

REQUEST FOR PROPOSAL

FOR

**NEW MEXICO STATE UNIVERSITY
SOLAR AND ENERGY STORAGE PROJECT**

EL PASO ELECTRIC COMPANY

P.O. Box 982
El Paso, Texas 79960

ISSUE DATE: December 10, 2018



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1.0 INTRODUCTION

El Paso Electric Company (“EPE” or the “Company”) is soliciting a turnkey proposal for the engineering, procurement and construction (“EPC”) of a microgrid ready, utility-scale solar energy generating facility to include an AC-coupled Energy Storage System (“ESS”) option, collectively, the (“Project”). EPE is open to consider all ESS technologies proposed. The Project is to be built on land provided by New Mexico State University (“NMSU”), the location of which is shown in attachment 8.3.

The proposal from Bidders responding to this RFP is for EPE’s ownership of the Project identified in this document. Bidders shall submit a proposal for EPE’s purchase of the Project. The Project proposed can be the solar facility only, ESS only, or both solar facility and ESS. EPE is expecting four types of proposals with the ratings below. Bidders can submit more than one proposal.

- 2 MW_{AC} Solar
- 3 MW_{AC} Solar
- 1 MW/2 MWh ESS
- 1 MW/4 MWh ESS

The objective of the Project is to supply a portion of NMSU’s electric utility load with renewable energy and storage as well as to provide NMSU’s students and faculty with a learning laboratory for educational and research purposes. EPE desires to increase the amount of renewable energy on its system while at the same time gaining further experience with operating and maintaining solar and energy storage technologies.

EPE will evaluate proposals taking into consideration overall Project cost and Bidder experience. EPE also requires that the proposal utilize local distributors and contractors where possible and requires that the Bidder provide details on how it will accomplish this requirement.

1.1 Purpose

EPE seeks a proposal (“Proposal”) for the complete design, procurement of all material and equipment, construction and startup of the Project, which will be located in Las Cruces, New Mexico. The Project should target maximum energy output and minimum levelized cost of energy. The Project will be owned by EPE and EPE intends to take advantage of the price benefit provided by any applicable tax credits effective at the end of 2020. The ESS must be charged by the solar photovoltaic (“PV”) facility 100% of the time on an annual basis to claim the full value of the Federal Investment Tax Credit. The Project must be on-line and

generating electricity as stated in RFP Schedule. EPE will take into consideration the overall cost of the Project, Bidder's experience (including megawatts of financed projects), partnerships with financial entities and Bidder's use of local distributors/manufacturers and contractors.

Eligibility of Sites

For the purpose of this solicitation, EPE will NOT consider any proposal for the Project to be developed on a site different than the site provided by EPE.

1.2 Communications

All communications from Bidders to EPE, including questions regarding this RFP, must be submitted via email. Based upon the nature and frequency of the questions EPE receives, EPE will choose to respond to Bidders either directly or address the question through a conference call.

All submittals, inquiries, and communications related to this RFP should be directed solely to the following EPE point of contact:

Julie Bañuelos
Contract Negotiator
P.O. Box 982
El Paso, Texas 79960
Fax: (915) 543-2209
E-mail: julie.banuelos@epelectric.com
And E-mail: scm@epelectric.com

All communications between Bidder and EPE shall be conducted via email. Oral communications are discouraged and shall not be binding upon EPE.

1.3 Confidentiality of Responses

EPE will consider proposals and associated information submitted by Bidders to be confidential. It is the Bidders' responsibility to clearly indicate in its proposal what information it deems to be confidential. Bidders may not mark an entire proposal as confidential, but instead must mark specific information on individual pages to be confidential in order to receive confidential treatment. Except as required by regulatory reviews, EPE will use reasonable efforts to avoid disclosure of information designated as confidential to persons other than those involved with the evaluation, selection and any subsequent negotiations. To the extent that Bidders receive information from EPE, Bidders shall maintain the confidentiality of such information and such information shall not be available to

any entity before, during or after this RFP process unless required by law or regulatory order.

Bidders should be aware that information received in response to this RFP will be subject to the review of applicable local, state and/or federal regulatory agencies, specifically including, but not limited to, the New Mexico Public Regulation Commission (“NMPRC”) and Public Utilities Commission of Texas (“PUCT”). All Bidders shall cooperate with EPE in making technological descriptions, pricing and other contract terms available for review as part of any regulatory approval process as EPE deems necessary or appropriate. EPE will follow applicable orders and rules of the NMPRC, PUCT and/or other applicable agency, including any protective orders issued, such as disclosure of price, terms or other information as required; therefore, EPE cannot promise that information marked as confidential will not be publicly disclosed, and, as such, EPE cannot be held liable for any information that is ordered to be released or that is inadvertently released.

Moreover, information submitted in response to this RFP may become subject to federal or state laws pertaining to public access to information as a result of any reviews conducted by the aforementioned agencies. EPE shall not be liable for the release of any information subject to disclosure under any laws pertaining to public access to information.

2.0 EL PASO ELECTRIC COMPANY SYSTEM DESCRIPTION

2.1 Company Overview

EPE is a public utility engaged in the generation, transmission and distribution of electricity in an area of approximately 10,000 square miles in the Rio Grande Valley in west Texas and south central New Mexico as illustrated in Figure 1. EPE serves approximately 421,000 residential, commercial, industrial and wholesale customers. EPE distributes electricity to retail customers principally in El Paso, Texas, and Las Cruces, New Mexico, utilizing remote and local generating stations.

2.2 Existing Generation Resources

As of 2017, EPE owns approximately 2,084 MW of net installed capacity. EPE owns 633 MW of generating capacity at the Palo Verde Nuclear Generating Station. Of EPE’s net total installed capacity, EPE owns 1,443 MW of local natural gas fired generating resources which include 64 MW at its Copper Generating Station, 275 MW at its Rio Grande Generating Station, 752 MW at its Newman Generating Station and 352 MW at Montana Power Station. EPE also receives a

total of approximately 115 MW of solar capacity from several solar projects located in its service territory.

2.3 El Paso Electric Property



Figure 1 - EPE Service Territory and Electric System

3.0 ELIGIBLE PROJECT INFORMATION

3.1 Eligible Project Structures

EPE will own the Project contracted through this solicitation process. EPE is interested in selecting the project that meets all stated requirements and provides the best value for EPE to include bidder experience in building similar types of utility-scale facilities, quality of major equipment and lowest total cost over the life of the facility for the expected energy output.

3.2 Eligible Generation Resources

Technology Requirements: The Project must utilize proven reliable forms of solar PV and energy storage technologies. For PV submittals, the facility must utilize either crystalline or thin-film solar PV technology in a single axis tracking configuration. For energy storage submittals, EPE is open to consider any proven reliable technology that meets the Project requirements. EPE is interested in peak shaving, solar shifting and curve smoothing. All major equipment and components must be tier-one rated. In order to be considered, the type of technology and key components proposed must have a minimum of twelve (12) months of established production and use at a single plant location at a scale greater than or equal to the capacity of the facility to be built.

EPE will consider the proposal for the facility to be located at the Project site described in this RFP at Design Point Conditions (DPC) as specified by EPE in Appendix 8.4 applicable to the facility. The solar net capacity must represent the expected capacity during the first year of operation, less any losses once the energy is delivered to the facility meter on the project site. The DPC shall be 1000w/m² and 65° Celsius module cell temperature. The ESS shall be metered separately, coupled with the solar facility and demonstrate its intended use at the point of interconnection, e.g. peak shaving, solar shifting, curve shifting. Bidders should also identify the expected annual degradation factors.

3.3 Project Site

The Project site is described in attachments 8.3 and 8.4. Details will be provided by EPE, subject to any executed land easement and/or lease between EPE and the entity with site control, if applicable. Bidder will have access to applicable land agreement terms and will be expected to comply with the terms of such agreements. The proposal shall be predicated on the use of the specified project site. The enclosed survey in attachment 8.4 shows the approximate acreage designated for the development of the Project (AREA 3 = 29.89 ACRES). Bidder is responsible for complying with all of the following items:

- Project Requirements and Technical Specifications (attachment 8.5)
- NMSU's Storm Water Management Program (attachment 8.6)
- Environmental Assessment, Interstate 10/Interstate 25, Interchange Improvements (attachment 8.7)
- Applicable zoning and code compliance requirements
- Lease and sublease agreements (to be provided to shortlist bidders)

The selected bidder will be responsible to produce and submit the following documents to the Company and Authorities Having Jurisdiction (AHJ) as necessary:

- ALTA site survey
- Storm Water Pollution Prevention Plan (SWPPP)
- Geotechnical report
- Project drawings
- Final certificate of inspection from AHJ

4.0 BIDDER TERMS

4.1 Pricing

- a. Proposal shall include all costs necessary to deliver capacity and energy from the facility to the point of interconnection, but not limited to, construction of the facility in accordance with the negotiated EPC agreement. Bidders are allowed to submit more than one proposal; however, pricing shall be kept separate. All proposal terms, conditions and pricing are binding through the final selection notification and subsequent negotiations, as well as regulatory approvals.
- b. By submitting a proposal, Bidder agrees to make available to the Company at any point in the bid evaluation process any financial data associated with the Bidder and its proposed project so that the Company may independently verify the Bidder submitted information. Financial data may include, but shall not be limited to, data supporting the economic life of the facility, the fair market value of the facility, and any and all other costs (including debt specific to the asset being proposed) associated with the Bidder's proposal. The Company may also use financial data contained in the Bidder's financial statements (e.g. income statements, balance sheets, etc.) as necessary.

5.0 RFP SCHEDULE

The following schedule and deadlines apply to this solicitation:

RFP Issuance Date	December 10, 2018
Notice of Intent to Bid Due Date	December 17, 2018
Pre-Bid Meeting and Site Visit Date	January 8, 2019
Final Submission of Questions Date	January 14, 2019
Proposal Due Date	February 5, 2019
Shortlisted Bidders Notification Date	February 12, 2019
Best and Final Proposals Due Date	February 20, 2019
EPE Selection of Project Tentative Date	February 28, 2019
Contract Negotiations and Execution of EPC Agreements Tentative Date	April 5, 2019
Target Commercial Operation Date	January 30, 2020

EPE reserves the right to modify, cancel or withdraw this RFP and to revise the schedule specified above if, at EPE's sole discretion, such changes are necessary. To the extent reasonably possible, EPE will inform Bidder of any schedule change.

5.1 RFP Issuance

EPE will post its New Mexico State University Solar RFP in EPE's website (<https://www.epelectric.com/doing-business-with-epe>) on the RFP issuance date.

Bidders who intend to bid must confirm receipt of the RFP invitation via e-mail to EPE's point of contact, Julie Bañuelos at the following email addresses:

Julie.banuelos@epelectric.com
scm@epelectric.com

5.2 Notice of Intent to Bid

Bidders must submit a Notice of Intent to Bid, included as Attachment 8.1, by 5:00 pm Mountain Time (MT) on December 17, 2018. The Notice of Intent to Bid may be submitted via email or facsimile to Julie Bañuelos at julie.banuelos@epelectric.com and scm@epelectric.com or (915) 543-4073. Failure to submit a Notice of Intent to Bid will result in exclusion from participation in the bidding process.

It is the sole responsibility of the Bidder to ascertain that the Notice of Intent to Bid is received by EPE prior to the date and time specified.

Receipt of the Notice of Intent to Bid will be confirmed via e-mail response from EPE to the Bidder.

5.3 Final Submission of Bidder Questions

All questions related to the RFP must be submitted by January 14, 2019, via email to the following EPE representative to ensure a response prior to the proposal due date.

Julie Bañuelos
Contract Negotiator
100 North Stanton Street
El Paso, Texas 79901
Fax: (915) 543-4073
E-mail: julie.banuelos@epelectric.com

EPE will prepare responses to questions received and distribute the questions and responses to Bidders that filed a timely Notice of Intent to Bid. Responses will be distributed to such Bidders with the question included but will not identify who originally submitted the question. Any questions related to the RFP must be submitted in writing via email.

5.4 Proposal Due Date

Proposal must be received at EPE's offices to the attention of Julie Bañuelos, Contract Negotiator, 100 North Stanton Street, Location #121, EL Paso, Texas 79901 or by e-mail: julie.banuelos@epelectric.com by 5:00 pm Mountain Time (MT) on February 5, 2019. Any proposal submitted after the due date will be excluded from consideration. The proposal should be as complete as possible.

Two hard copies of the proposal must be submitted. In addition, a soft copy of the proposal must be submitted on a USB. Facsimile submittals shall be excluded from consideration.

Bidder is solely responsible for ensuring the proposal is received by EPE in accordance with the RFP instructions prior to the date and time specified, and at the place specified. EPE shall not be responsible for any delays in mail, or by common carriers, by transmitting errors, delays or mislabeling.

5.5 Tentative Date for Selection of Project

Following a review of technical, economic and potential environmental factors, EPE will make a determination if the project best meets its objectives and may initiate negotiations with Bidder. EPE intends to select a project and notify selected bidder by February 28, 2019.

5.6 Tentative Date for Contract Discussions

Should EPE choose to initiate negotiations with Bidder, the tentative date for commencement of contract negotiations with the Bidder is March 8, 2019. Any contract between EPE and Bidder will be conditioned upon approval by EPE's board of directors and prior regulatory approval by the NMPRC. EPE, at its sole discretion, reserves the right to reject any proposed contract(s) that result from this RFP for any reason including if subsequently issued regulatory approvals or authorizations are subject to conditions, including ratemaking treatments, which are unacceptable to EPE.

5.7 Proposal Validity

Bidder must hold its proposal open and valid for a period of two hundred forty (240) days following the submittal and during the time necessary to complete state regulatory approvals.

5.8 Proposal Information Requirements

Flexibility is afforded to Bidder regarding the facility's characteristics, as may be necessary to meet the requirements of the RFP. The proposal for the Project whose production bid amounts would exceed EPE's required AC capacity will not be considered.

The proposal must also provide an available energy profile (MWh or kWh) on an hourly basis for an average day in each month using the template provided by

EPE as Attachment 8.8. EPE reserves the right to request additional information from the Bidder regarding limitations or any other details related to the proposal.

EPE is responsible for obtaining any required NMPRC approvals, but Bidder agrees to provide necessary information and cooperation to facilitate such approval. Bidder is responsible for acquiring and maintaining all applicable present and future federal, state and local approvals, licenses, permits or variances, and meeting specific requirements to construct and/or operate any generation facility and any associated interconnection facilities.

Bidder must provide a specific cost forecast for ongoing operations and maintenance ("O&M"). An O&M manual must be provided to EPE that details the maintenance schedule and cycle for the solar and the ESS components. EPE is also interested in receiving a proposal that includes ongoing O&M performed by Bidder or a third-party contractor under an O&M contract. Bidder should specify contract terms and operating cost guarantees for this option.

5.9 Interconnection Requirements

A meeting will be scheduled with the selected Bidder to discuss the interconnection requirements and associated costs.

The facility must deliver capacity and energy by directly interconnecting to the specified location.

For interconnection inquiries relating to this RFP, Bidder must pose questions via email or facsimile to EPE's point of contact:

Julie Bañuelos
Contract Negotiator
Fax: (915) 543-4073
E-mail: julie.banuelos@epelectric.com

6.0 SUBMITTAL PREPARATION INSTRUCTIONS

6.1 General Information

a. Currency

Prices and dollar figures must be clearly stated in nominal United States Dollars.

b. Schedule

Proposal shall be submitted in strict accordance with the RFP schedule.

c. Extensions

EPE will not grant any extensions to the RFP schedule and will not accept a late proposal. Any proposal received after the Proposal Due Date will not be considered and the Bidder will be notified of its elimination.

d. Reservation of Rights

EPE reserves the right to accept or reject, at its sole discretion, any proposal for any reason at any time after submittal. EPE also reserves the right to select an offer that is not the lowest price, if EPE determines that to do so would result in the best value to EPE's customers.

e. Failure to Comply

Failure to comply with all requirements of this RFP may result in the rejection of the applicable proposal at EPE's sole discretion.

f. No Liability

Bidders that submit a proposal do so without legal recourse against EPE or its directors, management, employees, agents, contractors or independent monitor based on EPE's rejection of any proposal or for failure to execute any agreement. EPE shall not be liable to Bidder or to any other party in law or equity, for any reason whatsoever relating to EPE's acts or omissions arising out of or in connection with this RFP. EPE further declares that it will incur no financial liability or obligation for Bidder's costs in preparing proposals.

g. Return of Documents

None of the materials received by EPE from Bidder in response to this RFP will be returned. Proposal and exhibits will become the property of EPE, subject to the provisions for confidentiality described in this document.

6.2 Proposal Content

The proposal must be prepared in accordance with the guidelines set forth in this section. Failure to follow the preparation instructions may result in the exclusion of the proposal from consideration. EPE reserves the right to conduct any further due diligence it considers necessary to fully understand and evaluate the proposal.

The proposal should be organized by section as described below. Each page of the proposal shall have the following information in top right corner.

- 2019 New Mexico State University Solar Project RFP
- Bidder Name

All of the following sections shall be completed or identified as “Not Applicable”.

A complete proposal will include a thorough written discussion about the project, assembled in the following format:

- Tab 1 - Executive Summary
- Tab 2 - Project Description and Technical Information
- Tab 3 - Project Costs
- Tab 4 - Experience and Qualifications
- Tab 5 - Distribution and Interconnection
- Tab 6 - Company Financial Information

Tab 1 - Executive Summary

The Executive Summary should provide an overall description of the proposal. The description should include details about the type of solar and/or ESS technologies proposed and key benefits to EPE. At a minimum, the summary should specify the technology, size of project, first year energy output, project costs and an explanation of how and to what extent the Bidder intends to use local distributors/manufacturers and contractors, where possible, to construct the facility.

Tab 2 - Project Description and Technical Information

The proposal must include a thorough description of the project including, but not limited to, the following:

Project Description

The proposal must provide a comprehensive description of the project, including project name, location, nameplate ratings, accredited capacity, in-service date, equipment and configuration, permitting, interconnection plan, milestones, meteorological studies/performance simulation data and any other pertinent information.

Project Team

The proposal must provide the project team information which includes an organizational structure describing members’ titles and functions in the organization as well as their responsibilities in the project e.g. engineering, project management, construction management, commissioning, procurement. Provide copies of the project team resumes and list relevant licenses, industry certifications, and experience in projects completed.

Equipment Description

At a minimum, the proposal should indicate for all major equipment the: (1) manufacturer; (2) model name and number; (3) key metrics and characteristics of the equipment; (4) performance history of the equipment; (5) terms of product, workmanship, performance and any other warranties and/or guarantees; (6) contracting status; and, (7) availability of equipment and planned delivery dates. Bidder should highlight any smart inverter features that add operational and resilience value to the project.

The following technical information should be discussed in this section, as applicable for the project proposed:

- Equipment data sheets,
- Major equipment manufacturers' point of contact,
- Description of technology and configuration,
- Summary of the commercial operating experience of major equipment,
- Solar/ESS layout and characteristics,
- Levels of efficiency,
- Solar DC and AC ratings,
- ESS DC and AC ratings, charge/discharge ratings,
- Annual degradation rate, ESS life cycle,
- Performance guarantees and warranties,
- Communications, controls, instrumentation, and protection devices,
- Facility limitations that may constrain operation,
- Hourly solar energy profile spreadsheet (attachment 8.8),
- Installation period,
- Quality assurance plans,
- Start-up standard testing,
- Factory and performance tests,
- Details of scheduled maintenance activities for major equipment, and
- Any other information that could impact the cost, construction schedule or output capability of the project.

Project Schedule

The proposal must provide a detailed schedule of project development activities and target completion dates for financing, engineering, permitting, equipment procurement, construction, startup and commissioning. Bidder should also describe the overall development strategy and work plan that will ensure that the project can be developed in time to meet the proposed commercial operation date.

Bidder must provide a high-level project development and completion schedule along with key milestone dates for the submitted proposal.

Risk Management and Insurance Program

Bidder shall provide a list of existing insurance contracts, listing policies by coverage, expiration date, insurer and limits per policy. Also, on a per coverage basis, provide current experience modifier and prior Loss History for the last three (3) years. Bidder shall also describe their Risk Management program if insurance coverage will derive from a parent company. Additional information may be requested based on information provided with the original proposal.

Operations and Maintenance (“O&M”) Plan

Bidder shall describe the operations and maintenance plans or services for the generation facilities associated with their proposal. Bidder should discuss the current or expected O&M plan, including staffing, budget, management and control over any facility, authority over the O&M budget and guarantees on O&M costs. Additionally, Bidder should provide a description of the basic philosophy for performing O&M and include a discussion of contracting for outside services if applicable. Bidder is required to submit the cost of a three-year O&M service plan with the option to extend.

Permitting Status

Proposal must describe all federal, state and local permits that will be required for the project and state whether any permits have been secured, and if not, whether applications have been filed. Proposal must report on the status of any pending applications and any feedback from permitting agencies and describe the expected time frame to obtain the necessary permits after application submittal to agencies.

Regulatory and Environmental Compliance

Bidder is exclusively responsible for meeting all required federal, state and local permits, licenses, approvals and/or variances, current or future. Bidder is required to demonstrate that all required permits have been attained or provide a specific timeline for future permit approval.

Provide information on the following as applicable:

- Regulatory permits,
- Environmental Clearance for sensitive resources (such as cultural, protected species, etc.), and
- Other applicable permits.

Tab 3 -Project Cost

The proposal must clearly state the all-in turnkey installed project cost minus any interconnection costs. Bidder must provide a breakout of the costs such as modules, inverters, tracking system, transformers, ESS, balance of plant, installation labor, engineering, credit support, etc. Bidder must offer project

costs valid for at least two hundred forty (240) days following the proposal due date and during the time required for EPE to obtain NMPRC approval.

Tab 4 – Experience and Qualifications

The capability and experience of Bidder must be demonstrated to provide assurance that the Bidder, and any other party involved in the proposal, has adequate competence, resources and skill. Each proposal must include the following information as a minimum.

- Description of technical experience, specifically with respect to solar and energy storage facilities similar to those proposed and collaboration efforts with electric utilities, if any;
- Description of operations and maintenance experience including megawatts monitored and maintained, years providing O&M services, experience with different types of solar PV and ESS technologies and number of team members dedicated to O&M services;
- Description of completed projects, total megawatts installed and customers with a specific identification of projects on which the Bidder has served as an EPC contractor or similar role;
- Years in business;
- Description of financial backing;
- Description of major components directly manufactured by bidder and those that will be procured from another company;
- Description of licenses applicable at project location; and
- References for similar projects.

Tab 5 – Transmission, Distribution and Interconnection

EPE will identify the interconnection points.

Tab 6 – Financial Information

The financial viability of any proposal must be demonstrated to provide assurance that the Bidder, and any other party involved in the proposal, has adequate financial capability. Each proposal must include the following information at a minimum:

- Most recent financial report for the Bidder and any other parties involved, or most recent copy of certified public accountant (“CPA”) audited (or Reviewed) income statement, balance sheet and cash flow statement;
- Provide Annual reports for the three most recent fiscal years that include CPA audited (or Reviewed) financial statements or CPA audited (or Reviewed) consolidated income statement and balance sheet for the three most recent fiscal years;

- Investment rating of Bidder or its parent company by Moody's and/or Standard & Poor's as applicable;
- Description of any current credit issues raised by rating agencies, banks, or accounting firms;
- Partnerships within the financial community;
- Description of construction financing for the project, include any financing commitments and available lines of credit;
- Megawatts of past financed projects; and
- Financial guarantees from affiliates or others, as appropriate;

EPE may request points of contact for financing partners/institutions and manufacturers providing lines of credit, a list of all lawsuits, regulatory proceedings or arbitration in which the Bidder or its affiliates or predecessors have been or are engaged in that could affect Bidder's performance of its bid. Bidders should identify the parties involved in such lawsuits, proceedings or arbitration, and the final resolution or present status of such matters.

7.0 EVALUATION PROCESS

EPE will assess the proposal, pursuant to the requirements of the RFP and the evaluation criteria developed by EPE. EPE will evaluate the bid based on all-in turnkey installed cost, overall cost per MWh and life cycle cost on a net present value basis, utilization of local inputs and other relevant factors. The assessment will consider economic and technical factors.

Proposal Review

EPE will use both quantitative and qualitative criteria to evaluate the proposal. EPE will first determine if the proposal satisfies the threshold requirements summarized below. If at any time during the evaluation process, EPE determines that the proposal does not meet its requirements, including timely submission of all documents pursuant to this RFP, such proposal will no longer be considered for this RFP and EPE will notify the Bidder accordingly during its notification process.

Favorable proposal characteristics include:

- Project – EPE seeks a project utilizing established solar and energy storage technologies;
- Low Cost – EPE seeks a proposal that will provide low-cost energy;
- High Efficiency and Performance – the proposal should provide high efficiency and performance and will provide additional value to EPE;
- Completeness and Responsiveness – The proposals must meet all criteria set forth in the RFP and include a thorough explanation of all aspects of

the proposal should be included and provide Detailed Project Engineering should be provided;

- Financial Viability and Creditworthiness – Success of the project relies on the financial capabilities of all parties involved; Bidder should have a proven financial track record and be able to provide documentation that demonstrates access to financial resources required to complete the project;
- Experience – EPE seeks a proposal from Bidder that possess extensive engineering, construction, technical, operating and maintenance experience, and a history of successful projects of a similar nature; and
- Compliance with New Mexico and federal regulations.

Threshold Evaluation

Step 1 – Bid Eligibility Determination

The proposal will be reviewed to determine if it meets the requirements outlined in this RFP.

The Company reserves the right to reject any proposal received for failure to meet any criteria set forth in this RFP. The proposal must be submitted on time and comply with the submission instructions. The corresponding application fee must be submitted as instructed

Step 2 – Initial Bid Screening Process

The Company will calculate the levelized cost in U.S. Dollars per megawatt hour (“\$/MWh”) for each bid based on information provided in the proposal. Bidder is advised that total life cycle cost will be a major factor in EPE’s evaluation, but EPE may consider other qualitative and quantitative factors.

Step 3 – Due Diligence

The Company will conduct due diligence as part of the overall bid evaluation process, including, but not limited to, consideration of the following proposal characteristics:

- Bidder or developer experience;
- Financial strength/credit worthiness of the bidder;
- Reasonableness of the solar generation profile proposed;
- Reasonableness of the energy storage output proposed;
- Financing plan;
- Development, construction and operation experience;
- Solar technology, availability, and warranties;
- Energy storage technology, availability, and warranties;
- Risk Management, coverages, loss histories, description of program;

- Environmental permitting and compliance;
- Safety record;
- QA/QC experience;
- Project operational characteristics;
- Supply-Chain risk;
- Counterparty viability;
- Construction and equipment supply plans and arrangements;
- Operations & Maintenance Plan;
- Project execution planning;
- Bidders ability to complete multiple projects within the proposed schedule;
- Environmental impact and profile;
- Contract risk related to the development of the project;
- Bidder's performance on previous projects with the Company.

7.1 EPE's Selection of Bid and Discussions with Bidder

a. Meetings

EPE may conduct meetings to gain a greater understanding of the structure and components of each proposal. EPE may also require Bidder to submit project and/or Bidder-specific pro forma financial statements by year for the applicable facility development and construction period, including income statements, balance sheets and statements of cash flows. EPE will reevaluate any significant changes to the proposal based on new understanding of Bidder's proposal as a result of the meetings.

b. Right to Terminate Negotiations

If EPE cannot reach acceptable EPC agreement terms with Bidder, EPE reserves the right to terminate negotiations with Bidder and begin a new solicitation or cancel this RFP. Furthermore, EPE at its sole discretion, reserves the right to not select any proposal for negotiation of an EPC agreement.

Notice of Disclaimer

EPE has prepared the information provided in this RFP to assist interested persons and entities in making a decision whether to respond with a proposal. EPE reserves the right to modify, change, supplement or withdraw the RFP at its sole discretion. No part of this document or any other correspondence from EPE, its employees, officers or consultants shall be taken as legal, financial or other advice, nor as establishing a contract or any contractual obligations. All communication between Bidder and EPE shall be conducted in writing.

EPE makes no representations or warranties regarding the completeness of the information contained within the RFP and does not purport that this RFP contains all of the information needed for Bidder to determine whether to submit a proposal. Neither EPE nor its employees, officers or consultants will make, or will be deemed to have made, any current or future representation, promise or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information contained within the RFP or any other information provided to Bidder.

Bidders who submit a proposal do so without legal recourse against EPE, or EPE's directors, management, employees, agents or contractors, due to EPE's rejection, in whole or in part, of their proposal or for failure to execute any agreement with EPE. EPE shall not be liable to any Bidder or to any other party, in law or equity, for any reason whatsoever related to EPE's acts or omissions arising out of, or in connection with, the RFP process.

EPE reserves the right to reject, for any reason, any and/or all proposals. EPE further reserves the right to waive any irregularity or technicality in proposals received, or to consider alternatives outside of this solicitation, at its sole discretion, to satisfy the needs of the Project. In addition, EPE reserves the right, at its sole discretion, to modify or waive any of the criteria contained herein and/or the process described herein.

No Bidder will have any claim whatsoever against EPE, its employees, officers, or consultants arising from, in connection with, or in any way relating to this RFP. Without limiting the generality of the foregoing, each Bidder agrees, by and through its submission of a proposal, that rejection of a proposal will be without liability on the part of EPE, its employees, officers or consultants, nor shall a Bidder seek recourse of any kind against any of the foregoing on account of such rejection. The filing of a proposal shall constitute an agreement of the Bidder to each and all of these conditions. Each Bidder and recipient of this RFP is responsible for all costs incurred in evaluating, preparing and responding to this RFP. Any other costs incurred by any Bidder during negotiations are also the responsibility of the Bidder.

8.0 ATTACHMENTS

8.1 Notice of Intent to Bid

1. Company Name: _____

2. Company Address: _____

3. Contact Person Information:

Name	
Title/Position	
Mail Address	
Courier Address (if different)	
Telephone Number	
Fax Number	
E-mail Address	

4. Check Project Facilities Proposed: Solar ESS Both

5. Equipment Ratings: Solar: Technology _____ MW _____
 ESS: Technology _____ MW _____ MWh _____

6. Authorized Signature: _____

Name: _____

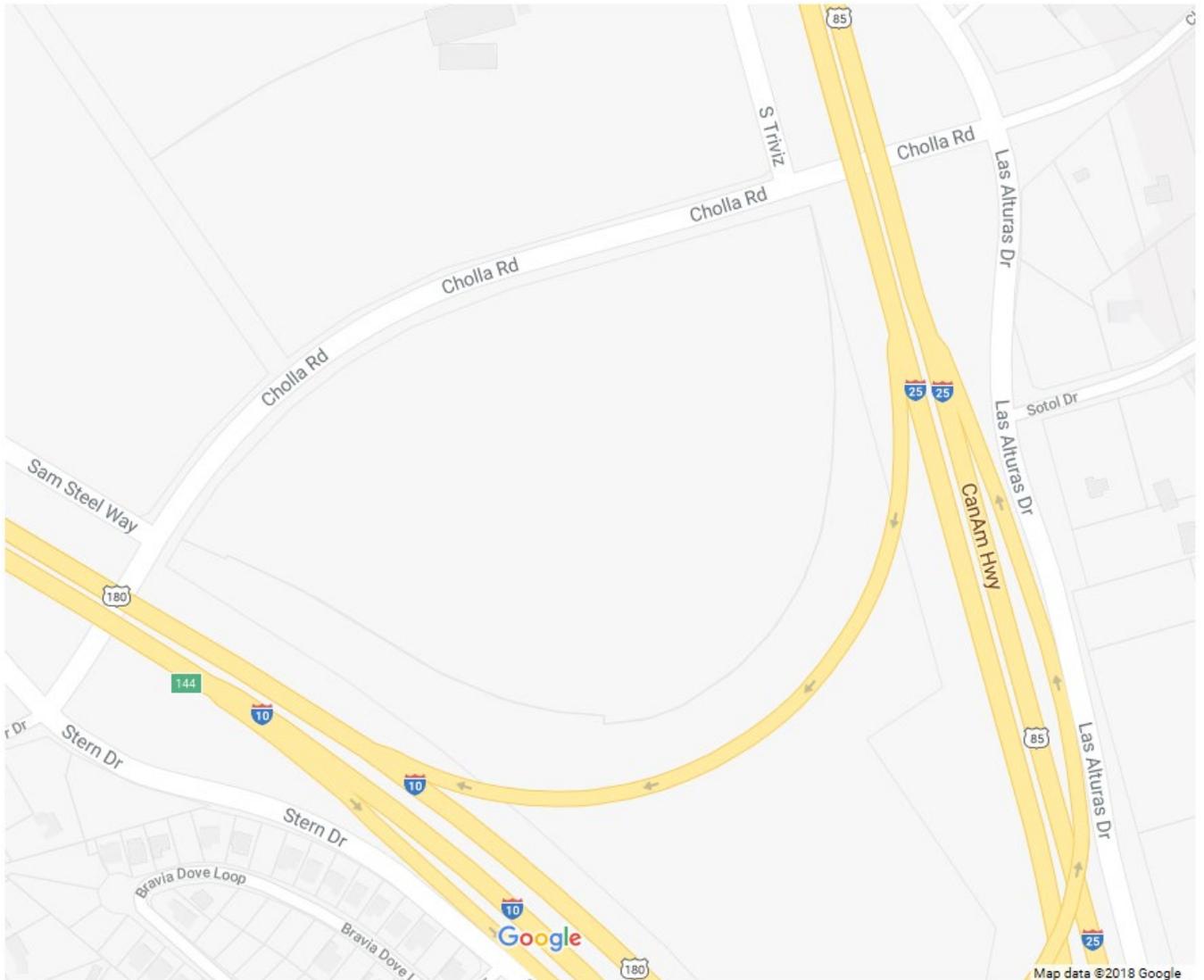
Title: _____

7. Date: _____

The Notice of Intent to Bid may be submitted via e-mail or facsimile to Julie Bañuelos at julie.banuelos@epelectric.com or (915) 543-4073, or mailed to Julie Bañuelos, Contract Negotiator, at P.O. Box 982, Location 121, El Paso, Texas 79960. Receipt of the Notice of Intent to Bid will be confirmed in an e-mail from EPE to the Bidder. **This form should be delivered to the above address no later than 5pm Mountain Time (MT) on December 17, 2018.**

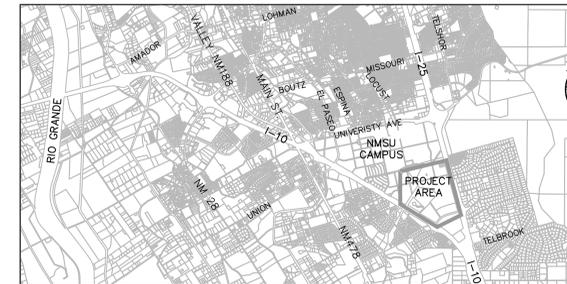
8.2 Project Data (provide a detailed description of the Solar/ESS project)

8.3 NMSU Project Location



8.4 Arrowhead Research Park Survey at NMSU Campus

**ARROWHEAD RESEARCH PARK SURVEY AT NMSU CAMPUS
WITHIN
PROJECTED SECTIONS 27, 28, 33 & 34, T. 23 S., R. 2 E., NMPM,
DONA ANA BEND COLONY GRANT
DONA ANA COUNTY, NEW MEXICO
SEPTEMBER 5, 2017**



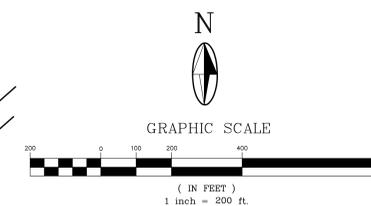
VICINITY MAP
SCALE 1" = 5000'

AREA SUMMARY

DESCRIPTION	GROSS AREA	AREA OF EASEMENTS OR LEASE	NET AREA	COMMENTS
AREA 1				
PRE-DEVELOPED	73.90 AC±	15.45 AC±		INCLUDES RESEARCH DRIVE
EBID		30.69 AC±		INCLUDES BOTH AREAS
ECHS 1		6.65 AC±		INCLUDES GAS & EPEC EASEMENT
ECHS 2		3.77 AC±		INCLUDES GAS & EPEC EASEMENT
TOTAL AREA 1	73.90	56.56 AC±	17.34 AC±	AREAS IN ACRES
AREA 2				
DRAINAGE	118.66 AC±	1.47 AC±		INCLUDES EPEC EASEMENT
BCOM		7.63 AC±		INCLUDES EPEC EASEMENT
		3.33 AC±		EASEMENTS
TOTAL AREA 2	118.66 AC±	12.43 AC±	106.23 AC±	AREAS IN ACRES
AREA 3				
AREA 3 - ROAD	29.89 AC±	0.05 AC±	29.84 AC±	AREAS IN ACRES, EPEC EASEMENT
AREA 4 - ROAD	8.05 AC±	8.05 AC±	0.0	ARROWHEAD ROAD 113' ROW WIDTH
TOTAL AREA	230.50 AC±	77.09 AC±	153.41 AC±	TOTAL AREA IN ACRES

LEGEND

- INDICATES MONUMENT FOUND (DESCRIBED)
- ⊙ INDICATES MONUMENT FOUND (CAP IN CONCRETE)
- INDICATES CONTROL POINT
- CALCULATED POINT ON EXISTING N.M.D.O.T. T-RAIL FOUND & USED
- EASEMENT LINES
- FENCE ON DAM
- CENTERLINES
- PROJECTED SECTION LINES
- LEASED AREAS
- ARROWHEAD BOUNDARY
- NMDOT RIGHT OF WAY FOR THE INTERSTATE AND FRONTAGE ROADS
- NMSU RIGHT OF WAY FOR ARROWHEAD ROAD
- DRAINAGE EASEMENT SET ASIDE



REFERENCES

INFORMATION PROVIDED BY NMSU FOR EASEMENTS AND LEASE AGREEMENT WITHIN THIS AREA.
NMDOT RIGHT OF WAY MAPS FOR INTERSTATE 10 AND INTERSTATE 25 PROJECTS - NMP NUMBERS F1-001-01(2), I-010-2(31)143, SP-1-78(801), I-025-1(20)0
SUBDIVISION PLATS SHOWN.
SURVEY AND TITLE INFORMATION ON RIGHT OF WAY MAPS FOR NMDOT PROJECT HPP-10-2(127)144, BY SURVEY CONTROL INC.,
DAC COUNTY GIS FOR NMSU ROAD PROJECTIONS

SURVEYOR'S NOTES

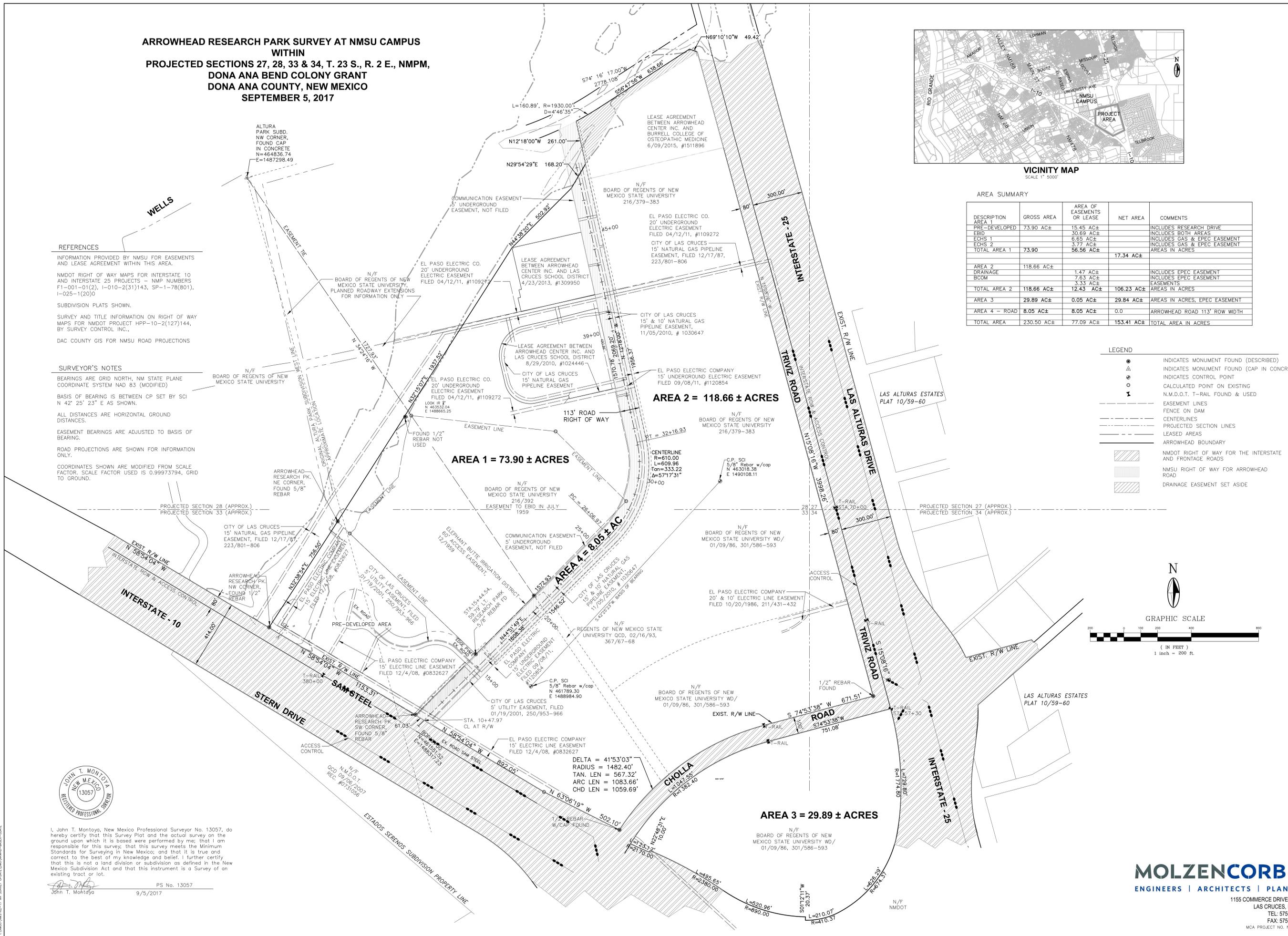
BEARINGS ARE GRID NORTH, NM STATE PLANE COORDINATE SYSTEM NAD 83 (MODIFIED)
BASIS OF BEARING IS BETWEEN CP SET BY SCI N 42° 25' 23" E AS SHOWN.
ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
EASEMENT BEARINGS ARE ADJUSTED TO BASIS OF BEARING.
ROAD PROJECTIONS ARE SHOWN FOR INFORMATION ONLY.
COORDINATES SHOWN ARE MODIFIED FROM SCALE FACTOR. SCALE FACTOR USED IS 0.99973794, GRID TO GROUND.



I, John T. Montoya, New Mexico Professional Surveyor No. 13057, do hereby certify that this Survey Plot and the actual survey on the ground upon which it is based were performed by me; that I am responsible for this survey; that this survey meets the Minimum Standards for Surveying in New Mexico; and that it is true and correct to the best of my knowledge and belief. I further certify that this is not a land division or subdivision as defined in the New Mexico Subdivision Act and that this instrument is a Survey of an existing tract or lot.

John T. Montoya PS No. 13057
9/5/2017

DATE: 9/5/2017 1:45 PM
DRAWN: JTM/MS/STW
CHECKED: JTM/MS/STW
PROJECT: ARROWHEAD RESEARCH PARK SURVEY AT NMSU CAMPUS



8.5 Project Requirements and Technical Specifications

8.5.1 General:

- 8.5.1.1 System designed per latest NEC and referenced sections adopted in the state where the site is located.
- 8.5.1.2 Prior to equipment procurement and construction activities, Contractor shall submit to Owner the project drawings and design documents for approval. The design shall comply with state and local codes and have a 30-year system design life.
- 8.5.1.3 System must be ground mounted.
- 8.5.1.4 Facility DC capacity is defined as the sum of the DC nameplate capacities of the solar modules under Standard Test Conditions.
- 8.5.1.5 Facility AC capacity is defined as the sum of the nameplate AC capacities of the inverters.
- 8.5.1.6 Installation of all system components will be carried out in accordance with manufacturer warranty and recommendations as well as to the requirements listed in this document. All systems and components installed must be compatible.
- 8.5.1.7 Certified stamped electrical, mechanical, and civil drawings must be provided by professional engineer(s) who are licensed in the state where the site is located.
- 8.5.1.8 All referenced sections of EPE's specifications can be found in EPE's Blue Book with the link below.

<https://www.epelectric.com/nm/business/electric-services-requirement-book>

8.5.2 Equipment:

- 8.5.2.1 Contractor shall provide all required equipment, materials, and services for the successful completion of the project.

8.5.3 Solar PV Modules:

- 8.5.3.1 PV modules compliant with UL1703.
- 8.5.3.2 Crystalline modules IEC 61215 certified.
- 8.5.3.3 Thin film modules IEC 61646 certified.

8.5.3.4 Latching or locking type connectors compliant with UL8703.

8.5.3.5 Manufacturer ISO9001 and ISO14001 certified.

8.5.3.6 Front glass shall include anti-reflective coating.

8.5.3.7 Acceptable vendors are the following:

8.5.3.7.1 Canadian Solar

8.5.3.7.2 First Solar

8.5.3.7.3 Hanwha

8.5.3.7.4 JA Solar

8.5.3.7.5 Jinko Solar

8.5.3.7.6 Kyocera

8.5.3.7.7 LG

8.5.3.7.8 Panasonic

8.5.3.7.9 REC Solar

8.5.3.7.10 Renesota

8.5.3.7.11 SolarWorld

8.5.3.7.12 SunPower

8.5.3.7.13 Trina

8.5.3.7.14 Yingli

8.5.3.7.15 Other equivalent

8.5.4 Tracking Systems:

8.5.4.1 The tracking system shall include the racking structure, mounting hardware, drive motors, controller system, and weather stations equipped with wind speed and irradiance sensors at minimum.

8.5.4.2 Tracking systems must be compliant with UL3703.

8.5.4.3 Racking structure, mounting hardware, grounding/bonding components and clamping and retention must be compliant with UL2703. EPC Contractor shall supply and manage the installation

of the mounting system for the solar modules sufficient to support all solar modules and meet all applicable licensing and Permit requirements. The system shall be composed of galvanized steel or aluminum. The racking manufacturer will supply a minimal 10 year warranty for the installed structure and the racking design will be certified by the racking manufacturer. The tracking system should have a 30-year design lifetime.

8.5.4.4 The tracking system must have the “stow” feature to meet wind loads design requirements. A backup energy source shall be installed for the trackers to stow during excess winds and grid power outage.

8.5.4.5 Tracking system vendor shall have installed a minimum of 50 MW of capacity in utility-scale projects. Acceptable tracking system vendors are the following:

8.5.4.5.1 Arctech Solar

8.5.4.5.2 Array Technologies

8.5.4.5.3 NexTracker

8.5.4.5.4 Soltec

8.5.4.5.5 SunPower

8.5.5 Combiner Boxes:

8.5.5.1 Combiner boxes shall be rated for maximum system voltage and maximum system continuous and short-circuit currents.

8.5.5.2 Combiner boxes must comply with the latest NEC adopted in the state the site is located.

8.5.5.3 Enclosures shall be NEMA 4 rated and have integral key lock or provisions for padlocking.

8.5.5.4 DC inputs shall be fused and fuses shall have a blown fuse indication.

8.5.5.5 Combiner box output shall have a means to be externally disconnected.

8.5.5.6 If the combiner box has a lightning protection device, the device should include a visual trip indicator.

8.5.6 Inverters:

- 8.5.6.1 Shall be central inverters specifically designed for PV installations, and meet the following minimum standards.
- 8.5.6.2 UL1741 – Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources.
- 8.5.6.3 Inverters and their functionality as distributed resources in planned electrical islands shall comply with applicable provisions described in IEEE 1547-2003 – IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems.
- 8.5.6.4 Inverters shall be multi-mode DC to AC capable of switching between grid-interactive mode and microgrid mode. Inverters shall have voltage and frequency ride-through functionalities, as well as be capable of actively regulating voltage levels by adjusting active and reactive power.
- 8.5.6.5 Have a maximum harmonic distortion of less than 3% of the total harmonic distortion at rated power output.
- 8.5.6.6 Have an efficiency greater than 97.5% without MV step-up transformer.
- 8.5.6.7 Be capable of reaching rated output at 50 degrees Celsius or higher.
- 8.5.6.8 Have a 30-year design life and carry a minimum 5-year standard warranty with options of at least 20-year extended warranty.
- 8.5.6.9 Inverters shall be equipped with data collection and communications to SCADA.
- 8.5.6.10 Inverter blocks shall be configured in identical MW increments, if possible.
- 8.5.6.11 Skid mounted solutions containing inverters, step-up transformers, and other power conditioning equipment and systems are preferred.
- 8.5.6.12 Inverter vendor shall be certified to ISO 9001 and ISO 14001 standards and have supplied a minimum of 50 MW capacity in utility-scale projects.

8.5.6.13 Acceptable inverter vendors are the following:

- 8.5.6.13.1 ABB
- 8.5.6.13.2 Eaton
- 8.5.6.13.3 General Electric
- 8.5.6.13.4 Schneider Electric
- 8.5.6.13.5 SMA

8.5.7 Transformers:

- 8.5.7.1 Step-up transformers must comply with **EPE specification G&I 088-010 to 088-400** except for any variances noted in this section
- 8.5.7.2 Interconnecting transformers shall step-up inverter output voltage to the Site nominal voltage.
- 8.5.7.3 The end of the transformer(s) series connection shall have surge arrestors on the high voltage side with a voltage rating suitable for the application.
- 8.5.7.4 Transformers shall meet C57.12.34 - IEEE Standard Requirements for Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers.
- 8.5.7.5 Transformer warranty to be provided by Contractor once the transformer is selected, which shall be from El Paso Electric Co.'s list of approved transformers:
 - 8.5.7.5.1.1 ABB
 - 8.5.7.5.1.2 EATON - Cooper
 - 8.5.7.5.1.3 ERMCO
 - 8.5.7.5.1.4 Howard
- 8.5.7.6 Step-up transformer(s) configuration shall be: Primary wye-grounded, secondary delta.
- 8.5.7.7 Transformer(s) shall comply with the 2016 DOE standard efficiency or latest.

- 8.5.7.8 Transformer(s) color shall be Munsell 7GY3.29/1.5 pad-mount green.
- 8.5.7.9 Transformer(s) shall accommodate a padlock on top of the required pentahead security bolts.
- 8.5.7.10 Transformer(s) shall be compatible with EPE transformer pad (Pad B).
- 8.5.7.11 The high side bushings shall comply with IEEE C57.1234 Figure 16 (loop configuration).
- 8.5.7.12 The low-voltage terminal location and arrangement shall conform to Figure 8(a) of IEEE C57.12.34.
- 8.5.7.13 The transformer shall be supplied with a sticker stating the nature of the coolant.
- 8.5.7.14 Required warning stickers are shown in Figure 2 on page 14 of **EPE Specification G&I 088-010 to 088-400**.
- 8.5.7.15 The primary voltage, secondary voltage, and kVA rating shall be located on the outside of the transformer. These stenciled numbers shall be 1 ¾" in height. See page 14 of **EPE Specification G&I 088-010 to 088-400**.
- 8.5.7.16 The transformer shall include two nameplates (one inside, and one outside) with the following information: KVA, primary voltage, secondary voltage, serial number, date of manufacture, Impedance, X/R ratio, gallons of oil, weight, and shall state that the transformer oil contains less than 1 ppm PCB.
- 8.5.7.17 The transformer shall include the approved Non-PCB sticker. See section 7.8 on page 5 and figure 1A on page 14 of **EPE Specification G&I 088-010 to 088-400**.
- 8.5.7.18 A ground lug should be included in the ground provision on the high-voltage side of the tank.
- 8.5.7.19 The low voltage terminals shall be suitable for the application of bushing mounted current transformers. The transformer secondary compartment shall contain studs, to be used for mounting current transformers.
- 8.5.7.20 EPE minimum clearances shall be met regarding the LV and HV bushing distance with respect to the HV-LV barrier and the cabinet

wall. Refer to Figure 3 in **EPE Specification G&I 088-010 to 088-400**.

- 8.5.7.21 EPE has a preference for non-load break 200 A bushings.
- 8.5.7.22 Tap changer shall be rated for operation under load.
- 8.5.7.23 Secondary terminations: 12-hole spades.
- 8.5.7.24 Only the last step-up (MV) transformer (going downstream) will be equipped with surge arrestors.
- 8.5.7.25 Envirotemp FR3 and Mineral Oil are both accepted.
- 8.5.7.26 S Taps – two 2.5% taps below nominal and two above nominal.

8.5.8 Metering:

- 8.5.8.1 EPE is responsible for providing metering equipment. The metering equipment is to be contained in a separate enclosure upstream of the switchgear enclosure. Metering equipment includes CTs, PTs, PQ and revenue meter.

8.5.9 Communications and Data Acquisition System:

- 8.5.9.1 Contractor shall design and specify all communications hardware and software required for system protection and remote monitoring and control.
- 8.5.9.2 The design shall include utility grade metering and monitoring provisions equipped with weather station(s) including remote “real time” monitoring of system performance and data collection over the internet via the Data Acquisition System (“DAS”).
- 8.5.9.3 The monitoring system shall provide real time energy generation data, historical data and meteorological data. The contractor shall provide meteorological station(s) that will provide real time weather data.
- 8.5.9.4 The data shall be collected at hardwired locations and transmitted wirelessly via a cellular modem to be provided and installed by the Contractor.
- 8.5.9.5 The monitoring system(s) shall include a web-based interface available for Owner to access remotely. The interface shall display site status and equipment status e.g. inverters, trackers. It shall

also display alarms and send automatic e-mail notifications in cases of emergency i.e. system outages.

8.5.9.6 The Contractor shall test the installed communications systems to demonstrate its ability to meet the requirements. Testing shall be conducted when the final system connections have been made.

8.5.10 Switchgear (up to 5 MW):

8.5.10.1 600-amp continuous and loadbreak.

8.5.10.2 12.5kA sym. maximum interrupting rating.

8.5.10.3 1000:1 internally mounted current transformers used for over current protection.

8.5.10.4 600-amp Deadbreak Apparatus Bushings per IEEE 386 figure 11.

8.5.10.5 600-amp Deadbreak interface to IEEE 386 200-amp (bushing extender combo).

8.5.10.6 Front Access to switch operators and bushings on front and back

8.5.10.7 Welded stainless steel mechanism cover painted light gray (ANSI 70).

8.5.10.8 Galvanized steel frame.

8.5.10.9 Parking stands for all bushings.

8.5.10.10 12-gauge galvanized steel padmount enclosure with 24" cable compartment. Meets ANSI C37.72 & C57.12.28 standards.

8.5.10.11 Enclosure painted Padmount Guardian Green, Munsell #7.0GY3.29/1.5.

8.5.10.12 36" minimum bushing height.

8.5.10.13 ½"-13 NC grounding provisions.

8.5.10.14 Padlockable operating mechanism.

8.5.10.15 Green/ OPEN - Red/ CLOSED labeling.

8.5.10.16 12-gauge galvanized steel low voltage enclosure.

8.5.10.17 The switch must fit EPE approved concrete pad.

- 8.5.10.18 Switch equipped with quantity one auxiliary Form C contacts wired to the control cabinet for use by the control.
- 8.5.10.19 NEMA 4X control cabinet, including: SEL751 feeder protection relay (751402BCBCB0X810621) to provide three phase overcurrent protection(50/51), under voltage protection(27), over voltage protection (59), frequency protection (81U, 81O), directional power, IEC cable/line thermal, vector shift, sensitive earth fault (SEF), and load encroachment elements; Provisions for mounting CISCO 2520 connected grid switch of dimensions 1.75 “H X 17.50 “W X 14.00 “D; 24 V DC Provisions for powering the CISCO 2520 connected grid switch; (2), Two-strain reliefs and necessary accessories for installing fiber based on diameter of fiber to be used.
- 8.5.10.20 Stationary motor control using SEL751 relay, the control shall be equipped with 120 VAC Power supply, PWR-IE170W-PC-AC and 55 AH batteries used for battery backup; the motor control shall have remote operation capability.
- 8.5.10.21 Applicable Industry Standards: Load Break Switch Ratings, IEEE C37.74; Fault Interrupter Ratings, IEEE C37.60; Bushings: IEEE 386; Padmount Enclosure: IEEE C57.12.28.
- 8.5.10.22 Solar Switch Termination must conform with **EPE Distribution Standard DSU-554.**
- 8.5.10.23 Switchgear Vault to be constructed in conformance with **EPE Distribution Standards UD300 and DSU 1235.**
- 8.5.10.24 Approved switchgear vendors:
 - 8.5.10.24.1 G&W Electric
 - 8.5.10.24.2 S&C Electric
 - 8.5.10.24.3 Elastimold
- 8.5.11 Communication Field Switches:
 - 8.5.11.1 Switch: CISCO IE-2000-16PTC-G-E
 - 8.5.11.2 Software: (Lan Base License)
 - 8.5.11.3 Power Supplies: 2 x PWR-IE170W-PC-DC=

8.5.11.4 Optics: SFP-GE-L=1000BASE-LX/LH

8.5.12 SCADA Points:

8.5.12.1 Switchgear status (Open/Closed) and local/remote control

8.5.12.2 Any MOD Status that would be used for isolation (Open/Closed)

8.5.12.3 Analogs – Revenue and PQ meter, Power Stations meters, and Energy Storage meter

8.5.12.3.1 MW

8.5.12.3.2 MVA

8.5.12.3.3 MVAR

8.5.12.3.4 Phase Currents

8.5.12.3.5 Phase Voltages

8.5.12.4 Accumulators – Revenue and PQ meter, Power Stations meters, and Energy Storage meter

8.5.12.4.1 MWh-In

8.5.12.4.2 MWh-Out

8.5.12.4.3 MVARh-In

8.5.12.4.4 MVARh-Out

8.5.12.5 Weather Station Signals

8.5.12.5.1 Ambient Temp

8.5.12.5.2 Solar Irradiance

8.5.12.5.3 Back Panel Temp

8.5.12.5.4 Wind Speed

8.5.12.5.5 Wind Direction

8.5.12.6 Tracker Data Points

8.5.12.6.1 Tilt Angle

- 8.5.12.6.2 Tracker Status
- 8.5.12.7 Transformer
 - 8.5.12.7.1 Alarms/Status Indicators
 - 8.5.12.7.2 Oil temperature
- 8.5.12.8 Energy Storage
 - 8.5.12.8.1 Local/Remote control
 - 8.5.12.8.2 Mode of Operation
 - 8.5.12.8.3 Charge/Discharge and State of Charge
 - 8.5.12.8.4 kW/kVAR setpoints
 - 8.5.12.8.5 Alarms/Status
- 8.5.12.9 Two isolated networks will provide site data access
 - 8.5.12.9.1 Monitoring entity to have direct access to field data; transferred to EPE via DNP3
 - 8.5.12.9.2 Field data to be provided to monitoring entity via Modbus after being collected through an EPE secure data connection to site
- 8.5.12.10 UPS powering SCADA server and weather station(s) required
- 8.5.13 Energy Storage System (ESS):
 - 8.5.13.1 The design and installation of the ESS shall be in accordance to UL 9540 Standard for Energy Storage Systems and Equipment.
 - 8.5.13.2 Shall be rated at one MW of power and either two or four MWh of energy, AC-coupled to a three MW solar generating facility.
 - 8.5.13.3 Maximum 100 millisecond response time from 100% charge to 100% discharge output and vice versa.
 - 8.5.13.4 Total Harmonic Distortion (THD) shall be less than three percent at rated output. Recommended practices and requirements as per IEEE 519 shall be followed.

- 8.5.13.5 Shall be able to retain at least 80% of Beginning of Life (BOL) capacity rating at 10 years.
- 8.5.13.6 Noise emissions shall be less than 60 decibels (dB) measured at the fence line of the project site.
- 8.5.13.7 Shall be capable of providing services including but not limited to peak shaving, solar shifting, and curve smoothing and expected to fully cycle once a day.
- 8.5.13.8 Shall be compatible with EPE's SCADA system for real time monitoring and system control. Communications shall be Modbus RTU, Modbus TCP, or DNP3.
- 8.5.13.9 The Energy Management System (EMS) shall be designed to provide automatic, unattended operation but also local manual operation, remote operation, and dispatch of the ESS from SCADA system.
- 8.5.13.10 The EMS shall provide the ability to manage system operation to include but not limited to:
 - 8.5.13.10.1 Interface with inverter controller
 - 8.5.13.10.2 Controls for charging, discharging, and state of charge
 - 8.5.13.10.3 Trigger alarms for conditions and malfunctions out of the specifications
 - 8.5.13.10.4 Data logging

8.5.14 Conduit:

- 8.5.14.1 Above ground conduit, in places where conduit could be subject to physical damage, the conduit shall be PVC schedule 80. Underground conduits are to be schedule 40 PVC with PVC sweeps direct buried rated or concrete encased rated. Underground conduits may be direct buried in areas that do not require concrete encased duct banks for structural considerations.
- 8.5.14.2 All metal conduit must be hot dipped galvanized.
- 8.5.14.3 In no case shall conduit design be less than that called for by NEC 2014 or latest adopted in the state where the site is located.

- 8.5.14.4 EMT shall be manufactured to UL797 and ANSI C80.3.
- 8.5.14.5 Module-to-module interconnection wiring within a string and string home-run wiring to combiner boxes shall be neatly bundled and routed below modules such that it is protected from damage and decay. Exposed DC wire shall be compliant with UL4703.
- 8.5.14.6 For Power Cable Conduit up to 25kV refer to **EPE Distribution Standard DSU 1645 Duct Sizes For Use On Underground Cable Runs.**

8.5.15 Wire & Conductors:

- 8.5.15.1 Underground Power Cable for operation at 60Hz three phase in solidly grounded wye systems rated up to 25kV phase to phase must conform with EPE specification **GI013-306 to 013-313.**
- 8.5.15.2 Both DC Side and AC side underground conductors must be in conduit.
- 8.5.15.3 All conductors must be aluminum or copper rated XHHW-2 or greater as required.
- 8.5.15.4 Single conductor wire and cable shall be rated for a maximum of 1500 V, 90°C for XLP and 90°C or 105°C for EPR insulation. Single conductor greater than #1/0 AWG shall have EPR insulation with a PVC, CPE or CSPE cable jacket. Non-jacketed FREP insulation with appropriate UL flame test may also be used for large single conductor cables.
- 8.5.15.5 Single pair instrument cable shall be rated for a maximum of 1500 V, XLP or PVC insulation, twisted shielded pairs with drain wires and a PVC, CPE or CSPE cable jacket.
- 8.5.15.6 Multi-pair instrument cable shall be rated for a maximum of 1500V, XLP or PVC insulation, twisted shielded pairs with drain wires, overall shield, and a PVC, CPE or CSPE cable jacket.
- 8.5.15.7 Wiring runs between major items of equipment and system modes (i.e., a string, combiner boxes, disconnects, inverters, utility interconnection, and energy monitoring system (EMS) devices shall be continuous, unless unavoidable. Pull boxes shall be used for long runs as per conductor technical specification.

8.5.15.8 When in conduit, conductors shall be USE-2 or THWN-2 (Thermoplastic Heat and Water Resistant Nylon Coated wire is permitted) or of a higher standard.

8.5.15.9 All conductors shall be sized per the most current NEC code.

8.5.15.10 Conductors used for data communication will be a stranded copper #18-22 twisted pair shielded wire (Belden 1120A or approved equivalent).

8.5.15.11 Plastic zip ties used for exposed wire management must be UV stabilized.

8.5.16 Fuses:

8.5.16.1 Fuses for disconnects to be current limiting UL class J, RK1 or RK5 and of the appropriate voltage, delay or non-delay characteristic, and current rating to provide complete short circuit and overload protection per NEC sections regarding component selection.

8.5.16.2 Fuses located in the combiner boxes protecting PV string branch circuits shall be UL listed, DC voltage rated based on branch circuit voltage, be in "finger-safe" type fuse holders providing load break disconnect capabilities when changing fuses. Midget fuses and fuse holders used in these circuits must be fully DC rated and adequate DC short circuit withstands and let-through capability must be provided for all power situations including "back-fed" conditions.

8.5.17 Enclosures:

8.5.17.1 Indoor enclosures shall be NEMA 3R or better.

8.5.17.2 Outdoor enclosures shall be rated NEMA 3R or better. A NEMA 4 rating is required for enclosures housing control equipment, fused DC combiners, data acquisition components, monitoring equipment, switchgear, and any sensitive equipment associated with the inverters.

8.5.17.3 Enclosures containing monitoring equipment such as dataloggers, meters, and network communications shall be located indoors if at all possible.

8.5.17.4 Switchgear, motor controls, inverters, battery and charger systems, DC and AC distribution panels shall be pad mounted and fenced.

8.5.18 Nameplates:

- 8.5.18.1 Engraved phenolic nameplates are required for all equipment, panels and enclosures. Proposed nameplates must be submitted for approval prior to installation and shall match drawing naming convention.
- 8.5.18.2 Signs shall be weather-proof, corrosion-proof, UV-stabilized and fade-resistant. Signs shall be attached using non-corrosive materials throughout. Any degrading signage, or failing attachment mechanisms, will be subject to warranty replacement.
- 8.5.18.3 Signs must be installed at appropriate locations warning that the Project is operational and that there are potentially multiple onsite power sources.
- 8.5.18.4 DC power circuits shall be identified on switches and individual module strings shall be identified in DC combiner boxes. Positive DC circuit wire should be color coded red and negative DC circuit wire should be color coded black.
- 8.5.18.5 Signage shall include that called out in NEC 2014 article 690 unless overridden by applicable local law or authorities having jurisdiction.
- 8.5.18.6 EPC Contractors or Subcontractor's brand or contact information is allowed only on temporary construction signage, or on equipment or components of the Project manufactured by Contractor, Subcontractor or its affiliates.

8.5.19 Site Access:

- 8.5.19.1 The site shall have access roads through the arrays to facilitate construction activities and accommodate emergency vehicles such as fire trucks. The roads shall be built to accommodate crane access and no equipment shall be installed along the roads' surface causing obstruction of vehicular access. Roads shall remain clear of any temporary or permanent obstruction during construction activities and after commissioning to facilitate O&M services.

8.5.20 Fencing:

- 8.5.20.1 Contractor shall provide a proposal for a permanent fencing structure around the perimeter of the project. The fencing shall

be decorative and no less than 7-foot high. Typical chain link is not acceptable. A “framed” chain link might prove acceptable.

8.5.20.2 The perimeter fence shall include two locked gates: one with a width of 24 feet for vehicles and one pedestrian entrance with a width of 4 feet. Fencing shall meet state and local codes.

8.5.20.3 Signage shall be installed along the fence every 65 feet and on all gates. Signage shall be installed five feet above ground level.

8.5.21 System Commissioning:

8.5.21.1 Commissioning tests, documentation, and inspection should comply with IEC 62446 at a minimum.

8.5.21.2 The solar system performance report shall include a PVSyst report, an 8760 output in Excel format, and a capacity test model based on ASTM E2848-13 (or later) Standard Test Method for Reporting Photovoltaic Non-Concentrator System Performance.

8.5.21.3 Once mechanical and electrical completion is achieved, and the system is energized and interconnected to Owner’s grid, Contractor may start with test energy production (with Owner’s consent). Once the system achieves rated capacity and all communications systems are complete, the 5-day capacity test may begin. The system must pass the capacity test to be commissioned and begin commercial operation.

8.5.21.4 The ESS performance report shall include testing data for 100% of the production cells to ensure compliance with design requirements. At a minimum, the following capacity tests shall be performed.

8.5.21.4.1 Amp-hour

8.5.21.4.2 Watt-hour

8.6 NMSU's Storm Water Management Program

NEW MEXICO STATE UNIVERSITY

STORM WATER MANAGEMENT PROGRAM FOR NPDES GENERAL PERMIT NO. NMR040000

JULY 2009



Prepared by:



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CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed by:

Jennifer Taylor

Jennifer Taylor, Senior Vice-President
Business, Finance and Human Resources
New Mexico State University

7-31-09

Date

By: *Angela Throneberry, Associate Vice President, Business Finance & Human Resources*



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EXECUTIVE SUMMARY

In 2007 the Environmental Protection Agency (EPA) issued a General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The permit's requirements are applicable to all state, city, county and other public bodies that own or operate a system of conveyances for storm water within an urbanized area. These conveyances may consist of roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, storm drains and other manmade channels or drainage structures.

New Mexico State University (NMSU) is an MS4 Operator within the Las Cruces Urbanized Area. Although NMSU has extensive properties throughout Las Cruces and New Mexico, the permit requirements are only applicable to the portion of NMSU within the Las Cruces Urbanized Area. This portion is called the main campus and is approximately bordered by University Avenue, Interstate Highway 25 and Interstate Highway 10.

NMSU must meet several criteria to be eligible for authorization of its storm water discharges under the general permit. These criteria include:

- Determination that its discharges do not cause or have a reasonable potential to cause or contribute to water quality standards not being met in the waters receiving the discharges;
- Determination that its discharges do not exceed any Total Maximum Daily Loads of pollutants established for waters receiving the discharges;
- Determination that its discharges and discharge-related activities do not jeopardize a species listed as endangered or threatened under the Federal Endangered Species Act; and
- Determination that its discharges and discharge-related activities do not affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the U.S. Secretary of the Interior.

NMSU has determined that it meets the above eligibility requirements. Future drainage projects or other construction activity in support of permit requirements will need to be evaluated for their potential effects on endangered or threatened species and historic properties at the time the projects are planned and designed.

The Storm Water Management Program (SWMP) was prepared to fulfill the permit's requirement that NMSU develop, implement, and enforce a SWMP to reduce the discharge of pollutants to the maximum extent practicable (MEP). The EPA has determined that effectively implementing six Minimum Control Measures (MCMs) will satisfy the permit's MEP requirement. The six MCMs are:

- Public Education and Outreach on Storm Water Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control
- Post-Construction Storm Water Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations



The permit contains standard requirements that must be addressed in the SWMP for each of these six MCMs. In addition, NMSU is required to propose Best Management Practices (BMPs) for each of the six MCMs.

BMPs are activities, prohibitions, maintenance procedures and other practices to prevent or reduce the discharge of pollutants to receiving waters. NMSU's proposed BMPs are summarized in Tables 1 – 6 of Chapter 4.0. Upon review and acceptance of these proposed BMPs by the EPA, the BMPs will become incorporated into the permit by reference. NMSU will be responsible for implementing the BMPs on the schedule presented in the tables and in no case later than June 30, 2012.

In addition to implementing the BMPs, NMSU is responsible for meeting general permit conditions that include:

- Submitting to the EPA a Notice of Intent to authorize its MS4 discharges under the permit;
- Submitting an annual report to the EPA by October 1 of each year;
- Publishing public notices of the Notice of Intent, SWMP, and each annual report;
- Developing a Monitoring and Assessment Plan to measure the effectiveness of BMPs; and
- Maintaining records of all permit-related documents and activities for at least three years from the date of the document or activity or for the term of the permit, whichever is longer.



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ACRONYMS

A/E	Architectural and Engineering
ASNMSU	Associated Students of New Mexico State University
BMP	Best Management Practice
CAFO	Concentrated Animal Feeding Operation
CFR	Code of Federal Regulations
CGP	Construction General Permit
CID	New Mexico Construction Industries Division
CIP	Capital Improvements Program
CWA	Clean Water Act
EBID	Elephant Butte Irrigation District
EH&S	Environmental Health & Safety
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
HHW	Household Hazardous Waste
IDDE	Illicit Discharge Detection and Elimination
IH	Interstate Highway
IPM	Integrated Pest Management
LID	Low Impact Development
MAP	Monitoring/Assessment Plan
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MRF	Material Recycling Facility
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector General Permit
NG	Natural Gas
NHPA	National Historic Preservation Act
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMSU	New Mexico State University
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Health and Safety Administration
RCRA	Resource Conservation and Recovery Act
SGCR	Student Government for Campus Residents
SHPO	State Historic Preservation Office
SIC	Standard Industrial Classification
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
USFWS	United States Fish and Wildlife Service
UA	Urbanized Area
WQS	Water Quality Standard
WRRRI	New Mexico Water Resources Research Institute

STORM WATER MANAGEMENT PROGRAM

1.0 INTRODUCTION

1.1 NEW MEXICO STATE UNIVERSITY

1.1.1 History and Governance

New Mexico State University was founded in 1888 as Las Cruces College. The New Mexico Territorial Legislature of 1889 established the land-grant Agricultural College and Experiment Station at the college, which officially opened on January 21, 1890. During its first full academic year, the college became known as the New Mexico College of Agriculture and Mechanic Arts. It was the first degree granting institution in the Territory.

In 1960 New Mexico College of Agriculture and Mechanic Arts became New Mexico State University (NMSU). Since that time, NMSU has become a comprehensive doctoral level university offering a wide variety of programs while sustaining its role as New Mexico's land-grant institution (NMSU, 2007).

NMSU is governed by the Board of Regents. The Board is appointed by the Governor of New Mexico and is comprised of five members, one of whom is a student. The university is operated by the President and a set of Vice Presidents.

1.1.2 Location and Boundaries

The main campus of NMSU is within the Las Cruces Urbanized Area. The Environmental Protection Agency (EPA) shows the main campus as University Park within the hatched urbanized area of Figure 1.

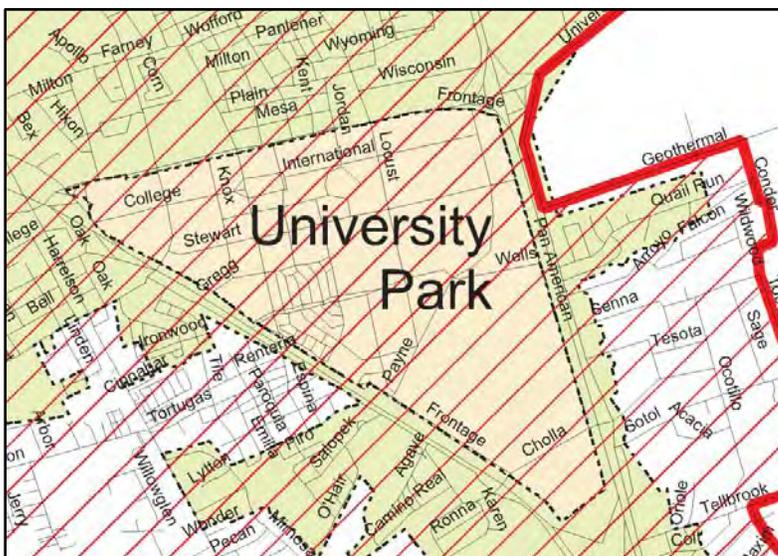


Figure 1. Las Cruces Urbanized Area at NMSU (EPA, 2002).

NMSU owns significantly more land in and adjacent to the Las Cruces Urbanized Area than is shown in Figure 1. Exhibit 1 of the SWMP shows the location and boundaries of

the main campus and other lands owned by NMSU in the immediate vicinity of Las Cruces, both within and outside of the Las Cruces Urbanized Area.

Land owned by NMSU north of University Avenue is leased for commercial development and is within the incorporated limits of the City of Las Cruces. The development is served by the City's drainage system and is subject to the City's Municipal Code of Ordinances.

Land owned by NMSU southwest of Interstate Highway 10 is used for agriculture in support of the land-grant institution activities of NMSU. The only discharges from these areas are agricultural storm water discharges and return flow from irrigation agriculture, both of which are excluded from the definition of point source in Section 502(14) of the Clean Water Act (CWA).

1.1.3 Land Use and Topography

NMSU lies within the Mesilla Valley that is created by the Rio Grande. The valley is part of the Basin and Range Province of the western United States and Mexico. Although the valley is within the Chihuahuan desert, the Rio Grande provides a source of water for irrigation that has resulted in the Mesilla Valley being an important agricultural center. The Elephant Butte Irrigation District (EBID) operates a network of canals, laterals and drains (historically known as acequias) to supply water for agriculture. NMSU is located over four miles from the Rio Grande, near the eastern edge of EBID's system.

Elevations within the main campus range from approximately 3880 feet in the western corner of the triangle to 4100-4200 feet along the I-25 corridor on the east side. The western corner of the main campus is in the bottomland clays of the historic Rio Grande floodplain. The campus rises onto valley sides and terraces toward the east, with soils transitioning from clay to loams to deep sands and gravelly sands on the east side and in the undeveloped southeast triangle of the main campus (USDA, 2004 and 2008). The soils also become progressively more erodible from west to east across the campus.

The historic bottomland in the western corner of the main campus is used for agricultural studies and research. The remainder of the main campus is within an area that had an historic climax community of dropseed-dominated grassland and a rangeland ecosystem (USDA, 2004 and 2008). A small remnant of the ecosystem exists between the Cholla Arroyo and the unnamed arroyo to the southeast, where the vegetation consists of sparse grasses with scattered yucca.

The entire main campus has been disturbed by human activity. The land north of Wells Street is fully developed, as is most of the land northwest of Tortugas Arroyo (Exhibit 2). The majority of undeveloped land is southeast of Tortugas Arroyo. In this area, most of the historic grassland has been replaced with mesquite dunes intermixed with sparse grasses and a few shrubs. The land south of the unnamed arroyo appears to have been significantly disturbed, probably by construction of the IH-10 and IH-25 interchange, and is now covered by creosote bushes.



Figure 2. Undeveloped Area of the NMSU Main Campus.

1.2 NPDES GENERAL PERMIT FOR DISCHARGES FROM SMALL MS4s

Under the Clean Water Act (CWA), operators of Municipal Separate Storm Sewer Systems (MS4) within an urbanized area are required to obtain permit authorization to discharge storm water. State, city, county and other public bodies in urbanized areas that had fewer than 100,000 residents in the 1990 Decennial Census are called “Small MS4s.” NMSU is a Small MS4 operator.

On May 31, 2007, the EPA issued National Pollutant Discharge Elimination System (NPDES) General Permit Number NMR040000 (Federal Register, 2007) authorizing discharges from Small MS4s to waters of the United States. Small MS4s are eligible for authorization of their storm water discharges under the General Permit, as long as they comply with the conditions of the permit. The permit requires Small MS4 operators to submit to the EPA a Notice of Intent (NOI) to authorize their storm water discharges under the permit. The MS4 Operator must also develop, implement and enforce a Storm Water Management Program (SWMP) designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP).

This SWMP was prepared in accordance with Part 5 of the MS4 General Permit by the NMSU Office of Facilities and Services and its consultant, Martich Professional Services, PLLC. NMSU has not combined or shared efforts with any other MS4 operator and is solely responsible for the implementation of the SWMP.

NMSU prepared the SWMP and is seeking permit authorization only for the portion of its MS4 that is within the Las Cruces Urbanized Area, which is the main campus, bounded



approximately by University Avenue, IH-25 and IH-10 (Exhibit 1). Land east of IH-25 is excluded from the SWMP, since it is outside of the urbanized area. It may become part of the SWMP when the permit is renewed, depending on results of the 2010 Decennial Census. Agricultural land southwest of IH-10 is excluded from the SWMP, since there are no municipal point source discharges from the property. NMSU may choose to implement some BMPs through-out its property, but it is only applying for permit authorization of discharges from the MS4 within the urbanized area, as required by the permit.

2.0 PERMIT ELIGIBILITY REQUIREMENTS

2.1 PUBLIC NOTICE AND REVIEW

Part 1.2.3.1 of the MS4 General Permit requires NMSU to provide public notice sixty (60) days prior to the submittal of its NOI. NMSU is also required to make the NOI with attachments, including the SWMP, available for public review.

A Public Notice of the availability of the NOI and SWMP for review is being published in the Las Cruces Sun-News on August 2, 2009. Documentation of the public notice, public comments received, and NMSU's response to the comments will be inserted into Appendix A. This documentation will be provided to the EPA with the annual report that is due October 1, 2009.

2.2 WATER QUALITY STANDARDS

Part 1.4.5 of the MS4 General Permit prohibits authorization of discharges that will cause or have the reasonable potential to cause or contribute to the excursion above any applicable Water Quality Standard (WQS), unless appropriate controls and procedures are implemented to bring the discharge into compliance with the standards. SWMP Exhibit 2 shows a drainage system map for the NMSU MS4. The MS4 discharges storm water into the following:

- City of Las Cruces MS4, which discharges to the EBID Park Drain;
- Tortugas Arroyo, which flows to the EBID Bouggy Drain and then the EBID Park Drain;
- Mission Bell Arroyo, which flows to the EBID Tortugas No. 2 retention basin;
- College Arroyo and Cholla Arroyo, which flow into the Tortugas Arroyo; and
- Unnamed Arroyo, which flows to a retention basin.

All of the arroyos are normally dry, ephemeral, water ways that only flow in direct response to significant precipitation in the immediate area. New Mexico Water Quality Standards for ephemeral waters are use-specific, based on an ephemeral water surface that can fulfill the designated uses of livestock watering, wildlife habitat, limited aquatic life, and secondary contact (NMAC, 2007). The arroyos that flow through NMSU have an ephemeral flow that is typically gone within a day and does not create usable surface water. The only non-use specific WQS is for bacteria. The standard is based on a geometric mean that requires five samples within a 30-day period. Surface water does not remain in these arroyos long enough to collect five samples.

NMSU has determined that its discharges do not cause, nor do they have a reasonable potential to cause, an excursion of a WQS.



Figure 3. Tortugas Arroyo, Looking Upstream from Wells Street.

2.3 TOTAL MAXIMUM DAILY LOADS

Part 1.4.6 of the MS4 General Permit prohibits authorization of discharges that are inconsistent with a Total Maximum Daily Load (TMDL) for impaired surface water, unless the SWMP includes measures or controls that are consistent with the assumptions and requirements of the TMDL. NMSU has determined that its storm water discharges are eligible for coverage under the general permit since no TMDL has been established for the arroyos that receive their discharges.

2.4 ENDANGERED SPECIES ACT ELIGIBILITY EVALUATION

According to Part 1.5 of the MS4 General Permit, coverage under the permit is only available if the MS4 operator's storm water discharges will not jeopardize the continued existence of any species that are listed as endangered or threatened according to the Federal Endangered Species Act (ESA) or will not result in the adverse modification or destruction of habitat that is designated as critical by the ESA. The MS4 operator's storm water discharge should not cause a prohibited "take" of endangered or threatened species unless such takes are authorized by the ESA. If endangered or threatened species are located in proximity to the MS4, consultation with the U.S. Fish and Wildlife Service (USFWS) must be completed to address the effects of the storm water discharges and discharge-related activities on listed species and critical habitat.

The USFWS Southwest Region Ecological Services' website (USFWS, 2009) lists the following endangered species as potentially present in Doña Ana County:

- Least Tern (*Sterna antillarum*) - Bird;
- Northern Aplomado Falcon (*Falco femoralis septentrionalis*) - Bird;



- Rio Grande Silvery Minnow (*Hybognathus anarus*) - Fish;
- Sneed Pincushion Cactus (*Coryphantha sneedii* var. *sneedii*) - Plant; and
- Southwestern Willow Flycatcher (*Empidonax traillii* extimus) - Bird.

The website also lists the Mexican Spotted Owl (*Strix occidentalis lucida*) potentially present in Doña Ana County as a threatened bird species (USFWS, 2009).

New Mexico State University assessed the potential effects of its storm water discharges, allowable non-storm water discharges and discharge-related activities on the above species using the criteria in Appendix A of the MS4 General Permit. No endangered or threatened species or critical habitat are believed to occur in proximity to the MS4 or the MS4's points of discharge. Therefore, the portion of NMSU within the Las Cruces Urbanized Area is eligible for general permit authorization of its MS4 discharges under Part 1.5.3.1 ESA Criterion A of the permit. Refer to Appendix B of the SWMP for the complete ESA Eligibility Evaluation.

2.5 NATIONAL HISTORIC PRESERVATION ACT ELIGIBILITY EVALUATION

Part 1.6 of the MS4 General Permit requires NMSU to assess its compliance with the National Historic Preservation Act (NHPA) in order to be eligible for authorization of its discharges by the permit. NMSU is required to assure storm water discharges, non-storm water discharges, and discharge-related activities do not affect property that is listed or is eligible for listing on the National Register of Historic Places. If discharges affect a property protected by the NHPA, a written agreement must be obtained from the State Historic Preservation Office (SHPO) that outlines all measures NMSU will undertake to mitigate or prevent adverse effects on the historic property.

The National Register of Historic Places contains five listed historic properties within New Mexico State University's portion of the Las Cruces Urbanized Area (National Park Service, 2009). The properties are:

- Former Air Science Building, now the William Conroy Honors Center;
- Foster Hall;
- Goddard Hall;
- Former University President's House, now the Nason House; and
- Elephant Butte Irrigation District (EBID) structures.

NMSU evaluated its permit eligibility in relation to the NHPA using the criteria in Appendix B of the MS4 General Permit. The evaluation and documentation of coordination with the New Mexico Historic Preservation Division are in SWMP Appendix C. NMSU determined that the portion of the university that is within the Las Cruces Urbanized Area is eligible for general permit authorization of its MS4 discharges under Part 1.6.1.1 NHPA Criterion A of the permit.



Figure 4. Goddard Hall

3.0 MINIMUM CONTROL MEASURES

The MS4 General Permit (GP) outlines six Minimum Control Measures (MCM) for the SWMP:

- Public Education and Outreach on Storm Water Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control
- Post-Construction Storm Water Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

An MCM consists of Best Management Practices (BMPs) to prevent or reduce the discharge of pollutants. According to the Code of Federal Regulations, Part 40, Section 122.34, implementation of the BMPs consistent with an authorized SWMP constitutes compliance with the Maximum Extent Practicable (MEP) standard for an MS4.

The following were considered in selecting BMPs for each MCM:

- Existing resources and activities that could be utilized to protect storm water quality;
- Limited legal authority of a university;
- Size of the population impacted; and
- Type of water bodies receiving discharges from the MS4.

BMPs are discussed in Section 3.0 of the SWMP. Schedules and measurable goals for the BMPs are in Section 4.0.

3.1 PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

3.1.1 Target Audiences and Target Pollutants

NMSU is a non-traditional municipality as described in General Permit Part 5.2.1.1.2. The target audiences for its public education and outreach are:

- Students that live both on and off campus;
- Faculty and staff;
- Tenants in leased research facilities; and
- Visitors to events held on campus.

The NMSU grounds maintenance staff inspects the campus for pollutants three times a week. The most common pollutant found is trash. Public education and outreach activities for staff and visitors will be primarily targeted at this pollutant.

There are no commercial or industrial enterprises on campus to generate pollutants. Potential pollutants from educational and research activities are chemical materials and wastes and general trash and debris. Education efforts targeted at faculty, staff and tenants will be focused on proper material and waste handling and preventing materials and wastes from being in contact with storm water.

NMSU has approximately 500 houses and townhouses for student family housing. The housing areas are similar to subdivisions in a traditional municipality. Pollutants typical of residential areas are lawn waste, household hazardous waste, pet waste, wash waters, and trash. Public education for residents will target these pollutants.



Figure 5. Tom Fort Village Family Housing.

3.1.2 General Description and Methods

NMSU will conduct an educational program to inform the public on the campus about storm water quality in the Las Cruces Urbanized Area. The program will emphasize the public's role and responsibility in improving storm water quality. Educating the public is also critical to generating support for the SWMP.

NMSU has a wide variety of methods available for public education and outreach. The targeted audiences are well educated and computer literate. The methods used will primarily be electronic in support of NMSU's sustainability efforts to reduce the use of natural resources. Methods that may be used include, but are not limited to:

- Public service announcements, tag lines, and/or information segments on KRWG 90.7 FM, a public radio station that operates from NMSU;
- Segments for local programming on KRWG-TV;
- Public service announcements and/or information segments on KRUX, a student-operated, non-commercial radio station;
- E-mail distribution systems for students, faculty, and staff;
- Advertisements in The Round Up, a student newspaper;
- @NMSU, an electronic newsletter;
- Press releases to the Round Up and to the Las Cruces Sun-News;
- Programming for television monitors in the Corbett Center Student Union; and
- NMSU website.

Using these methods, NMSU estimates that it will contact over 17,000 students, 3,400 faculty members, 1100 staff members, and approximately 500 research tenants each year.

3.1.3 Best Management Practices

BMP 1-1 Communications Plan

NMSU's Office of News and Media Relations has a highly qualified, professional communications staff. They will develop a written Communications Plan for storm water pollution prevention. The plan will establish specific messages for the target audiences in each year of the permit. Methods used for communicating the messages will vary as needed to be effective based on the topic and the audience.

BMP 1-2 Storm Water Web Page

NMSU will develop a storm water web page on its website. The page will describe the connection between storm water runoff and the watershed's water quality. It will provide information about things the targeted audiences can do to reduce the pollutants in storm water and to protect water quality. The public will have access to NMSU's SWMP and its annual reports through this web page.

BMP 1-3 @NMSU Articles

@NMSU is an electronic newsletter that is distributed to faculty and staff twice a month. The newsletter will be used to inform the faculty and staff about development of the NMSU SWMP and its implementation. The articles will include information on the role that faculty and staff have in preventing storm water pollution. Since NMSU is the leading institution of higher education and research in the Las Cruces Urbanized Area, the newsletter will also be used to encourage faculty and staff involvement in leadership and outreach on storm water pollution prevention in the watershed.

BMP 1-4 Family Housing Information Package

NMSU will develop information on storm water pollution prevention to be included in the information package given to new residents of family housing. Topics that may be included are household hazardous waste, pet waste, car washing, fertilizers, pesticides, and trash.

BMP 1-5 Family Housing Newsletter

The Office of Housing and Residential Life publishes a monthly newsletter for residents of family housing. The newsletter will be used to regularly communicate pollution prevention information to the residents.

BMP 1-6 Special Event Pollution Prevention

The university's athletic facilities are frequently used by sports leagues, concert promoters, and other non-university groups. The visitors that attend these events are a source of trash and debris. NMSU will review its facility use agreements and identify a means to include pollution prevention educational material and requirements in the agreements.

BMP 1-7 Public Radio and Television

KRWG media from NMSU provides public radio and television services to southern New Mexico and west Texas. In 2006 KRWG produced and aired *Rio Grande: How Clean is Our River?* This program looked at water quality in the Rio Grande and the types of point and non-point sources pollutants that affect the river. NMSU will produce a follow-on program that focuses on the sources of storm water pollutants. The program may focus on the public contribution to pollutants in storm water, storm water pollutant research being conducted by the New Mexico Water Resources Research Institute (WRRI) located at NMSU, storm water pollution prevention activities of the Paso Del Norte Watershed Council in which NMSU participates, or other storm water pollution prevention information.

3.1.4 Program Coordinator

The Assistant Vice-President of Facilities and Services is the Program Coordinator. The coordinator will implement the Public Education and Outreach BMPs with assistance from the responsible departments.

3.2 PUBLIC INVOLVEMENT/PARTICIPATION

3.2.1 General Description

As employees of NMSU, faculty and staff will be targeted for involvement in the SWMP through the BMPs in the sixth MCM, Pollution Prevention/Good Housekeeping for Municipal Operations (Section 3.6). The Public Involvement/Participation MCM will focus on involving students in pollution prevention. The student body is the largest audience on campus. They are also the community's future leaders and have the potential to change the community's views of its watersheds and water resources.

3.2.2 SWMP Public Review and Comment Process

The NOI and SWMP will be available through a link on NMSU's website (BMP1-2). NMSU will designate a person to receive public comments on the SWMP. A comment log will be used to track public input. The log will document the comment received, the response provided (if necessary), and the manner in which the comment was evaluated and addressed in the SWMP. Results of the public input and any changes to the SWMP will be documented in NMSU's annual reports.

The student newspaper, The Round Up, is published twice weekly. It has a circulation of approximately 10,500 copies. In addition to the official Public Notice in the Las Cruces Sun-News (Section 2.1), NMSU will notify students of the SWMP through an advertisement in The Round Up.

3.2.3 Best Management Practices

BMP 2-1 Web Access to the SWMP

A link to the SWMP will be maintained on NMSU's storm water web page (BMP1-2). The web page will include the name, phone number and e-mail address of a person that the public can contact about the SWMP. The public will be encouraged to submit questions, comments and concerns related to the SWMP. Annual reports will also be posted for public review as they become available.

BMP 2-2 Advertisements in The Round Up

Advertisements will be published in The Round Up to inform students about the opportunity to comment on and become involved in the SWMP. Advertisements will also be used to solicit comments on annual reports. These advertisements will be in addition to the formal, permit-required Public Notices that will be published in the Las Cruces Sun-News for the SWMP and the annual reports. The permit-required notices occur at the beginning of fall semester when students are distracted by starting the school year. The advertisements in The Round Up will be published later in the fall semester when students will be more receptive to becoming involved.



BMP 2-3 Public Report Phone Number

NMSU will publicize a phone number where the public can report illegal dumping, illicit discharges, construction site discharges and other types of pollutants that have the potential to enter the MS4.

BMP 2-4 Student Government Activities

The two largest student governing bodies that meet regularly are Associated Students of NMSU and Student Government for Campus Residents. Both of these organizations have a history of student involvement and volunteer activities.

Associated Students of NMSU (ASNMSU) is the student-run government with the purpose of serving the entire student body. It consists of an Executive, Legislative and Judicial Branches. One of the goals of the Executive Branch is to provide opportunities for students to become involved in campus-wide special events. ASNMSU is already involved in sustainability and environmental activities such as the Aggie Recycling Program. ASNMSU goals include increasing student awareness of environment issues and “green” programs on campus.

Student Government for Campus Residents (SGCR) is a student-run organization that serves all students in on-campus housing. The organization meets weekly during the school year. One of its goals is to provide opportunities to build a sense of community on campus.

NMSU staff members will meet with the Executive Branch of ASNMSU and with SGCR to discuss the SWMP and ways that students can become involved. NMSU will encourage and support the involvement of students in special events focused on the environment and pollution prevention, such as Earth Day celebrations, clean-up competitions between student groups, or similar events.

3.2.4 Program Coordinator

The Assistant Vice-President of Facilities and Services is the Program Coordinator. The coordinator will implement the Public Involvement/Participation BMPs with assistance from the responsible departments.

3.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

3.3.1 Allowable Non-Storm Water Discharges

An illicit discharge is any discharge to NMSU’s MS4 that is not composed entirely of storm water; except for discharges authorized by another NPDES permit. NMSU believes the following categories of non-storm water discharges are not significant contributors of pollutants to the MS4. As such, they are not considered illicit discharges and are allowable non-storm water discharges:

- Water line flushing;
- Landscape irrigation;

- Diverted stream flows;
- Rising ground waters;
- Uncontaminated ground water infiltration (as defined in 40 CFR Section 35.2005(20));
- Uncontaminated pumped ground water;
- Discharges from potable water sources;
- Foundation drains;
- Air conditioning condensate;
- Irrigation water;
- Springs;
- Water from crawl space pumps;
- Footing drains;
- Lawn watering;
- Individual residential car washing;
- Flows from wetlands and riparian habitats;
- De-chlorinated swimming pool discharges;
- Street wash water; and
- Discharges from emergency fire fighting activities (does not include discharges from fire fighting training activities).

NMSU's Central Plant includes a 3-million gallon thermal storage tank that is drained occasionally for maintenance. Typically, several years pass between the times when maintenance is needed. Utilities Services samples and tests the water in the tank for chemicals of concern and determines the water to be safe for discharge before draining the tank. This precaution ensures that discharges from the thermal storage tank are not significant sources of pollutants to the MS4; and therefore discharges from the thermal storage tank are considered allowable discharges.

3.3.2 MS4 Map

Exhibit 2 is an interim map that shows the location of waters of the U.S. and the City of Las Cruces MS4 that are either within or downstream of the portion of the NMSU MS4 that is covered by this SWMP. The NMSU MS4 consists of surface structures, except for approximately 1200 LF of subsurface storm drain pipe in College Avenue.

On the western side of the main campus, storm water runoff flows into either the College Avenue storm drain or the NMSU Regional Pond, both of which have an outfall to the City of Las Cruces storm drain system. The pond receives storm water runoff from NMSU and the NM Department of Transportation right-of-way for IH-10. The outlet of the pond is controlled by a valve. The valve is normally closed to detain storm water runoff from NMSU and discharge it into the City of Las Cruces storm drain after the city's peak discharge has passed.



Figure 6. NMSU Regional Pond.

Outfalls of surface flow into the arroyos on the eastern side of the main campus will be mapped during the remainder of the permit term. Updated maps will be submitted with each annual report.

3.3.3 On-Site Sewage Disposal Systems

NMSU does not have on-site sewage disposal systems within the main campus. NMSU operates two on-site systems on the agricultural lands west of IH-10 (Exhibit 1). One of these systems, at the Fabian Garcia Research Center, is an old cistern-style, septic system in poor condition. The center is located in the 400 block of College Street, between College and University Avenue. Sanitary sewer service is currently not available to the portion of the research center that is served by the septic system. The City of Las Cruces has proposed improvements to their sanitary sewer system in this area. Although this area is outside of the NMSU MS4 permit coverage, NMSU wants to be a leading environmental steward in the Las Cruces area. The research center will be connected to the new sanitary sewer when it becomes available.

3.3.4 Detection and Elimination Methods

Since all the drainage ways within the main campus are normally dry, visual inspections will be used to detect illicit discharges. Grounds maintenance crews patrol the entire campus three times a week looking for trash and other problems. They will be trained to identify illicit discharges.

When grounds maintenance crews find a flow or material discharged (dumped) where none should be present, they will track it back to the source and determine if it's an

allowable discharge (Section 3.3.1). In cases where the discharge is not allowable, the crews will take steps to stop the discharge. Methods will vary depending on the source:

- If the discharge is a result of a leak, break or other problem with NMSU infrastructure, the appropriate department will be contacted to make repairs and clean-up the discharge.
- If the discharge is the result of faculty or staff actions, EH&S will be contacted to inform the faculty or staff of correct material and waste handling methods and to direct the clean-up.
- If the discharge is the result of a tenant's actions, the Office of Real Estate will be contacted to enforce lease requirements for compliance with environmental laws, regulations and permits.
- If the discharge is a result of students or the general public, the NMSU Police Department will be contacted for enforcement.
- If no source can be determined, EH&S will be contacted to remediate the discharge with assistance from the Office of Facilities and Services.

3.3.5 Enforcement Policy

The NMSU Police Department, being a state law enforcement agency, has the authority to enforce the New Mexico Administrative Code (NMAC) and can issue citations for violations of the NMAC. NMAC 20.9.2 contains the state requirements for solid waste management. Solid waste is defined in the code as *“garbage, refuse, sludge from a waste treatment plant, water supply treatment plant or air pollution control facility and other discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial commercial, mining and agricultural operations and from community activities...”*

The following actions are prohibited by NMAC 20.9.2.10 and are illicit discharges:

- Disposal of any solid waste that will harm the environment or endangers the public health, welfare or safety; and
- Disposal of any solid waste in a place other than a solid waste facility.

When a responsible party can be identified for illicit discharges, NMSU will first inform the party of the violation and direct them to remove and properly dispose of the waste. If the responsible party is affiliated with a university department and does not have the means to remediate the illicit discharge, EH&S will remove and dispose of the waste for them and charge the department. When the responsible party is not affiliated with a university department and is unwilling to remove and dispose of the waste, the NMSU Police Department will use its authority to issue citations and initiate judicial enforcement orders for the cleanup. In cases where there is immediate threat to life, health, safety and/or the environment, EH&S may cleanup the discharge and work with the NMSU Police Department to obtain compensation through a judicial order.

3.3.6 Employee Training for IDDE

NMSU grounds maintenance employees will be trained to identify illicit discharges. The training may include:

- Types of allowable discharges;
- Procedures for identifying the source of a discharge; and
- Response and reporting procedures if the discharge is determined to be an illicit discharge.

3.3.7 Public Education for IDDE

Information about the effects of illicit discharges on storm water quality will be included in the BMPs for Public Education and Outreach (Section 3.1).

3.3.8 Best Management Practices

BMP 3-1 Outfall Mapping

NMSU will identify and map the locations where point source discharges from the MS4 enter the arroyos that flow through the main campus. The map will be updated when new construction adds an outfall to the MS4.

BMP 3-2 Outfall Screening

After the outfall map is completed, NMSU will annually inspect all mapped outfalls for evidence of illicit discharges. If illicit discharges are found, they will be handled as discussed in Sections 3.3.4 and 3.3.5.

BMP 3-3 Recycling

NMSU offers recycling for several types of materials including, but not limited to: plastic #1, aluminum, white paper, colored paper, newspaper, magazines and cardboard. NMSU has over 130 bin locations for recyclables throughout campus, making it easy to recycle and to prevent drink containers and paper from being discarded into the MS4. Work orders can be placed for pick-up of materials such as appliances, concrete, asphalt, wood, and construction and demolition debris.

Recycling is important to the students, faculty and staff at NMSU, as evidenced by awards received in the past two years. In 2008 the university received the Post-Secondary School Recycling Program of the Year Award. In 2009 NMSU was ranked number three out of 510 universities that participated in Recyclemania 2009.

NMSU is developing a curbside recycling program that will be implemented for its family housing residents.



Figure 7. Bottle and Can Recycling.



Figure 8. Paper Recycling.

BMP 3-4 Household Hazardous Waste (HHW) Information for Residents

Residents of student family housing have the potential to generate HHW such as used motor vehicle fluids, paint and paint thinner, stains, printer cartridges, and pesticides. The information developed for family housing under BMP 1-4 will include instructions on proper disposal of HHW. The appropriate location is the City of Las Cruces Recycling Center. NMSU will formalize the agreement for students to use this facility.

BMP 3-5 Public Trash Receptacles

NMSU maintains over 150 trash receptacles and nearly 90 dumpster locations throughout campus to make it easy to dispose of waste material correctly. They are inspected and serviced a minimum of once a week to ensure they are not overflowing. NMSU also provides dumpsters for festivals, sports, and other special events on campus to decrease the amount of trash discharged from these events.

BMP 3-6 Inspections for Trash and Debris

At least once a week, Facilities Maintenance staff inspects for and removes trash and debris from all areas of the campus grounds that are exposed to storm water. Material that is recyclable is placed in recycling bins or transported to the Material Recycling Facility. Unrecyclable material is placed in the waste bins throughout campus.

BMP 3-7 Grounds Maintenance Employee Training

Employees will be trained to identify illicit discharges while performing their regular maintenance duties. Training will be accomplished during one of the regularly scheduled, monthly safety training sessions.

3.3.9 Program Coordinator

The Assistant Vice-President of Facilities and Services is the Program Coordinator. The coordinator will implement the Illicit Discharge Detection and Elimination BMPs with assistance from the responsible departments.

3.4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROLS

3.4.1 Legal Authority and Compliance Procedures

Capital improvement projects at NMSU are constructed by companies under contract to NMSU. As a state institution, construction at NMSU is governed by the New Mexico Construction Industries Division (CID) rules as published in the NMAC. NMSU does not have the legal authority to adopt ordinances. Enforcement of construction requirements are done through issuance of a building permit by CID and through enforcement of construction contract requirements by Facilities Planning and Construction.

NMSU's construction contracts require the contractor to comply with NPDES General Permit No. NMR150000, the Construction General Permit (CGP), including preparation of a Storm Water Pollution Prevention Plan (SWPPP). Erosion, sediment and waste controls are part of the SWPPP. The contractor is required to submit the SWPPP to NMSU for review. NMSU does not allow the contractor to start any soil disturbing activities until they have reviewed and accepted the SWPPP.

Portions of NMSU are leased to research tenants. New construction by tenants is subject to the same CID building permit requirements as NMSU construction and to the NPDES CGP. Tenants manage and inspect their own construction projects. NMSU's authority over tenant construction is limited to the terms of the tenant's lease.

3.4.2 Inspection and Enforcement Process

NMSU staff is on the university's construction sites daily to inspect for compliance with all requirements of construction contracts. When a deficiency is observed, NMSU gives the contractor a notice of the deficiency and seven days to correct it. If the contractor continues to not comply with contract requirements, NMSU will withhold contract payment for the work and may use contract funds to correct the deficiency. NMSU uses these procedures to enforce the contract requirement to comply with the CGP. If these procedures are unsuccessful, NMSU will contact the NMED to enforce the CGP requirements.

From public roads, NMSU can visually check tenant construction sites for the following:

- NPDES posting(s);

- Well-maintained BMPs for erosion and sediment controls; and
- Evidence of tracking or discharges onto streets or into arroyos.

When NMSU observes conditions that may not be in compliance the CGP, they will use their Office of Real Estate to inform the tenant that NMED will be notified if the site conditions do not improve. During the permit term, NMSU will review its legal authority and its leases to determine if additional inspection and enforcement procedures can be implemented for tenant construction sites.

3.4.3 Public Reports of Construction Site Problems

Information about reporting pollution from construction sites will be included in the publicity for the Public Report Phone Number (BMP 2-3). BMPs for Public Education and Outreach (Section 3.1) will also include information about reporting problems at construction sites.

3.4.4 Best Management Practices

BMP 4-1 NMSU Employee SWPPP Training

NMSU employees who review SWPPPs and inspect construction sites will be trained in the requirements of the CGP.

BMP 4-2 SWPPP Review Checklist

NMSU will develop a checklist for reviewers to use to ensure that the SWPPPs for NMSU projects include all elements required by the CGP.

BMP 4-3 SWPPP Inspection Report

NMSU will develop a standard SWPPP Inspection Report that meets the report requirements of the CGP. This report will be used to inspect NMSU construction sites at the frequency required in the CGP.

BMP 4-4 Tenant Construction Compliance

NMSU will review its leases with the tenants to determine its authority to enforce the erosion sediment and waste control requirements in the CGP. Within its legal authority, NMSU will revise existing leases and ensure new leases require compliance with the CGP.

BMP 4-5 Tenant Construction Inspection

Access to and authority over tenant construction sites are currently constrained by the terms of the tenant's lease. As NMSU reviews the leases and determines changes that can be made to allow inspection, NMSU will also develop inspection procedures. The inspection procedures will be implemented when the leases are revised and/or new leases are signed.

3.4.5 Program Coordinator

The Assistant Vice-President of Facilities and Services is the Program Coordinator. The coordinator will implement the BMPs under the Construction Site Storm Water Runoff Control MCM with assistance from the responsible departments.

3.5 POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

3.5.1 Legal Authority and Enforcement Procedures

As a state institution and the only land owner within the NMSU MS4, NMSU does not have the typical legal authority to control development through ordinances. Instead, development is controlled through contracts and leases issued by NMSU.

Facilities Planning and Construction uses professional services contracts with architectural and engineering (A/E) firms to plan and design new development. NMSU's design requirements are included in the contract. NMSU reviews the plans prepared by the A/E firm to verify that design is in accordance with NMSU's requirements. NMSU's construction inspectors ensure the development is built according to the plans.

Development designs for NMSU's tenants are accomplished by the tenant's design team; however, NMSU reviews the tenant's plans for compatibility with the university's standards and guidelines. NMSU's authority to enforce the requirements is limited to the terms of the tenant's lease.

3.5.2 Operations and Maintenance

As the sole landowner within the main campus, all drainage structures are part of the NMSU MS4. There are no private structures. Since the majority of drainage on campus is by sheet flow, the MS4 contains few structures that require maintenance. Long-term operation and maintenance of the structures is provided by the Office of Facilities and Services.

Currently, NMSU's MS4 maintenance activities are focused on the streets. Street sweepers are used to remove pollutants from the streets. After storm events, equipment is used to remove sediment and debris that the arroyos deposit on the streets within the main campus. During implementation of the SWMP, the maintenance program will be extended to other MS4 structures.

3.5.3 Developer and Public Education

As the leading institution of higher education and research in the Las Cruces UA, NMSU can play a significant role in providing education about Low Impact Development (LID).

LID methods are relatively new in the southwest region of the U.S. One of the obstacles to implementing LID methods is that many of the current methods publicized by the EPA and the LID Center were developed for the east and west coasts. The climate on the coasts is significantly different and wetter than the climate of southern New Mexico.

NMSU can be a leader in overcoming obstacles to LID in the region by providing research and education about LID methods that are appropriate for southern New Mexico. NMSU will explore opportunities to work with the City of Las Cruces and Doña Ana County to provide developer and public education on LID. NMSU's involvement may be through its staff, faculty, and/or the New Mexico Water Resources Research Institute.

3.5.4 Best Management Practices

BMP 5-1 LEED Silver Standards for Capital Improvement Projects

NMSU is a signatory to the American College & University President's Climate Commitment. The commitment is an effort by college and university presidents to show leadership in addressing global warming. By signing this commitment, the President of NMSU promised to develop a comprehensive plan for NMSU to achieve climate neutrality. He also committed to implementing measures to reduce greenhouse gases while the comprehensive plan is being developed. One of these measures is establishing a policy that all new capital improvement projects will be built to at least the U.S. Green Building Council's LEED Silver standard or equivalent.

To achieve LEED Silver standard, specific criteria must be met in Site Development and Storm Water Design. Site Development requirements are to conserve existing natural resources and restore damaged areas as well as to provide a high ratio of open spaces. Storm Water Design requirements are to limit disruption of natural hydrology by reducing impervious cover, increase on-site infiltration, reduce or eliminate pollution from storm water runoff, and limit the disruption of natural water flows.

BMP 5-2 Drainage Design Guidelines

Currently, every development design team is required to include a licensed civil engineer in the State of New Mexico to design the grading and drainage plan. NMSU requires the post-development hydrograph (total volume and peak flow rate) for the 100-year return period storm event to match the pre-developed hydrograph. The remainder of the drainage design is generally left to the judgment of the engineer. During review of the plans, NMSU may comment on the design based on known drainage problems and experience; however, there are no other standard design requirements.

NMSU will develop written Drainage Design Guidelines for new development and redevelopment projects. The guidelines will encourage minimization of impervious area, preservation of natural drainage systems, and the incorporation of design features to protect or improve storm water quality.

BMP 5-3 Tenant Development Requirements

NMSU will review its leases with tenants to determine its authority to enforce development standards. Within its legal authority, NMSU will develop procedures to require and review the tenants' development plans for compliance with the Drainage Design Guidelines.



BMP 5-4 Plan Review

Office of Facilities and Services – Engineering currently participates in plan review for capital improvement projects. They will expand their review to include compliance with the new Drainage Design Guidelines. Within their legal authority, they will also review development plans for the projects of NMSU's tenants.

BMP 5-5 MS4 Inspection and Repair Program

NMSU will inventory its MS4 infrastructure, excluding curbs and gutters. Structures that will be inventoried include ponds and basins, inlets, storm drains, ditches and swales, concrete flumes and other constructed or modified (e.g. lined with riprap) drainage ways. After the inventory is completed, NMSU will develop a schedule for inspecting the structures. Cleaning and repair of the structures will be accomplished as needed based on the results of inspections.

BMP 5-6 LID Workshop

NMSU staff and faculty or WRII researchers interested in LID will meet with representatives from the City of Las Cruces and Doña Ana County to discuss the potential for cooperating on a regional LID the workshop. If there is sufficient interest, NMSU will plan and present an LID Workshop for the region.

3.5.5 Program Coordinator

The Assistant Vice-President of Facilities and Services is the Program Coordinator. The coordinator will implement the Development BMPs, with assistance from the responsible departments.

3.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

3.6.1 Affected Operations

Operations and facilities that occur outside or that have materials and/or wastes located outside have the potential to discharge pollutants to storm water. At NMSU, these operations and facilities include:

- Facilities maintenance;
- Fleet maintenance facility;
- Farm equipment maintenance shop;
- Lawn maintenance shop;
- Craft shops (painting, carpentry, welding, signs, etc.);
- Central Plant;
- Material Recycling Facility (MRF);
- Composting facility;
- Horse stables and facilities; and
- Animal study and research facilities.



Figure 9. Fleet Maintenance Facility.

NMSU construction activities are discussed under the Construction Site Storm Water Runoff Control MCM (Section 3.4).

3.6.2 Industrial Facilities

NMSU operates a physical plant, known as the Central Plant, which produces electricity, chilled water for space cooling, and domestic hot water on the main campus. Natural gas is used to fuel the turbine generator cogeneration system and the steam boilers. Electricity generated by the facility is solely for support of NMSU's education and research mission (SIC Code 8221). No electricity is sold, and no receipts are received for generation of electricity. The Central Plant is not a primary industrial activity as defined by NPDES General Permit No. NMR05000 for Storm Water Discharges Associated with Industrial Activity, also known as the Multi-Sector General Permit (MSGP). Therefore, storm water discharges from the Central Plant are not required to be authorized by the MSGP.



Figure 10. NMSU Central Plant.



Figure 11. Cooling Towers behind Central Plant (NG-Fired Turbines are within Building on the Right Side).



NMSU also operates the Material Recycling Facility (MRF). The MRF stores recyclable material collected on campus and processes it to be transported and sold to a recycling wholesaler. The MRF includes the following processes:

- Baler for paper and cardboard;
- Can densifier; and
- Shredder for plastic bottles.

Although NMSU processes recyclable materials at the MRF, they only process materials collected from NMSU facilities. The materials are then sold to a wholesaler. NMSU itself is not a wholesaler under SIC Code 5093. Therefore, storm water discharges from the facility are not required to be authorized by the MSGP.

There are no other activities on the main campus that could potentially meet the definition of an industrial activity. Both the Central Plant and the MRF are included in the affected operations (Section 3.6.1) that will implement BMPs under the Pollution Prevention/Good Housekeeping for Municipal Operations MCM.

3.6.3 Employee Training Program

Employees in the affected operations will be trained in the following, as appropriate for their operations that are exposed to storm water:

- General storm water pollution prevention;
- BMP implementation; and
- Relevant EH&S waste management procedures.

3.6.4 Best Management Practices

BMP 6-1 Good Housekeeping Procedures for Shops and Maintenance Facilities

NMSU will identify which craft shops, maintenance facilities and similar facilities have exterior areas where any of the following occur:

- Vehicles or equipment is held prior to repairs or maintenance;
- Supplies and materials are stored;
- Old parts and equipment are stored until haul-off;
- Chemicals are stored until they are needed; or
- Other activities with the potential to discharge pollutants to storm water.

For each of these facilities, NMSU will develop written good housekeeping procedures for the areas that are exposed to storm water. The procedures may contain, but are not limited to,

- Items that are prohibited from being stored outside;
- Water-proof containers, covers, or other BMPs to prevent contact with storm water;

- Berms, containment systems or other BMPs to prevent the discharge of pollutants;
- Regularly scheduled sweeping or other clean-up; and
- Quarterly visual inspections of the area.

The employees who operate each facility will be responsible for implementing the good-housekeeping procedures, including the quarterly inspection. Facility employees will be trained in the good housekeeping procedures after they are developed.

BMP 6-2 Annual Storm Water Pollution Prevention Inspections

EH&S manages NMSU's compliance with RCRA waste handling, storage and disposal regulations; OSHA hazard communication regulations; and other safety and environmental regulations. They are well versed in identifying pollutant sources and preventative measures. After the good housekeeping procedures are implemented (BMP 6-1), EH&S will annually perform independent facility inspections to ensure good housekeeping procedures and BMPs are adequate and to identify any new or changed operations that might require new procedures or BMPs.

BMP 6-3 Integrated Pest Management (IPM) Program

In 2009 NMSU assumed operation of grounds (open space) maintenance from a contractor. The contractor was using an IPM program. NMSU has adopted many of the same methods.

No pesticides are applied routinely. Lawns and plants are checked monthly for density of pests, and pesticides are applied only when thresholds are exceeded. The least toxic, species-specific pesticide is used whenever possible. Insecticidal soap is typically used first, with more toxic pesticides used only when the soap is not effective. NMSU has two state-licensed applicators who apply pesticides when necessary. NMSU will continue to use and expand its IPM practices and will develop a written IPM program.

BMP 6-4 Street Sweeping

The majority of storm water runoff at NMSU is by surface flow, most of which is conveyed through the streets. Stewart Street (Exhibit 2) is one of the university's main drainage ways. NMSU has a street sweeping program to reduce the amount of pollutants discharged with the storm water.

BMP 6-5 Material Handling Procedures for MS4 Maintenance

NMSU will develop written procedures for storing, handling and disposing of the material it removes from the MS4. This material includes debris collected in street sweepers, sediment and debris removed from arroyo low water crossings, and material from cleaning MS4 infrastructure (BMP 5-5). Employees will be trained in the material handling procedures after they are developed.



BMP 6-6 Composting of Landscaping Waste

For most lawns, NMSU uses mulching mowers to deposit the grass trimmings back into the lawn. Grass clippings that can't be mulched, pruning waste, and other organic matter from landscaping operations are taken to the university's on-campus composting facility. The finished compost is then returned to the landscaping as a slow-release, organic fertilizer. Using compost reduces the amount of chemical fertilizer that is applied to the landscaping.

BMP 6-7 Feasibility Study of Controls for Animal Pens

The west corner of the main campus triangle contains animal pens for research operations, animal science classes, and athletic teams. The animal population is below the threshold for a medium Concentrated Animal Feeding Operation (CAFO). The permitting authority has not designated the facility as a significant contributor of pollutants; therefore, it is not required to obtain permit authorization as a Small CAFO.

Although NMSU is not required to obtain permit authorization for discharges from its pens, NMSU is interested in reducing pollutants in storm water from the pens, if possible. NMSU will conduct a feasibility study of potential controls for the pens. The controls may be structural or non-structural (operational procedures).

3.6.5 Program Coordinator

The Assistant Vice-President of Facilities and Services is the Program Coordinator. The coordinator will implement the Municipal Operations BMPs, with assistance from the responsible departments.

4.0 SCHEDULE AND MEASUREABLE GOALS

Tables 1 through 6 present implementation schedules for BMPs and their measurable goals. The MS4 General Permit is effective for five years, starting on July 1, 2007 and expiring on June 30, 2012. Years 3, 4, and 5 in the tables refer to the corresponding permit year. The SWMP was prepared at the start of Year 3; therefore, no activities are shown for Years 1 and 2. Unless otherwise noted, the scheduled date of accomplishment for each measurable goal is June 30th of the permit year in which it is listed.



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Table 1. Public Education and Outreach on Storm Water Impacts: BMPs, Measurable Goals and Schedule

BMP NO.	TITLE	RESPONSIBLE DEPARTMENT	YEAR 3 July 1, 2009 - June 30, 2010	YEAR 4 July 1, 2010 - June 30, 2011	YEAR 5 July 1, 2011 - June 30, 2012
1-1	Communications Plan	News and Media Relations	Complete a Communications Plan by December 31, 2009 Track the methods used and the estimated number of contacts made	Track the methods used and the estimated number of contacts made	Track the methods used and the estimated number of contacts made
1-2	Storm Water Web Page	News and Media Relations	Establish web page by September 30, 2009	Review and update web page	Review and update web page
1-3	@NMSU Articles	News and Media Relations	Publish two articles	Publish two articles	Publish two articles
1-4	Family Housing Information Package	Housing and Residential Life	Develop and print information sheet or brochure about storm water pollution prevention for family housing residents	Track number of packages distributed	Track number of packages distributed
1-5	Family Housing Newsletter	Housing and Residential Life	Include pollution prevention information in two newsletters	Include pollution prevention information in two newsletters	Include pollution prevention information in two newsletters
1-6	Special Event Pollution Prevention	Athletics		Complete review of facility use agreements by December 31, 2010 Develop pollution prevention education and requirements for facility use agreements	Track number of facility use agreements that include pollution prevention education and requirements
1-7	Public Radio and Television	News Media and Relations			Produce program on sources of storm water pollutants

Table 2. Public Involvement/Participation: BMPs, Measurable Goals and Schedule

BMP NO.	TITLE	RESPONSIBLE DEPARTMENT	YEAR 3 July 1, 2009 - June 30, 2010	YEAR 4 July 1, 2010 - June 30, 2011	YEAR 5 July 1, 2011 - June 30, 2012
2-1	Web Access to the SWMP	News and Media Relations	Post SWMP on the web page by July 31, 2009	Add the annual report to the web page by August 31, 2010	Add the annual report to the web page by August 31, 2011
2-2	Advertisements in The Round Up	News and Media Relations	Publish an advertisement soliciting comments on and involvement in the SWMP by Nov. 15, 2009	Publish an advertisement soliciting comments on and involvement in the SWMP by Nov. 15, 2010	Publish an advertisement soliciting comments on and involvement in the SWMP by Nov. 15, 2011
2-3	Public Report Phone Number	Office of Facilities and Services	Establish the phone number and procedures for handling reports	Track the number and types of reports received	Track the number and types of reports received
2-4	Student Government Activities	News and Media Relations	Meet with ASNMSU Executive Branch and SGCR once each fall and spring semester	Meet with ASNMSU Executive Branch and SGCR once each fall and spring semester	Meet with ASNMSU Executive Branch and SGCR once each fall and spring semester

Table 3. Illicit Discharge Detection and Elimination: BMPs, Measurable Goals and Schedule

BMP NO.	TITLE	RESPONSIBLE DEPARTMENT	YEAR 3 July 1, 2009 - June 30, 2010	YEAR 4 July 1, 2010 - June 30, 2011	YEAR 5 July 1, 2011 - June 30, 2012
3-1	Outfall Mapping	Office of Facilities and Services	Complete a map of outfalls to arroyos in the main campus Add new MS4 outfalls to the map as they are constructed	Add new MS4 outfalls to the map as they are constructed	Add new MS4 outfalls to the map as they are constructed
3-2	Outfall Screening	Facilities Maintenance		Inspect 100% of mapped outfalls for signs of illicit discharges	Inspect 100% of mapped outfalls for signs of illicit discharges
3-3	Recycling	Facilities Maintenance	Track the types and amount of material recycled	Track the types and amount of material recycled	Track the types and amount of material recycled Implement curbside recycling for family housing
3-4	HHW Information for Residents	Housing and Residential Life	Formalize agreement for family housing residents to use the City of Las Cruces HHW collection center Include information about HHW disposal in the family housing information package (BMP 1-4)	Include information about HHW disposal in the family housing information package (BMP 1-4)	Include information about HHW disposal in the family housing information package (BMP 1-4)
3-5	Public Trash Receptacles	Facilities Maintenance	Track number of receptacles provided	Track number of receptacles provided	Track number of receptacles provided
3-6	Inspections for Trash and Debris	Facilities Maintenance	Inspect for and remove trash and debris from the campus grounds once a week	Inspect for and remove trash and debris from the campus grounds once a week	Inspect for and remove trash and debris from the campus grounds once a week
3-7	Grounds Maintenance Employee Training	Facilities Maintenance	Train employees by March 30, 2010 to identify illicit discharges	Train new employees within 3 months of being hired	Train new employees within 3 months of being hired

Table 4. Construction Site Storm Water Runoff Controls: BMPs, Measurable Goals and Schedule

BMP NO.	TITLE	RESPONSIBLE DEPARTMENT	YEAR 3 July 1, 2009 - June 30, 2010	YEAR 4 July 1, 2010 - June 30, 2011	YEAR 5 July 1, 2011 - June 30, 2012
4-1	NMSU Employee SWPPP Training	Facilities Planning and Construction	Train NMSU employees who review SWPPPs and inspect construction sites by March 30, 2010	Within 4 months of EPA issuing the new CGP, train employees in the in the new requirements Train new plan review and inspection employees within six months of being hired	Train new plan review and inspection employees within 6 months of being hired
4-2	SWPPP Review Checklist	Facilities Planning and Construction	Develop a SWPPP review checklist by December 31, 2009	Revise the SWPPP review checklist within 2 months of EPA issuing the new CGP	
4-3	SWPPP Inspection Report	Facilities Planning and Construction	Develop a SWPPP Inspection Report by March 30, 2010	Revise the SWPPP Inspection Report, if needed, within 2 months of EPA issuing the new CGP	
4-4	Tenant Construction Compliance	Office of Real Estate	Review leases and determine legal authority to enforce erosion, sediment and waste control requirements that are in the CGP	Within NMSU's legal authority, modify existing leases to require compliance with the Construction General Permit Ensure that new leases include the requirement to comply with the Construction General Permit	Ensure that new leases include the requirement to comply with the Construction General Permit
4-5	Tenant Construction Inspection	Office of Facilities and Services	Within NMSU's legal authority, develop procedures to inspect for tenant's compliance with the Construction General Permit	Track number of tenant construction inspections and types of enforcement actions	Track number of tenant construction inspections and types of enforcement actions

Table 5. Post-Construction Storm Water Management in New Development and Redevelopment: BMPs, Measurable Goals and Schedule

BMP NO.	TITLE	RESPONSIBLE DEPARTMENT	YEAR 3 July 1, 2009 - June 30, 2010	YEAR 4 July 1, 2010 - June 30, 2011	YEAR 5 July 1, 2011 - June 30, 2012
5-1	LEED Silver Standards for Capital Improvement Projects	Facilities Planning and Construction	Establish design policies for LEED Silver Certification of new capital improvement projects	Track percentage of capital improvement projects that receive LEED Silver Certification	Track percentage of capital improvement projects that receive LEED Silver Certification
5-2	Drainage Design Guidelines	Office of Facilities and Services		Develop written Drainage Design Guidelines that include water quality criteria	
5-3	Tenant Development Requirements	Office of Real Estate	Review leases and determine legal authority to enforce development requirements on tenants	Within NMSU's legal authority, modify existing leases to require compliance with the Drainage Design Guidelines Ensure that new leases include the requirement to comply with Drainage Design Guidelines	Ensure that new leases include the requirement to comply with Drainage Design Guidelines
5-4	Plan Review	Office of Facilities and Services		Review NMSU and tenant development plans (within legal authority) for compliance with Drainage Design Guidelines	Review NMSU and tenant development plans (within legal authority) for compliance with Drainage Design Guidelines
5-5	MS4 Inspection and Repair Program	Office of Facilities and Services	Inventory all non-natural drainage channels and structures	Add new infrastructure to the MS4 inventory as it is constructed Develop an inspection schedule for the MS4	Add new infrastructure to the MS4 inventory as it is constructed Track the amount of material cleaned from the MS4 and the number and types of repairs
5-6	LID Workshop	Office of Facilities and Services	Meet with the City of Las Cruces and Doña Ana County to determine level of interest in a regional LID Workshop	If interest exists, plan an LID Workshop	If interest exists, present an LID Workshop

Table 6. Pollution Prevention/Good Housekeeping for Municipal Operations: BMPs, Measurable Goals and Schedule

BMP NO.	TITLE	RESPONSIBLE DEPARTMENT	YEAR 3 July 1, 2009 - June 30, 2010	YEAR 4 July 1, 2010 - June 30, 2011	YEAR 5 July 1, 2011 - June 30, 2012
6-1	Good Housekeeping Procedures for Shops and Maintenance Facilities	Facilities Maintenance	Develop written procedures for each facility	Train the employees at each facility by September 30, 2010 Train new employees at each facility within 3 months of being hired	Train new employees at each facility within 3 months of being hired
6-2	Annual Storm Water Pollution Prevention Inspections	Environmental Health & Safety		Develop an inspection form by September 30, 2010 Track number of facilities inspected and percentage that needed corrective measures	Track number of facilities inspected and percentage that needed corrective measures
6-3	Integrated Pest Management (IPM) Program	Facilities Maintenance		Develop a written IPM program	
6-4	Street Sweeping	Facilities Maintenance	Sweep each major thorough-fare monthly Track the amount of material removed from the MS4 by street sweeping	Sweep each major thorough-fare monthly Track the amount of material removed from the MS4 by street sweeping	Sweep each major thorough-fare monthly Track the amount of material removed from the MS4 by street sweeping
6-5	Material Handling Procedures for MS4 Maintenance	Facilities Maintenance	Develop written procedures	Train the employees that perform maintenance by September 30, 2010 Train new maintenance employees within 3 months of being hired	Track amount of material disposed of and where it is disposed Train new maintenance employees within 3 months of being hired
6-6	Composting of Landscaping Waste	Facilities Maintenance	Track amount of material composted and amount of compost applied to open spaces	Track amount of material composted and amount of compost applied to open spaces	Track amount of material composted and amount of compost applied to open spaces
6-7	Feasibility Study of Controls for Animal Pens	Office of Facilities and Services		Complete the feasibility study	Prepare an implementation plan for any feasible controls

5.0 MONITORING AND ASSESSMENT

The MS4 General Permit requires NMSU to develop a Monitoring /Assessment Plan (MAP) that evaluates program compliance, the appropriateness of best management practices, and progress toward achieving the SWMP's measurable goals. No analytical monitoring is required, since NMSU does not discharge to waters on the CWA Section 303(d) list of impaired waters. NMSU will submit the MAP to the EPA with the annual report that is due October 1, 2009.

The MAP will seek to measure the improvement and/or protection of water quality that is resulting from implementation of the SWMP. Examples of measures that may be included in the MAP are:

- Quantity of material removed from the MS4;
- Number of illicit discharges found and eliminated;
- Number of construction sites in compliance with the CGP; and
- Number of new projects using LID principles to protect or improve water quality.

6.0 GENERAL PERMIT REQUIREMENTS

6.1 ANNUAL REPORT

MS4 General Permit requires NMSU to submit an annual report to the EPA by October 1st of each year. The report should cover all SWMP activities for the prior permit year of July 1st to June 30th. NMSU is also required to provide public notice and make available for public comment a draft of the Annual Report for at least thirty (30) days. All public input and any resulting changes to the SWMP must be addressed in the annual report before it is submitted to the EPA.

Refer to Part 5.8 of the MS4 General Permit for a discussion of items that must be included in the annual report. These items include, but are not limited to:

- A statement of NMSU's status of compliance with the MS4 General Permit;
- An assessment of the appropriateness of the BMPs that have been implemented;
- Review of the progress made toward reducing the discharge of pollutants to the Maximum Extent Practicable (MEP);
- An assessment of the success of the measurable goals for each of the MCMs;
- A summary of the collected and analyzed information, if any, used to track the success of the program;
- A summary of the storm water activities that NMSU is going to implement during the next reporting cycle, including a schedule;
- Proposed changes to the SWMP, BMPs or measurable goals;
- Description and schedule of any additional BMPs that may be necessary based on new information or applicable TMDLs;
- A notice of any agreements that NMSU has for another government entity to satisfy some of its permit obligations;
- A summary of any issues raised by the public on the Draft Annual Report;
- Proposed changes to the SWMP based on public comment; and
- A summary of NMSU's response to public comments.



The annual reports should be submitted to the EPA at the following address:

U.S. EPA, Region 6
Compliance Assurance and Enforcement Division
Water Enforcement Branch (6EN-WC)
1445 Ross Avenue
Dallas, TX 75202-2733

A copy of each annual report must also be submitted to:

Program Manager
Point Source Regulations Section
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, NM 87502

6.2 REVIEWING AND UPDATING THE SWMP

The MS4 General Permit requires NMSU to annually review its SWMP in conjunction with preparation of the annual report. NMSU may add BMPs, components, controls, or requirements to the SWMP at any time upon written notification to the EPA, as long the changes do not replace anything in the SWMP and nothing is removed from the SWMP. If NMSU wishes to replace an ineffective or infeasible BMP with an alternate BMP, NMSU must submit a written request for the change to the EPA. Requests for changes must include:

- An analysis of why the BMP is ineffective or infeasible (including cost prohibitive);
- Expectations of the effectiveness of the replacement BMP; and
- An analysis of why the replacement BMP is expected to achieve the goals of the BMP being replaced.

Unless denied by the EPA, changes proposed according to the criteria above will be deemed approved and may be implemented sixty (60) days after submitting the request.

Refer to Part 5.5 of the MS4 General Permit for all requirements related to Reviewing and Updating SWMPs.

6.3 RECORDKEEPING

The MS4 General Permit requires NMSU to retain the following (as applicable) for at least three years from the date of the sample, measurement, report, or permit application, or for the remainder permit term, whichever is longer:

- Records of all data used to complete the NOI;
- All monitoring records, calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation;
- Copies of all reports required by the permit;
- Copies of Discharge Monitoring Reports (DMRs);
- A copy of the NPDES permit;

- Information and determinations used to document permit eligibility based on discharges being consistent with a TMDL;
- Information and determinations used to document permit eligibility based on the ESA; and
- Information and determinations used to document permit eligibility based on the NHPA.

The recordkeeping period may be extended by request of the EPA. Refer to Part 5.7 of the MS4 General Permit for all requirements related to Recordkeeping.

7.0 REFERENCES

Environmental Protection Agency (2002). "Las Cruces, NM Urbanized Area Storm Water Entities as Defined by the 2000 Census." August 27, 2002. Retrieved July 07, 2009 from http://www.epa.gov/npdes/pubs/va_nm_lascruces_rds.pdf.

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New Mexico State University (2007). "New Mexico State University Policy Manual." Ratified October 22, 2007. Retrieved 6/30/2009 from <http://www.nmsu.edu/manual/documents/intro.pdf>.

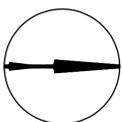
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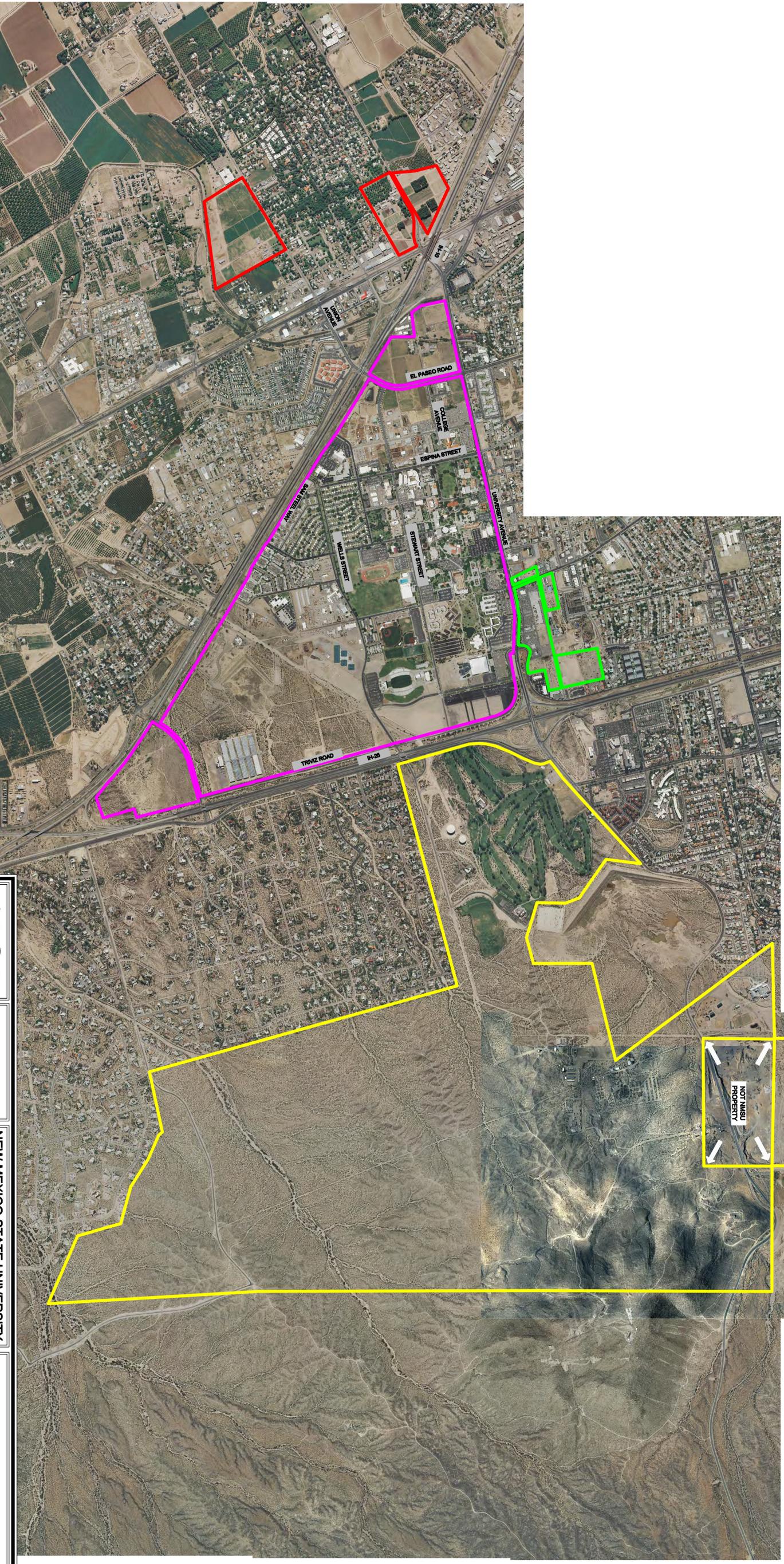
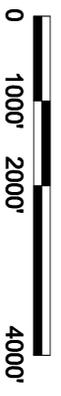
Insert copies of public notices, public comments
and NMSU's responses to comments.

LEGEND

	NMSU MS4 WITHIN LAS CRUCES URBANIZED AREA (MAIN CAMPUS)
	NMSU PROPERTY WITHIN CITY OF LAS CRUCES MS4
	NMSU AGRICULTURAL LANDS WITHIN LAS CRUCES URBANIZED AREA
	NMSU MS4 OUTSIDE OF LAS CRUCES URBANIZED AREA



SCALE: 1" = 1000'



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 4100 RIO BRAVO ST., STE. 320
 EL PASO, TX 79902-1049
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K. MARTICH

DRAWN BY:
E. CHACON

REVIEWED BY:
K. MARTICH

NEW MEXICO STATE UNIVERSITY
 LAS CRUCES, NEW MEXICO

STORM WATER
 MANAGEMENT PROGRAM
 JULY 2009

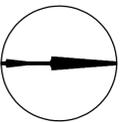
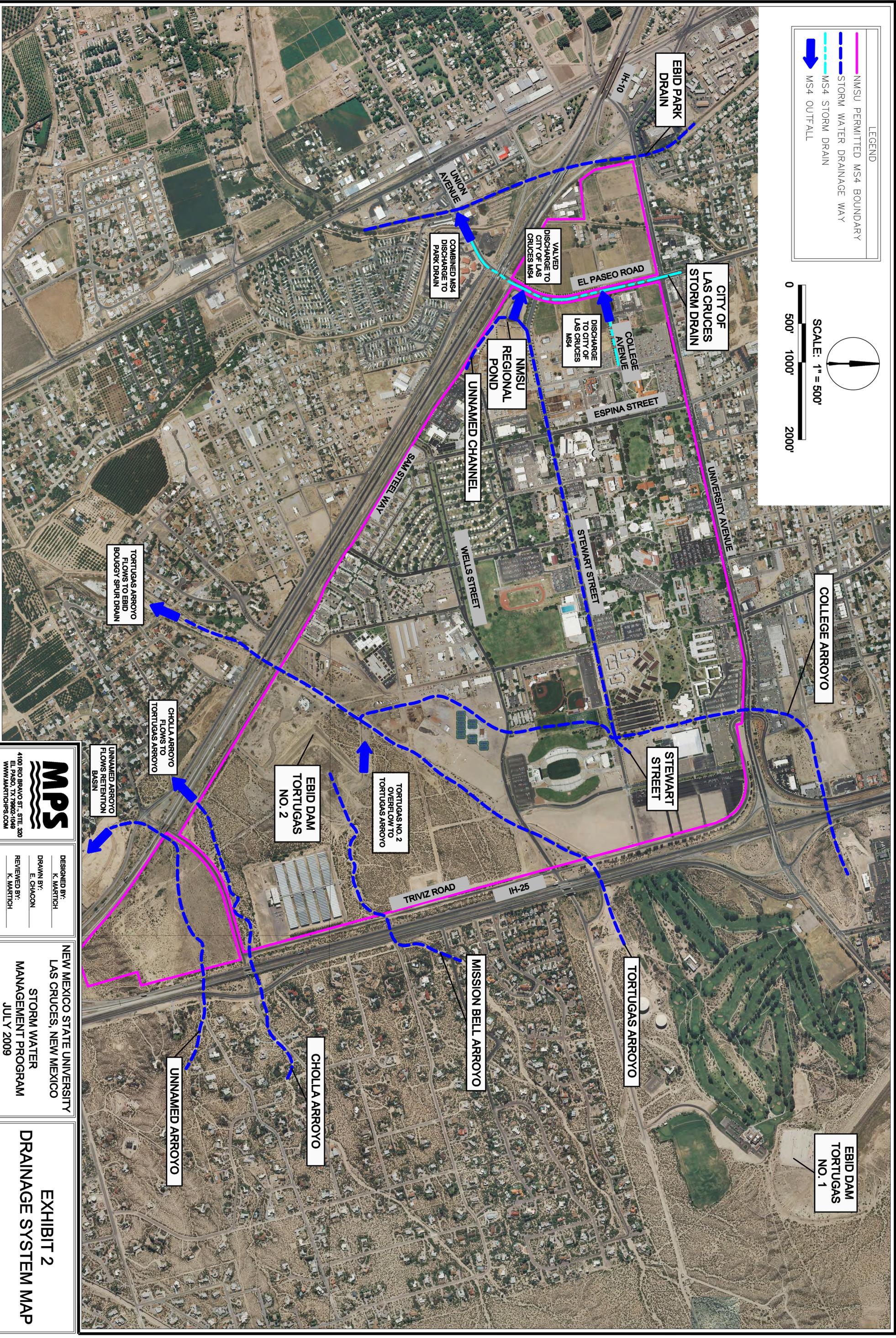
EXHIBIT 1
 LOCATION MAP AND
 MS4 BOUNDARIES

LEGEND

- NMSU PERMITTED MS4 BOUNDARY
- - - STORM WATER DRAINAGE WAY
- - - MS4 STORM DRAIN
- ➔ MS4 OUTFALL

SCALE: 1" = 500'

0 500' 1000' 2000'

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 4100 RIO BRAVO ST., STE. 320
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E. CHACON

REVIEWED BY:
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NEW MEXICO STATE UNIVERSITY
 LAS CRUCES, NEW MEXICO

STORM WATER
 MANAGEMENT PROGRAM
 JULY 2009

EXHIBIT 2
 DRAINAGE SYSTEM MAP

ENDANGERED SPECIES ACT ELIGIBILITY EVALUATION

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES

This evaluation is limited to the portion of New Mexico State University that is within the Las Cruces Urbanized Area of Doña Ana County (main campus). According to the website of the Southwest Region Ecological Services office of the U.S. Fish and Wildlife Service (USFWS, 2009), the species potentially present in Doña Ana County that are federally listed as endangered are:

- Least Tern (*Sterna antillarum*) - Bird;
- Northern Aplomado Falcon (*Falco femoralis septentrionalis*) - Bird;
- Rio Grande Silvery Minnow (*Hybognathus anarus*) - Fish;
- Sneed Pincushion Cactus (*Coryphantha sneedii* var. *sneedii*) - Plant; and
- Southwestern Willow Flycatcher (*Empidonax traillii* extimus) - Bird.

The website also lists the Mexican Spotted Owl (*Strix occidentalis lucida*) potentially present in Doña Ana County as a threatened bird species (USFWS, 2009).

The website lists two other bird species of concern, the Bald Eagle (*Haliaeetus leucocephalus*) and the Yellow-billed Cuckoo (*Coccyzus americanus*), that are potentially present in Doña Ana County. In 2007 the status of the Bald Eagle was changed from endangered to delisted-recovered. It is currently undergoing 5-years of monitoring, after which it is anticipated that the Bald Eagle will be removed from the list.

The Yellow-billed Cuckoo is listed as a candidate species. A candidate species is one for which the USFWS has sufficient information to support a proposal to list the species as Threatened or Endangered; however, the proposal is precluded by work on higher priority listings. Listing Priority Numbers range from 1 to 12, with 1 being highest priority based on the magnitude of threats, immediacy of threats, and taxonomic status. Species with a LPN of 1, 2 or 3 are considered high priority candidates. The LPN for the Yellow-billed Cuckoo is 3.

Since the Bald Eagle and the Yellow-billed Cuckoo are not currently listed as threatened or endangered, they do not have to be evaluated for New Mexico State University's MS4 permit application.

DESIGNATED CRITICAL HABITAT

According to the website of the USFWS Southwest Region Ecological Services office, no critical habitat rules have been published for the Least Tern, Northern Aplomado Falcon, and Sneed Pincushion Cactus (USFWS, 2009). Final Rules designating critical habitat have been published for the Mexican Spotted Owl (Federal Register, 2004), the Rio Grande Silvery Minnow (Federal Register, 2003), and Southwestern Willow Flycatcher (Federal Register, 2005). None of the designated critical habitats are within or near the portion of NMSU that is within the Las Cruces Urbanized Area.

ELIGIBILITY DETERMINATION

Interior Least Tern

Within New Mexico, the required habitat of the Interior Least Tern is the sandbars and beaches along the Rio Grande river system (IBWC, 2003). The Rio Grande does not flow through the portion of NMSU within the Las Cruces Urbanized Area; therefore, suitable habitat is not believed to be present.

Northern Aplomado Falcon

The required habitat for the Northern Aplomado Falcon is open terrain with scattered trees or shrubs. In New Mexico, the habitat is characterized by desert grasslands with scattered mesquite and yucca (USFWS, 1990). The western portion of the main campus is a developed, landscaped, urban area. The eastern portion, particularly the southeastern corner, contains undeveloped areas with sparse remnants of habitat that may have been suitable for the falcon; however, the area is highly disturbed by human activity.

The falcon population present in New Mexico is an Experimental Population, Non-Essential (USFWS, 2009). The population is being established through releases on private ranches, White Sands Missile Range, and lands owned by the U.S. Bureau of Land Management and the State of New Mexico (Zenone, 2008). As the birds disperse, it's highly unlikely the birds will find the campus attractive due to the human activity in the area and the small area of remnant vegetation.

Rio Grande Silvery Minnow

The Draft Revised Recovery Plan for the minnow states that the Rio Grande Silvery Minnow is only known to be present in the Middle Rio Grande down to the headwaters of Elephant Butte Lake (USFWS, 2007). In addition, there are no perennial waterways in the vicinity of the main campus; therefore, suitable habitat is not believed to be present.

Sneed Pincushion Cactus

The Sneed Pincushion Cactus grows in cracks on vertical ledges in limestone formations of the Chihuahuan desert at elevations of 3,900 – 7,700 feet (USFWS, 2009). The western portion of the main campus is a developed, landscaped, urban area. The eastern portion of the main campus is undeveloped. This eastern area is in the lower elevations that would be appropriate for the cactus; however, the Soil Survey of Doña Ana County indicates the soils are deep sand and gravelly sand on valley terraces, valley sides and alluvial fans (USDA, 2009). Suitable habitat is not believed to be present.

Southwestern Willow Flycatcher

The required habitat of the Southwestern Willow Flycatcher is dense riparian woodlands along lakes, rivers, streams and other wetlands (USFWS, 2009). There are no intermittent or perennial waterways or wetlands to support a riparian habitat within the main campus. The flycatcher is breeding in portions of Dona Ana County, but not within the Las Cruces Urbanized Area (Hira A. Walker, Ph.D., *pers. comm.*). Suitable habitat is not believed to be present.

CONCLUSION

The federally listed threatened or endangered species that are potentially present within Doña Ana County are not believed to occur in proximity to the New Mexico State University's MS4 or the MS4's points of discharge that lie within the Las Cruces Urbanized Area. Also, no critical habitat is in proximity to the MS4. Therefore, the portion of New Mexico State University that is within the Las Cruces Urbanized Area is eligible for general permit authorization of its MS4 discharges under Part 1.5.3.1 ESA Criterion A of the permit.

REFERENCES

- Federal Register (2003). *Designation of Critical Habitat for the Rio Grande Silvery Minnow (Hybognathus amarus)*; Final Rule. Vol. 68, No. 33. February 19, 2003.
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NATIONAL HISTORIC PRESERVATION ACT ELIGIBILITY EVALUATION

FEDERALLY LISTED HISTORIC RESOURCES

The National Register of Historic Places contains five listed historic properties located within New Mexico State University's portion of the Las Cruces Urbanized Area (National Park Service, 2009). The properties are:

- Former Air Science Building, now the William Convoy Honors Center;
- Foster Hall;
- Goddard Hall;
- Former University President's House, now the Nason House; and
- Elephant Butte Irrigation District (EBID) structures.

According to Michelle Ensey, Archaeologist with the New Mexico Historic Preservation Division, the EBID listing is not of concern for the MS4 permit. EBID has a Memorandum of Agreement with the New Mexico Historic Preservation Division, and any potential effects on it are addressed through the EBID discharge permitting process (Ensey, 2008). None of the other listed properties are in the path of storm water discharges from the portion of New Mexico State University that is within the Las Cruces Urbanized Area.

TRIBAL CONSULTATION

On September 22, 2008 and again on November 20, 2008, Region 6 of the EPA sent a letter to Tribal authorities within the State of New Mexico and notified them of the NPDES General Permit NMR040000. EPA also provided the Tribes with a list of MS4 operators that may be seeking authorization under the permit. The Tribes were asked to comment on any properties with religious or cultural importance to the Tribe that might be affected by authorizing discharges under the permit. Denise Hamilton in the EPA Region 6 NPDES Permits and Technical Section indicates that these letters satisfy the Tribal consultation requirements under Section 106 of the NHPA (Hamilton, 2008).

CONCLUSION

Except for the EBID, the listed historic properties are not in the path of MS4 discharges from the portion of New Mexico State University within the Las Cruces Urbanized Area. Although the EBID receives MS4 discharges, the EBID ensures through its permitting process that the discharges do not negatively affect its structures. None of the Best Management Practices in the Storm Water Management Program (SWMP) prepared for the MS4 permit will be constructed on, adjacent to or near the listed historic properties. Therefore, the portion of New Mexico State University within the Las Cruces Urbanized Area is eligible for general permit authorization of its MS4 discharges under Part 1.6.1.1 NHPA Criterion A of the permit.

REFERENCES

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Ensey, Michelle (2008). Archaeologist, New Mexico Historic Preservation Division, Department of Cultural Affairs. By phone, December 09, 2008.

Hamilton, Denise (2008). Environmental Protection Agency Region 6, Water Quality Protection Division. By phone, November 19, 2008.



**MARTICH
PROFESSIONAL
SERVICES, PLLC**

July 9, 2009

Ms. Michelle Ensey, Archaeologist
Department of Cultural Affairs
Historic Preservation Division
Bataan Memorial Building
407 Galisteo Street, Suite 326
Santa Fe, NM 87501

RE: New Mexico State University's Application for Coverage under
NPDES General Permit No. NMR040000 for
Discharges from Small Municipal Separate Storm Sewer Systems (MS4)

Dear Ms. Ensey:

New Mexico State University (NMSU) is preparing a Notice of Intent to obtain authorization of its storm water discharges under the subject permit. NMSU contracted with Martich Professional Services to assist in preparation of the permit documents.

In accordance with Part 1.6 of the permit, NMSU evaluated its discharges for permit eligibility with regards to the National Historic Preservation Act. The enclosed table (Exhibit 1) summarizes the National Registry properties within NMSU's portion of the Las Cruces Urbanized Area. Exhibit 2 shows the location of the listed properties in relation to the MS4 and the receiving waters for its discharge points.

Except for the Elephant Butte Irrigation District (EBID), the listed historic properties are not in the path of NMSU's storm water discharges and allowable non-storm water discharges. In addition, no construction activities are planned to control storm water discharges near the listed properties. The EBID permit process will be used for any future drainage project that may impact their system. Therefore, NMSU has determined that its storm water discharges within the Las Cruces Urbanized Area are eligible for the subject permit under NHPA Criterion A in Part 1.6.1.1 of the permit. I am submitting this evaluation for your review of NMSU's determination.

Ms. Denise Hamilton of the EPA Region 6 has stated that her letters dated September 22, 2008 and November 20, 2008 satisfy the permit's requirement for Tribal consultation and that no further action is needed by NMSU. Copies of these letters are enclosed for your review.

If you have any questions or require additional information, please contact me at (915) 433-9254 or by e-mail at kmartich@martichps.com.

Respectfully Submitted,

Katrina M. Martich, P.E.
President

Enclosures:

Exhibit 1 Properties on the National Registry within NMSU

Exhibit 2 Location Map of National Registry Properties

USEPA Region 6 Letters dated September 22, 2008 and November 20, 2008

c: David Bollschweiler
Office of Facilities and Services
New Mexico State University
P.O. Box 30001 MSC 3545
Las Cruces, NM 88003

EXHIBIT 1. PROPERTIES ON THE NATIONAL REGISTRY WITHIN NEW MEXICO STATE UNIVERSITY

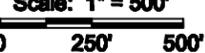
NATIONAL REGISTRY INFORMATION SYSTEM				
LISTED RESOURCES WITHIN THE LAS CRUCES URBANIZED AREA OF NEW MEXICO STATE UNIVERSITY*				
State	County	Resource Name	Address	Notes
NM	Dona Ana	Air Science	NE Corner of N. Horseshoe and Espina St.	William Conroy Honors Center
NM	Dona Ana	Foster Hall	SE Corner of S. Horseshoe and Sweet	
NM	Dona Ana	Goddard Hall	S. Horseshoe between Espina and Sweet St.	
NM	Dona Ana	University President's House	South of University Ave. between Espina and Solano	Nason House
NM	Dona Ana	Elephant Butte Irrigation District	Roughly along US 85, between jct. of US 85 and NM 90, and El Paso City Limits	Park Drain, Las Cruces Lateral, and Tortugas No. 2

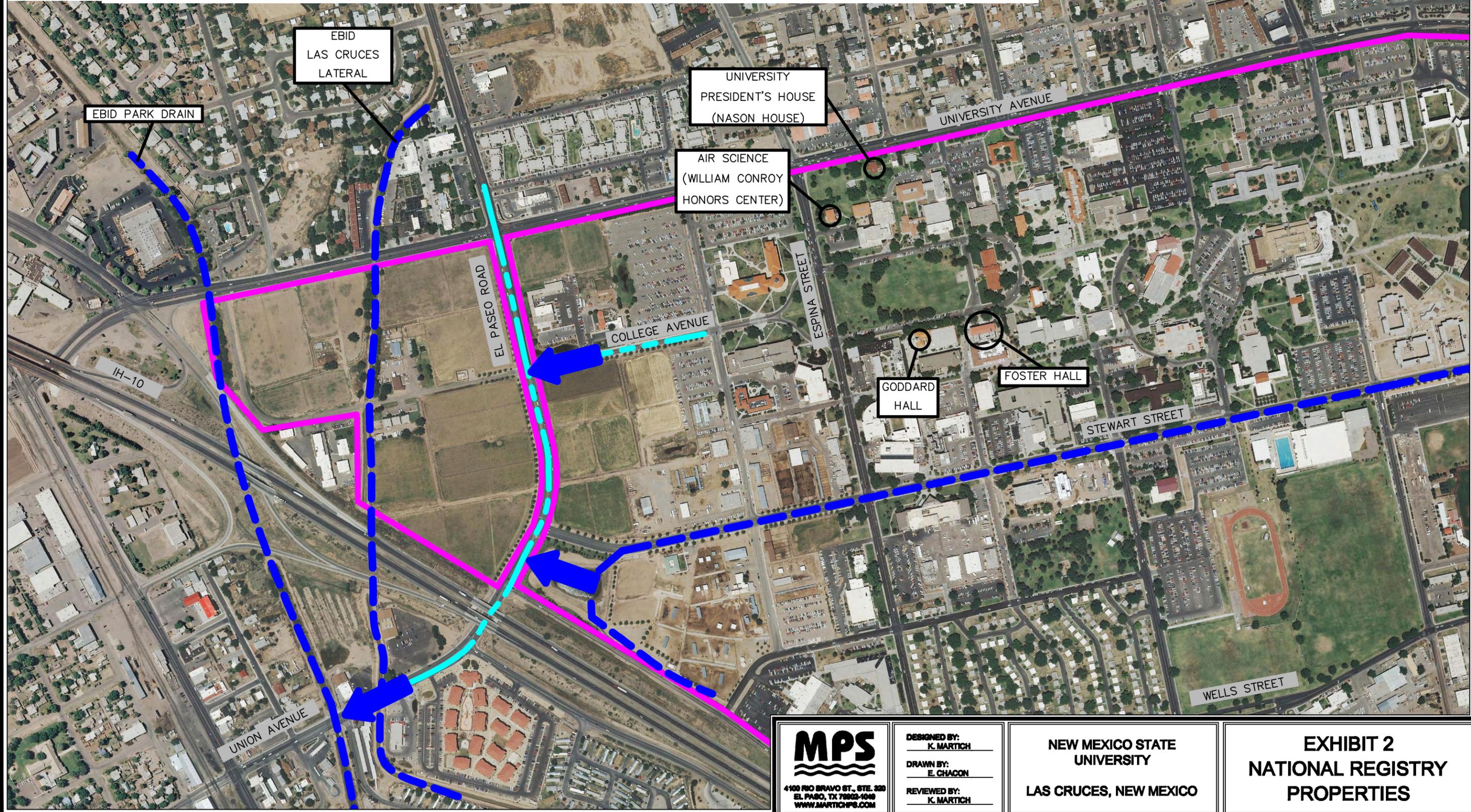
Source: 07/03/09 search and download from <http://www.nr.nps.gov/>

*The downloaded data included all listed properties in Doña Ana County. The list was then reduced to the properties within the portion of New Mexico State University that is within the Las Cruces Urbanized Area.

LEGEND

-  NMSU PERMITTED MS4 BOUNDARY
-  STORM WATER DRAINAGE PATH
-  MS4 STORM DRAIN
-  MS4 OUTFALL


Scale: 1" = 500'




EBID PARK DRAIN

EBID LAS CRUCES LATERAL

UNIVERSITY PRESIDENT'S HOUSE (NASON HOUSE)

AIR SCIENCE (WILLIAM CONROY HONORS CENTER)

EL PASEO ROAD

COLLEGE AVENUE

ESPINA STREET

UNIVERSITY AVENUE

GODDARD HALL

FOSTER HALL

STEWART STREET

WELLS STREET

UNION AVENUE

MPS
 4100 RIO BRAVO ST., STE. 320
 EL PASO, TX 79902-1040
 WWW.MARTICHMPS.COM

DESIGNED BY:
K. MARTICH

DRAWN BY:
E. CHACON

REVIEWED BY:
K. MARTICH

NEW MEXICO STATE UNIVERSITY
 LAS CRUCES, NEW MEXICO

EXHIBIT 2
 NATIONAL REGISTRY
 PROPERTIES

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 6

1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

SEP 22 2008

Governor Chandler Sanchez
Pueblo of Acoma
P.O. Box 309
Acoma, New Mexico 87034

Dear Governor Sanchez:

Through this letter EPA is clarifying the process for providing information to fulfill requirements with the National Historic Preservation Act (NHPA), Section 106. EPA is in the process of authorizing discharges of small Municipal Storm Sewer Systems (sMS4s) in New Mexico through our May 2007, general permit. EPA has an obligation to consider the effects of this undertaking on historic properties. We request your input during the formal comment period should the Tribe be aware of properties with religious or cultural importance that are affected by this undertaking.

A copy of the EPA sMS4 general permit is available at <http://epa.gov/region6/water/npdes/sw/sms4/index.htm>. In accordance with general permit requirements, MS4 operators within specified urbanized areas (UAs) must apply to EPA for permit coverage by filing a Notice of Intent (NOI). The UAs, defined by 2000 Census data, include Farmington, Santa Fe, Albuquerque, Las Cruces, El Paso and many of their surrounding communities. Maps of the UAs are available on the general permit website. It should be noted that municipal stormwater from within the City of Albuquerque is addressed by a separate individual permit, while MS4s outside the city limits who meet population density levels apply under this general permit.

Contrary to most general permits, the sMS4 general permit does not grant automatic coverage upon filing an NOI. The sMS4 permit requires that EPA authorize by letter each NOI only after in-house review and completion of a 30-day public comment opportunity. Review and comment on individual NOIs may be made online at <http://epa.gov/region6/water/npdes/sw/sms4/index.htm> or directly via mail to EPA. Currently, several NOI comment periods are complete, a few remain open, and several are anticipated in the future; continuing until all applications for discharge of municipal stormwater in New Mexico are processed.

Tribal input regarding cultural or historic properties that might be affected by EPA authorization of any sMS4 discharge is requested during the public comment period. EPA utilizes a New Mexico Tribal Mailing List to inform interested parties, including the Tribes, of public comment opportunities on NPDES permits. Please contact EPA immediately if the Tribe has not been receiving notification from us regarding online availability of NOIs. If, for any NOI whose comment period has closed, you have

remarks for our consideration, we request you forward those comments to EPA within thirty days of receipt of this letter. For NOIs with public comment periods currently open and for future NOIs, you should provide any comments, including those regarding historic and cultural properties, during the comment period.

EPA acknowledges the government-to-government relationship we share with federally recognized tribes. We look forward to hearing from you. Any comments, including input the Tribe might have regarding the effects on historic properties of discharges addressed in an NOI, should be submitted to: Diane Smith, USEPA, Region 6, Water Quality Protection Division (6WQ-NP), 1445 Ross Ave., Suite 1200, Dallas, TX, 75202. Additionally, you may contact Denise Hamilton of the NPDES Permits and Technical Section via telephone at (214) 665-2775 or email at hamilton.denise@epa.gov, if you have questions.

Sincerely,



Claudia V. Hosch.
Associate Director
NPDES Permits and TMDLs Branch

cc: (orig w/ Tribal Mailing List)
Michelle Ensey, NMSHPO
Tribal Mailing List

List of Addressees to be merged - Creates 1 letter

Office_Address_List

9/5/2008 per

individual

Title	First Name	Last Name	Company Name
Governor	Chandler	Sanchez	Pueblo of Acoma
Governor	Joseph Ernest	Suina	Pueblo of Cochiti
Governor	Robert	Benavides	Pueblo of Isleta
Governor	Paul	Chinana	Pueblo of Jemez
Governor	John	Antonio, Sr	Pueblo of Laguna
Governor	Ernest	Mirabal	Pueblo of Nambe
Governor	Earl	Salazar	Ohkay Owingeh
Governor	Craig	Quanchello	Pueblo of Picuris
Governor	George	Rivera	Pueblo of Pojoaque
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Governor	Robert	Mora	Pueblo of Tesuque
Governor	Ivan	Pino	Pueblo of Zia
Governor	Norman	Cooney	Pueblo of Zuni
Chairman	Joe	Garcia	All Indian Pueblo Council
President	Levi	Pesata	Jicarilla Apache Nation
Executive Director	James Roger	Madalena	Five Sandoval Indian Pueblos
President	Dr. Carleton	Naiche-Palmer	Mescalero Apache Tribe
Interim Executive Director	Valarie	Lyon	Eight Northern Indian Pueblos Council
President	Joe	Shirley, Jr.	Navajo Nation
Speaker of the House	Lawrence	Morgan	Navajo Nation Council
Chairman	Benjamin	Nuvamsa	Hopi Tribal Council
Chairperson	Wendsler	Noise, Sr	San Carlos Tribal Council
Chairman	Ronnie	Lupe	White Mountain Apache Tribal Council
Chairman	Clement J.	Frost	Southern Ute Tribe
Chairman	Ernest	House, Sr	Ute Mountain Ute Tribe
Chairman	Alonzo	Chalepah	Apache Tribe of Oklahoma
Chairman	Wallace	Coffey	Comanche Nation
Chairman	Jeff	Houser	Fort Sill Apache Tribe of Oklahoma
Chairman	Don	Tofpi	Kiowa Tribe of Oklahoma
President	George	Howell	Pawnee Tribal Business Council
President	Gary	McAdams	Wichita & Affiliated Tribes
Governor	Frank	Piaz	Ysleta del Sur Pueblo

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY****REGION 6**1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

November 20, 2008

Governor Chandler Sanchez
Pueblo of Acoma
P.O. Box 309
Acoma, New Mexico 87034

Dear Governor Sanchez:

On September 22, 2008, EPA, Region 6, mailed a letter to inform the Tribe of municipal storm water Notices of Intent (NOIs) now and recently at public notice. That letter meant to clarify the process for information to be provided to fulfill requirements with National Historic Preservation Act (NHPA), Section 106, regarding EPA's Small Municipal Storm Sewer System (sMS4) general permit. Your input was requested regarding properties with religious or cultural importance to the Tribe that might be affected by this undertaking.

It has come to our attention that not all of the NOIs were accessible for review. Due to the inability for interested parties to review all NOIs, we are allowing additional time for review and comment. The EPA sMS4 general permit and copies of each NOI received to date by EPA are now available at <http://epa.gov/region6/water/npdes/sw/sms4/index.htm>.

Tribal input is again requested, regarding cultural or historic properties potentially affected by EPA authorization of any sMS4 discharge. For those NOIs with closed public comment periods, please forward any comments to EPA within 14 days of receipt of this letter. Please note that your input regarding potential impacts to cultural or historic properties from NOIs at public notice now or in the future should be submitted during each comment period.

Comments the Tribe might have regarding the effects on historic properties of discharges addressed in an NOI should be submitted to: Diane Smith, USEPA, Region 6, Water Quality Protection Division (6WQ-NP), 1445 Ross Ave., Suite 1200, Dallas, TX, 75202. Additionally, you may contact Denise Hamilton of the NPDES Permits and Technical Section via telephone at (214) 665-2775 or email at hamilton.denise@epa.gov, if you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Hosch".

for Claudia V. Hosch
Associate Director
NPDES Permits and TMDLs BranchInternet Address (URL) • <http://www.epa.gov>

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CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed by:

Jennifer Taylor

Jennifer Taylor, Senior Vice-President
Business, Finance and Human Resources
New Mexico State University

7-31-09

Date

By: *Angela Throneberry, Associate Vice President, Business Finance & Human Resources*

8.7 Environmental Assessment, Interstate 10/Interstate 25, Interchange Improvements (FOR REFERENCE INFORMATION ONLY)

ENVIRONMENTAL ASSESSMENT

Interstate 10 / Interstate 25 Interchange Improvements

Las Cruces, Doña Ana County, New Mexico

Project No. HPP-010-2(127)144
Control No. 1100030

Prepared for

New Mexico Department of Transportation

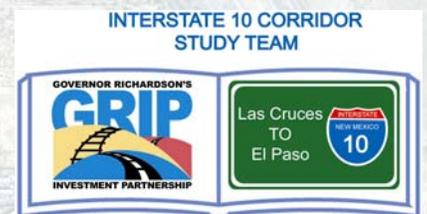
In Cooperation with

Federal Highway Administration

Prepared by

Parametrix
Molzen-Corbin & Associates

May 2009



ENVIRONMENTAL ASSESSMENT

Interstate 10 / Interstate 25 Interchange Improvements

Las Cruces, Doña Ana County, New Mexico

Project Number HPP-010-2(127)144
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Prepared for

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In Cooperation with

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Prepared by

Parametrix
Molzen-Corbin & Associates

May 2009

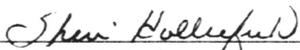
ENVIRONMENTAL ASSESSMENT

Interstate 10 / Interstate 25 Interchange Improvements
Las Cruces, Doña Ana County, New Mexico

Project Number: HPP-010-2(127)144 Control Number: 1100030

Prepared for
New Mexico Department of Transportation (NMDOT)
Federal Highway Administration (FHWA)

This environmental assessment has been developed under the
direction of Jerry Paz with Molzen-Corbin and Associates and prepared by Parametrix.



NMDOT Project Development Engineer

2/12/09

Date



NMDOT Environmental Program Manager

2/27/09

Date



Federal Highway Administration

3/23/09

Date

The following persons may be contacted for more information concerning this document:

Steve Reed, NMDOT
Environmental Program Manager
PO Box 1149
Santa Fe, NM 87504
(505) 827-5254

Frank Lozano, FHWA
Field Operations Engineer
604 W. San Mateo Road
Santa Fe, NM 87505
(505) 820-2031

Curt Frischkorn, NMDOT
Environmental Specialist
PO Box 1149
Santa Fe, NM 87504
(505) 827-5156

Sherri Holliefield, NMDOT
Project Development Engineer
750 N. Solano Drive
Las Cruces, NM 88001
(575) 525-7351

EXECUTIVE SUMMARY

This environmental assessment (EA) has been prepared on behalf of the New Mexico Department of Transportation (NMDOT), in cooperation with the Federal Highway Administration (FHWA), to evaluate potential impacts associated with improvements proposed to the Interstate 10/Interstate 25 (I-10/I-25) Interchange in Las Cruces, Doña Ana County, New Mexico. The environmental process has been completed in compliance with the National Environmental Policy Act of 1969 (NEPA), the *NMDOT Location Study Procedures* (NMDOT, 2000), and other applicable guidelines and regulations.

The limits of construction for the I-10/I-25 Interchange Improvements are milepost (MP) 143.3 to MP 146, along I-10. However, the area of environmental consideration expands west to MP 142, to ensure consideration of foreseeable transportation improvements in the area. The purpose and need for the I-10/I-25 Interchange Improvements were defined to correct physical deficiencies, enhance safety, relieve traffic congestion, address traffic flow, improve access, and accommodate economic development. Public and agency outreach has been extensive and consistent with a Context Sensitive approach to project development. The Recommended Build Alternative was selected following evaluation of transportation alternatives and consideration of agency and public input, resulting in the following components:

- realigning the I-25 southbound (SB) to I-10 westbound (WB) direct-connector ramp;
- realigning the I-10 eastbound (EB) to I-25 northbound (NB) direct-connector ramp;
- modifying existing alignments of I-10 main lanes, I-25 main lanes, Stern Drive, and Las Alturas Drive to accommodate alterations of the direct-connector ramps;
- replacing two parallel I-10 bridges carrying I-10 EB and I-10 WB traffic over I-25 SB;
- reconstructing concrete pavement along I-10 main lanes from MP 143.3 to MP 146; and
- improving drainage facilities within the I-10/I-25 Interchange complex.

The proposed improvements to the I-10/I-25 Interchange are included in the NMDOT *State Transportation Improvement Program* (STIP) for the fiscal years 2008 to 2011. The fiscal year 2009 program funds identified for the project include \$12,563,582 provided by the 2009 American Recovery and Reinvestment Act (ARRA). The total project cost is estimated at \$31,149,300, resulting in a funding deficit; therefore, the project may require phasing for construction. The proposed phases, in order of priority, would be: 1) direct-connector ramps, 2) bridge replacement, and 3) pavement reconstruction. The priority ranking was determined based on safety concerns at the direct-connector ramps and load-bearing limitations for two parallel bridges. Drainage improvements will be incorporated into the most appropriate phase(s). The I-10/I-25 Interchange Improvement Project was initially evaluated under the *I-10 Corridor Study* (AC-GRIP-010-2(108)144 CN:G18A1) which included provisions to improve I-10 from Las Cruces to the Texas state line.

Potential impacts of the Recommended Build Alternative and the No-Build Alternative have been evaluated in the EA for a wide range of social, economic, and environmental factors. Mitigation measures have been identified to minimize anticipated adverse impacts of the Recommended Build Alternative and are summarized in the EA. In addition, improvements at

the I-10/I-25 Interchange will require approval, by the FHWA, of an Interstate Justification Report (IJR).

This EA concludes that the Recommended Build Alternative meets the purpose and need identified for the I-10/I-25 Interchange Improvements. The proposed improvements are not anticipated to cause significant adverse social, economic, or environmental impacts at a level that would warrant an environmental impact statement (EIS). Therefore, unless significant impacts are identified during the public review of this EA, a finding of no significant impact (FONSI) for the Recommended Build Alternative will be requested from the FHWA. If a FONSI is issued, it would provide environmental authorization for final design, right-of-way acquisition, and construction.

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1.0 INTRODUCTION

This environmental assessment (EA) has been prepared on behalf of the New Mexico Department of Transportation (NMDOT), in cooperation with the Federal Highway Administration (FHWA), to evaluate potential impacts associated with improvements proposed to the Interstate 10/Interstate 25 (I-10/I-25) Interchange in Las Cruces, Doña Ana County, New Mexico. This EA has been completed in compliance with the National Environmental Policy Act of 1969 (NEPA), which requires that all federally-funded projects adopt a systematic and interdisciplinary approach throughout the decision-making processes. Important components of the NEPA framework include development and consideration of alternatives, the analysis of potential environmental impacts, and solicitation of public input. This EA has also been conducted in accordance with policies and procedures outlined in the NMDOT *Location Study Procedures* (NMDOT, 2000), and other applicable guidelines and regulations.

Prior to construction, improvements at the I-10/I-25 Interchange would require approval, by the FHWA, of an Interstate Justification Report (IJR). A summary of the information included in this EA will be incorporated into the IJR.

1.1 BACKGROUND

Initially, the I-10/I-25 Interchange Improvement Project was studied under the *I-10 Corridor Study* (AC-GRIP-010-2(108)144 CN:G18A1), which extended from the I-10/NM 478 Interchange (South Main Street) in Las Cruces (MP 142) to the NM/Texas state line at MP 164.2. The results of earlier studies are presented in the *Phase A Initial Evaluation of Alternatives; Interstate-10: Las Cruces to Texas State Line* (Molzen-Corbin & Associates, 2006) and *Phase B Detailed Evaluation of Alternatives; Interstate-10: Las Cruces to Texas State Line* (Molzen-Corbin & Associates, 2007), which are referred to as the *Phase A Report* and *Phase B Report*. In addition to the proposed improvements at the I-10/I-25 Interchange, the *I-10 Corridor Study* included proposed improvements to the I-10/NM 404 Interchange, the I-10/NM 227 Interchange, and the I-10/NM 228 Interchange. These proposed improvements will be evaluated under separate environmental documentation. Discussion and results presented in this EA will directly relate to those improvements proposed for the I-10/I-25 Interchange, only.

The proposed improvements to the I-10/I-25 Interchange are included in the NMDOT *State Transportation Improvement Program* (STIP) for the fiscal years 2008 to 2011. The fiscal year 2009 program funds identified for the project include \$12,563,582 provided by the 2009 American Recovery and Reinvestment Act (ARRA). The total project cost is estimated at \$31,149,300, resulting in a funding deficit; therefore, the project may require phasing for construction. The proposed phases, in order of priority, would be: 1) direct-connector ramps, 2) bridge replacement, and 3) pavement reconstruction. The priority ranking was determined based on safety conditions at the ramps and load-bearing limitations for the bridges. Drainage improvements will be incorporated into the most appropriate phase(s).

The proposed improvements are also included in the Las Cruces Metropolitan Planning Organization (MPO) *Transportation Improvement Program* (TIP) for FY 2008 to 2013.

1.2 LOCATION

I-10 is the southernmost, east-west highway in the United States (U.S.). In NM, I-10 begins at the Arizona state line and continues through southern NM to the Texas state line (Figure 1). The I-10/I-25 Interchange is the southern terminus for I-25, which travels north through NM into Colorado. The anticipated limits of construction for the I-10/I-25 Interchange Improvements are milepost (MP) 143.3 to MP 146, along I-10. The area of environmental consideration expands to the I-10/NM 478 Interchange (South Main Street) at MP 142 to ensure that the EA addresses environmental matters on a broad scale and does not restrict consideration of alternatives for other foreseeable transportation improvements in the area (Figure 2).



Figure 1: Location Map

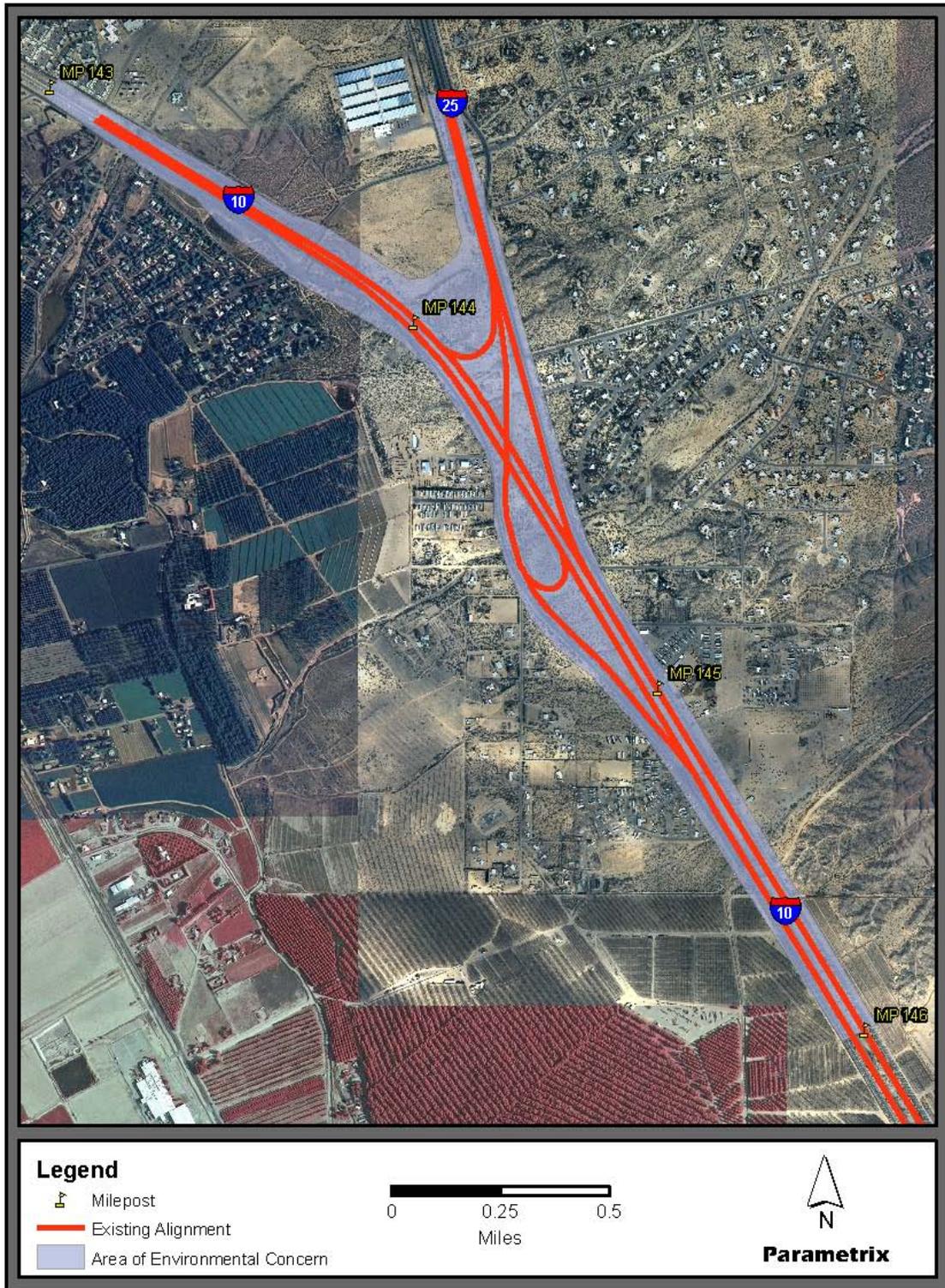


Figure 2: Project Area Map

2.0 PROJECT PURPOSE AND NEED

2.1 PROJECT PURPOSE AND NEED

The purpose and need for the I-10/I-25 Interchange Improvements was defined in the initial stages of project development to correct physical deficiencies, enhance safety, relieve traffic congestion, address traffic flow, improve access, and accommodate economic development. The I-10/I-25 Interchange Improvements are also needed within the framework of future transportation plans for adjacent areas, and to enhance system connectivity across southern NM.

2.2 EXISTING CONDITIONS AND PHYSICAL DEFICIENCIES

The I-10/I-25 Interchange complex exhibits deficient vertical and horizontal geometry, structural weaknesses for some bridges, inadequate drainage, and safety concerns for traffic entering/exiting the interstate from the interchange ramps.

2.2.1 Direct-Connector Ramps at I-10/I-25 Interchange

The I-10/I-25 Interchange is located between MP 143 and MP 146 along I-10, and comprises a grade-separated ramp complex following a trumpet design. Deficiencies at the interchange include horizontal curvature limitations at the I-10 EB to I-25 NB direct-connector ramp and the I-25 SB to I-10 WB direct-connector ramp, both of which are single-lane facilities. The I-10 EB to I-25 NB direct-connector is a spiral-loop ramp that transitions from I-10 EB with a tight right-hand curve to the north. It then passes underneath the I-10 EB and I-10 WB lanes, and ties in to I-25 NB on the left side. The I-10 WB to I-25 NB direct-connector is a two-lane section that transitions without severe curvature or grade changes.

2.2.2 Bridge Structures

Six (6) structures are currently located within the I-10/I-25 Interchange complex. Two (2) of the structures are parallel bridges that carry I-10 EB and I-10 WB main line traffic over I-25 ramps. These two (2) parallel bridges currently exhibit load-bearing limitations and exhibit structural deficiencies. The remaining four bridges provide underpasses for Cholla Road as it crosses with the I-10 or I-25 main lanes. All bridges were originally constructed in 1968.

2.2.3 Frontage Roads

Stern Drive (FR 1035) is a two-lane, paved road that extends along the western side of the entire length of the I-10/I-25 Interchange complex. Las Alturas Drive (FR 1036) is the eastern frontage road within the I-10/I-25 Interchange complex. It is a two-lane, paved road that extends from the I-25/University Avenue Interchange to approximately 0.5 miles south of the I-10/NM 227 Interchange. Most traffic uses Las Alturas Drive to access the semi-urban neighborhoods east of the I-10/I-25 Interchange. The frontage roads are generally parallel to the adjacent I-10 main line, typically with posted speeds of 35 mph.

2.2.4 Drainage

Storm-water runoff is conveyed under the I-10/I-25 Interchange by five existing drainage structures. The modification of existing structures would be required to accommodate roadway improvements.

2.2.5 Pavement

Several areas in the I-10/I-25 Interchange complex exhibit concrete pavement with large cracks and poor conditions. These conditions may be attributed to sub-grade failures, which cannot be corrected by applying a bituminous overlay.

2.3 TRAVEL DEMAND AND CONGESTION

In 2004, the Average Daily Traffic (ADT) for the I-10/I-25 Interchange complex was recorded as 22,837 vehicles per day. Twenty-nine percent was estimated to be heavy commercial traffic. Additional details on traffic demand are located in the *Transportation Needs Analysis Report* (HDR, 2006), however, the traffic analysis did not identify any capacity failures at the I-10/I-25 Interchange.

2.4 SAFETY

During the three-year period, from 2002 to 2004, accidents recorded within the I-10/I-25 Interchange complex included a total of 34 accidents, with no fatalities. Six (6) of these accidents were turn-overs and five (5) were alcohol-related. I-10, west of the I-10/I-25 Interchange, has been designated as a 'Safety Corridor,' with a posted speed limit of 70 mph.

2.5 SYSTEM CONNECTIVITY

The I-10/I-25 Interchange is an important regional connection point. Integrated and continuous levels of access and connectivity are needed to enhance traffic flow through the local and regional transportation network. Consideration of potential alternatives for foreseeable transportation improvements adjacent to the project area is critical, so as not to preclude opportunities for future projects.

2.6 ECONOMIC DEVELOPMENT

Over the ten-year period between 1990 and 2000, the U.S. census data indicate that Doña Ana County has experienced a 28.9% increase in total population. Much of the growth is dependent on the transportation of goods and services that utilize the I-10/I-25 Interchange as a means of travel between Las Cruces, El Paso, and Juarez, Mexico, supporting economic development in the US/Mexico border region.

3.0 ALTERNATIVES CONSIDERED

The *Phase A Report* (Molzen-Corbin & Associates, 2006) contained a comprehensive description of all feasible alternatives and identified the most promising options based on a broad examination of engineering and environmental issues. The *Phase B Report* (Molzen-Corbin & Associates, 2007) further defined engineering parameters and reviewed potential environmental impacts for the most promising options before identifying the Recommended Build Alternative for the project. Public and agency stakeholder input, consistent with a Context Sensitive approach, was a key element throughout the process of evaluating and refining project alternatives.

3.1 RECOMMENDED BUILD ALTERNATIVE

The Recommended Build-Alternative for the I-10/I-25 Interchange Improvements proposes modifications to both the vertical and horizontal alignment of direct-connector ramps improving the geometry and increasing safety throughout the complex. Additional components are also proposed to accommodate ramp improvements, structural weaknesses, and to address drainage issues (Figure 3). Typical sections for the proposed improvements are included in Appendix A.

3.1.1 Direct-Connector Ramps at the I-10/I-25 Interchange

Southbound I-25 to Westbound I-10 (Ramp B). The Recommended Build Alternative for the I-10/I-25 Interchange would realign the direct-connector ramp linking I-25 SB to I-10 WB by locating it northwards in a vacant area currently bound by I-10, I-25 and Cholla Road. The new I-25 SB to I-10 WB direct-connector ramp would depart on the right-hand side of I-25 and enter on the right-hand side of the two-lane I-10 WB lane. It would consist of one 14-ft driving lane, with a 4-ft inside shoulder, a 10-ft outside shoulder, and 8.5-ft-wide surfacing tapers.

Eastbound I-10 to Northbound I-25 (Ramp A). The Recommended Build Alternative for the I-10/I-25 Interchange proposes to realign the direct-connector ramp linking I-10 EB to I-25 NB by locating it northwards in a vacant area bound by I-10, I-25 and Cholla Road. The direct-connector ramp would consist of one 14-ft driving lane, with a 4-ft inside shoulder, a 10-ft outside shoulder, and two concrete wall barriers. The new I-10 EB to I-25 NB direct-connector ramp would depart on the right-hand side of I-10 and fly-over the existing I-10 EB and WB lanes, then curve on an elevated embankment to fly-over the I-25 SB and NB lanes to enter on the right-hand side of the two-lane I-25 NB roadway. The alignment of Las Alturas Road would be modified slightly to accommodate the entry on the right-hand side of the I-25 NB lane.

3.1.2 Bridge Structures

Ramp A and Ramp B. Widening of the existing bridge over I-25 and Cholla Road will be required for both *Ramp A* and *Ramp B*. Two (2) additional bridge structures will need to be constructed over I-10 and I-25 for *Ramp B*. Typical sections for the proposed bridge structures proposed in the Recommended Build Alternative are included in Appendix A.

I-10 Bridges. The Recommended Build Alternative for the I-10/I-25 Interchange would remove the existing direct-connector ramp for I-25 SB to I-10 WB and reconstruct the two (2) parallel

I-10 bridges over the I-25 travel lanes due to their load-bearing limitations and substandard vertical clearance.

3.1.3 Frontage Road Improvements

Stern Drive Realignment. The Recommended Build Alternative for the I-10/I-25 Interchange includes a realignment of Stern Drive, beginning southeast of the Cholla Road intersection extending south for less than 0.5 mile. The realignment would be required to accommodate the proposed right-hand entrance of the new I-10 EB to I-25 NB direct-connector ramp.

Las Alturas Drive Realignment. The Recommended Build Alternative for the I-10/I-25 Interchange includes a realignment of Las Alturas Drive, beginning southeast of the Cholla Road intersection extending south for less than 0.5 mile. The realignment would be required to accommodate the proposed right-hand exit of the new I-10 WB to I-25 NB direct-connector ramp.

3.1.4 Drainage Improvements

Drainage Structures. The Recommended Build Alternative for the I-10/I-25 Interchange includes the modification of existing drainage structures to accommodate roadway improvements.

Four arroyos will require modifications to accommodate the direct-connector ramp improvements. The largest drainage structure is associated with the Fillmore Arroyo at MP 145. Improvements at the Fillmore Arroyo would be completed in conjunction with the pavement reconstruction along that segment, and would include the removal of the existing span bridge and installation of box culverts.

Detention Pond. The Recommended Build Alternative for the I-10/I-25 Interchange also includes the construction of an approximately 10-acre detention pond located in the undeveloped land between the direct-connector ramp linking I-10 EB to I-25 NB and the direct-connector ramp linking I-25 SB to I-10 WB.

3.1.5 Pavement Improvements

MP 143.3 to MP 146. The Recommended Build Alternative for the I-10/I-25 Interchange includes the reconstruction of the existing concrete pavement along I-10 from MP 143.3 to MP 146.

3.2. NO-BUILD ALTERNATIVE

NEPA and the NMDOT *Location Study Procedures* (NMDOT, 2000) require that the No-Build Alternative be considered as a baseline for comparison with other alternatives. The improvements that have been identified for the I-10/I-25 Interchange complex would not be implemented under the No-Build Alternative. However, the No-Build Alternative does not exclude the expense that would be required to maintain the current condition of the existing transportation facilities.

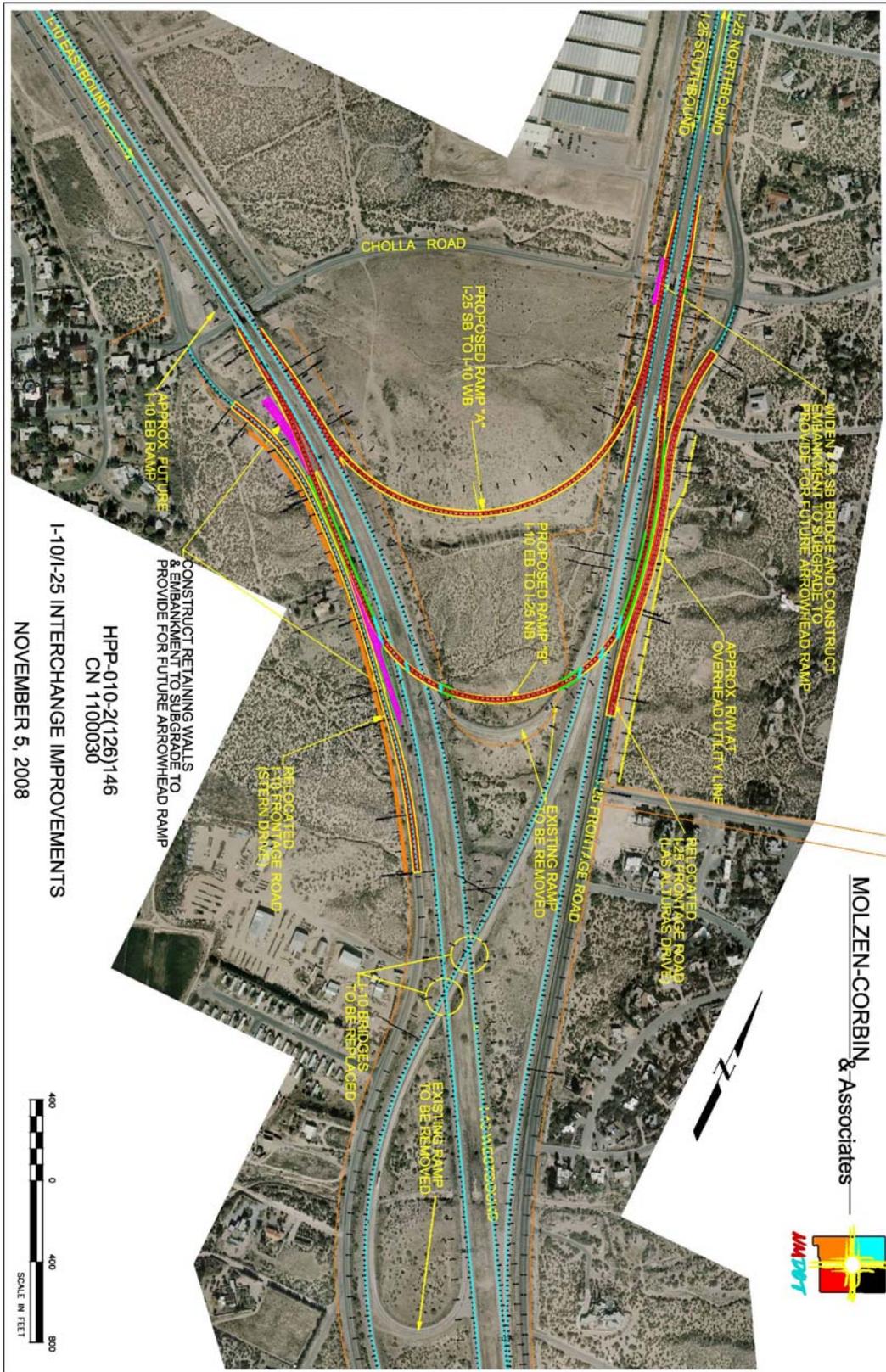


Figure 3: Recommended Build Alternative

3.3 ALTERNATIVES CONSIDERED BUT NOT RECOMMENDED

A comprehensive discussion and detailed descriptions of the design options evaluated in earlier stages of project development can be found in the *Phase A Report* (Molzen-Corbin & Associates, 2006) and *Phase B Report* (Molzen-Corbin & Associates, 2007).

Initially, five build alternatives were identified for the I-10/I-25 Interchange Improvements. Two alternatives involved the addition of a new interchange, while two more alternatives were based on modifying existing interchanges and implementing one-way frontage roads. The fifth alternative included a left-hand merge at the I-10 EB to the I-25 NB direct-connector ramp. Analysis of the options resulted in the selection of the Recommended Build Alternative with a synopsis of alternatives considered but not recommended as follows:

- New interchange at the intersection of Arrowhead Drive and I-10.
- New interchange at the intersection of I-25 with Cholla Road.
- Fly-over ramp for I-10 EB to I-25 NB traffic.
- Replacement of the existing I-10 EB to I-25 NB direct-connector ramp, resulting in a larger-radius ramp extending further west.
- Reconstructed I-10 EB to I-25 NB direct-connector ramp entering the I-25 NB lane on the left-hand side.

3.3.1 Multi-Modal Transportation Facilities

Multi-modal transportation facilities have been considered throughout the development of the I-10/I-25 Interchange Improvements, including public/agency consultation and involvement in the SCRTD. Although no specific, public transit components have been identified in the Recommended Build Alternative, those factors which have been proposed will not preclude the future adoption of multi-modal transportation options within the region.

4.0 ENVIRONMENTAL CONSIDERATIONS

4.1 SCOPE OF THE ENVIRONMENTAL ANALYSIS

The following sections describe existing environmental conditions, evaluate expected impacts, and recommend mitigation measures to minimize any anticipated adverse impacts associated with the proposed improvements. Information pertaining to environmental conditions was assembled from several sources, including field inspections, review of public records and databases, consultation with interested agencies, and public input. Quantitative and qualitative methods have been used to evaluate the project impacts for a wide range of resources.

4.1.1 Area of Environmental Consideration

The I-10/I-25 Interchange is located in Las Cruces, Doña Ana County, New Mexico. The anticipated limits of construction for the I-10/I-25 Interchange Improvements are MP 143.3 to MP 146 along I-10, with the area of environmental consideration expanding westward to the I-10/NM 478 Interchange (South Main Street) in Las Cruces (MP 142).

4.1.2 Analysis of Alternatives

Under the No-Build Alternative, the I-10/I-25 Interchange would remain in its existing condition. Although the No-Build Alternative would be expected to have a minimal impact on the natural environment, it would not meet the purpose and need identified for the project. Moreover, the No-Build Alternative does not preclude all financial commitments, as ongoing costs would be required to maintain the I-10/I-25 Interchange in its current condition. Therefore, the following discussion focuses on evaluating expected impacts of the Recommended Build Alternative for the I-10/I-25 Interchange Improvements.

4.2 GENERAL ENVIRONMENTAL SETTING

4.2.1 Climate

The I-10/I-25 Interchange area features a mild arid to semi-arid climate, with an average annual precipitation of 10 inches. Summer rainfall contributes more than 50 percent of total rainfall, often occurring as intense and localized thunderstorms. Mean annual temperature is approximately 62 degrees Fahrenheit (F), with summer temperatures often exceeding 100 degrees F and winter nighttime temperatures dropping below freezing. Prevailing winds are most common from the southwest with spring as the windiest season.

4.2.2 Physiography

The elevation of the I-10/I-25 Interchange area is approximately 4,000 ft above sea level (asl). The project area is located on western slopes adjacent to the broad valley and floodplain of the Rio Grande. The terrain continues to gently rise to the east, over the lower, alluvial fans and interfan valleys of the Organ Mountain range. The I-10/I-25 Interchange lies near the southern boundary of the Jornada del Muerto, within the physiographic region known as the Mexican Highland Section of the Basin and Range Province (Hawley, 1986). No unique geologic formations exist within the project area.

4.3 SOILS

The I-10/I-25 Interchange complex is dominated by Bluepoint loamy-sands, which are found on terraces, ridges, and alluvial fans in the elevated margins of the Rio Grande Valley (Soil Conservation Service, 1977). Interfan valleys and broad drainages of the project area contain soils of the Bluepoint-Caliz-Yturbide complex, the Riverwash-Arizo complex, and the Canutio and Arizo gravelly sandy loams. The soils originate from alluvial deposits, and are deep and well-drained.

A Storm Water Pollution Prevention Plan (SWPPP), in compliance with the National Pollutant Discharge Elimination System (NPDES) permitting requirements, will outline erosion control measures and best management practices (BMPs) to mitigate soil erosion. A Temporary Erosion and Sediment Control Plan (TESCP) will be included in the construction plans. Disturbed areas will be re-vegetated after construction, if appropriate. No discharge of hazardous materials into the soil will be allowed during construction.

4.4 WATER RESOURCES

4.4.1 Surface Water

The *Clean Water Act of 1972* (CWA) regulates activities that have the potential to impact jurisdictional “waters of the United States”. Section 404 of the CWA regulates dredge-and-fill activities at roadway-crossings of jurisdictional waters. The U.S. Army Corp of Engineers (USACE) is authorized to provide regulatory guidance and issue permits governing these activities.

Field surveys have identified five (5) ephemeral arroyos within the project area that drain into the Rio Grande, and hence qualify as “waters of the United States” under the CWA. A Section 404 Nationwide Permit Number 14 will be required prior to construction at these locations. Temporary and permanent erosion/sedimentation control measures will be implemented in compliance with the NPDES permit program, and a SWPPP will be developed for the project.

4.4.2 Ground Water

The *NM Water Quality Act of 1978* requires the NM Environment Department Ground Water Quality Bureau (NMED-GWQB) to protect the environmental quality of the state’s ground water resources. The I-10/I-25 Interchange complex is located in the lower Rio Grande monitoring area, which encompasses Doña Ana and Sierra Counties.

The I-10/I-25 Interchange complex lies over the Mesilla Bolson, an aquifer that covers approximately 11,000 square miles centered on the Rio Grande in southern NM. The aquifer typically flows in a southerly direction. Depth to groundwater is less than 200 ft below land surface (bls) (U.S. Geology Service, 2005), and remains relatively constant through recharge from the river and regional irrigation.

As a mitigation measure, engineering and drainage plans will be designed to minimize roadway runoff and potential groundwater impacts. Standard control measures that protect groundwater will be implemented as part of NMDOT’s construction contracting requirements.

4.5 BIOLOGICAL RESOURCES

A comprehensive description of biological resources within the project area is presented in *Biological Evaluation and Assessment: I-10 Corridor Study* (Taschek Environmental Consulting, 2007a), which reports the results of a pedestrian survey conducted during July and August of 2006.

4.5.1 Vegetation

The project area is primarily located within the Chihuahuan Desert Scrub community (Dick-Peddie, 1993), interspersed by elements of the Desert Grassland community (Cully and Knight, 1987).

The plant species affected by construction activities are common and widespread throughout the region. Furthermore, construction primarily will be restricted to the existing right-of-way, which is already dominated by species that readily recover after disturbance. If appropriate, NMDOT will implement various options to reestablish native vegetation once construction is completed.

4.5.2 Wildlife

Project-related construction activities are likely to cause larger mammals, reptiles, and birds to relocate to other areas. Individuals of smaller, less-mobile species, inadvertently could be impacted by construction activities. Small areas of wildlife habitat could also be disturbed by construction, but extensive areas of similar or higher-quality habitat remain in the vicinity of the I-10/I-25 Interchange.

Therefore, the proposed improvements to the I-10/I-25 Interchange are not expected to have a significant impact on wildlife populations in the area.

4.5.3 Threatened and Endangered Species

The federal *Endangered Species Act of 1973* (ESA) requires that floral and faunal species listed with an endangered, threatened, proposed, or candidate protection status must be evaluated for potential impacts from the proposed project. The U.S. Fish and Wildlife Service (USFWS) acts as the regulatory authority for ESA. Additional protection of some species is also conferred under state statutes, including the *New Mexico Wildlife Conservation Act of 1974* and the *New Mexico Endangered Plant Species Act of 1978*. The NMDGF and the New Mexico Energy, Minerals and Natural Resources Department (Rare Plants Program) (NMEMNRD) regulate state protection of fauna and flora, respectively.

The USFWS, NMDGF, NMEMNRD, BLM, and New Mexico Natural Heritage Program (NMNHP) were consulted. Appendix B contains correspondence and species lists received by these agencies, as well as target lists of species developed from the federal and state lists by comparing habitat requirements of the species to the natural communities within the area.

No protected species were observed within the area of the I-10/I-25 Interchange. Therefore, the proposed improvements to the I-10/I-25 Interchange will have no effect on threatened, endangered, candidate, state sensitive, and “of concern” species.

4.5.4 Migratory Birds

The *Migratory Bird Treaty Act of 1918* (MBTA) protects against the “taking” of migratory birds, their nests, and their eggs, except as permitted by USFWS. Construction projects that involve removing trees or shrubs, or disturbing on-ground or underground nests or nesting structures, must comply with the MBTA.

Migratory birds and bird nests were directly observed during the biological surveys. Therefore, as a mitigation measure, construction activities will be initiated during the non-nesting season (September-March) to avoid disturbing the habitat of nesting migratory birds. Construction that commences during the nesting season will be preceded by a pre-construction survey and other mitigation procedures, as described under USFWS permitting requirements.

4.5.5 Noxious Weeds

Management to prevent the spread of noxious weeds is required under the federal *Executive Order (EO) 13112* and *NM EO 00-22*. The NM Department of Agriculture (NMDA) has developed a list of noxious weeds (NMDA, 1999) for control or eradication pursuant to the *NM Noxious Weed Management Act of 1998*. Such species are non-native to NM and are targeted to minimize negative impacts on the economy or environment.

Biological surveys within the area of the I-10/I-25 Interchange identified one Class B noxious weed: Malta starthistle (*Centaurea melitensis*). These weed populations will be controlled before construction commences following guidelines described by the NMDOT’s *Vegetation Management Program* (NMDOT, 2007) and in *Biological Evaluation and Assessment: I-10 Corridor Study* (Taschek Environmental Consulting, 2007a).

No further action is required for the two observed Class C noxious weed species of salt cedar (*Tamarix ramosissima*) and Siberian elm (*Ulmus pumila*).

4.6 SPECIALLY DESIGNATED AREAS

4.6.1 Wetlands

Wetlands are protected from unauthorized dredge-and-fill activities under *EO 11990* and Section 404 of the CWA. Jurisdictional wetlands are identified by the USACE based on soil saturation features and vegetation type.

Five (5) ephemeral arroyos cross the project area, but none features a consistently adequate level of moisture to be classified as jurisdictional wetlands. Therefore, the proposed improvements are compatible with the wetlands management objectives of *EO 11990* and Section 404 of the CWA.

4.6.2 Floodplains

Protection of floodplains is mandated under *EO 11988*, which requires that any potential impacts to floodplain areas be studied, assessed, and identified to reduce the risk of flood loss, minimize the impact of floods on human safety, and preserve the beneficial values served by floodplains.

The area of the I-10/I-25 Interchange has been mapped by the Federal Emergency Management Agency (FEMA) on the Federal Insurance Administration Flood Hazard Boundary Map

Community-Panel Number 35013C0634E (Appendix B). The map indicates the project area, primarily, to be within Flood Zone X. Additional locations crossing, or adjacent to, the project area are designated as Flood Zone A. Flood Zone X is not at risk from inundation during a 100-year flood. Flood Zone A indicates that, although detailed analyses have not been conducted to quantify depths or base flood elevations, these areas are at risk from inundation during a 100-year flood.

In accordance with *EO 11988*, the project will not alter flood hazard conditions or impact floodplains. Engineering plans will be designed to minimize roadway runoff and will not modify floodplains.

4.6.3 Prime Farmland

The federal *Farmland Protection Policy Act* of 1981 aims to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural use. The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) farmland classification system is based on a combination of factors including soil type, moisture supply, growing season, and current production status. However, no agricultural activity has historically occurred at this location.

Therefore, the proposed improvements to the I-10/I-25 Interchange are not expected to have a significant impact on prime farmland in the region.

4.6.4 Section 4(f) Property

Section 4(f) of the *Department of Transportation Act of 1966* restricts the use of public parks, recreational areas, wildlife refuges, and significant historic sites for transportation projects. This regulation is not applicable to any property within the area of the I-10/I-25 Interchange.

4.6.5 Section 6(f) Property

Properties purchased or developed under the authority of *Section 6(f)* of the *Land and Water Conservation Fund Act of 1964* may not be converted to uses other than outdoor public recreation. This regulation is not applicable to any property within the area of the I-10/I-25 Interchange.

4.7 CULTURAL RESOURCES

Potential impacts to cultural resources are assessed through *Section 106* of the *National Historic Preservation Act of 1966*. Cultural resources are evaluated in consultation with the State Historic Preservation Officer (SHPO). This process identifies historic properties that could be affected by the project, and determines approaches to avoid, minimize, or mitigate adverse effects.

A comprehensive description of cultural resources within the area of the I-10/I-25 Interchange is presented in *Cultural Resources Survey for the Interstate 10 Corridor Study: Las Cruces to Texas State Line, Dona Ana County, New Mexico* (Taschek Environmental Consulting, 2007b), which reports the results of a pedestrian survey conducted during July and August 2006.

The field survey identified several descansos (historic markers), but no archeological sites within the construction limits of the Recommended Build Alternative. Therefore, the proposed

improvements to the I-10/I-25 Interchange are not expected to adversely impact cultural resources. Concurrence on this determination has been completed by the NMDOT, on December 12, 2008, under the present agreement with New Mexico State Historic Preservation Division, effective June 21, 2005. Documentation on this coordination is included in Appendix B.

As a mitigation measure, the descansos will be removed prior to construction and replaced in or near their original locations as the project is completed. If buried archeological or cultural deposits are discovered during construction, work in the area will immediately cease while SHPO and the NMDOT Environmental Section are consulted. If there is a discovery of Native American human remains during construction, all construction activity will cease while the appropriate tribes are consulted for treatment and disposition of the human remains and associated funerary objects, pursuant to the *Native American Graves Protection and Repatriation Act of 1990*.

4.8 NOISE

Traffic noise impacts, as defined in the *Code of Federal Regulations (CFR), Title 23, Part 772 (23 CFR 772)* and NMDOT’s noise policy, occur when predicted traffic noise levels resulting from a transportation project either:

- approach or exceed the FHWA noise abatement criteria (NAC) (Table 1), or
- are greater than 57 A-weighted decibels (dBA) at average hourly levels (Leq) and exceed existing ambient noise levels by 10 dbA (Leq).

Table 1. FHWA Noise Abatement Criteria

Category	Leq(h) ¹	Land Use Activity
A	57 (Exterior)	Lands on which serene and quiet are of extraordinary significance and serve an important public need and where preservation of those qualities is essential if the area is to continue to serve its intended purposes.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Category A or B above.
D	-	Undeveloped land.
E	52 (Interior)	Residences, motels, public meeting rooms, schools, churches, libraries, hospitals, or auditoriums.

¹ Traffic noise is quantified in decibels, which measure relative acoustic energy intensities. A-weighted decibels, or dBA, simulate human response to noise, and average hourly levels, Leq(h), address the time-varying characteristics of noise. The full unit of measurement is the dBA (Leq[h]).

Under these conditions, state and federal policy requires an assessment of abatement measures to provide reasonable and feasible reductions in noise levels at the impacted locations, based on factors such as:

- a noise reduction of at least 5 dBA is achieved,
- costs are less than \$40,000 per benefited receptor,
- noise abatement is limited to existing development, and
- commercial land uses (Category C, Table 1) or isolated residences are generally excluded from noise abatement or mitigation.

A comprehensive evaluation of potential noise impacts for the I-10/I-25 Interchange complex is presented in *Traffic Noise Analysis for Interstate 10: Las Cruces to Texas State Line* (Mike Henderson Consulting, 2007). The FHWA Traffic Noise Model (TNM) was used to predict potential noise impacts associated with the Recommended Build Alternative and the expected increase in traffic. Noise receptor locations were identified adjacent to the project area. The TNM model indicates that noise levels at most receptor locations are expected to increase by 1-4 dBA and exceed the 67 dBA NAC by the year 2030.

Potential costs and benefits of installing noise walls to mitigate excessive traffic noise levels at locations where noise levels are predicted to exceed the 67 dBA NAC by the year 2030 were also analyzed using TNM (Table 2).

Table 2. Noise Level Abatement in the I-10/I-25 Interchange complex.

Location	Modeled Noise Levels (dBA)			Wall Dimensions (ft)		Cost per Receptor (\$)	Warranted
	2030 Build	With Wall	Noise Reduction	Length	Height		
West of I-10 near Cholla Road/ Broadmoor Drive	64-71	60-68	2-6	4,400	12-14	52,450	
East of I-25 near Cholla Road	65-70	62-64	3-6	3,440	12	164,640	
East of I-25 south of Tellbrook Road	68-72	63-68	4-6	2520	18	127,000	
La Fe De Manor Mobile Home Park at Larjon Road	65-68	64-65	1-3	1,600	10-14	n.a.	
Villa del Sol Mobile Home Park at C Street & F-Street	68-71	62-65	3-9	1,600	10	32,000	√

Source: Traffic Noise Analysis for Interstate 10: Las Cruces to Texas State Line (Mike Henderson Consulting, 2007).

The analysis concluded that noise walls would be infeasible or unreasonable at several locations, due either to cost or to the unlikelihood of achieving a 5 dBA noise reduction. However, a noise wall is warranted, based on state and federal noise policy, for reduction of noise to the southwest of the I-10/I-25 Interchange (Villa Del Sol Mobile Home Park). Preliminary details of the location and noise wall elevations for mitigation are presented in the *Traffic Noise Analysis for Interstate 10: Las Cruces to Texas State Line* completed in 2007, as well as the *I-10/I-25 Interchange Supplemental Noise Abatement Analysis* completed in 2009 (Mike Henderson Consulting). Since completion of the original study in 2007, the noise wall location has been further refined during final design and is proposed directly adjacent to the Interstate, on the east side of Stern Drive. An aerial identifying the proposed location of the noise wall is included in Appendix A.

4.9 AIR QUALITY

The *Clean Air Act of 1970*, as amended, establishes the National Ambient Air Quality Standards (NAAQS) to protect public health from exposure to dangerous levels of six air pollutants: ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), lead (Pb), and

airborne particulate matter (PM₁₀). The project area is an attainment area for all six air pollutants.

Some temporary impacts to air quality may be expected from dust during construction. These impacts would be localized and restricted to the period of construction. A *Natural Events Action Plan of Doña Ana County* (NMED-AQB, 2000) (NEAP) has been adopted to offset generation of dust during construction activities. Dust control measures, in accordance with the NEAP, will be incorporated into construction plans.

Therefore, the proposed improvements to the I-10/I-25 Interchange are not expected to have a significant impact on air quality within the project area.

4.10 LAND USE

The I-10/I-25 Interchange complex is located in the City of Las Cruces, Doña Ana County, New Mexico. Land use activities within the project area, including subdivisions and commercial development, are regulated by policies and ordinances established by both the City of Las Cruces and Doña Ana County. Transportation issues are also addressed by the Las Cruces MPO.

Existing land use within the project area includes a combination of residential and commercial development. In addition, coordination with the New Mexico State University (NMSU) has been ongoing throughout the study due to their proximity to the I-10/I-25 Interchange, as well as to ensure that the Recommended Build Alternative would complement roadway alignments proposed in NMSU's *Draft Master Plan 2006-2016* (NMSU, 2006).

Continued growth in both residential and commercial land use is expected within the project area. Overall, the project is consistent with local expectations about land use, city and county development control ordinances, and transportation goals of the Las Cruces MPO. Coordination with the associated regulatory agencies, planning agencies, and landowners will continue through final design.

4.11 ACCESS AND TRANSPORTATION

4.11.1 Access and Safety

The Recommended Build Alternative addresses the comments received during the public involvement process that highlighted concerns regarding traffic access and safety at the interchange. Specific improvements at the I-10/I-25 Interchange include the realignment of connectors to improve geometry, construction of overpasses and flyovers to keep traffic separated, and the addition of a right-hand merge for the I-10 EB to I-25 NB direct-connector ramp.

Therefore, the proposed improvements to the I-10/I-25 Interchange are not expected to have a significant impact on access and safety.

4.11.2 Multimodal Transportation Service

Currently, pedestrian, bicycle, and equestrian use is permitted on the frontage roads within the project area but not allowed within the I-10/I-25 Interchange complex.

Additional multimodal transportation services that utilize the I-10/I-25 Interchange include regional motor coach and shuttle services between the major urban centers of Las Cruces and El Paso. School bus routes are established along the frontage roads. In addition, the SCRTD is expected to promote an efficient and multi-modal transportation network across southern NM. Coordination with the SCRTD has been ongoing in order to ensure that the proposed improvements do not preclude future multi-modal transportation initiatives.

The proposed improvements at the I-10/I-25 Interchange are not expected to have a significant impact on the existing pedestrian, bicycle, or equestrian facilities; however, no additional pedestrian, bicycle, or equestrian facilities are proposed under the Recommended Build Alternative.

4.11.3 Emergency Services

Emergency departments will be updated frequently on the project status so that service and access will not be disrupted.

The proposed improvements to the I-10/I-25 Interchange would enhance traffic safety and access within the project area; therefore, an improvement in the response time of vehicular emergency services is expected.

4.12 RIGHT-OF-WAY ACQUISITION

The I-10/I-25 Interchange Improvements are expected to require the acquisition of additional right-of-way, within the area bounded by I-10, I-25, and Cholla Road, for the reconstruction of the direct-connector ramps. Other components associated with the ramp modifications and frontage road realignments will remain entirely within the existing right-of-way. An estimate of the additional right-of-way required at the I-10/I-25 Interchange is 24 acres.

No residences or businesses are anticipated to be displaced as a result of the proposed right-of-way acquisition. Right-of-way acquisition will conform with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as well as other applicable regulations.

It is expected that construction and maintenance easements (CME's), temporary construction permits (TCP) and/or work permits will be required for the project, with additional information developed during final design.

4.13 HAZARDOUS MATERIALS

Contamination of soil or water with hazardous materials is a serious concern due to health, safety, and the liability of clean-up operations. An extensive set of regulations address the management of hazardous substances in transportation projects, including:

- *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* – materials that may create a risk to health, safety, and property;
- *Resource Conservation and Recovery Act of 1976*– hazardous wastes;
- *Clean Water Act of 1972* – water pollutants;

- *Clean Air Act of 1970* – air pollutants;
- *Toxic Substances Control Act of 1976* – chemical substances; and
- *42 USC 9601* – substances that may present substantial danger to public health and the welfare of the environment.

An initial site assessment (ISA) identifies sites with recognized environmental conditions that could impact the project due to the potential presence of contamination from petroleum products or other hazardous substances. The results of an initial ISA for a portion of the I-10/I-25 Interchange complex are presented in *Initial Site Assessment Summary: I-10 Milepost 144.0 to 164.3, Doña Ana County, NM* (NMDOT, 2006). The remainder of the project area, MP 142 to MP 144, is currently under investigation and will be presented in a separate ISA. Any hazardous material sites identified will be disclosed and managed prior to construction. If necessary, a further assessment of environmental hazards will be conducted during final project design to determine the need for a more detailed, preliminary site investigation (PSI).

Hazardous materials used during construction will be managed in accordance with federal, state, and local laws and regulations to ensure that no contamination of the soil and ground or surface water will occur within the I-10/I-25 Interchange complex.

4.14 VISUAL RESOURCES

The I-10/I-25 Interchange complex is characterized by many of the visual features associated with a major transportation route, including elevated bridges, signs, and billboards. Specifically, the proposed construction of elevated ramps at the I-10/I-25 Interchange could modify views for residents in surrounding neighborhoods. The existing interchange configuration contains several elevated sections for the direct-connector ramps, which will generally follow a similar vertical profile under the Recommended Build Alternative. Potential visual impacts associated with the I-10 EB to I-25 NB direct-connector ramp have been a primary focus of neighborhood discussions, and will be carefully evaluated throughout final project design. The right-hand merge option for the I-10 EB to I-25 NB direct-connector ramp would require additional structures to carry traffic over both the SB and NB lanes of I-25. This fly-over would be approximately 21-ft above the roadway surface, which is a similar elevation to the other direct-connector ramps within the interchange complex.

The introduction of a noise wall at the southwestern edge of the interchange will modify views along Stern Drive. However, the height of the noise wall will remain below the height of the bridge structures and the direct connector-ramps, and is separated from residential development by Stern Drive. Therefore, the noise wall construction is not expected to result in a significant impact to visual resources.

Any street lighting features included during final design will comply with the *NM Night Sky Protection Act of 1978* and are not expected to result in a significant impact to the area.

4.15 UTILITIES

A preliminary description of utilities located within the I-10/I-25 Interchange complex is presented in *Utilities Records Research* (Abasto Utility Locating Company, 2006). An extensive record search identified a significant presence of utilities within the project area.

Proposed improvements to the I-10/I-25 Interchange are expected to encroach on the current configuration of some utilities. Therefore, the NMDOT will continue coordination with utility companies throughout the final stages of project design. If it is determined that impacts to utilities are unavoidable and relocation is found to be necessary, the NMDOT will contact and provide all available project information to the affected utility companies to ensure that service disruptions to area residents are minimized.

4.16 SOCIAL ISSUES

4.16.1 Environmental Justice

EO 12898 prevents federal policies and actions from creating disproportionately high and adverse health and environmental impacts to minority and low-income populations. *Title VI* of the *Civil Rights Act of 1964* and related statutes ensure that individuals are not subjected to discrimination on the basis of race, color, national origin, age, sex, or disability under any program or activity receiving federal financial assistance.

Table 3 provides an overview of the demographic characteristics of the area. Based on data from the U.S. Census (2000), the general project area (represented by Las Cruces) has a similar percentage of minority population groups and a similar population of persons below the poverty level to the surrounding areas. However, there is no indication that a disproportionate number of minority or low-income population groups would be affected by the Recommended Build Alternative.

Table 3. Demographic Characteristics of the Project Area.

	New Mexico		
	City of Las Cruces	Doña Ana County	New Mexico
Population			
Population, 2000	74,276	174,682	1,819,046
Minority Representation			
White alone	51,248	118,478	1,214,253
Non-white	23,109	56,204	604,793
% non-white	31%	32%	33%
Economic Data			
Median Household Income, 1999	\$30,375	\$29,808	\$34,133
Per Capita Income, 1999	\$15,704	\$13,999	\$17,261
% persons below poverty, 1999	23%	25%	18%

Source: U.S. Department of Commerce, U.S. Census Bureau, 2000 Census data

Demographic characteristics of neighborhoods adjacent to the I-10/I-25 Interchange were evaluated in greater detail in response to the various components of the Recommended Build Alternative. Table 4 presents data from the U.S. Census (2000) at the Census block residences along the east side of the I-10/I-25 Interchange and Census Tract 11.01 (Block Groups 2 and 3) representing the residences on the western side. Although data at this level still represents an area greater than the adjacent neighborhoods, it does offer a closer evaluation of the demographic characteristics in the project area.

Table 4. Demographic Data for Areas Adjacent to the I-10/I-25 Interchange.

	Census Tract 11.01		Census Tract 12.02		City of Las Cruces	Doña Ana County	New Mexico
	Block Group 2	Block Group 3	Block Group 7	Block Group 8			
Minority Representation							
% non-white	30%	21%	10%	14%	31%	32%	33%
Economic Data							
% persons below poverty, 1999	22%	21%	10%	11%	23%	25%	18%

Source: U.S. Department of Commerce, U.S. Census Bureau, 2000 Census data

Table 4 indicates that a higher percentage of minorities and persons below the poverty level are found in Census Tract 11.01 (Block Groups 2 and 3) than in Census Tract 12.02 (Block Groups 7 and 8). However, indicators of minority representation and economic status for this group are above averages derived at the city, county, and/or state level. Therefore, this analysis does not identify environmental justice concerns with regard to the Recommended Build Alternative.

4.16.2 Community Cohesion

Transportation projects can impact community cohesion by splitting neighborhoods, isolating development, changing property values, or separating residents from community facilities. Relationships and travel patterns of neighborhoods within the I-10/I-25 Interchange area were investigated during public involvement activities.

The proposed improvements are not anticipated to result in a loss of community adhesion. The I-10/I-25 Interchange is an existing facility, and much of the project will be conducted within the current NMDOT right-of-way. No established neighborhoods will be divided or isolated by the project. The community may also benefit from the enhanced local and regional access provided by the improvements to the I-10/I-25 Interchange.

4.17 ECONOMIC DEVELOPMENT AND EMPLOYMENT

I-10 is the southernmost east-west interstate traversing the U.S., and I-25 provides north-south access commencing at the I-10/I-25 interchange. Both interstate routes are used for regional and interstate business, freight, tourist, residential, and recreational travel which rely heavily on access through the I-10/I-25 Interchange.

Members of the local business community and the public have expressed support for access and capacity improvements to the I-10/I-25 Interchange complex as a means of stimulating local and regional economic development. Funds spent on construction would provide employment, and create a multiplier effect on the local economy. The Recommended Build Alternative is expected to provide economic development opportunities both within and beyond the I-10/I-25 Interchange area.

4.18 CONSTRUCTION IMPACTS

Typical short-term inconveniences will be experienced during proposed construction of the I-10/I-25 Interchange improvements. Maintaining access and minimizing construction-related traffic delays is an integral part of the Recommended Build Alternative, and efforts will be made throughout the design and construction process to minimize disruptions. Interstate and frontage road access will be maintained throughout construction by re-routing traffic as necessary. Any temporary modification to traffic patterns will follow established FHWA and NMDOT safety procedures. Emergency departments will be updated frequently on the project so that service and access will not be disrupted.

Noise levels will often be greater than normal in areas adjacent to construction. However, the construction work will typically occur during daylight hours when loud noises are more tolerable, and measures to control construction noise will be implemented.

Air quality may also experience localized, short-term, adverse impacts during construction, resulting from smoke, dust, and exhaust emissions. Compliance with standard NMDOT, NMED, and Doña Ana County NEAP regulations and specifications will be strictly administered for all burning operations and dust-producing aspects of construction.

A SWPPP will be developed for the project to ensure compliance with the terms and conditions of the NPDES permit program. Procedures will be included in the plan to reduce pollutants in storm water discharges associated with the construction site. Precautions to prevent release of sedimentation pollution into drainages will also be detailed in the TESCPC included in construction contracts. Unwanted materials and surplus concrete generated by the construction will be deposited at suitable sites.

A variety of utility adjustments may be made during construction. These adjustments will be identified specifically during final project design. Efforts will be made to accommodate the needs of property and utility owners.

4.19 SECONDARY IMPACTS

The Council on Environmental Quality (CEQ) defines secondary impacts as those that are expected to be caused by the proposed project at a later time or at some distance.

Most of the proposed improvements are expected to occur in the existing NMDOT right-of-way, which has been previously disturbed by other roadway construction activities. Therefore, the proposed construction will not significantly impact land use, community cohesion, or travel patterns in the area. As discussed in Section 4.17, opportunities for economic development are

expected as a result of the Recommended Build Alternative. In addition, the Recommended Build Alternative is expected to improve traffic safety, enhance the local and regional transportation network, and enhance system connectivity both within and beyond the I-10/I-25 Interchange area.

4.20 CUMULATIVE IMPACTS

Cumulative impacts arise from the incremental consequences of a project when added to other, past and foreseeable future actions.

The proposed improvements to the I-10/I-25 Interchange will also help to accommodate the increased traffic expected from various residential and business developments occurring in the Las Cruces area. The interchange improvements are not expected to directly increase traffic or require additional improvements along other sections of I-10, I-25, or surrounding arterial roads. Close coordination with the Las Cruces MPOs has been ongoing and no concerns have been identified with the current proposal.

The consideration of other reasonable foreseeable transportation improvements in the region will not be restricted by the proposed project. Specifically, the potential for a future interchange located at Arrowhead, just east of the I-10/I-25 Interchange, was considered throughout project design. The associated IJR being prepared for the Recommended Build Alternative provides additional documentation with regard to foreseeable transportation improvements, including the potential Arrowhead Interchange.

Furthermore, the Recommended Build Alternative will not preclude any of the proposed improvements included in the *I-10 Corridor Study*. Ultimately, the Recommended Build Alternative will be complementary to the proposed six-lane widening of I-10, as well as the corresponding interchange improvements (i.e. I-10/NM 404, I-10/NM 228, I-10/NM 227).

5.0 ENVIRONMENTAL COMMITMENTS

- A SWPPP will be developed to define erosion control measures, storm water management measures, structural controls, and BMPs to mitigate erosion.
- A TESCP will be included in the construction plans.
- No discharge of hazardous materials into the soil will be allowed during construction.
- A Section 404 Nationwide Permit, issued through the USACE, is required before construction commences.
- Final construction plans will be designed to ensure that the Recommended Build Alternative will not alter runoff patterns from the interchange.
- The NMDOT will implement various options to reestablish native vegetation once construction is completed.
- Construction activities (including the removal of existing culverts and/or bridges, and the clearing of shrubs and cacti) will be initiated during the non-nesting season (September-March) to avoid disturbing the habitat of nesting migratory birds. Construction that commences during the nesting season will be preceded by a pre-construction survey and other mitigation procedures, as described under USFWS permitting requirements.
- Populations of the Class B noxious weed, Malta starthistle (*Centaurea melitensis*), will be controlled before construction commences, following guidelines described by the NMDOT Vegetation Management Program.
- The proposed improvements will not alter flood hazard conditions or impact floodplains, in compliance with *EO 11988*.
- During construction activities, the NMDOT will remove the descansos (historic markers) that were recorded within the project area, and replace them in or near their original location as the project is completed.
- If buried archeological or cultural deposits are discovered during construction, work in the area will cease while the SHPO and NMDOT Environmental Section are consulted. If Native American human remains are discovered during construction, construction activity will cease while the appropriate tribes are consulted for treatment and disposition of these objects, pursuant to the *Native American Graves Protection and Repatriation Act of 1990*.
- Specifications for the noise wall warranted southwest of the I-10/I-25 Interchange will be refined prior to construction.
- Dust control measures, in accordance with the *NEAP for Doña Ana County* (NMED-AQB, 2000), will be incorporated into construction plans.

- Emergency departments will be updated frequently on the project status so that service and access will not be disrupted.
- Owners of property acquired for additional right-of-way will be compensated in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* and other applicable federal and state regulations.
- If necessary, a further assessment of environmental hazards will be conducted during final project design to determine the need for a more detailed preliminary site investigation (PSI).
- Hazardous materials used during construction will be managed in accordance with federal, state, and local laws and regulations. Appropriate procedures will also be adopted to protect the health and safety of employees and the public.
- Street lighting features that are included in the final project design will comply with the *NM Night Sky Protection Act of 1978*.
- The NMDOT will continue coordination with utility companies throughout the final stages of project design. If it is determined that impacts to utilities are unavoidable and relocation is found to be necessary, the NMDOT will provide available project information to the affected utility companies to ensure that service disruptions to area residents are minimized.
- Unwanted materials generated by construction activities will not be dumped in “Waters of the U.S.” or vacant areas. Materials will be deposited in suitable sites.

6.0 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

In accordance with NEPA, a program was implemented to encourage agency coordination and public involvement in the I-10/I-25 Interchange Improvements. Feedback received during this process assisted in the identification of potential project impacts, and influenced the design of the Recommended Build Alternative.

6.1 PUBLIC INVOLVEMENT PLAN

A public involvement plan (PIP), *I-10 Corridor Study Public Involvement Plan* (Taschek Environmental Consulting, 2005), was prepared for the I-10/I-25 Interchange Improvements as part of the evaluation process for the proposed *I-10 Corridor Study*. The PIP disclosed potential social and environmental issues, identified stakeholders, and outlined the anticipated public involvement effort needed to complete the project.

6.2 AGENCY COORDINATION

In September 2005, an initial letter providing notification of the upcoming improvement project and soliciting input on potential issues of concern was mailed to agencies identified in the PIP. Agency responses were limited typically to areas of resource specialty (Appendix B). Concerns expressed during the agency review process were considered during project development, and have also been addressed in this EA.

6.3 STAKEHOLDER AND COMMUNITY INVOLVEMENT

Public and stakeholder outreach was implemented using a variety of direct mail and workshop-oriented methods, including:

- public open-houses, informational meetings, and individual contacts;
- meetings with special interest groups, business owners, and neighborhood associations; and
- meetings with elected officials and representatives of local government agencies.

The public involvement process included a diverse selection of formats, venues, and participants. Nonetheless, the input received at these forums revealed a similar set of concerns and needs for the various stakeholder groups, and is summarized below. Additional information regarding the public involvement process is included in Appendix C. Feedback received from the stakeholder forums was considered during project development, and has also been addressed in this EA.

6.3.1 Agency and Community Stakeholder Meetings

A total of four stakeholder meetings have been held, as summarized below:

- An initial agency stakeholder meeting was held on August 25, 2005, in Las Cruces, NM. The meeting was well attended, including representatives from NMDOT, TxDOT, BLM, Las Cruces MPO, Doña Ana County, El Paso MPO, NMSU, Border Patrol, and several law enforcement agencies. The meeting was intended to identify the needs and concerns of agency stakeholder groups in relation to the proposed project.
- A community stakeholder meeting was held on November 8, 2005, in Anthony, NM. The meeting was attended by representatives from the local communities, dairy farms, trucking

associations, and political organizations. The meeting's agenda was similar to the agency stakeholder meeting, with the objectives to identify the community's needs and concerns with regard to the proposed project.

- A combined agency and community stakeholder meeting was held on March 3, 2006, in Las Cruces, NM. The decision to include both agency and community stakeholders at this meeting was based on the similarity of issues raised at preceding meetings. The meeting's purpose was to solicit comments on the Phase A alternatives and identify priorities. Improvements to the I-10/I-25 Interchange were identified as one of the highest project priorities.
- A second combined agency and community stakeholder meeting was held on July 26, 2006, in Las Cruces, NM. The meeting was intended to present and discuss the recommended alternatives of Phase B. Comments at the meeting indicated overall support for the project, including requests for bilingual signage, elimination of the left-side exit at the interchange, and further evaluations of the weaving potential within the interchange complex.

6.3.2 Neighborhood Meetings

Neighborhood meetings were held at 2 community locations within the I-10/I-25 Interchange complex between September 20, 2005, and November 2, 2005. Attendees at all neighborhood meetings expressed general support for the project and appreciation for the opportunity to comment. Concerns presented at the meetings included:

- need for improved safety and drainage;
- support for additional I-10 access and public transportation elements; and
- concern with noise levels in residential areas.

6.3.3 Public Involvement Meeting

Two public involvement meetings have been held for the I-10/I-25 Interchange Improvements: March 15th and September 27th, 2006. The purpose of these meetings was to provide information and collect input on the recommended alternatives presented in Phase A and Phase B, respectively. Issues discussed at the meetings related to the I-10/I-25 Interchange are as follows:

- location of Cholla interchange/access;
- lighting effects and visual impacts;
- clarification on study area, project schedule, and budget;
- explanation of traffic volumes considered.

6.3.4 Property Owner Interviews

When requested, property owner interviews were held by the NMDOT and consultant staff. These meetings were scheduled to supplement or repeat project information that was provided at the public involvement or stakeholder meetings.

6.4 PUBLIC HEARING

A public hearing will be held after the FHWA releases this EA for public review. The public hearing will allow a final opportunity for public input on project design and the findings presented in this EA.

Formal notice of the availability of this EA and the public hearing date will be published in the local newspaper. Notifications will also be mailed to agencies and individuals on the stakeholder list. Copies of the EA and associated technical reports will be made available at several locations for agency and public access. The public will have at least 30 days to review and comment on this EA. An input synopsis will be prepared to address concerns received at the public hearing and during the EA review period.

7.0 CONCLUSIONS

This EA concludes that the proposed improvements within the I-10/I-25 Interchange complex will correct existing physical deficiencies, address capacity issues, improve safety, enhance system connectivity, and support economic development in the region.

The project is not expected to cause significant adverse social, economic, or environmental impacts at a level that would warrant an environmental impact statement (EIS). Mitigation measures have been identified to minimize anticipated adverse impacts of the Recommended Build Alternative. Therefore, unless significant impacts are identified during the public review of this EA, a FONSI for the Recommended Build Alternative will be requested from the FHWA. The FONSI would provide environmental authorization for final design, right-of-way acquisition, and construction of the I-10/I-25 Interchange Improvements.

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10.0 ACRONYMS AND ABBREVIATIONS

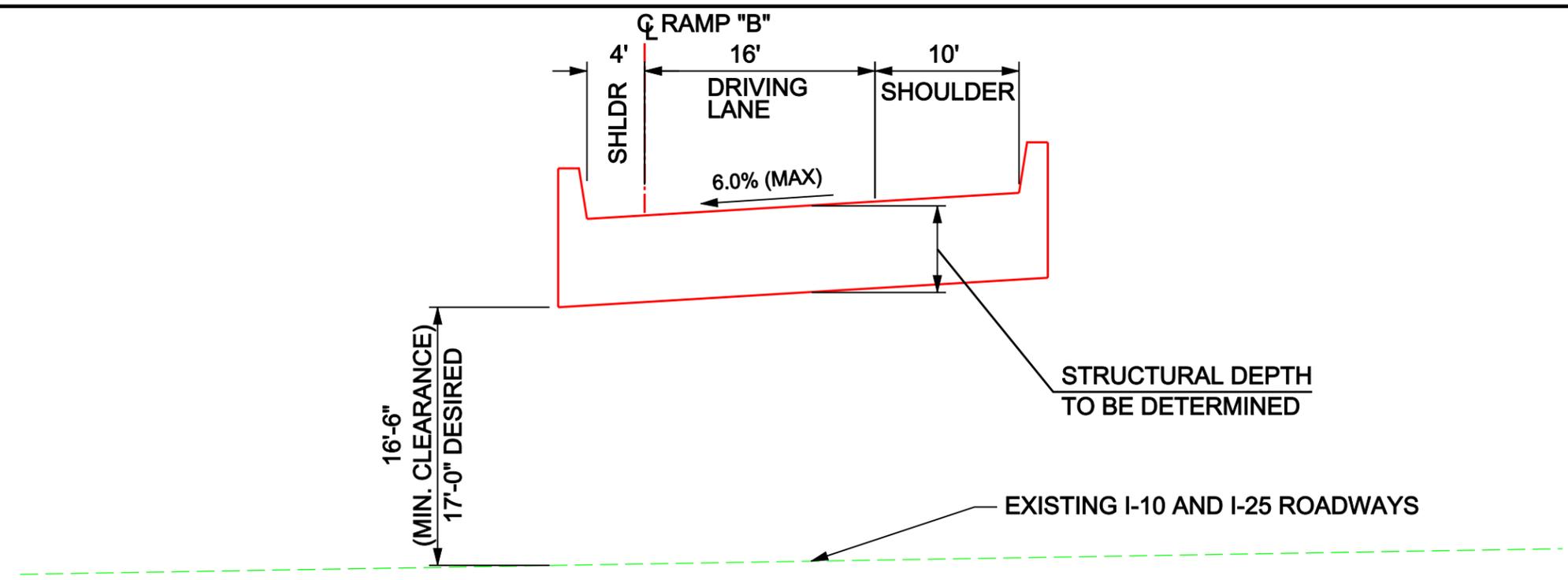
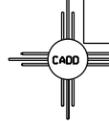
AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACEC	Area of Critical Environmental Concern
APE	Area of Potential Effects
ARMS	Archaeological Records Management Section
ASTM	American Society for Testing and Materials
BLM	Bureau of Land Management
BMP	Best Management Practice
BNSF	Burlington Northern Santa Fe
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CME	Construction and Maintenance Easements
CO	carbon monoxide
CSD	Context Sensitive Design
CSS	Context Sensitive Solutions
CWA	Clean Water Act
dBA	A-weighted decibels
EA	Environmental Assessment
EB	eastbound
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
GRIP	Governor Richardson's Investment Partnership
IO	Isolated Occurrence
ISA	Initial Site Assessment
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MP	Mile Post
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NB	northbound
NEAP	Natural Events Action Plan
NEPA	National Environmental Policy Act
NMDA	New Mexico Department of Agriculture
NMDGF	New Mexico Department of Game and Fish
NMDOT	New Mexico Department of Transportation

NMED	New Mexico Environment Department
NMED-GWQB	New Mexico Environment Department – Ground Water Quality Bureau
NMED-SWQB	New Mexico Environment Department – Surface Water Quality Bureau
NMEMNRD	New Mexico Energy, Minerals, and Natural Resources Department
NMNHP	New Mexico Natural Heritage Program
NMSLO	New Mexico State Land Office
NMSRCP	New Mexico State Register of Cultural Properties
NMSU	New Mexico State University
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NPDES	National Pollutant and Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	ozone
OGFC	Open Graded Friction Course
Pb	lead
PIP	Public Involvement Plan
PM	particulate matter
PSI	Preliminary Site Investigation
SACC	Scenic Area of Critical Concern
SB	southbound
SCRTD	South-Central Regional Transit District
SHPO	State Historic Preservation Officer
SLO	State Land Office
SO ₂	sulfur dioxide
SRMA	Special Recreation Management Area
SWPPP	Storm Water Pollution Prevention Plan
TCP	Temporary Construction Permits
TESCP	Temporary Erosion and Sediment Control Plan
TNM	Traffic Noise Model
TxDOT	Texas Department of Transportation
USACE	United States Army Corps of Engineers
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VRM	Visual Resource Management
WB	westbound
WSMR	White Sands Missile Range

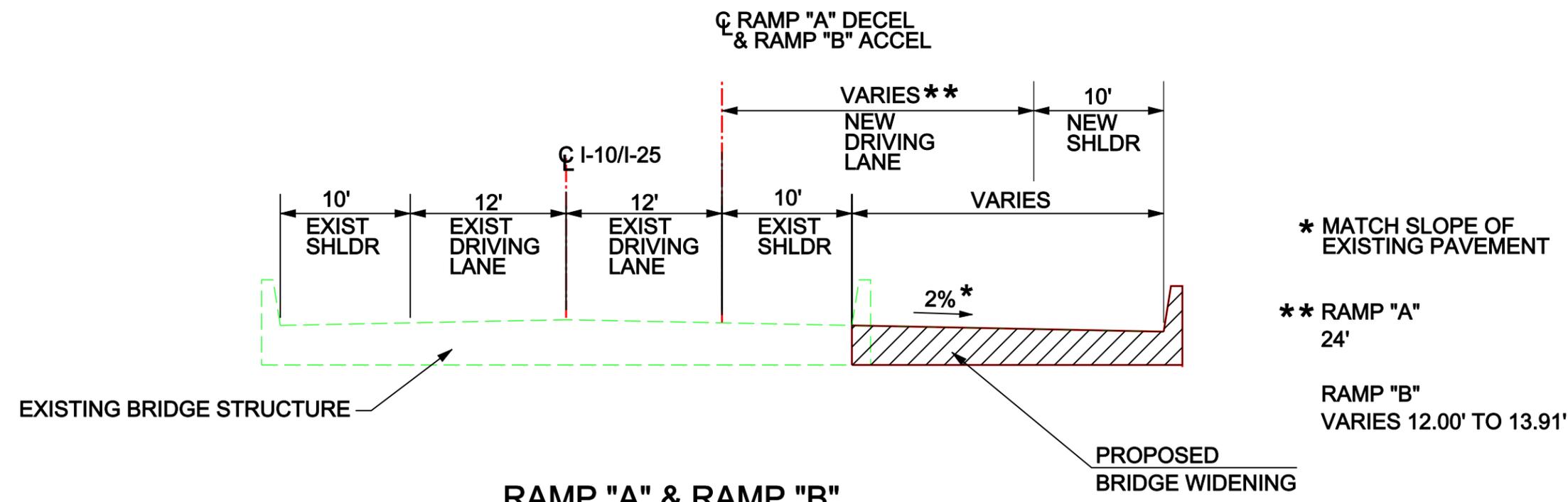
APPENDIX A

Typical Sections





**RAMP "B" BRIDGES
OVER I-10 AND I-25 ROADWAYS**

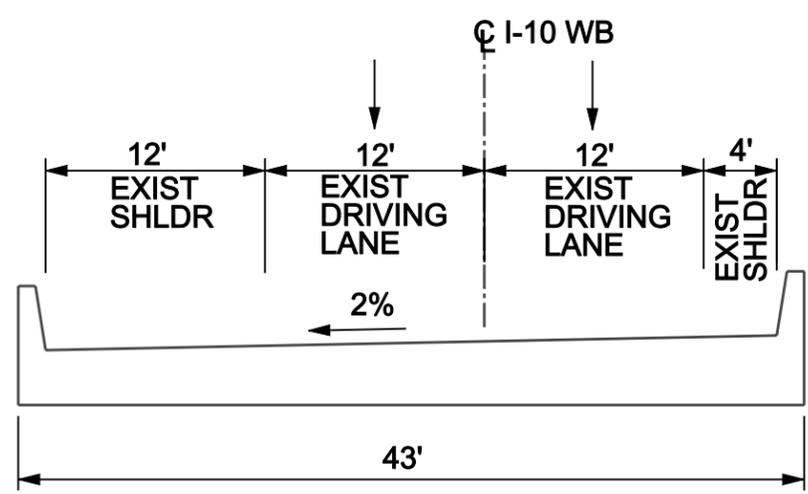
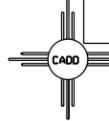


**RAMP "A" & RAMP "B"
BRIDGE WIDENING
I-25 OVER CHOLLA RD**

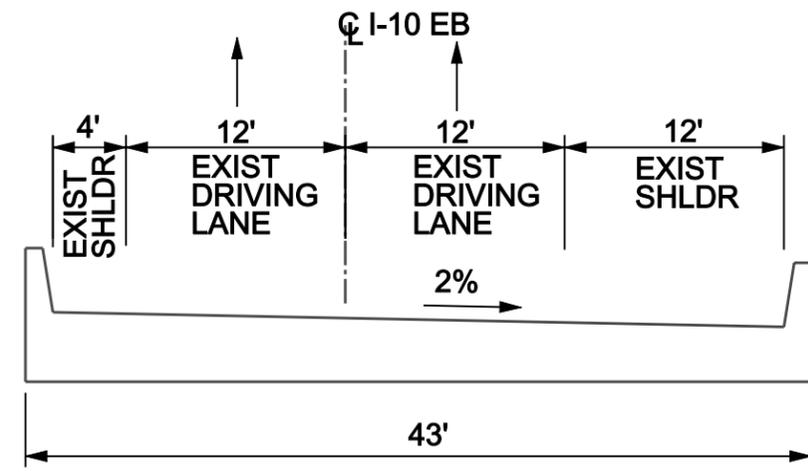
NEW MEXICO DEPARTMENT
OF TRANSPORTATION

PROPOSED TYPICAL SECTIONS
RAMP "A" & "B" BRIDGE WIDENING
RAMP "B" BRIDGES

NEW MEXICO PROJECT NO.	SHEET NO.
HPP-010-2(127)144	
CN: 1100030	



I-10 WB BRIDGE
OVER I-25 SB



I-10 WB BRIDGE
OVER I-25 SB

NEW MEXICO DEPARTMENT
OF TRANSPORTATION

INTERSTATE 10
OVER INTERSTATE 25 SB
BRIDGE TYPICAL SECTIONS

NEW MEXICO PROJECT NO.	SHEET NO.
HPP-010-2(127)144 CN: 1100030	1-1



NEW MEXICO DEPARTMENT
OF TRANSPORTATION

PLAN
"STERN DRIVE" NOISE WALL

APPENDIX B

Agency Correspondence



*Taschek Environmental Consulting
Las Cruces Office
1155 S. Telshor Blvd, Suite 204
Las Cruces, NM 88011
Phone: (505) 522-7400 FAX: (505) 532-9792*

September 22, 2005

RE: I-10 Corridor Study in Doña Ana County, New Mexico

Taschek Environmental Consulting, under contract with the New Mexico Department of Transportation, and in cooperation with the Federal Highway Administration, is preparing a corridor study along Interstate 10 (I-10) in Doña Ana County between the I-10/I-25 interchange in the City of Las Cruces, New Mexico and the New Mexico/Texas State Line. As part of the Governor Richardson's Investment Partnership (GRIP) program, the I-10 Corridor Study will include analysis of the frontage road system and several key interchanges (I-25, Mesquite, Vado, and NM 404) within the project termini, as well as consider issues such as traffic capacity, public transportation, drainage, and safety.

Given the regional importance of the I-10 corridor, it is valuable to collect information from all agencies and organizations that may be impacted by future improvements to the facility. An extensive public and agency input process has been initiated to identify elements to be considered as part of the corridor study. This letter is to invite submission of any comments or information relating to potential effects from the project on the physical, social, or economic environment in the area.

Taschek Environmental Consulting would appreciate your response within 30 days to the TEC Las Cruces Office. If you need further information or wish to discuss the project, please contact me at (505) 522-7400 or email me at tecdenise@aol.com.

Sincerely,

Denise Weston, Environmental Planner

Attachments: map

Mr. Gedi Cibas
NM Environment Department
Program Support Bureau
PO BOX 953
Santa Fe, NM 87504

Ms. Marcy Leavitt
Surface Water Quality Bureau
New Mexico Environment Department
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Santa Fe, NM 8750

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Natural Resources Conservation Service
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U.S. Environmental Protection Agency
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Dallas, TX 75202-2733

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US Army Corps of Engineers
El Paso Regulatory Office
PO Box 6096
Fort Bliss, TX 79906-0096

Mr. Paul Dugie
Dona Ana County Flood Commission
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Las Cruces, NM 88001

Mr. McMahon Chuck
Dona Ana County
Planning Department
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Las Cruces, NM 88001

Mr. Robert Armijo
Dona Ana County
2025 E. Griggs
Las Cruces, NM 88001

Ms. Elizabeth Bernal
South Central Council of Governments
PO BOX 1072
Elephant Butte, NM 87935

Ms. Janell Ward
NM Department of Game and Fish
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Santa Fe, NM 87504

Jim Davis
Petroleum Storage Tank Bureau
NM Environment Department
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Santa Fe, NM 87504

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NM Energy, Minerals & Natural Resources
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Santa Fe, NM 87504

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El Paso , TX 79901

Mr. Ricardo Dominquez
El Paso MPO
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El Paso , TX 79935

Mr. Tim Saunders
BLM
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El Paso, TX 79928

Mr. George Sarmiento
City of El Paso
2 Civic Center Plaza
El Paso , TX 79901

Mr. Robert Garza
Public Works Director
City of Las Cruces
PO Box 20000
Las Cruces , NM 88004

Subj: **Various Dona Ana County Projects**
Date: 11/8/2005 2:28:01 PM Mountain Standard Time
From: James.E.Mace@spa02.usace.army.mil
To: tecdenise@aol.com
Sent from the Internet (Details)

Hello Denise,

The following are my comments on the three letters you submitted, dated September 22, 2005, regarding various projects in Dona Ana County, New Mexico:

**Dona Ana County Roads:
Church Street
Mark Twain, Hanna Court, Bradbury Avenue, and Post Street**

After a review of both of these projects, with the information provided and other information, as applicable, neither project appears to discharge dredged or fill materials into waters of the United States. As such, a Department of the Army permit would not be required for either of these proposed projects.

**Reconstruction of Lohman Avenue
Las Cruces, Dona Ana County, New Mexico**

This proposed project appears to cross the Las Cruces Arroyo, which may be a jurisdictional water of the United States at this location. Additionally, the proposed project references the relocation of a storm drain to the Las Cruces Arroyo. If portions of the construction proposed for this project would require the discharge of dredged or fill materials within the ordinary high water mark of the Las Cruces Arroyo, a Department of the Army permit may be required. Please contact my office with additional details of any specific filling activities within the Las Cruces Arroyo, if applicable.

I-10 Corridor Study in Dona Ana County, New Mexico

This project will likely require bridge and culvert replacement, depending on the final design. Please be advised the replacement of these types of structures, allowing tributaries of the Rio Grande to drain to the Rio Grande, would likely require a Department of the Army Permit. If/when you have specific questions about individual crossings to be replaced and/or design concerns about such crossings, please feel free to contact my office.

Thank you for the opportunity to comment on these proposed projects. If you have any additional questions, please do not hesitate to telephone or email me.

Jim

James E. Mace
Chief, El Paso Regulatory Office
U.S. Army Corps of Engineers
Albuquerque District
P.O. Box 6096
Fort Bliss, Texas 79906-0096
phone (915) 568-1359
fax (915) 568-1348
james.e.mace@usace.army.mil

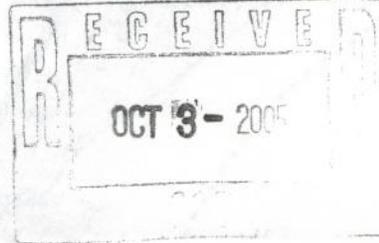


Form I

Taschek Environmental Consulting
Las Cruces Office
1155 S. Telshor Blvd, Suite 204
Las Cruces, NM 88011
Phone: (505) 522-7400 FAX: (505) 532-9792

#10392
MW
10/22/05

September 22, 2005



Ms. Janell Ward
NM Department of Game and Fish
PO Box 25112
Santa Fe, NM 87504

RE: I-10 Corridor Study in Doña Ana County, New Mexico

Dear Ms. Ward,

Taschek Environmental Consulting, under contract with the New Mexico Department of Transportation, and in cooperation with the Federal Highway Administration, is preparing a corridor study along Interstate 10 (I-10) in Doña Ana County between the I-10/I-25 interchange in the City of Las Cruces, New Mexico and the New Mexico/Texas State Line. As part of the Governor Richardson's Investment Partnership (GRIP) program, the I-10 Corridor Study will include analysis of the frontage road system and several key interchanges (I-25, Mesquite, Vado, and NM 404) within the project termini, as well as consider issues such as traffic capacity, public transportation, drainage, and safety.

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Taschek Environmental Consulting would appreciate your response within 30 days to the TEC Las Cruces Office. If you need further information or wish to discuss the project, please contact me at (505) 522-7400 or email me at tecdenise@aol.com.

Sincerely,

Denise Weston

Denise Weston, Environmental Planner

Attachments: map

GOVERNOR
Bill Richardson



DIRECTOR AND SECRETARY
TO THE COMMISSION
Bruce C. Thompson

STATE OF NEW MEXICO

DEPARTMENT OF GAME & FISH

One Wildlife Way
Post Office Box 25112
Santa Fe, NM 87504
Phone: (505) 476-8008
Fax: (505) 476-8128

Visit our website at www.wildlife.state.nm.us
For basic information or to order free publications: 1-800-862-9310.

STATE GAME COMMISSION
Guy Riordan, Chairman
Albuquerque, NM

Dr. Tom Arvas, Vice-Chairman
Albuquerque, NM

Alfredo Montoya, Commissioner
Alcalde, NM

David Henderson, Commissioner
Santa Fe, NM

Peter Pino, Commissioner
Zia Pueblo, NM

Leo Sims, Commissioner
Hobbs, NM

M. H. "Dutch" Salmon, Commissioner
Silver City, NM

October 26, 2005

Denise Weston, Environmental Planner
Taschek Environmental Consulting
1155 S. Telshor Blvd. Suite 204
Las Cruces, NM 88011

Re: I-10 Corridor Study in Dona Ana County, New Mexico
NMGF No. 10392

Dear Ms. Weston,

In response to your letter dated September 22, 2005, regarding the above referenced project, the Department of Game and Fish (Department) does not anticipate significant impacts to wildlife or sensitive habitats. For your information, we have enclosed a list of sensitive, threatened and endangered species that occur in Dona Ana County.

For more information on listed and other species of concern, contact the following sources:

1. Species Accounts: <http://fwie.fw.vt.edu/states/nm.htm>
2. Species Searches: <http://nvnhp.unm.edu/bisonm/bisonquery.php>
3. New Mexico Wildlife of Concern by Counties List:
http://www.wildlife.state.nm.us/conservation/share_with_wildlife/documents/speciesofconcern.pdf
4. Habitat Handbook Project Guidelines:
http://wildlife.state.nm.us/conservation/habitat_handbook/index.htm
5. For custom, site-specific database searches on plants and wildlife. Go to Data then to Free On-Line Data and follow the directions go to: <http://nvnhp.unm.edu>
6. New Mexico State Forestry Division (505-827-5830) or <http://nmrareplants.unm.edu/index.html> for state-listed plants
7. For the most current listing of federally listed species **always** check the U.S. Fish and Wildlife Service at (505-346-2525) or <http://ifw2es.fws.gov/EndangeredSpecies/lists/>.

Thank you for the opportunity to review and comment on your project. If you have any questions, I can be contacted at (505) 476-8101 or janell.ward@state.nm.us.

Sincerely,

Janell Ward, Assistant Chief
Conservation Services Division

JW/ttd

xc: Susan MacMullin, New Mexico Ecological Services, USFWS
Luis Rios, SW Area Operations Chief, NMGF
Pat Mathis, SW Area Habitat Specialist, NMGF

New Mexico Species of Concern - Dona Ana County Page 1 of 2

Common Name	SCIENTIFIC NAME	FWS					
		ESA	NM WCA	FS R3	BLM NM	NM Sen	FWS SOC
Northern Leopard Frog	<i>Rana pipiens</i>	-	-	S	-	-	-
Bleached Earless Lizard	<i>Holbrookia maculata ruthveni</i>	-	-	-	-	S N	-
Texas Horned Lizard	<i>Phrynosoma cornutum</i>	-	-	S	S	-	-
White Sands Prairie Lizard	<i>Sceloporus undulatus cowlesi</i>	-	-	-	-	S N	-
Little White Whiptail	<i>Cnemidophorus gypsi</i>	-	-	-	-	S N	-
Desert Kingsnake	<i>Lampropeltis getula splendida</i>	-	-	S	-	-	-
Brown Pelican (no data)	<i>Pelecanus occidentalis carolinensis</i>	E	E	S	-	-	-
Neotropic Cormorant	<i>Phalacrocorax brasilianus</i>	-	T	S	-	-	-
American Bittern	<i>Botaurus lentiginosus</i>	-	-	S	-	-	-
Great Egret	<i>Ardea alba egretta</i>	-	-	S	-	-	-
Snowy Egret	<i>Egretta thula brewsteri</i>	-	-	S	-	-	-
Green Heron	<i>Butorides virescens</i>	-	-	S	-	-	-
Black-crowned Night-Heron	<i>Nycticorax nycticorax hoactli</i>	-	-	S	-	-	-
White-faced Ibis	<i>Plegadis chihi</i>	-	-	S	S	-	-
Osprey	<i>Pandion haliaetus carolinensis</i>	-	-	S	-	-	-
White-tailed Kite (no data)	<i>Elanus caeruleus majusculus</i>	-	-	S	-	-	-
Mississippi Kite	<i>Ictinia mississippiensis</i>	-	-	S	-	-	-
Bald Eagle	<i>Haliaeetus leucocephalus</i>	AD, T mg	T	S	-	-	-
Northern Goshawk	<i>Accipiter gentilis</i>	-	-	S	S	S	S
Common Black-Hawk	<i>Buteogallus anthracinus anthracinus</i>	-	T	S	-	-	-
Swainson's Hawk	<i>Buteo swainsoni</i>	-	-	S	-	-	-
Ferruginous Hawk	<i>Buteo regalis</i>	-	-	S	S	-	-
Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	E mg	E	S	-	-	-
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	DM m	T	S	-	-	S
Sora	<i>Porzana carolina</i>	-	-	S	-	-	-
Whooping Crane	<i>Grus americana</i>	EXPN, E mg	E	S	-	-	-
Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>	-	-	S	-	-	-
Mountain Plover	<i>Charadrius montanus</i>	PT	-	S	-	S	-
Black-necked Stilt	<i>Himantopus mexicanus</i>	-	-	S	-	-	-
Long-billed Curlew	<i>Numenius americanus americanus</i>	-	-	S	-	-	-
Interior Least Tern	<i>Sterna antillarum athalassos</i>	E mg	E	S	-	-	-
Black Tern	<i>Chlidonias niger surinamensis</i>	-	-	-	S	-	S
Common Ground-dove	<i>Columbina passerina pallescens</i>	-	E	S	-	-	-
Burrowing Owl	<i>Athene cunicularia hypugaea</i>	-	-	-	S	-	S
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	T hmg	-	S	-	S	-
Yellow-billed Cuckoo	<i>Coccyzus americanus occidentalis</i>	C	-	S	-	S	-
Broad-billed Hummingbird	<i>Cynanthus latirostris magicus</i>	-	T	S	-	-	-
Costa's Hummingbird	<i>Calypte costae</i>	-	T	S	-	-	-
Belted Kingfisher	<i>Ceryle alcyon</i>	-	-	S	-	-	-
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E h	E	S	-	-	-
Loggerhead Shrike	<i>Lanius ludovicianus</i>	-	-	-	S	S	-
Bell's Vireo	<i>Vireo bellii</i>	-	T	S	-	-	S
Gray Vireo	<i>Vireo vicinior</i>	-	T	S	-	-	-
Gray Catbird	<i>Dumetella carolinensis ruficrissa</i>	-	-	S	-	-	-
American Redstart	<i>Setophaga ruticilla tricolora</i>	-	-	S	-	-	-
Baird's Sparrow	<i>Ammodramus bairdii</i>	-	T	S	S	-	S
Varied Bunting	<i>Passerina versicolor</i>	-	T	S	-	-	-
Western Small-footed Myotis Bat	<i>Myotis ciliolabrum melanorhinus</i>	-	-	-	S	S	-
Yuma Myotis Bat	<i>Myotis yumanensis yumanensis</i>	-	-	-	S	S	-
Occult Little Brown Myotis Bat	<i>Myotis lucifugus occultus</i>	-	-	-	S	S	-
Long-legged Myotis Bat	<i>Myotis volans interior</i>	-	-	-	S	S	-
Fringed Myotis Bat	<i>Myotis thysanodes thysanodes</i>	-	-	-	S	S	-

New Mexico Species of Concern - Dona Ana County Page 2 of 2

Common Name	SCIENTIFIC NAME	FWS		NM		FS. BLM.		NM		FWS. SOC
		ESA	WCA	R3	NM	Sen				
Western Red Bat	<i>Lasiurus blossevillii</i>	-	-	S	-	S	-	S	S	
Eastern Red Bat	<i>Lasiurus borealis</i>	-	-	S	-	S	-	S	-	
Spotted Bat	<i>Euderma maculatum</i>	-	-	T	S	S	-	S	-	
Pale Townsend's Big-eared Bat	<i>Plecotus townsendii pallescens</i>	-	-	S	-	S	-	S	-	
Big Free-tailed Bat	<i>Nyctinomops macrotis</i>	-	-	-	-	S	-	S	-	
Organ Mountains Colorado Chipmunk	<i>Tamias quadrivittatus australis</i>	-	-	T	-	S	-	S	-	
Desert Pocket Gopher	<i>Geomys arenarius arenarius</i>	-	-	-	-	S	-	S	-	
Desert Pocket Gopher	<i>Geomys arenarius brevirostris</i>	-	-	-	-	-	-	S n	-	
Rock Pocket Mouse	<i>Chaetodipus intermedius rupestris</i>	-	-	-	-	-	-	S	-	
Pecos River Muskrat	<i>Ondatra zibethicus ripensis</i>	-	-	-	-	S	-	S	S	
Red Fox	<i>Vulpes vulpes</i>	-	-	-	-	-	-	S	-	
Ringtail	<i>Bassariscus astutus</i>	-	-	S	-	-	-	S	-	
Western Spotted Skunk	<i>Spilogale gracilis</i>	-	-	-	-	-	-	S	-	
Common Hog-nosed Skunk	<i>Conepatus mesoleucus</i>	-	-	-	-	-	-	S	-	
Chihuahuan Pronghorn	<i>Antilocapra americana mexicana</i>	-	-	S	-	-	-	m	-	
Desert Bighorn Sheep	<i>Ovis canadensis mexicana (endangered pops)</i>	-	E	S	-	-	-	m	-	
Dona Ana Talussnail	<i>Sonorella todseni</i>	-	T	-	-	S	-	n	S	
Anthony Blister Beetle	<i>Lytta mirifica</i>	-	-	-	-	S	-	S	S	
Obsolete Viceroy Butterfly	<i>Basilarchia archippus obsoleta</i>	-	-	S	-	-	-	-	S	

NATIVE SPECIES APPARENTLY NO LONGER OCCURRING IN DONA ANA COUNTY

American Eel	<i>Anguilla rostrata</i>	(extirpated from NM)
Mexican Tetra	<i>Astyanax mexicanus</i>	
Rio Grande Chub	<i>Gila pandora</i>	
Rio Grande Silvery Minnow	<i>Hybognathus amarus</i>	
Rio Grande Shiner	<i>Notropis jemezianus</i>	
Rio Grande Bluntnose Shiner	<i>Notropis simus simus</i>	(extinct)
Gray Redhorse	<i>Moxostoma congestum</i>	
Flathead Catfish	<i>Pylodictis olivaris</i>	
Blue Sucker	<i>Cypleptus elongatus</i>	
Arizona Black-tailed Prairie Dog	<i>Cynomys ludovicianus arizonensis</i>	
Mexican Gray Wolf	<i>Canis lupus baileyi</i>	
Swift Fox	<i>Vulpes velox velox</i>	
Grizzly Bear	<i>Ursus arctos</i>	(extirpated from NM)
Jaguar	<i>Panthera onca arizonensis</i>	
American Bison	<i>Bos bison</i>	
NM Ramshorn Snail	<i>Pecosorbis kansasensis</i>	
Ovate Vertigo Snail	<i>Vertigo ovata</i>	

Subj: **I-10 corridor**
Date: 10/6/2005 1:14:16 PM Mountain Daylight Time
From: robert.sivinski@state.nm.us
To: tecdenise@aol.com
Sent from the Internet (Details)

Hi Denise:

Just got your letter dated 22 September 2005 concerning the I-10 corridor study in Dona Ana County. Just wanted to let you know that this corridor goes through a population of *Opuntia arenaria* (dune pricklypear), which is on the State of New Mexico's list of endangered plant species. You can find more details on the NM Rare Plants web site at <http://nmrareplants.unm.edu/>

Bob Sivinski
EMNRD-Forestry Division
476-3347

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October 20, 2005
MPO-05-017

Denise Weston
Tascheck Environmental Consulting
Las Cruces Office
1155 South Telshor Boulevard, Suite 204
Las Cruces, NM 88011

RE: GRIP I-10 Study Process

Dear Ms. Weston,

Thank you for considering the input of the Las Cruces Metropolitan Planning Organization in the GRIP I-10 study process. We have a number of issues that we would like to raise at the beginning of the process.

Interchange Placement and East/West Corridors. The MPO has recently expanded its jurisdictional boundaries. The boundaries previously coincided with the Extra-Territorial Zone (ETZ) of the City of Las Cruces. The boundaries now extend farther south into Dona Ana County to the Berino area. The recently added land has been designated as a "study area". We will soon be assigning functional classifications to roadways, and developing a thoroughfare plan, bicycle facilities plan, and trail plan for the area. East/west connections linking the Rio Grande agricultural valley to I-10 and possible future development east of the interstate are of great importance, and will depend to a great extent on locations and designs of interchanges. Please consult us when this matter is studied in detail, so that any recent developments in the MPO planning process may be taken into account.

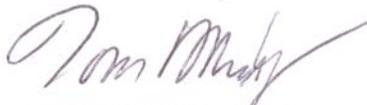
Multi-Modal Frontage Roads. Stern Dr and Las Alturas Rd have been designated as having planned bicycle lanes from their northern termini south to the ETZ boundary. It can be expected that this designation will continue south to the new MPO boundary when the bicycle facility plan is updated through the boundary expansion study. Therefore, we would expect that the frontage roads have 4' shoulders at minimum. If these shoulders have rumble strips, they should be as close to the line as possible, and should have frequent gaps to allow cyclists to enter the motor vehicle lane safely if necessary to avoid debris on the shoulder.

We would also like you to consider the possibility of constructing a 10' multi-use path between the frontage roads and the interstate. The Triviz multi-use path along I-25 covers about 5 miles within the city and is very heavily used. The advantage of constructing such paths along interstates is that the number of conflict points between path users and motor vehicle traffic is substantially reduced. We are particularly interested in the Stern Dr side, from Mesquite north. Northbound cyclists on I-10 are currently directed to exit at Mesquite. A multi-use path along Stern could allow them to continue their journey north and eventually link to the La Llorona multi-use path that follows the Rio Grande west of Las Cruces, or to link with the soon to be designated state bicycle route along US-70. Since it is unlikely that sidewalks will be built along the frontage roads, a multi-use path would also accommodate pedestrians moving among existing and future subdivisions in the area. Design of the path would coincide with design of interchanges and over/underpasses, so cost would be minimized.

Special Use Lane. If the corridor study concludes that an additional lane should be added to I-10, we believe designation as a special use lane for transit, HOV, and possibly alternative fuels/hybrid vehicles should be given serious consideration. The MPO is coordinating the certification of a Regional Transit District in south central New Mexico, and one possible result of this effort is intercity bus service between Las Cruces and El Paso. If this service is successful, it will remove cars from the corridor during peak periods, as well as offer commuters a way to avoid the economic burden of increasing gasoline prices. However, in order to be viable, it needs to be fast, and a dedicated lane could help it avoid major congestion. A lane dedicated only to buses would result in underutilization of capacity, so we propose that it would be open to all vehicles carrying two or more passengers. Encouraging carpooling accomplishes the same goals as the transit service, albeit on a more modest scale. If a suitable registration process could be instituted in NM and TX, hybrid or alternative fuel vehicles may be allowed to use the lane as well. Such a special use facility would help to encourage fuel conservation and commuting alternatives, which is of great economic importance due to ever increasing and highly volatile fuel prices, as well as the significant anticipated development along the corridor.

We look forward to updates in the I-10 planning process and appreciate the opportunity to contribute.

Sincerely,



Tom Murphy, AICP
MPO Officer

/ph

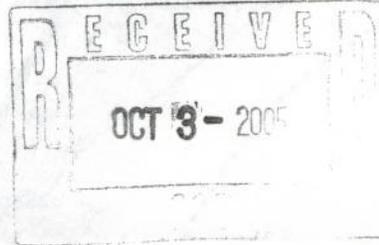


Form I

Taschek Environmental Consulting
Las Cruces Office
1155 S. Telshor Blvd, Suite 204
Las Cruces, NM 88011
Phone: (505) 522-7400 FAX: (505) 532-9792

#10392
MW
10/22/05

September 22, 2005



Ms. Janell Ward
NM Department of Game and Fish
PO Box 25112
Santa Fe, NM 87504

RE: I-10 Corridor Study in Doña Ana County, New Mexico

Dear Ms. Ward,

Taschek Environmental Consulting, under contract with the New Mexico Department of Transportation, and in cooperation with the Federal Highway Administration, is preparing a corridor study along Interstate 10 (I-10) in Doña Ana County between the I-10/I-25 interchange in the City of Las Cruces, New Mexico and the New Mexico/Texas State Line. As part of the Governor Richardson's Investment Partnership (GRIP) program, the I-10 Corridor Study will include analysis of the frontage road system and several key interchanges (I-25, Mesquite, Vado, and NM 404) within the project termini, as well as consider issues such as traffic capacity, public transportation, drainage, and safety.

Given the regional importance of the I-10 corridor, it is valuable to collect information from all agencies and organizations that may be impacted by future improvements to the facility. An extensive public and agency input process has been initiated to identify elements to be considered as part of the corridor study. This letter is to invite submission of any comments or information relating to potential effects from the project on the physical, social, or economic environment in the area.

Taschek Environmental Consulting would appreciate your response within 30 days to the TEC Las Cruces Office. If you need further information or wish to discuss the project, please contact me at (505) 522-7400 or email me at tecdenise@aol.com.

Sincerely,

Denise Weston

Denise Weston, Environmental Planner

Attachments: map



United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

October 17, 2005

Ms. Denise Weston
Taschek Environmental Consulting
1155 South Telshor Boulevard, Suite 204
Las Cruces, New Mexico 88011

Dear Ms. Weston:

Thank you for your recent requests for information on threatened or endangered species or important wildlife habitats that may occur in your project areas. The New Mexico Ecological Services Field Office has posted lists of the endangered, threatened, proposed, candidate and species of concern occurring in all New Mexico Counties on the Internet. Please refer to the following web page for species information in the county where your project occurs: http://ifw2es.fws.gov/NewMexico/SBC_intro.cfm. If you do not have access to the Internet or have difficulty obtaining a list, please contact our office and we will mail or fax you a list as soon as possible.

After opening the web page, find New Mexico Listed and Sensitive Species Lists on the main page and click on the county of interest. Your project area may not necessarily include all or any of these species. This information should assist you in determining which species may or may not occur within your project area.

Under the Endangered Species Act, as amended (Act), it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with us further. Similarly, it is their responsibility to determine if a proposed action has no effect to endangered, threatened, or proposed species, or designated critical habitat. If your action area has suitable habitat for any of these species, we recommend that species-specific surveys be conducted during the flowering season for plants and at the appropriate time for wildlife to evaluate any possible project-related impacts. Please keep in mind that the scope of federally listed species compliance also includes any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects.

Candidates and species of concern have no legal protection under the Act and are included on the web site for planning purposes only. We monitor the status of these species. If significant declines are detected, these species could potentially be listed as endangered or threatened. Therefore, actions that may contribute to their decline should be avoided. We recommend that candidates and species of concern be included in your surveys.

Also on the web site, we have included additional wildlife-related information that should be considered if your project is a specific type. These include communication towers, power line safety for raptors, road and highway improvements and/or construction, spring developments and livestock watering facilities, wastewater facilities, and trenching operations.

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. We recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands. These habitats should be conserved through avoidance, or mitigated to ensure no net loss of wetlands function and value.

The Migratory Bird Treaty Act (MBTA) prohibits the taking of migratory birds, nests, and eggs, except as permitted by the U.S. Fish and Wildlife Service. To minimize the likelihood of adverse impacts to all birds protected under the MBTA, we recommend construction activities occur outside the general migratory bird nesting season of March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until nesting is complete.

We suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding fish, wildlife, and plants of State concern.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area.

Sincerely,

A handwritten signature in blue ink that reads "Brian Hanson".

Brian Hanson
Acting Field Supervisor



BILL RICHARDSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
Office of the Secretary
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2855



RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

November 22, 2005

Denise Weston
Environmental Planner
Taschek Environmental Consulting
1155 S. Teishor Blvd., Suite 204
Las Cruces, NM 88011

fax: 505.532.9792

Dear Ms. Weston:

RE: DONA ANA COUNTY: I-10 CORRIDOR STUDY: ADDENDUM

These comments on *air quality* issues are being provided as an addendum to those that were submitted to you in our November 1, 2005 correspondence in reference to the above-mentioned project.

Air Quality

The proposed project I-10 Corridor Study is located in Anthony, New Mexico. Anthony is currently considered to be in nonattainment with the National Ambient Air Quality Standards (NAAQS) for PM10. The New Mexico State Department of Transportation (NMDOT) will need to consult with the Federal Department Of Transportation and the U.S. Environmental Protection Agency (U.S.EPA) Region 6 to determine if a transportation conformity plan is needed for the proposed project.

The Town of Anthony is located in Doña Ana County, New Mexico. Doña Ana County is currently considered to be in attainment with the NAAQS; however, the New Mexico Environment Department (NMED) Air Quality Bureau (AQB) has recorded exceedances of the standard for PM10. In response to the recorded exceedances of the standard for PM10, a Natural Events Action Plan (NEAP) for Doña Ana County has been prepared and submitted to the U.S.EPA for approval. As part of the NEAP, NMDOT has signed a memorandum of agreement (MOU) with the NMED in support for the NEAP. This MOU needs to be referenced in the environmental documentation for this project. In accordance with the MOU, appropriate dust control techniques may also need to be addressed.

Along with the requirements of the MOU, applicable local or county regulations requiring dust control should also be followed during construction activities to minimize the release of particulates during the proposed project. Areas disturbed by construction activities, within and adjacent to the project area, should be reclaimed to avoid long-term problems with erosion and fugitive dust.

Denise Weston
November 22, 2005
Page 2

All asphalt, concrete, quarrying, crushing and screening facilities contracted in conjunction with the proposed project, I-10 Corridor Study, must have current and proper air quality permits. For more information on air quality permitting and modeling requirements, please refer to 20.2.72 NMAC.

We appreciate the opportunity to comment on this project.

Sincerely,

A handwritten signature in black ink, appearing to be 'Gedi Cibas', written over a horizontal line.

Gedi Cibas, Ph.D.
Environmental Impact Review Coordinator

Addendum: NMED File No. 2185ER



BILL RICHARDSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
Office of the Secretary
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2855



RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

November 1, 2005

Denise Weston
Environmental Planner
Taschek Environmental Consulting
1155 S. Telshor Blvd., Suite 204
Las Cruces, NM 88011

fax: 505.532.9792

Dear Ms. Weston:

RE: DONA ANA COUNTY: I-10 CORRIDOR STUDY

The New Mexico Environment Department (NMED) staff reviewed the information on the above-referenced document included in your September 22, 2005 correspondence to the Department. The review is based on the received correspondence.

Surface Water Quality

The U.S. Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction projects (common plans of development) that will result in the disturbance (or re-disturbance) of one or more acres, including expansions, of total land area. Because this project exceeds one acre (including staging areas, etc.), it will require appropriate NPDES permit coverage prior to beginning construction (small, one - five acre, construction projects may be able to qualify for a waiver in lieu of permit coverage - see Appendix D).

Among other things, this permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures (revegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters. In addition, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site (both during and after construction) compared to pre-construction, undisturbed conditions (see Subpart 9.C.1)

You should also be aware that EPA requires that all "operators" (see Appendix A) obtain NPDES permit coverage for construction projects. Generally, this means that at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over

Denise Weston
November 1, 2005
Page 2

project specifications (probably NMDOT in this case), the general contractor who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the storm water pollution plan and other permit conditions, and possibly other "operators" will require appropriate NPDES permit coverage for this project.

The CGP was re-issued effective July 1, 2003 (see **Federal Register/Vol. 68, No. 126/Tuesday, July 1, 2003** pg. 39087). The CGP, Notice of Intent (NOI), Fact Sheet, and Federal Register notice can be downloaded at: <http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>

In addition, under the NPDES Phase II Storm Water Regulations published in **Federal Register/Vol. 64, No. 235/Wednesday, December 8, 1999, p.68722**, USEPA requires that Dona Ana County and NMDOT obtain NPDES storm water permit coverage for their Municipal Separate Storm Sewer Systems (MS4) by March 10, 2003 in the Las Cruces and El Paso Urbanized Areas, of which this area is a part. This permit program requires that MS4 operators develop, implement, and enforce a storm water management program to reduce the discharge of pollutants from its MS4 to the "maximum extent practicable" and protect water quality. NMED strongly suggests that NMDOT and Dona Ana County examine the potential impacts to water quality and their ability to appropriately control pollutant loads from their storm sewer system during the review process for the subject, as well as all other, projects which may impact water quality.

Underground Storage Tanks

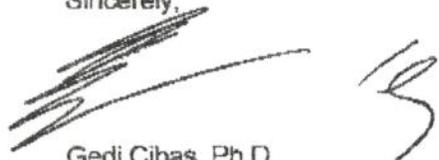
The Petroleum Storage Tank Bureau knows of two former or current tank facilities, neither of which has experienced a release, within the proposed project area for the I-10 corridor study in the City of Las Cruces. Some of the sites listed may not be affected by this project. Please check the local street address to see if this information applies. The contractors should remain alert for indications of soil or groundwater contamination in the vicinity of any of the listed sites.

If contaminated soil or water is encountered during construction, all monitoring, handling and disposal requirements must be met in order to protect workers, the public and the environment, from contaminants. You can contact the PST Bureau at 505 984-1741.

Tank Facility Name	Address	Leak Reported
Bella Vista 207	1195 N. Mesquite	No
Rio Grande Rock LLC	I-10 Mesquite Exit	No

We appreciate the opportunity to comment on this project.

Sincerely,



Gedi Cibas, Ph.D.
Environmental Impact Review Coordinator
NMED File No. 2185ER

Re: I-10 Corridor

Lori_Allen@nm.blm.gov [Lori_Allen@nm.blm.gov]

Sent: Monday, February 09, 2009 10:59 AM

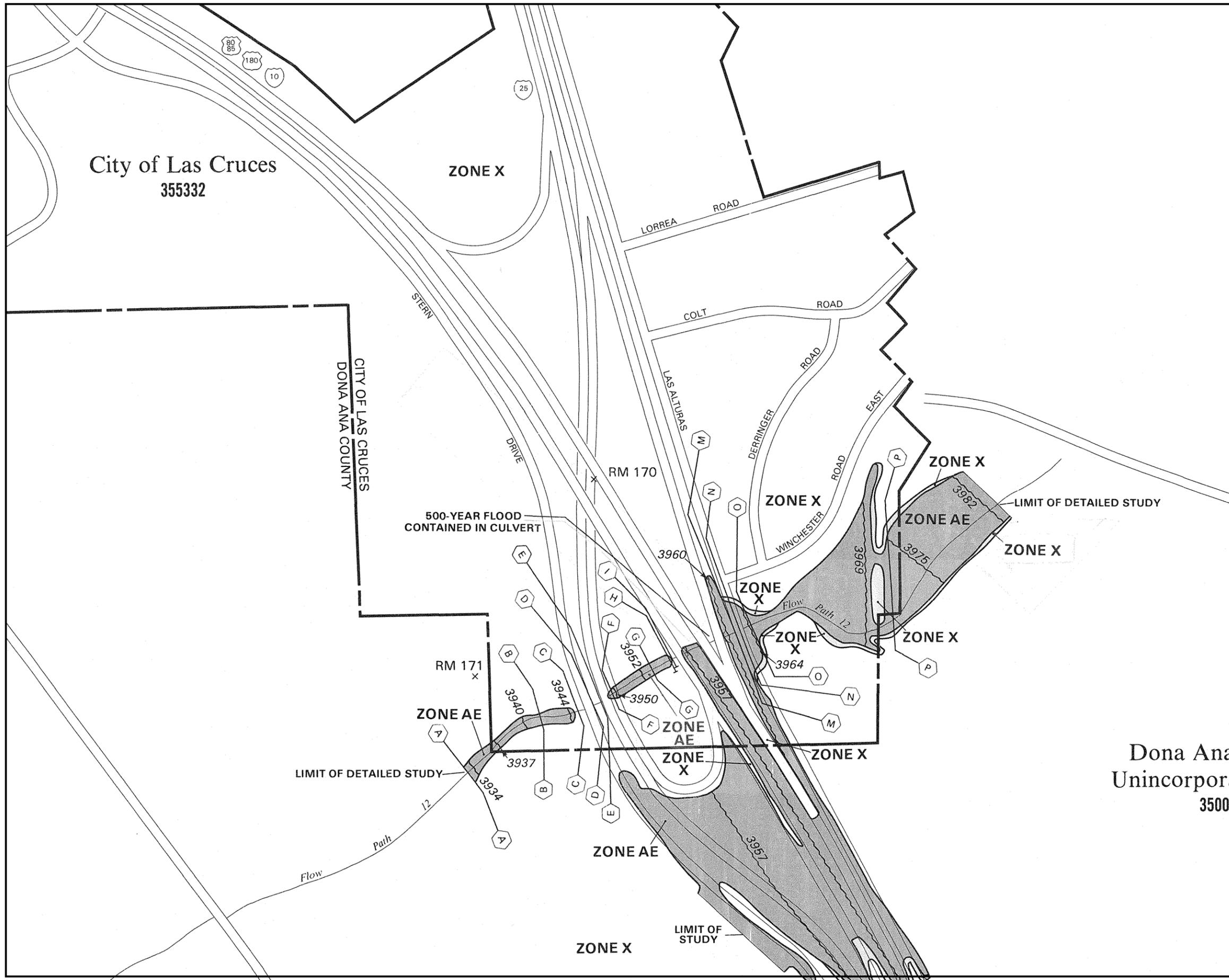
To: Denise M. Weston

Denise,

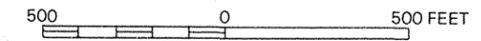
Since I-10 in T. 25S., R. 3 and T. 26S., R. 3E is given to the NM Highway Dept. under the Federal Aid Highway Act, which is 317 of the act of August 27, 1958 and Section 107d , Title 23 U.S.C. the BLM will not be a permitting agency in the upgrade of I-10. The BLM does request that we are courtesty copied on the archaeology survey reports for our files. We appreciate you and your team keeping us informed on this project.

Thanks,
Lori

Lori Allen
Realty Specialist
USDOI- BLM- Las Cruces District Office
1800 Marquess Street
Las Cruces, NM 88005
(575) 525-4454 phone
(575) 525-4412 fax
email: Lori_Allen@nm.blm.gov



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

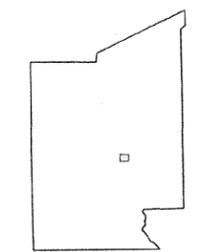
**FIRM
FLOOD INSURANCE RATE MAP**

**DONA ANA COUNTY,
NEW MEXICO AND
INCORPORATED AREAS**

PANEL 634 OF 1050
(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LAS CRUCES, CITY OF	355332	0634	E
UNINCORPORATED AREAS	350012	0634	E



PANEL LOCATION

**MAP NUMBER
35013C0634 E**

**EFFECTIVE DATE:
SEPTEMBER 27, 1991**



Federal Emergency Management Agency

Dona Ana
Unincorporated
35001

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

FW: CR clearance for CN 11000-30 I-10 and I-25 Interchange

Frischkorn, Curt, NMDOT [Curt.Frischkorn@state.nm.us]

Sent: Friday, December 12, 2008 4:24 PM**To:** Denise M. Weston

From: Wallace, Laurel T., NMDOT**Sent:** Friday, December 12, 2008 1:20 PM**To:** Roxlau, Blake R., NMDOT; Frischkorn, Curt, NMDOT**Subject:** CR clearance for CN 11000-30 I-10 and I-25 Interchange

Blake and Curt:

Please consider the project to reconstruct the Interstate 10 and Interstate 25 Interchange (HPP-010-2(127)44, CN 11000-30), Doña Ana County, to be cleared for cultural resource issues. The original project to reconstruct Interstate 10 between Las Cruces and the Texas State line has been reduced in scope considerably, and the new proposed project areas given new project numbers.

The inventory report (*Cultural Resources Survey for the Interstate 10 Corridor Study: Las Cruces to Texas State Line, Doña Ana County, New Mexico*) identified no archaeological or historic resources within the surveyed APE of the proposed I-10/I-25 Interchange improvements.

Traditional Cultural Properties inquiries have been completed and responses were received from the Navajo Nation and Isleta Pueblo. The proposed I-40/NM 404 Interchange area appears to have no evidence of serving as a traditional cultural property. The NMDOT Cultural Resources Bureau considers this project cleared for Traditional Cultural Properties issues.

Under our present agreement with the New Mexico Historic Preservation Division, effective June 21, 2005, the NMDOT may proceed with an undertaking following approval by the NMDOT cultural resources manager/staff.

Thank you-

Laurel Wallace

Cultural Resources Section
NM Department of Transportation
1120 Cerrillos Rd, Room 213
Santa Fe, New Mexico 87505-1842
office: (505) 827-5240
cell: (505) 490-2501

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APPENDIX C

Public Involvement Activities

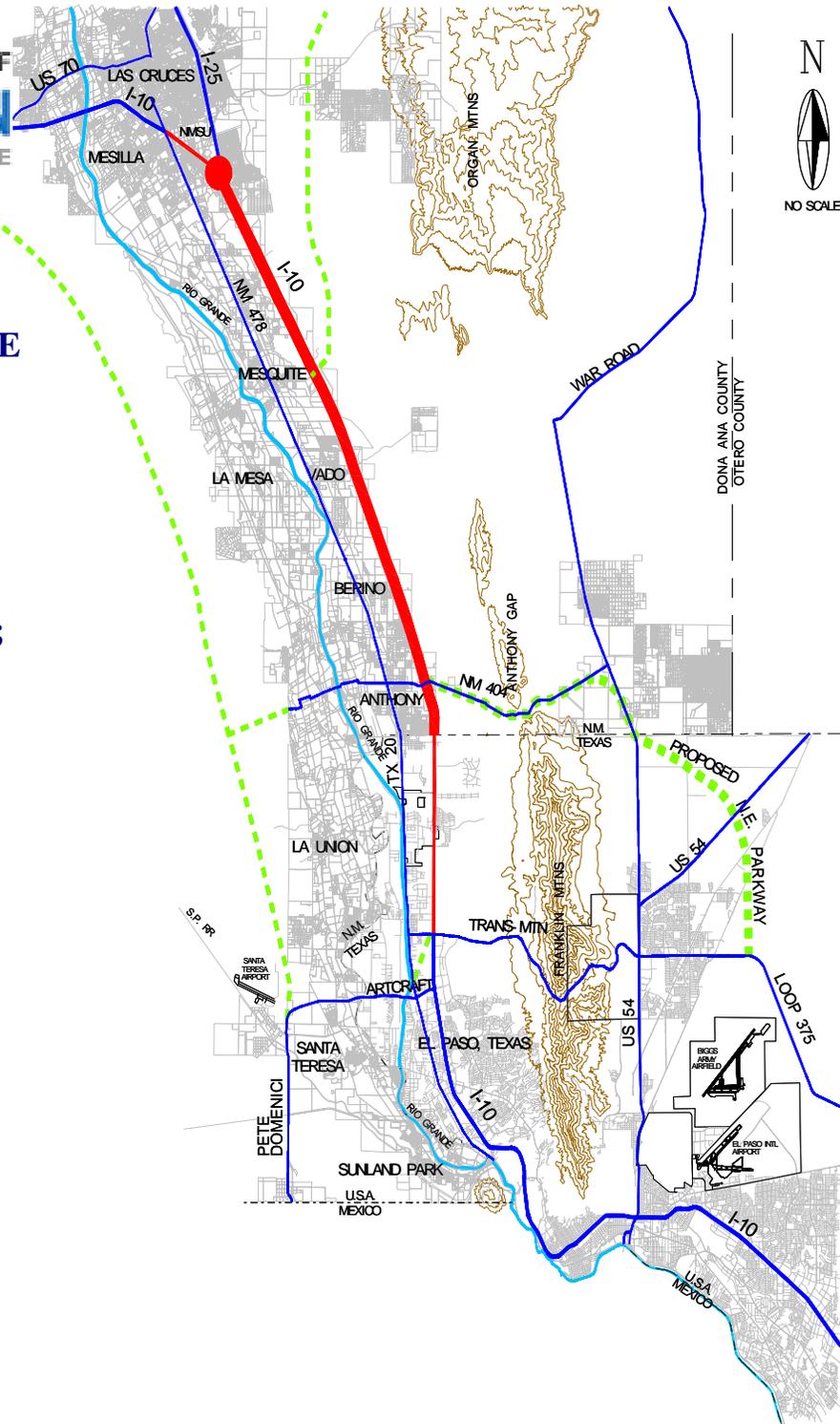




New Mexico DEPARTMENT OF
TRANSPORTATION
 MOBILITY FOR EVERYONE

**YOU ARE INVITED TO PARTICIPATE
 IN OUR TRANSPORTATION
 NEIGHBORHOOD MEETINGS FOR
 THE:
 I-10 GRIP
 CORRIDOR STUDY
 (LAS CRUCES TO TEXAS STATE LINE)
 NMDOT No: AC-GRIP-010-2(108)144;
 CN: G18A1**

**ESTA USTED INVITADO A
 PARTICIPAR EN NUESTRA JUNTA
 DE TRANSPORTACION EN SU
 VECINDAD PARA EL PROYECTO:
 I-10 GRIP
 ESTUDIO CORREDOR
 (LAS CRUCES A LA LINEA DEL ESTADO DE
 TEXAS)
 NMDOT No: AC-GRIP010-2(108)144;
 CN: G18A1**



AGENDA:

- INTRODUCTION
- PROJECT OVERVIEW
- REQUEST FOR INPUT & PARTICIPATION

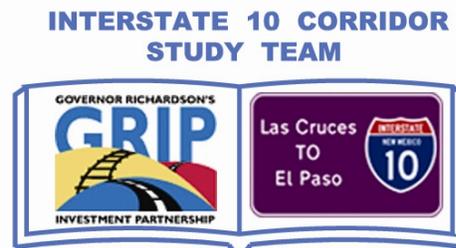
AGENDA:

- INTRODUCCION
- DESCRIPCION DEL PROYECTO
- PETICION DE IDEAS Y PARTICIPACION

SCHEDULE / HORARIO

DATE/FECHA	TIME/HORA	LOCATION/LOCALIDAD	ADDRESS/DOMICILIO	HOST/ANFITRION
September 20, 2005	6:00 PM	Mesquite, NM	215 Bryant Mesquite, NM 88048	Mesquite Water
September 21, 2005	7:00 PM	Vado/Del Cerro, NM	180 La Fe Ave Vado NM 88048	Del Cerro Comm. Center Centro Fuerza Y Unidad
September 27, 2005	7:00 PM	Anthony, Texas	401 Wildcat Drive Anthony, TX 79821	Town of Anthony, Texas
October 3, 2005	6:30 PM	Las Cruces, NM Club Fusion	101 E. Union Ave. Las Cruces, NM 88001	Las Cruces MPO
October 5, 2005	6:30 PM	Las Cruces, NM Las Alturas Fire Station	4145 Cholla Rd Las Cruces, NM 88011	Las Cruces MPO
October 12, 2005	6:30 PM	Canutillo, Texas High School	7311 Bosque Rd. Canutillo, TX 79835	Canutillo ISD
October 17, 2005	6:30 PM	Berino, NM	205 San Benito Street Berino, NM 88024	Berino Immaculate Conception Church
October 18, 2005	11:00 AM	Anthony, NM	1155 4th Street Anthony, NM 88021	Anthony/Berino Econ. Development Council
October 24, 2005	7:30 PM	Brazito, NM	885 Three Hawks Rd. Mesilla Park, NM 88047	Brazito Water
October 25, 2005	6:30 PM	La Union, NM	1708 Main Street La Union, NM 88021	La Union Town Council Our Lady of Refuge Church
November 2, 2005	6:00 PM	La Mesa, NM	521 St. Valentine St. La Mesa, NM 88044	La Mesa Water

Meeting sponsored by the NMDOT and the I-10 Corridor Study Team. For questions or comments, please call Jerry B. Paz, P.E. of Molzen-Corbin & Associates Toll Free at 1-866-316-0443 or e-mail at jpaz@molzencorbin.com



Esta junta es patrocinada por NMDOT y el Equipo de Estudio del Corredor I-10. Para preguntas o comentarios, por favor llame a Ingeniero Jerry B. Paz de Molzen-Corbin & Associates Gratis al 1-866-316-0443 o al correo electronico jpaz@molzencorbin.com

INTERSTATE 10 CORRIDOR
STUDY TEAM



I-10 Corridor Study

NMDOT Project No. AC-GRIP-010-2(108)144:
CN G18A1

MEETING SUMMARY **DRAFT**

City of Las Cruces Neighborhood Meeting

October 24, 2006

Prepared by Denise Weston, Taschek Environmental

I-10 CORRIDOR STUDY TEAM MEMBERS IN ATTENDANCE:

Jerry Paz,	Molzen-Corbin & Associates
Jerry Cordova,	Molzen-Corbin & Associates
Denise Weston,	Taschek Environmental Consulting

Location: Club Fusion

Time: 6 pm

A neighborhood meeting was called by Councilor Dolores Connor. On the agenda of this meeting was a discussion of the land swap between the City of Las Cruces and the New Mexico Department of Transportation for the vacant parcel of land located adjacent to Stern Drive at the corner of Agave Drive. Mike Johnson, Public Works Director with the City of Las Cruces, provided a brief presentation on the land swap and its connection with the proposed NMDOT I-10 improvements. In response to this presentation, several questions and concerns were raised by the public on the proposed interstate improvements in the area of Stern Drive. Jerry Paz with Molzen-Corbin & Associates spoke in response to those concerns. A summary of the questions and issues expressed are as follows:

Have you considered the traffic on Stern Drive?

It is already difficult to turn on/off of Stern Drive?

A new interchange is going to make it more difficult to turn on/off of Stern Drive?

Have you considered the new development on Stern Drive and the increase in traffic as a result of that development?

We already need improvements on Stern Drive?

Are you going to provide improvements to Stern Drive?

Why are you putting a new interchange on I-10 and not on I-25?

Stern Drive can't be widened because of the cemetery.

Las Alturas has plenty of room for widening.

Can you move the interchange further south?

We don't need more interchanges?

Why provide additional access to NMSU?

Why are you moving the interstate traffic closer to our neighborhood?

Have you considered the drainage issues on Stern Drive?

Is the arrowhead overpass going to put more traffic on Stern Drive?

With the closure of Cholla Drive I will have to drive further to the hospital for emergency services?

It was explained that further analysis on the impacts to Stern Drive would be considered as well as all impacts of the proposed improvements. All of the participants were provided with comment sheets and contact information on the NMDOT I-10 Corridor Study. It was emphasized that they would be added to the mailing list and invited to the next stakeholder meeting.



Public Involvement Meeting

The New Mexico Department of Transportation (NMDOT)
in cooperation with the

Federal Highway Administration (FHWA)

invites you to attend a public meeting on proposed improvements to

Interstate 10 (I-10)

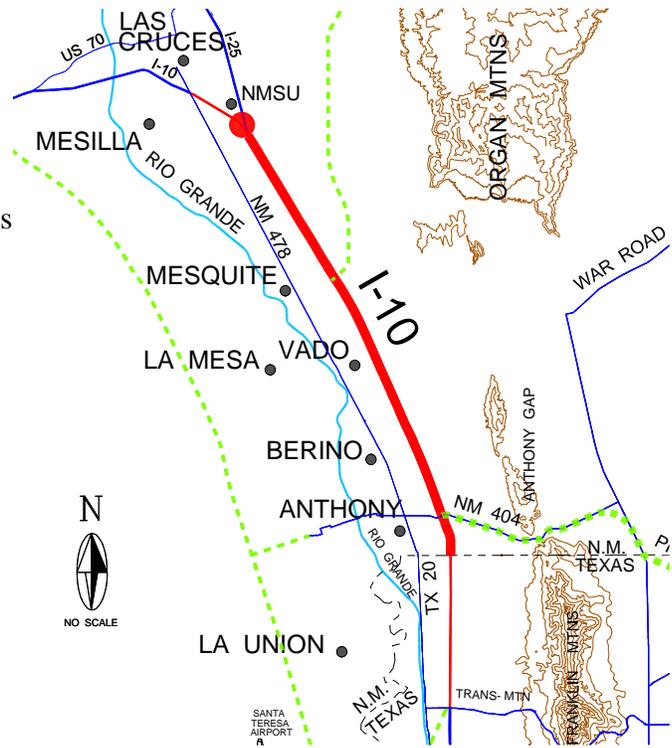
(Las Cruces to the New Mexico/Texas State Line)
in Doña Ana County, New Mexico.

Project No. AC-GRIP-010-2(108)144: CN G18A1

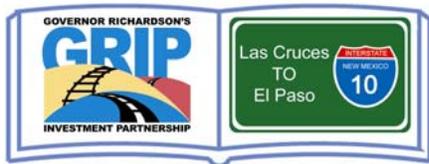
DATE: Wednesday, March 15, 2006

TIME: 6:00-7:00 P.M. – Open House
7:00-8:00 P.M. – Presentation & Comments

PLACE: New Mexico Farm & Ranch
Heritage Museum
4100 Dripping Springs Road
Las Cruces, New Mexico



INTERSTATE 10 CORRIDOR
STUDY TEAM



The NMDOT and FHWA are proposing improvements to the I-10 corridor between the I-10/I-25 interchange in Las Cruces, New Mexico and the New Mexico/Texas State Line in Doña Ana County, New Mexico. Preliminary alternatives will be presented at the meeting and will include proposed improvements to the I-10 main lanes, the frontage roads, and the following interchanges: I-10/I-25, I-10/NM 228 (Mesquite), I-10/NM 227 (Vado), and I-10/NM 404 (Anthony). You are encouraged to attend this meeting to provide input on the transportation needs of the region including bicycle, pedestrian, equestrian, and cultural resource issues. There will be an opportunity for questions and comments from the public. There will be a Spanish-language translator available for both the presentation and comments.

General questions about the project or requests for Americans with Disabilities Act (ADA) related accommodations should be directed to Molzen-Corbin & Associates at (505) 522-0049 (English/Spanish.)

INTERSTATE 10 CORRIDOR
STUDY TEAM



**New Mexico Department of
Transportation (NMDOT) in
cooperation with the
Federal Highway Administration
(FHWA)**

**Departamento de Transporte de Nuevo
México (NMDOT) en cooperación con
la Administración Federal de
Carreteras (FHWA)**

Public Involvement Meeting

Reunión De Participación Ciudadana

Wednesday, September 27, 2006

Miércoles 27 de septiembre de 2006

**I-10 Corridor Study
Doña Ana County, New Mexico
AC-GRIP-010-2(018)144: CN G18A1**

**I-10 Corridor Study
Doña Ana County, New Mexico
AC-GRIP-010-2(018)144: CN G18A1**

6:00 – 7:00 pm

6:00 – 7:00 pm

Open House

Reunión Preliminar

7:00 – 7:40 pm

7:00 – 7:40 pm

Staff Presentation in English

Presentación del Personal en Inglés

Gabriela Appodaca, P.E.,
Project Development Engineer, NMDOT

Gabriela Apodaca, P.E.,
Ingeniero de Desarrollo de Proyectos, NMDOT

Jerry Paz, P.E.,
Molzen-Corbin & Associates

Jerry Paz, P.E.,
Molzen-Corbin & Associates

Denise Weston,
Taschek Environmental Consulting

Denise Weston,
Taschek Environmental Consulting

Eric Hawton, P.E.,
HDR, Inc.

Eric Hawton, P.E.,
HDR, Inc.

Jan Niclas, P.E.,
HDR, Inc.

Jan Niclas, P.E.,
HDR, Inc.

7:40 – 8:00 pm

7:40 – 8:00 pm

Public Comment

There will be an opportunity for questions
and comments from the public.

Comentarios del Público

Habrá oportunidad de una sesión de
preguntas y respuestas para el público en
general.

*There will be a Spanish-language translator
available.

*También habrá un traductor del Inglés al
Español disponible.

**INTERSTATE 10 CORRIDOR
STUDY TEAM**



I-10 GRIP Project: Texas State Line to Las Cruces

AC-GRIP-010-2(108)144; CN G18A1

Agency Stakeholder Meeting #1

August 25, 2005 • 9:30 a.m. - 3:30 p.m.

Best Western Conference Center, Las Cruces, New Mexico

Agenda

Objectives:

1. To align all project team members' expectations—including both the technical team and agency representatives.
2. To identify priority values, concerns and ideas of agency stakeholder groups.
3. To establish a standard of success for the project study that lasts through the project.
4. To create a sense of *teamwork* and *mutual obligation* for a successful project.

Agenda (times are approximate; breaks will be taken as needed):

9:30 Welcome/Introductions/Meeting Overview—This will include brief opening remarks from representatives of the principal organizations, outlining the importance of the project and the meeting.

9:45 Project Overview—An overview of key aspects of the project.

10:15 Mapping Stakeholder Values, Concerns and Ideas

- Small groups of 5-8 people will use maps of the study area to brainstorm ideas, note insights, highlight concerns, express hopes and make a visual record of the group's conversation. Each group will use three different copies of an area map to note:
 - Map #1—Special qualities and nodes: "Places of the Heart"
 - Map #2—Concerns and Highlights: "Good and Bad Happenings"
 - Map #3—Ideas for the Project Study: "Where to Take Action"

Noon Lunch

1:00 Indicators of Partnership Success—Participants will consider a common focus question: "As the project goes forward, what will a successful study phase of the project look like, both during the study process and when the study is finished?" Small groups will discuss individual priorities and values, and the total group will craft a common set of priority expectations and goals that will guide the whole project team's interactions.

2:30 Partnering Agreement—A brief charter will be drafted that incorporates results from the morning's discussions. Each person will be invited to sign the agreement as a sign of his/her commitment to help implement the agreements made in the meeting.

3:00 Adjourn

March 7, 2006

Dear Valued Stakeholder of the NMDOT I-10 Corridor Study,

Thank you for attending the Stakeholder Meeting for the I-10 Corridor Study on March 3, 2006. We understand that it was a substantial time commitment out of your busy schedule and hope you feel that it was worth your time and effort to participate. As a study team, we were very pleased with the results of the meeting, respect the input you provided, and will evaluate your comments as we proceed with the alternative selection process.

We would also like to respond to your concerns over the difficult balance between the quantity of information that was provided and the lack of detail on some very relevant topics. As pointed out at the meeting, there were many references made to the *Phase A Location and Environmental Study Report* yet no one had been given the opportunity to review the document. In order to equip you with all of the necessary information needed to make the most appropriate choices for the project, I have enclosed a CD which contains the *Phase A Location and Environmental Study Report*. I hope this provides the answers to any remaining questions you may have. A copy of the Power Point presentation is also included on the CD. Please feel free to share this information with other interested members of the community.

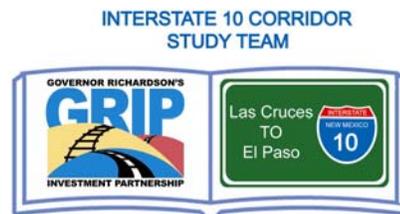
With this letter, a comment form is provided for your use. If, after reviewing the *Phase A Location and Environmental Study Report*, you have additional comments to make, please share them with us. If you prefer to provide feedback via email, my contact information is below.

We hope, as the I-10 Corridor Study progresses, you will continue to provide input to ensure that design recommendations along the corridor represent the needs and wants of this community. And, don't forget the Public Involvement Meeting on March 15, 2006 from 6-8 P.M. at the New Mexico Farm and Ranch Heritage Museum in Las Cruces. Your support is always appreciated.

If you have any further comments on the workshop or concerns with the project, please feel free to contact me at (505) 522-7400 or at tecdenise@aol.com.

Sincerely,

Denise Weston



**YOU ARE INVITED TO PARTICIPATE IN OUR
STAKEHOLDER MEETING #4
FOR THE:
I-10 GRIP
CORRIDOR STUDY
(LAS CRUCES TO TEXAS STATE LINE)
NMDOT No: AC-GRIP-010-2(108)144; CN: G18A1**

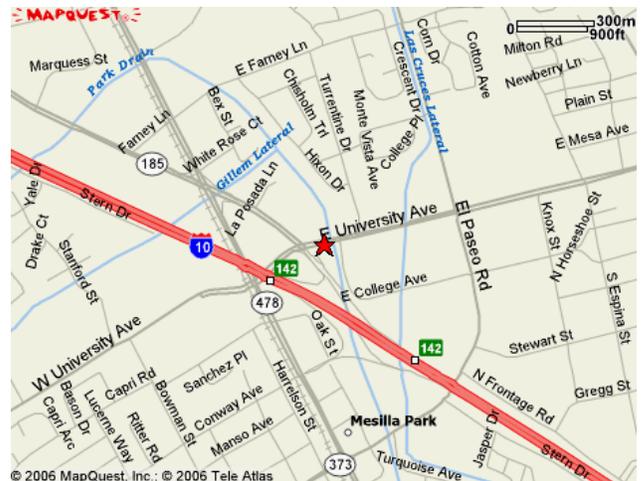
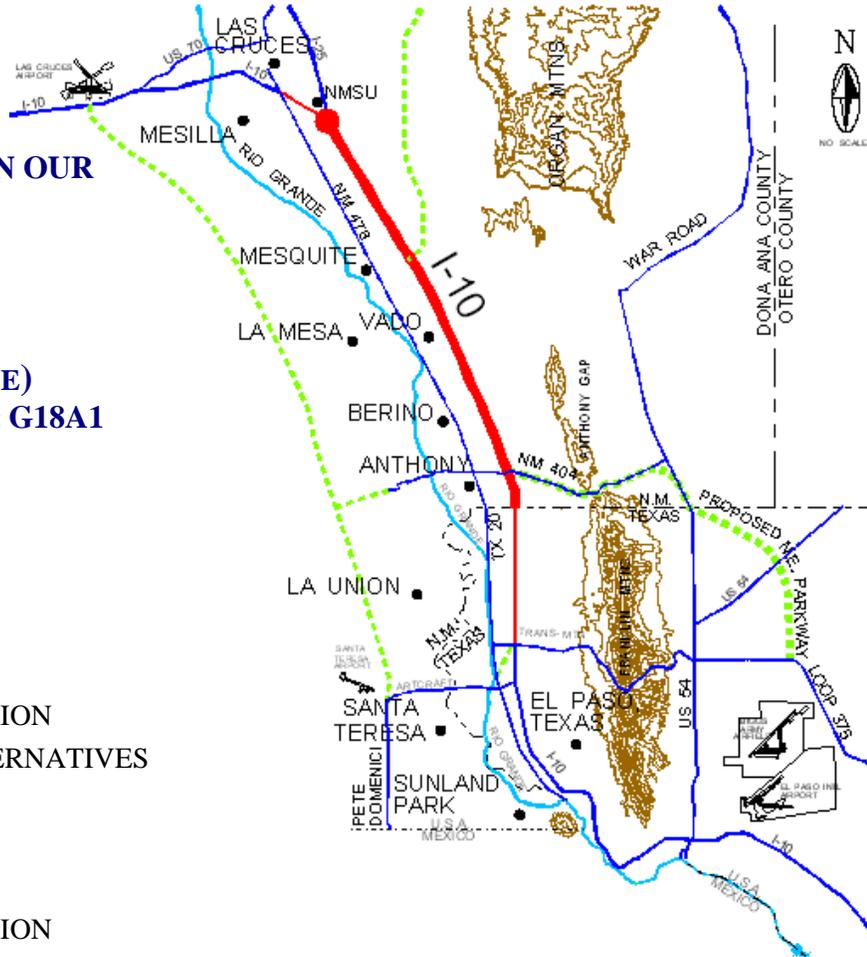
AGENDA:

- 8:45 A.M. REGISTRATION
- 9:00 A.M. OPEN HOUSE / WELCOME
- 9:30 A.M. PRESENTATION / DISCUSSION
ON RECOMMENDED ALTERNATIVES

- NOON: LUNCH

- 12:45 P.M. PRESENTATION / DISCUSSION
ON RECOMMENDED ALTERNATIVES
- 2:30 P.M. CONCLUSIONS AND FEEDBACK
- 3:00 P.M. ADJOURN

WHEN: WEDNESDAY, JULY 26, 2006
TIME: 9:00 A.M. TO 3:00 P.M.
WHERE: RAMADA PALMS
 LA MESA ROOM
 201 E. UNIVERSITY AVE
 LAS CRUCES, NEW MEXICO



INTERSTATE 10 CORRIDOR
STUDY TEAM



Meeting hosted by the NMDOT and the I-10 Corridor Study Team. For questions or comments, please call Jerry B. Paz, P.E. of Molzen-Corbin & Associates at 505.522.0049 or e-mail him at jpaz@molzencorbin.com.

8.8 Energy Profile Spreadsheet (Editable Electronic Excel File to be provided to Bidders)