GALATI | BLEK LLP

455 Capitol Mall Suite 350
Sacramento CA 95814
Tel· 916.441.6575
Fax· 916.441.6553

DOCKET
09-AFC-6
DATE JUN 16 2010
RECD. JUN 16 2010

June 16, 2010

California Energy Commission
Dockets Unit
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: **PALO VERDE SOLAR I, LLC's REBUTTAL TESTIMONY**
BLYTHE SOLAR POWER PROJECT
DOCKET NO. (09-AFC-6)

Enclosed for filing with the California Energy Commission is the original of **PALO VERDE SOLAR I, LLC's REBUTTAL TESTIMONY**, for the Blythe Solar Power Project (09-AFC-6).

Sincerely,

Marie Mills

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:	**DOCKET NO. 09-AFC-06**
Application For Certification for the BLYTHE SOLAR POWER PROJECT	**DECLARATION OF** William Graham

I, William Graham, declare as follows:

1. I am presently employed by AECOM as Principal, and have been for 11 years.

2. A copy of my professional qualifications and experience is included in Attachment A to the Opening Testimony and is incorporated by reference in this Declaration.

3. I prepared the attached rebuttal testimony in response to T'Shaka Toure, Scott Cashen, and Vernon C. Bleich testimonies relating to Biological Resources for the Blythe Solar Power Project (California Energy Commission Docket Number 09-AFC-06).

4. It is my professional opinion that the attached prepared rebuttal testimony is valid and accurate with respect to issues that it addresses.

5. I am personally familiar with the facts and conclusions related in the attached prepared rebuttal testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on June 15, 2010.

William Graham

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:	**DOCKET NO. 09-AFC-06**
Application For Certification for the BLYTHE SOLAR POWER PROJECT	**DECLARATION OF** Michael Anguiano

I, Michael Anguiano, declare as follows:

1. I am presently employed by AECOM, as a Wildlife Biologist, and have been for 1 year.

2. A copy of my professional qualifications and experience is included in Attachment A to the Opening Testimony and is incorporated by reference in this Declaration.

3. I prepared the attached testimony in response to T'Shaka Toure, Scott Cashen, and Vernon C. Bleich testimonies relating to Biological Resources for the Blythe Solar Power Project (California Energy Commission Docket Number 09-AFC-06).

4. It is my professional opinion that the attached prepared rebuttal testimony is valid and accurate with respect to issues that it addresses.

5. I am personally familiar with the facts and conclusions related in the attached prepared rebuttal testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on June 15, 2010.

Michael Anguiano

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:	**DOCKET NO. 09-AFC-06**
Application For Certification for the BLYTHE SOLAR POWER PROJECT	**DECLARATION OF** Jennifer Guigliano

I, Jennifer Guigliano, declare as follows:

1. I am presently employed by AECOM as Project Director and Associate Principal, and have been for 5 years.

2. A copy of my professional qualifications and experience is included in Attachment A to the Opening Testimony and is incorporated by reference in this Declaration.

3. I prepared the attached rebuttal testimony in response to T'Shaka Toure, Scott Cashen, and Vernon C. Bleich testimonies relating to Biological Resources for the Blythe Solar Power Project (California Energy Commission Docket Number 09-AFC-06).

4. It is my professional opinion that the attached prepared rebuttal testimony is valid and accurate with respect to issues that it addresses.

5. I am personally familiar with the facts and conclusions related in the attached prepared rebuttal testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on June 15, 2010.

Jennifer Guigliano

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:	**DOCKET NO. 09-AFC-06**
Application For Certification for the BLYTHE SOLAR POWER PROJECT	**DECLARATION OF** Scott McMillan

I, Scott McMillan, declare as follows:

1. I am presently employed by AECOM as senior botanist and restoration ecologist, and have been for 5 years.

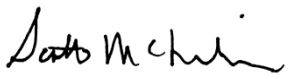
2. A copy of my professional qualifications and experience is included in Attachment A to the Opening Testimony and is incorporated by reference in this Declaration.

3. I prepared the attached rebuttal testimony in response to T'Shaka Toure, Scott Cashen, and Vernon C. Bleich testimonies relating to Biological Resources for the Blythe Solar Power Project (California Energy Commission Docket Number 09-AFC-06).

4. It is my professional opinion that the attached prepared rebuttal testimony is valid and accurate with respect to issues that it addresses.

5. I am personally familiar with the facts and conclusions related in the attached prepared rebuttal testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on June 15, 2010.



Scott McMillan

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:	**DOCKET NO. 09-AFC-06**
Application For Certification for the BLYTHE SOLAR POWER PROJECT	**DECLARATION OF** Angie Harbin-Ireland

I, Angie Harbin-Ireland, declare as follows:

1. I am presently employed by AECOM as a senior biologist, and have been for 3 years.

2. A copy of my professional qualifications and experience is included in Attachment A to the Opening Testimony and is incorporated by reference in this Declaration.

3. I prepared the attached rebuttal testimony in response to T'Shaka Toure, Scott Cashen, and Vernon C. Bleich testimonies relating to Biological Resources for the Blythe Solar Power Project (California Energy Commission Docket Number 09-AFC-06).

4. It is my professional opinion that the attached prepared rebuttal testimony is valid and accurate with respect to issues that it addresses.

5. I am personally familiar with the facts and conclusions related in the attached prepared rebuttal testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on June 15, 2010.

Angie Harbin-Ireland

BLYTHE SOLAR POWER PROJECT
BIOLOGICAL RESOURCES
REBUTTAL TESTIMONY

I. Name: Bill Graham, Michael Anguiano, Jennifer Guigliano, Scott McMillan, and Angie Harbin-Ireland

II. Purpose:

Our rebuttal testimony addresses the Biological Resources issues asserted by CURE witnesses Bleich, Toure, and Cashen in CURE's Opening Testimony for the Blythe Solar Power Project (09-AFC-6).

III. Qualifications:

Bill Graham: I am presently employed at AECOM, and have been for the past 11 years and am presently a Vice President with that organization. I have a Masters Degree in Regional Planning and I have over 25 years of experience in the field of Ecological Planning. I prepared or assisted in the preparation of the Biological Resources section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

Michael Anguiano: I am presently employed at AECOM Inc., and have been for the past 1 year and am presently a Wildlife Biologist with that organization. I have an M.S. Degree in Ecology and I have over 6 years of experience in the field of Ecology and Wildlife Biology. I prepared or assisted in the preparation of the Biological Resources section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

Jennifer Guigliano: I am presently employed at AECOM Design and Planning, and have been for the past 5 years and am presently a Project Director and Associate Principle with that organization. I have a Masters of Engineering Degree in Environmental Engineering and a Bachelors of Science Degree in Combined Science with Biology and Environmental Sciences Minors and I have over 12 years of experience in the field of environmental consulting and natural resources management, including biological resources, water resources and storm water management, and environmental compliance and permitting. I prepared or assisted in the preparation of post-filing information, data responses, and supplemental filings, including the mitigation planning documents for Biological Resources. A detailed description of my qualifications is contained in the attached resume.

Scott McMillan: I am presently employed at AECOM Inc., and have been for the past 6 years and am presently a Senior Botanist with that organization. I have an B.S. Degree in Biology and I have over 17 years of experience in the field of Botany and Restoration Ecology. I prepared or assisted in the preparation of post-filing information, data responses, and supplemental filings for Biological Resources. A detailed description of my qualifications is contained in the attached resume.

Angie Harbin-Ireland: I am presently employed at AECOM Inc., and have been for the past 3 years and am presently a Senior Biologist with that organization. I have a B.S. Degree in Wildlife Biology, an M.S. Degree in Ecology, and I have over 12 years of experience in the field of wildlife biology and ecology. I prepared or assisted in the preparation of the post-filing information, data responses, and supplemental filings to the Application for Certification related to Biological Resources. A detailed description of my qualifications is contained in the attached resume.

IV. Exhibits

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

Exhibit 55	**Western Burrowing Owl Technical Report**, dated June 16, 2010, and docketed on June 16, 2010.
Exhibit 56	**BSPP Biological Resources Technical Report**, dated June 16, 2010, and docketed on June 16, 2010.
Exhibit 58	**BSPP Golden Eagle Survey Results**, dated June 16, 2010, and docketed on June 16, 2010.

V. Opinion and Conclusions

We have reviewed CURE's Opening Testimony of Vernon C. Bleich, T'shaka Toure, and Scott Cashen and disagree with portions of those opinions. We offer the following as rebuttal testimony.

REBUTTAL TO TESTIMONY OF VERNON C. BLEICH

Dr. Bleich contends that:

1. That the RSA should conclude that bighorn sheep occupy the McCoy Mountains and the Project Area by:

    a. Application of the Precautionary Principle;

    b. Relying on the Golden Eagle Survey flight results;

2. That the BSPP provides foraging habitat and connectivity for bighorn sheep based on:

    a. Dr. Bleich's assessment of the probability of the site providing foraging habitat;

    b. Cr. Bleich's assessment of the value of the washes for movement to the McCoy Mountains.

We disagree with Dr. Bleich's assessment that the evidence support a finding that bighorn sheep occupy the McCoy Mountains or use the Project Area for foraging. Since there is no evidence we also disagree that the BSPP will result in a significant impact to connectivity for the bighorn sheep.

Dr. Bleich's application of the the Precautionary Principle is misplaced in this setting. The Precautionary Principle is typically applied when there is a lack of data to support conclusions. However, as part of desert tortoise focused surveys 100% visual coverage was achieved on the ground by wildlife biologists with desert species expertise and no evidence of bighorn sheep was detected. In addition, focused surveys for sensitive plants and other wildlife species (burrowing owl and avian point counts) have been conducted in which numerous biologists have been present on the site during spring, summer, and fall of 2009 and spring 2010. These surveys constitute over 800 biologist person days on the site and no direct sighting or sign of bighorn sheep has been observed. Therefore, application of this principle is beyond reasonable and the Committee has sufficient evidence upon which to base a conclusion that the BSPP will not significantly impact bighorn sheep.

With respect to the presence of bighorn sheep being present in the McCoy Mountains, the Committee should note that helicopter surveys conducted in spring 2010 for golden eagle nests did not detect presence of bighorn sheep within the McCoy Mountains even though they were detected in other mountain ranges in the region, confirming the ability to detect the species during such surveys. As discussed in our Opening Testimony, we do not believe the BSPP impacts bighorn sheep. The project does not involve construction activities or removal of potential habitat for bighorn sheep in the McCoy Mountains. It is well settled that any mitigation should bear a nexus to the project impacts. Staff's desire to accommodate the possibility that in the future bighorn sheep are reintroduced into the McCoy Mountains bears no nexus to the BSPP and the

BSPP should be required to mitigate for or facilitate a potential future action based on a condition that is “capable of supporting” a population that does not currently exist. Mitigation is based on baseline conditions and baseline conditions indicate that big horn sheep are not currently present in the area.

While we acknowledge that the site could provide habitat for bighorn sheep, there simply is no evidence that it does. Dr. Bleich ignores that the lands to the west and north of the site likely provide higher quality foraging habitat as they are closer to the mountains. These areas receive more water as it drains from the mountain ranges and therefore generate more productive forage. As the drainages move across the valley floor and flatten out, the eastern portion of the BSPP becomes open and dry with limited forage. Presumably this area is less suitable for foraging big horn sheep. The areas to the west and north of the site which abut mountain ranges will be avoided by the project and have a higher probability of being utilized based on the presence of higher quality forage.

Dr. Bleich ignores the fact that the the project will provide compensatory mitigation for loss of vegetated washes and include surrounding uplands for desert tortoise habitat mitigation as required by the Revised Staff Assessment. BIO-12 requires 1:1 replacement of 7,014.8 acres of desert tortoise habitat according to specific criteria. This habitat preservation will benefit other desert species whose ranges overlap with desert tortoise including bighorn sheep. The criteria for acquisition of desert tortoise compensation lands include: acquiring habitat within the Colorado Desert Recovery Unit, lands that have potential to contribute to habitat connectivity and build linkages with other preserved lands, lands that do not have a history of intensive disturbance, and lands in close proximity to other preserved lands. Application of these criteria along with long-term habitat management and funding, which is also required by BIO-12, will result in optimal preservation of lands that likely support bighorn sheep.

Additionally, BIO-22 requires the project to mitigate for impacts to dry wash woodland at a 3:1 ratio. According to our Opening Testimony, approximately 797 acres of dry wash woodland as part of a larger state waters compensation requirement that will be preserved, enhanced, and managed in perpetuity for the benefit of wildlife species in the region such as bighorn sheep. The RSA requires preparation of a Management Plan as well as a long-term funding mechanism for the acquired washes to be approved by CDFG. The Management Plan will include site-specific enhancement measures for the washes on the acquired compensation lands. The objective of the Management Plan shall be to enhance the wildlife value of the drainages, and may include enhancement actions such as weed control, fencing to exclude livestock, or erosion control. These objectives are in line with management of lands suitable for bighorn sheep.

With implementation of BIO-12 and BIO-22 preservation of hundreds of acres of vegetated wash habitat and thousands associated uplands and thousands of

acres of other desert habitat will occur within the range of big horn sheep, contributing to long-term maintenance of populations in the region.

We also believe that the project will not present a barrier to movement between mountain ranges as they may still disperse around the site to the west, north, and south. There will be sufficient open space in the valley floor for wildlife movement to the north of the project area and a corridor will be maintained at the base of the McCoy Mountains to the west of the site. This corridor likely provides higher quality foraging habitat than the eastern portion of the site on the valley floor as discussed above.

Lastly, PVSI is providing compensatory mitigation for thousands of acres associated with impact to habitat from the BSPP. As described in our Opening Testimony, addition of an artificial water source could likely have more significant adverse impacts. It would create dependency of a population of sheep on an artificial water source and could affect population dynamics in an unnatural way. It also creates a potential new subsidy for ravens and coyotes that could negatively affect desert tortoise by increasing these predatory species.

REBUTTAL TO TESTIMONY OF T'SHAKA TOURE

T'shaka Toure contends that:

1. That impacts to the waters have not been adequately characterized regarding flooding potential, downstream impacts, and peak discharges; and,
2. That feasible and appropriate mitigation measures have not been identified.

The project's impacts on washes and other hydrologic features have been assessed quantitatively and qualitatively to properly characterize the affect of the project hydrologically, geomorphically, and biologically. A hydrological analysis was completed, as was an engineering analysis and preliminary design. All information regarding the engineering, hydrology, hydraulics, and geomorphic analyses are included in the Soil and Water subject matter.

The Drainage Report for the Blythe Solar Power Project (AECOM 2009) provides:

1. Existing Condition Hydrology comprised of;
   - Floodwave Routing
   - Loss
   - Catchment Data
   - Reach parameters
   - HMS Program and Runs

- Results which present offsite and onsite flow rates for the 10-yr, 25-yr and 100-yr storm depths.
- Tables for Existing Condition Hydrology (HMS output) comprised o for the 10-yr, 25-yr and 100-yr storm.

2. Existing Condition Flow Patterns comprised of:
   - Offsite Flow Patterns
   - Onsite Flow Patterns
   - Tables presenting peak discharge of offsite and onsite for the 10-yr, 25-yr and 100-yr storm depths.

Additional detail was provided on those subjects and how they related to the biological and jurisdictional characteristics of the features in the Biological Technical Resources Reports (BRTRs) and Jurisdictional Delineation Reports (JDRs) for the project.

The rerouted washes have been designed in accordance with regulatory requirements defined by the California Energy Commission, Regional Water Quality Control Board, and California Department of Fish and Game. These include evaluation of preconstruction versus post-construction flows, flooding conditions, and functions and values of the system. In addition, the washes are required to have certain design criteria to minimize impacts to biological resources (e.g., side slopes no steeper than 3:1, native material, etc.) and flows (e.g., velocities) and the final designs must be approved per the Conditions of Certification under Soil and Water. Implementation of those Conditions of Certification will adequately mitigate any potential downstream impacts.

Information regarding the design of the washes (e.g.., native materials, reduced slopes, lengths) and required maintenance of the washes has been presented in the AFC and subsequent data requests, the Channel Maintenance Plan for purposes of assessing impacts. The impacts of the loss of the natural washes and associated habitat have been assessed at length in the JDRs and subsequent filings and offsite mitigation has been proposed to compensation for permanent loss of Waters of the State. Offsite mitigation is summarized in the Habitat Mitigation and Monitoring Plan (HMP; January 2010) and includes 3:1 preservation to impact for desert wash woodlands and 1:1 for unvegetated ephemeral dry washes. The vegetated swales associated with big galleta grass do not meet the criteria for waters of the State and would not require mitigation as such. The onsite rerouted washes will not serve as mitigation for impacts and are therefore not required to be maintained under the terms and conditions of a restoration or mitigation site (i.e., a Mitigation, Maintenance, and Monitoring Plan or Restoration Plan).

Additional information is included in Soil and Water Rebuttal Testimony from Mr. Bill Hagmaier.

REBUTTAL TO TESTIMONY OF SCOTT CASHEN

Scott Cashen contends that:

1. The Project may result in unmitigated significant impacts to gila woodpecker because:

    a. The RSA does not accurately report the range and nesting habitat for Gila Woodpecker;
    b. Distance from nearest CNDDB occurrence reasoning for low potential for occurrence lacks basis;
    c. It is a scientifically indefensible argument that Gila woodpeckers are conspicuous, and likely would have been detected during the Applicant's point count surveys;
    d. The Project would result in impacts to at least 269 acres of Desert Wash Woodland that contains plant species associated with occurrence of Gila woodpecker.

2. Does not provide adequate baseline information or mitigation measures for the Couch's spadefoot toad because:
    a. Conditions that appear to promote the ponding of water, such as shallow clay pans or caliche burrows, are present;
    b. The Applicant has yet to provide any information on the methods that were used to identify potential breeding ponds;
    c. The Revised Staff Assessment does not ensure mitigation of project impacts to the Couch's spadefoot toad.

3. The project may result in unmitigated significant impacts to Coachella Valley milkvetch

Gila Woodpecker

The project is in the range of the species which is why it was considered species for analysis, but the species is not expected to occur on site. The presence of desert wash woodland does not mean the species is present in that habitat. Scott Cashen is assuming the presence of particular tree species, for example ironwood and palo verde, to mean there is suitable breeding habitat. However, these species also have to be present in a sufficient quantity and density for the species to be present on site. During our habitat assessments it was determined that tree species were not dense enough for the Gila woodpecker. The CNDDB occurrences referred to are located closer to the Colorado River or in Imperial County in locations where the dry desert wash woodlands are composed of a greater density of tree species. They do not match the habitat conditions present on site.

The species is not expected to occur on site because of the combination of several factors, not one, and these are the lack of CNDDB records, the lack of suitable habitat on site, and the results of avian point count surveys. As stated previously, there is a lack of suitable habitat on site because the tree species present on site are not of sufficient quantity and density on site. The other sites Scott Cashen refers to do not match the habitat conditions present on our site. Additionally, point count surveys were conducted at 88 locations on site, 12 of which were located in the dry desert wash woodland. During point counts, all species are surveyed for. Being a conspicuous species, with a loud call and non-secretive nature, this species would have likely been detected during point count surveys. No Gila woodpeckers were detected during any point count surveys, clear evidence that this species is not present within the project disturbance area or buffer. Additionally the presence of woodpecker cavities does not indicate that this species is currently on site. They are potentially from ladder-backed woodpeckers (*Picoides scalaris*), which were detected on site.

Gila Woodpecker is not expected to occur on site; therefore there would be no impacts to this species. The desert wash woodland is already being mitigated for at a 3:1 ratio for impacts to that habitat, irrespective of the woodpecker.

Couch's Spadefoot

The vegetation description for Sonoran creosote bush scrub states that "this community is characterized by sandy soils with an underlying shallow clay pan on a broad, gentle southeast-trending slope draining into the Colorado River." This description relates to vegetation communities not spadefoot. The clay pans are likely several feet below the surface and trap water that is used by the roots of plants present within this vegetation community. This statement does not imply that the clay pan forms surface waters throughout the site.

Caliche burrows present on site are associated on near vertical sides of washes where they have been eroded out into caves. Given the location of these burrows on the sides of the washes water likely does not pool within these burrows and instead runs down the slope into the wash. If pooling did occur it would be minimal as the burrows are not large enough to support water that could pool for 9 days. Pools could only fill a small amount before the water would just overflow down into the wash. Additionally, burrows are completely covered and tadpoles are typically found in pools with little or no other cover (http://amphibiaweb.org/cgi/amphib_query?where-genus=Scaphiopus&where-species=couchii&account=lannoo).

During protocol DT surveys project biologists mapped potential areas that may pond following rainstorms in order to assess the potential of Couch's spadefoot. The 2010 surveys detected evidence of potential ponding areas, but did not make a conclusion that these were potential breeding habitat areas as no toads have been detected in the vicinity or nearby. The ponds merely have the potential to pond for a sufficient period to support habitat, though even the

ponding potential is a qualitative assessment only. Quantitative data regarding length of potential water retention, depth of water (if any), size of the pond, and suitability for breeding were not documented. Scott Cashen suggests that the ponds identified in 2010 are occupied and that is speculative at best. There is no assurance that these ponds have standing water long enough, it is just a qualitative assessment of potential. Even if they do hold water long enough, Scott Cashen states in Section III. B. 5. of his testimony that not all ponds that could hold water for nine days provide breeding habitat.

A project impact analysis is not necessary, since no Couch's spadefoot have been detected in the project area during any surveys. Limited ponding potential has been identified and the nearest record of a toad is 5 miles from the project site. Although no impacts have been verified, the project mitigation as proposed for other resources, including mitigation for the desert tortoise would offset any potential impacts to the Couch's spadefoot. Mitigation land will have the same characteristics as the project site that would facilitate appropriate mitigation for the Couch's spadefoot. The Applicant is mitigating at 3:1 for impacts to desert wash woodland and 1:1 for unvegetated ephemeral washes. Washes have a higher potential of supporting ponding. Providing mitigation for waters provides a reasonable opportunity for protection of potential ponding areas suitable for Couch's spadefoot. Given the lack of observations of the species, the negligible impact on potential habitat, and the already substantial compensatory mitigation required for the project (that would very likely support similar potential habitat), no additional mitigation should be required.

Coachella Valley Milkvetch

Coachella Valley milk-vetch was incorrectly included during submission of the 2010 preliminary results. There was not a misidentification of milkvetch in the project area. The spring 2010 preliminary results simply contained a data entry error and Coachella Valley milk-vetch was incorrectly selected from a drop down menu. This correction was documented in the attached email exchange between Kyle Harper (AECOM), Alan Solomon (CEC), and Carolyn Chainey-Davis dated May 14, 2010 and the Blythe preliminary results submitted to Susan Sanders dated May 14, 2010. No additional surveys are required.

Additionally, Project Biologist Andrew Sanders (of the UCR Herbarium) has determined that Coachella Valley milkvetch is not currently documented outside of the Coachella Valley area. To reach this conclusion, Mr. Sanders thoroughly reviewed the vouchered collections (identified as Coachella Valley milkvetch) from the Desert Center area (Dice 980324-2; Dice 980324-3; and Sears 1173) and other collection data (e.g., http://ucjeps.berkeley.edu/consortium/ and University of California at Riverside (UCR) herbaria specimens). After careful consideration, Mr. Sanders found the Desert Center collections (i.e., all Coachella Valley milkvetch collections outside the Coachella Valley) to be

Astragalus lentiginosus var. *variabilis* rather than *A. lentiginosus* var. *coachellae*. See attached letter.

Therefore, focused surveys for Coachella Valley milkvetch were not applicable to the BSPP botanical surveys, and field observations during the 2010 survey season corroborated the findings of Andrew Sanders.

From: Harper, Kyle
Sent: Friday, May 14, 2010 8:28 AM
To: 'Asolomon@energy.state.ca.us'
Cc: 'Harron@solarmillennium.com'; Graham, Bill; Luttrell, Mark; Lindner, Carl
Subject: RE: E-Mail from Carolyn Chainey-Davis to Alice Harron RequestingAdditional Information

Mr. Solomon,

I am in charge of data collection for Spring 2010 botanical surveys for the Blythe Solar Energy Project. The *Astragalus* record noted in the original message below should have been identified as *Astragalus insularis* var. *harwoodii* (Harwood's milkvetch), a CNPS List 2.2 plant species.

Best Regards,

Kyle Harper
Biologist
Design + Planning
D +1 619.764.6897
kyle.harper@aecom.com

AECOM
1420 Kettner Boulevard, Suite 500
San Diego CA 92101 USA
T +1 619 233 1454 F +1 619 233 0952
www.aecom.com

-----Original Message-----
From: Alan Solomon [mailto:Asolomon@energy.state.ca.us]
Sent: Tuesday, May 11, 2010 4:31 PM
To: 'Carolyn Chainey-Davis'; Alice Harron
Subject: E-Mail from Carolyn Chainey-Davis to Alice Harron RequestingAdditional Information

To: Alice Harron

Senior Director, Development
Solar Millennium, LLC

From: Carolyn Chainey-Davis

California Energy Commission, Siting Division, Biological Resources Unit

RE: Request for Additional Technical Information Regarding Coachella Valley
Milk-Vetch Occurrence in the Blythe Solar Energy Project Buffer,

Blythe Solar Power Project, Docket No. 09-AFC-6, Draft Summary: Preliminary

Spring 2010 Survey Results for Desert Tortoise, Rare Plants, and Jurisdictional Waters

Ms. Herron:

The Draft Summary of the 2010 Spring Survey Results for Biological Resources (including special-status plants) indicates that a population of 14 Coachella Valley milk-vetch (Astragalus lentiginosus var.
coachellae -a federal-listed endangered plant, was discovered by your biological consultants within the buffer east of the transmission alignment
between I-10 and the proposed new Substation. The taxonomic status of the
Coachella Valley-milk-vetch specimens from the Chuckwalla Valley area have
been debated for some time and have characteristics that are intermediate
between the more distinct plants in Coachella Valley and the common variety
A. l. variabilis that is common in Chuckwalla Valley.

The USFWS Carlsbad office interviewed a number of recognized botanical experts (Andy Sanders, UC Riverside Herbarium and another botanist responsible for a recent genetic analysis of three specimens from Desert Center. All but three of the herbaria specimens collected historically from
the Desert Center area (some of which were originally labeled as the Coachella Valley milk-vetch) have been annotated (re-labeled) as the common
conspecific .Astragalus lentiginosus var. variabilis. All but the same three specimens also were analyzed genetically and found to be the common
variety. The three collections not annotated as A.l. variabilis and not genetically analyzed, but originally identified as coachellae (and therefore
in question) were morphometrically inspected by an 'expert' botanist specializing in desert flora and found to have some intermediate characters
but overall closer to variabilis. Based on this recent work, a portion of
which was funded by the Service under a section 6 grant to the California
Dept of Fish and Game, the Service concluded that the milk-vetch historically collected in Desert Center is not the listed taxon.

We need to resolve this issue immediately; this re-labeling of the historic
collections from Desert Center does not necessarily preclude the occurrence

of the federal-listed species occurring in your project area. Thus we need
the following information from the biological consultants that conducted the
botanical survey:

1) Completed CNDDB form for the occurrence(s)

2) Voucher specimen (if collected) and photo

3) Detailed description of the habitat conditions, including invasive
species, OHV or other threats, if present

4) Explanation for the identification as Coachella Valley milk-vetch
(detailed description of the morphological characteristics used to
distinguish the taxon collected from its common conspecific-Astragalus
lentiginosus var. variabilis

5) Description of the potential direct and indirect effects of the
project and potential for avoidance

Thank you,

Carolyn Chainey-Davis

UNIVERSITY OF CALIFORNIA, RIVERSIDE

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

COLLEGE OF NATURAL AND AGRICULTURAL SCIENCES
CITRUS RESEARCH CENTER AND
AGRICULTURAL EXPERIMENT STATION

DEPARTMENT OF BOTANY AND PLANT SCIENCES-072
RIVERSIDE, CALIFORNIA 92521-0124
FAX (951) 827-4437
VOICE (951) 827-4401
Web Site http://plantbiology.ucr.edu

June 15, 2010

Andrew Sanders
Curator, UCR Herbarium
Department of Botany & Plant Sciences
University of California
Riverside, California 92521

Kyle Harper
Project Biologist
AECOM
1420 Kettner Blvd, Suite 500
San Diego, California 92119

Subject: Potential for Occurrence of Coachella Valley Milkvetch in the Desert Center and/or Blythe Areas

Dear Mr. Harper:

In December 2009, I reviewed herbarium specimens of the southern California varieties of *Astragalus lentiginosus*, including the federally endangered Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*). My review included the Desert Center collections of supposed Coachella Valley milkvetch (Dice 980324-2; Dice 980324-3; and Sears 1173). Later, during spring of 2010, I participated in field surveys for the Blythe Solar Power Project and the Palen Solar Power Project, at which time I visited potential Coachella Valley milkvetch habitat in the Desert Center to Blythe region

I have worked extensively with the genus *Astragalus* within southern California during my career of over 30 years as curator of the UCR Herbarium, and am generally very familiar with the plants of the California desert. After careful review of the Desert Center collections, I determined that those attributed as Coachella Valley milkvetch are best considered to be misidentified specimens of freckled milkvetch (*Astragalus lentiginosus* var. *variabilis*). Freckled milkvetch is not a special status plant species, as it is widespread on the southern California deserts. The two taxa are similar and probably closely related within the *A. lentiginosus* complex. Both are also sufficiently variable

that past confusion is understandable, but the Desert Center plants do not fit the description of *Astragalus lentiginosus* var. *coachellae* well.

I believe that the best evidence to date indicates that Coachella Valley milkvetch is endemic to the Coachella Valley, and does not occur elsewhere. There are no reliable records of this taxon in the Desert Center region, just a few somewhat ambiguous *A. l. variabilis* specimens that have been misidentified in the past. The distribution of Coachella Valley milkvetch appears to be restricted to the extensive loose sands of the Coachella Valley and the surrounding rocky habitats have confined it to that one valley. Dispersal out of the valley into potentially suitable habitats elsewhere appears never to have occurred. The Desert Center area is over 60 miles east of the Coachella Valley, which is a considerable geographic barrier between the two locations, given the lack of sand dunes in the intervening region.

Even though the Desert Center and Blythe areas contain vast expanses of sandy habitat that appear suitable for Coachella Valley milkvetch, based on my review of existing records I do not expect Coachella Valley milkvetch to occur in the Desert Center or Blythe areas.

Sincerely,

Andrew C. Sanders

Andrew Sanders
Curator, UCR Herbarium

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:	**DOCKET NO. 09-AFC-06**
Application For Certification for the BLYTHE SOLAR POWER PROJECT	**DECLARATION OF** William C. Hagmaier

I, William C. Hagmaier, declare as follows:

1. I am presently employed by AECOM as Senior Project Manager.

2. A copy of my professional qualifications and experience is included in Attachment A to the Opening Testimony and is incorporated by reference in this Declaration.

3. I prepared the attached rebuttal testimony in response to Open Testimony relating to Soil and Water Resources for the Blythe Solar Power Project (California Energy Commission Docket Number 09-AFC-06).

4. It is my professional opinion that the attached prepared rebuttal testimony is valid and accurate with respect to issues that it addresses.

5. I am personally familiar with the facts and conclusions related in the attached prepared rebuttal testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on June 15, 2010.

William C. Hagmaier

BLYTHE SOLAR POWER PROJECT
SOIL AND WATER RESOURCES
REBUTTAL TESTIMONY

I. Name: Bill Hagmaier

II. Purpose:

This Rebuttal Testimony addresses the subject of Soil and Water Resources specifically raised in the CURE Testimony of T'Shaka Toure.

III. Qualifications:

Bill Hagmaier: I am presently employed at AECOM, and have been for the past 15 years and am presently a Senior Project Manager with that organization. I have a Bachelors Degree in Civil Engineering and I have over 31 years of experience in the field of civil engineering, (utilities, roadways, drainage, and site design). I prepared or assisted in the preparation of the Soil and Water section of the AFC as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is contained in the attached resume.

To the best of my knowledge all referenced documents and all of the facts contained in this testimony are true and correct. To the extent this testimony contains opinions, such opinions are my own. I make these statements and provide these opinions freely and under oath for the purpose of constituting sworn testimony in this proceeding.

II. "Pages 2-4. Project Description and Project Impacts to State Jurisdictional Waters"

The Revised Staff Assessment does in fact correctly anticipate that vegetation downslope of the project will continue to provide habitat value. The Post-Development Drainage Conditions Report documents that the peak flows and flow volumes are relatively unchanged in the pre-development condition compared with the post-development condition. The report provides full information for the post development drainage condition associated with the site for the 10 year, 25 year, and 100 year storm events. The existing drainage outlets from the site are natural swales or broad drainage fans, not private or public conveyance structures, and these natural swales and/or fans are hydraulically respected by the proposed design using drainage diffusers at the various drainage outlets from the site. The final design for these drainage features will incorporate all the requirements as noted by the Conditions of Certification for Soil and Water.

III. "Pages 4-6. Feasible Project Measures and Alternatives to Reduce Impacts to State Waters"

The Drainage Report, Pre-Development Drainage Conditions Report, and Post-Development Drainage Conditions Report all contain hundreds of pages of drainage information and calculations regarding the flow patterns, flow rates, and flow volumes of the off-site and on-site drainage conditions. As noted previously, the flow rates and flow volumes are relatively unchanged in the pre versus post development condition and as such the issues associated with the functional values of the washes have been discussed at length in the Jurisdictional Delineation Reports (JDR's) and the Biological Technical Resources Reports (BRTRs).

The construction of the permanent drainage channels will be incorporated into the earliest aspects of the site construction and as such there is not anticipated to be temporary impacts as noted in Mr. Toure statements. Neither the upstream nor the downstream washes, swales, or drainage fans will be disturbed by the construction, and only those drainage elements within the project boundary will be modified as part of the construction. The on-site construction will not result in cementing of the channels, the peripheral channels will be allowed to re-vegetate in accordance with the Channel Maintenance Plan, and retention basins are not appropriate for the site in compliance with various agency requirements. The approach to drainage pattern modification is consistent with the regional drainage requirements and the final design for these drainage features will incorporate all the requirements as noted by the Conditions of Certification for Soil and Water.

IV. "Pages 6-7. The Project may Result in Unanalyzed and Unmitigated Significant Impacts Because the Applicant has Failed to Provide Specific Construction Methods for Channel Alterations."

The proposed drainage alterations are fully documented in the project plans and all drainage reports as previously noted. The channel alignments, channel slopes, geometric configuration, side slopes, and channel widths are all noted within these documents. In addition the materials being used have been fully documented. The channels will be constructed of native material and no concrete will be used in the drainage channels or swales. The final design for these drainage features will incorporate all the requirements as noted by the Conditions of Certification for Soil and Water.

<u>Summary Statement:</u>
The project's impacts on washes and other hydrologic features have been assessed quantitatively and qualitatively to properly characterize the affect of the project. Hydrologic and hydraulic analyses were completed utilizing HEC HMS, HECRAS, and FLO-2D modeling to evaluate all aspects of the site drainage

conditions. In addition, an engineering site analysis was performed and preliminary grading designs were created to address the required drainage features. All information regarding the engineering, hydrology, hydraulics, and geomorphic analyses are included in the Soil and Water subject matter. Additional detail was provided on those subjects and how they related to the biological and jurisdictional characteristics of the features in the Biological Technical Resources Reports (BRTRs) and Jurisdictional Delineation Reports (JDRs) for the project.

The rerouted washes have been designed in accordance with regulatory requirements defined by the California Energy Commission, Regional Water Quality Control Board, and California Department of Fish and Game. These design efforts include evaluation of preconstruction versus post-construction flows, flooding conditions, and functions and values of the system. In addition, the washes are required to have certain design criteria to minimize impacts to biological resources (e.g., side slopes will be no steeper than 3:1, native material will be used to construct the channel bottom and side slopes, erosion protection measures will be used to control any scour, etc.) and the final designs must be approved per the Conditions of Certification under Soil and Water.

Information regarding the design of the washes and required maintenance of the washes has been presented in the AFC and subsequent data requests, the Channel Maintenance Plan, as well as in the BRTRs for purposes of assessing impacts.

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:	**DOCKET NO. 09-AFC-06**
Application For Certification for the BLYTHE SOLAR POWER PROJECT	**DECLARATION OF** Frederick Swahn, Jr.

I, Frederick Swahn, Jr., declare as follows:

1. I am presently employed by AECOM as a program director.

2. A copy of my professional qualifications and experience is included herewith (Attachment to the Rebuttal Testimony) and is incorporated by reference in this Declaration.

3. I prepared the attached rebuttal testimony in response to Mathew F. Hagemann testimony relating to Waste Management for the Blythe Solar Power Project (California Energy Commission Docket Number 09-AFC-06).

4. It is my professional opinion that the attached prepared rebuttal testimony is valid and accurate with respect to issues that it addresses.

5. I am personally familiar with the facts and conclusions related in the attached prepared rebuttal testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on June 15, 2010.

Frederick Swahn, Jr.

BLYTHE SOLAR POWER PROJECT
WASTE MANAGEMENT
REBUTTAL TESTIMONY

I. Name: Frederick H. Swahn, Jr.

II. Purpose:

My rebuttal testimony addresses the Waste Management issues asserted by CURE witness Mathew F. Hagemann in CURE's Opening Testimony for the Blythe Solar Power Project (09-AFC-6).

III. Qualifications:

Frederick Swahn I am presently employed at AECOM, and have been for the past 2 years and am presently Director of Operations for AECOM's Military Munitions Response Program at the national level. I have a Bachelor's Degree in Geology and have over 27 years of experience in environmental investigation, engineering, remediation, construction management, munitions response and compliance. Under contract to the USACE, I have managed many MMRP site inspections and investigations at FUDS sites and performed characterizations to determine appropriate response actions in accordance with DERP, CERCLA, and NCP guidance and regulations. I have managed many UXO and MEC range clearances, and have been responsible for UXO planning and on-site responses for the Solar Millennium project sites.

To the best of my knowledge all referenced documents and all of the facts contained in this testimony are true and correct. To the extent this testimony contains opinions, such opinions are my own. I make these statements and provide these opinions freely and under oath for the purpose of constituting sworn testimony in this proceeding.

IV. Exhibits

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit 29	**Palo Verde Solar I, LLC's Initial Comments on the SA, DEIS**, dated April 19, 2010, and docketed on April 19, 2010.

V. Opinion and Conclusions

I have reviewed the Opening Testimony of Matthew F. Hageman and disagree with his assessment of the BSPP and potential impacts. Specifically, I believe:

1. Impacts to the soils on the Blythe Solar Power Project (BSPP) site have not been adequately portrayed in the Hagemann Testimony regarding historic use of small arms ranges; and,
2. The exact location or existence of a firing and bombing range within the northern boundary of the BSPP site has not been verified or substantiated in the Hagemann Testimony.

Potential impacts to the soils on the BSPP site from the historic and limited use of small arms ranges associated with the World War II training of bomber crews located at the former Blythe Army Air Field (AAF) are misrepresented in the Hagemann Testimony. The locations of the two small arms range fans or safety arcs presented in Figures 1, 1a, and 1b of the Hagemann Testimony are incorrect when compared to the location and orientation presented in the Blythe AAF Boundary Sketch presented in Attachment 3 of the Hagemann Testimony and the three maps from the Blythe AAF Archive Search Report Supplement presented in Attachment 4 of the Hagemann Testimony.

Based on the small arms range configuration presented in the Boundary Sketch map, the firing point and general direction of fire from the Poorman and Jeep ranges would be further to the west than depicted in the Hagemann Testimony figures. The correct orientation of these two small arms ranges would result in less impact of small arms to the BSPP site from unintentional or errant overshot of the target area.

Additionally, there is no documentation in the Hagemann Testimony confirming the existence of a “firing and bombing” range area within and adjacent to the northern boundary of the BSPP site. A review of the figures contained in the Laguna Maneuver Area Formally Used Defense Site (FUDS) Archives Search Report Supplement shows that none of the documented artillery, bombing, and air to ground ranges or the maneuver areas are located outside the state of Arizona.

I. THE BASELINE CONDITIONS ARE ACCURATELY DESCRIBED

Hagemann claims in Pages 2-9 of his testimony that the staff assessment and the applicant’s submittals fail to identify baseline conditions and the ongoing federal cleanup activities on the project site. Although the former Blythe AAF FUDS is subject to the Defense Environmental Restoration Program (DERP) and environmentally managed under the FUDS Program, to date an initial Site Inspection (an early step in the CERCLA process) has not been performed in the period of time since the US Army Corps of Engineers (USACE) 1999 Findings and Determination of

Eligibility report. The ATC and DR responses indicate that the USACE has not taken action on the SI for the former Blythe AAF site. This indicates that the Blythe AAF FUDS is a low risk, low priority site that will not likely receive attention from the USACE at any time in the near future.

A. Prior uses at the site have been accurately described. The Army's creation and use of the CAMA is well explained in the AFC and follow-on DR responses.

1. Activities Associated with Poorman Ranges - Although the Poorman and Jeep ranges are transposed in Hagemann's testimony (when compared to the USACE Archives Search Report Supplement figures dates March 2002), these ranges involved use of small arms weapons of .50 caliber and below. Regardless of density, the bullets from small arms fire do not constitute an MEC or UXO risk.

2. Activities Associated with Jeep Ranges – (a) The dimensions of both small arms ranges have been drawn in an inaccurate manner. The historic Boundary Sketch and the Archives Search Report Supplement source documentation indicate a differing orientation than represented in the Hagemann Testimony. Additionally, the concentrated small arms fire and resulting bullet accumulation will mass in the area of the targets, located much closer to the Blythe AAF than the BSPP site. The implications in the Hagemann Testimony inflate the reaches of small arms range impact areas by misrepresenting the orientation of the range fan or safety arch represented in their figures as they compare to the range fans depicted on the Archives Search Report Supplement figures. While some fire may overfly the targets, the distribution of materials beyond the target line will be dramatically less dense. This can be demonstrated by looking at impact sampling data from other ranges.

   (b) Based on the conditions presented in Item 2 of the subject testimony, we would not expect incendiary materials associated with small arms to be present in the vicinity of the BSPP site boundary. In practice the use of such materials would have been closer to the airfield, as the USACE Archives Search Report Supplement figures indicate and as described above.

3. Firing and Bombing Range – (a) The Hagemann Testimony references "…a map of "Firing and Bombing Area" associated with the Blythe AAF was provided by the Corps and is included with my testimony as Attachment 4." This map is not present in the copy of the testimony received by AECOM. Additionally, a careful review of

the site maps contained in the Laguna Maneuver Area Archives Search Report Supplement, indicated that no "Firing and Bombing" areas are identified in the State of California.

(b) Because of the suspected (USACE Findings and Determination of Eligibility, 1999) storage of bombs and explosive materials at the former Blythe AAF, a range for bombing runs and practice releases would not be located in close proximity to the airfield. The representation on Figure 1 that an active portion of the Laguna Maneuver Area bombing range extended into the vicinity of the site (or the original airfield) is not correct.

4. Other Activities – The confirmed presence of pieces of test/practice landmines discovered within the BSPP site indicates the area was used as a ground force maneuver area during CAMA training operations. However, to date no confirmed discovery of UXO, to include any of the other items mentioned in the Hagemann Testimony "grenades, mortars, and artillery" have been reported and no historic documentation or evidence is known to exist that would indicate that these munitions items were used within the boundaries of the BSPP site.

II. HAGEMAN EXAGGERATES THE POTENTIAL FOR SIGNIFICANT HAZARDOUS CONDITIONS WITHIN THE PROJECT RIGHT OF WAY

A. In addition to the inaccurate location of the small arms range fans and safety arcs, the lead and other metal contaminants resulting from use of the small arms ranges do not constitute a significant hazard to workers because the ranges were not used for a long enough period to create an appreciable amount of accumulation that might be injurious to workers on the BSPP site, and the lead that is present is not in a form that constitutes a particulate or inhalable hazard.

B. The applicability of the Nellis Air Force Base (AFB) Small Arms Range as referenced in the Hagemann Testimony is an inappropriate comparison to the Blythe AAF small arms ranges for an indication of potential soil contamination. Unlike the Blythe AAF small arms ranges, the Nellis AFB small arms range, referenced in Attachment 5 of the Hagemann Testimony, was utilized by the DoD for a much longer period, from 1941 through the 1970's and possibly into the early 1990's. This 30+-year use duration allowed for the discharge of a larger amount of small arms bullet mass. Additionally, the Nellis small arms range area was used for other training activities not conducted at the Blythe AAF small arms ranges, to include four bomb jettison areas,

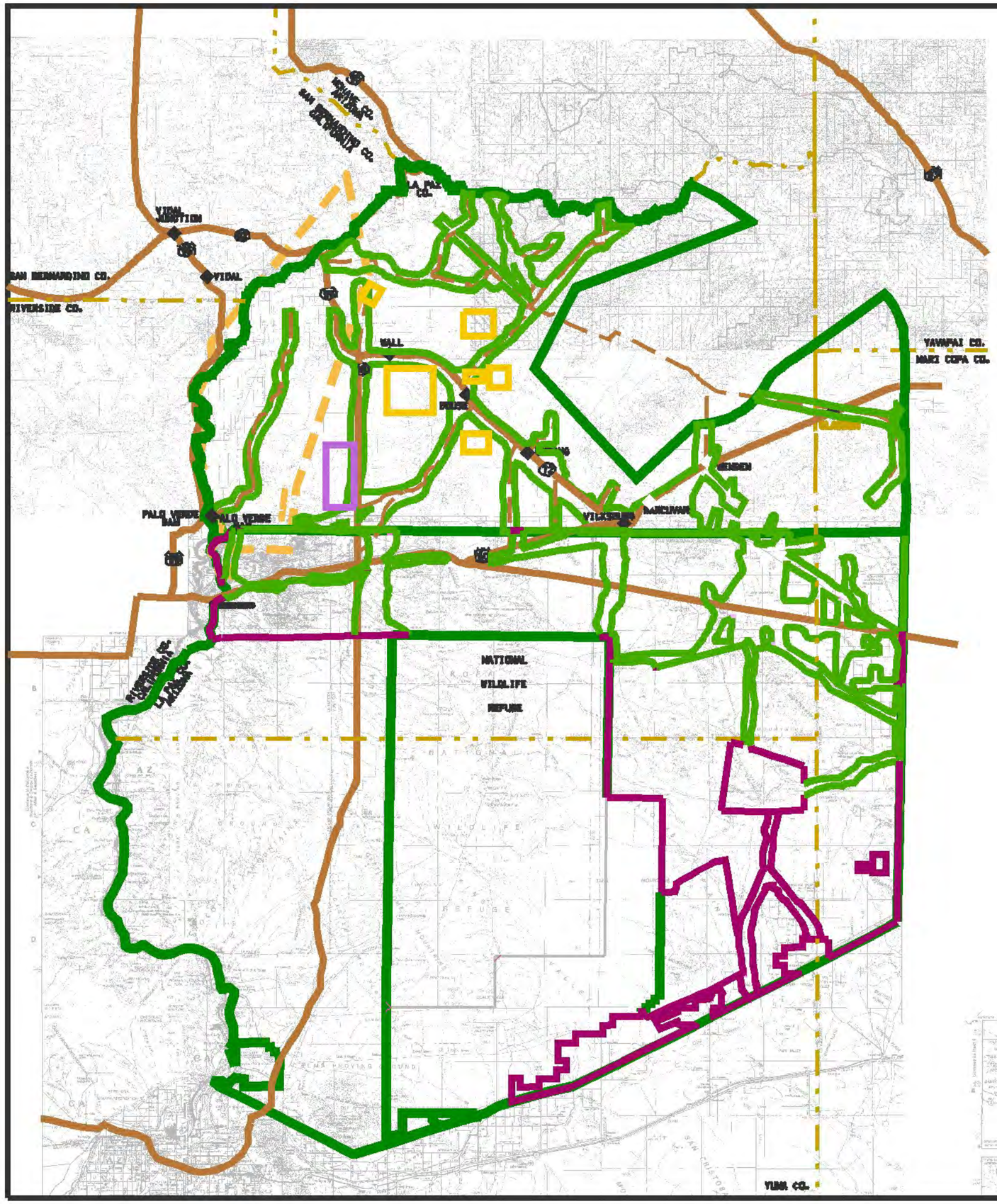
a potential dump area for 37mm artillery projectiles, and a former explosive ordnance disposal area.

III. HAGEMAN CLAIMS THAT STAFF'S PROPOSED CONDITIONS OF CERTIFICATION WASTE-1 AND WASTE-2 ARE INADEQUATE

A. As stated above, the ATC and DR responses indicate that USACE has not taken action on the SI for the former Blythe AAF site. This indicates that the Blythe AAF FUDS is a low risk, low priority site that will not likely receive attention from the USACE at any time in the near future.

B. The USACE has been actively performing SIs on FUDS with potential contamination from the historic use of military munitions since 2006. To date an initial SI (an early step in the CERCLA process) has not been completed by the USACE for the Blythe AAF site. The USACE has completed or is currently performing more than 50 other military munitions FUDS SIs within the State of California alone and more than 500 across the United States. The Hagemann Testimony states "ongoing state and federal response actions at the Project site" have not been recognized by the Applicant and Staff Assessment; the "ongoing state and federal response actions at the Project site" are recognized as stated above.

C. The Hagemann testimony inaccurately states that WASTE -1 "provides only for a plan to train construction workers and other site workers in the recognition of potential UXO." In fact, WASTE-1 also requires a "work plan to recover and remove discovered ordnance, and complete additional field screening, possibly including geophysical surveys to investigate adjacent areas for surface, near surface or buried ordnance in all proposed land disturbance areas."



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- ARTILLERY RANGES
- BOMBING RANGES
- MANEUVER AREAS/VEHICULAR ACCESS
- AIR TO GROUND RANGE
- MAIN ROAD
- SECONDARY ROAD
- COUNTY BOUNDARY

N

0 80000 160000

APPROXIMATE SCALE IN FEET

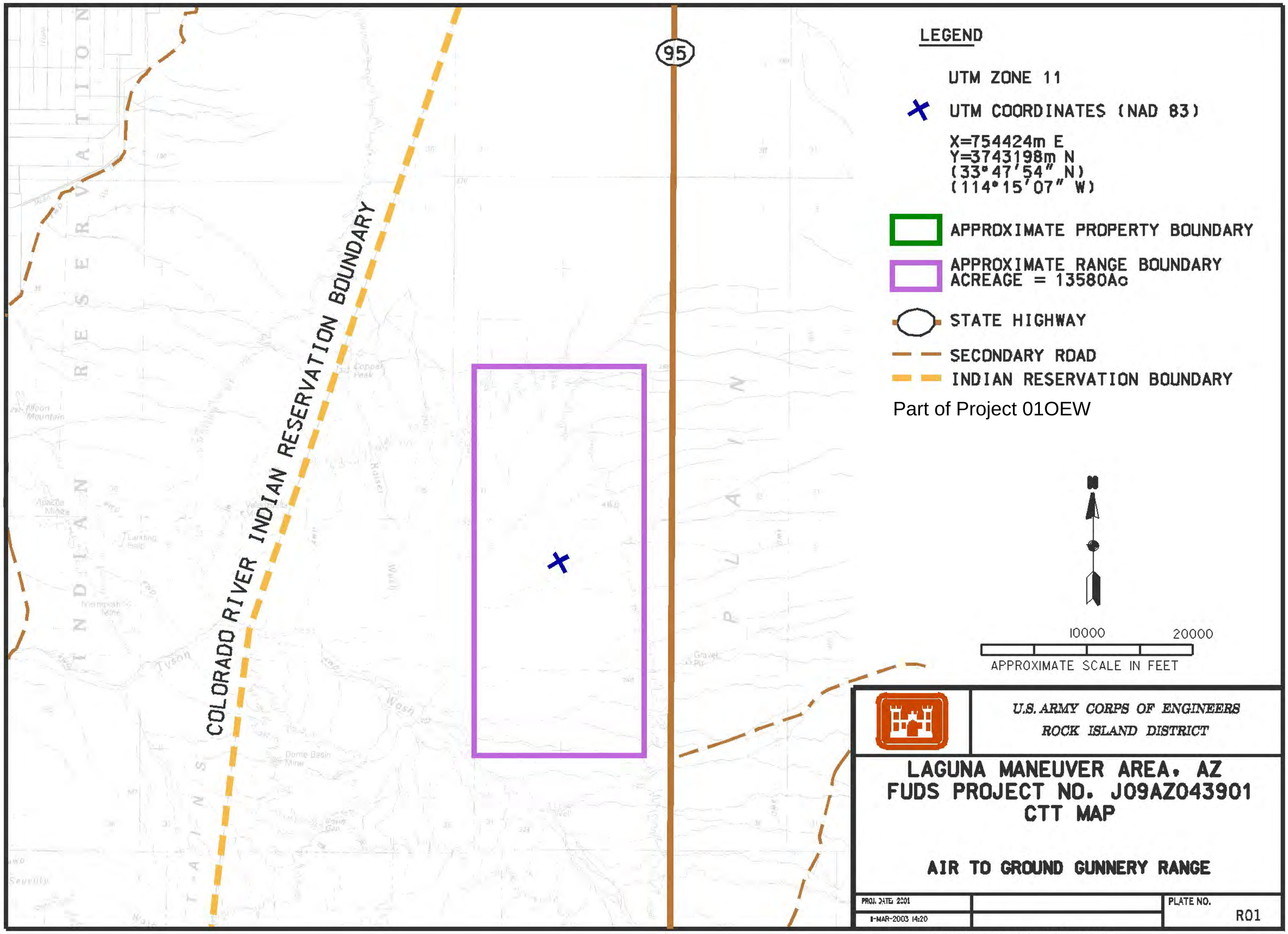
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

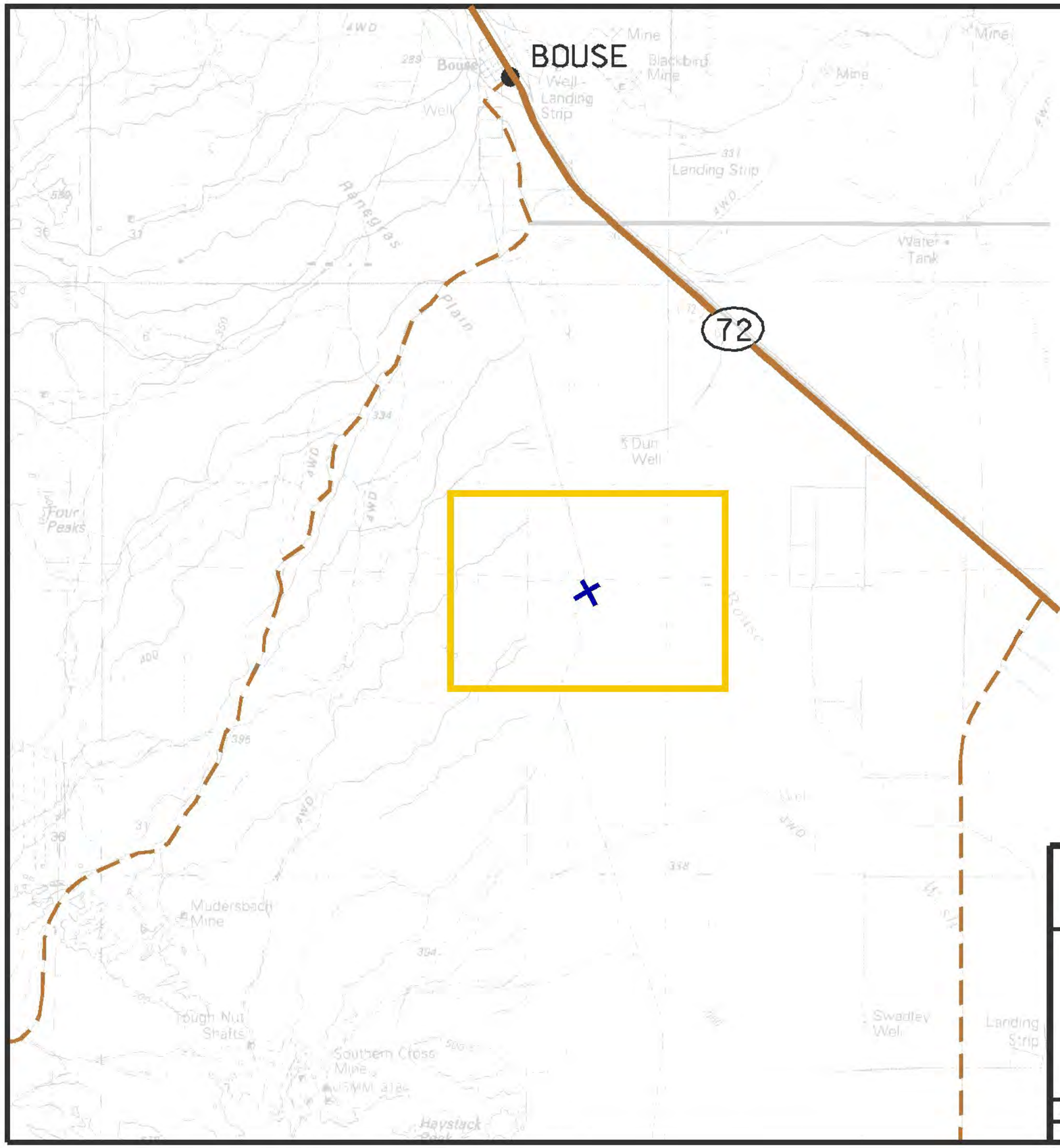
LAGUNA MANEUVER AREA
FUDS PROPERTY NO. J09AZ043900
YUMA, ARIZONA
YUMA, LAPAZ & MARI COPA COUNTIES

INSTALLATION MAP

PROJ. DATE: 2001		PLATE NO.
10-JAN-2003 08:50		1

er401_RangeRuleMLagunaMAZ9799F5126_INSTAL_MAP_00_20020705.dgn





LEGEND

UTM ZONE 12

UTM COORDINATES (NAD 83)

X=223434m E
Y=3749807m N
(33°51'08" N)
(113°59'21" W)

APPROXIMATE RANGE BOUNDARY
ACREAGE = 3558Ac

STATE HIGHWAY

SECONDARY ROAD

Part of Project 01OEW

0 7000 14000

APPROXIMATE SCALE IN FEET

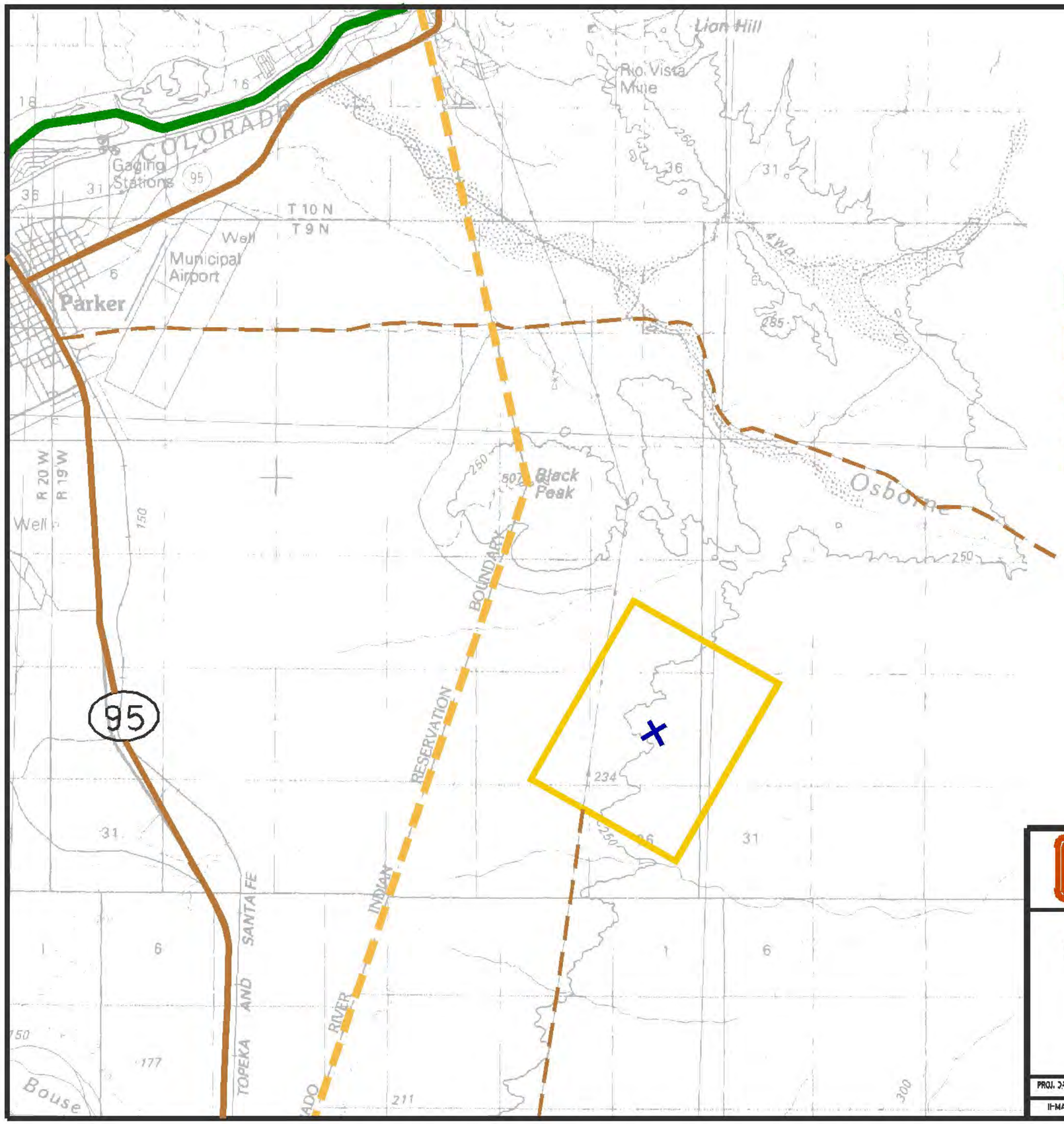
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043901
CTT MAP

BOMBING TARGET #1

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 14:24		R02

e:\DLRangeRule\Laguna\AZ9799F526_CTT_MAP_02_200207ll.dgn



LEGEND

UTM ZONE 11

UTM COORDINATES (NAD 83)

X=759138m E
Y=3776036m N
(34°05'35" N)
(114°11'28" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 1735Ac

STATE HIGHWAY

SECONDARY ROAD

INDIAN RESERVATION BOUNDARY

Part of Project 02OEW

0 6000 12000

APPROXIMATE SCALE IN FEET

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043902
CTT MAP

BOMBING TARGET #2

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 14:31		R01

en\OL RangeRule\Laguna\AZ9799F526_CTT_MAP_03_200207.dgn

EAST CACTUS PLAIN

WILDERNESS

Cactus Plain

Wells

OLD R.R. GRADE

Thompson Well

Water Tank

Barber Mine

Bouse Hills

BOUSE

Bouse

Well

Landing Strip

Blackbird Mine

Mine

Mine

AQUEDUCT

4WD

331 Landing Strip

Cunningham

Water Tank

LEGEND

UTM ZONE 12

UTM COORDINATES
X= 223468m E
Y= 3761711m N
(33°57'35" N)
(113°59'33" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 1233Ac

MAIN ROAD

SECONDARY ROAD

Part of Project 02OEW

N

0 8000 16000

APPROXIMATE SCALE IN FEET

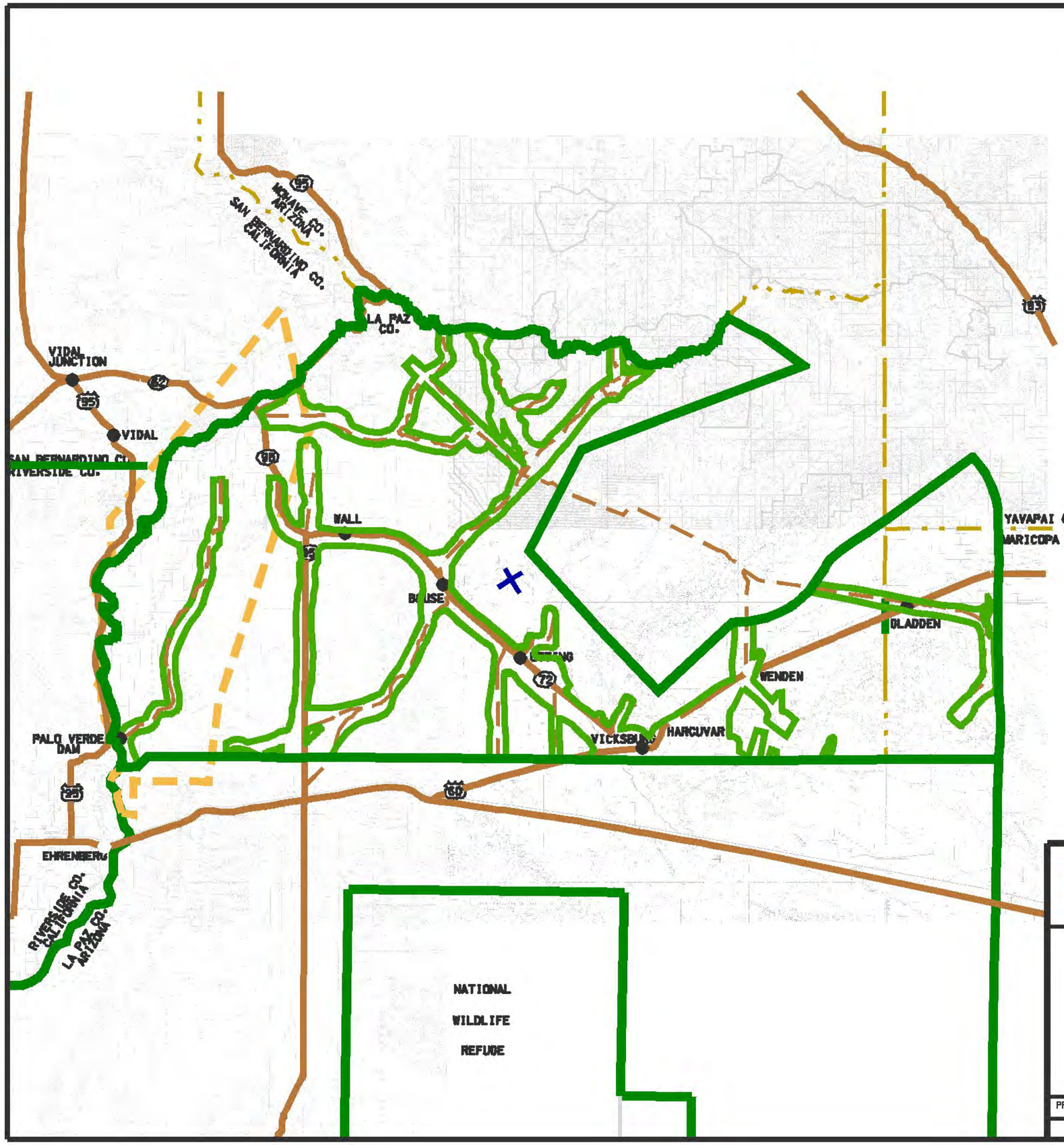
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043902
CTT MAP

BOMBING TARGET #3

PROJ. DATE: 2001		PLATE NO. R02
11-MAR-2003 14:36		

e:\01_RangeRuleMLaguna\AZ9799F5126_CTT_MAP_04_20020711.dgn



LEGEND

UTM ZONE 12

UTM COORDINATES (NAD 83)
X= 231704m E
Y= 3759032m N
(33° 56′ 15″ N)
(113° 54′ 10″ W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 227478Ac

STATE HIGHWAY

SECONDARY ROAD

COUNTY BOUNDARY

INDIAN RESERVATION BOUNDARY

Part of Project 02OEW

N

0 60000 120000

APPROXIMATE SCALE IN FEET

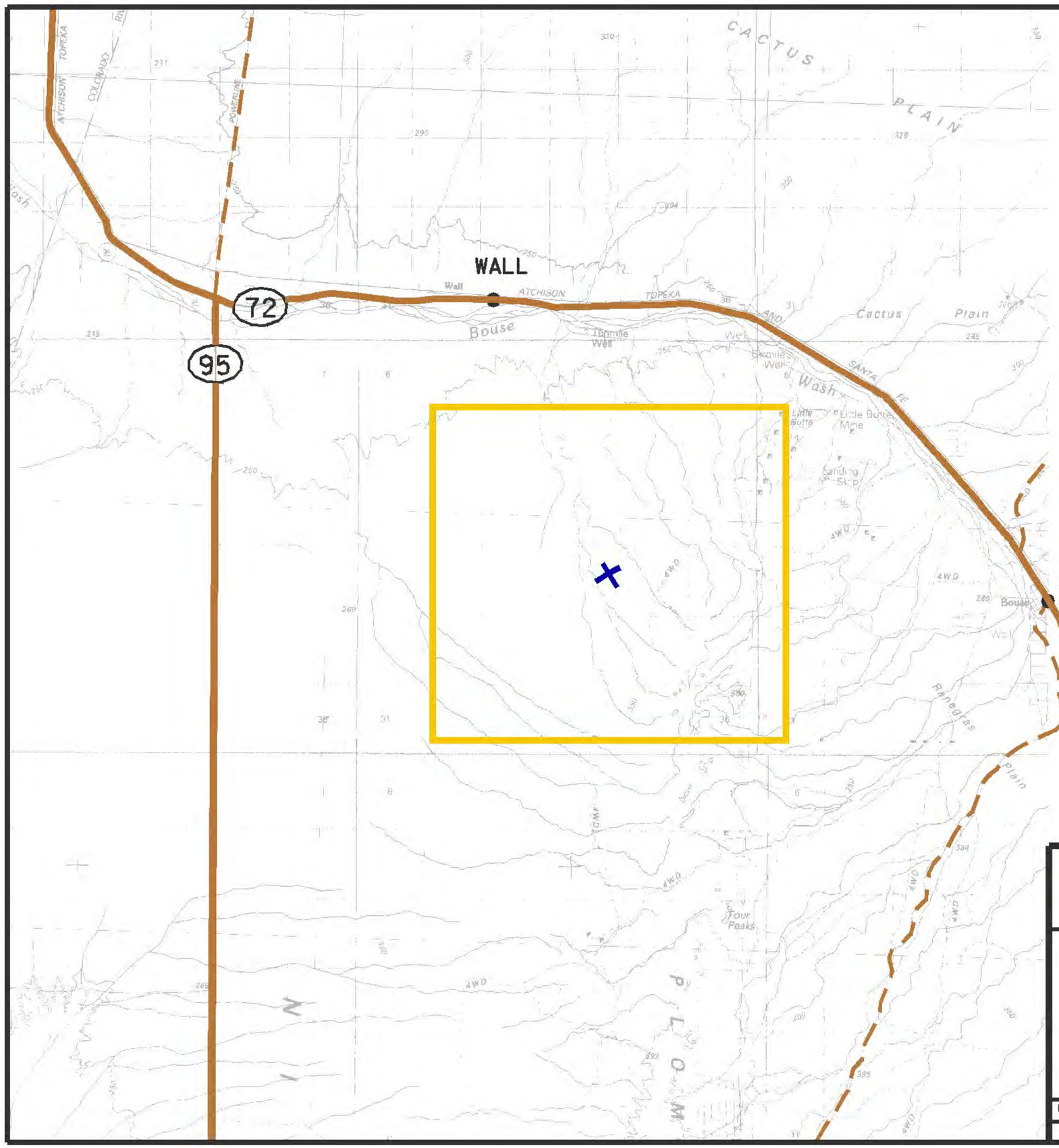
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043902
CTT MAP

NORTH MANEUVER AREA

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 14:39		R03

e:\01_RangeRuleMLaguna\AZ9799F5126_CTT_MAP_05_20020711.dgn



LEGEND

UTM ZONE 11

UTM COORDINATES (NAD 83)
X= 766575m E
Y= 3758927m N
(33° 56′ 13″ N)
(114° 06′ 57″ W)

APPROXIMATE RANGE BOUNDARY
ACREAGE = 15952Ac

STATE HIGHWAY

SECONDARY ROAD

Part of Project 03OEW

0 10000 20000
APPROXIMATE SCALE IN FEET

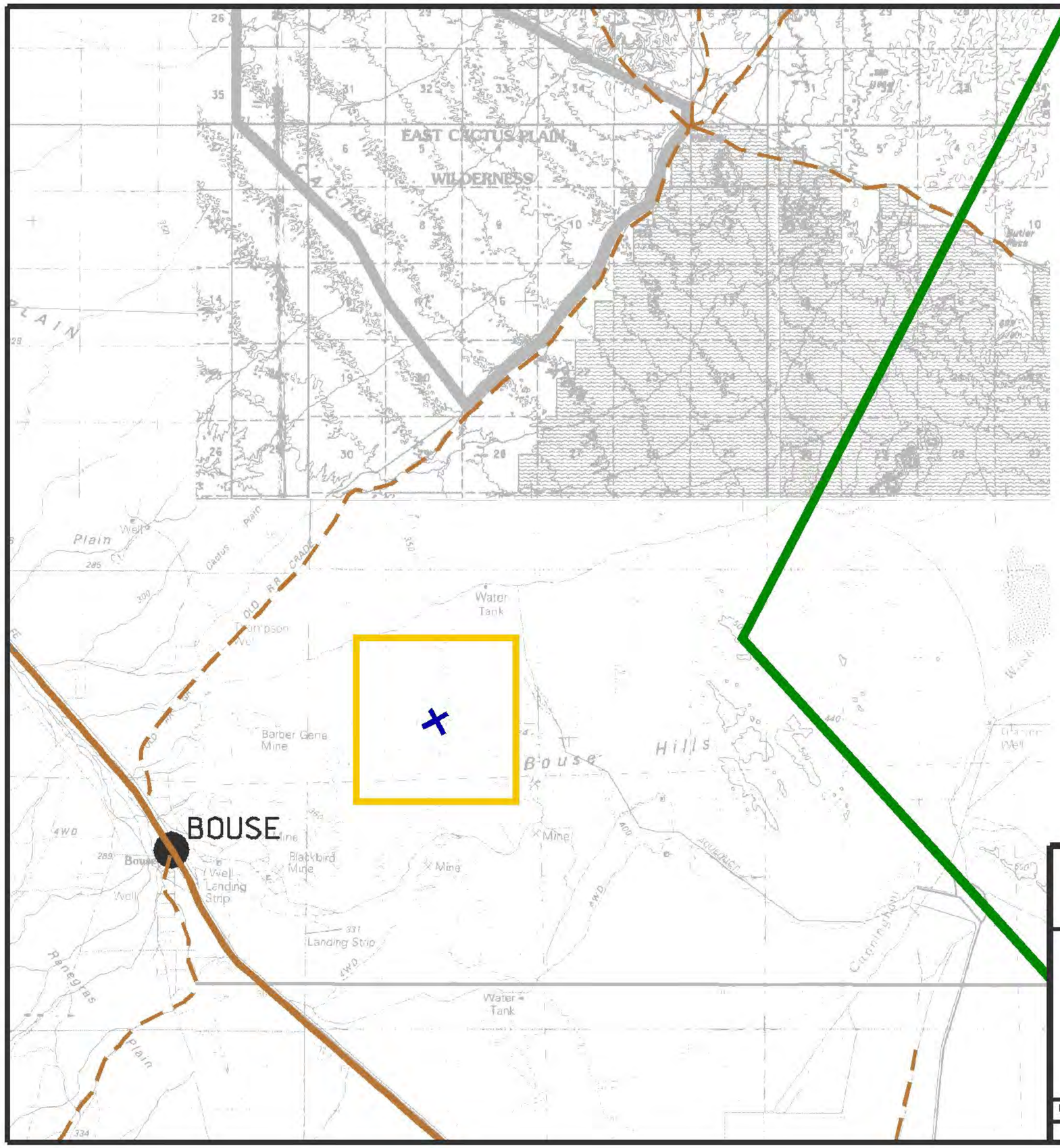
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043903
CTT MAP

BOMBING TARGET #4

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 14:44		R01

e:\R01_RangeRuins\Laguna\AZ9799F5126_CTT_MAP_06_20020712.dgn



LEGEND

UTM ZONE 12

UTM COORDINATES (NAD 83)
X= 227742m E
Y= 3761532m N
(33° 57′ 33″ N)
(113° 56′ 47″ W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 2860Ac

MAIN ROAD

SECONDARY ROAD

Part of Project 03OEW

0 9000 18000
APPROXIMATE SCALE IN FEET

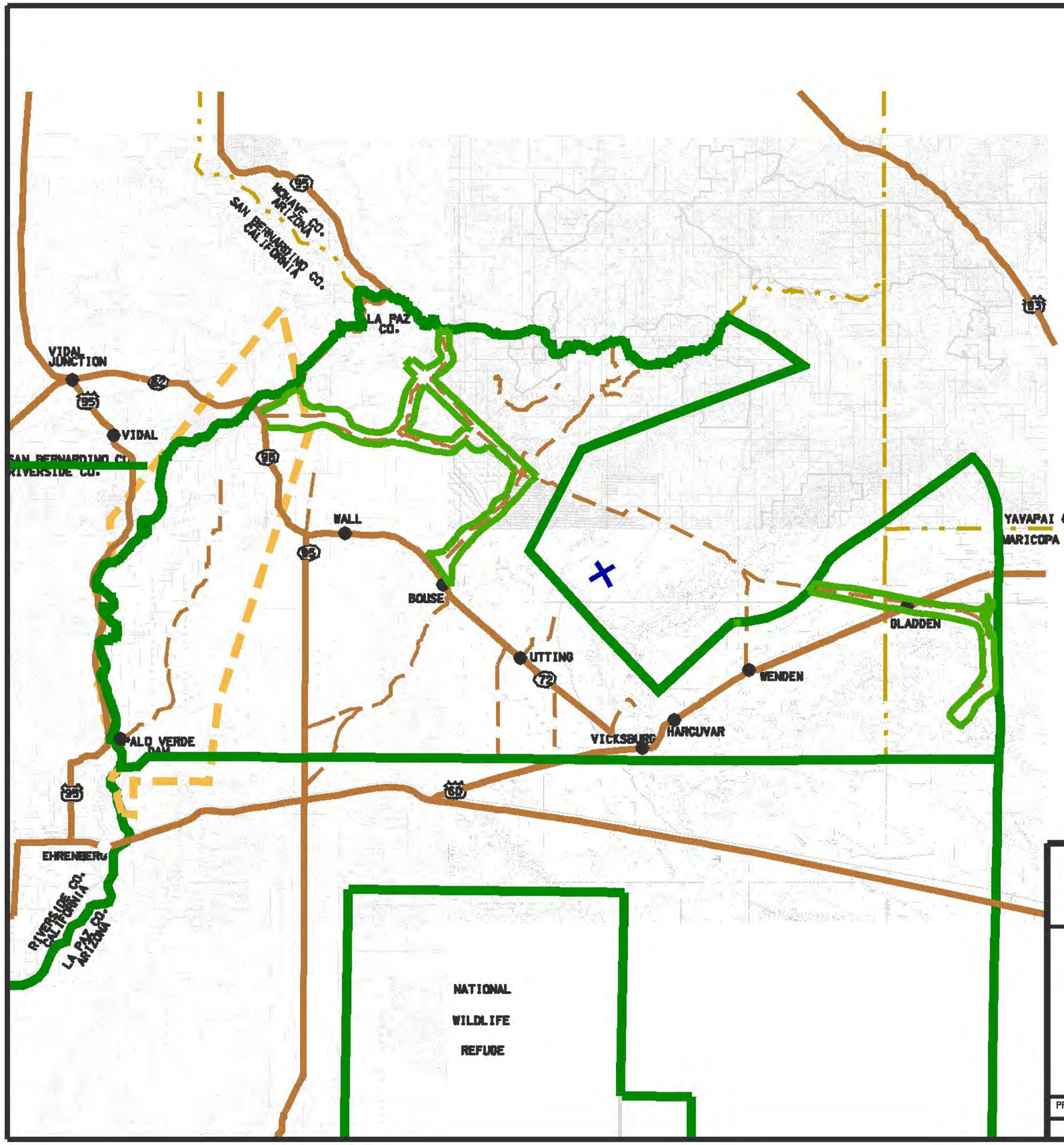
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043903
CTT MAP

BOMBING TARGET #5

PROJ. DATE: 2001		PLATE NO. R02
11-MAR-2003 14:47		

et=01_RangeRuleMLaguna=AZ9799F5126_CTT_MAP_0T_20020712.dgn



LEGEND

UTM ZONE 12

UTM COORDINATES (NAD 83)
X= 245054m E
Y= 3760212m N
(33° 57′ 06″ N)
(113° 45′ 31″ W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 80563Ac

STATE HIGHWAY

SECONDARY ROAD

COUNTY BOUNDARY

INDIAN RESERVATION BOUNDARY

Part of Project 03OEW

0 60000 120000

APPROXIMATE SCALE IN FEET

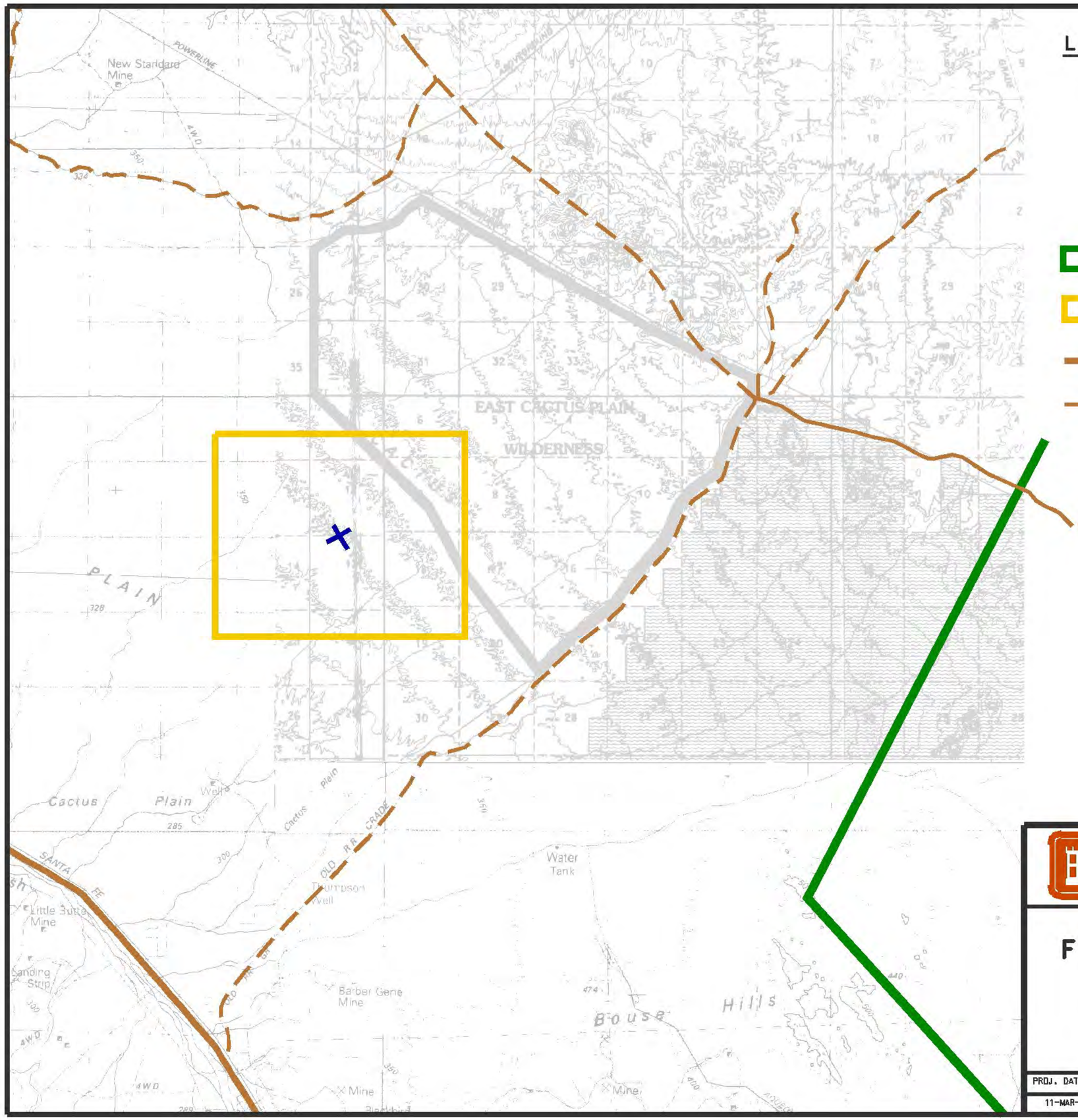
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043903
CTT MAP

MANEUVER AREA/VEHICULAR ACCESS AREA #1

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 14:56		R03

er=01_RangeRules\Laguna\AZ9799F5126_CTT_MAP_08_20020711.dgn



LEGEND

UTM ZONE 12

UTM COORDINATES (NAD 83)
X= 224328m E
Y= 3771120m N
(34°02'40" N)
(113°59'10" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 5834Ac

MAIN ROAD

SECONDARY ROAD

Part of project 04OEW

N

0 9000 18000

APPROXIMATE SCALE IN FEET

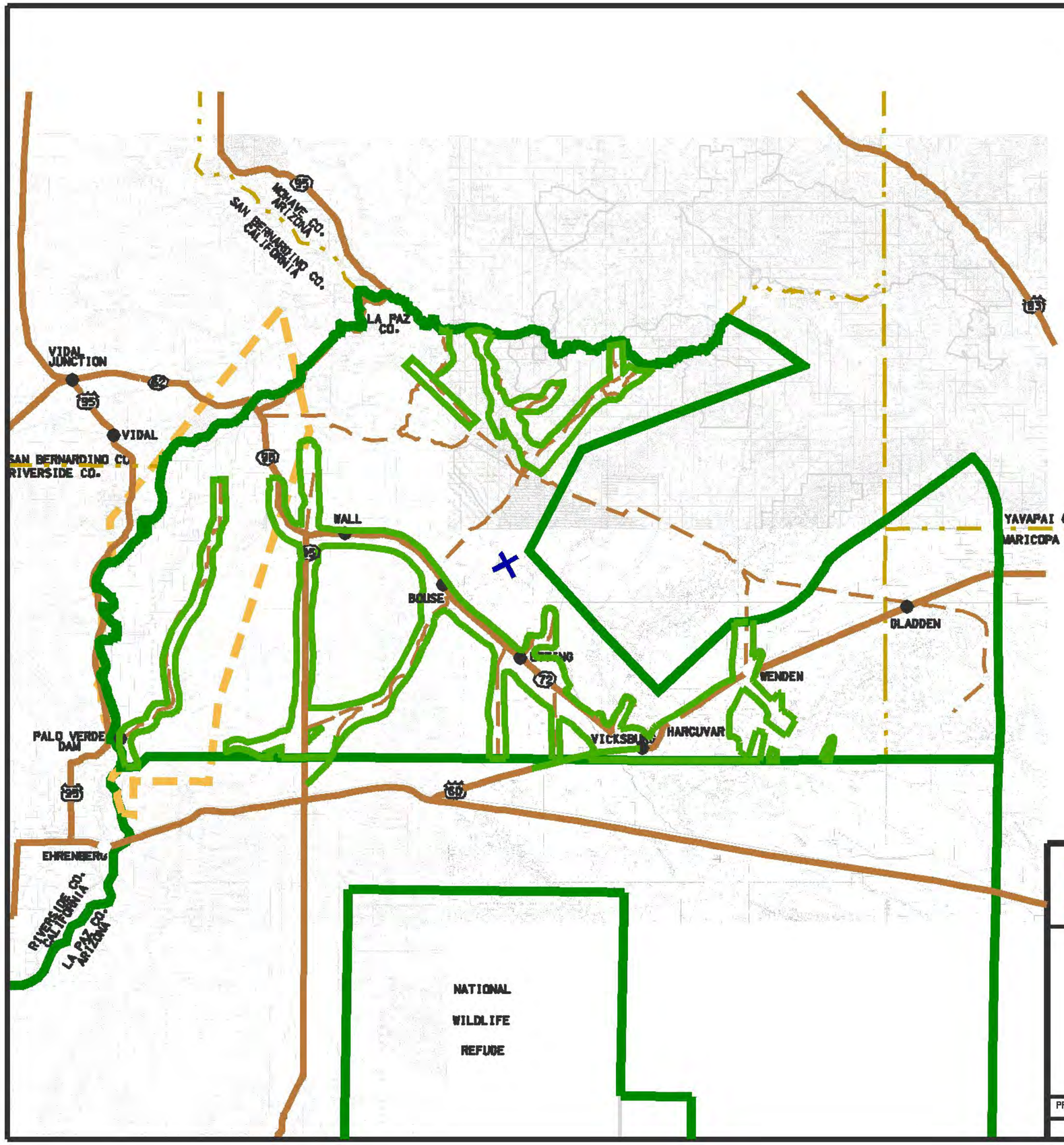
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043904
CTT MAP

BOMBING TARGET #6

PROJ. DATE: 2001		PLATE NO. R01
11-MAR-2003 15:07		

et-R01_RangeRuleMLaguna-AZ9799F5126_CTT_MAP_09_20020705.dgn



LEGEND

UTM ZONE 12

UTM COORDINATES (NAD 83)
X= 231033m E
Y= 3761206m N
(33°57'25" N)
(113°54'38" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 211936 Ac

STATE HIGHWAY

SECONDARY ROAD

COUNTY BOUNDARY

INDIAN RESERVTION BOUNDARY

Part of Project 04OEW

N

0 60000 120000

APPROXIMATE SCALE IN FEET

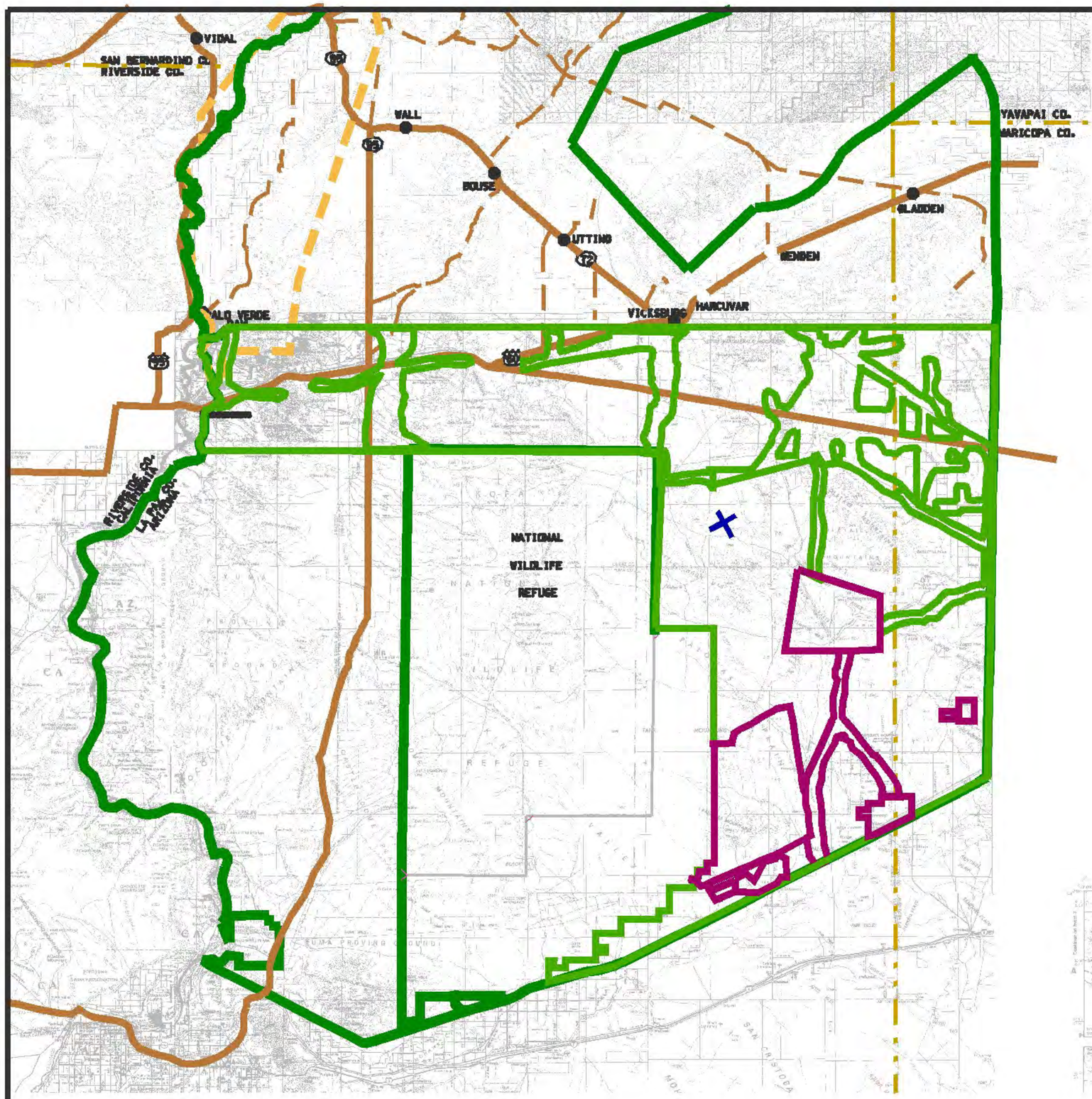
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043904
CTT MAP

MANEUVER AREA/VEHICULAR ACCESS AREA #2

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 15:10		R02

e:\01_RangeRules\Laguna\AZ9799F5126_CTT_MAP_10_20020713.dgn



LEGEND

UTM ZONE 12

UTM COORDINATES (NAD 83)
X= 255824m E
Y= 3702359m N
(33°25'58" N)
(113°37'35" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 987814 Ac

STATE HIGHWAY

SECONDARY ROAD

COUNTY BOUNDARY

INDIAN RESERVATION BOUNDARY

Part of Project 05OEW

0 70000 140000
APPROXIMATE SCALE IN FEET

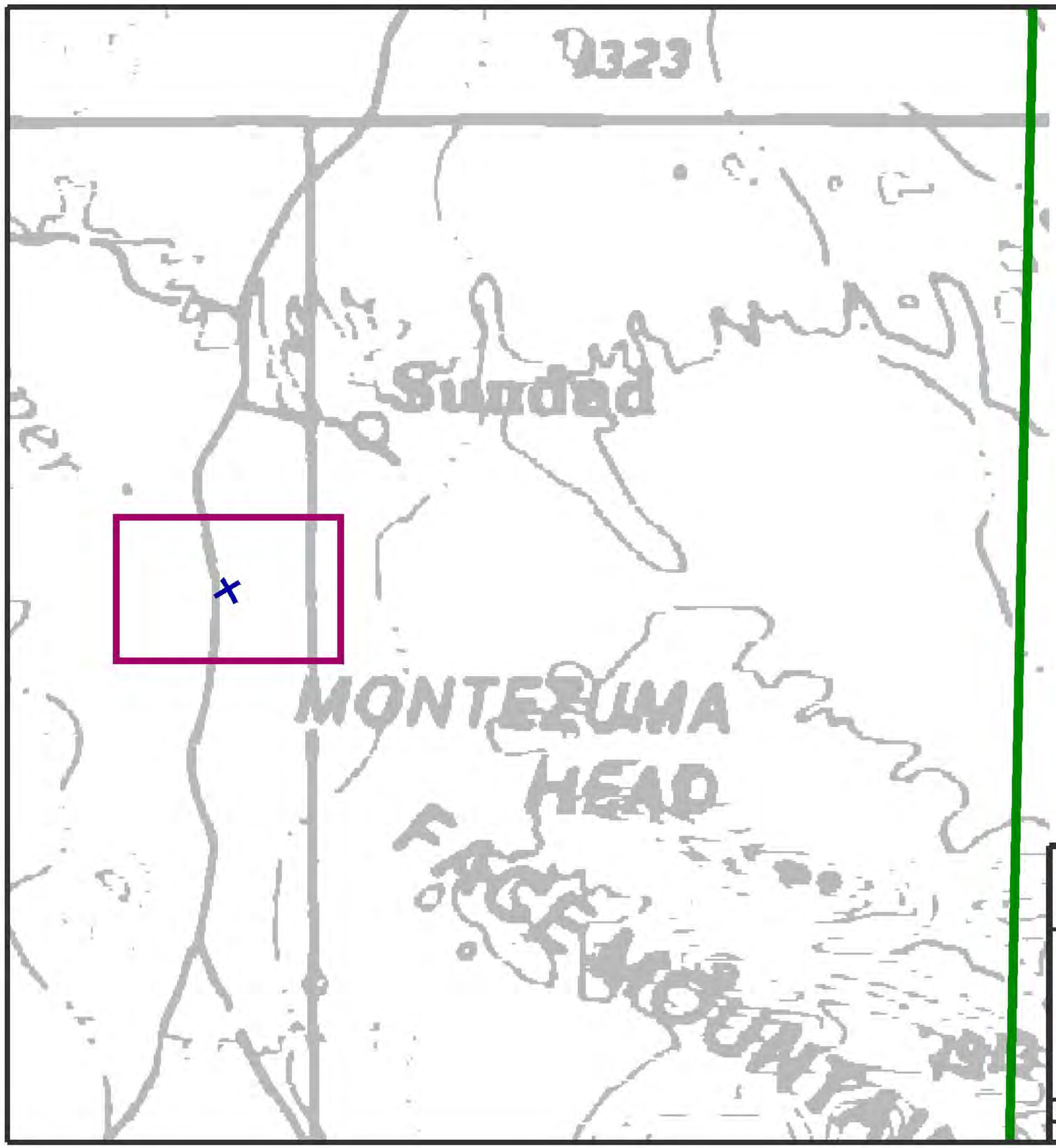
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043905
CTT MAP

SOUTH MANEUVER AREA

PROJ. DATE: 2001		PLATE NO. R03
11-MAR-2003 15:13		

e:\01_RangeRuleWLaguna\AZ9799F5126_CTT_MAP_11_20020713.dgn



LEGEND

UTM ZONE 12 (NAD 83)

UTM COORDINATES
X= 290409m E
Y= 3672082m N
(33°10'02" N)
(113°14'52" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 522Ac

Part of Project 05OEW

0 3400 6800
APPROXIMATE SCALE IN FEET

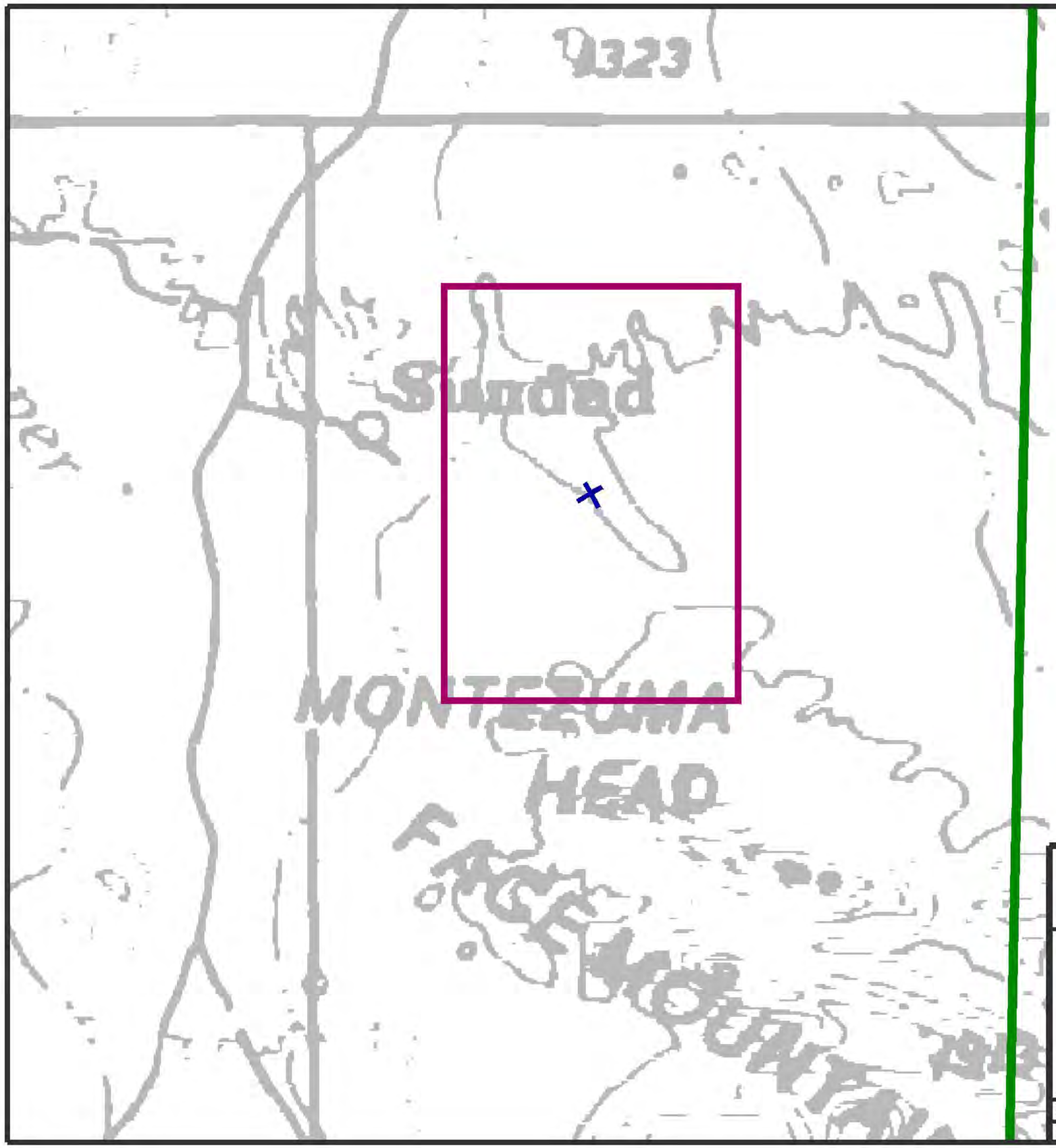
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043905
CTT MAP

WEST IMPACT AREA

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 15:15		R01

et-R01_RangeRuleset_Laguna-AZ9799F5126_CTT_MAP_12_20020713.dgn



LEGEND

UTM ZONE 12 (NAD 83)

UTM COORDINATES
X= 293620m E
Y= 3672712m N
(33°10'25" N)
(113°12'48" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 1908Ac

Part of Project 05OEW

0 3400 6800
APPROXIMATE SCALE IN FEET

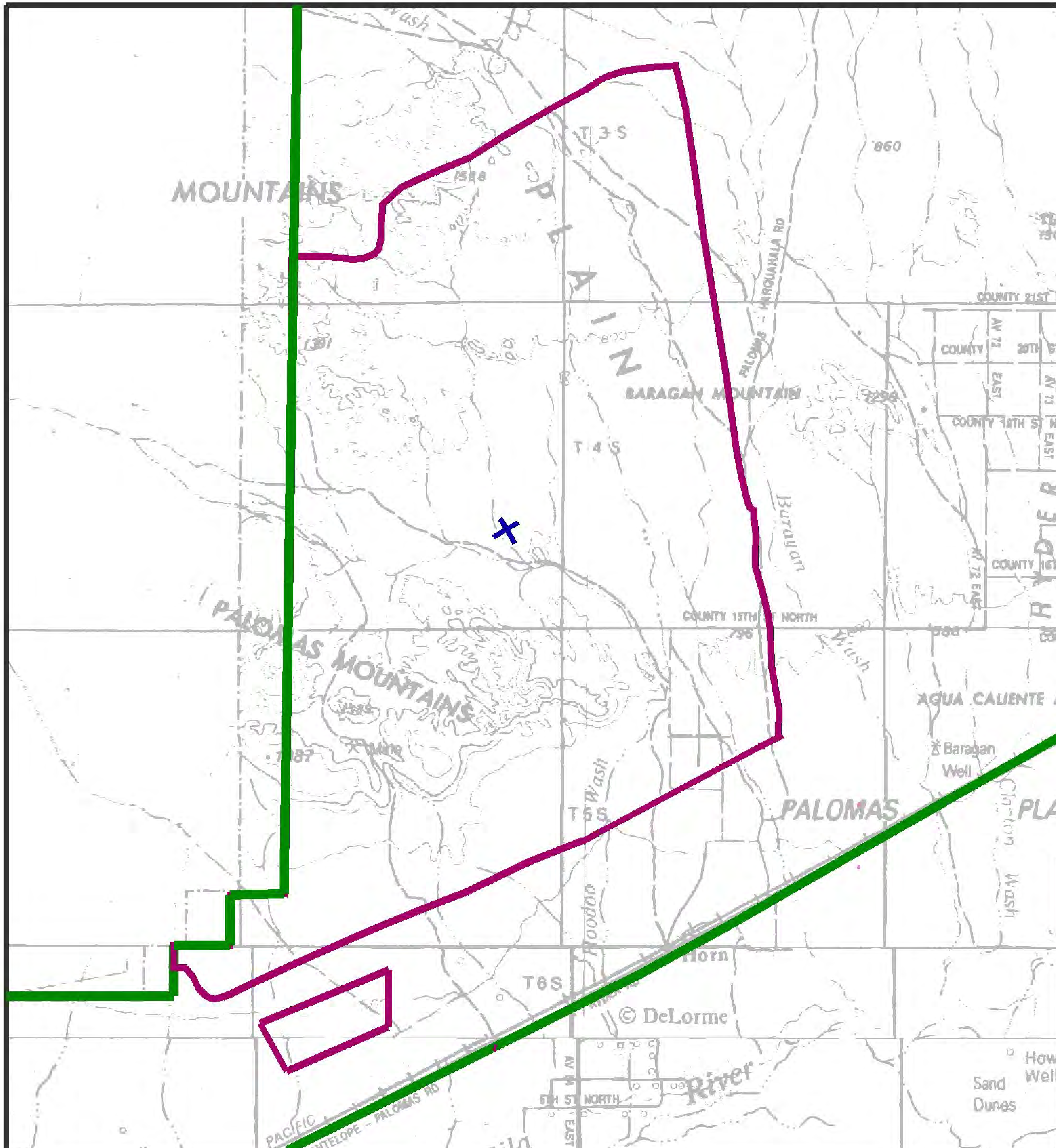
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043905
CTT MAP

EAST IMPACT AREA

PROJ. DATE: 2001		PLATE NO. R02
11-MAR-2003 15:14		

et-R01_RangeRuleset_Laguna-AZ9799F5126_CTT_MAP_13_20020713.dgn



LEGEND

UTM ZONE 12 (NAD 83)

UTM COORDINATES
X= 317220m E
Y= 3600796m N
(32°31′45″ N)
(112°56′43″ W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 73255Ac

Part of Project 06OEW

N

0 13000 26000
APPROXIMATE SCALE IN FEET

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043906
CTT MAP

CAMP HORN TRAINING AREA

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 15:06		R01

LEGEND

UTM ZONE 12 (NAD 83)

UTM COORDINATES
X= 272953m E
Y= 3687857m N
(33°18'27" N)
(113°26'19" W)

APPROXIMATE RANGE BOUNDARY
ACREAGE = 35373Ac

Part of Project 06OEW

N

0 11000 22000

APPROXIMATE SCALE IN FEET

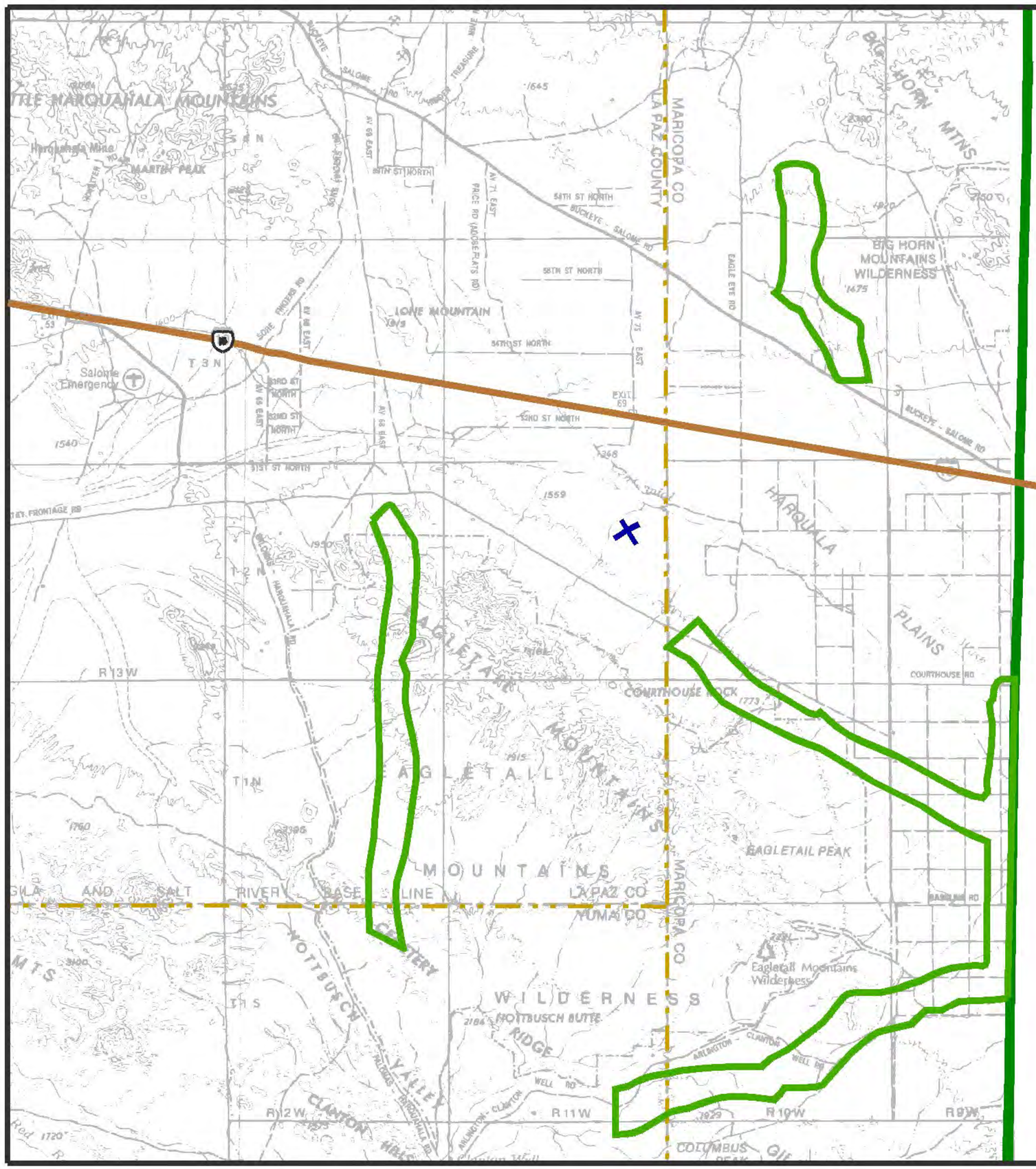
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043906
CTT MAP

NORTH IMPACT AREA

PROJ. DATE: 2001		PLATE NO.
17-MAR-2003 09:53		R02

et:\01_RangeRuins\Laguna\AZ9799F5126_CTT_MAP_16_20020715.dgn



LEGEND

UTM ZONE 12 (NAD 83)

UTM COORDINATES
X= 282240m E
Y= 3712275m N
(33°31'40" N)
(113°20'42" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 26583 Ac

MAIN ROAD

COUNTY BOUNDARY

Part of Project 06OEW

0 19000 28000

APPROXIMATE SCALE IN FEET

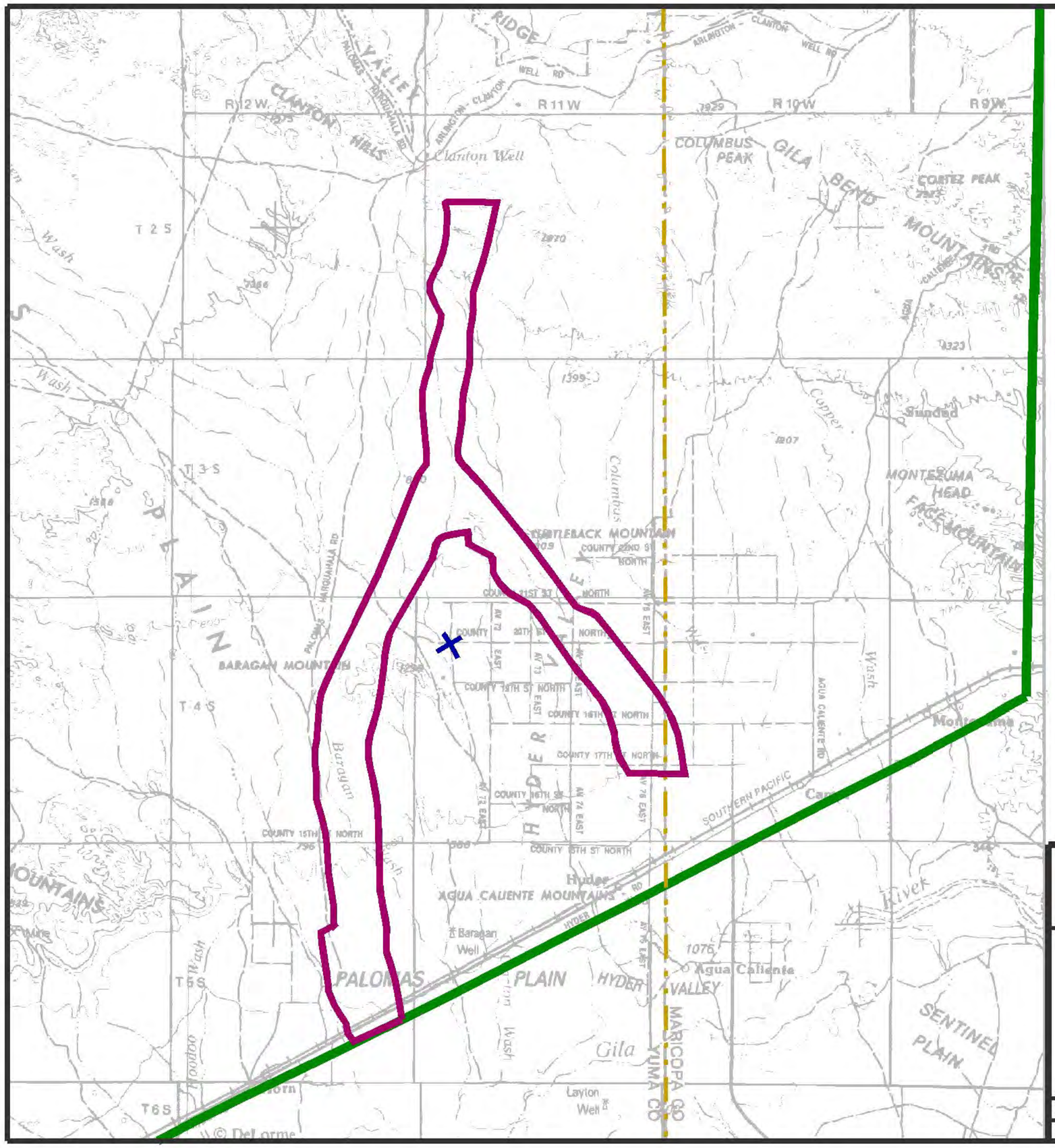
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043906
CTT MAP

MANEUVER AREA/VEHICULAR ACCESS AREA #3

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 15:08		R03

e:\01_RangeRuleMLaguna\AZ9799F5126_CTT_MAP_1T_20020715.dgn



LEGEND

UTM ZONE 12 (NAD 83)

UTM COORDINATES
X= 273726m E
Y= 3666864m N
(33°06'28" N)
(113°25'30" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 22446Ac

COUNTY BOUNDARY

Part of Project 07OEW

N

0 17000 34000

APPROXIMATE SCALE IN FEET

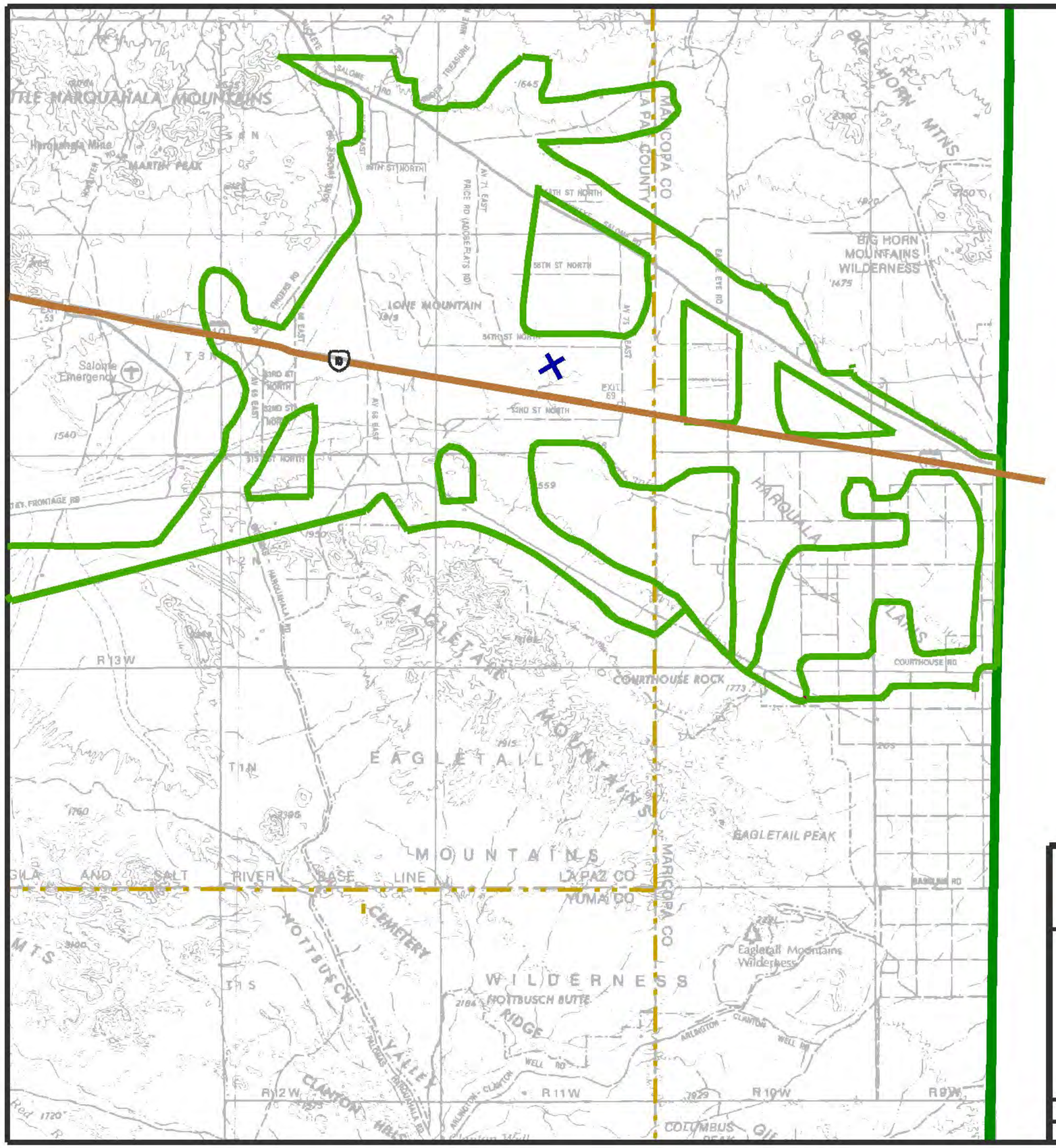
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J00AZ043907
CTT MAP

SW VEHICULAR ACCESS/MANUEVER AREA
AREA #4

PROJ. DATE: 2001		PLATE NO. R01
17-MAR-2003 10:10		

e:\R01_RangeRuleset\Laguna\AZ9799F5126_CTT_MAP_18_20020715.dgn



LEGEND

UTM ZONE 12 (NAD 83)

UTM COORDINATES
X= 279517m E
Y= 3718188m N
(33°34'50" N)
(113°22'32" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 164195Ac

INTERSTATE

COUNTY BOUNDARY

Part of Project 07OEW

0 19000 28000

APPROXIMATE SCALE IN FEET

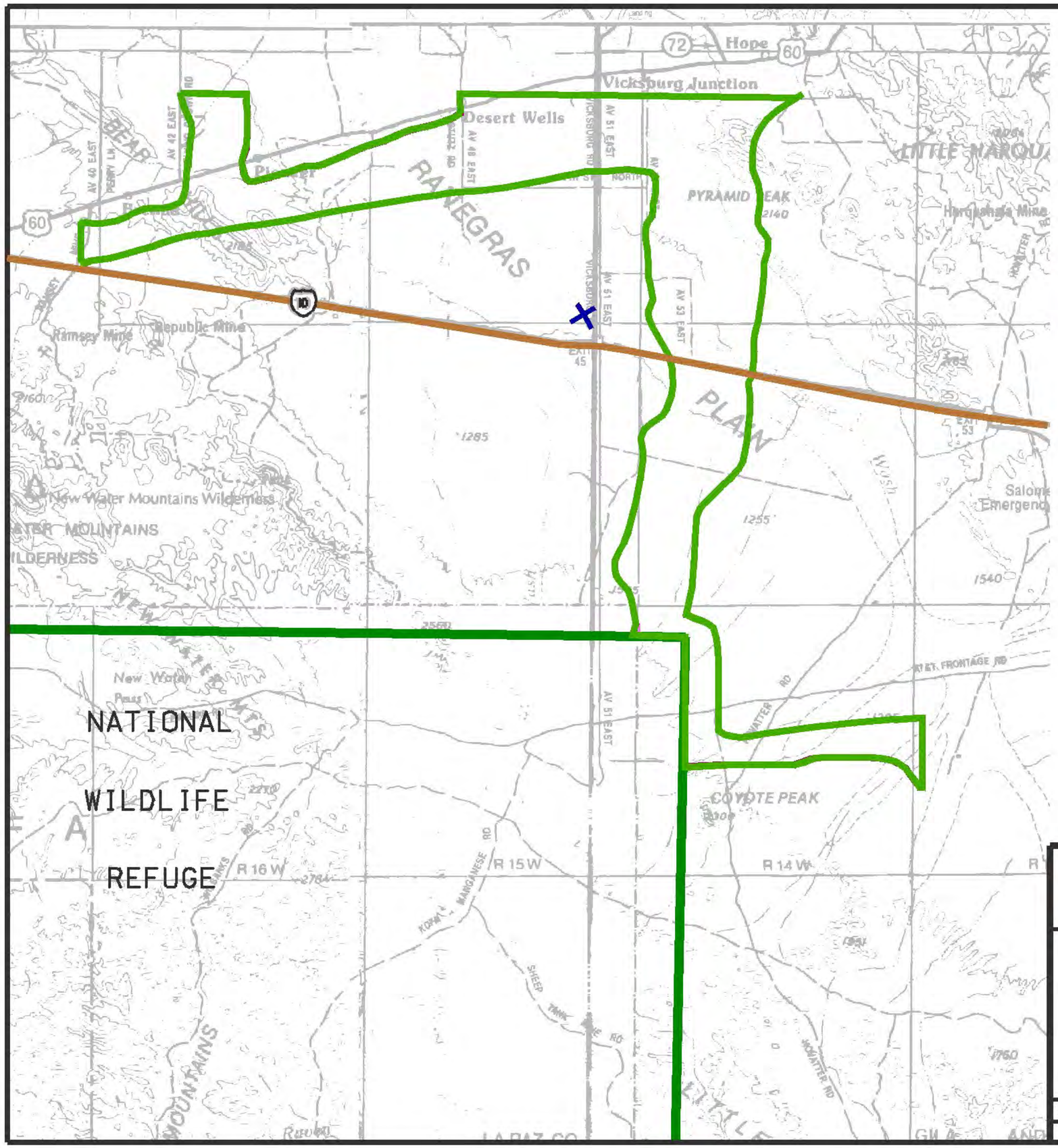
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043907
CTT MAP

NE VEHICULAR/ MANE AREA #3

PROJ. DATE: 2001		PLATE NO. R02
11-MAR-2003 15:09		

et-R01_RangeRuleLaguna-AZ9799F5126_CTT_MAP_19_20020715.dgn



LEGEND

UTM ZONE 12 (NAD 83)

UTM COORDINATES
X= 243224m E
Y= 3725077m N
(33°38'04" N)
(113°22'32" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 31317Ac

INTERSTATE

Part of Project 07OEW

0 15000 30000
APPROXIMATE SCALE IN FEET

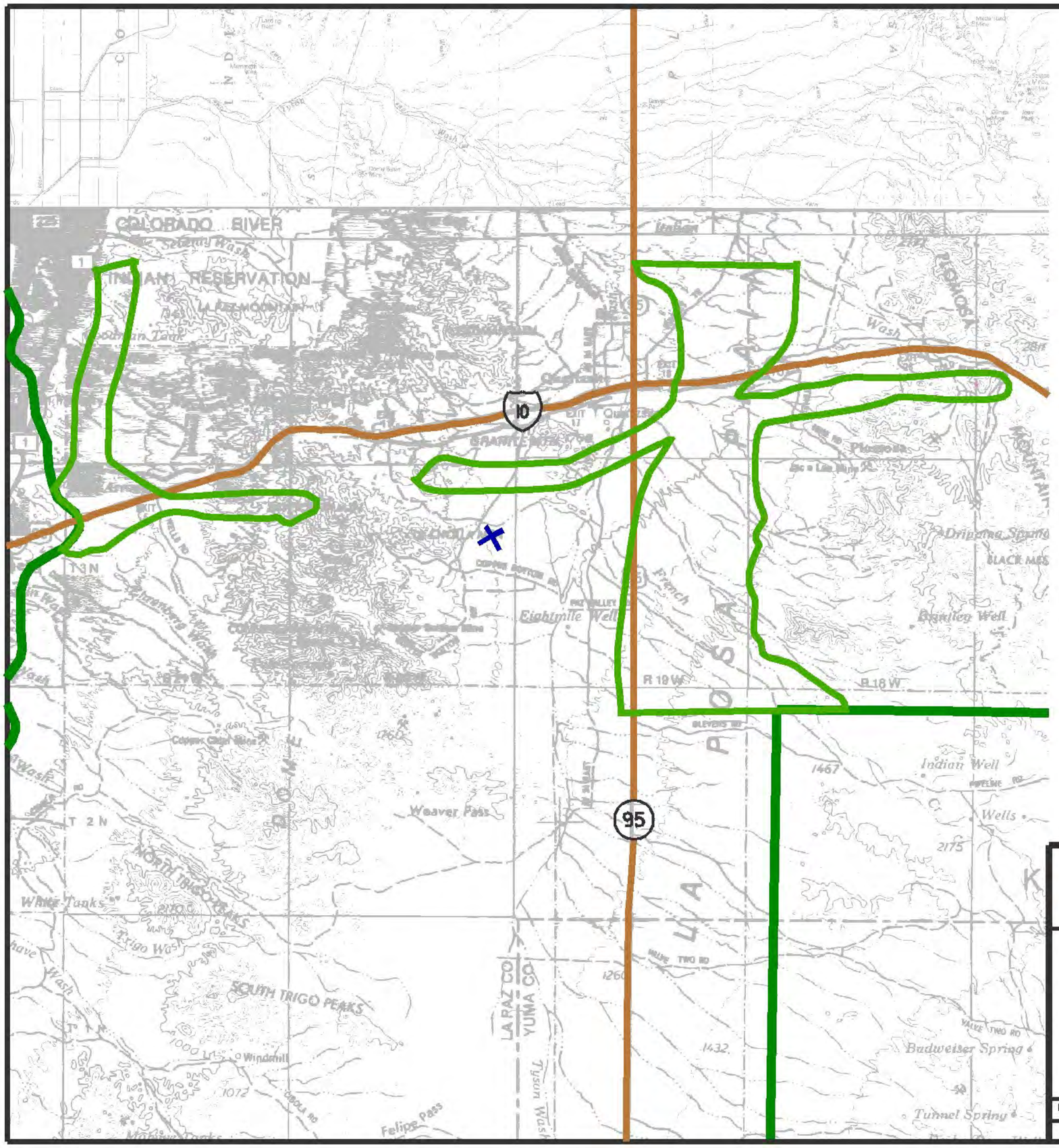
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043907
CTT MAP

N. CENTRAL VECHICLE ACCESS MANEUVER

PROJ. DATE: 2001		PLATE NO.
11-MAR-2003 15:10		R03

et-R01_RangeRules\Laguna\AZ9799F5126_CTT_MAP_20_20020705.dgn



LEGEND

UTM ZONE 11 (NAD 83)

UTM COORDINATES
X= 754119m E
Y= 3722533m N
(33°36'44" N)
(114°15'40" W)

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 318562Ac

INTERSTATE

STATE HIGHWAY

Part of Project 07OEW

0 18000 36000

APPROXIMATE SCALE IN FEET

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043907
CTT MAP

NW VEHICLE ACCESS/MANEUVER

PROJ. DATE: 2001		PLATE NO.
17-MAR-2003 09:59		R04

et-*01_RangeRules*Laguna*AZ9799F5126_CTT_MAP_21_20020715.dgn

EHRENBERG

RIVERSIDE CO. CALIFORNIA

LA PAZ CO. ARIZONA

COLORADO RIVER

LAPAZ COUNTY
YUMA COUNTY

LEGEND

UTM ZONE 11

UTM COORDINATES
X= 744817 E
Y= 3667600 N
(33°07'10")
(114°22'31")

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 88425 Ac

MAIN ROAD

COUNTY BOUNDARY

Project 08OEW

0 40000 80000

APPROXIMATE SCALE IN FEET

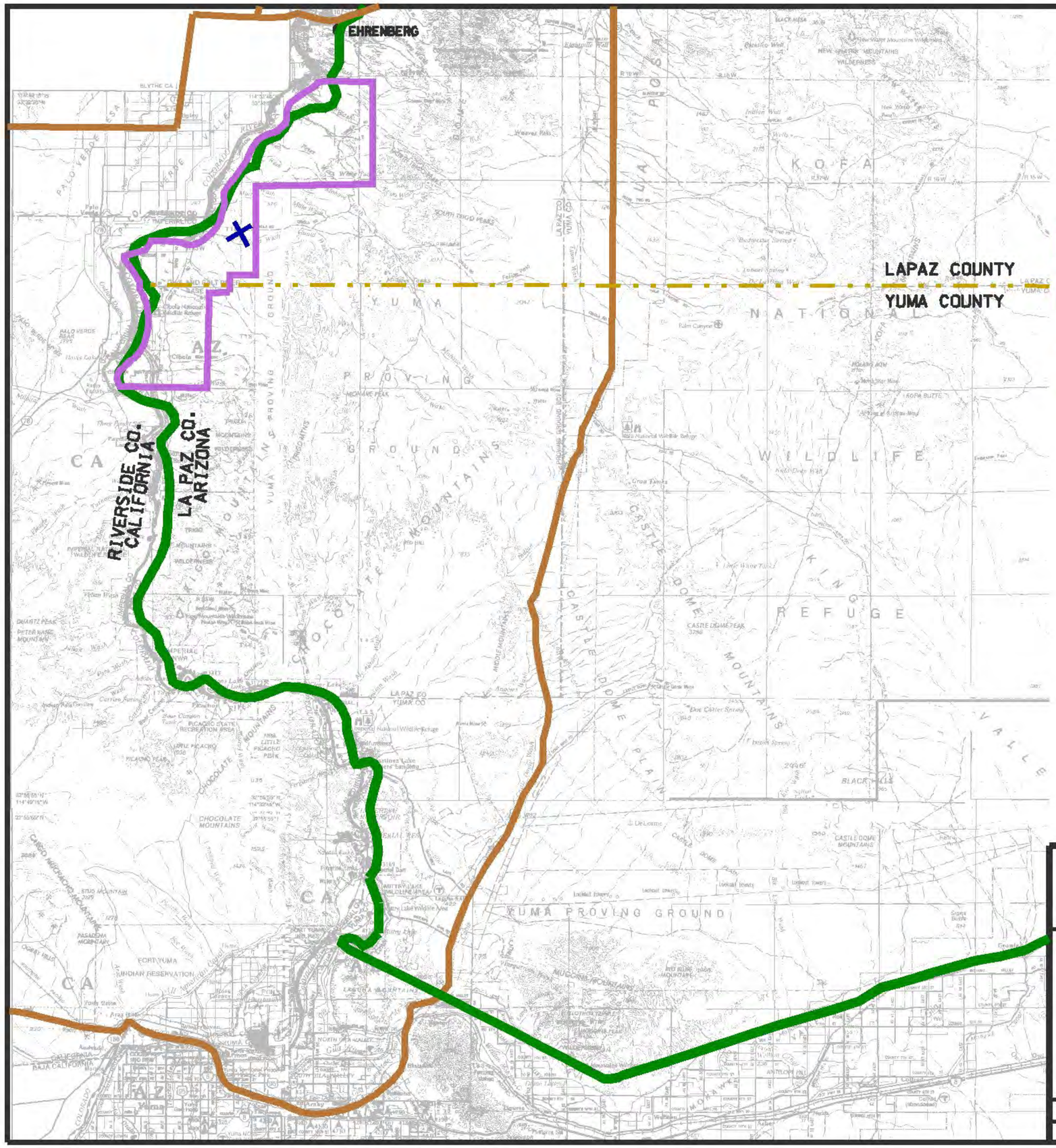
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROPERTY NO. J09AZ043908
CTT MAP

MANEUVER AREA

PROJ. DATE: 2001		PLATE NO.
23-SEP-2002 11:38		R01

E:\R01_RangeRuleMLaguna\AZ9799F5120_CTT_MAP_22_2002092302.dgn



LEGEND

- UTM ZONE 11
- UTM COORDINATES
  X= 723973 E
  Y= 3700418 N
  (33°25'11")
  (114°27'46")
- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE RANGE BOUNDARY
  ACREAGE = 5392 Ac
- MAIN ROAD
- COUNTY BOUNDARY

Project 09OEW

0 40000 80000

APPROXIMATE SCALE IN FEET

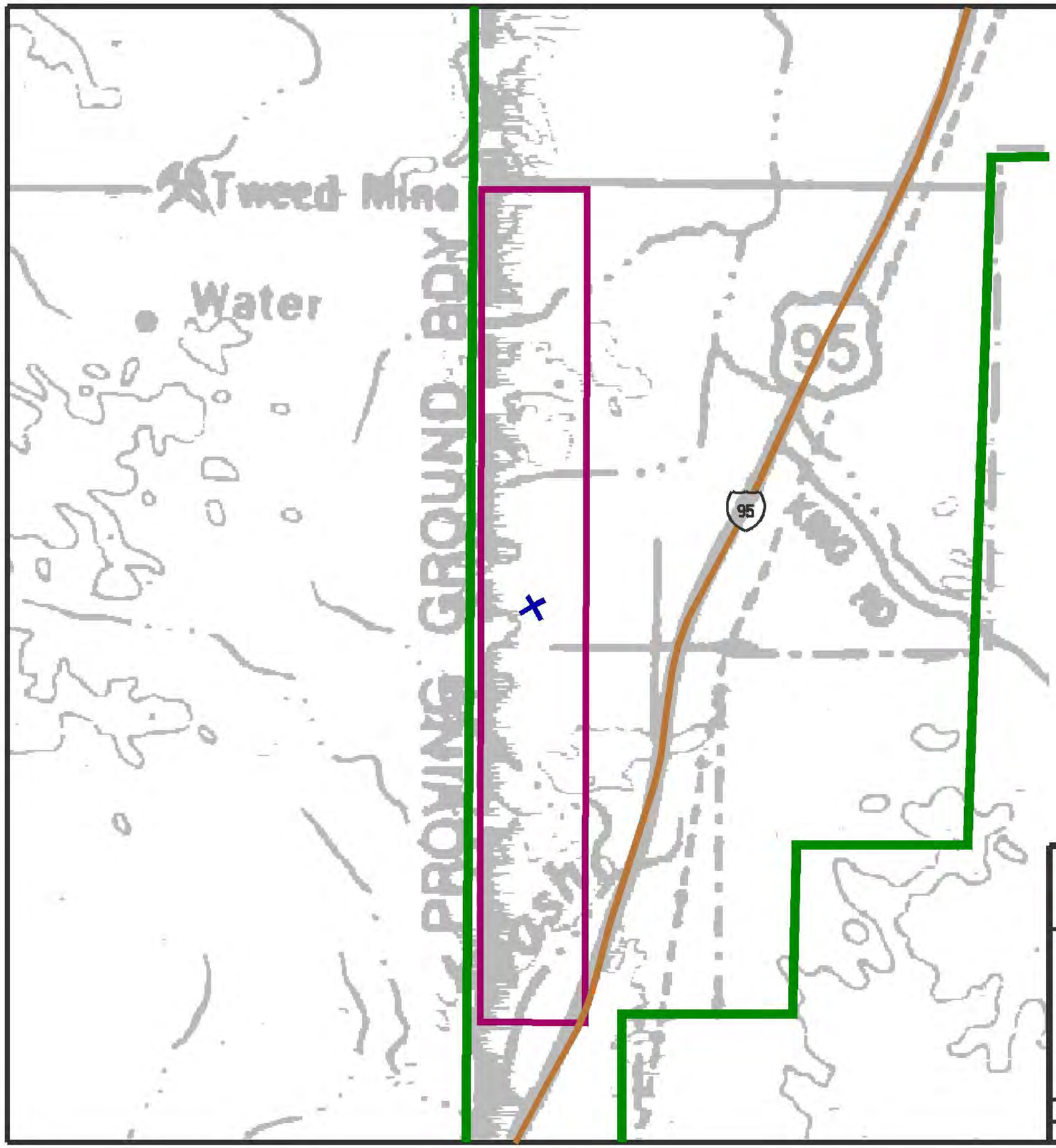
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043909
CTT MAP

AIR-TO-GROUND GUNNERY RANGE

PROJ. DATE: 2001		PLATE NO.
17-MAR-2003 08:45		R01

et:\02_RangeRuleRt\Laguna NA\AZ9T99F5126_CTT_MAP_23_20020923.dgn



LEGEND

UTM ZONE 11

UTM COORDINATES
X= 755142 E
Y= 3682692 N
(33°15'11")
(114°15'37")

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 1210 Ac

INTERSTATE

Part of Project 10OEW

N

0 4000 8000

APPROXIMATE SCALE IN FEET

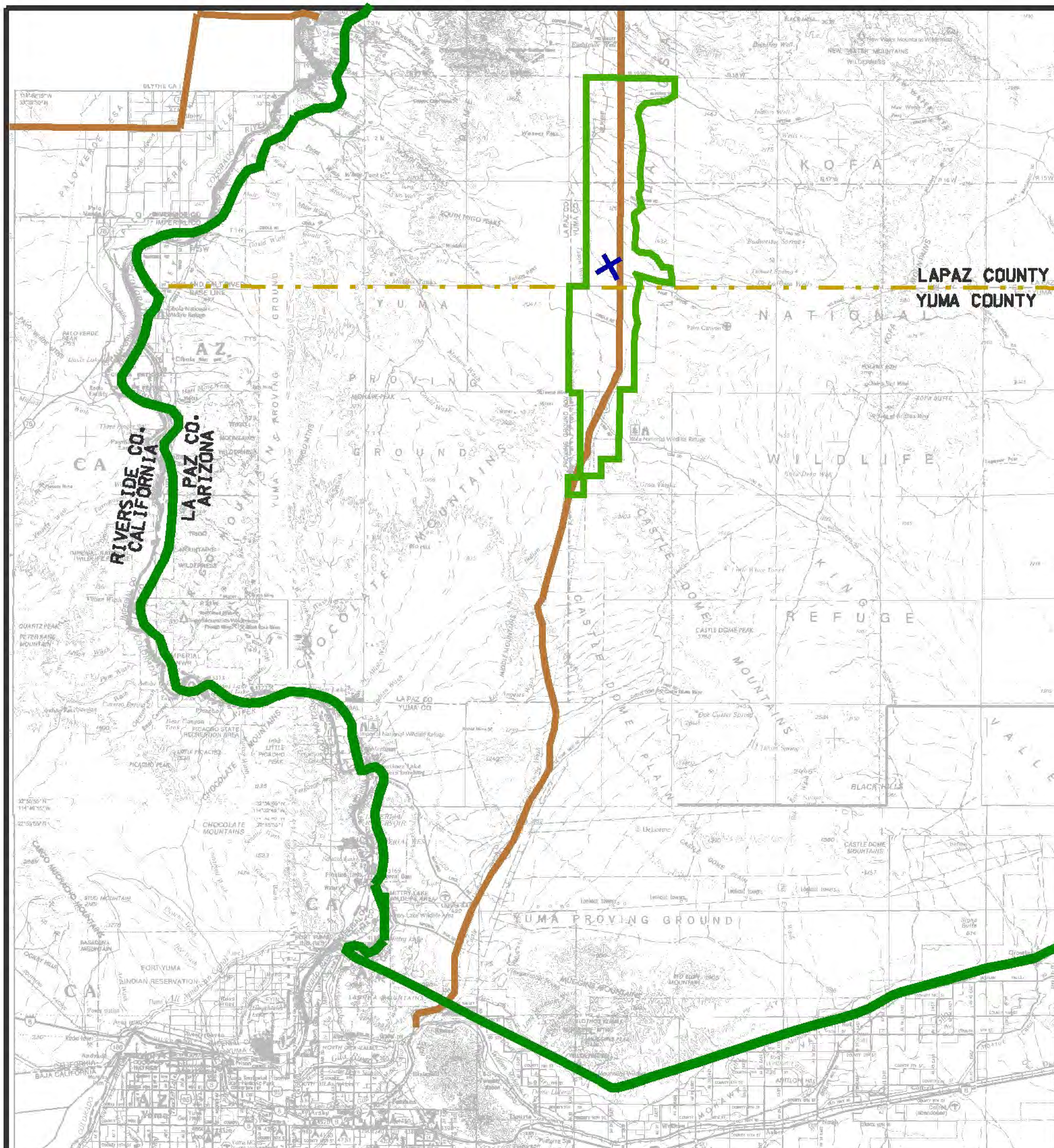
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043910
CTT MAP

STONE CABIN IMPACT AREA

PROJ. DATE: 2001		PLATE NO.
17-MAR-2003 08:46		R01

e:\02_RangeRuleset\Laguna NA\AZ9T99F5126_CTT_MAP_24_20020923.dgn



LEGEND

UTM ZONE 11

UTM COORDINATES
X= 757931 E
Y= 3698534 N
(33°23'42")
(114°13'34")

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 48658 Ac

MAIN ROAD

COUNTY BOUNDARY

Part of Project 10OEW

N

0 40000 80000
APPROXIMATE SCALE IN FEET

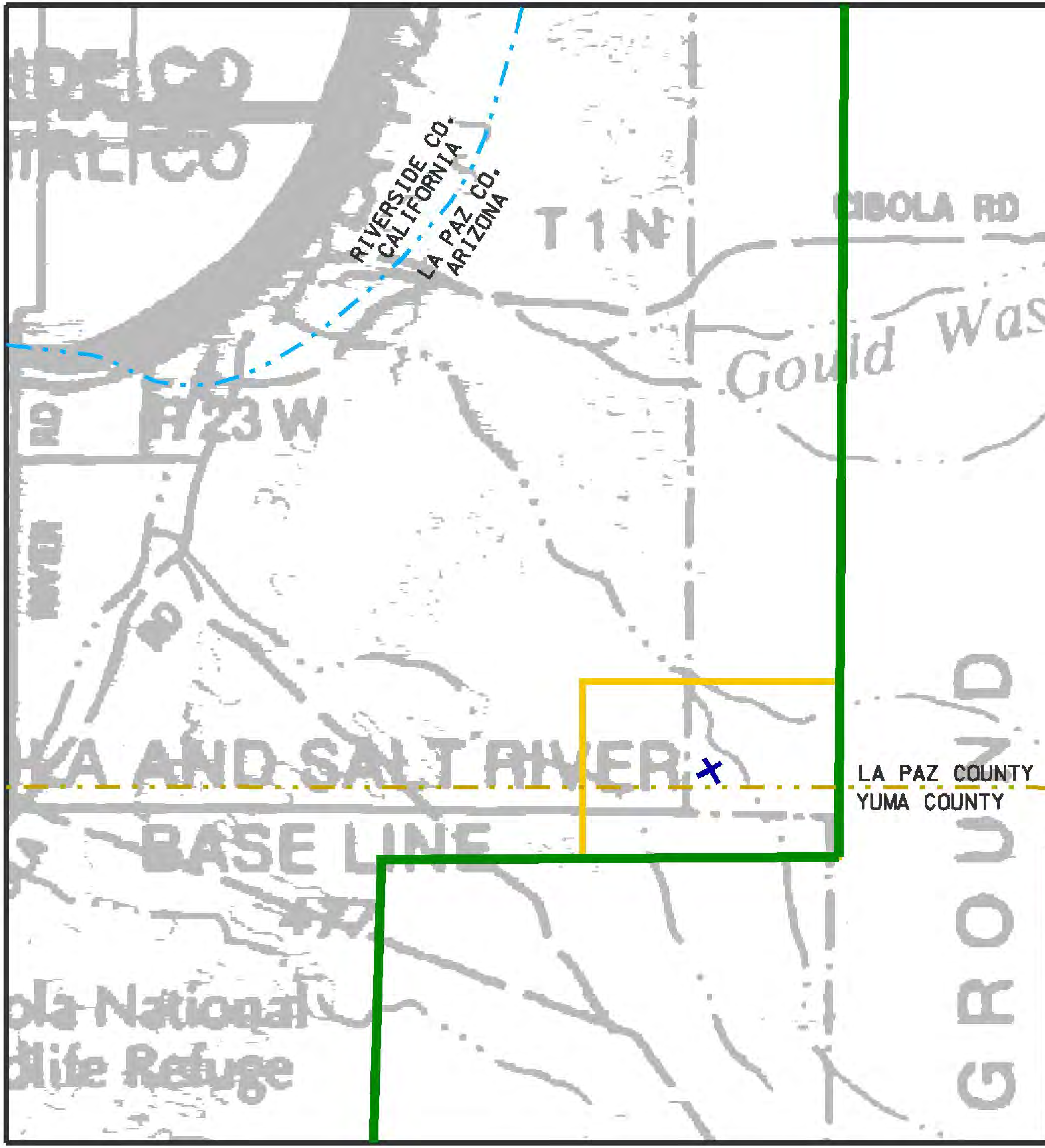
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA
FUDS PROJECT NO. J09AZ03910
CTT MAP

MANEUVER AREA

PROJ. DATE: 2001		PLATE NO.
17-MAR-2003 08:47		R02

at#02_RangeRule#Laguna NA#AZ9T99F5126_CTT_MAP_25_20020820.dgn



LEGEND

UTM ZONE 11

UTM COORDINATES
X= 724326 E
Y= 3695608 N
(33°22'34")
(114°35'16")

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 974 Ac

COUNTY BOUNDARY

COLORADO RIVER /
INSTALLATION BOUNDARY

Part of Project 11OEW

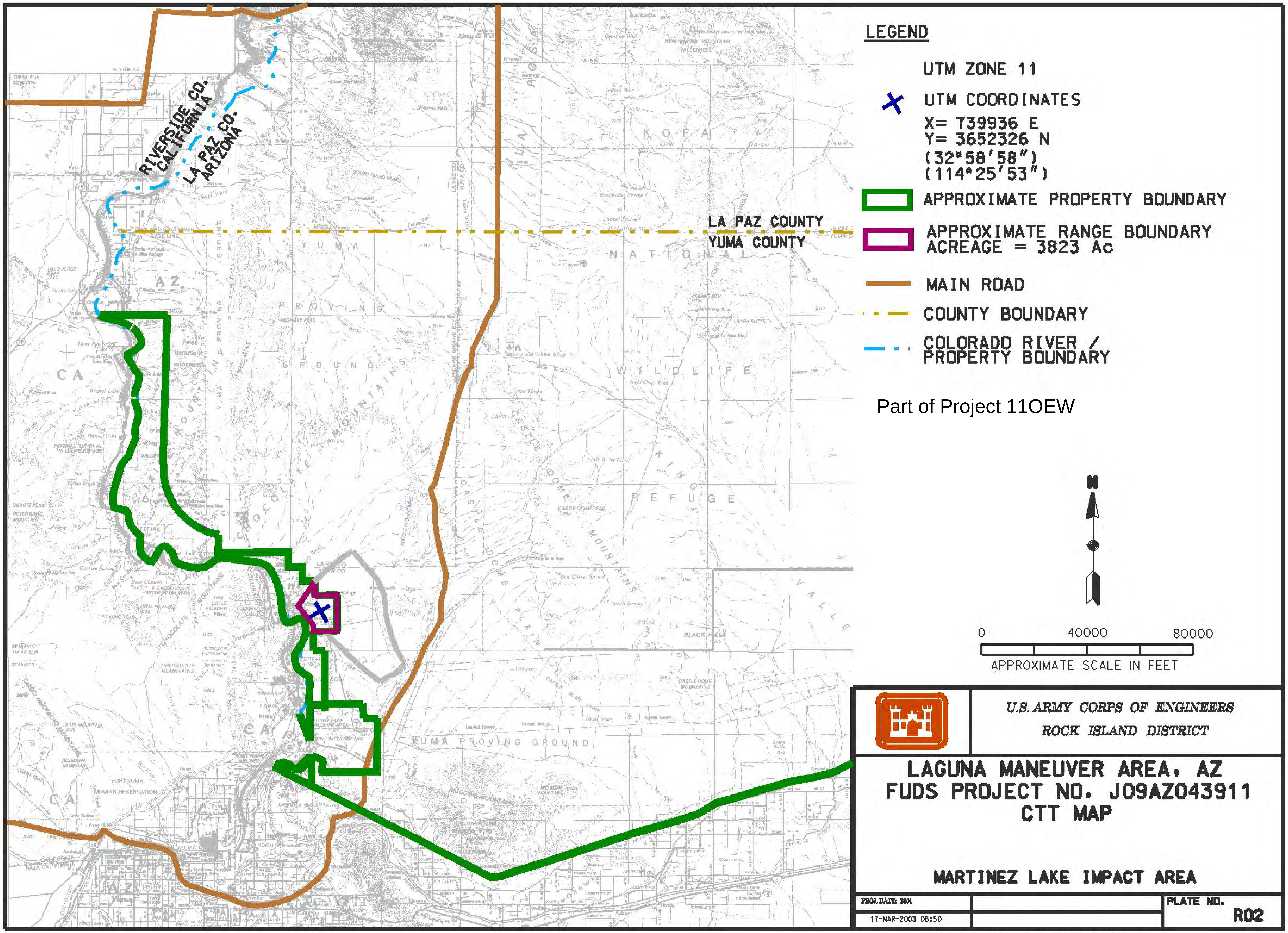
0 4000 8000
APPROXIMATE SCALE IN FEET

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA
FUDS PROJECT NO. J09AZ043911
CTT MAP

CIBOLA BOMB TARGET

PROJ. DATE: 2001		PLATE NO.
17-MAR-2003 08:48		R01



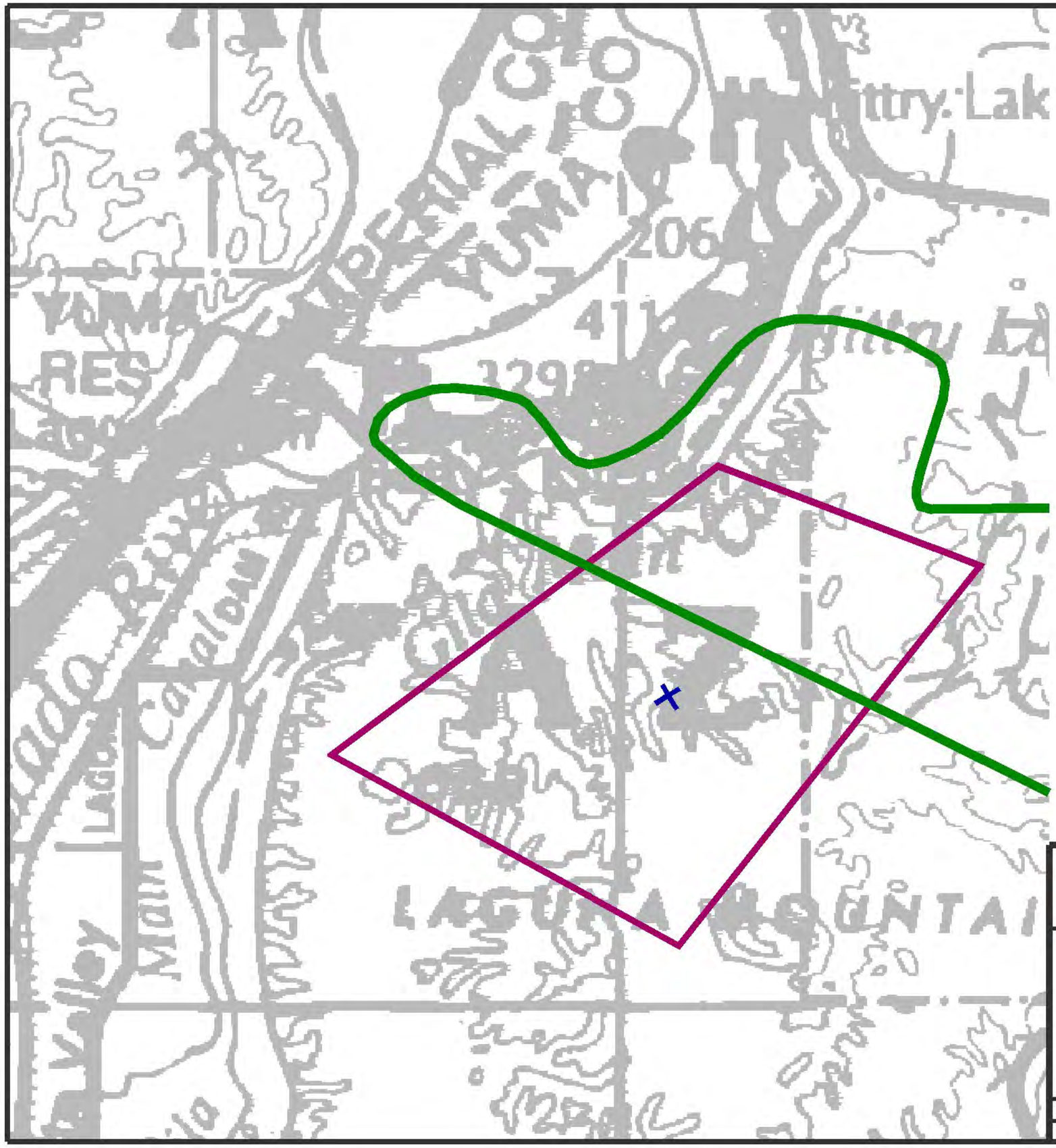
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA, AZ
FUDS PROJECT NO. J09AZ043911
CTT MAP

MARTINEZ LAKE IMPACT AREA

PROJ. DATE: 2001		PLATE NO.
17-MAR-2003 08:50		R02

at402_RangeRule#Laguna MA#AZ9T99F5126_CTT_MAP_27_20020923.dgn



LEGEND

UTM ZONE 11

UTM COORDINATES
X= 738303 E
Y= 3631921 N
(32°47'57")
(114°27'15")

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 3298 Ac

Part of Project 11OEW

N

0 4000 8000

APPROXIMATE SCALE IN FEET

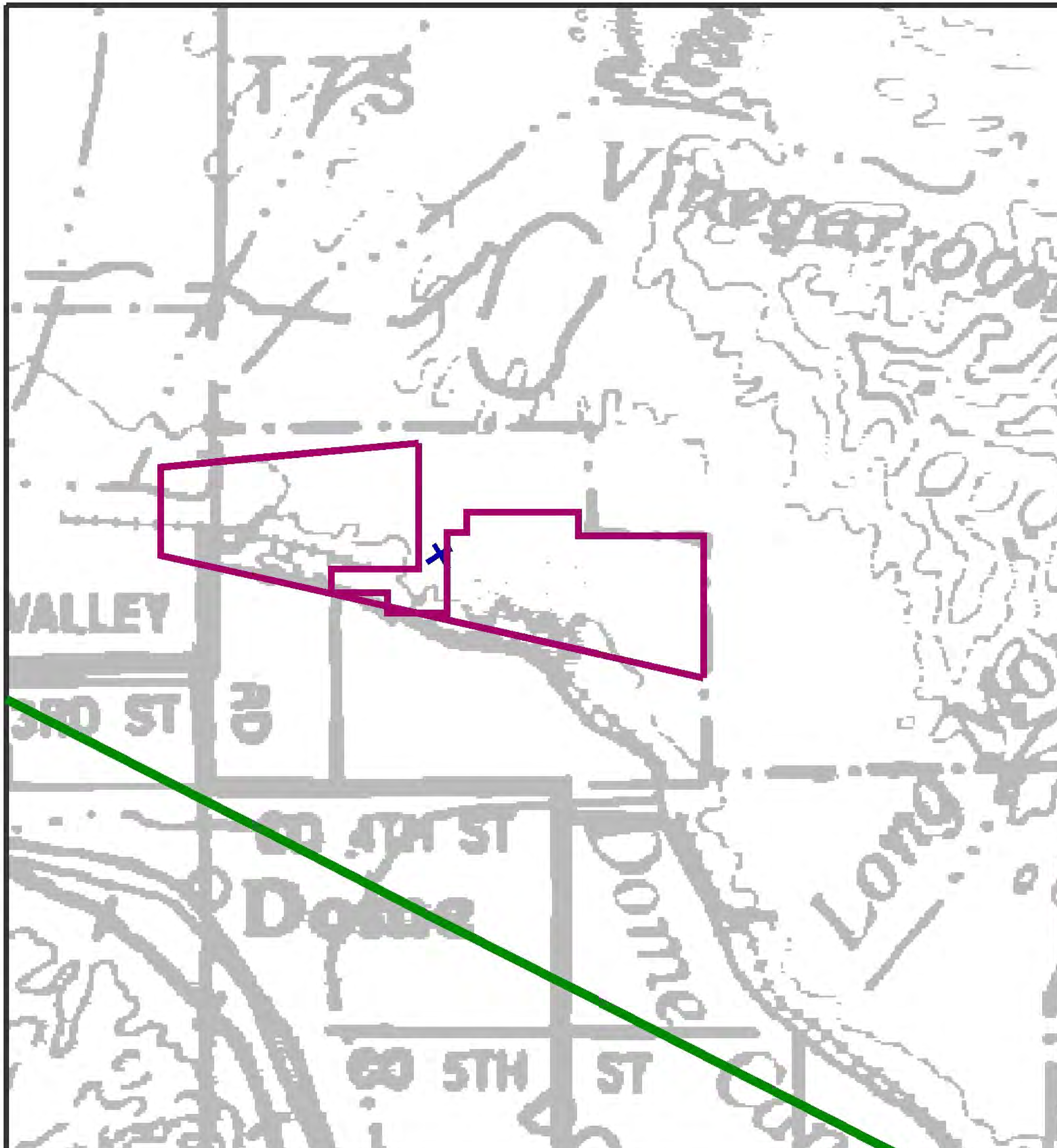
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA
FUDS PROJECT NO. J09AZ043911
CTT MAP

LAGUNA DAM IMPACT AREA

PROJ. DATE: 2001		PLATE NO. R03
17-MAR-2003 08:51		

e:\02_RangeRuins\Laguna NA\AZ9T99F5126_CTT_MAP_28_20020923.dgn



LEGEND

UTM ZONE 11

UTM COORDINATES
X= 749341 E
Y= 3630098 N
(32°46'49")
(114°20'13")

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE RANGE BOUNDARY
ACREAGE = 756 Ac

Part of Project 11OEW

N

0 3000 6000
APPROXIMATE SCALE IN FEET

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT

LAGUNA MANEUVER AREA
FUDS PROJECT NO. J09AZ043911
CTT MAP

MUGGINS HILLS IMPACT AREA

PROJ. DATE: 2001		PLATE NO.
17-MAR-2003 08:53		R04

at-R02_RangeRules-Laguna NA-AZ9T99F5126_CTT_MAP_29_20020923.dgn

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION
FOR THE *BLYTHE SOLAR*
POWER PLANT PROJECT

Docket No. 09-AFC-6

PROOF OF SERVICE
(Revised 5/3/10)

APPLICANT
Alice Harron
Senior Director of Project Development
1625 Shattuck Avenue, Suite 270
Berkeley, CA 94709-1161
harron@solarmillennium.com

Elizabeth Ingram, Associate Developer, Solar Millennium, LLC
1625 Shattuck Avenue
Berkeley, CA 94709
ingram@solarmillennium.com

Carl Lindner
AECOM Project Manager
1220 Avenida Acaso
Camarillo, CA 93012
carl.lindner@aecom.com

Ram Ambatipudi
Chevron Energy Solutions
150 E. Colorado Blvd., Ste. 360
Pasadena, CA 91105
rambatipudi@chevron.com

Co-COUNSEL
Scott Galati, Esq.
Galati/Blek, LLP
455 Capitol Mall, Suite 350
Sacramento, CA 95814
sgalati@gb-llp.com

Co-COUNSEL
Peter Weiner
Matthew Sanders
Paul, Hastings, Janofsky & Walker LLP
55 2nd Street, Suite 2400-3441
San Francisco, CA 94105
peterweiner@paulhastings.com
matthewsanders@paulhastings.com

INTERESTED AGENCIES
Calfornia ISO
e-recipient@caiso.com

Holly L. Roberts, Project Manager
Bureau of Land Management
Palm Springs-South Coast Field Office
1201 Bird Center Drive
Palm Springs, CA 92262 Office
CAPSSolarBlythe@blm.gov

INTERVENORS
* California Unions for Reliable Energy (CURE)
c/o: Tany A. Gulesserian,
Elizabeth Klebaner
Marc D. Joseph
Adams Broadwell Joseph & Cardozo
601 Gate Way Boulevard,
Suite 1000
South San Francisco, CA 94080
tgulesserian@adamsbroadwell.com
eklebaner@adamsbroadwell.com

ENERGY COMMISSION
KAREN DOUGLAS
Chairman and Presiding Member
kldougla@energy.state.ca.us

ROBERT WEISENMILLER
Commissioner and Associate Member
rweisenm@energy.state.ca.us

Raoul Renaud
Hearing Officer
rrenaud@energy.state.ca.us

Alan Solomon
Siting Project Manager
asolomon@energy.state.ca.us

Lisa DeCarlo
Staff Counsel
ldecarlo@energy.state.ca.us

Jennifer Jennings
Public Adviser's Office
publicadviser@energy.state.ca.us

*indicates change

DECLARATION OF SERVICE

I, Marie Mills, declare that on June 16, 2010, I served and filed copies of the attached **PALO VERDE SOLAR I, LLC's REBUTTAL TESTIMONY** dated June 16, 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:
[http://www.energy.ca.gov/sitingcases/solar_millennium_blythe]

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(***Check all that Apply***)

FOR SERVICE TO ALL OTHER PARTIES:

__X__ sent electronically to all email addresses on the Proof of Service list;

__X__ by personal delivery or by depositing in the United States mail at with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

__X__ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method***);

OR

____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 09-AFC-6
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

Marie Mills

AECOM

Richmond, Virginia
Environment
June 2010

Frederick H. Swahn, Jr., PG
Program Director

Education

BS, Geology, University of Maryland, College Park, 1983

Registrations

Professional Geologist, Tennessee, #TN2205, 1991

Years of Experience

27

Employment History

AECOM
Alion Science and Technology
Science Applications International Corporation
MWH Americas Inc
IT Corporation Inc
ICF Kaiser Engineers Inc
Parsons Engineering Science
US Army Toxic & Hazardous Materials Agency

Mr. Swahn is a program manager with 27 years of experience in environmental investigation, engineering, remediation, construction management, munitions response and compliance serving federal, DoD and private-sector clients. He has served as an operations manager for munitions investigations and site clearance, environmental remediation, demolition and destruction (D&D), and emergency response projects. Mr. Swahn has been a program manager for more than $150 million in DoD contracts IDIQ military munitions response (MMR) and hazardous, toxic and radioactive waste (HTRW) remediation contract task orders. He has performed the full complement of munitions response and environmental projects including: preliminary assessments, site investigations, RI/FS assessments, EE/CAs, closure plans and PP/ROD decision documents, remedial action planning and design, remedial construction, site closure, BRAC property transfer support, and military installation compliance activities. He has been successful in developing closure strategies, developing accurate cost-to-complete estimates, and communicating, negotiating and delivering the complete project cycle for environmental services.

Experience

USACE Alaska District, MEC RI, FUDS Tanaga Island, Alaska. As MMRP group leader, advised on-site project team performing the work in Alaska. The MEC remedial investigation (RI), conducted in parallel with an HTRW remedial investigation/feasibility study (RI/FS) of the site, assessed former live munitions ranges and defensive gun emplacements at this remote, former Naval auxiliary airfield. Field activities included identification of all MEC-related areas, geophysical mapping, intrusive investigation of anomalies, and energetic disposal of any remaining military munitions, as required. Thirty-two anti-aircraft gun emplacements, a rifle range, a rocket and bombing target, a landfill, and two munitions demolition areas have been identified and were investigated for MEC under the RI/FS. The project was recently awarded an FY2009 Secretary of the Army Environmental Award for Environmental Restoration – Team, as well as a 2009 4th Quarter Safety award from USACE Alaska District. In addition, AECOM received the 2009 Contractor of the Year Award from USACE Alaska District, based on our performance on this project.

ANG, Geophysical Anomaly Intrusive Investigation and Non Time Critical Removal Action at Combined Arms Collective Training Facilities and Urban Assault Course, Camp Ripley, Minnesota. Senior technical reviewer for After Action Report. Also managed

construction support activities for the Combined Arms Collective Training Facilities and Urban Assault Course building sites.

Solar Millennium, Solar Energy Plants Site Planning, Blythe and Palen, California. Project manager for an archival review, preparation of the unexploded ordnance section for the health and safety plan, PowerPoint presentation training sessions, and an on-site UXO briefing with team leaders and management cadre.

US Army Corps of Engineers - Huntsville District, CONUS/OCONUS Munitions Response, Multiple Locations. Division manager for $5.5 million in annual revenue with 15 to 25 employees.

DMPTR Site Clearance, Fort Bliss, Texas. Managed clearance activities for more than 150 acres to a depth of three and one half feet for the installation of new Digital Multiple-Purpose Training Range within the Dona Ana range complex, characterized as a high risk area containing unexploded 20mm, 37mm, and 40mm HE projectiles, 60mm HE mortars, and 60mm illumination. Clearance Work Plan approved by Fort Worth District and on-site clearance activities with two seven man clearance crews ongoing supported by digital geophysical mapping (DGM).

US Army Corps of Engineers - Baltimore District, FUDS MMRP Site Inspections, Northeastern United States. Managed 15 MMRP SIs at FUDS. Work tasks included technical project planning (TPP) outreach with various stakeholder such as current property owners, both private and public sector, multiple regulatory agencies, and all branched of the military; field sampling and data analysis from MEC reconnaissance and MC sampling activities; site characterization to determine whether each of the specific project sites identified warrant further response action or NDAI for MEC and MC, and preparation of final report documentation in accordance with DERP, CERCLA, and NCP, as well as state guidance and regulations.

Stationary Gunnery Range 1 Clearance, Fort Benning, Georgia. Managed task order to clear a portion of the historic range fan used for mortar, recoilless rocket, rocker launcher and tank guns. Work task included: preparation of an approved Type II work plan, coordination with range safety for access and work schedule on an active range, oversight of a seven-man UXO clearance team to clear five acres, on-site consolidated detonations, and final approval for grid clearance.

Oil Storage Terminal, Long-term Remedial Solution, Brooklyn, New York. Managed an $8.9 million life-cycle cost project for the investigation, immediate response/containment and installation of a containment system for petroleum product seeping into a barge canal, implementation of an interim product collection system to capture petroleum before it seeps into the canal, and a long-term solution preventing additional seepage of product. Managed design and installation of a petroleum seep containment system on the surface of the barge canal adjoining the property; configuration and implementation of an immediate product recovery system for wells located along the canal; the investigation and delineation of the free

phase petroleum product floating on the surface of the groundwater (upwards of six-feet thick), and the design, installation/construction and operation of a contaminated groundwater and product recovery system to operate for upwards of 10 years.

US Army Corps of Engineers - Baltimore District, TERC Program, Multiple Sites. Program manager for a $150 million 10-year contract. Managed the cleanup of more than 25 indoor rifle ranges located at Army Guard armories across Pennsylvania.

US Air National Guard Bureau, Environmental Remediation Contract, Nationwide. Program manager for 15 to 20 performance-based competitively awarded task orders valued at $2.5 million to $5 million annual revenue with performance goals. Managed remedial systems operations at sites on the ANG portion of the former Pease AFB and 52 delivery orders valued at over $7.5 million in awards through the first two years of the contract. Additional nationwide project task orders range in scope from RI/FS/PP/ROD, ecological/biological/cultural surveys, environmental baseline assessments, and remedial design to UST/AST removal and installation, in-situ/ex-situ remediation, environmental construction upgrades to noncompliant operations, and site closure.

US Postal Service, Brentwood Postal Facility Anthrax Cleanup, Washington, DC. On-site manager for a $120 million task order. Prepared scope, schedule, and budget submissions and assisted with the management of the design and construction of a chlorine dioxide (ClO2) gas fumigation system to decontaminate an 800,000-square foot mail sorting building. Ensured strict compliance to safety, quality, and government contracting standards for the successful performance of this twelve-month emergency response project. Prepared written containment plan and preliminary decontamination procedures documented to meet environmental management system (EMS) format. Prepared and submitted applications for air permits, wastewater discharge permits, and bio-hazardous waste handling and temporary storage permits receiving approval from DC Health Department. Additionally prepared future threat and vulnerability assessment analysis reports using site investigation data and contaminant migration information and prepared the initial draft of a continuity of operations plan for the Postal Service's mail handling facility.

US Army Corps of Engineers - Baltimore District, TERC Program, Picatinny Arsenal New Jersey. Managed 11 task orders with a total contracted value of $48 million to facilitate closure of 187 IRP sites. Managed a staff of 35, including seven project managers, performing as many as 15 RI/FS, RD, and RA simultaneously. Implemented cost control measures, including daily cost tracking for large field remedial construction projects and provided weekly and monthly variance and earned value analysis based on a pre-approved project tracking matrix schedule. Partnered with Picatinny Arsenal environmental restoration program staff, USACE Baltimore and Omaha Districts, US Army Environmental Center, USEPA Region II, New Jersey DEP, and US Fish and Wildlife to ensure effective execution of project performance

with a focus on site closure.

Open Detonation/Burning Ground Groundwater Monitoring Program, Picatinny Arsenal New Jersey. Technical manager for update of the RCRA Sub-part X permit. Managed the expedited planning, installation, and reporting to comply with expanded permit requirements leading to NJDEP granting interim approval for Subpart X of the installation-wide RCRA permit.

Army Engineer Corps, Environmental Compliance and Engineering Services Support, Mid-Atlantic. Program manager for a $30 million A/E services ESPS contract. Directed six project managers working on $26.5 million of task order scopes at four installations. Served as the single POC for coordinating and communicating program progress and resolving program issues with the client. Established and implemented program-level quality control and administrative procedures. Developed project delivery approaches, schedules, and cost estimates, including negotiating additional work under client-authorized modifications.

Colonie FUSRAP Site, Albany, New York. Project manager responsible for preparation of the initial draft EE/CA for the removal and disposal of lead and radioactive contaminated soils, site-wide groundwater RI/FS, and preparation of the final soil remediation closure plan and record of decision for site closure.

US Army Environmental Command, TEPS Contract - HTRW Environmental Work, Picatinny Arsenal, New Jersey. Project manager for more than $12 million of cleanup work. Worked closely with AEC counterparts to provide high quality cost-effective support to the Arsenal's IRP staff. Work orders included the preliminary assessment of 187 IRP sites under CERCLA. Performed PA/SIs and initial RIs for most of these sites, and started preparation of closure decision documents where site required no-further-action (NFA). Investigations included assessing and clearing six radioactive contaminated buildings. The site-wide soil sampling program incorporated extensive on-site screening for contaminate assessment that reduced off-site analytical costs by more than $2 million, based on the collection and on-site analysis of more than 6000 soil and sediment samples. Based on these preliminary assessments, sites were grouped by potential future environmental path forward ranging from no further action, limited action with institutional controls, and full scale RD/RA. Supervised technical quality and financial management for more than 150,000 hours of work and more than $4 million of subcontractor and ODC costs to ensure work assignments were completed on schedule and within budget.

Underground Storage Tank Investigation and Upgrade/Regulatory Compliance Task Order, Fort Carson, Colorado. Project manager for $2.4 million USATHAMA investigation of 70 UST sites, focusing on 24 discrete areas. Two UST areas contained storage of hazardous waste solvent and the remaining 22 UST areas stored contained petroleum products (POL). Innovative use of EM and soil gas surveys as quick screening tools to identify areas of concern. These rapid preliminary screening techniques allowed investigation team to quickly

focus on leaking USTs, saving the client time and funding. UST removal plans were developed and implemented for 15 sites, requiring the removal and closure of 42 USTs.

US Army, Defense Distribution Region East RI/FS, New Cumberland Army Depot, Pennsylvania. Delineated off-post groundwater contamination resulting from historic army aircraft maintenance and plating operations. Study results were presented to the local residential community. Extensive partnering with the local community, PADER, and USEPA Region II allowed for the efficient design of an off-post groundwater recovery system, approved by local residents bordering the installation. Prepared the final ROD for the site, 3 months ahead of schedule to accommodate DDRE warehouse building construction schedule.

US Department of Energy, Feed Materials Production Center Environmental Restoration, Fernald, Ohio. Managed detailed document review for technical quality, regulatory compliance, and ability of implementation for all RI/FS and decision documents prepared under the consent agreement. Documents included RI reports; baseline risk assessments; initial screening of remedial action alternatives reports; detailed feasibility studies; proposed plans for additional field investigations to fill RI data gaps; remedial design work plans; and remedial action work plans.

US Army Corps of Engineers - Baltimore District, TERC Program, Assistant Program manager for a $330 million 10-year CPFF and CPAF contract with 35 to 40 active task orders.

Washington Metropolitan Area Transit Authority, Wastewater/Stormwater Pretreatment Assessments, Washington, DC. Managed the design and implementation for five bus garage and maintenance facilities. Assessed potential cross connection of discharge lines and the need to upgrade or redesign existing in-line pretreatment systems. Managed field sampling activities, dye trace studies, testing, analyses, and oversight of in-line camera and smoke testing by subcontractors. The results of the study identified several cross connections of wastewater being discharged to storm water lines and design deficiencies to the existing oil/water separators. Prepared and implemented cross connection repair plans and separator upgrade designs.

Lone Pine Landfill Superfund Site, New Jersey. Technical specialist supporting the evaluation of a proposed detailed design (aquifer restoration through groundwater extraction) for the 50-acre site. Reviewed background hydrogeologic data and evaluated the effectiveness of the proposed well field extraction alternative to ensure hydraulic containment of wastes and contaminated groundwater directly beneath the landfill. Performed field sampling activities, subsurface investigations, and design of dewatering trench drain.

Radford Army Ammunition Plant, Virginia. Assisted with the development of a detailed design package and bid specifications for the closure of three hazardous waste lagoons and one solid (hazardous) waste landfill. Conducted a bench-scale study for lagoon

sludge stabilization, hydrogeologic assessment, closure design support, and preparation of the construction estimate. Provided on-site construction oversight services to ensure compliance to design specifications.

US Army Toxic & Hazardous Materials Agency, Contaminant Transport Modeling, Twin Cities Army Ammunition Plant, Minnesota. Managed two consultants performing contaminant transport modeling of the shallow and deep groundwater aquifer system beneath the ammunition plant and surrounding downgradient community. Evaluated potential contribution of groundwater contamination to a Superfund site located near the army installation. Recommended groundwater extraction and treatment system using boundary wells to prevent further off-site migration of contaminants.

US Army Toxic & Hazardous Materials Agency, O-Line Ponds, Milan Army Ammunition Plant, Tennessee. Performed landfill cap design studies to assess leaching of explosives contaminated surface water infiltration from the ponds. Conducted surface water infiltration modeling for the clay cover. Results showed clay soils from a nearby source located on the installation could be used as cover material; a significant cost savings to the Army.