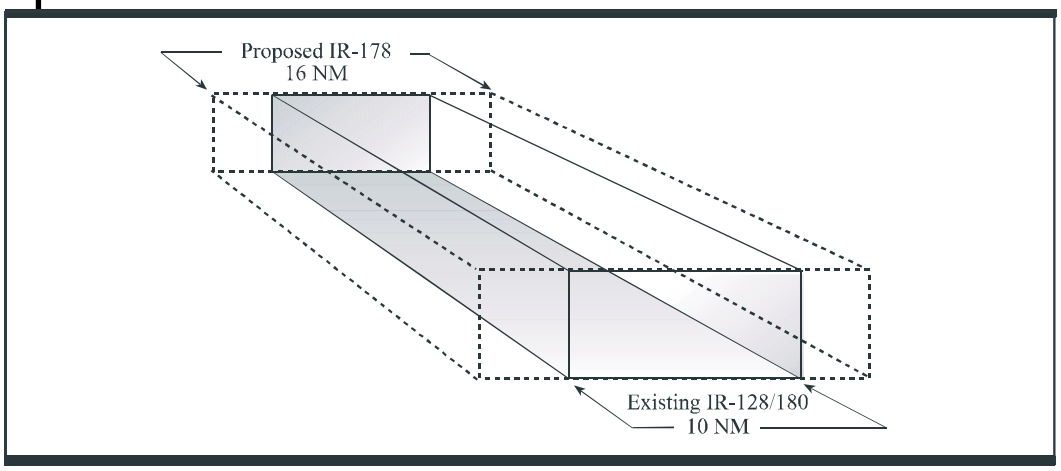
IR-178		*Secondary MTR*		*Total*[2]	*IR-178*		*Secondary MTR*		*Total*
Segment	*Sortie-Operations*	*MTR*	*Sortie-Operations*		Segment	*Sortie-Operations*	*MTR*	*Sortie-Operations*	
AB	1,560	not applicable	not applicable	1,560	AKAL	65	IR-128/180	200	265
BC	1,560	not applicable	not applicable	1,560	ALAM	65	IR-128/180	200	265
CD	1,560	not applicable	not applicable	1,560	AMAN	65	IR-128/180	200	265
DE	1,560	not applicable	not applicable	1,560	ANAO	65	IR-128/180	200	265
EF	1,560	not applicable	not applicable	1,560	AOAP	65	IR-128/180	200	265
FG	1,560	not applicable	not applicable	1,560	APAQ	65	IR-128/180	200	265
GH	1,560	not applicable	not applicable	1,560	AQAR	65	IR-128/180	200	265
HI	1,560	not applicable	not applicable	1,560	ARAS	65	IR-128/180	200	265
IJ	1,560	not applicable	not applicable	1,560	ASAT	65	IR-128/180	200	265
JK	1,560	not applicable	not applicable	1,560	AI1XX	0	IR-128/180	200	200
KL	1,560	not applicable	not applicable	1,560	AE1BA	125	IR-128/180	200	325
LM	1,560	not applicable	not applicable	1,560	BABB	125	IR-128/180	200	325
MN	955	not applicable	not applicable	955	BBBC	125	IR-128/180	200	325
NO	955	not applicable	not applicable	955	BCBD	125	IR-128/180	200	325
OP	765	not applicable	not applicable	765	BDBE	125	IR-128/180	200	325
PQ	765	IR-128/180[3]	200	965	BEBF	125	IR-128/180	200	325
QR	765	IR-128/180	200	965	BFBG	125	IR-128/180	200	325
RS	765	IR-128/180	200	965	BGBH	125	IR-128/180	200	325
ST	765	IR-128/180	200	965	BHBI	125	IR-128/180	200	325
TU	765	IR-128/180	200	965	BIBJ	125	IR-128/180	200	325
UV	765	IR-128/180	200	965	BJBK	125	IR-128/180	200	325
VW	765	IR-128/180	200	965	BKBG1	0	IR-128/180	200	200
WX	765	IR-128/180	200	965	AIXW	0	IR-128/180	200	200
XY	765	IR-128/180	200	965	XWXX	0	IR-128/180	200	200
YZ	765	IR-128/180	200	965	O1CA	190	not applicable	not applicable	190
ZAA	765	IR-128/180	200	965	CACB	190	not applicable	not applicable	190
AAAB	765	IR-128/180	200	965	CBCC	190	not applicable	not applicable	190
ABAC	765	IR-128/180	200	965	CCCD	190	not applicable	not applicable	190
ACAD	765	IR-128/180	200	965	CDCE	190	not applicable	not applicable	190
ADAE	765	IR-128/180	200	965	CECF	190	VR-196/197	512	702
AEAF	65	IR-128/180	200	265	CFCG	190	not applicable	not applicable	190
AFAG	65	IR-128/180	200	265	CGCH	190	IR-192/194	658	848
AGAH	65	IR-128/180	200	265	CHCI	190	not applicable	not applicable	190
AHAI	65	IR-128/180	200	265	CICJ	190	not applicable	not applicable	190
AIAJ	65	IR-128/180	200	265	CJCK	190	not applicable	not applicable	190
AJAK	65	IR-128/180	200	265					

[1] See Appendix B for break-out of sortie-operations by aircraft type.

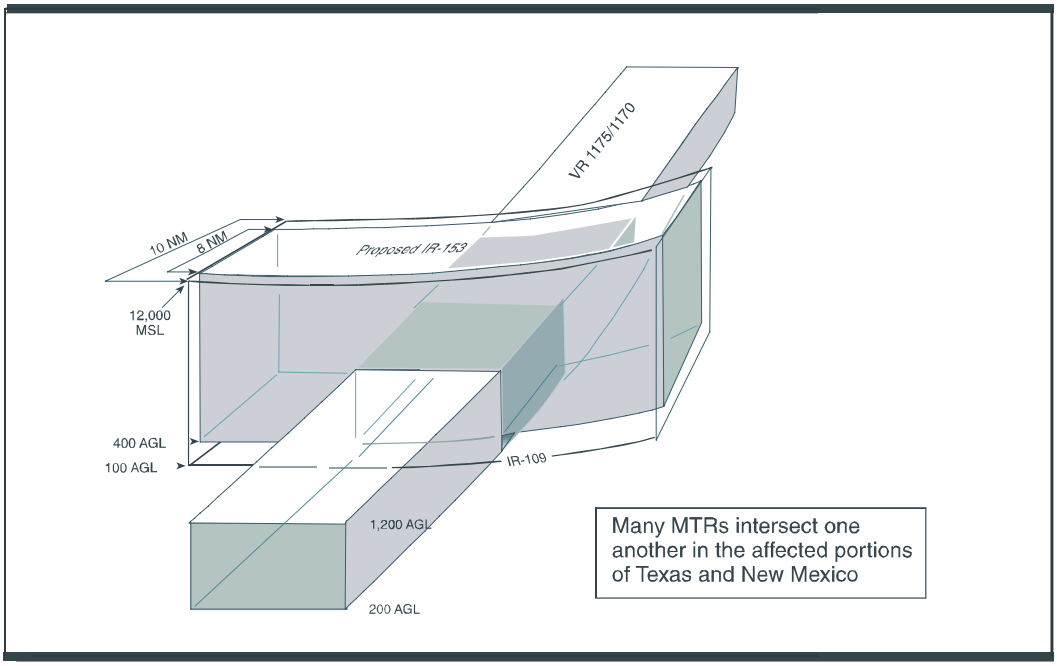
[2] Total represents the sortie-operations flown on the primary MTR (IR-178) plus those flown on overlapping or intersecting segments of other MTRs.

[3] IR-128/180 is a primary MTR under Alternative A.

See Figure 2.3-1 for segment locations.



Illustrative Representation of Overlapping MTR Airspace **Figure 2.3-2**



Illustrative Representation of Intersecting MTRs **Figure 2.3-3**

Within the primary MTRs, aircraft would use altitudes between 300 and 3,000 feet AGL (Table 2.3-3). On average, all aircraft types including bombers from Barksdale and Dyess AFBs fly most of the time at 500 to 1,000 feet AGL in the primary MTRs. For B-52s, average flight altitudes can vary with changes to mission requirements. Two altitude regimes for B-52s can apply depending upon these requirements. In one regime, B-52s use altitudes between 300 and 1,000 feet AGL about 85 percent of the time. In the other regime, B-52s avoid use of altitudes from 300 to 1,000 feet AGL in the MTRs, with flight activity occurring at 1,000 to 3,000 feet AGL.

In all the primary MOAs, except the Mt. Dora MOA, bombers conduct sortie-operations above 3,000 feet AGL all the time. The floors (lower altitude limits) of the primary airspace MOAs are higher than 3,000 feet AGL. In the Mt. Dora MOA, F-16 aircraft use altitudes from 1,500 to 3,000 feet AGL an average of 45 percent of the time. The few (11) annual bomber sortie-operations in the Mt. Dora MOA also use the full range of available altitudes. In all primary MOAs, 45 percent of B-1 flight activity occurs above 15,000 feet AGL, and 60 to 80 percent of B-52 activity

Table 2.3-3
Altitude Distribution in MTRs and MOAs

MTRs: Percentage of Time				
Altitude (Feet AGL)	B-1	B-52[1]		Other Aircraft
100-299	0%	0%	0%	0%
300-499[2]	5%	5%	0%	0%
500-999	80%	80%	0%	90%
1,000-1,999	10%	10%	70%	7%
2,000-2,999	5%	5%	30%	3%
3,000 and above	0%	0%	0%	0%
MOAs: Percentage of Time				
Altitude (Feet AGL)	B-1	B-52[1]		Other Aircraft
100-2,999	0%	0%	0%	0%[3]
3,000-4,999	40%	30%	15%	20%
5,000-9,999	20%	10%	5%	60%
10,000-14,999	0%	0%	0%	20%
15,000-19,999	5%	0%	0%	0%
20,000 and above	35%	60%	80%	0%

[1] Average altitude use for B-52s would vary with mission requirements. Two altitude regimes can apply to B-52 activities.

[2] Only selected aircrews are authorized to fly below 500 feet AGL on specified segments. Numbers presented are averages; not every mission would include flight below 500 feet AGL.

[3] In the Mt. Dora MOA only, other aircraft use from 1,500 to 3,000 feet AGL about 45% of the time. This is not included in the overall calculations since the three other primary airspace MOAs involve no flight below 3,000 AGL.

B-52s can fly MTRs using two altitude regimes. In one regime, they fly between 300 and 1,000 feet AGL about 85 percent of the time. In the other, B-52s fly only above 1,000 feet AGL.

is above 20,000 feet AGL. As in the MTRs, B-52 use of the MOAs can involve two altitude regimes, with one employing higher altitudes to a greater extent.

In a MOA, bombers would conduct training activities for approximately 30 to 45 minutes at airspeeds ranging from 360 to 550 nm/hour. About five training periods would be scheduled per weekday. Within the MTRs, B-1 and B-52 aircrews fly, on average, 420 to 550 and 360 nm/hour, respectively. These represent cruising speeds used for training. Depending upon the specific training mission, aircrews could fly all or part of the MTR.

Training activities in the primary and secondary MTRs and MOAs would continue to be conducted during the day and night (Table 2.3-4). For purposes of environmental analysis, day extends from 7:00 AM to 10:00 PM, and night spans from 10:00 PM to 7:00 AM. B-1s and B-52s, respectively, fly 80 and 85 percent of the time during the day; other aircraft using the airspace fly 93 to 99 percent of the time during the day. Night vision goggles would normally be used by aircrews during night operations. Flight activities by bombers from Barksdale and Dyess AFBs would occur 260 days per year. Training is planned for weekdays, although bad weather and special training requirements may necessitate occasional weekend flights.

Flight activities in MOAs and MTRs occur predominantly during weekdays.

Daily flight operations by bombers on an MTR such as IR-178 commonly involve flying with two aircraft of the same type. If one aircraft trails the other in formation, they are separated by 3 to 9 nm; when they fly abreast of one another in formation, 1 to 3 nm separates them. On a typical day, two to three formations of two B-1s or B-52s use IR-178. Commonly, flights of two aircraft schedule the MTR for an hour and use the hours between 9:00 and 11:00 AM, 1:00 to 3:00 PM, and 7:00 to 8:00 PM (winter) or 9:00 to 10:00 PM (summer). Throughout the day, single bombers and other aircraft could also fly on the MTR.

Table 2.3-4
Percent of Day vs. Night Flight Activities

	Bomber Aircraft		*Other Airspace Users*					
Day vs. Night	*B-1s*	*B-52s*	*Air Force Fighter Aircraft* [1]	*Navy Aircraft* [2]	*GAF Aircraft* [3]	*RSAF Aircraft* [4]	*Trainer Aircraft* [5]	*Other Aircraft* [6]
Day (7:00 AM-10:00 PM)	80%	85%	98%	99%	93%	95%	99%	99%
Night (10:00 PM-7:00 AM)	20%	15%	2%	1%	7%	5%	1%	1%

[1] Consists predominantly of F-16s
[2] Consists of F-14s and F-18s
[3] German Air Force Tornados at Holloman AFB
[4] Republic of Singapore F-16s at Cannon AFB; 5% night activity applies to MOAs only; no night activity on MTRs
[5] T-38 and T-1 trainers
[6] Includes primarily transport aircraft such as C-141s and C-17s

When flying, aircrews comply with FAA avoidance rules. Aircraft must avoid congested areas of a city, town, or settlement or any open-air assembly of people by 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft. Outside congested areas, aircraft must avoid persons, vessels, vehicles, or structures by 500 feet.

2.3.2 Use of Electronic Scoring Sites

Under the No-Action Alternative, existing ground operations at the Harrison and La Junta Electronic Scoring Sites would continue at current levels, along with the staffing of those sites. There are about 30 employees at the Harrison Electronic Scoring Site and 31 employees at the La Junta Electronic Scoring Site. Both sites contain buildings providing administration, maintenance, and recreation space for assigned personnel and equipment. Each site contains a storage van connected to an assigned radar and electronic countermeasures equipment van. Septic systems provide waste treatment for the sites. Power, telephone, and water lines are adjacent to the sites. Operations take place in two shifts, mostly during weekdays. Most activities occur from midmorning to early evening, based on flight schedules. Ground operations at each of these facilities would remain the same under the No-Action Alternative.

2.4 ACTION ALTERNATIVES

RBTI has three Action Alternatives: B, C, and D. B is the preferred and environmentally preferred alternative.

The proposed action for RBTI is to provide an ESS system with airspace and ground-based training facilities to conduct training operations within approximately 600 nm from Dyess AFB, Texas, and Barksdale AFB, Louisiana. There are three action alternatives that could fulfill the need defined under the proposed action. All three RBTI action alternatives (Alternatives B, C, and D) would involve the same set of elements and subelements. These are the focus for the impact analysis presented in Chapter 4. The differences among the three action alternatives, as described in Sections 2.4.2 through 2.4.4, consist primarily of the alternatives' locations and some variations in airspace use. Alternative B is the preferred and environmentally preferred alternative.

2.4.1 Elements Common to Action Alternatives

There are four project elements common to the action alternatives: airspace and flight operations, construction, ground operations, and decommissioning

Table 2.4-1
Project Elements and Sub-Elements

Element	*Sub-Element*
AIRSPACE & FLIGHT OPERATIONS	• MTR and MOA/ATCAA establishment/modification • Changing flight operations in MTRs and MOAs • Change in noise from flight operations
CONSTRUCTION	• Land acquisition • Site grading, preparation, fencing • Electronic Scoring Site construction • Emitter site construction and emitter placement • Driveway, telephone, and powerline construction
GROUND OPERATIONS	• Staffing and personnel activities at operations sites • Operations/maintenance of emitters and scoring sites • Radio frequency emissions • Increased vehicle traffic
DECOMMISSIONING	• Disposal of property and termination of lease • Elimination of staff jobs and activities at sites • Removal of equipment/facilities/infrastructure • Elimination of radio frequency emissions • Reduction in vehicle traffic

(Table 2.4-1). Should a decision be made to implement one of the action alternatives, the Air Force estimates the airspace changes could be instituted within two years of the Record of Decision, and full implementation of the proposal could occur within three years.

AIRSPACE AND FLIGHT OPERATIONS

All three action alternatives would involve changes to the structure or use of airspace. While the Air Force would propose these changes, the FAA would be responsible for evaluating, processing, and charting them. Appendix C presents the FAA's procedures for processing airspace. Only primary airspace (refer to Table 2.3-1) would be affected, although the alternatives would result in interaction with some secondary airspace not currently affected. There are three categories of changes to airspace structure alternatives:

1. *Modification:* This category applies to existing airspace that would be incorporated into and/or redesignated as part of a proposed MTR or MOA/ATCAA. For example, under Alternatives B and C, IR-178 would be modified with many existing segments of IR-178 incorporated into modified IR-178. Similarly, portions of the Reese 4, Reese 5, and Roby MOAs would be incorporated into and redesignated as the proposed Lancer MOA/ATCAA in Alternative B.

2. *Establishment:* This category of change refers to instances where new MTR or MOA/ATCAA airspace would be established for an alternative. Newly established airspace would not include existing airspace that would be simply redesignated. Each of the three action alternatives includes establishment of new airspace. In Alternative D, for example, proposed IR-153 would be established overlapping and intersecting almost entirely with segments of numerous existing secondary MTRs. The portions of proposed IR-153 not overlapped or intersected would be considered new MTR airspace (refer to Figure 2.4-10).

Throughout the remainder of the EIS, IR-178 may be referred to as "proposed IR-178." It should be noted that "proposed IR-178" in Alternatives B and C represents modifications to existing IR-178, not a proposal for an entirely new MTR.

3. *Elimination:* This category applies to segments of MTRs or parts of MOAs that would be eliminated and no longer used. All three action alternatives would involve elimination of airspace, primarily existing MOA airspace. For MTRs, this category of change applies only to segments of IR-178 in Alternatives B and C.

Combinations of all three categories of airspace structure changes apply to each of the three action alternatives (Alternatives B, C, and D). Specific descriptions of the proposed airspace structure changes for each alternative site are presented below in Sections 2.4.2 through 2.4.4.

The three action alternatives have some commonalities with regard to proposed airspace use. First, proposed increases in airspace use (i.e., annual sortie-operations) stem from projected B-1 and B-52 bomber activity. Sortie-operations by other aircraft (such as F-16 fighters) would not change relative to baseline conditions for either primary or secondary airspace. Second, proposed increases in sortie-operations would affect only primary MTRs and MOA/ATCAAs associated with each alternative. The few secondary airspace units affected would be subject to decreases in sortie-operations. Third, aircraft in primary and secondary airspace would continue to fly according to current altitude distributions (refer to Table 2.3-3). Based on mission requirements, B-52s would continue to employ two altitude regimes--one emphasizing flight at altitudes between 300 and 1,000 feet AGL and one emphasizing altitudes from 1,000 to 3,000 feet AGL or higher (refer to Table 2.3-3). Fourth, the daily pattern of flight activities would remain similar to that described under the No-Action Alternative (refer to Section 2.3.1). To accommodate increased use of the airspace by bombers, one to two additional formation flights of two aircraft apiece would occur on an average day. The percentage of night (after 10:00 PM), flights would not increase under Alternatives B, C, and D, but the number of night sortie-operations in the MTR and MOA/ATCAA associated with each alternative would increase in conjunction with the overall increase in sortie-operations. Fifth, air speeds used for training in the MTR and MOA/ATCAA would remain the same as under the no-action alternative. On an MTR, aircrews could fly all or part of its length, depending upon mission requirements. For example, each of the proposed MTRs associated with Alternatives B, C, and D allows aircraft to exit to the MOA without flying the entire route or to conduct additional training by using the re-entry route. These variations would create the following differences in the approximate amount of time the aircraft fly along the MTR:

The pattern of daily flight activities under the action alternatives would remain similar to current conditions.

- Alternative B - 0.6-1.9 hours for B-52s; 0.4-1.1 hours for B-1s
- Alternative C - 0.6-1.6 hours for B-52s; 0.4-1.0 hours for B-1s
- Alternative D - 0.4-1.7 hours for B-52s; 0.3-0.8 hours for B-1s

CONSTRUCTION

Each RBTI action alternative would require two sets of five emitter sites, one associated with the MTR and one associated with the MOA/ATCAA (Figure 2.4-1), and two Electronic Scoring Sites, one located near the proposed MTR and associated MTR re-entry route and one for the en route Electronic Scoring Site (Figure 2.4-2). In total, these 12 sites, each encompassing 15 acres, would comprise the ground-based assets for the proposed ESS system in the three action alternatives. Construction of the MTR and MOA emitter sites would involve installing a chain-link fence around the perimeter of the 15-acre (800- by 800-foot) site; clearing, grading, and graveling a 0.25-acre pad in the center of the site; and constructing a 14-foot-wide gravel driveway. To power and operate the emitter, the site would be

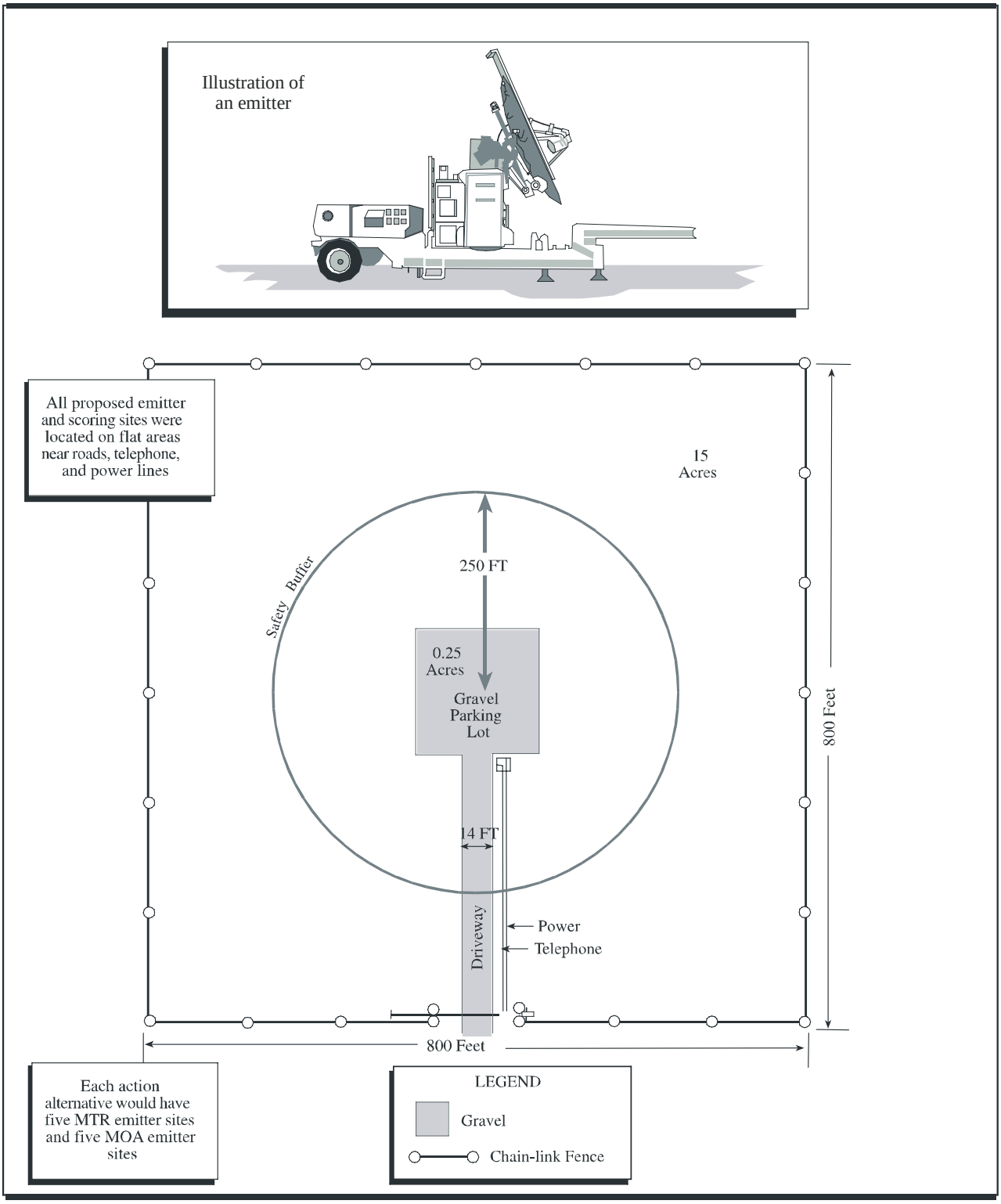
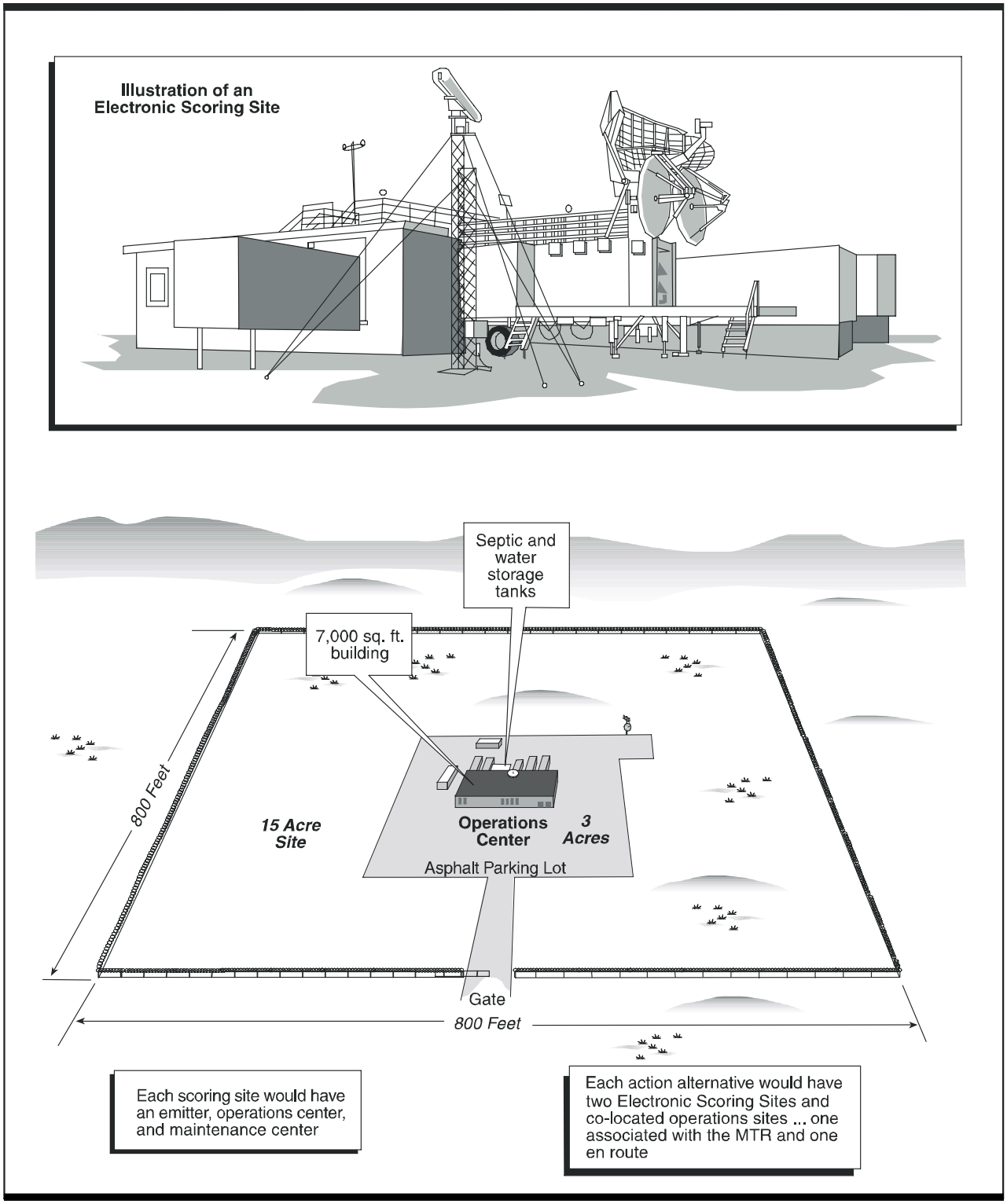


Diagram of MTR and MOA Emitter Sites

Figure 2.4-1



Illustrations of Electronic Scoring Site **Figure 2.4-2**

linked to existing power and telephone lines. Construction of an emitter site would span 1 to 2 months of intermittent effort.

Construction for the Electronic Scoring Sites would follow a similar pattern with installation of a perimeter chain-link fence, clearing and grading for a 14-foot-wide driveway and 3-acre central pad, and asphalting of the pad and driveway. The Electronic Scoring Sites would require power and communications, so the sites would use existing utility lines. A 7,000-square-foot, one-story operations center would be constructed in the center of the pad. Septic and water storage tanks would be installed on site.

In some instances, existing power lines, telephone lines, and roads lie more than several hundred feet from the sites. To connect the utilities to the sites would require acquisition of a utility easement and installation of poles or underground cables. The Air Force has estimated the route for these lines, although the final responsibility for design and construction would be with the appropriate utility company. Some dirt roads may need to be upgraded or roads to the sites may need to be constructed. These locations have not been determined and any additional environmental studies that may be needed due to changes to the Air Force's estimated route would be accomplished prior to the start of construction and are not part of this impact analysis. Construction of the Electronic Scoring Sites would require 12 to 18 months, including connecting power and telephone lines to the sites. Actual ground disturbance would occur only a fraction of the time during construction.

Identification of locations for emitters and Electronic Scoring Sites followed a systematic process to ensure that candidate sites met operational requirements (refer to Section 2.1.2) and addressed environmental factors. The Air Force used the following steps for identifying candidate sites for MTR emitters, MTR Electronic Scoring Sites, MOA emitters, and the en route Electronic Scoring Site for each alternative:

1. Examined maps of the lands under and near the proposed MTR and MOA for operationally suitable regions.
2. Using more detailed maps, refined the regions into smaller zones associated with existing roads and power lines.
3. Conducted driving visits to the zones to establish multiple smaller parcels encompassing at least 15 acres and offering potentially good line-of-sight; considered many more parcels than would be needed for the emitters and Electronic Scoring Sites; and eliminated parcels containing or close to homes (within 3,000 feet), known historical sites, large structures, and obvious bodies of water from further consideration, as well as parcels farther than 2 miles from power and telephone lines.
4. Performed initial research at county courthouses and other public record storehouses to identify owners of parcels.
5. Contacted owners of parcels to determine willingness to consider leasing lands for emitter or Electronic Scoring Site placement; carried forward parcels of willing owners and eliminated those where owners declined interest in leasing.
6. Prepared and obtained signatures on formal rights-of-entry for parcels; eliminated parcels where owners previously expressing interest declined the right-of-entry.
7. Conducted on-the-ground visits to all parcels with rights-of-entry to perform investigation of available lines-of-sight for emitter and Electronic Scoring Site operation; evaluated distances to roads, power lines, and telephone lines; refined boundaries to match the 15-acre size requirement; eliminated parcels failing to meet operational requirements; and defined parcels meeting requirements as numbered candidate sites (see Appendix D for locations).

The Air Force carefully studied each candidate site for emitters and Electronic Scoring Sites.

8. Performed background research on all candidate sites to determine previous land uses, evidence of hazardous materials use and waste disposal, wetlands, soils, endangered species, and cultural resources.
9. Completed comprehensive, on-the-ground environmental baseline surveys for indications of hazardous materials and waste, biological surveys, and archaeological surveys of each candidate site (see Appendix E for survey results).

This process resulted in identification of more candidate sites than would be needed for the emitters and Electronic Scoring Sites under each action alternative (Table 2.4-2). Should an action alternative be selected in a Record of Decision, the required number of sites for emitters and Electronic Scoring Sites would also be selected. Offering more than the required number of candidate sites provides greater flexibility for addressing potential environmental impacts.

Table 2.4-2
Comparison of Candidate and Required Emitter Sites and Electronic Scoring Sites

	Alternative B		*Alternative C*		*Alternative D*	
	Candidate Sites	*Sites Required*	*Candidate Sites*	*Required Sites*	*Candidate Sites*	*Required Sites*
MTR Emitters	6	5	6[1]	5	9	5
MTR Electronic Scoring Site	2	1	2[1]	1	3	1
MOA/ATCAA Emitters	6	5	6	5	8	5
En Route Electronic Scoring Site	2[2]	1	2[2]	1	2[2]	1

[1] Same candidate sites as in Alternative B

[2] Same candidate sites in all three alternatives

Of the cumulative total of 42 different candidate sites, 40 lie on private property. To acquire the right to construct and operate the ground-based assets on such sites, the Air Force would need to lease or purchase the 11 sites (for five MTR emitters, five MOA emitters, and one MTR Electronic Scoring Site) selected as candidates for each alternative. The twelfth site needed for the package of ground-based assets consists of the location for the en route Electronic Scoring Site. Two sites located near and managed by Dyess AFB represent the only candidates for the single en route Electronic Scoring Site under all three action alternatives. Both sites are Department of Defense (DoD) lands and contain existing but unused structures. To meet the requirements for the Electronic Scoring Site, the Air Force would construct a new building, connect to on-site power, telephone, and water sources, and install a septic system.

MTR and MOA emitters would be activated only as needed for training; they would not operate constantly.

GROUND OPERATIONS

The combination of the Electronic Scoring Sites and the sets of MTR and MOA emitters form the ground-based assets for an ESS system. Use of the system would occur more than 98 percent during weekdays, with less than 2 percent during weekends. About 85 percent of flight activities would be performed between 7:00 AM and 10:00 PM, with the remaining 15 percent occurring after 10:00 PM. Personnel would be present at the Electronic Scoring Sites when aircraft use the system. Approximately 30 employees would work at each Electronic Scoring Site and live off-site in nearby communities. The Electronic Scoring Sites would include

a threat emitter, electronic scoring facilities, and parking. Commonly, panel trucks containing integrated electronic equipment are connected into the building on one side. The MOA and MTR emitters would also operate in response to scheduled use. These unmanned emitters would be remotely activated and programmed from an Electronic Scoring Site only during those periods when aircraft would use them for training. They would not operate constantly but would be turned on and off as needed. Not all emitters would be used all the time. Use would depend upon the type of training and expected threats. By varying which emitters were operating at a given time, aircrews would receive more realistic training by having to quickly respond to an unfamiliar scenario.

For RBTI, the Air Force would use emitters known as "mini-MUTES" at the MTR and MOA sites. These unmanned emitters are programmed to simulate numerous types of threats. The emitters are about 17 feet tall, including an antenna, and are similar in size to a flatbed semi-tractor trailer. During operation, the antenna would be pointed skyward. When they are to be activated, a warning horn sounds and lights flash for a few seconds. The horn is equivalent to a luggage carousel horn, and the light is a standard warning light equivalent to those used on construction barriers.

Emitters generate radio frequency (RF) emissions. RF energy is absorbed by an animal or human body in the form of heat. The result is a temperature increase that can be accommodated by species temperature regulation capabilities or avoided by movement away from the source of energy. Department of Defense Instruction 6055.1 (1995) sets the permissible exposure limits for humans. These limits are designed for personnel working around and near emitters, but they also serve to protect the public who would be further away from the RF source. The potential impact to wildlife would be extremely small. As mentioned above, the animal would experience a rise in its body temperature if it stayed in direct line of the RF emission. However, before the animal could be harmed, it would naturally move away from the area.

For the types of emitters proposed under RBTI, a safe separation distance of 250 feet has been established to prevent exposure to RF energy. This distance is based on tests with the emitter beam pointed parallel to the ground and held in one spot. The test results are very conservative because when the emitters are in actual use, they would be pointed skyward and in motion. As such, the distance around the emitter affected by RF energy would be less than 250 feet.

Placing the emitter in the center of a fenced 15-acre (800- by 800-foot) site provides more than 150 feet beyond the safe separation distance. Maintenance of the emitters would occur monthly and when required for emergency repairs. Personnel from the Electronic Scoring Sites would conduct the maintenance.

DECOMMISSIONING

The Electronic Scoring Sites at Harrison, Arkansas, and La Junta, Colorado, would be closed under any of the three action alternatives. This would include closure of associated emitter sites. For the Electronic Scoring Sites, all equipment would be removed from the building/facility, leaving an intact building with all utilities. All equipment would be moved to the Electronic Scoring Sites for RBTI. For Harrison, where the Air Force leases the land, the Air Force would end its lease through agreement with the property owner. Retention or disposition of the building would be decided as part of terminating the lease. For La Junta, which lies on land owned by the DoD and managed by the Air Force, the site would be disposed of through standard procedures for excess government property.

Existing emitter sites associated with the Harrison and La Junta Electronic Scoring Sites are not greatly developed. Improvements at the sites include electrical lines, telephone connections, and a gravel pad. The Air Force proposes to remove the emitters and transport them to the sites for whichever action alternative may be selected. If the emitter site land is leased, it would be returned to the owner through ending the agreement with the Air Force. If the lands are owned by the Air Force, they would be disposed of through standard procedures for excess government property.

The existing mix (military and civilian) of employees at the Harrison and La Junta Electronic Scoring Sites is similar to that proposed for the Electronic Scoring Sites under RBTI. Air Force personnel working at these existing facilities would be offered the opportunity to relocate to the new sites to continue their jobs. Currently, about 61 employees work at the Harrison and La Junta sites.

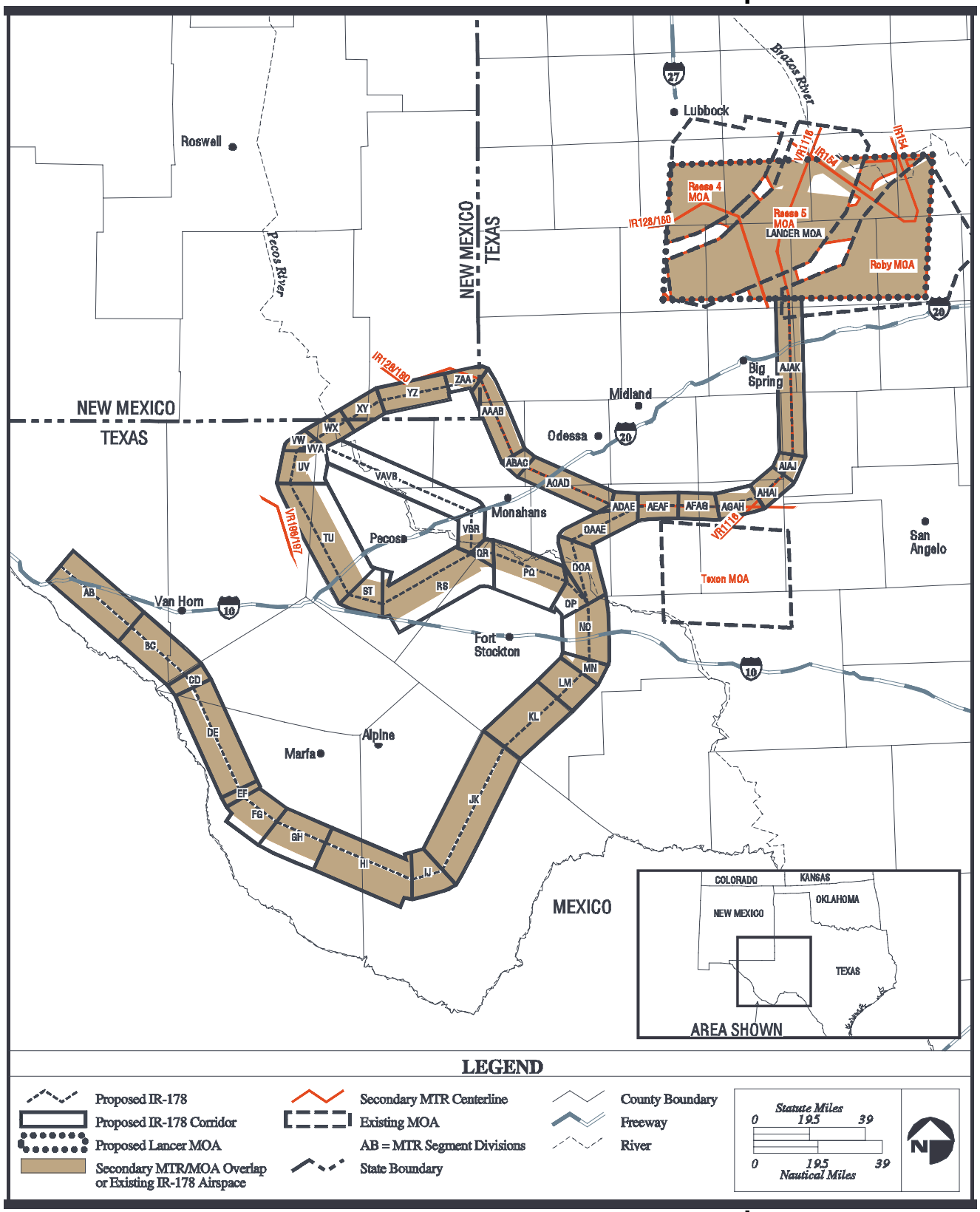
2.4.2 Alternative B: IR-178/Lancer MOA

The affected area for Alternative B occurs mostly in western Texas, with only a small portion of MTR airspace falling within southeastern New Mexico (Figure 2.4-3). It also includes the Mt. Dora MOA (refer to Figure 2.3-1) as well as the MTRs associated with Electronic Scoring Sites at Harrison and La Junta (refer to Figure 2.2-2). This affected area, which represents a subset of the overall study area, corresponds to the locations of primary airspace (MTRs and MOAs) that would undergo changes in structure or use as a result of implementing Alternative B. Secondary airspace forms part of the affected area only where secondary MTRs and MOAs overlap or intersect primary airspace.

AIRSPACE AND FLIGHT OPERATIONS

Airspace Modifications. Alternative B airspace centers on existing IR-178 and the proposed Lancer MOA/ATCAA, where the bombers would conduct about 96 percent of their sortie-operations within the affected area. In addition to changes in the amount of use, IR-178 would undergo some structural modifications (Figure 2.4-4). Most of IR-178 would remain intact, but changes would include the following:

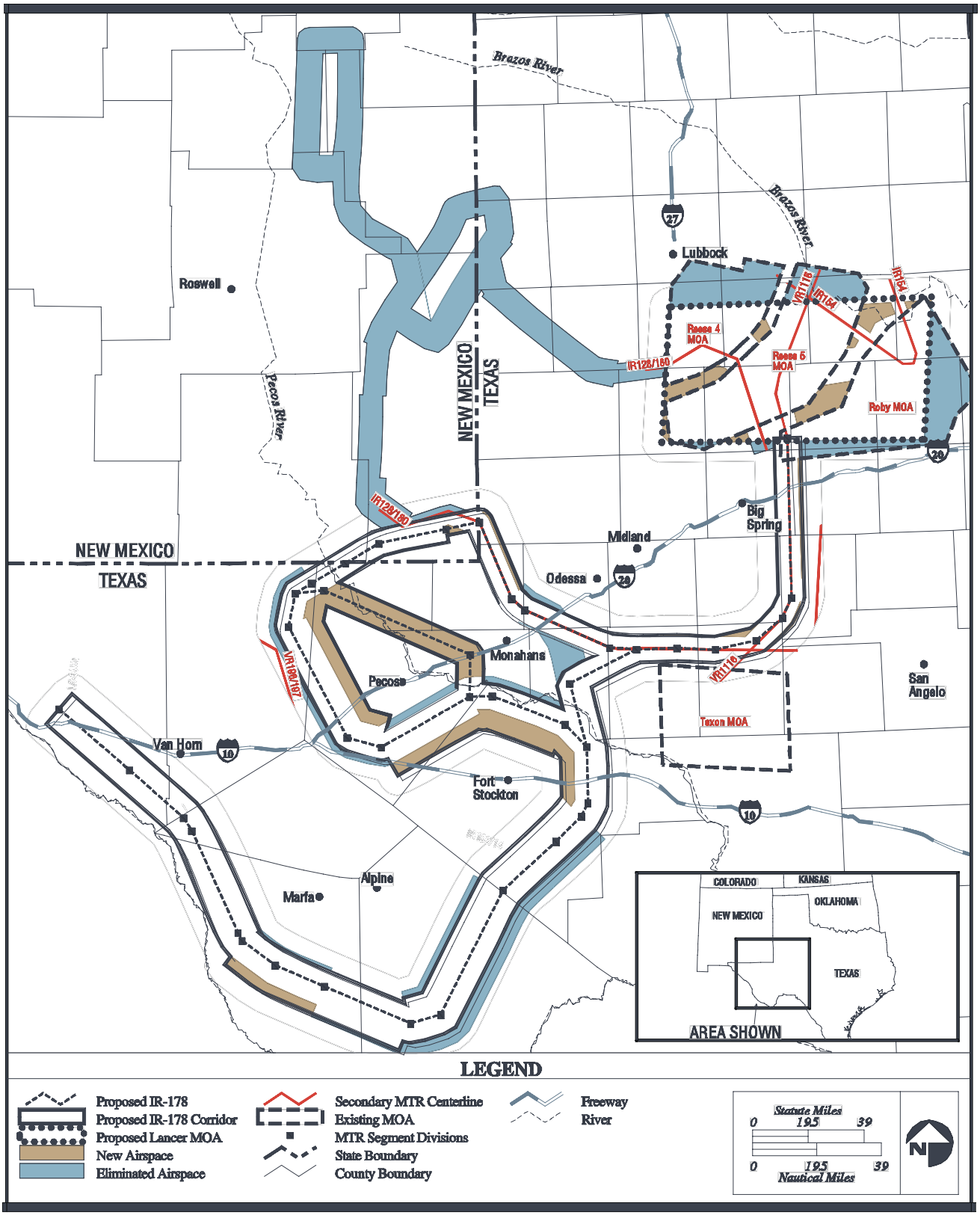
- Modification of the width and alignment of the MTR corridor to accommodate alternative exits to the proposed Lancer MOA/ATCAA (segment OOA), establishment of the re-entry route (segments VAVB to VBR), and elimination of the potential for overflights of Big Bend National Park (segment JK).



Affected Area for Alternative B: IR-178/Lancer MOA

Figure 2.4-3

2.0 Description of Proposed Action and Alternatives: Alternative B



Alternative B: IR-178/Lancer MOA Proposed Airspace Modifications **Figure 2.4-4**

- Establishment of new IR-178 segments VAVB to VBR, ADAE to AEAF, and AGAH. Of these segments, only a portion of segment VAVB-VBR represents new airspace not currently overlapped or intersected by existing primary or secondary MTRs (refer to Figure 2.4-3).
- Elimination of all IR-178 segments north of segment ZAA. However, existing IR-128/180 would continue to occupy this same corridor and flights would continue.
- Modification of the floor (lower limit) and ceiling (upper limit) altitudes for many segments of IR-178 to support its modified structure. Appendix C details the existing and proposed floor and ceiling altitudes for all alternatives.

Most of proposed IR-178 overlaps or intersects with existing primary or secondary airspace. Of the 41 proposed segments, two comprise completely new airspace and 10 include some new airspace. New airspace represents about 15 percent of the proposed route. Segments ZAA to AGAH overlap with IR-128/180 and AHAI to AJAK overlap with VR-1116. Other secondary MTRs (VR-196/197) intersect with partial segments of IR-178. The structure of the overlapping and intersecting MTRs would not change under Alternative B.

Proposed IR-178 would consist of about 85 percent existing airspace.

The proposed Lancer MOA/ATCAA would be created from existing Reese 4, Reese 5, and Roby MOAs. Most of these existing MOAs would be redesignated and incorporated into the proposed Lancer MOA/ATCAA. New airspace would be established to connect the MOAs, and portions of the existing MOAs that fall outside the proposed Lancer MOA/ATCAA would be eliminated. Roughly 10 percent of the area outlined by the proposed Lancer MOA/ATCAA would consist of new airspace not currently covered by a MOA or MTR. The altitude structure of the proposed Lancer MOA/ATCAA would differ from that of the existing Reese 4, Reese 5, and Roby MOAs. The floor of the proposed Lancer MOA/ATCAA would be 3,000 feet AGL, with a ceiling of 18,000 feet MSL. An overlying ATCAA would provide available airspace up to 40,000 feet MSL. Currently, the Reese 4 MOA extends from 10,000 feet MSL (about 6,000 to 7,000 feet AGL) to 18,000 feet MSL; both the Reese 5 and Roby MOAs have a floor altitude of 12,000 feet MSL (about 8,000 to 9,000 feet AGL) and extend to 18,000 feet MSL. The existing ATCAA overlying the three MOAs extends from 18,000 feet MSL to 23,000 feet MSL. So the proposed Lancer MOA/ATCAA would expand the upper and lower limits of the airspace in the area.

Proposed changes to IR-178 and Lancer MOA/ATCAA would reduce the total amount of land under the airspace in comparison to current conditions (Table 2.4-3).

Table 2.4-3
Comparison of Existing and Proposed Area Under Alternative B: IR-178/Lancer MOA

	Area Under Airspace (square nm)				
	Existing Airspace	*Eliminated Airspace*	*Existing Airspace As Part of Proposed Airspace*	*New Airspace*	*Total Proposed Airspace*
IR-178	9,717	3,292	6,425	1,124	7,549
Lancer MOA	3,854[1]	824	3,030	318	3,348

[1] Combination of existing Reese 4, Reese 5, and Roby MOAs and secondary MTRs.

A reduction of about 2,300 square nm would result from changes to IR-178, but most of this derives from eliminating the segments of IR-178 that coincide with IR-128/180 in New Mexico. Since IR-128/180 would remain intact, MTR airspace would continue to overlie the lands. Consolidation of the Reese 4, Reese 5, and Roby MOAs would expose about 300 square nm of land below new airspace to flight activities above 3,000 feet AGL. This change, however, would also eliminate such activities over more than 1,000 square nm.

. . . Alternative B: IR-178/Lancer MOA

Annual sortie-operations for primary airspace would change under Alternative B (Table 2.4-4). Annual sortie-operations along portions of proposed IR-178 and in the proposed Lancer MOA/ATCAA would increase predominantly due to bomber flight activities. All other primary MTRs and MOAs would receive decreased use; sortie-operations in secondary MTRs would not change.

Total sortie-operations analyzed for proposed IR-178 also include existing sortie-operations on overlapping and intersecting MTRs.

For the 41 individual segments of proposed IR-178, sortie-operations would increase in all but four segments (ZAA to ACAD). The increases in use of the other segments would vary, depending upon the amount of continuing sortie-operations in overlapping or intersecting MTRs (Figure 2.4-5 and Table 2.4-5). Increases in sortie-operations would range from 210 (segments OOA to OAAE) to 1,620 (segments ST-UV). B-1s and B-52s would form the dominant users of proposed IR-178, although B-2s and F-16s are projected to fly on portions of the route. Appendix B provides details on sortie-operations by different aircraft.

A total of 2,350 annual sortie-operations would occur in the proposed Lancer MOA/ATCAA. Current use of the Reese 4, Reese 5, and Roby MOAs totals 106 annual sortie-operations, and underlying secondary MTRs (VR-1116 and IR-154) account for another 100 sortie-operations.

CONSTRUCTION

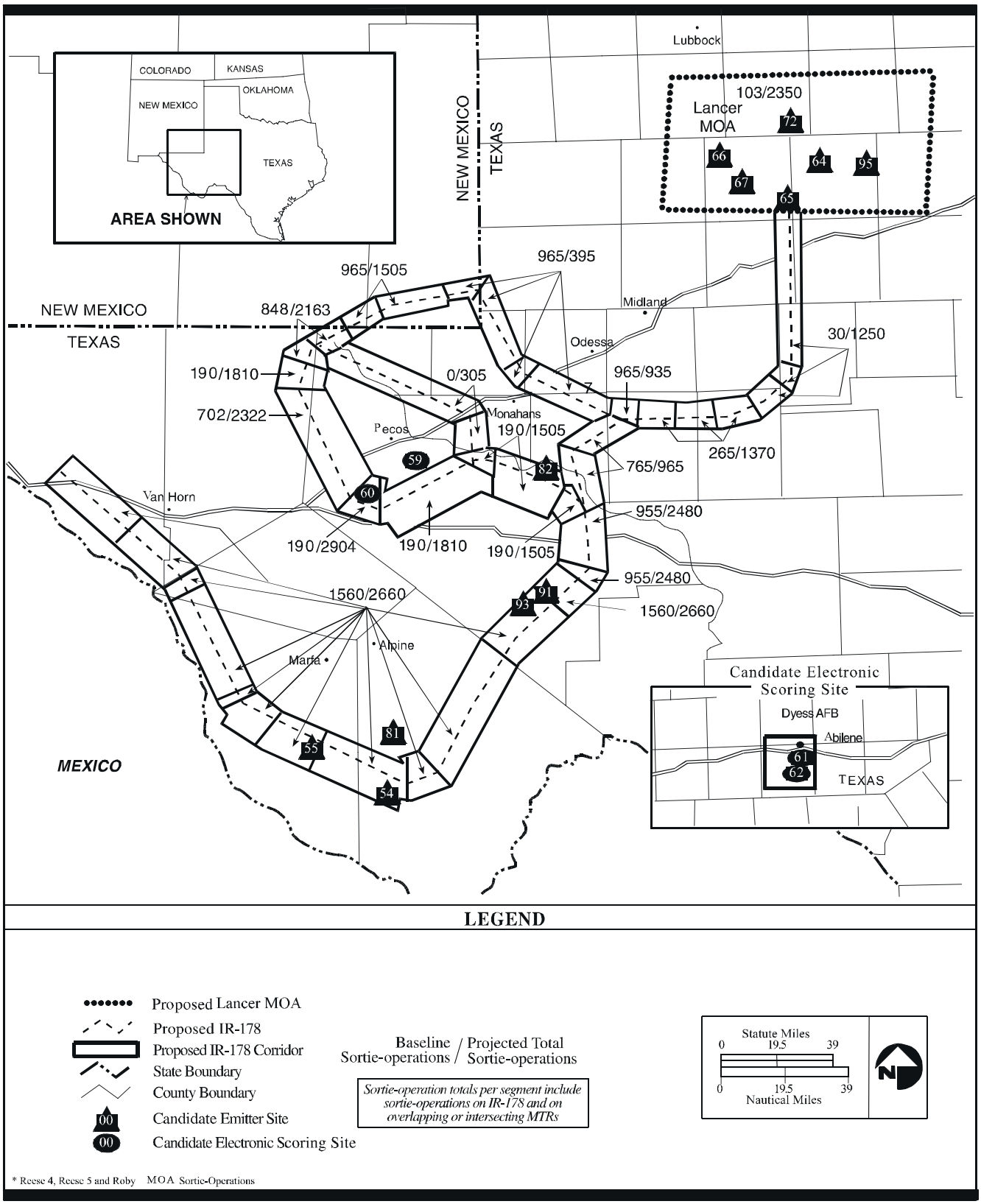
As described in Section 2.4.1, the Air Force identified more candidate sites for MTR emitters, MOA emitters, and Electronic Scoring Sites than would be selected and used under Alternative B (refer to Table 2.4-2). Table 2.4-6 lists the candidate sites for Alternative B along with their road, power, telephone, water, and wastewater requirements. The table provides distances from the juncture of the existing paved road, telephone line, and power line to the center of each site (approximately 400 feet from the edge). The affected area associated with driveway and power line construction would have a 40-foot-wide right-of-way, whereas telephone line construction would require a 25-foot-wide right-of-way.

Candidate site locations are dispersed in many counties in western Texas (refer to Figure 2.4-5). Appendix D provides maps of their locations within counties.

Table 2.4-4. Alternative B: IR-178/Lancer MOA Projected Airspace Use

Table 2.4-4. Alternative B: IR-178/Lancer MOA Projected Airspace Use																	
		Bomber Aircraft Annual Sortie-Operations						*Other Aircraft Annual Sortie-Operations*						*Totals*		
Airspace Units	*Class*	*B-1s: Dyess*	*Change from Baseline*	*B-52s: Barksdale*	*Change from Baseline*	*Bombers: Other Bases*	*Change from Baseline*	*Air Force Fighter Aircraft*[1]	*Navy Aircraft*[2]	*GAF Aircraft*[3]	*RSAF Aircraft*[4]	*Trainer Aircraft*[5]	*Other Aircraft*[6]	*Alternative B Total*	*Baseline/ No-Action Total*	*Change from Baseline*
MTRs																
VR-100/125	S							964	8	100	188	1	4	1,265	1,265	*0*
VR-108	S							97	25		18	3		143	143	*0*
VR-114	S							805			146	56	7	1,014	1,014	*0*
VR-143	S					100		50	400			70		620	620	*0*
VR-186	S					100		50	400			625		1,175	1,175	*0*
VR-196/197	S											512		512	512	*0*
VR-1107/1195	S							1,050						1,050	1,050	*0*
VR-1116	S					30								30	30	*0*
VR-1175/1176	S					50								50	50	*0*
IR-107	S					10		71			13	10		104	104	*0*
IR-109	S					50	*50*	188	28		33		11	310	310	*0*
IR-110	S													0	0	*0*
IR-111	S							80		9	14	18	9	130	130	*0*
IR-113	S							110	170		20			300	300	*0*
IR-123	S					1		1	35			13		50	50	*0*
IR-124	S					10		10	20			40	60	140	140	*0*
IR-128/180	**P**	**0**	*-25*	**0**	*-25*							**150**		**150**	**200**	*-50*
IR-150	**P**	**80**	*-120*	**20**	*-60*									**100**	**280**	*-180*
IR-154	S							10					60	70	70	*0*
IR-169	S											465		465	465	*0*
IR-174	**P**	**0**	*-40*	**0**	*-25*	**121**								**121**	**186**	*-65*
IR-177/501	**P**	**55**	*-220*	**20**	*-130*									**75**	**425**	*-350*
IR-178[7]	**P**	**1,330**	*525*	**905**	*350*	**375**	*225*	**50**						**2,660**	**1,560**	*1,100*
IR-192/194	S									637			21	658	658	*0*
IR-592	**P**			**20**	*-170*	**317**							**3**	**340**	**510**	*-170*
MOAs																
Reese 4	R	0	*-3*											0	3	*-3*
Reese 5	R	0	*-3*											0	3	*-3*
Roby	R	0	*-100*											0	100	*-100*
Proposed Lancer	**P**	**1,850**	*1,850*	**400**	*400*	**50**	*50*	**50**	**0**			**0**	**0**	**2,350**	**106**	*2,244*
Texon	S							15	30		0	40	15	100	100	*0*
Mt. Dora	S	0	*-6*	0	*-15*			321	4		33		10	368	379	*-11*

Class P = Primary airspace used by B-1s from Dyess AFB and/or B-52s from Barksdale AFB.
Class S = Secondary airspace unit intersects with airspace unit used by B-1s from Dyess AFB and/or B-52s from Barksdale AFB.
Class R = Redesignated airspace to form the Proposed Lancer MOA.
[1] Consists predominantly of F-16s
[2] Consists of F-14s and F-18s
[3] German Air Force Tornados at Holloman AFB
[4] Republic of Singapore F-16s at Cannon AFB
[5] T-38 and T-1 trainers
[6] Includes primarily transport aircraft such as C-141s and C-17s
[7] Total sortie-operations represent maximum for segments of MTR; other segments used less.



Alternative B: IR-178/Lancer MOA Current and Proposed Sortie-Operations

Figure 2.4-5

Table 2.4-5
Alternative B: IR-178/Lancer MOA Projected Sortie-Operations

IR-178		*Secondary MTR*		*Total*[3]	*Baseline Total*[3]	*Change from Baseline*
Segments	*Projected Sortie-Operations*	*MTR*	*Sortie-Operations*			
AB	2,660	not applicable	not applicable	2,660	1,560	1,100
BC	2,660	not applicable	not applicable	2,660	1,560	1,100
CD	2,660	not applicable	not applicable	2,660	1,560	1,100
DE	2,660	not applicable	not applicable	2,660	1,560	1,100
EF	2,660	not applicable	not applicable	2,660	1,560	1,100
FG	2,660	not applicable	not applicable	2,660	1,560	1,100
GH	2,660	not applicable	not applicable	2,660	1,560	1,100
HI	2,660	not applicable	not applicable	2,660	1,560	1,100
IJ	2,660	not applicable	not applicable	2,660	1,560	1,100
JK	2,660	not applicable	not applicable	2,660	1,560	1,100
KL	2,660	not applicable	not applicable	2,660	1,560	1,100
LM	2,660	not applicable	not applicable	2,660	1,560	1,100
MN	2,480	not applicable	not applicable	2,480	955	1,525
NO	2,480	not applicable	not applicable	2,480	955	1,525
OP	1,505	not applicable	not applicable	1,505	190	1,315
PQ	1,505	not applicable	not applicable	1,505	190	1,315
QR	1,505	not applicable	not applicable	1,505	190	1,315
RS	1,810	not applicable	not applicable	1,810	190	1,620
ST	1,810	not applicable	not applicable	1,810	190	1,620
TU	1,810	VR-196/197	512	2,322	702	1,620
UV	1,810	not applicable	not applicable	1,810	190	1,620
VW	1,505	IR-192/194	658	2,163	848	1,315
WX	1,505	IR-192/194	658	2,163	848	1,315
XY	1,505	not applicable	not applicable	1,505	190	1,315
YZ	1,505	not applicable	not applicable	1,505	190	1,315
ZAA	245	IR-128/180	150	395	965	-570
AAAB	245	IR-128/180	150	395	965	-570
ABAC	245	IR-128/180	150	395	965	-570
ACAD	245	IR-128/180	150	395	965	-570
ADAE[1]	245	IR-128/180	150	395	965	395
AEAF[1]	1,220	IR-128/180	150	1,370	265	1,370
AFAG[1]	1,220	IR-128/180	150	1,370	265	1,370
AGAH[1]	1,220	IR-128/180	150	1,370	265	1,370
AHAI[2]	1,220	VR-1116	30	1,250	30	1,370
AIAJ[2]	1,220	VR-1116	30	1,250	30	1,250
AJAK[2]	1,220	VR-1116	30	1,250	30	1,250
VVA	305	not applicable	not applicable	305	not applicable	305
VAVB	305	not applicable	not applicable	305	not applicable	305
VBR	305	not applicable	not applicable	305	not applicable	305
OOA	975	not applicable	not applicable	975	765	210
OAAE	975	not applicable	not applicable	975	765	210

[1] Proposed IR-178 segments AD through AH overlap existing segments of IR-128/180.
[2] Proposed IR-178 segments AH through AK overlap existing segments of VR-1116.
[3] Totals represent sortie-operations flown on primary MTR (IR-178) plus those flown on overlapping or intersecting segments of other MTRs. See Figure 2.4-3 for segment locations.

Table 2.4-6
Candidate Emitter and Electronic Scoring Sites Analyzed for Alternative B: IR-178/Lancer MOA

Candidate Sites[1]	*Function*[2]	*Driveway Construction (feet)*	*Power Lines (feet)*	*Telephone Lines (feet)*	*Water*	*Wastewater Treatment*
54	MTR Emitter	300	700	700	NA	NA
55	MTR Emitter	400	1,600	1,600	NA	NA
81	MTR Emitter	600	10,600	10,600	NA	NA
82	MTR Emitter	400	1,600	700	NA	NA
91	MTR Emitter	9,500	2,000	3,200	NA	NA
93	MTR Emitter	600	Existing	1,000	NA	NA
59	MTR Electronic Scoring Site	400	500	400	Truck-in	Construct
60	MTR Electronic Scoring Site	400	500	4,200	Truck-in	Construct
64	MOA Emitter	400	400	800	NA	NA
65	MOA Emitter	400	500	400	NA	NA
66	MOA Emitter	400	500	700	NA	NA
67	MOA Emitter	400	600	400	NA	NA
72	MOA Emitter	400	500	4,200	NA	NA
95	MOA Emitter	600	500	2,100	NA	NA
61	En Route Electronic Scoring Site	400	Existing	Existing	Existing	Construct
62	En Route Electronic Scoring Site	400	Existing	Existing	Existing	Construct

[1] Each site was given a unique number to aid in analysis.
[2] Five MTR Emitter Sites, one MTR Electronic Scoring Site, five MOA Emitter Sites, and one En Route Electronic Scoring Site would be required and selected.

2.4.3 Alternative C: IR-178/Texon MOA

As a subset of the overall study area, the affected area for Alternative C (Figure 2.4-6) corresponds closely to that of Alternative B. The affected area is focused on western Texas with a small portion of MTR in southeastern New Mexico, as well as the portions of Arkansas and Colorado associated with the Harrison and La Junta Electronic Scoring sites (refer to Figure 2.2-2). The existing Mt. Dora MOA is also part of the affected area, although only because bombers would no longer fly there.

AIRSPACE AND FLIGHT OPERATIONS

Alternative C airspace centers on proposed IR-178 and the proposed Texon MOA/ATCAA, both of which comprise existing airspace that would undergo the following structural changes (Figure 2.4-7):

- Modification of the width and alignment of the MTR corridors to accommodate establishment of the re-entry route (segments VAVB to VBR) and to eliminate overflights of Big Bend National Park (segment JK).
- Establishment of new IR-178 segments NNA and VAVB to VBR consisting of new airspace not currently overlapped or intersected by existing primary or secondary MTRs.
- Elimination of all IR-178 segments north of segment ZAA. Existing IR-128/180 would continue to occupy this same corridor.
- Modification of floor and ceiling altitudes for many segments of IR-178 to support the modified structure (see Appendix C).

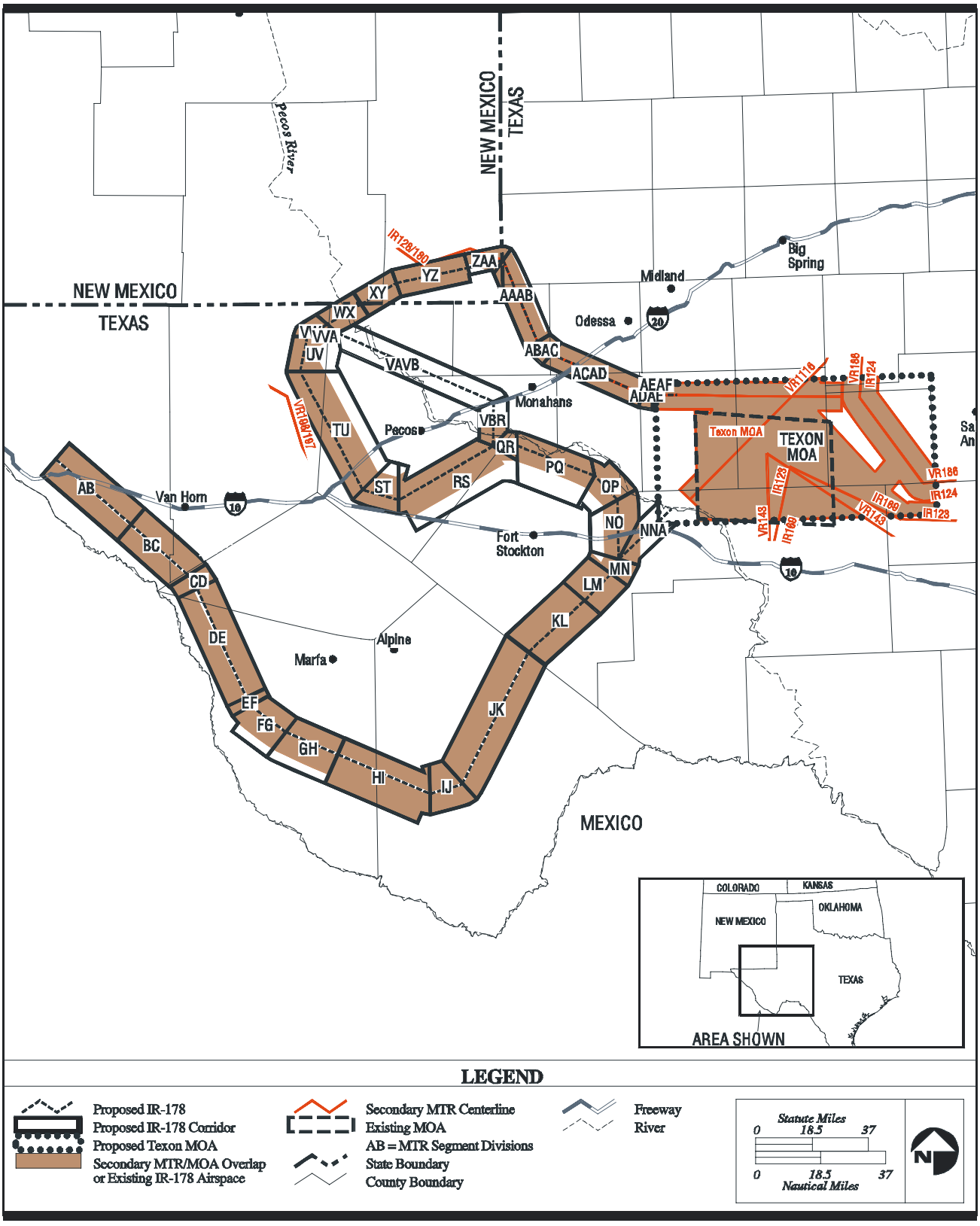
Almost all of proposed IR-178 under Alternative C would overlap or intersect with existing primary or secondary airspace. Proposed IR-178 contains 35 segments, three of which comprise completely new airspace and nine with some portions of new airspace. About 20 percent of proposed IR-178 represents new airspace. Segments ZAA to AEAF overlap with existing IR-128/180. Other secondary MTRs (VR-196/197) intersect with segments of IR-178. No structural changes to overlapping or intersecting primary and secondary MTRs would occur under Alternative C.

Of 35 total segments in proposed IR-178, 32 consist wholly or partially of existing airspace.

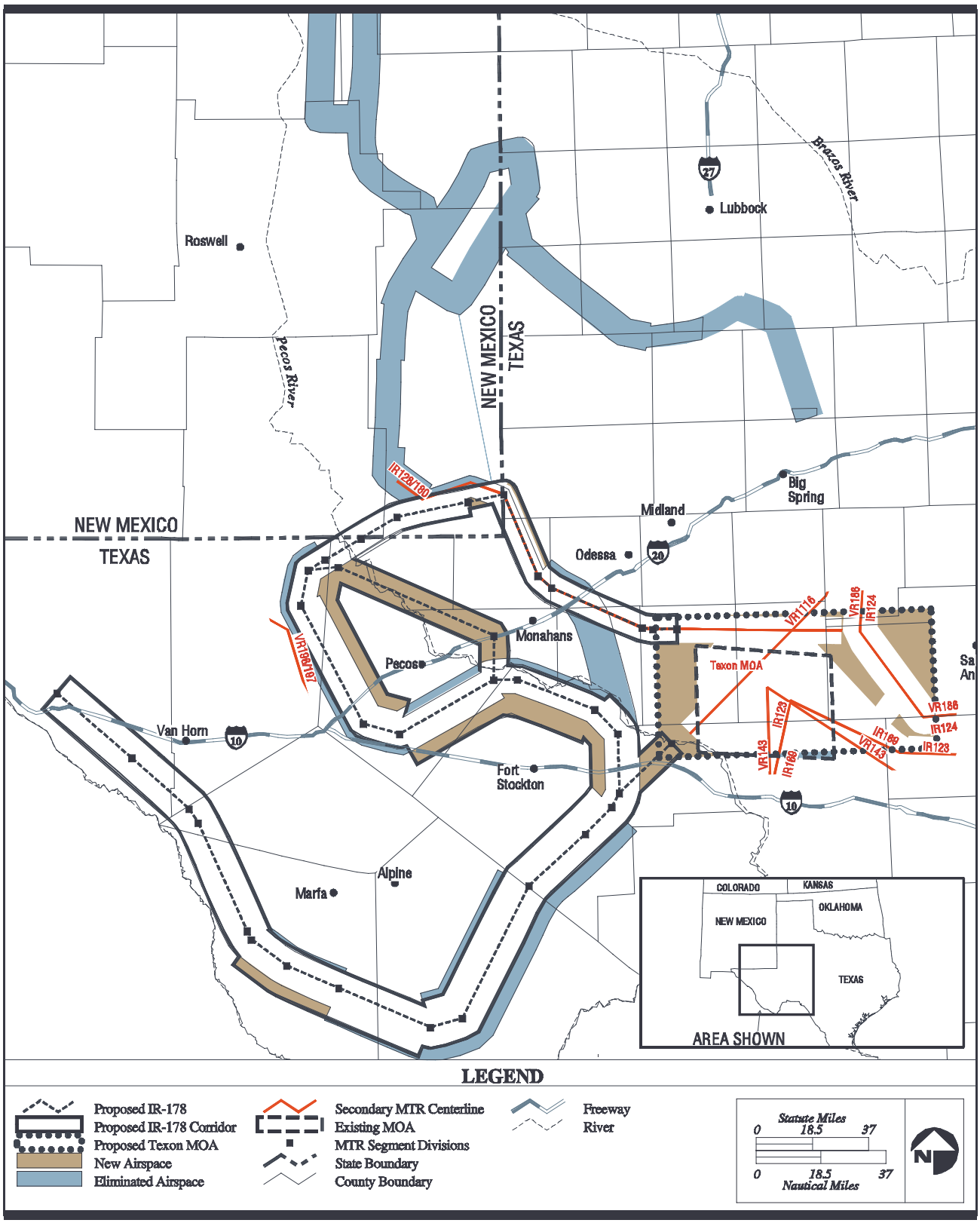
The proposed Texon MOA/ATCAA under Alternative C would be an expansion of the existing Texon MOA (refer to Figure 2.4-6). Expansion of the MOA with new airspace would occur primarily to the west, east, and north. Along the south, the proposed and existing boundaries would be similar, although a small sliver of the existing Texon MOA would be eliminated in this area. About 25 percent of the proposed Texon MOA/ATCAA would consist of new airspace. The floor altitude for the proposed Texon MOA/ATCAA would change from its current limits of 6,000 feet AGL to 3,000 feet AGL. Ceiling altitude for the MOA would remain 18,000 feet MSL, but an overlying ATCAA extending up to 40,000 feet MSL would be added.

Proposed changes to IR-178 would reduce the total amount of land underlying this MTR by about 3,000 square nm (Table 2.4-7). However, the corridor for IR-128/180 would remain intact and cover the same area as the eliminated IR-178 segments did. Expansion of the proposed Texon MOA/ATCAA would increase the affected area by more than 2,000 square nm, including about 800 square nm of new airspace.

Relative to baseline conditions, annual sortie-operations for primary airspace would change under Alternative C (Table 2.4-8). Increases would occur for portions of



Affected Area for Alternative C: IR-178/Texon MOA **Figure 2.4-6**



Alternative C: IR-178/Texon MOA Proposed Airspace Modifications **Figure 2.4-7**

Table 2.4-7
Comparison of Existing and Proposed Area
Under Alternative C: IR-178/Texon MOA

	Area Under Airspace (square nm)				
	Existing Airspace	*Eliminated Airspace*	*Existing Airspace As Part of Proposed Airspace*	*New Airspace*	*Total Proposed Airspace*
IR-178	9,717	3,292	5,417	1,139	6,556
Texon MOA	1,157	40	2,348[1]	800	3,148

[1] Includes both existing Texon MOA airspace and multiple secondary MTRs that also cross over the lands under the MOA.

proposed IR-178 and the proposed Texon MOA/ATCAA.[1] Bombers from Barksdale and Dyess AFBs would conduct about 96 percent of their total sortie-operations in the study area in IR-178 and the proposed Texon MOA/ATCAA. Fewer sortie-operations than under baseline conditions would occur on all other primary MTRs and MOAs. Use of secondary MTRs would not change under Alternative C.

Total sortie-operations for proposed IR-178 also include existing sortie-operations on overlapping and intersecting MTRs.

Sortie-operations would increase in all but five of 35 segments of proposed IR-178 (Figure 2.4-8 and Table 2.4-9). In five segments (ZAA to ADAE), sortie-operations would decrease. For the other 30 segments, increases in use would range from 130 (segment AEAF) to 1,605 (segment RS to TU) annual sortie-operations. Overlapping and intersecting MTRs would contribute to the segment-by-segment totals, although their use would not increase above baseline. B-1s and B-52s would be the major users of IR-178 (see Appendix B).

A total of 2,300 annual sortie-operations would be conducted in the proposed Texon MOA/ATCAA. Current use of the existing Texon MOA totals 100 annual sortie-operations, with five underlying MTRs accounting for 1,305 more annual sortie-operations.

CONSTRUCTION

The Air Force identified more candidate emitters and Electronic Scoring Sites than would be required for Alternative C (refer to Table 2.4-2). Table 2.4-10 lists the candidate emitter and Electronic Scoring Sites for Alternative C along with their road, power, telephone, water, and wastewater requirements. The table also provides distances from the juncture of the existing paved road, telephone line, and power line to the center of each site. Candidate sites occur in several counties in western Texas (refer to Figure 2.4-8 and Appendix D).

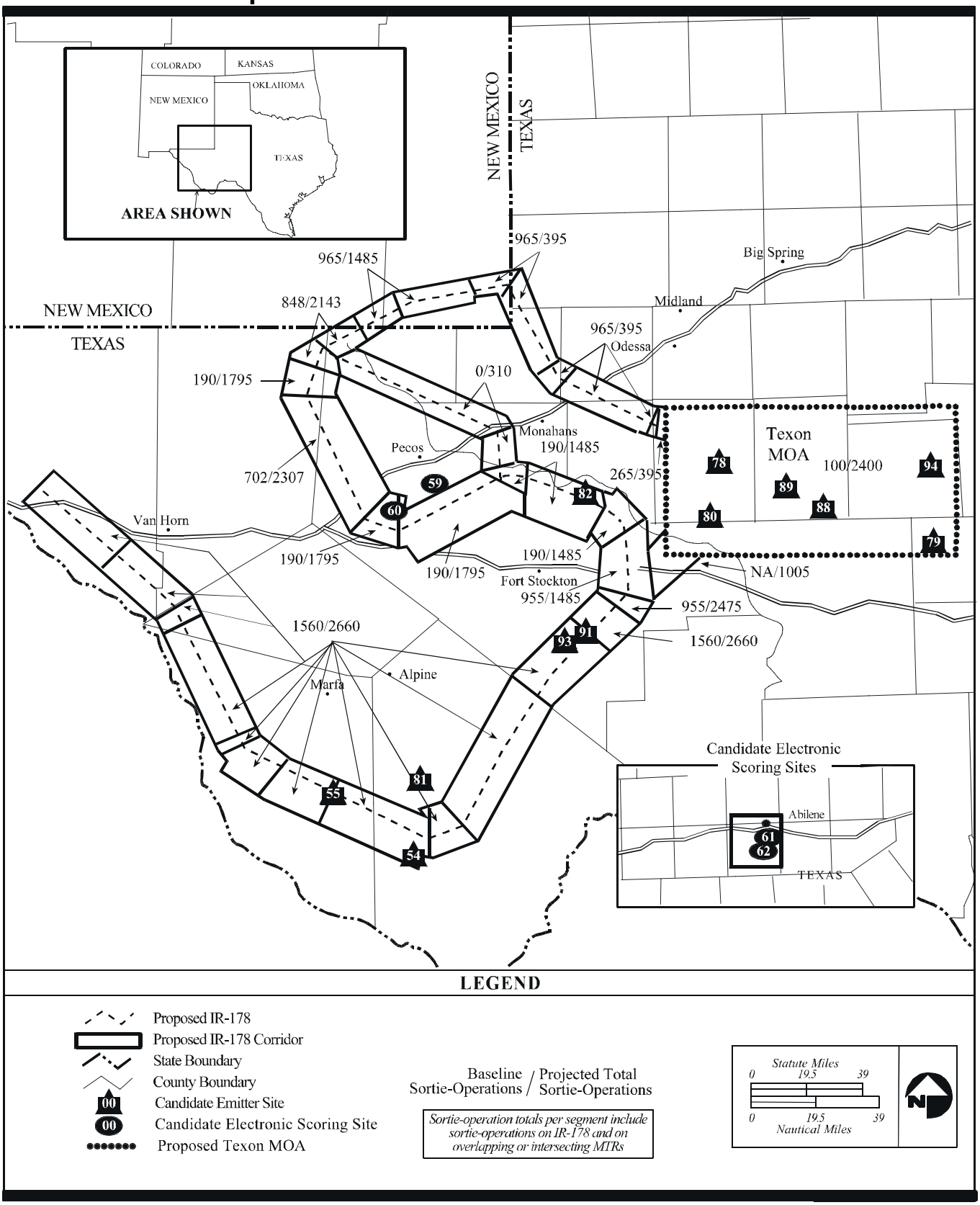
[1]Texon MOA shifts from secondary airspace under baseline to primary in Alternative C because Barksdale and Dyess AFBs would begin to use it.

Table 2.4-8. Alternative C: IR/178/Texon MOA Projected Airspace Use

		Bomber Aircraft Annual Sortie-Operations						Other Aircraft Annual Sortie-Operations						Totals		
Airspace Units	*Class*	*B-1s: Dyess*	*Change from Baseline*	*B-52s: Barksdale*	*Change from Baseline*	*Bombers: Other Bases*	*Change from Baseline*	*Air Force Fighter Aircraft*[1]	*Navy Aircraft*[2]	*GAF Aircraft*[3]	*RSAF Aircraft*[4]	*Trainer Aircraft*[5]	*Other Aircraft*[6]	*Alternative C Total*	*Baseline/ No-Action Total*	*Change from Baseline*
MTRs																
VR-100/125	S							964	8	100	188	1	4	1,265	1,265	*0*
VR-108	S							97	25		18	3		143	143	*0*
VR-114	S							805			146	56	7	1,014	1,014	*0*
VR-143	S					100		50	400			70		620	620	*0*
VR-186	S					100		50	400			625		1,175	1,175	*0*
VR-196/197	S											512		512	512	*0*
VR-1107/1195	S							1,050						1,050	1,050	*0*
VR-1116	S					30								30	30	*0*
VR-1175/1176	S					50								50	50	*0*
IR-102/141[7]	S					49		40		900			105	1,094	1,094	*0*
IR-107	S					10		71			13	10		104	104	*0*
IR-109	S					50		188	28		33		11	310	310	*0*
IR-110	S													0	0	*0*
IR-111	S							80		9	14	18	9	130	130	*0*
IR-113	S							110	170		20			300	300	*0*
IR-123	S					1		1	35			13		50	50	*0*
IR-124	S					10		10	20			40	60	140	140	*0*
IR-128/180	**P**	**0**	***-25***	**0**	***-25***							**150**		150	**200**	***-50***
IR-150	**P**	**80**	***-120***	**25**	***-55***									105	**280**	***-175***
IR-154	S							10					60	70	70	*0*
IR-169	S											465		465	465	*0*
IR-174	**P**	**0**	***-40***	**0**	***-25***	**121**								121	**186**	***-65***
IR-177/501	**P**	**55**	***-220***	**20**	***-130***									75	**425**	***-350***
IR-178[7]	**P**	**1,330**	***525***	**905**	***350***	**375**	***225***						**50**	2,660	**1,560**	***1,100***
IR-192/194	S									637			21	658	658	*0*
IR-592	**P**			**20**	***-170***	**317**							**3**	340	**510**	***-170***
MOAs																
Reese 4	S	0	*-3*											0	3	*-3*
Reese 5	S	0	*-3*											0	3	*-3*
Roby	S	0	*-100*											0	100	*-100*
Proposed Texon	**P**	**1,850**	***1,850***	**400**	***400***	**50**		**15**	**30**			**40**	**15**	2,400	**100**	***2,300***
Mt. Dora	S	0	*-6*	0	*-5*			321	**4**		33		10	368	379	*-11*

Class P = Primary airspace used by B-1s from Dyess AFB and/or B-52s from Barksdale AFB.
Class S = Secondary airspace unit intersects with airspace unit used by B-1s from Dyess AFB and/or B-52s from Barksdale.
VR = Visual route
IR - Instrument route

[1] Consists predominantly of F-16s
[2] Consists of F-14s and F-18s
[3] German Air Force Tornados at Holloman AFB
[4] Republic of Singapore F-16s at Cannon AFB
[5] T-38 and T-1 trainers
[6] Includes primarily transport aircraft such as C-141s and C-17s
[7] Total sortie-operations represent maximum for segments of MTR; other segments used less.



Alternative C: IR-178/Texon MOA Current and Proposed Sortie-Operations **Figure 2.4-8**

Table 2.4-9
Alternative C: IR-178/Texon MOA Projected Sortie-Operations

IR-178		*Secondary MTR*		*Total* [1]	*Baseline Total* [1]	*Change from Baseline*
Segments	*Projected Sortie-Operations*	*MTR*	*Sortie-Operations*			
AB	2,660	not applicable	not applicable	2,660	1,560	1,100
BC	2,660	not applicable	not applicable	2,660	1,560	1,100
CD	2,660	not applicable	not applicable	2,660	1,560	1,100
DE	2,660	not applicable	not applicable	2,660	1,560	1,100
EF	2,660	not applicable	not applicable	2,660	1,560	1,100
FG	2,660	not applicable	not applicable	2,660	1,560	1,100
GH	2,660	not applicable	not applicable	2,660	1,560	1,100
HI	2,660	not applicable	not applicable	2,660	1,560	1,100
IJ	2,660	not applicable	not applicable	2,660	1,560	1,100
JK	2,660	not applicable	not applicable	2,660	1,560	1,100
KL	2,660	not applicable	not applicable	2,660	1,560	1,100
LM	2,660	not applicable	not applicable	2,660	1,560	1,100
MN	2,475	not applicable	not applicable	2,475	955	1,520
NO	1,485	not applicable	not applicable	1,485	955	530
OP	1,485	not applicable	not applicable	1,485	190	1,295
PQ	1,485	not applicable	not applicable	1,485	190	1,295
QR	1,485	not applicable	not applicable	1,485	190	1,295
RS	1,795	not applicable	not applicable	1,795	190	1,605
ST	1,795	not applicable	not applicable	1,795	190	1,605
TU	1,795	VR-196/197	512	2,307	702	1,605
UV	1,795	not applicable	not applicable	1,795	190	1,605
VW	1,485	IR-192/194	658	2,143	848	1,295
WX	1,485	IR-192/194	658	2,143	848	1,295
XY	1,485	not applicable	not applicable	1,485	965	520
YZ	1,485	not applicable	not applicable	1,485	965	520
ZAA	245	IR-128/180	150	395	965	-570
AAAB	245	IR-128/180	150	395	965	-570
ABAC	245	IR-128/180	150	395	965	-570
ACAD	245	IR-128/180	150	395	965	-570
ADAE[2]	245	IR-128/180	150	395	965	-570
AEAF[2]	245	IR-128/180	150	395	265	130
VVA	310	not applicable	not applicable	310	not applicable	310
VAVB	310	not applicable	not applicable	310	not applicable	310
VBR	310	not applicable	not applicable	310	not applicable	310
NNA	1,005	not applicable	not applicable	1,005	not applicable	1,005

[1] Totals represent sortie-operations flown on primary MTR (IR-178) plus those flown on overlapping or intersecting segments of other MTRs.
[2] Proposed IR-178 segments AD through AF overlap existing IR-128-180 segments AB through AD.
See Figure 2.4-6 for segment locations.

Table 2.4-10
Candidate Emitter and Electronic Scoring Sites Analyzed for Alternative C: IR-178/Texon MOA

Candidate Sites[1]	*Function*[2]	*Driveway Construction (feet)*	*Power Lines (feet)*	*Telephone Lines (feet)*	*Water*	*Wastewater Treatment*
54	MTR Emitter	300	700	700	NA	NA
55	MTR Emitter	400	1,600	1,600	NA	NA
81	MTR Emitter	600	10,600	10,600	NA	NA
82	MTR Emitter	400	1,600	700	NA	NA
91	MTR Emitter	9,500	2,000	3,200	NA	NA
93	MTR Emitter	600	Existing	1,000	NA	NA
59	MTR Electronic Scoring Site	400	525	400	Truck-in	Construct
60	MTR Electronic Scoring Site	400	470	4,200	Truck-in	Construct
78	MOA Emitter	400	900	900	NA	NA
79	MOA Emitter	400	2,600	400	NA	NA
80	MOA Emitter	2,600	1,100	8,400	NA	NA
88	MOA Emitter	400	400	500	NA	NA
89	MOA Emitter	400	600	400	NA	NA
94	MOA Emitter	1,100	Existing	1,000	NA	NA
61	En Route Electronic Scoring Site	400	Existing	Existing	Existing	Construct
62	En Route Electronic Scoring Site	400	Existing	Existing	Existing	Construct

[1] Each site was given a unique number to aid in analysis.

[2] Five MTR Emitter Sites, one MTR Electronic Scoring Site, five MOA Emitter Sites, and one En Route Electronic Scoring Site would be required and selected.

2.4.4 Alternative D: IR-153/Mt. Dora MOA

Although also a subset of the larger RBTI study area, the affected area for Alternative D differs from those associated with Alternatives B and C. Alternative D would be centered around proposed IR-153 and the proposed Mt. Dora MOA/ATCAA in northeastern New Mexico (Figure 2.4-9), but would also include the MTRs and Electronic Scoring Sites at Harrison and La Junta (refer to Figure 2.2-2). Other primary airspace, including existing IR-178 and IR-128/180 in western Texas, would continue to form part of the affected area, but its use would be minimized. The affected area also contains secondary airspace, with numerous secondary MTRs overlapping or intersecting the proposed IR-153 and Mt. Dora MOA/ATCAA.

AIRSPACE AND FLIGHT OPERATIONS

Changes to airspace would consist of establishing proposed IR-153 and reconfiguring the Mt. Dora MOA (Figure 2.4-10). No other primary or secondary airspace would be subject to structural changes. Proposed IR-153 would be a newly designated MTR within its own corridor and altitude structure. While no IR-153 exists today, the proposed MTR corridor would overlap or intersect with multiple existing MTRs used currently by fighter and bomber aircraft. Of the 38 total segments for proposed IR-153, only one complete segment (WAWB) and parts of 13 other segments would represent new airspace. This new airspace accounts for about 11 percent of the total MTR. Since IR-153 would represent a newly designated MTR, no airspace would be eliminated.

Numerous existing MTRs already cover about 89 percent of the area associated with proposed IR-153. Only 11 percent of proposed IR-153 would include new airspace.

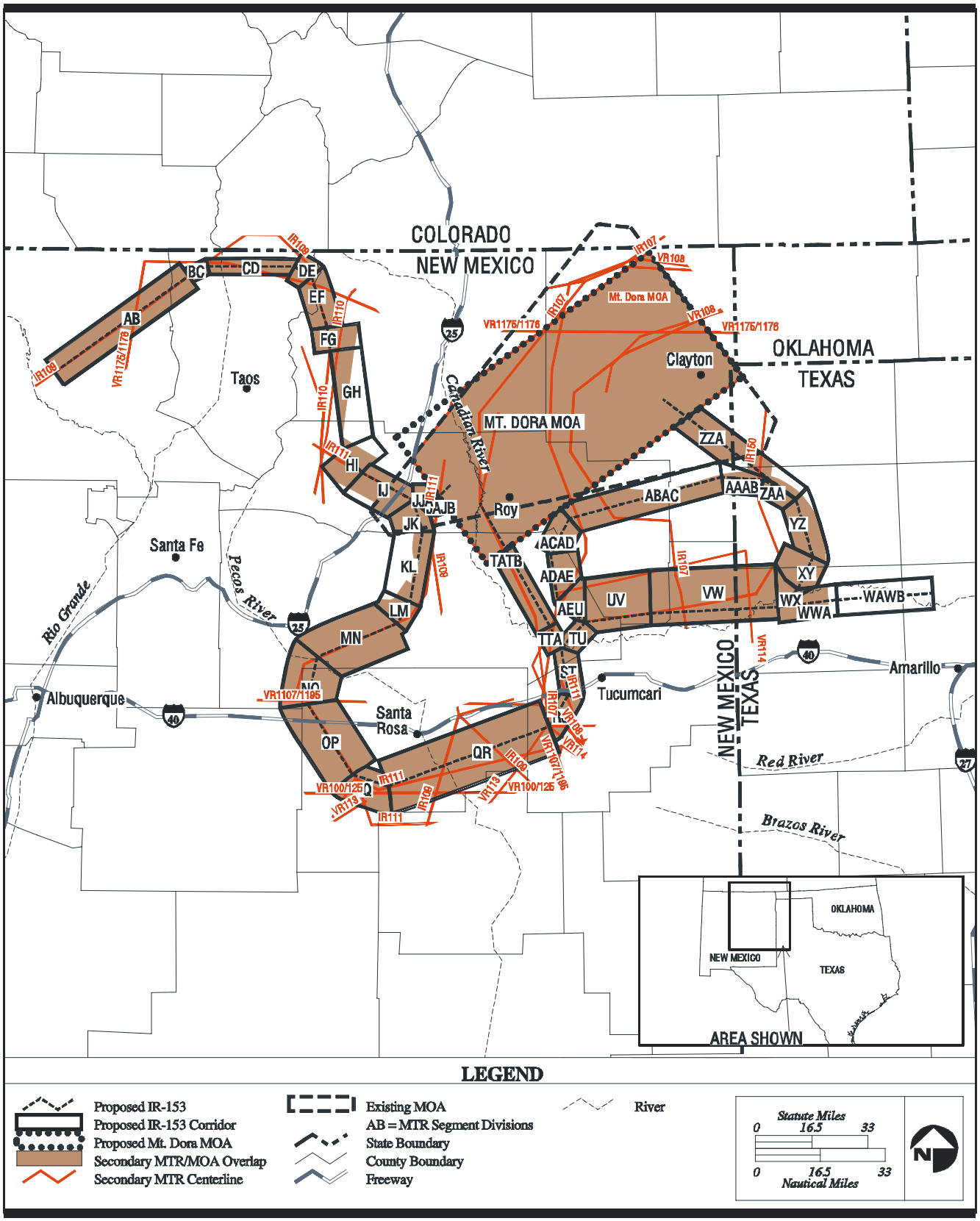
Changes to the Mt. Dora MOA would include modification to its shape, addition of a small amount of new airspace, elimination of a larger amount of existing airspace, and addition of an ATCAA atop the MOA. The current triangular shape of the Mt. Dora MOA would be modified to form a 40- by 80-nm rectangle (refer to Figure 2.4-10). This would result in addition of about 75 square nm of new airspace beyond the northwest edge of the existing MOA; a similar expansion would occur on the south side of the existing MOA, but would coincide with existing secondary MTR airspace. With existing reconfiguration, existing Mt. Dora MOA airspace on the northern and southern edges would be eliminated.

Modification to the altitude structure of the Mt. Dora MOA would consist solely of extending the ATCAA from the ceiling (18,000 feet MSL) of the reconfigured MOA up to 40,000 feet MSL. The existing floor (1,500 feet AGL) would not be changed, although the bombers would conduct flights no lower than 3,000 feet AGL. Use of the airspace between 1,500 and 3,000 feet AGL would be confined to fighter aircraft (mostly F-16s; see Appendix B) currently using this airspace in the same way.

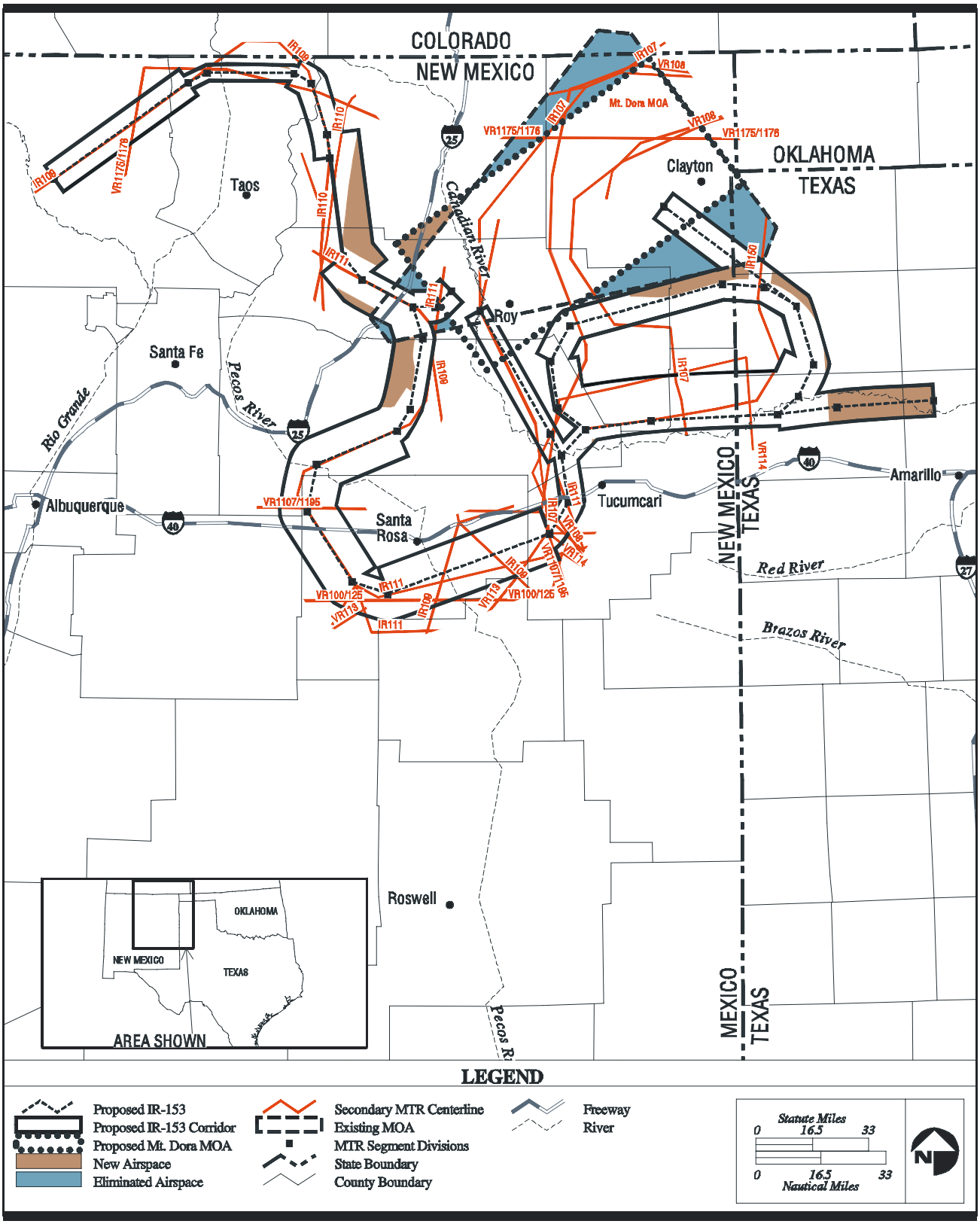
Alternative D would result in a decrease in the total amount of land under the airspace (Table 2.4-11). Proposed IR-153 would, as noted previously, predominantly coincide with existing secondary MTR airspace; little new airspace would be added. The proposed Mt. Dora MOA/ATCAA would shrink in overall size, with almost all of the reconfigured MOA consisting of existing airspace.

Total sortie-operations for proposed IR-153 combine those projected for IR-153 and existing sortie-operations on overlapping and intersecting MTRs.

Annual sortie-operations under Alternative D would be concentrated along proposed IR-153 and in the Mt. Dora MOA (Table 2.4-12). Use of all other primary airspace, including IR-178, would decrease; no changes to use of secondary airspace would occur. For proposed IR-153, segments AB to KJ would be used the most (2,660 annual sortie-operations). Sortie-operations along the remainder of the segments would be less (Figure 2.4-11). As shown in Table 2.4-13, the numerous secondary MTRs overlapping or intersecting with proposed IR-153 would continue to receive use for sortie-operations at baseline levels. When added to the projected use of



Affected Area for Alternative D: IR-153/Mt. Dora MOA **Figure 2.4-9**



Alternative D: IR-153/Mt. Dora MOA Proposed Airspace Modifications

Figure 2.4-10

Table 2.4-11
Comparison of Existing and Proposed Area
Under Alternative D: IR-153/Mt. Dora MOA

	Area Under Airspace (square nm)				
	Existing Airspace	*Eliminated Airspace*	*Existing Airspace As Part of Proposed Airspace*	*New Airspace*	*Total Proposed Airspace*
IR-153	4,757[1]	0	4,757	612	5,369
Mt. Dora MOA	4,034	933	3,101[1]	75	3,176

[1] Includes other primary and secondary MTRs covering portions of same area.

IR-153, the combined annual maximum sortie-operations would be 6,336 for segment RS. Baseline sortie-operations for this segment total 3,876.

Baseline use of the secondary airspace that would become IR-153 ranges from zero annual sortie-operations in the single segment (WAWB) not overlapping or intersecting with existing secondary MTRs to 3,876 (combined sortie-operations for IR-107, IR-113, VR-100/125, VR-108, VR-1107/1195 and VR-114) in segment RS of proposed IR-153. Fighter aircraft such as F-16s represent the predominant users of these secondary MTRs (see Appendix B).

Use of the reconfigured Mt. Dora MOA would increase from 379 to 2,668 annual sortie-operations. B-1 and B-52 bombers would conduct 2,250 of these sortie-operations. Baseline activity in the area of the proposed Mt. Dora MOA/ATCAA includes sortie-operations along MTRs that cross over much of the same area. These four secondary MTRs (refer to Figure 2.4-9) add more than 400 low-altitude sortie-operations to the 379 currently being conducted in the area.

CONSTRUCTION

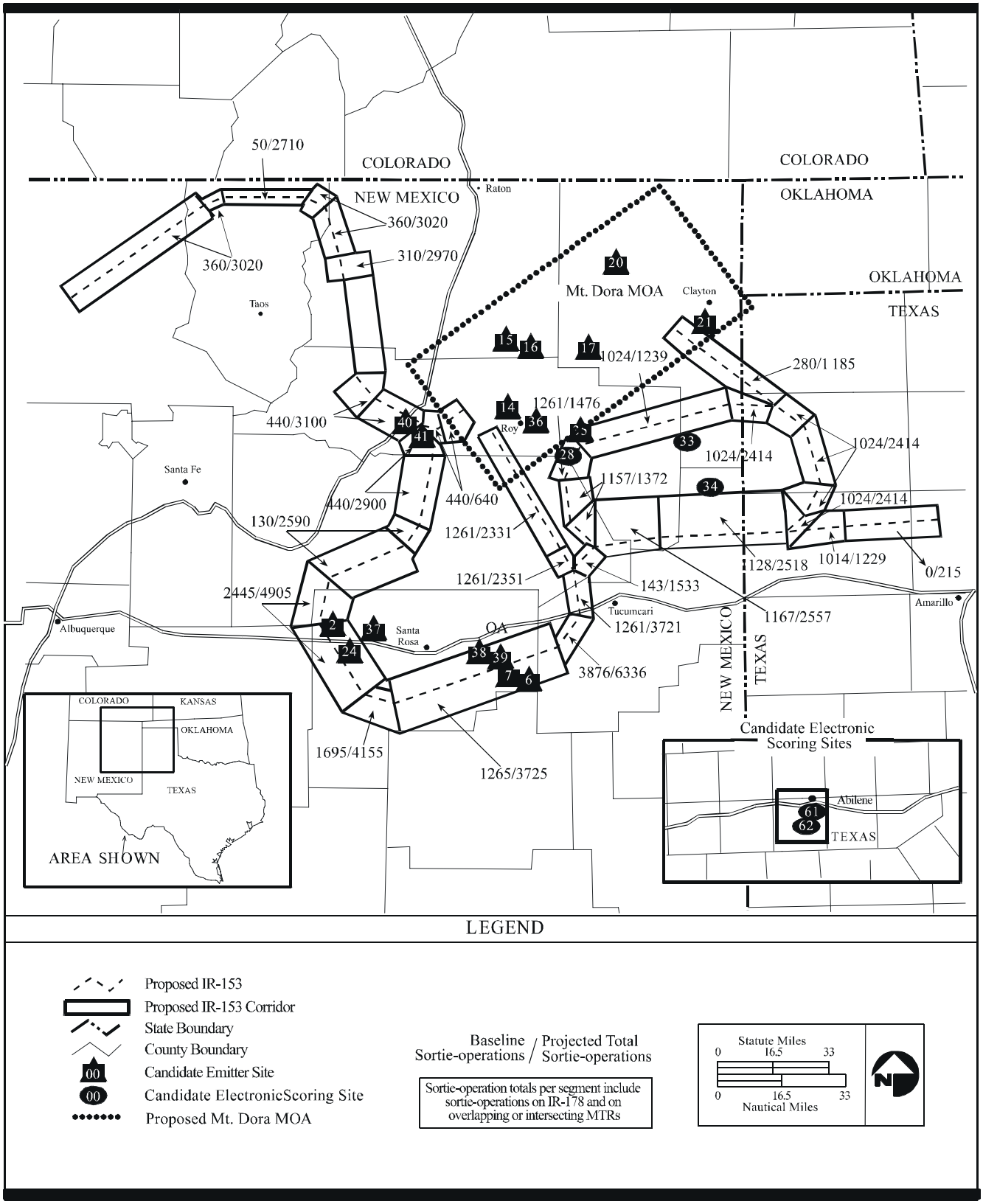
Table 2.4-14 lists candidate emitters and Electronic Scoring Sites for Alternative D along with their road, power, telephone, water, and wastewater requirements. The table also provides distances from the juncture of the existing paved road, telephone line, and power line to the center of each candidate sites. As with Alternatives B and C, the Air Force identified more candidate sites than would be required.

Table 2.4-12. Alternative D: IR-153/Mt. Dora MOA Projected Airspace Use

Table 2.4-12
Alternative D: IR-153/Mt Dora MOA Projected Airspace Use

		Bomber Aircraft Annual Sortie-Operations						*Other Aircraft Annual Sortie-Operations*						*Total*		
Airspace Units	*Class*	*B-1s: Dyess*	*Change from Baseline*	*B-52s: Barksdale*	*Change from Baseline*	*Bombers: Other Bases*	*Change from Baseline*	*Air Force Fighter Aircraft*[1]	*Navy Aircraft*[2]	*GAF Aircraft*[3]	*RSAF Aircraft*[4]	*Trainer Aircraft*[5]	*Other Aircraft*[6]	*Alternative D Total*	*Baseline/ No-Action Total*	*Change from Baseline*
MTRs																
VR-100/125	S							964	8	100	188	1	4	1,265	1,265	*0*
VR-108	S							97	25		18	3		143	143	*0*
VR-114	S							805			146	56	7	1,014	1,014	*0*
VR-143	S					100		50	400			70		620	620	*0*
VR-186	S					100		50	400			625		1,175	1,175	*0*
VR-196/197	S											512		512	512	*0*
VR-1107/1195	S							1,050						1,050	1,050	*0*
VR-1116	S					30								30	30	*0*
VR-1175/1176	S					50								50	50	*0*
IR-107	S					10		71			13	10		104	104	*0*
IR-109	S					50		188	28		33		11	310	310	*0*
IR-110	S	0												0	0	*0*
IR-111	S							80		9	14	18	9	130	130	*0*
IR-113	S							110	170		20			300	300	*0*
IR-123	S					1		1	35			13		50	50	*0*
IR-124	S					10		10	20			40	60	140	140	*0*
IR-128/180	**P**	**0**	***-25***	**0**	***-25***							**150**		150	**200**	***-50***
IR-150	**P**	**5**	***-195***	**5**	***-75***									10	**280**	***-270***
Proposed IR-153	**P**	**1,330**	***1,330***	**905**	***905***	**375**	***375***	**50**						2,660	**0**	***2,660***
IR-154	S	0						10					60	70	70	*0*
IR-169	S											465		465	465	*0*
IR-174	**P**	**0**	***-40***	**0**	***-25***	**121**								121	**186**	***-65***
IR-177/501	**P**	**5**	***-270***	**5**	***-145***									10	**425**	***-415***
IR-178[7]	**P**	**220**	***-585***	**70**	***-485***		***-150***	**50**						340	**1,560**	***-1,220***
IR-192/194	S									637			21	658	658	*0*
IR-592	**P**			**20**	***-170***	**317**							**3**	340	**510**	***-170***
MOAs																
Reese 4	S	0	*-3*											0	3	*-3*
Reese 5	S	0	*-3*											0	3	*-3*
Roby	S	0	*-100*											0	100	*-100*
Texon	S	0	*0*	0	*0*			15	30	0		40	15	100	100	*0*
Proposed Mt. Dora	**P**	**1,850**	***1,844***	**400**	***394***	**50**		**321**	**4**		**33**		**10**	2,668	**379**	***2,289***

Class P = Primary airspace used by B-1s from Dyess AFB and/or B-52s from Barksdale AFB.
Class S = Secondary airspace unit intersects with airspace unit used by B-1s from Dyess AFB and/or B-52s from Barksdale AFB.
[1] Consists predominantly of F-16s
[2] Consists of F-14s and F-18s
[3] German Air Force Tornados at Holloman AFB
[4] Republic of Singapore F-16s at Cannon AFB
[5] T-38 and T-1 trainers
[6] Includes primarily transport aircraft such as C-141s and C-17s
[7] Total sortie-operations represent maximum for segments of MTR; other segments used less.



Alternative D: IR-153/Mt. Dora MOA
Current and Proposed Sortie-Operations

Figure 2.4-11

Table 2.4-13
Alternative D: IR-153 Projected Sortie-Operations

IR-153		*Secondary MTR*		*Total* [1]	*Baseline Total*	*Change from Baseline*
Segments	*Projected Sortie-Operations*	*MTR*	*Sortie-Operations*			
AB	2,660	IR-109, VR-1175/1176	360	3,020	360	2,660
BC	2,660	IR-109, VR-1175/1176	360	3,020	360	2,660
CD	2,660	VR-1175/1176	50	2,710	50	2,660
DE	2,660	IR-109, VR-1175/1176	360	3,020	360	2,660
EF	2,660	IR-109, VR-1175/1176	360	3,020	360	2,660
FG	2,660	IR-109, IR-110	310	2,970	310	2,660
GH	2,660	IR-109, IR-110	310	2,970	310	2,660
HI	2,660	IR-109, IR-110, IR-111	440	3,100	440	2,660
IJ	2,660	IR-109, IR-111	440	3,100	440	2,660
JK	2,660	IR-109, IR-111	440	3,100	440	2,660
KL	2,460	IR-109, IR-111	440	2,900	440	2,460
LM	2,460	IR-111	130	2,590	130	2,460
MN	2,460	IR-111	130	2,590	130	2,460
NO	2,460	IR-111, VR-100/125, VR-1107/1195	2,445	4,905	2,445	2,460
OP	2,460	IR-111, VR-100/125, VR-1107/1195	2,445	4,905	2,445	2,460
PQ	2,460	IR-111, IR-113, VR-100/125	1,695	4,155	1,695	2,460
QR[a]	2,460	VR-100/125	1,265	3,725	1,265	2,460
QR[b]	2,460	IR-107, IR-113, VR-108, VR-114, VR-100/125, VR-1107/1195	1,265	3,725	1,265	2,460
RS	2,460	IR-107, IR-113, VR-108, VR-114, VR-100/125, VR-1107/1197	3,876	6,336	3,876	2,460
ST	2,460	IR-107, VR-108, VR-114	1,261	3,721	1,261	2,460
TU	2,460	VR-108	143	2,603	143	2,460
UV	1,390	IR-150, VR-108, VR-114	1,167	2,557	1,167	1,390
VW	1,390	IR-107, IR-150, VR-114	1,128	2,518	1,128	1,390
WX	1,390	IR-150, VR-114	1,024	2,414	1,024	1,390
XY	1,390	IR-150, VR-114	1,024	2,414	1,024	1,390
YZ	1,390	IR-150, VR-114	1,024	2,414	1,024	1,390
ZAA	1,390	IR-150, VR-114	1,024	2,414	1,024	1,390
AAAB	1,390	IR-150, VR-114	1,024	2,414	1,024	1,390
ABAC	215	IR-107, IR-108, VR-114	1,261	1,476	1,261	215
ACAD	215	IR-108, VR-114	1,157	1,372	1,157	215
ADAE	215	IR-108, VR-114	1,157	1,372	1,157	215
AEU	215	IR-108, VR-114	1,157	1,372	1,157	215
TTA	215	IR-107, IR-108, VR-114	1,261	1,476	1,261	215
TATB	1,090	IR-107, IR-108, VR-114	1,261	2,351	1,261	1,090
ZZA	1,070	IR-150	10	1,080	280	800
WWA	1,175	VR-114	1,014	2,189	1,014	1,175
WAWB	215	not applicable	not applicable	215	not applicable	215
JJA	215	IR-109, IR-111	440	655	440	215
JAJB	200	IR-109, IR-111	440	640	440	200

See Figure 2.4-9 for segment locations.

[1] Totals represent sortie-operations flown on primary MTR (IR-153) plus those flown on overlapping or intersecting segments of other MTRs.

[a] Secondary MTRs overlapping western portion of the segment.

[b] Secondary MTRs overlapping eastern portion of the segment.

Table 2.4-14
Candidate Sites for Emitters and Electronic Scoring Sites Analyzed for Alternative D: IR-153/Mt. Dora MOA

Candidate Sites[1]	*Function*[2]	*Driveway Construction (feet)*	*Power Lines (feet)*	*Telephone Lines (feet)*	*Water*	*Wastewater Treatment*
2	MTR Emitter	500	10,600	5,300	NA	NA
6	MTR Emitter	400	100	400	NA	NA
7	MTR Emitter	400	100	400	NA	NA
24	MTR Emitter	2,000	1,700	1,700	NA	NA
37	MTR Emitter	800	7,400	7,400	NA	NA
38	MTR Emitter	400	7,400	8,400	NA	NA
39	MTR Emitter	8,400	12,700	8,400	NA	NA
40	MTR Emitter	7,900	7,300	7,400	NA	NA
41	MTR Emitter	500	500	500	NA	NA
28	MTR Electronic Scoring Site	600	500	500	Truck-in	Construct
33	MTR Electronic Scoring Site	500	1,300	500	Truck-in	Construct
34	MTR Electronic Scoring Site	2,600	10,600	2,600	NA	NA
14	MOA Emitter	800	100	800	NA	NA
15	MOA Emitter	400	500	400	NA	NA
16	MOA Emitter	400	500	500	NA	NA
17	MOA Emitter	400	400	400	NA	NA
20	MOA Emitter	400	400	400	NA	NA
21	MOA Emitter	400	400	400	NA	NA
35	MOA Emitter	500	3,200	3,200	NA	NA
36	MOA Emitter	500	500	500	NA	NA
61	En Route Electronic Scoring Site	400	Existing	Existing	Existing	Construct
62	En Route Electronic Scoring Site	400	Existing	Existing	Existing	Construct

[1] Each site was given a unique number to aid in analysis.

[2] Five MTR Emitter Sites, one MTR Electronic Scoring Site, five MOA Emitter Sites, and one En Route Electronic Scoring Site would be required and selected.

2.5 ENVIRONMENTAL IMPACT ANALYSIS PROCESS

2.5.1 Scoping

To determine the issues to be addressed during the impact analysis process, NEPA requires an early and open process called scoping. The scoping process and the participation of agencies allowed the analysis to be focused on the effects of most concern and was used as a means to keep the EIS readable and useful to the decision-maker and the public. The scoping period began with the December 19, 1997, publication of the Notice of Intent in the Federal Register and concluded on April 3, 1998, with the end of the public scoping comment period. Extensive public scoping meetings were held at nine locations throughout western Texas and northeastern New Mexico, as well as in Harrison, Arkansas, and La Junta, Colorado, from January 24 to February 6, 1998. In addition to public input, the Air Force sought the concerns of federal, state, and local agencies; technical specialists; and Native American tribes. The scoping process helped identify the issues to be analyzed in depth in the draft EIS, as well as the resources not likely to be affected by the action. The Air Force also received additional input on issues through six community meetings held in Texas and New Mexico prior to the start of scoping (December 1997). Additional meetings held in New Mexico after the conclusion of scoping provided another opportunity to hear issues from the public.

Chapter 6 summarizes RBTI public involvement to date.

Scoping revealed concerns about the effects of aircraft noise on humans, livestock, wildlife, recreation, and general quality of life were the most numerous comments received through the public scoping process. Structural damage from noise vibration on homes and historic structures due to low-altitude overflights was also of concern. Airspace issues focused on potential conflicts between military aircraft and local aviation activities, such as cloud seeding, emergency medical flights, and aerial spraying. Safety issues of primary concern were related to plane crashes from increased air traffic, bad weather, or birds, along with additional concerns relating to the effects of vortices from aircraft overflights. In terms of biological resources, many people mentioned concerns about the impact to wildlife in proposed overflight areas.

The U.S. Fish and Wildlife Service (FWS) was concerned about the effects of overflights on threatened and endangered species. State Historic Preservation Officers (SHPOs) from Texas and New Mexico were concerned about the potential effects of construction of Electronic Scoring Site facilities on archaeological sites. Other concerns mentioned during the scoping period included an increase in air pollution, contamination of waterways from soil erosion due to construction, and visual intrusion of overflights in recreation areas.

2.5.2 Public Comment on the Draft EIS

The Air Force used this input on issues to scope and prepare the draft EIS. Published on March 19, 1999, more than 900 copies of the draft EIS were distributed to agencies, the public, and repositories. Fifteen public hearings were held from April 7, 1999, through April 22, 1999 (see Section 6.0). At these meetings, the public commented on the draft EIS. By the end of the 90-day public comment period on June 16, 1999, the Air Force had received a combined total of over 1,500 oral and written comments on the draft EIS. Each comment was reviewed and responses were prepared (see Volume II). These public and agency comments also provided input for change to and clarification of this final EIS.

Comments provided during the public comment period restated concerns raised during scoping. In all instances, the core concerns presented at scoping were

addressed in the draft EIS. However, commentors on the draft took issue with either the depth of treatment of the topic or the analytical conclusions reached about the topic. Additional comments on the draft EIS covered a set of broad topics about which many members of the public made similar, if not identical, comments:

Aircraft noise was the most common potential effect mentioned by the public.

- Noise Analysis Methodology--Comments questioned the validity and applicability of the noise analysis methodology and modeling used for RBTI.
- Civil Aviation Conflicts--Concerns centered around the opinion that the draft EIS did not recognize an appropriate magnitude of impacts to civil aviation activities in the affected areas.
- Overflight Effects on Livestock--Public comments yielded anecdotes concerning the effects on livestock and contended that the draft EIS underestimated those potential effects.
- Overflight Effects on the Economy and Land Use--Commentors surmised that the proposed increases in military airspace use would force changes in land use and decreases in the revenues from land, ranching, hunting, and tourism.
- Ownership of Airspace--Commentors contended that individuals own the airspace above their property and deserve compensation for its use by military aircraft.
- Effects on Philmont Scout Ranch--The most numerous comments received concerned the need to further detail the nature and magnitude of impacts to the ranch, its uses, and its activities.
- Effects on Quality of Life--A major concern expressed by the public was on the effects of overflights to their “sense of well-being,” “peacefulness,” or general lifestyle.

2.5.3 Analysis Approach

NEPA requires focused analysis on the areas and resources (e.g., wildlife) potentially affected by an action or alternative. It also indicates that an EIS should consider, but not analyze in detail, those areas or resources not potentially affected. In so doing, an EIS should not be encyclopedic; rather, it should try to be "to the point." These overarching NEPA principles guided the approach to analysis in this RBTI EIS. To define the affected areas and resources, the analysis process first determined where the four alternatives would occur. This led to definition of the study area (refer to Section 2.2), which encompasses the No-Action Alternative and the three action alternatives. The affected area for each of these four alternatives represents a subset of the larger study area. As shown in the preceding Sections 2.4-2 through 2.4-4, Alternatives A, B, and C share a similar, although not identical, affected area in western Texas. Alternative D, in contrast, is centered in northeastern New Mexico, and mostly affects a different area. The affected areas for all four alternatives include the MTRs and Electronic Scoring Sites associated with the Harrison and La Junta facilities. The Air Force conducted the following evaluations of the areas and resources that RBTI might affect:

- Identified the types and locations of all elements involved in each alternative;
- Determined the possible interaction of these elements with the resources in potentially affected locations;
- Correlated the issues raised in scoping to the potentially affected locations and resources; and

- Assessed whether, how and to what degree the resources may be affected.

Combined, the affected areas and affected resources defined through scoping and initial analyses comprise the affected environment for each of the four alternatives. This EIS examines the specific affected environment for each alternative, considers the current conditions of the affected environment, and compares those to conditions that might occur should an alternative be implemented. Table 2.5-1 presents the results of the process of identifying the affected environment. It, along with the following discussion in this section, also identifies those issues and resources examined in this EIS and those eliminated from further detailed analysis.

2.5.4 Definition of Resource Analysis

Table 2.5-1 lists the order in which this EIS discusses the affected resources; this order reflects the degree of detail of the discussion. NEPA regulations (40 CFR Parts 1500-1508) call for this approach by requiring an EIS to discuss impacts in proportion to their significance and present only enough discussion of other than significant issues to show why more study is not warranted.

Initially, the potential effects of the alternatives were evaluated according to 15 major resource categories (refer to Table 2.5-1). Through the process described previously, it was determined that discussion of related resources and issues could be combined in the EIS, that only specific portions of some resources warranted detailed discussion, and that some resources warranted no further discussion in the EIS.

Table 2.5-1
Resources and Issues Considered in Environmental Impact Analysis Process

		PROJECT ELEMENTS				
Resource	*Public/Agency/AF Scoping of Issues*	*Flight Operations*	*Construction*	*Ground Operations*	*Decommissioning*	*Location in EIS*
Airspace	✔	✔				Section 4.1 Airspace and Aircraft Operations
Noise	✔	✔				Section 4.1 Airspace and Aircraft Operations [1]
Safety	✔	✔				Section 4.1 Airspace and Aircraft Operations
Air Quality	✔	✔				Section 4.1 Airspace and Aircraft Operations [2]
Land Use	✔	✔	✔	✔	✔	Section 4.2 Land Management and Use
Recreation	✔	✔				Section 4.2 Land Management and Use
Visual Resources	✔	✔	✔	✔		Section 4.2 Land Management and Use
Biological Resources	✔	✔	✔	✔		Section 4.3 Biological Resources
Socioeconomics	✔	✔	✔	✔	✔	Section 4.4 Socioeconomics and Environmental Justice
Environmental Justice	✔	✔				Section 4.4 Socioeconomics and Environmental Justice
Cultural Resources	✔	✔	✔	✔	✔	Section 4.5 Cultural Resources
Earth Resources	✔		✔	✔	✔	Section 4.6 Soils and Water [3]
Water Resources	✔			✔		Section 4.6 Soils and Water
Transportation						Eliminated from Further Study (see discussion below)
Hazardous Materials and Waste						Eliminated from Further Study (see discussion below)

[1] Noise effects on humans, quality of life, and recreation are discussed in Section 4.2, Land Management and Use; on wildlife and livestock in Section 4.3, Biological Resources; on historic structures and traditional resources in Section 4.5, Cultural Resources.
[2] Air quality effects due to fugitive dust are discussed in Section 4.6, Soils and Water.
[3] Effects on Paleontological Resources (fossils) are discussed in Section 4.6, Soils and Water.

Airspace, aircraft noise, aircraft safety, and aircraft emissions (air quality), representing some of the most noted issues, were combined under Section 4.1, Airspace and Aircraft Operations. These resource areas are grouped because they deal with issues related to flight operations. Section 4.2, Land Management and Use, covers a combination of many related topics: Land Ownership, Land Management, Recreation, and Visual Resources. Section 4.3 discusses biological resources as a discrete topic. Socioeconomics and Environmental Justice, Section 4.4, combines discussion of these two linked topics. Section 4.5, Cultural Resources, is limited to a discussion of archaeological, historic architectural, and traditional resources.

The affected area for soils and water resources (Section 4.6) proved to be narrower than the overall affected environment for a given alternative. Analysis demonstrated that soils and water only had the potential to be affected by construction and operation of the proposed 15-acre emitter sites and Electronic Scoring Sites. No other elements of the proposal would impact these resources, so discussion of soils and water is focused only on the development and use of ground-based assets.

Three resource categories--hazardous waste and materials, transportation, and ground safety--were eliminated from further study. No public or agency concerns were raised during scoping, and none of the alternatives would measurably affect these resource categories. The following presents the justification for eliminating these resources from further discussion in the EIS.

Hazardous Materials and Waste. Effects from hazardous materials and waste associated with the construction and operation of the emitter sites and Electronic Scoring Sites would be negligible to nonexistent. Environmental baseline surveys were conducted at each of the proposed emitter sites and Electronic Scoring Sites and at the two existing Electronic Scoring Site sites at Harrison and La Junta. No evidence of soil contamination, PCB-containing equipment, fuel or chemical storage tanks, asbestos-containing building materials, wastewater treatment and disposal or lead-based paint was present at the candidate sites. Two of the candidate sites (60 and 61) contain aboveground storage tanks holding heating oil. Two other candidate sites (65 and 79) contain empty aboveground storage tanks. No evidence of spills or other problems was noted at these sites. The minimal quantities of hazardous materials used at the existing Electronic Scoring Sites, such as aerosol cans, paint, and oil, are collected and taken to a consolidated accumulation point for disposal. All hazardous materials handling complies with Air Force procedures.

During construction, use of hazardous substances for fueling and equipment maintenance at the emitter and Electronic Scoring Site sites would be handled using best construction practices in accordance with Air Force policy and procedures. Adherence to policy relating to hazardous storage and use during operation would be monitored under the Air Force's Environmental Compliance Assessment Management Program (ECAMP), which requires both internal audits and examination by independent reviewers. Spill plans would be prepared in accordance with Air Force regulations. Given the enforced requirement to ensure safe handling of materials and the minimal amounts of materials likely to be used at the sites, the probability for an effect on the environment would be so negligible that further analysis in this EIS is unwarranted.

Transportation. The action alternatives would involve transportation of personnel to the two scoring sites over improved roads and the monthly travel of maintenance personnel to the emitter sites on state or county roads. The amount of travel would be minimal (30 to 40 round trips per day) and dispersed over many miles of very lightly used roads. Consequently, no alternative would result in increased traffic or require modification to existing public roads. Road construction would consist of building an asphalt or gravel driveway from the edge of the site to the center or

constructing new roads from existing improved roads to the driveway. Since construction would take place on private lands, it would not result in increased traffic to lightly traveled areas. Effects of any of the action alternatives on existing transportation resources would not be measurable or noticeable.

Ground Safety. Aircraft safety is discussed in Section 4.1. Effects to human safety related to construction and operation of the emitter and scoring sites would be minimal. During construction, standard industrial safety standards and best management practices would be followed. Operations and maintenance activities would be performed in accordance with all applicable safety directives. A safe separation distance of 250 feet from the emitter has been established at every emitter location. There are no specific aspects of operations or maintenance that would create any unique or extraordinary safety issues.

Hazardous materials and waste, transportation, and ground safety would not be issues under RBTI.

2.5.5 Clarifications and Changes to the EIS

Public and agency comment on the draft EIS revealed the need to clarify or enhance certain information on a few topics in the final EIS. The Air Force reviewed and considered the broad topics described above in Section 2.5.2. Each of these topics received special attention through expanded, detailed responses to comments (see Volume III) designed to comprehensively address the issues. In addition, the following comprise clarifications and additions presented in this final EIS:

- A secondary MTR, IR-102/141, was eliminated from analysis along with its associated sortie-operations, thereby reducing cumulative noise levels and other effects stemming from aircraft flight activities.
- More detail has been added to the EIS (Sections 2.4 and 4.1) regarding the nature, speed, and duration of current and proposed flight activities.
- Measures to mitigate impacts and management actions to address public and agency concerns have been added in Section 2.6.2.
- More information on past studies of the effects of overflight and noise on domestic livestock and wildlife has been incorporated into Appendix G, and clarification of those potential effects has been included in Section 4.3.
- Section 4.3 now includes a clarified description of consultation with the U.S. Fish and Wildlife Service concerning threatened and endangered species.
- Appendix E now contains enhanced descriptions of the methods used for the biological, cultural resource, and environmental baseline surveys of the candidate electronic scoring sites and emitter sites.

2.6 SUMMARY OF IMPACTS

2.6.1 Impacts Related to the Proposed Action

Table 2.6-1 presents a summary of the impacts associated with the proposed establishment of a realistic bomber training area. The table compares the effects of each action alternative (Alternatives B, C, and D) to those of the No-Action Alternative (Alternative A). For more detailed information, see the resource discussion in Chapter 4.0 and associated appendices.

Table 2.6-1
Comparison of Alternatives by Resource and Potential Impact

	No-Action Alternative	*Proposed Action*		
Project Elements	*Alternative A*	*Alternative B*	*Alternative C*	*Alternative D*
4.1 AIRSPACE AND AIRCRAFT OPERATIONS				
Airspace Management	No change to airspace structure or management; scheduling and FAA procedures designed to prevent conflicts between military and civil aviation.	Proposed IR-178 would include about 15 percent new airspace and the proposed Lancer MOA/ATCAA would include about 10 percent new airspace. A total of 29 segments of existing IR-178 eliminated in New Mexico, but FAA would need to ensure conflicts between proposed ATCAA and intersecting jet routes are avoided.	Proposed IR-178 would include about 20 percent new airspace and the pr posed Texon MOA/ATCAA would include about 25 percent new airspace. A total of 29 segments of existing IR-178 eliminated in New Mexico. Minimal potential for conflicts with civil aviation, but VFR conflicts between proposed MOA/ATCAA and intersecting jet routes and federal airways would require rerouting and possibly airspace restructuring.	Proposed IR-153 would include about 11 percent new airspace and the proposed Mt. Dora MOA/ATCAA would include less than 5 percent new airspace. Minimal potential for conflicts with civil airfields, but the proposed Mt. Dora MOA/ATCAA would intersect jet routes and federal airways, thus requiring increased airspace management. Establishment of proposed IR-153 would affect current military users of existing secondary MTRs it overlaps or intersects.
Noise	Noise levels on existing IR-178 range from less than 45 to 61 DNL. Of a total of 71 IR-178 segments, three have noise levels of less than 45 DNL and 30 have noise levels of 55 DNL or greater. Noise levels in other primary and secondary MTRs range from less than 45 DNL to 56 DNL. Noise levels of less than 45 DNL characterize the MOAs. Average daily sortie-operations on IR-178 combined with activity on segments of overlapping or intersecting MTRs range from 1 to 6, depending upon the segment.	Noise levels on proposed IR-178 would range from 46 to 61 DNL. Of a total of 41 segments on proposed IR-178, none has noise levels of less than 45 DNL and 28 have noise levels of 55 DNL or greater. Noise levels in the proposed Lancer MOA/ATCAA would remain low, but increase to 46 DNL. Noise levels in other primary and secondary MTRs and MOAs either decrease or remain the same. Average daily sortie-operations on proposed IR-178 combined with activity on segments of overlapping or intersecting MTRs would range from 1 to 10, and would increase on all but five segments; increases would range from 1 to 6 daily sortie-operations.	Noise levels on proposed IR-178 would range from 46 to 61 DNL. Of a total of 35 segments on proposed IR-178, none have noise levels of less than 45 DNL and 25 have noise levels of 55 DNL or greater. Noise levels in the proposed Texon MOA/ATCAA would remain low, but increase to 46 DNL. Noise levels in other primary and secondary MTRs and MOAs either decrease or remain the same. Average daily sortie-operations on proposed IR-178 combined with activity on segments of overlapping or intersecting MTRs would range from 1 to 10, and would increase on all but five segments; increases would range from 1 to 6 daily sortie-operations.	Noise levels on proposed IR-153 range from less than 45 to 64 DNL. Of a total of 38 segments on proposed IR-153, 3 have noise levels of less than 45 DNL and 26 have noise levels of 55 DNL or greater. Noise levels in the proposed Mt. Dora MOA/ATCAA would remain low, but increase to 46 DNL. Noise levels in other primary and secondary MTRs and MOAs either decrease or remain the same. Average daily sortie-operations on proposed IR-153 combined with activity on segments of overlapping or intersecting MTRs would range from 1 to 24, and would increase on all but three segments; increases would range from 1 to 10 daily sortie-operations.
Aircraft Emissions	Aircraft emissions produce minimal quantities of criteria pollutants, and ground-level concentrations of pollutants are fractions of federal and state standards.	Aircraft emissions produce minimal quantities of criteria pollutants, and ground-level concentrations of pollutants would be fractions of federal and state standards.	Aircraft emissions produce minimal quantities of criteria pollutants, and ground-level concentrations of pollutants would be fractions of federal and state standards.	Aircraft emissions produce minimal quantities of criteria pollutants, and ground-level concentrations of pollutants would be fractions of federal and state standards.
Aircraft Safety	The probability of a B-1 Class A mishap on IR-178 is 0.07 percent per year and for B-52s, the probability is 0.03 percent. The probabilities of Class A mishaps in all other primary airspace are even lower.	The probability of a B-1 Class A mishap on proposed IR-178 would be 0.08 percent per year and for B-52s, the probability would be 0.03 percent. The probabilities of Class A mishaps in all other primary airspace would be even lower.	The probability of a B-1 Class A mishap on proposed IR-178 would be 0.07 percent per year and for B-52s, the probability would be 0.02 percent. The probabilities of Class A mishaps in all other primary airspace would be even lower.	The probability of a B-1 Class A mishap on proposed IR-153 would be 0.07 percent per year and for B-52s, the probability would be 0.02 percent. The probabilities of Class A mishaps in all other primary airspace would be even lower.
Construction	No Effect	No Effect	No Effect	No Effect
Ground Operations	No Effect	No Effect	No Effect	No Effect
Decommissioning	No Effect	No Effect	No Effect	No Effect

Table 2.6-1
Comparison of Alternatives by Resource and Potential Impact

	No-Action Alternative	*Proposed Action*		
Project Elements	*Alternative A*	*Alternative B*	*Alternative C*	*Alternative D*
4.2 LAND MANAGEMENT AND USE				
Airspace and Flight Operations	A) No change to land use, recreation resources, or visual setting. B) Five communities underlie IR-178 and one is subject to noise levels of 55 DNL or greater. C) Three special use land management areas are affected by noise levels of 55 DNL or higher.	A) No likely effects to land use, recreation resources, or visual settings. B) Six communities experience increases in noise levels of 1 to 8 dB. One community newly exposed to aircraft noise. C) No Special Use Land Management Areas experience increases in noise levels of more than 3 dB.	A) No likely effects to land use, recreation resources, or visual settings. B) Five communities experience increases in noise levels of 4 to 5 dB. One community newly exposed to aircraft noise. C) No Special Use Land Management Areas experience increases in noise levels of more than 3 dB.	A) No likely effects to land use, recreation resources, or visual settings. B) Four communities experience increases in noise levels of 10 to 16 dB. C) Thirteen Special Use Land Management Areas experience increases in noise levels of 4 to 17 dB.
Construction	No change to land use, recreation resources, or visual setting.	No adverse effects to land use, recreation resources, or visual settings.	Same as Alternative B.	Same as Alternative B.
Ground Operations	No change to land use, recreation resources, or visual setting.	No adverse effects to land use, recreation resources, or visual settings.	Same as Alternative B.	Same as Alternative B.
Decommissioning	No change	No adverse effects.	Same as Alternative B.	Same as Alternative B.
4.3 BIOLOGICAL RESOURCES				
Airspace and Flight Operations	Approximately 1 to 6 low-altitude overflights per day over estimated aplomado falcon historic range.	Approximately 1 to 10 low-altitude overflights per day over estimated aplomado falcon historic range.	Approximately 1 to 10 low-altitude overflights per day over estimated aplomado falcon historic range.	Increase of 1 to 10 low-altitude overflights over wintering bald eagle areas and Mexican spotted owl and mountain plover habitat.
Construction	No Effect	Disturbance of less than 20 acres of possible wildlife habitat.	Disturbance of less than 20 acres of possible wildlife habitat.	Disturbance of less than 20 acres of possible wildlife habitat.
Ground Operations	No Effect	No Effect	No Effect	No Effect
Decommissioning	No Effect	No Effect	No Effect	No Effect
4.4 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE				
Airspace and Flight Operations	No Change	No measureable impacts to socioeconomics. No disproportionate impacts to minority and low-income populations.	Same as Alternative B.	No measureable impacts to socioeconomics. No disproportionate impacts to minority and low-income populations.
Construction	No Change	Taylor County: Increase in expenditures and revenue of $11.5 million, earnings of $3.4 million, and short-term, indirect jobs of 140. Reeves County: Increase in expenditures and revenue of $9 million, earnings of $1.9 million and short term, indirect jobs of 80.	Same as Alternative B.	Taylor County: Same as Alternative B. Tri-County Region: Increase in expenditures and revenue of $9.7 million, earnings of $2.7 million and short term, indirect jobs of 133.

Table 2.6-1
Comparison of Alternatives by Resource and Potential Impact

	No-Action Alternative	*Proposed Action*		
Project Elements	*Alternative A*	*Alternative B*	*Alternative C*	*Alternative D*
4.4 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE (continued)				
Decommissioning	No Change	Boone County: Loss in expenditures and revenue of $1.1 million, earnings of $1.1 million, and direct (31) and indirect (14) jobs of 45. Otero County: Loss in expenditures and revenue of $1 million, earnings of $1.2 million, and direct (30) and indirect (15) jobs of 45. Lost earnings would represent approximately 1 percent of current county personnel income for each county.	Same as Alternative B.	Same as Alternative B.
4.5 CULTURAL RESOURCES				
Airspace and Flight Operations	No change to archaeological, architectural, or traditional cultural properties. 22 National Register-listed properties, including 3 National Historic Landmarks currently overflown.	A) No likely effects to archaeological, architectural, or traditional resources. B) 15 National Register-listed properties exposed to changes of 1 to 12 dB in noise levels; average daily sorties increase by between 1 and 6 in MTR and 9 in MOA but area already overflown and overflights due to alternative rare. C) No known traditional cultural properties.	A) No likely effects to archaeological, architectural, or traditional resources. B) 6 National Register-listed properties exposed to changes of 1 to 5 dB in noise levels; average daily sorties increase by between 1 and 6 in MTR and 9 in MOA but area already overflown and overflights due to alternative rare. C) No known traditional cultural properties.	A) No likely effects to archaeological, architectural, or traditional resources. B) 15 National Register-listed properties including 2 National Historic Landmarks exposed to changes of 0 to 18 dB in noise levels; average daily sorties increase by 1 to 10 in MTR and MOA but are already overflown and overflights due to alternative rare. C) No known traditional cultural properties.
Construction	No Effect	No adverse effects to archaeological, architectural, or traditional resources. Existing site to be avoided.	No adverse effects to archaeological, architectural, or traditional resources. Existing 2 archaeological sites would be avoided.	No adverse effects to archaeological, architectural, or traditional resources. Existing 5 archaeological sites to be avoided or mitigated.
Ground Operations	No Effect	No adverse effects to archaeological, architectural, or traditional resources.	Same as Alternative B.	Same as Alternative B.
Decommissioning	No Effect	Transfer of property could affect resources if present, but effects could be avoided or mitigated to insignificant levels.	Same as Alternative B.	Same as Alternative B.
4.6 SOILS AND WATER RESOURCES				
Construction	No Effect	Potential for soil erosion exists on 7 sites but effects would be avoided or mitigated to insignificant levels. Soil losses of no more than 5 tons per 15-acre site with fugitive dust at 0.4 tons for emitters and 2.0 tons for ESSs. Best Management Practices would reduce effects to negligible levels. No effect due to water use or availability.	Potential for soil erosion exists on 7 sites but effects would be avoided or mitigated to insignificant levels. Soil losses of no more than 5 tons per 15-acre site with fugitive dust at 0.4 tons for emitters and 2.0 tons for ESSs. Best Management Practices would reduce effects to negligible levels. No effect due to water use or availability.	Potential for soil erosion exists on 16 sites but effects would be avoided or mitigated to insignificant levels. Soil losses of no more than 5 tons per 15-acre site with fugitive dust at 0.4 tons for emitters and 2.0 tons for ESSs. Best Management Practices would reduce effects to negligible levels. No effect due to water use or availability.
Ground Operations	Soil and water erosion negligible.	Soil and water erosion negligible.	Soil and water erosion negligible.	Soil and water erosion negligible.
Decommissioning	No Effect	No Effect	No Effect	No Effect

2.6.2 Measures to Address Environmental Effects and Community/Agency Concerns

MITIGATION MEASURES TO ADDRESS DEFINED EFFECTS

The mitigation measures presented below reflect a specific action that could be taken to reduce the potential for particular effects to resources. Details associated with each measure include a summary of the potential effect, the action to be taken and resulting environmental outcomes, responsible agencies, and implementation time frame. None of the mitigation measures presented will result in any significant degradation of realistic bomber training.

Resource Category	***Aircraft and Airspace Operations, Land Use, Cultural Resources, Biological Resources***
Potential Effect Addressed	Number of flights on proposed IR-153.
Action	Limit annual sortie-operations to 1,560 (about 6 per day), instead of the proposed 2,660 (about 10 per day).
Alternatives	D
EIS Section	2.3.1 and 2.4.4
Outcome	- Fewer sortie-operations would be flown than projected for Alternative D. - Potential impact of low-altitude flight activities would be reduced compared to projections for Alternative D.
Agency Responsible	Air Force
Time Frame	Proposal implementation.

Resource Category	***Biological Resources***
Potential Effect Addressed	After discussion with the FWS, the Air Force determined that aircraft flights on portions of modified IR-178 may affect, but are not likely to adversely affect, aplomado falcons, and is currently seeking FWS concurrence with that determination.
Action	- Evaluate the areas under modified IR-178 that are not currently being surveyed. - Expand the ongoing aplomado falcon survey into areas the evaluation determines may be aplomado falcon habitat.
Alternatives	B, C
EIS Section	4.3.3 and 4.3.4
Outcome	Reduce potential impact to aplomado habitat.
Agency Responsible	Air Force
Time Frame	Initiated with consultation process.

Resource Category	Biological Resources
Potential Effect Addressed	After discussion with the FWS, the Air Force determined that aircraft flights on portions of proposed IR-153 may affect, but are not likely to adversely affect, threatened and endangered bird species, and is currently seeking FWS concurrence with that determination.
Action	Adopt avoidance distances developed through consultation on German Air Force operations at Holloman AFB, New Mexico and force structure and foreign military sales actions at Cannon AFB, New Mexico.
Alternatives	D
EIS Section	4.3.5
Outcome	Reduce potential impact to threatened and endangered species.
Agency Responsible	Air Force
Time Frame	Proposal implementation.

Resource Category	Biological and Cultural Resources
Potential Effect Addressed	Construction or modification of driveways, power lines, and telephone lines to Electronic Scoring Site or emitter sites may impact significant biological resources or eligible cultural resources.
Action	- Consultation with SHPO. - Consultation with FWS. - Cultural and biological resources surveys of rights-of-way. - Realignment, where feasible, of rights-of-way to avoid resources. - Development and implementation of site-specific mitigation measures, if required.
Alternatives	B, C, D
EIS Section	Sections 4.3 and 4.5
Outcome	Avoid or reduce impacts to biological and cultural resources.
Agency Responsible	Air Force
Time Frame	Completed with site selection and consultation, prior to construction on affected sites.

Resource Category	*Cultural Resources*
Potential Effect Addressed	- Potentially eligible prehistoric archaeological sites could be disturbed by construction of an Electronic Scoring Site or emitter sites. - Potential effect on cultural resources through decommissioning of La Junta Electronic Scoring Site and disposition of lands out of federal control.
Action	- Complete Section 106 compliance measures and employ a combination of avoidance, monitoring, testing, and data recovery (if needed). - Survey of La Junta site and completion of Section 106 process.
Alternatives	B, C, D
EIS Section	Section 4.5
Outcome	- Avoid cultural resources wherever feasible. - Protect eligible cultural resources through Section 106 process.
Agency Responsible	Air Force
Time Frame	Completed with site selection and consultation, prior to construction on affected sites and transfer of land out of federal ownership.

MANAGEMENT ACTIONS

In addition to mitigation measures designed to address impacts revealed through the analysis in this EIS, the Air Force has identified two types of management actions to address concerns:

- *Actions incorporated into the proposal:* These actions used project design, configuration, and/or component location to reduce or eliminate potential impacts to a resource or suite of resources. Such actions include the use of existing information or data collected as part of the public involvement process to avoid siting alternative components in areas or settings known to contain resources that could be significantly affected. Such avoidance is not absolute; rather it is balanced with training and operational considerations needed to perform realistic bomber training. Because of operational and fiscal requirements, not all possible actions can be incorporated into the alternative components.

- *Actions to address community/agency concerns:* These actions were developed to address concerns brought forth by the public and agencies. These concerns were gathered at public hearings and received during the public comment period.

The following lists these actions associated with the three action alternatives proposed for RBTI. Details associated with each management action include a summary of the concern, the type of action to be taken, resulting environmental outcomes, responsible agencies, and implementation time frame. Like the mitigation measures, these management actions would not significantly reduce the effectiveness of realistic bomber training.

ACTIONS INCORPORATED INTO THE PROPOSAL

Resource Category	*Airspace and Aircraft Operations*
Concern Addressed	Creation of new military airspace.
Action	Use the maximum feasible existing airspace to define alternatives as suggested by FAA.
Alternatives	B, C, D
EIS Section	2.1.2
Outcome	Alternative B used 85% existing airspace, Alternative C, 80% existing airspace; Alternative D, 90% existing airspace. This was done by linking segments of existing MTRs to form a complete MTR for each alternative and by modifying existing MOAs. By doing this, the Air Force limited creation of new airspace.
Agency Responsible	Air Force and FAA
Time Frame	Proposal implementation.

Resource Category	*Aircraft and Airspace Operations*
Concern Addressed	Structure of the proposed MTRs would result in increased aircraft noise and overflights.
Action	Raise the floor altitude on several segments of the proposed MTR.
Alternatives	B, C
EIS Section	2.4 and Appendix C
Outcome	Reduce individual overflight noise and related effects.
Agency Responsible	Air Force and FAA
Time Frame	Proposal implementation.

Resource Category	*Land Use, Cultural Resources, Biological Resources, Soils and Water*
Concern Addressed	Flexibility needed in the number and siting of emitter sites and Electronic Scoring Sites to address potential environmental impacts.
Action	- Consider more sites than would be required for the emitters and Electronic Scoring Sites to provide more flexibility. - During the Environmental Impact Analysis Process, potential sites containing known historical sites or located close to homes, large structures, and obvious bodies of water were eliminated.
Alternatives	B, C, D
EIS Section	2.4
Outcome	Candidate sites chosen based on operational functionality and least amount of associated impact.
Agency Responsible	Air Force
Time Frame	Incorporated into the proposal.

Resource Category	*Land Use, Biological Resources, Cultural Resources, Soils and Water*
Concern Addressed	Potential environmental consequences due to site and infrastructure construction associated with emitter sites and Electronic Scoring Sites.
Action	- Identify locations as close as possible to existing roads, as well as to power and telephone lines so that less area would be affected by construction. - Sought previously disturbed locations. - Conducted surveys on candidate sites to locate sensitive cultural or biological resources in order to avoid or minimize disturbance.
Alternatives	B, C, D
EIS Section	2.4
Outcome	- Use existing infrastructure to reduce impact to affected area. - Use previously disturbed areas to reduce overall environmental impact. - Avoid cultural and biological resources where feasible.
Agency Responsible	Air Force
Time Frame	Incorporated into the proposal.

Resource Category	*Safety*
Concern Addressed	Prevent radio frequency exposure to the public from emitters.
Action	An 800- by 800-foot fenced site provides 150 feet of extra safe-separation distance and prevents exposure to radio frequency energy.
Alternatives	B, C, D
EIS Section	2.4
Outcome	Increase public safety and minimize risk.
Agency Responsible	Air Force
Time Frame	Incorporated into the proposal.

Resource Category	*Soils and Water Resources, Biological Resources*
Concern Addressed	Construction and maintenance associated with emitter sites and Electronic Scoring Sites could increase erosion and affect soil and water resources.
Action	- Select candidate sites avoiding drainages, wetlands, and sloped areas where possible erosion could occur. - Employ best management practices. - Minimize potential for erosion.
Alternatives	B, C, D
EIS Section	2.4
Outcome	- Reduce erosion. - Preserve wetlands and drainages.
Agency Responsible	Air Force
Time Frame	Incorporated into the proposal.

Resource Category	Airspace and Aircraft Operations
Concern Addressed	Floor of MOA could conflict with local and commercial aviation as well as instrument approach procedures at several airports.
Action	Establish the floor of the MOA above the Instrument Approach Procedures minimum altitudes for all airports under or adjacent to the proposed MOAs.
Alternatives	B, C
EIS Section	2.4
Outcome	Provide safe separation between civilian and military flight activities.
Agency Responsible	Air Force
Time Frame	Incorporated into the proposal.

ACTIONS TO ADDRESS COMMUNITY/AGENCY CONCERNS

Resource Category	Aircraft and Airspace Operations, Land Use, Cultural Resources, Biological Resources
Concern Addressed	Increased number of flights on proposed IR-178.
Action	Limit the annual sortie-operations to 1,560 (about 6 per day), instead of the proposed 2,660 (about 10 per day).
Alternatives	B, C
EIS Section	2.3.1, 2.4.2, and 2.4.3
Outcome	- Fewer sortie-operations would be flown than projected for Alternatives B and C. - Impact of low altitude activities would be reduced compared to projections for Alternatives B and C.
Agency Responsible	Air Force
Time Frame	Proposal implementation.

Resource Category	Aircraft and Airspace Operations
Concern Addressed	Floor of some MTR segments (200 feet AGL) is lower than the proposed minimum flight altitude of 300 feet AGL.
Action	Raise the floor of MTR segments to a minimum of 300 feet AGL.
Alternatives	B, C, D
EIS Section	Appendix C
Outcome	Match MTR segment altitude with minimum flight altitude.
Agency Responsible	Air Force and FAA
Time Frame	Proposal implementation.

Resource Category	***Aircraft and Airspace Operations, Land Use, Cultural Resources, Biological Resources***
Concern Addressed	Interaction between military use of MOA and underlying local airport traffic.
Action	- Establish an 800 number to Dyess AFB. - Establish a Military Radar Unit (MRU) and real-time communications.
Alternatives	B, C, D
EIS Section	2.4.2, 2.4.3, and 2.4.4
Outcome	- Increase communication opportunities with civil aviators. - Raise awareness and avoid potential conflicts between military and general aviation aircraft flying in local airspace. - Allow easier local airport access.
Agency Responsible	Air Force
Time Frame	Proposal implementation.

Resource Category	***Aircraft and Airspace Operations***
Concern Addressed	Conflicts with local aviation (crop dusting, weather modification, and predator control).
Action	Raise the floor altitude of the proposed MTR re-entry route to 6,000 feet MSL for Alternatives B and C, 8,000 feet MSL for Alternative D.
Alternatives	B, C, D
EIS Section	2.4.2, 2.4.3, 2.4.4, and Appendix C.
Outcome	Reduce potential for conflict between military and civil aviation activities.
Agency Responsible	Air Force and FAA
Time Frame	Proposal implementation.

Resource Category	***Airspace and Aircraft Operations***
Concern Addressed	Potential for increased noise complaints and public perception that noise complaints are not handled effectively.
Action	Publicize the existing 800 number.
Alternatives	B, C, D
EIS Section	Volume II
Outcome	Improved communication between public and military public affairs offices.
Agency Responsible	Air Force
Time Frame	Proposal implementation.

Resource Category	***Aircraft and Airspace Operations, Land Use, Cultural Resources, Biological Resources***
Concern Addressed	Interaction between military use of proposed MTRs and MOA/ATCAAs and civil aviation activities.
Action	- Establish an 800 number to Dyess AFB. - Establish an MRU and real-time communications.
Alternatives	B, C, D
EIS Section	2.4.2, 2.4.3, and 2.4.4
Outcome	- Increase communication opportunities between civil aviators. - Raise awareness and avoid potential interaction between military and general aviation aircraft flying in local airspace.
Agency Responsible	Air Force
Time Frame	Proposal implementation.

Resource Category	***Airspace and Aircraft Operations***
Concern Addressed	Overflights and associated noise would adversely affect the use of Philmont Scout Ranch.
Action	- Establish working meetings with Philmont Scout Ranch officials to gain insight on the schedule and ways to reduce perceived effects. - Implement reasonable operational and seasonal constraints.
Alternatives	D
EIS Section	Volume II
Consequence	- Reduce noise over Philmont Scout Ranch. - Enhance ability to address seasonal concerns regarding aircraft noise consistent with operational requirements.
Agency Responsible	Air Force
Time Frame	Proposal implementation.

Resource Category	*Aircraft and Airspace Operations*
Concern Addressed	Operational location of en route Electronic Scoring Site (ESS) near Dyess AFB.
Action	Place ESS at evaluated candidate emitter site, at a local municipal airport, or at another suitable location under proposed MOA.
Alternatives	B, C, D
EIS Section	2.4.1
Outcome	- Eliminate potential effects on identified cultural resources. - Increase operational flexibility. - Provide economic benefit to county(ies) underlying the MOA.
Agency Responsible	Air Force
Time Frame	Proposal implementation.

2.6.3 Expected Operational Outcomes

Table 2.6-3 presents the expected operational outcomes and benefits of implementing each of the three action alternatives.

Table 2.6-3
Expected Operational Outcomes of Implementing Alternatives B, C, or D

Alternative B: IR-178/Lancer MOA	*Alternative C: IR-178/Texon MOA*	*Alternative D: IR-153/Mt. Dora MOA*
67 percent reduction in B-52 low-value transit time to realistic Electronic Scoring System	67 percent reduction in B-52 low-value transit time to realistic Electronic Scoring System	75 percent reduction in B-52 low-value transit time to realistic Electronic Scoring System
71 percent reduction in B-1 low-value transit time to realistic Electronic Scoring System	71 percent reduction in B-1 low-value transit time to realistic Electronic Scoring System	45 percent reduction in B-1 low-value transit time to realistic Electronic Scoring System
20 to 26 percent increase in proportion of combat training time	26 to 29 percent increase in proportion of combat training time	18 to 26 percent increase in proportion of combat training time
Anticipated increase in ability to train replacement B-1 and B-52 aircrews	Anticipated increase in ability to train replacement B-1 and B-52 aircrews	Anticipated increase in ability to train replacement B-1 and B-52 aircrews

2.6.4 Cooperating Agency

The FAA is a cooperating agency for the RBTI EIS due to its responsibilities for the establishment and management of the nation's airspace. In accordance with 40 CFR 1501.6, a cooperating agency participates in the NEPA process, provides technical expertise for the analysis, and may adopt the lead agency's EIS to fulfill its own NEPA requirements.

2.6.5 Other Regulatory and Permit Requirements

In accordance with the Endangered Species Act and with the National Historic Preservation Act, the Air Force has initiated consultation with the FWS and the Texas, New Mexico, Colorado, and Arkansas SHPOs. Government-to-government consultation with various Native American tribes and reservations is ongoing in accordance with the Presidential Memorandum of 29 April, 1994, Executive Order

13084 (Consultation and Coordination with Indian Tribal Government), and the DoD American Indian and Alaskan Native Policy (1998).

Approximately eight candidate emitter sites in Texas and nine candidate sites in New Mexico are located on prime farmland. One purpose of the Farmland Protection Policy Act is to discourage federal agencies from building on prime farmlands. In accordance with the law, the Air Force would inform the National Resource Conservation Service and complete forms on all sites to be retired permanently from production.

Four candidate emitter sites are located on Conservation Reserve Program lands. Possible outcomes of using these lands are discussed in Section 4.2, Land Management and Use.

If RBTI is implemented, appropriate construction permit requirements may include grading permits. The need for a grading permit would be determined on a county-by-county basis once the emitter and scoring locations are chosen.