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Equal Opportunity Employer

Issue Date: December 28, 2009

**THE COUNTY OF MERCED
DEPARTMENT OF ADMINISTRATIVE SERVICES-PURCHASING**

**INVITATION FOR BID
BID NO. 6477**

**FOR:
PROVIDE AND INSTALL AN AIR SPARGE/SOIL
VAPOR EXTRACTION SYSTEM
COMMODITY CODE: 962.00**

Notice is hereby given that sealed bids will be received at the Merced County Department of Administrative Services-Purchasing until 4:00 P.M., local time, on **Thursday, January 28, 2010**, at which time they will be publicly opened, read and **published to the web** for the furnishing of all labor, materials and equipment, and performing all work necessary and incidental to Provide and Install an Air Sparge/Soil Vapor Extraction System. Please carefully read and follow the instructions. **Bids shall be presented under sealed cover. Clearly marked with the bid number and bid submittal deadline date on the outside and mailed or delivered to:**

County of Merced
Department of Administrative Services-Purchasing
2222 "M" Street, Room 1
Merced, California 95340
Attn: Frank C. Rybka, C.P.M., CPPB,
Procurement Specialist II
Phone: 209-385-7331 Ext. 4361
Fax: 209-725-3535
E-Mail: frybka@co.merced.ca.us

Any bidder who wishes their bid to be considered is responsible for making certain that their bid is received in the Department of Administrative Services-Purchasing by the Bid Submittal Deadline. **NO ORAL, TELEPHONIC, TELEGRAPHIC, ELECTRONIC (E-MAIL), OR FACSIMILE BIDS OR MODIFICATIONS WILL BE CONSIDERED. BIDS RECEIVED AFTER THE BID SUBMITTAL DEADLINE WILL BE REJECTED REGARDLESS OF POSTMARK DATE AND WILL BE RETURNED TO THE BIDDER UNOPENED.**

BID SUBMITTAL DEADLINE: 4:00 P.M., THURSDAY, JANUARY 28, 2010

BIDS WILL BE CONSIDERED LATE WHEN THE OFFICIAL DEPARTMENT OF ADMINISTRATIVE SERVICES-PURCHASING TIME CLOCK READS 4:01 P.M.

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SECTION 1

SCOPE OF WORK

BID NO. 6477

These specifications describe the requirements to furnish all labor, materials and equipment, and performing all work necessary and incidental to Provide and Install an Air Sparge/Soil vapor Extraction System according to the following Drawings and Specifications:

- Exhibit 1 - "Site Specific Equipment Notes and Requirements (Pages 1-5)
- Exhibit 2 - Drawing List:
- Sheet 1 – Title Sheet (For reference only, not a part of this bid, performed by Others)
 - Sheets 2-7 – General Notes and Specifications (For reference only, not a part of this bid, performed by others)
 - Sheet 8 – Site Vicinity Map (For reference only, not a part of this bid, performed by others)
 - Sheet 9 – Generalized Site Plan (For reference only, not a part of this bid, performed by others)
 - Sheet 10 – Trench Detail (For reference only, not a part of this bid, performed by others)
 - Sheet 11 – Process and Instrumentation Diagram (For reference only, not a part of this bid, performed by others)
 - Sheet 12 – Equipment Layout (This is a general, not an exact layout for the equipment).
 - Sheet 13 – Construction Details (For reference only, not a part of this bid, performed by others)
 - Sheet 14 – Well Details (For reference only, not a part of this bid, performed by others)

SECTION 2
INSTRUCTIONS FOR SUBMITTING BIDS

1. Bid Submittal

- a. Bid must be submitted on the form(s) provided by and made available at the Office of the Merced County Department of Administrative Services-Purchasing, 2222 "M" Street, Room 1, Merced, CA 95340. All items shall be filled in and the signatures of all persons signing shall be written and printed in longhand. All bids submitted must have signature sheet, (**Attachment A**) completed, dated, with firm's name and signed by a duly authorized officer of the firm.

The bid cost sheet, (**Attachment B**) to be completed, signed and returned with bid submittal.

Bids not submitted on the form(s) provided may not be considered by the Department of Administrative Services-Purchasing.

- b. All bids shall be presented under sealed cover. Clearly identified on the outside to read:
- Name of the bidder
 - Address of the bidder
 - Subject of the Bid
 - Invitation for Bid Number
 - Bid Submittal Deadline Date
- c. Please submit **one (1) original signature hard copy** to be signed in blue ink (original copies marked as such) and **one (1) copy**.
- d. All bids shall remain firm for at least ninety (90) calendar days after Bid Submittal Deadline unless otherwise specified. Within ninety (90) calendar days after the Bid Submittal Deadline opening, a purchase order and/or a contract may be awarded by the County to the lowest responsible bidder, as it may deem proper in its absolute discretion. The time for awarding a purchase order and/or a contract may be extended at the sole discretion of the County, if required to evaluate bids or for such other purposes as the County may determine, unless the bidder objects to such extension in writing with their bid.
- e. All prices shall be bid F.O.B. DESTINATION only.
- f. Delivery dates of all items/services shall be specified on the bid.
- g. Mistakes must be corrected and the correction inserted; correction must be initialed in blue ink by the person signing the bid.

- h. Bidder shall be able to withdraw their bid at any time prior to the Bid Submittal Deadline. After bid submitted deadline, the bidder shall not be relieved of its bid without the consent of the County, nor shall any change in the bid be made because of a mistake. The County may allow a bidder to withdraw a bid because of a mistake only when the bidder has notified the County in writing within five (5) work days following the bid opening, specifying in detail how the mistake occurred, and has established to the satisfaction of the County that: (1) a mistake was made; (2) the mistake made the bid materially different from what the bidder intended; and (3) the mistake was made in filling out the bid and was not due to an error in judgment nor to carelessness in inspecting the site nor in reading the plans or specifications.
- i. The submission of a bid shall be considered an agreement to all the terms, conditions, and specifications provided herein and in the various bid documents, unless specifically noted otherwise in the bid.

2. **Interpretation, Corrections and Addenda**

The Bidder must carefully examine the specifications, terms and conditions provided in the Invitation For Bid and become fully informed as to the requirements set forth therein. If anyone planning to submit a bid discovers any ambiguity, conflict, discrepancy, omission or error in the bid, has any questions in relationship to the "Scope of Work", or any other related matters, they shall immediately notify the contact person as shown on the "Cover Sheet" of such concern in writing and request clarification or modification of the document(s) no later than the deadline as set forth herein:

Deadline for submission of questions: **January 19, 2010**

No further requests for clarification or objections to the bid will be accepted or considered after this date. Any change in the bid will be made only by written addendum, issued by the Department of Administrative Services-Purchasing Division to each firm in receipt of the Invitation for Bid and shall be incorporated in the bid.

The Bidder shall sign and date the addendum and submit same with the bid. **Any oral communication by the County's designated contact person or any other County staff member concerning this proposal is not binding on the County and shall in no way modify this proposal or the obligations of the County or any Bidders.**

The Bidder may FAX, E-mail or mail the contact person as shown on the "Cover Sheet".

All inquiries shall be directed to the designated County staff person as shown. Contact with any other County personnel, any undue "badgering" of such County personnel by the Bidder is prohibited. Failure to comply with this request may be considered cause for disqualification of your bid.

3. **Bid Submittal Deadline**

The bid must be received in the Merced County Department of Administrative Services-Purchasing by 4:00 P.M. local time on **Thursday, January 28, 2010**. All bids shall be presented under sealed cover, clearly identified on the outside to read:

- Name of the bidder
- Address of the bidder
- Subject of the bid
- Invitation for Bid Number
- Bid Submittal Deadline Date

For the purposes of this bid, the time specified will be as defined by the Date/Time machine in the Office of the Department of Administrative Services-Purchasing, 2222 "M" Street, Room 1; Merced, California 95340. **BIDS RECEIVED AFTER THIS DEADLINE WILL BE REJECTED REGARDLESS OF POSTMARK DATE AND WILL BE RETURNED TO THE BIDDER UNOPENED.**

Bid must be mailed or delivered personally to:

Merced County Department of
Administrative Services-Purchasing
2222 "M" Street, Room No. 1
Merced, California 95340
Bid No. **6477**
Attention: Frank C. Rybka, C.P.M., CPPB,
Procurement Specialist II

Without law or policy to the contrary, if the bidder took reasonable steps to submit the bid in due time, and failure of the bid to be on hand at the time of closing was not the result of negligence or other fault of the bidder, but was the result of negligence by the County, the County reserves the right to accept such bid.

4. **References**

Provide a list of at least three (3) three customer references, (**Attachment C**) which you have sold or are currently selling similar items/services. Include the company's name; the name, title, and telephone number of a contact person; the dollar amount of the contract; and the dates that these items/services were completed.

5. **Pre-Bid Conference**

A pre-bid conference will be held to discuss all relevant issues associated with the Invitation for Bid. While attendance is not required, all potential bidders are strongly encouraged to attend. Each firm will be limited to not more than two (2) representatives in attendance.

Please submit, in writing, any questions relevant to the Invitation For Bid that you would like answered at the pre-bid conference to the Department of Administrative Services-Purchasing as

referenced above or fax your questions to (209) 725-3535, no later than three (3) work days before the conference. This will allow for a more thorough response.

The pre-bid conference may be taped and answers will be posted to the County of Merced Official Website (www.co.merced.ca.us) following the conference. Please contact the Merced County Department of Administrative Services-Purchasing at (209) 385-7331 for confirmation of your attendance. **Oral answers at the conference will not be binding on the County.**

The location, date and time will be as follows:

Location:	Merced County Public Works Corporation Yard 715 Martin Luther King, Jr. Way Merced, CA 95341
Date:	January 6, 2010
Time:	10:00AM

6. Bid Security

Each bid must be accompanied by a Bid Security in the amount of ten percent (10%) of the total bid cost made payable to the County of Merced. At the option of the bidder, this may be a certified check, cashier's check, or Bid Bond. Bid Bonds shall be executed as a Surety by a corporation licensed to issue Surety Bonds in the State of California. Bid securities will be returned to all except the three lowest bidders, which will be retained until the accepted bidder has entered into a contract with the County.

7. Forfeiture Of Bid Security

The bid security shall be submitted with the understanding that it is a guarantee that the bidder will not withdraw their bid during such time and under the conditions set forth herein; that they will enter into a formal contract if it is awarded to them; that they will furnish the required bonds and that the bid security will be declared forfeited as liquidated damages in the event of withdrawal of their bid or in the event of failure to enter into said contract and give said bonds within the time specified after they have received notice of an award. The County may then award the contract to the next responsible bidder or bidders, or may call for new bids.

8. Performance Bond

Within fourteen (14) calendar days of the award of the contract, the successful bidder will be required to furnish, at bidder's expense, the County a Faithful Performance Bond in an amount equal to one hundred percent (100%) of the total bid cost. The bond shall be approved as to form by the County, executed by the bidder as principal and by a corporation licensed to issue such bonds in the State of California.

9. Payment Bond

Upon execution of the contract, the successful bidder will be required to furnish a Payment bond in an amount equal to one hundred percent (100%) of the total amount of the contract.

10. Liquidated Damages

The amount of the liquidated damages to be paid by the successful bidder, awarded the contract by the County, for failure to complete the entire work by the completion date (as extended, if applicable) will be \$250.00 for each calendar day, continuing to the time at which the work is complete. Such amount is the actual cash value agreed upon as the loss to the County resulting from successful bidder's default.

11. Specific Compliance

All bidders will be required to abide by all applicable Federal and State laws and regulations.

12. Acceptance Test

Upon receipt of written notification of the completion of the delivery of the items/services called for under this bid, County, at its option, may conduct a fifteen (15) work day on-site acceptance test. The acceptance test of the items/services will be conducted for the purpose of demonstrating, that, in County's sole opinion that such items/services performs in accordance with the manufacturer's specifications.

In the event the items/services do not successfully pass the acceptance test, County shall notify the successful bidder, in writing, specifying in reasonable detail in what respects the items/services failed to perform. Seller shall immediately correct any deficiencies, disclosed by the acceptance test. County may repeat the fifteen (15) work days test again until the items/services have successfully passed the acceptance test.

In the event that the items/services fail to pass the acceptance test within sixty (60) calendar days of the date that the notification of the completion of the delivery of the items/services are received, County shall have the option of immediately terminating any purchase order issued as a result of this bid without financial liability or penalty of any kind, or, with mutual agreement the parties may continue the acceptance testing. The option to terminate any purchase order issued as a result of this bid, as aforesaid, shall remain available to County during any mutually agreed to continuation of the acceptance test after the aforesaid sixty (60) calendar day period. If County elects to termination any purchase order issued as a result of this bid, the successful bidder shall refund all monies received from County up to the period of termination, within thirty (30) calendar days from receipt of written termination by County.

13. Merced County Business License

Prior to the issuance of any purchase order and/or the performance of any contract derived from this bid, the successful bidder and its subcontractors shall be required to maintain a Merced County Business License in accordance with the County of Merced Ordinance No. 1705, "An Ordinance Establishing a requirement for a Business License and Temporary Business License and/or persons operating in the unincorporated areas of Merced County (www.caed.merced.ca.us).

It is the intent of the Board of Supervisors of the County of Merced to authorize that no person shall maintain, conduct, or carry-on a business, whether or not for profit, located in whole or in part at a fixed place of business within the County and outside the limits of any incorporated city, without first obtaining a license to operate as provided under the County of Merced Ordinance No. 1705.

**SECTION 3
GENERAL TERMS AND CONDITIONS**

1. Bid Rejection/Waiver of Informalities

THE COUNTY RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS OR ANY PART THEREOF, TO WAIVE ANY INFORMALITIES IN THE BID AND MINOR IRREGULARITIES, TECHNICAL DEFECTS OR CLERICAL ERRORS.

The County's decision shall be final. The County's waiver of an immaterial defect shall in no way modify the bid documents or excuse the bidder from full compliance with its specifications if the bidder is awarded the bid.

2. Bonding Requirements

If required, before execution of the contract with the successful bidder by the County, the successful bidder shall file with the County the necessary bonds satisfactory to the County in the amounts and for the purposes noted. Bonds shall be duly executed by a responsible corporate surety, authorized to issue such bonds in California and secured through an authorized agent with an office in California. The successful bidder shall pay all bond premiums, costs and incidentals.

3. Condition of Equipment Bid

If equipment is proposed, it is to be the newest and latest model in current production. Used, re-manufactured, shopworn, demonstrator, prototype or discontinued models are not acceptable unless otherwise stipulated under this bid.

4. Brand Names

Manufacturers' brand names and model numbers, when used, are for reference to indicate the character or quality desired. Equal items will be considered, provided your offer clearly describes the item. Offers for equal items must state the manufacturers brand and model number, or level of quality. The determination of the Department of Administrative Services-Purchasing as to what items are equal is final and conclusive. When manufacturer's brands, model numbers or level of quality is not stated by bidder, the offer will be considered exactly as specified.

5. Payments, Invoicing and W-9 Certification Form

Invoices in triplicate, shall be mailed or delivered to the County Department whose name and address shall appear in the "INVOICE TO" section of any purchase order and/or contract as a result of this bid.

In addition to the itemized invoice(s) submitted by the successful bidder for payment, the successful bidder must also complete and submit a Form W-9, "Request for Taxpayer Identification Number and Certification", (www.irs.gov/pub/irs-pdf/fw9.pdf) to the County.

Both invoice(s) and W-9 form shall be forwarded to the County at the address indicated in the purchase order and/or contract.

Upon approval by the County, the sum due hereunder shall be paid to the successful bidder within thirty (30) calendar days following acceptance pursuant to Section "Acceptance Test", and receipt of a proper invoice(s).

6. Delivery Hours

Delivery will be accepted from 9:00 a.m. to 4:00 p.m., Monday through Friday.

7. Damage of Items

All damages pursuant to items received by County due to the successful bidder's negligence shall be the responsibility of successful bidder to replace.

8. Alternate Bids

Alternate bids will not be considered.

9. Cash Discount

In connection with any cash discount specified on this bid, time will be computed from the date of the complete delivery of the items/equipment as specified, or from date correct invoices are received in the County department requesting such items/equipment, whichever is later. For the purpose of earning the discount, payment is deemed to be made on the date of mailing of the County warrant or check.

10. Pricing

Unless otherwise provided, the items/services stated herein will not be subject to any price increase from the date of acceptance of bid to the date of termination/extension as stated herein. If the successful bidder established prices for any items/services listed herein is decreased during the term of this bid, then such discounts/ reductions in price shall be immediately applicable so that County may have benefit of such lower prices.

11. Risk of Loss

The successful bidder shall bear risk of loss until goods have reached the final F.O.B. Destination point. Thereafter, County shall bear risk of loss.

12. Prior to Shipment

While the successful bidder has risk of loss, the successful bidder agrees, at its own expense, to procure and carry suitable fire, and extended coverage insurance on material, work-in-process and any furnished items which comprise or will eventually comprise the Piece-of Equipment. The amount to be insured shall be the actual replacement value of said material, work-in-process and furnished items. Such insurance shall provide a loss payable clause in favor of the successful bidder as its interest may appear.

13. **F.O.B. Point**

F.O.B. Destination to include inside delivery to:

**MERCED COUNTY
PUBLIC WORKS CORPORATION YARD
715 MARTIN LUTHER KING, JR. WAY
MERCED, CA 95341**

14. **Examination of Bid Documents**

All bidders shall carefully examine the specifications herein and must fully inform themselves of the conditions and requirement of the items/services to be furnished. Failure to do so will be at bidder's own risk and cannot secure relief on the plea of error, or dispute, or question such specifications and the directions explaining or interpreting them.

Should a bidder find discrepancies in, or omissions from, the specifications, or should he/she be in doubt to their meaning, he/she shall at once notify the County's Department of Administrative Services-Purchasing. Notification is to be in written form and must be submitted at least seven (7) work days prior to the Bid Submittal Deadline. Any interpretations by the County will be made in written form. Any change in requirements will be done in the form of a written addendum. The receipt of any resulting amendment must be acknowledged in accordance with the directions on the amendment. **Oral explanations or instructions given before the award of the contract will not be binding upon the County.**

All other questions should be directed to the buyer shown on the "Cover Sheet" of this Invitation for Bid (IFB)

15. **Request for Changes**

The County reserves the right to order in writing changes in the bid or alterations, additions, or omissions at any time prior to acceptance of the items/services without voiding the bid, and the successful bidder shall comply with such order. The successful bidder may also request changes in the bid, but no work will be performed on such changes until the request is approved in writing by the County. Such changes shall be performed in accordance with the original bid requirements except as modified by an amendment. Except as herein provided, the successful bidder shall have no claim for any other compensation due to changes in the work.

Any changes or deviation from the contract made without authority in writing from the County's Department of Administrative Services-Purchasing will be at the bidder's own risk. No such changes shall be made nor adjustment in compensation granted unless the successful bidder receives an executed amendment prior to making the changes.

16. Local Business Purchasing Preference

A five percent (5%) preference shall be granted to local bidders. A local bidder is defined as:

- a. A principal place of business located within the County of Merced with a valid and verifiable business license, if applicable, issued by a city the County or a business located in the unincorporated areas of the County. Post Office Boxes do not qualify as verifiable local business addresses;
- b. Employs at least one (1) full-time employee within the County, or if the business has no employees, shall be at least fifty percent (50%) owned by one or more persons whose primary residence(s) is located within the County; and
- c. Has had a fixed office or place of business having a street address within the County for at least six (6) months immediately prior to the issuance of the request for competitive bids by the County.

Local preference only applies to the purchase of materials, supplies, equipment or services, and will not apply to bids conducted cooperatively with other public agencies, nor when prohibited by state or federal statutes or regulations to be awarded to the “lowest responsible bidder” or other wise exempted from local preference. The total amount of such a preference granted in a single competitive bid shall not exceed \$10,000 over a non-local bidder (County of Merced Ordinance No. 1852, Chapter 5.12.025; “Local Business Purchasing Preference”).

17. Insurance

Prior to the commencement of work, and as a precondition to this contract, Contractor shall purchase and maintain the following types of insurance for the stated minimum limits indicated during the term of this Agreement. Contractor shall provide a certificate of insurance and endorsements naming County as an additional insured on each policy. The insurance carrier shall be required to give County notice of termination at least 10 days prior to the intended termination of any specified policy. Each certificate of insurance shall specify if Contractor has a SIR, and if so, Contractor shall be required to provide the entire policy of insurance with which it has a SIR.

- a. Requirements and Limits:
 - 1. Commercial General Liability: \$1,000,000.00 per occurrence and \$2,000,000.00 annual aggregate covering bodily injury, personal injury and property damage. The County and its officers, employees and agents shall be endorsed to above policies as additional insured using ISO form CG2026, as to any liability arising from the performance of any contract resulting from this proposal.
 - 2. Automotive Liability: \$1,000,000.00 per accident for bodily injury and property damage, or split limits of \$500,000.00 per person/\$1,000,000.00 per accident for bodily injury and \$250,000.00 per accident for property damage.

3. Workers' Compensation Statutory coverage, if and as required according to the California Labor Code, including Employers' Liability limits of \$1,000,000.00 per accident, the policy shall be endorsed to waive the insurer's subrogation rights against the County.
 4. If the successful bidder elects to deliver products to the County using a common carrier that is not related to the bidders business entity. The bidder may request waiver of the automobile and workers compensation insurance requirements.
- b. Insurance Conditions.
1. Insurance is to be placed with admitted insurers rated by A.M. Best Co. as A: VII or higher. Lower rated, or approved but not admitted insurers, may be accepted if prior approval is given by the County's Risk Manager.
 2. Each of the required policies, noted above, shall be endorsed to provide the County with thirty (30) calendar days prior written notice of cancellation. Additionally, the policies shall also be endorsed by the insurance company (not the agent) to modify the policies to include Merced County, its officers, agents, and employees as additional insured. The County is not liable for the payment of premiums or assessments on the policy. No cancellation provisions in the insurance policy shall be construed in derogation of the continuing duty of successful bidder to furnish insurance during the term of the contract.
 3. These requirements assume that standard insurance policy forms, terms, and conditions will apply to cover the expected risk exposures for the intended "Scope of Work". Additional qualifying policy conditions or special endorsements may be specified in the contract depending on the final "Scope of Work" agreed on by County and the successful bidder. Insurance questions may be directed to the Department of Administrative Services-Purchasing for response from the County's Risk Manager.

18. Qualification of Bidder

The County may make such investigation as it deems necessary to determine the ability of the bidder to provide the services requested herein, and the bidder shall furnish to the County all information and data for this purpose as the County may request. The County reserves the right to reject any bid should the evidence submitted by, or investigation of, the bidder fail to satisfy the County that such bidder is properly qualified to carry out the obligations of the bid and to complete the requirements contemplated therein.

19. Subcontracting

Any bidder using a subcontractor(s) must clearly explain the use of the subcontractor(s) and list the name(s) and address(es) of the subcontractor(s) providing work under this bid. **(Attachment D)** The successful bidder will be fully responsible for all work performed under this bid and will be considered as the Prime Contractor. Any subcontracting, or other legal arrangements made by

the bidder are the sole responsibility of the bidder. Any contract that is entered into between the successful bidder and the subcontractor(s) shall contain provisions for federal and state access to the books, documents, records, and inspection of work.

20. Default

In the event the successful bidder who is awarded a purchase order and/or contract resulting from this bid shall be in breach or default, the County may procure the items/services from other sources and may deduct from any monies due, or that may thereafter become due to the successful bidder, the difference between the price named in the purchase order and/or contract and actual cost thereof to the County. Prices paid by the County must be considered the prevailing market price at the time such purchase is made. These rights and remedies shall not be exclusive but in addition to any other rights and remedies provided by contract law. Periods of performance may be extended if the facts as to the cause of delay justify such extension in the opinion of the Department of Administrative Services-Purchasing.

21. Cancellation of Purchase Order and/or Contract

The County may terminate any purchase order and/or contract derived from this bid as follows:

- a. WITHOUT CAUSE at any time by giving thirty (30) calendar days written notice to the successful bidder.
- b. WITH CAUSE (Default) at any time by giving ten (10) calendar days written notice to the successful bidder. Cancellation for cause shall be at the discretion of the Department of Administrative Services-Purchasing and shall be, but is not limited to, failure to supply the items, materials, equipment or services specified within the time allowed or within the terms, conditions or provisions of this bid.

The successful bidder may not cancel any purchase order and/or contract derived from this bid, without prior written consent of the Department of Administrative Services-Purchasing.

22. Rejection of Bid

THE COUNTY RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS OR ANY PART THEREOF, TO WAIVE ANY INFORMALITIES IN THE BID, AND ALSO TO WITHHOLD AWARD FOR A PERIOD OF NINETY (90) CALENDAR DAYS FROM DATE OF BID OPENING.

23. Nondiscrimination

- a. During the performance of this bid, bidder and any sub-bidders shall not unlawfully discriminate against any employee or applicant for employment because of race, color, ancestry, religion, sex, national origin, martial status, age, medical condition (cancer related), physical handicap (including AIDS), or sexual orientation. Equal employment extends, but is not limited to recruitment, compensation, benefits, layoff, termination, and all other conditions of employment. Bidder and sub-bidders shall ensure that the

evaluation and treatment of their employees and applicants for employment are free of such discrimination. Bidder and sub-bidders shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and the applicable regulations promulgated thereunder (California Administrative Code, Title 2, Section 7285.0 et seq.) The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900, set forth in Chapter 5 of Division 4 of Title 2 of the California Administrative Code and incorporated into this contract by reference and made a part hereof as if set forth in full.

- b. Bidder and any sub-bidders shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
- c. Bidder shall include the nondiscrimination and compliance provisions of the clause in all subcontracts to perform work under the contract.
- d. Bidder shall grant access by representative of the Department of Fair Employment and Housing and the County upon reasonable notice at any time during normal business hours, but in no case less than twenty-four (24) hours notice, to such of its books, records, accounts, other sources of information and its facilities as said Department or County shall require to ascertain compliance with this clause.

24. Non-discrimination of the Disabled

The County will not aid or perpetuate discrimination against a qualified disabled individual by funding as an agency, organization, or person that discriminates on the basis of handicap in providing aid, benefit, or service to beneficiaries of the program or activity. The County is committed to provide access to all County services, programs, and meetings open to the public for people with disabilities.

In this regard the County and all of its vendors and bidders will take all reasonable steps to ensure that disabled individuals have the maximum opportunity for the same level of aid, benefit, or service as any other individual.

25. Governing Law and Venue

This bid, or any contract that may result from the award of this bid, shall be deemed to be made under, and shall be governed by and construed in accordance with, the laws of the state of California. Any action brought to enforce the terms, or provision of this bid or any contract that may result from the award of this bid, shall have venue in the County of Merced, State of California.

26. Taxes

Sales Tax should be shown separately on the bid form, when and where indicated. The County is exempt from Federal Excise Tax and should not be included in your bid. If your company is outside California and collects sales tax, please state the amount as a separate item if the County is to remit the tax.

27. Samples

Samples of items, when required, must be furnished free of cost. Samples may be retained for future comparison. Samples which are not destroyed by testing or which are not retained for future comparison will be returned upon request at your expense.

28. Liabilities

The bidder shall hold the County, its officers, agents, servants, and employees, harmless from liability of any nature or kind because of use of any copyrighted, or uncopyrighted composition, secret process, patented or unpatented invention, articles or appliances furnished or used under this order, and agrees to defend, at its own expense, any and all actions brought against the County or bidder because of the unauthorized use of such items.

29. Indemnification

Contractor has the contracted duty (hereinafter "the duty") to indemnify, defend and hold harmless, County, its Board of Supervisors, officers, employees, agents and assigns from and against any and all claims, demands, liability, judgments, awards, interest, attorney's fees, costs, experts' fees and expenses of whatsoever kind or nature, at any time arising out of or in any way connected with the performance of this Agreement, whether in tort, contract or otherwise. This duty shall include, but not be limited to, claims for bodily injury, property damage, personal injury, and contractual damages or otherwise alleged to be caused to any person or entity including, but not limited to employees, agents and officers of Contractor.

Contractor's liability for indemnity under this Agreement shall apply, regardless of fault, to any acts or omissions, willful misconduct or negligent conduct of any kind, on the part of the Contractor, its agents, subcontractors and employees. The duty shall extend to any allegation or claim of liability except in circumstances found by a jury or judge to be the sole and legal result of the willful misconduct of County. This duty shall arise at the first claim or allegation of liability against County. Contractor will on request and at its expense, defend any action suit or proceeding arising hereunder. This clause for indemnification shall be interpreted to the broadest extent permitted by law.

30. Warranty, Manufacturer

Manufacturer shall fully warrant all materials and equipment furnished under the terms of this bid against poor and inferior quality. While under warranty, manufacturer shall repair or replace inoperable materials or equipment in a timely manner to minimize the disruption of County operations. A copy or description of the manufacturer's warranty shall accompany each bid for the material and equipment proposed, detailing the scope and length of the warranty. Where the successful bidder is also the manufacturer of the materials or equipment provided under this bid, the Manufacturer's Warranty requirement will supersede the successful bidder warranty requirement of this bid.

31. Warranty, Successful Bidder

Successful bidder shall fully warrant all materials and equipment furnished under the terms of this bid against poor and inferior quality, for a period of not less than *one (1) year* from date of the final acceptance by the County. While under warranty, successful bidder shall repair or replace inoperable materials or equipment in a timely manner to minimize the disruption of County operations.

SECTION 4 AWARD OF BID

An evaluation team shall validate and evaluate all bids received. All requirements identified in this bid must be satisfied in order to ensure that a bid will qualify for consideration.

1. Most Responsive Bidder

Although competitive pricing is essential in the award of this IFB, consideration shall be given, but not limited to:

- a. Lowest responsive bidder following assessment of 5% Local Business Purchasing Preference, if applicable.
- b. The ability of the Bidder to comply with Terms and Conditions set forth herein.

2. Lowest Responsible Bidder

In addition to price in determining the lowest responsible bidder, consideration shall be given, but not limited to:

- a. The quality and performance of the supplies/equipment to be provided by the bidder;
- b. The ability, capacity and skill of the bidder to perform the contract or accomplish the transaction within the time specified, without delay;
- c. The character, integrity, reputation, judgment, experience and efficiency of the bidder;
- d. The quality of bidder's performance on previous purchases by, or contracts with, the County;
- e. The ability of the bidder to provide future maintenance, repair parts and services for the supplies/equipment provided;

3. Award

The County reserves the right to:

- a. Award bids received on the basis of individual items/services, or groups of items/services, or on the entire list of items/services;
- b. Reject any or all responses, or any part thereof;
- c. Waive any informality in the bids;
- d. Accept the bid that is in the best interest of the County. The Department of Administrative Services-Purchasing's decision shall be final; and
- e. Award bids based upon the "Local Business Purchasing Preference" Policy.

An evaluation of the bidder's ability, quality, and performance as set forth under Section "Most Responsive Bidder" and "Lowest Responsible Bidder" of this bid will be used in addition to total cost as a basis of award for any ensuing contract.

EXHIBIT 1

SITE SPECIFIC EQUIPMENT NOTES AND REQUIREMENTS

Merced County Public Works Corporation Yard

715 Martin Luther King Jr. Way

Merced, California

AIR SPARGE/SOIL VAPOR EXTRACTION SYSTEM

An air sparge/soil vapor extraction (AS/SVE) system will be used to remove volatile organic compounds in soil and groundwater from the subject site. Soil vapor extraction will additionally be used to remove shallow zone hydrocarbon vapors and mitigate the risk of vapor intrusion to the indoor air of nearby structures.

The SVE system will consist of a regenerative blower to simultaneously extract soil vapor from seventeen wells (VE-1 through VE-17). The vapor will be directed through a moisture separator tank prior to being abated by an electric catalytic oxidizer (catox). Treated air will be discharged through an effluent stack. Operation of the vapor abatement system will occur under the authority of the San Joaquin Air Pollution Control District.

The sparge system will consist of an oil-less air compressor, three way solenoid valve, pressure regulator, rotameter and seventeen air sparge wells (AS-1 through AS-17). The compressor will be powered through the main SVE control panel and individual well operation will be controlled by way of a timers and solenoid valves.

Extracted groundwater will be transferred into a holding tank, and then transported to an approved treatment facility for disposal.

Aboveground piping containing hydrocarbon vapor shall be mild steel, black iron, or schedule 80 PVC. All water conveyance piping shall be schedule 80 PVC. All air-sparge piping shall be ABS or galvanized steel.

SYSTEM DETAILS

The system is designed to be manufactured and supplied as a "Turn Key" packaged remediation system, custom built to the requirements and specifications in these design notes and drawings. The system is designed for continuous operation. Remedial design drawings are provided as an attachment.

Electric Power Available at the Site:

200 Amp, 240 Volt, three-phase. Discussions with the Merced County Public Works Corporation Yard (the County) indicate that sufficient electrical services will be available for system operation.

Equipment electrical classification:

Outdoor application of all electrical equipment shall be NEMA 4.

System Enclosure Requirements:

The AS/SVE system will be placed on the existing surface located on the East side of the Maintenance Shop building, on the Northern side of the property. The holding tank will be placed adjacent to the equipment, within a secondary containment berm. All equipment should stand-alone or be skid mounted. Skids for equipment must fit into the space shown on Sheet 12 of the design package.

Soil Vapor Extraction Skid and Blower:

Soil vapor will be simultaneously extracted from the 17 designated wells, using a regenerative blower capable of generating 300 CFM at a vacuum of B0 inches of water column. The regenerative blower shall be a skid-mounted unit with a main control panel, and air-water separator. The air-water separator (AWS) will be a 60-gallon steel vacuum rated tank. The tank will come with a clean-out access and 2" diameter clear PVC full-length sight tube with true unions. The tank will be connected to the regenerative blower with piping containing automatic and manual vacuum relief valves. The tank will include one transfer pump (P-1) sized to deliver water from the tank against operating vacuum pressure. Gauges will be supplied to monitor line pressure and temperature. Vapor flow will be measured using a hand-held anemometer.

The SVE Skid and Blower must contain the following equipment:

- i. Regenerative Blower
 - 300 CFM at 80 inch water column
 - 230 Volt AC, 3 Phase, TEFC motor
 - 0 - 100° F, 2½" steel dial, ¼ NPT connection, temperature gauge on blower inlet piping
 - 0 - 30 PSI, 2½" steel dial, ¼ NPT connection, pressure gauge on blower discharge piping
 - 0 - 200° F, 2½" steel dial, ¼ NPT connection, temperature gauge on blower discharge piping

- ii. Air-Water Separator Tank
 - Welded steel construction with external enamel finish
 - Tangential inlet and demister for 99% moisture removal
 - 60 gallon holding capacity
 - Full vacuum design rating
 - 2 inch, clear PVC site glass with stainless steel level control and high level floats
 - Site glass level controls should be installed to allow easy removal and cleaning
 - Level controls in the air-water separator tank are to be designed such that:
 - LSL - Turns pump P-1 off.
 - LSH - Turns pump P-1 on.
 - LSHH - Turns off the AS/SVE system.
 - LAHH - Panel mounted indicator light in the event of system shutoff at high level.
 - Polypropylene demister element
 - 1" drain valve (brass ball valve)
 - 3" NPT inlet and outlet connections
 - 6" Plate flanged cleanout port
 - 3" Wye strainer on separator inlet

2" air bleed valve with filter/silencer on inlet (bronze globe valve)
Adjustable automatic vacuum relief valve on separator discharge
0 - 200 inch H2O, 2½" steel dial, ¼ NPT connection, vacuum gauge on separator housing

iii. Air-Water Separator Transfer Pump

10 gpm @ 65"TDH
¾ HP, 230 Volt, 3 phase, TEFC motor
Isolation valve on pump inlet (brass ball valve)
Check valve, throttle valve and sample port on pump discharge
0 - 60 PSI, 2½" steel dial, ¼ NPT connection, liquid filled pressure gauge on pump discharge

iv. Dilution Air Control Valve

The Catalytic Oxidizer's dilution air control valve must be integrated into the existing skid mounted SVE system process piping.

v. Soil Vapor Extraction Control Panel

For operation on 230 volt AC, 3 phase, 3 wire incoming electrical service. To control (1) regenerative blower, (1) air-water separator transfer pump, and interlocked with air-sparge system control panel and catalytic oxidizer. The control panel is to be skid mounted on the SVE skid. To include:

Enclosure, NEMA 4, 36"H, 36"w, 12"d with outer door mounted switches and indicator lights

Panel must be UL Listed

Panel mounted fused disconnect switch with door interlock

3 pole power distribution terminal block with Plexiglas shield

1 pole neutral distribution block with Plexiglas shield

Circuit Breaker: sized for SVE Blower

Circuit Breaker: sized for AWS Transfer Pump

Circuit Breaker: sized for Air Sparge skid operation

Circuit Breaker: sized for Catox skid operation

Motor starter/thermal overload: sized for SVE Blower operation

Motor starter/thermal overload: Contactor sized for AWS transfer pump operation

Three position (Hand-Off-Auto) switch for SVE Blower

Three position (Hand-Off-Auto) switch for AWS Transfer Pump

Amber light for Catox Ready (indicates interlock criteria is met)

White light for Power On (indicates that control power is available)

Red light for high Level holding Tank High-Level (activates full system shut-down)

Red light for high Level Air-Water Separator Tank High-Level (activates system shut-down)

Red light for Catox Failure (activates system shut-down)

Reset button (clears alarm conditions)

Hour meter for SVE blower

Engraved laminated legends for all door mounted devices

Interlocks as required for operation with catox and Catox Ready light

Interlock for sparge system (Sparge system locked out if the SVE system is not operating)

Relay and timer logic as required

Terminal blocks for external connections and fusing as required

External connection for holding tank normally closed high level switch

Color-coded wiring with wire markers at all terminations
Emergency Stop Button on front of panel
GFIC 20A outlet with weatherproof cover, mounted adjacent to control panel

Air-Sparge Compressor and Controls:

The Air Sparge system will be piped into 17 sparge wells, using oil-less continuous duty rotary vane air compressor capable of generating 20 CFM at a pressure of 15 pounds per square inch (PSI). The air compressor shall be a skid-mounted unit with a sparge control panel. The sparge control panel will be interlocked with the main control panel such that if the soil vapor extraction system is off, the sparge system will be automatically turned off. Each of the ten sparge wells will be controlled by an individual timer within the control panel and solenoid valve operation. The sparge system will include an in-line flow meter and adjustable pressure relief valve. Gauges will be supplied to monitor line pressure and temperature.

The Air-Sparge Skid and Compressor must contain the following equipment:

- i. Sparge Compressor
 - 20 CFM at 15 PSI
 - 230 Volt AC, 3 Phase, TEFC motor
 - 0 - 100° F, 2½" steel dial, ¼ NPT connection, temperature gauge on blower inlet piping
 - 0 - 100 PSI, 2½" steel dial, ¼ NPT connection, pressure gauge on blower discharge piping
 - 0 - 50 CFM in-line flow meter

- ii. Air Sparge System Control Panel
 - For operation on 230 volt AC, 3 phase, 3 wire incoming electrical service. To control (1) sparge compressor and (10) 120 volt AC solenoid valves for air-sparge well operational control, and interlocked with soil-vapor extraction system control panel. The control panel is to be skid mounted on the air-sparge skid. To include:
 - Enclosure, NEMA 4, 36"H, 36"w, 12"d with outer door mounted switches and indicator lights
 - Panel mounted fused disconnect switch with door interlock
 - 3 pole power distribution terminal block with Plexiglas shield
 - 1 pole neutral distribution block with Plexiglas shield
 - Circuit Breaker: sized for air-sparge compressor
 - Motor starter/thermal overload: sized for air-sparge Compressor operation
 - Three position (Hand-Off-Auto) switch for air sparge Compressor
 - Amber light for SVE System Ready (indicates interlock criteria is met)
 - White light for Power On (indicates that control power is available)
 - Hour meter for air-sparge compressor
 - Engraved laminated legends for all door mounted devices
 - Interlocks as required for operation with SVE System and SVE system Ready light
 - Relay and timer logic as required
 - (10) Adjustable pin timer for solenoid valve timing/operation
 - Terminal blocks for external connections and fusing as required
 - Color-coded wiring with wire markers at all terminations

Catalytic Oxidizer:

A skid mounted vendor supplied electric catalytic oxidizer will be used as the abatement device for impacted soil vapor. The catalytic oxidizer must be capable of processing flow rates up to 300 CFM and will shut down if the process temperature falls below 630° Fahrenheit. The catalytic oxidizer will include a continuous recording device to document process temperatures per the San Joaquin Air Pollution Control District.

The Catalytic Oxidizer must contain the following equipment:

- i. Catalytic Oxidizer
300 CFM process flow

- ii. Catalytic Oxidizer Control Panel
For operation on 230 volt AC, 3 phase, 3 wire incoming electrical service. To control electrical heating element to maintain process temperature at or above 630o F, dilution air control valve, and interlocked with the soil-vapor extraction system control panel to shut down the system in the event of a catox failure. Controls must be such that extracted vapors will not enter the oxidizer until the oxidizer is at operating temperature. To include:
 - Enclosure, NEMA 4, sized as required for proper operation
 - Panel mounted fused disconnect switch with door interlock
 - 3 pole power distribution terminal block with Plexiglas shield
 - 1 pole neutral distribution block with Plexiglas shield
 - On-Off switch for oxidizer operation
 - Engraved laminated legends for all door mounted devices
 - White light for Power On (indicates that control power is available)
 - Automatic Process Controls
 - Interlocks as required for operation with SVE System
 - Relay and timer logic as required
 - Terminal blocks for external connections and fusing as required
 - Color-coded wiring with wire markers at all terminations
 - Continuous recording device to record process temperature (minimum 1 week capability)

Holding Tank (HT):

The holding tank will be supplied by the County.

The Normally Closed high level float switch for the holding tank will be supplied by vendor.

Equipment Delivery:

Equipment vendor will deliver equipment to:
Merced County Public Works Corporation Yard
715 Martin Luther King Jr. Way
Merced, California 95341-6041

EXHIBIT 2 – DRAWING LIST

SHEETS 1 THRU 14

EXHIBIT 2 – SHEET 1 OF 14






DRAWING LIST		09 RDP DESIGN	ERI <small>ENVIRONMENTAL RESTORATION INSTITUTE</small>
SHEET 1	TITLE SHEET	TITLE	
SHEETS 2-7	GENERAL NOTES AND SPECIFICATIONS		
SHEET 8	SITE VICINITY MAP		
SHEET 9	GENERALIZED SITE PLAN		
SHEET 10	TRENCH DETAIL		
SHEET 11	PROCESS AND INSTRUMENTATION DIAGRAM		
SHEET 12	EQUIPMENT LAYOUT		
SHEET 13	CONSTRUCTION DETAILS		
SHEET 14	WELL DETAILS		
		TITLE SHEET	
		Drawing	
		REMEDICATION SYSTEM MERCED COUNTY PUBLIC WORKS CORPORATION YARD 7+5 Merced Lumber King Jr. Way Merced, California	
		Project DWG. # 2738 09 RDP 065 04 Drawn/Approved MKS/DAK Plot Scale NOT TO SCALE Last Rev. Date 03/04/09 Date 07/07/09 Project No. 2738 Sheet No. 1	

EXHIBIT 2 - SHEET 2 OF 14

<p>GENERAL REQUIREMENTS</p> <ol style="list-style-type: none"> 1) Materials to be used for construction shall be new. 2) Contractor refers to contractors responsible for site construction activities. "County" refers to the Merced County Department of Public Works. "Consultant" refers to the County's contracted Environmental Project Consultant representatives. 3) Where multiple contractors are used for excavation, electrical, plumbing, etc., a delineation of responsibilities and applicable specifications shall be made by the County's Project Manager and/or Consultant in the Site Notes and bid package. 4) Contractor shall verify all dimensions and all conditions before starting work. The Consultant shall be notified of any discrepancy. 5) Contractor shall handle and install all items per manufacturer's instructions and these drawings. Equipment, materials, and instruments, specifically defined in the plans, shall be provided by the Consultant or the County for installation by the contractor. The contractor shall provide other materials. 6) Contractor shall keep site free of waste and rubbish at all times. 7) Prior to bidding or construction, the County's Project Manager or Consultant shall specify responsibilities for applicable permits, utilities, fees, etc. The contractor must not bid or begin work without obtaining instruction. Unless otherwise specified: <ol style="list-style-type: none"> a) The Contractor shall provide all required construction permits and inspections, including permits for electrical, mechanical, and civil construction. b) The Consultant will be responsible for any discharge permits. c) The Contractor shall be responsible for all discharge permits. d) All operating permits (County, city, BORSES, PDW, or discharge) etc.) are to be placed in the County's name at the operating consultants address (for consultant payment). e) Utilities (electrical, natural gas, water, etc.) shall be provided by the County. 8) Upon completion of the project, the contractor shall provide to Project Consultant or the County's Project Manager an AS-Built drawing showing surveyed locations of all piping and equipment installed. 9) A final quality analysis/quality control will be completed by the County's Project Manager or designated consultant upon completion of the work. All items not meeting the specifications shall be promptly repaired and/or replaced by the contractor at no expense to County. 10) Contractor shall be responsible for restoring to original condition all disturbed lawns, trees, shrubs, plantings, fences, walkways, etc. Disturbed areas shall be re-graded and re-seeded or re-seeded. Contractor shall be responsible for mulching and initial watering of re-seeded areas. 11) Upon completion of project, Contractor shall mechanically or hand sweep site to provide a clean surface. <p>SAFETY</p> <ol style="list-style-type: none"> 1) Contractor is responsible for the safety of their personnel and subcontractors. The contractor will develop a Health and Safety Plan (HASP) that, at a minimum, conforms to the County and the Consultant's site HASP. The plan shall be on site at all times. 	<p>GENERAL NOTES AND SPECIFICATIONS</p> <ol style="list-style-type: none"> 3) All work to be done during daylight hours only unless prior approval from County's Project Manager is obtained. 4) Acceptable working hours shall be established by the County's Project Manager or Consultant prior to project start. 5) Contractor must take the necessary precautions to control dust and fugitive emissions from excavation and from excavation and construction activities. 6) The Contractor shall be responsible for the independent location of all utilities and shall take appropriate measures to protect them. Should any utilities including electrical conduits and telephone lines be damaged, contractor must notify the affected parties and begin repairs immediately. In no case shall interruption of any water or utility service be allowed to exist outside dry shift working hours unless prior approval is granted by the County. 7) Contractor shall ensure compliance with OSHA regulations, and all other regulations. 8) Contractor shall assemble on site sufficient quantities of hard hats, traffic cones (minimum 28" high), barricades, drip pans, goggles, rubber gloves, other protective clothing, and a minimum of one 20-pound type "ABC" fire extinguisher. In addition, Contractor shall have clearly posted on site emergency phone numbers such as fire, police, ambulance, city hospital. 9) Contractor shall block all work areas with barricades (i.e., standard barricades or snow fencing barricades, etc.). Traffic cones may be used for closed locations unless excavations will remain open or pedestrian traffic exists in the area. 10) When traffic conditions warrant, Contractor shall post flagmen in addition to barriers/cones to prevent traffic from entering site. <p align="center">TRENCH EXCAVATION</p> <ol style="list-style-type: none"> 1) Trenches shall be installed as specified in the County's design provided to Contractor at bidding. Any additional trenching and excavation shall be discussed with the County's Project Manager or Consultant prior to conducting the work. 2) Where piping is installed below ground, the pipe shall be buried in a trench or excavation below the frost line or at a minimum depth of 18-inches to the top pipe, unless otherwise stated. 3) Contractor shall locate all underground utilities and all piping systems. 4) All existing pavement shall be saw cut to provide a neat vertical face for repairing. Intersections saw cuts shall meet at no less than 90 degrees of each other or be perpendicular to existing paving joints.
<p>REMEDICATION SYSTEM COUNTY PUBLIC WORKS CORPORATION YARD 715 Martin Luther King Jr. Way Merced, California</p> <p>Project DWG. # 2738 09 ROP DESIGN Drawn/Approved MKB/DAK Plot Scale NOT TO SCALE Last Rev. Date 03/05/09 Date 07/07/09 Project No. 2738 Sheet No. 2</p>	<p align="center">Drawing</p> <p align="center">09 ROP DESIGN GN-1</p>



EXHIBIT 2 – SHEET 3 OF 14

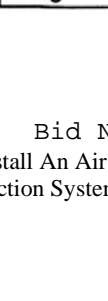
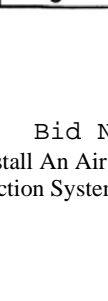
<p>PIPING</p> <ol style="list-style-type: none"> 1) All material and workmanship shall be in accordance with the manufacturer's instructions, these specifications, and all applicable codes. 2) All piping and plumbing shall be done by competent personnel who meet all the requirements of the local authorities. In addition, the personnel must be trained and licensed to install specific equipment/materials when the manufacturer's of the product used require it. The Contractor must secure all permits. 3) Contractor shall label all piping at the compound manifold to denote the corresponding well and/or purpose, and process flow direction (flow direction arrows). 4) Unless otherwise specified, the Contractor shall complete all well heads per the attached drawings. 5) Materials <ol style="list-style-type: none"> a) POLYVINYL CHLORIDE PIPING <ol style="list-style-type: none"> i) All below ground Polyvinyl Chloride (PVC) piping, with the exception of sparging piping, shall be schedule 40 with glue slip fittings unless otherwise specified in this section or on these drawings. Unless otherwise stated, all valves shall be PVC slip fitted as indicated in these drawings. ii) All above ground PVC piping shall be schedule 80 with glue slip fittings unless otherwise specified in this section or on these drawings. Unless otherwise stated, all valves shall be PVC flare union as indicated in these drawings. iii) Straight sections of PVC pipes shall not be joined using threaded connections. Connections to metal components shall be made with adapters or composite unions. Threaded connections are allowed to join PVC fittings and valves as discussed elsewhere in the specifications. b) ACRYLONITRILE-BUTADIENE-STYRENE PIPING <ol style="list-style-type: none"> i) All above ground pressure piping for Air Sparging systems shall be steel, copper, or Acrylonitrile-Butadiene-Styrene (ABS) piping. Below ground pressure piping for Air Sparging systems shall be ABS unless otherwise stated. ii) ABS pipes shall not be threaded. Connections to metal components shall be made with adapters or composite unions. c) GALVANIZED PIPING <ol style="list-style-type: none"> i) No galvanized piping shall be used to transport vapors in remediation systems. d) COPPER PIPING <ol style="list-style-type: none"> i) The use of copper piping is acceptable for sparging and water applications. e) HOSES/FLEXIBLE TUBING <ol style="list-style-type: none"> i) Hoses and flexible tubing shall be rated for the operating temperatures and pressures under which they will be used. All hoses and flexible tubing shall be inspected periodically in accordance with the manufacturer's specifications. ii) Underground hoses shall not be direct buried. All hoses shall be placed within PVC conduits. Exposed flexible tubing shall not be run outside of a secured equipment compound. 	<p>Drawing GENERAL NOTES AND SPECIFICATIONS</p>	<p>Project REMEDIAATION SYSTEM MERCED COUNTY PUBLIC WORKS CORPORATION YARD 715 Martin Luther King Jr. Way Merced, California</p> <p>DWG. # 2738 06 RDP DESIGN</p> <p>Drawn/Approved MKB/DAK</p> <p>Plot Scale NOT TO SCALE</p> <p>Last Rev. Date 03/04/09</p> <p>Date 07/07/09</p> <p>Project No. 2738</p> <p>Sheet No. 3</p>	<p>09 RDP DESIGN GN-2</p> 
<p>5) Use care in removing existing piping and earth to avoid damage to existing underground lines.</p> <ol style="list-style-type: none"> a) Hand excavate existing soil in sufficient quantity to expose existing lines (i.e., product, vent, electrical conduit, etc.). b) Once all existing lines have been located and exposed, each excavation shall be neatly cut by a backhoe or other approved method to provide a square vertical cut. Concrete or asphalt cuts for trenches shall not exceed a nominal width of 36-inches nor will the width be less than 12-inches, unless approved in writing by the County's or the Consultant. Trench excavations shall be minimum width necessary to accommodate necessary piping. <p>6) During the time concrete is removed, if impending weather includes heavy rain, precautions should be taken to minimize surface water entering excavations by construction diversion ditches around piping trenches. Absolutely no leachate from the debris or excavated soils shall be allowed to enter into storm drains.</p> <p>7) If trenches in traffic areas must remain open after normal work hours at an active location, they shall be covered with metal sheathing capable of supporting vehicular traffic. Trenches in non-traffic areas may be covered with 3/4 inch plywood and barricaded. Trenches shall not remain open over a weekend at an active site.</p> <p>8) All excavated soil shall be stock piled on plastic sheeting in an area designated by the County and covered with plastic sheeting. The County or Consultant will sample the excavated soils unless otherwise specified. The County or Consultant will be responsible for manifesting soils and coordinating transport to an approved facility if necessary. The Contractor shall be responsible for loading the soils for transport unless otherwise specified.</p> <p>9) Contractor shall dispose of construction debris off-site, including any pavement, concrete framework, etc.</p> <p>BACKFILL AND COMPACTION</p> <ol style="list-style-type: none"> 1) Piping trenches and excavations shall be backfilled with well graded, clean, sharp, fresh water sand, free of silt and clay particles, at a minimum from 4-inches below the piping to 4-inches above the piping. NO RUBBLE, TRASH, Boulders, OR OTHER DEBRIS WILL BE ALLOWED AS FILL MATERIAL IN ANY USAGE. Upon approval by the Consultant, native soil or other fill soil may be used as backfill material. Note: Sand shall not be placed directly over pea gravel. 2) Fill soil shall be compacted to 95% of the optimum density (based on Standard Proctor Compaction Test). The County reserves the right to have soil tests performed to confirm the suitability of any fill material. 3) Contractor shall place a minimum of 6-mil polyethylene sheet over fill material prior to placing paving subgrade. 4) Backfilling shall occur as soon as possible after the line or conduit is in place and has been tested (see Line Testing) to preclude caving of the trench sides. Trenches may remain open where inspection is required but shall be immediately backfilled upon inspection. 	<p>Drawing GENERAL NOTES AND SPECIFICATIONS</p>	<p>09 RDP DESIGN GN-2</p> 	

EXHIBIT 2 – SHEET 4 OF 14


<p>7) FUEL SOURCE PIPING</p> <p>a) Propane, natural gas, or other fuel sources necessary shall be installed per local, state, or other applicable regulations. Piping shall also conform to applicable standards such as NFPA.</p> <p>8) INSTALLATION</p> <p>a) Piping runs shall be minimized, not placed under buildings, and shall be installed with minimum spacing clearances required by the piping manufacturer. If piping routing is not specified, Contractor shall install in the most direct route, subject to approval by the County's Project Manager or Consultant. Contractor shall demonstrate to the County's Project Manager that all installed materials are new and conform to above codes.</p> <p>b) When connecting to existing underground piping, the Contractor shall first verify the existing piping path. Existing piping paths shown on drawings are approximate.</p> <p>c) Where piping is routed above ground, inside the equipment enclosure, the piping shall be supported by unducted pipe supports and clamps. The support points shall be mounted on a base that is secured to the ground surface as indicated on the site sketch drawings.</p> <p>d) Piping inside the equipment enclosure shall be labeled (i.e., Hot), to identify purpose and to indicate process flow direction (flow direction arrows). In addition, a consistent piping color and/or labeling system should be used similar to ANSI A13.1-1984.</p> <p>e) Minimum height requirement for Off-Gas Vent Piping is 8 feet. Vent height is contingent on permit requirements and area usage considerations.</p> <p>f) The remediation system stack after an odorizer must be located 10 or more feet away from any UST vent stack.</p> <p>g) Hazardous lines will be identified with longer size placed along the side of the trench above the top of the pipe. Tracer size terminals will be tagged and identified in the equipment enclosure. They may be terminated above ground in a protected location or below grade in a standard wall box. Piping locations will be further identified by adding marking tape approximately six inches above the top of pipe.</p> <p>9) WIRE TESTING</p> <p>a) Contractor shall ensure that all foreign material has been removed from all service lines and conduit following installation. Six vapor extraction piping will be tested for continuity and leakage. All high pressure lines shall be tested for leaks and pressure drops. All testing shall be performed by the contractor and witnessed by Project Manager or the Consultant. Do not test through instruments or equipment.</p> <p>ELECTRICAL</p> <p>Note: The following specifications are intended for electrical power supplies and run from well to the main control panel on integrated remediation systems supplied by a system manufacturer.</p> <p>1) GENERAL</p> <p>a) All electrical work shall be performed by skilled electricians in accordance with the National Electrical Code (NEC), applicable State and Local Codes, the regulations of the power company furnishing the service, and these specifications. In cases where these specifications or the NEC conflict with local codes the local code shall apply.</p> <p>b) The contractor will connect the equipment system to the main service per local and NEC code requirements.</p> <p>c) The contractor will obtain all necessary permits and inspections.</p>	<p>d) No underground splices shall be permitted unless specifically approved by the County's Project Manager.</p> <p>e) If variable frequency drive (VFD) will be used in place of a phase converter the VFD manufacturer and model number shall be provided to the County's Project Manager for review and approval. The VFD and the impact on the motor supplied equipment (e.g., heater rated motor, heat tank etc, etc)</p> <p>2) SERVICE DISCONNECT SWITCHES</p> <p>a) Contractor shall install all service disconnect switches necessary for the equipment. The switches shall be type MCC, normal duty, quick break, quick make, in NEMA Type 4 rain light enclosure.</p> <p>b) Power relays may be used for remote service disconnect in series with a service disconnect as listed above.</p> <p>3) CONDUIT AND BOXES</p> <p>a) Contractor shall install threaded rigid galvanized metal conduit unless otherwise specified. Threaded joints shall be installed per local code or be made up of at least five threads fully engaged with standard (NPT) threads that taper 3/4" inches per foot.</p> <p>b) All couplings, unions, junction boxes, device boxes, conduit bodies, etc. shall have tight joints.</p> <p>4) WIRING</p> <p>a) All wiring shall be run in conduit that is properly clamped, suspended, and mechanically straight.</p> <p>b) All wiring shall be copper and carry a minimum rating of 600 volts. Where allowed by code, aluminum of equal capacity may be used.</p> <p>c) No wire nuts or twist lock terminations shall be used for ground, motor, or power connections.</p> <p>5) SEALING</p> <p>a) Conduit seals shall be installed as necessary per local code.</p> <p>b) Conduit seals shall be installed in all conduits entering the equipment enclosure or attaching to a system skid. Seals shall be installed within 18 inches from the enclosure and skids.</p> <p>c) Sealing compounds shall be appropriate and approved for the conditions and use.</p> <p>6) GROUNDING</p> <p>a) The conduit system and the neutral conductors of the wiring shall be grounded in accordance with Article 250 of the NEC. Wiring for grounding shall be installed per local code or be bare copper run to a grounding rod in the absence of a code. Each circuit shall be listed in accordance with the NEC and ground testing should be documented in the construction file.</p> <p>7) TESTS</p> <p>a) Contractor will make all necessary tests to ensure that entire installation is free from grounds, shorts, on/off open circuits, voltage, current, and rotation tests shall be made prior to placing equipment into operation.</p>
<p>Project REMEDICATION SYSTEM MERCED COUNTY PUBLIC WORKS CORPORATION YARD 715 Martin Luther King Jr. Way Merced, California</p> <p>DWG. # 2738 09 RDP DESIGN</p> <p>Drawn/Approved MKB/DAK</p> <p>Plot Scale NOT TO SCALE</p> <p>Last Rev. Date 03/04/09</p> <p>Date 07/07/09</p> <p>Project No. 2738</p> <p>Sheet No. 4</p>	<p>Drawing GENERAL NOTES AND SPECIFICATIONS</p> <p>09 RDP DESIGN GN-3</p> 

EXHIBIT 2 – SHEET 5 OF 14


<p>CONCRETE FINISHING</p> <p>1) ACCEPTANCE</p> <p>a) The finished driveway surface shall be true and even with existing grades. Any concrete determined to be substandard in strength, materials, finish, or slope (i.e., presence of water puddling) shall be removed and replaced.</p> <p>b) All concrete areas shall be neatly marked and staked to provide straight cuts.</p> <p>c) The surface and finish of all concrete must match existing pavement to prevent tripping hazards and ponding water and be free of bumps, depressions, or cracks.</p> <p>d) Paving shall be protected from vehicular traffic until suitably cured. Damage to paving during this time shall be the responsibility of the Contractor.</p> <p>e) Initial layout of concrete cuts should follow, if possible, existing joints and lay of existing concrete.</p> <p>f) Contractor shall place a minimum of 6-mil polyethylene sheet over all materials prior to placing paving.</p> <p>2) SUBGRADE</p> <p>a) General – The Contractor shall prepare the subgrade in accordance with these specifications, using the necessary means and materials to provide the specified results.</p> <p>b) Subgrade Preparation – The Contractor shall remove all vegetation, surface soil, demolition rubble, and other undesirable materials from the excavation. The subgrade shall be prepared by compacting the existing fill throughout the thickness to 1" less than existing pavement grade.</p> <p>3) REINFORCING STEEL</p> <p>a) Transverse reinforcing steel shall be #3 with a maximum spacing of 18 inches on center along entire trench length. Reinforcing steel shall be embedded into existing concrete a minimum of 6 inches deep and spaced in place or tied to existing steel.</p> <p>b) Epoxy material shall be a 100% solid, high-modulus, non-frag gel, moisture insensitive epoxy-resin compliant with ASTM C-881, Type I and II, Grade 3, Class C. Approved product: Compac Spec-Bond 200 or approved equivalent.</p> <p>c) Longitudinal reinforcing steel shall be #3 and wire tied to all transverse reinforcing steel.</p> <p>d) All reinforcing steel to be set at the midsection of the concrete (including trenches). Use plastic chairs if necessary. The steel bars shall be Grade 60 conforming to ASTM A615 set at a minimum of 10 inch centers. No welds are mesh shall be used in driveway.</p> <p>4) JOINTS</p> <p>a) Joints shall be provided in the driveway paving where they previously existed and they shall bond smoothly with the joints of the underlying pavement. Contractor shall install the same type of joints as those existing in pavement areas.</p> <p>b) Joints shall be provided along property lines where entry ramps cross UNLESS the agency with jurisdiction imposes different requirements.</p>	<p>CONCRETE MIX</p> <p>a) Materials – Portland cement shall meet the requirements of American Society of Testing and Materials C150 for Type I cement. The concrete mix shall be capable of placing a compressive strength test of 4000 pounds per square inch after 28 days (per ASTM C39). Minimum slump shall be 10 inches (per ASTM C143). No admixtures shall be used unless approved in writing by the County Engineer. Only coarse aggregate of size #10 and finer shall be used. The concrete shall be free of deleterious materials. Water shall be clean, potable, and free of harmful amounts of salts, alkalis, and organic materials.</p> <p>b) Contractor shall specify the concrete mix, furnish a copy of these specifications to the County Engineer, and request the County Engineer to review the mix at no additional cost to the County. Information including type and amount of cement (if mega/pmc), compressive strength, volume or weight of water, slump, type and weight of fine and coarse aggregates, and type and amount of admixtures shall be made available to the County or the Consultant by the Contractor at no additional cost to the County.</p> <p>c) The concrete shall be mixed and delivered in accordance with ASTM C94.</p> <p>4) CONCRETE PLACEMENT</p> <p>a) General – The Contractor shall ensure that the subgrade has been prepared to meet these specifications. No concrete shall be poured on frozen soil, ice, snow, or standing water.</p> <p>b) Excavation – Concrete shall be poured in accordance with the following requirements and commonly accepted "good" industry practices.</p> <p>1) The Contractor shall prevent overwatering and aggregate segregation during the pour. However, the concrete shall be adequately tamped or vibrated to prevent voids.</p> <p>2) Each area between joints shall be cast as one continuous pour. Concrete overflowing into adjacent areas shall be removed if pouring in the adjacent area is delayed beyond twenty minutes.</p> <p>3) Concrete curbs shall be poured integrally with the adjacent concrete paving. No curbs shall be poured separately as an inventory in this paving.</p> <p>c) Finishing – At the proper time, the Contractor shall finish the concrete according to these specifications and common "good" industry practices.</p> <p>1) After all the bleed water has disappeared, the Contractor shall float the flat surface by hand using a wood float or a trowel. Next, with a soft concrete finishing broom, finish the surface to match existing finish.</p> <p>2) Dry cement shall not be used to remove excess water from the surface. Finishing must be delayed until the water has been removed. WATER SHALL NOT BE ADDED TO EDGE THE FINISHING. Cures shall be taken not to overwork the surface.</p> <p>3) Construction/Control joints shall be hand-topped to 1/4" radius.</p>	<p>CONCRETE FINISHING</p> <p>1) ACCEPTANCE</p> <p>a) The finished driveway surface shall be true and even with existing grades. Any concrete determined to be substandard in strength, materials, finish, or slope (i.e., presence of water puddling) shall be removed and replaced.</p> <p>b) All concrete areas shall be neatly marked and staked to provide straight cuts.</p> <p>c) The surface and finish of all concrete must match existing pavement to prevent tripping hazards and ponding water and be free of bumps, depressions, or cracks.</p> <p>d) Paving shall be protected from vehicular traffic until suitably cured. Damage to paving during this time shall be the responsibility of the Contractor.</p> <p>e) Initial layout of concrete cuts should follow, if possible, existing joints and lay of existing concrete.</p> <p>f) Contractor shall place a minimum of 6-mil polyethylene sheet over all materials prior to placing paving.</p> <p>2) SUBGRADE</p> <p>a) General – The Contractor shall prepare the subgrade in accordance with these specifications, using the necessary means and materials to provide the specified results.</p> <p>b) Subgrade Preparation – The Contractor shall remove all vegetation, surface soil, demolition rubble, and other undesirable materials from the excavation. The subgrade shall be prepared by compacting the existing fill throughout the thickness to 1" less than existing pavement grade.</p> <p>3) REINFORCING STEEL</p> <p>a) Transverse reinforcing steel shall be #3 with a maximum spacing of 18 inches on center along entire trench length. Reinforcing steel shall be embedded into existing concrete a minimum of 6 inches deep and spaced in place or tied to existing steel.</p> <p>b) Epoxy material shall be a 100% solid, high-modulus, non-frag gel, moisture insensitive epoxy-resin compliant with ASTM C-881, Type I and II, Grade 3, Class C. Approved product: Compac Spec-Bond 200 or approved equivalent.</p> <p>c) Longitudinal reinforcing steel shall be #3 and wire tied to all transverse reinforcing steel.</p> <p>d) All reinforcing steel to be set at the midsection of the concrete (including trenches). Use plastic chairs if necessary. The steel bars shall be Grade 60 conforming to ASTM A615 set at a minimum of 10 inch centers. No welds are mesh shall be used in driveway.</p> <p>4) JOINTS</p> <p>a) Joints shall be provided in the driveway paving where they previously existed and they shall bond smoothly with the joints of the underlying pavement. Contractor shall install the same type of joints as those existing in pavement areas.</p> <p>b) Joints shall be provided along property lines where entry ramps cross UNLESS the agency with jurisdiction imposes different requirements.</p>
<p>Drawing</p> <p>GENERAL NOTES AND SPECIFICATIONS</p>	<p>09 ROP DESIGN</p> <p>GN-4</p>	
<p>Project</p> <p>REMEDIATION SYSTEM</p> <p>MERCED COUNTY PUBLIC WORKS CORPORATION YARD</p> <p>715 Martin Luther King Jr. Way</p> <p>Merced, California</p>	<p>DWG. #</p> <p>2738 09 ROP DESIGN</p> <p>Drawn/Approved</p> <p>MKB/DAK</p> <p>Plot Scale</p> <p>NOT TO SCALE</p> <p>Last Rev. Date</p> <p>03/04/09</p> <p>Date</p> <p>07/07/09</p> <p>Project No.</p> <p>2738</p> <p>Sheet No.</p> <p>5</p>	

EXHIBIT 2 – SHEET 6 OF 14

<p>d) Curing – Concrete shall be protected from external influence to allow proper curing and to maintain desired finish.</p> <p>i) Fresh concrete extensively subject to freezing temperatures shall be covered with hay, straw, burlap, or blankets to prevent damage.</p> <p>j) Paving shall be protected from vehicular traffic and similar loads until properly cured. The contractor shall be responsible for the protection of the California Department of Transportation. Damaged paving shall be replaced at no cost to the County.</p>	<p>4) ASPHALT MATERIALS</p> <p>a) General – The paving materials shall be a high quality, thoroughly controlled hot mixture of asphalt and well graded, high quality aggregate, thoroughly compacted into a uniform dense mass. For open base and surface use, it shall be similar to ASTM Specification D3313.</p> <p>b) Contractor shall specify a mix to the asphalt supplier and request the asphalt supplier to prove its mix at no additional cost to the County. Contractor shall provide to the County's Project Manager or the Consultant the composition of each individual asphalt paving mixture (Type and quality of asphalt and aggregate).</p> <p>c) Test Coat – Applied as a bond between layers of asphalt, or between concrete and asphalt, the test coat shall be a diluted emulsified asphalt corresponding to one of the following grades: SS-1, SS-1H, CSS-1, or CSS-1H, and meeting the specifications of ASTM D977 or D2397 before dilution. The asphalt emulsion is to be diluted with an equal amount of clean, fresh water before application.</p> <p>d) Mineral Aggregate – The mineral aggregate used for the base course and surface mixture shall be crushed stone, crushed gravel, stone or slag screenings, sand, mineral filler, or a combination of two or more of these materials. Incurved coarse aggregate may be used if base course materials if the mixture meets all design criteria.</p> <p>i) Course and fine aggregate shall comply with all the quality requirements of ASTM D692 and ASTM D1023, respectively.</p> <p>j) Mineral filler shall meet the physical requirements of ASTM D4242 and the grading requirements outlined in these specifications.</p> <p>k) Slag shall be air-cooled, blast furnace slag and shall weigh not less than 70 pounds per cubic foot.</p> <p>l) Asphalt – The liquid asphalt used shall comply with the applicable requirements of ASTM D3381 and D3446 and shall correspond to the following grades depending on mean annual temperature conditions:</p>	<p>f) Asphalt – Aggregate Mixture – Dense graded asphalt mixes specified by local transportation agencies may be used if a satisfactory history of performance can be verified.</p>	<p>09 ROP DESIGN</p> <p style="text-align: center;">GN-5</p>											
<p>ASPHALT PAVING</p> <p>1) ACCEPTANCE</p> <p>a) Asphalt pavement shall be used only if existing asphalt areas (under no circumstances shall asphalt pavement be used in freeways where concrete pavement exists).</p> <p>b) The finished driveway surface shall be free and even with existing grades. Finished surfaces shall be smooth with a uniform texture and free of surface voids, no matter how small. The surface shall be free of ruts, depressions, holes, and other imperfections. Edges shall be tapered over and sloped. No feathered edges or patches shall be allowed. Portions of the completed pavement that are defective in surface, drainage, compression, contraction, or thickness shall be removed and replaced at no additional charge.</p> <p>2) SUBGRADE</p> <p>a) General – The Contractor shall prepare the subgrade in accordance with these specifications, using the necessary means and methods to provide the specified results.</p> <p>b) Subgrade Preparation – The Contractor shall remove all vegetation, virgin soil, demolition rubble, and other undesirable materials. The contractor shall shape the subgrade, taking into account the thickness of the paving system. The tolerance of this rough grading shall be within 1/2" high to 1" low. The contractor shall note, and report to the County's Project Manager or Consultant, any soft areas that become apparent after traffic by construction equipment and loaded trucks.</p> <p>c) The County's Project Manager or Project Consultant may allow an optional concrete sub-base. In such a case, asphalt areas will be replaced with 4 inches of concrete overlain by 3 inches of asphalt.</p> <p>i) Provide a minimum of 6 inches of compacted Aggregate Base Course or Crush & Run Cover and compact to 95% standard proctor.</p> <p>ii) Place a minimum of 2 mil polyethylene sheet over the compact gravel.</p> <p>iii) Place a minimum of 4000 psi concrete (28 day strength) with welded wire mesh or rebar and finish only.</p> <p>iv) After the concrete has cured, place a tack coat on the concrete per specifications H 1.3.</p> <p>v) Place a minimum of 3 inches asphalt paving per the following specifications:</p>	<p style="text-align: center;">REMIEDIATION SYSTEM MERCED COUNTY PUBLIC WORKS CORPORATION YARD 715 Martin Luther King Jr. Way Merced, California</p> <p style="text-align: center;">Drawing</p> <p style="text-align: center;">GENERAL NOTES AND SPECIFICATIONS</p>	<p style="text-align: center;">Temperature Conditions</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Coast, mean annual air temperature less than 7 deg C (45 deg F)</td> <td>AC-5, AC-10</td> </tr> <tr> <td>Warm, mean annual air temperature between 7 deg C (45 deg F) and 24 deg C (75 deg F)</td> <td>AC-10, AC-20</td> </tr> <tr> <td>Hot, mean annual air temperature greater than 24 deg C (75 deg F)</td> <td>AC-20, AC-40</td> </tr> </table> <p style="text-align: center;">Asphalt Grades</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>AC-5, AC-10</td> <td>120/150, 65/100 pen</td> </tr> <tr> <td>AC-20</td> <td>85/100, 60/70 pen</td> </tr> <tr> <td>AC-30, AC-40</td> <td>60/70, 40/50 pen</td> </tr> </table>	Coast, mean annual air temperature less than 7 deg C (45 deg F)	AC-5, AC-10	Warm, mean annual air temperature between 7 deg C (45 deg F) and 24 deg C (75 deg F)	AC-10, AC-20	Hot, mean annual air temperature greater than 24 deg C (75 deg F)	AC-20, AC-40	AC-5, AC-10	120/150, 65/100 pen	AC-20	85/100, 60/70 pen	AC-30, AC-40	60/70, 40/50 pen
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AC-5, AC-10	120/150, 65/100 pen													
AC-20	85/100, 60/70 pen													
AC-30, AC-40	60/70, 40/50 pen													
<p>Project</p> <p>DWG. #</p> <p>Drawn/Approved</p> <p>PLOT SCALE</p> <p>Last Rev. Date</p> <p>Date</p> <p>Project No.</p> <p>Sheet No.</p>	<p>2738 09 ROP DESIGN</p> <p>MKB/DK</p> <p>NOT TO SCALE</p> <p>03/04/09</p> <p>07/07/09</p> <p>2738</p> <p>6</p>	<p>Project</p> <p>REMIEDIATION SYSTEM</p> <p>MERCED COUNTY PUBLIC WORKS CORPORATION YARD</p> <p>715 Martin Luther King Jr. Way</p> <p>Merced, California</p>	<p>09 ROP DESIGN</p> <p style="text-align: center;">GN-5</p>											



EXHIBIT 2 – SHEET 7 OF 14

3) The 100-mic formula for the asphalt-aggregate base course mixture shall be within the following limits:

Sieve Size	Total Percent Passing, by Weight	
	a	b
2 in. (50.0mm)	100	---
1 1/2 in. (37.5mm)	90-100	100
1 in. (25.0mm)	60-80	100
3/4 in. (19.0mm)	---	90-100
1/2 in. (12.5mm)	---	60-80
3/8 in. (9.5mm)	---	90-80
No. 20 (75µm)	20-55	25-60
No. 40 (37.5µm)	10-16	35-50
No. 60 (250µm)	---	---
No. 100 (150µm)	2-16	3-16
No. 200 (75µm)	0-5	1-7
Asphalt Content (% by weight of total mix)	3 1/2-8	4-8 1/2
	4-9	4-9

mm = millimeters
µm = micrometers

4) The 100-mic formula for the asphalt-aggregate surface course mixture shall be within the following limits:

Sieve Size	Total Percent Passing by Weight	
	a	b
1/2 in. (12.5mm)	100	---
3/8 in. (9.5mm)	90-100	---
No. 4 (4.75mm)	60-80	---
No. 10 (2.0mm)	35-45	---
No. 20 (850µm)	---	---
No. 30 (600µm)	6-25	---
No. 50 (300µm)	---	---
No. 100 (150µm)	2-10	---
Asphalt Content (% by weight of total mix)	5-10	---

5) PAVEMENT CONSTRUCTION

a) Temperature - Temperature of the completed asphalt mixture shall not exceed 325 degrees Fahrenheit (163 F) when discharged from the spreader. Initial compaction shall be performed when the temperature of the mixture is not less than 250 deg F. Final compaction shall begin with the asphalt at hot, as possible but of not less than 150 deg F. Surface temperature upon which asphalt is to be placed shall not be below 50 deg F.

6) **BASE COURSE** - The base course mixture shall be placed in one or more lifts. The minimum lift thickness shall be at least two times the maximum particle size. The maximum lift thickness shall be that which can be demonstrated to be laid in a single lift and compacted to the required uniform density and porosity. The degree of compaction for the base course shall meet or exceed 95% of its reference density.

7) **Surface Course** - The surface course mixture shall be placed in one lift to provide a normal compacted increase of 1.5% and the degree of compaction shall meet or exceed 96% of its reference density.

8) **Lock Coat** - A lock coat of 0.15 gallons per square yard of diluted emulsified asphalt shall be applied to the surface of the asphalt pavement. The lock coat shall be applied for 100% of the base course. At wetting points, which will be indicated by the contractor, the lock coat shall be applied in a manner that will allow the asphalt paving to be placed on the lock coat. The lock coat shall be allowed to cure before placing the succeeding course and shall be applied on only one such pavement as can be covered with asphalt mixture during the same day.

9) Where asphalt paving mixes, concrete paving such as at an abutment concrete pad, the lock coat shall be applied above the concrete surface to allow for further traffic compaction of the asphalt.

10) **Compaction** - The mix shall be compacted immediately after placing, using walking with a steel wheel tandem roller, steel three-wheeled roller, vibratory roller or a pneumatic-tired roller shall follow the paver as closely as possible. If needed, intermediate rolling with a pneumatic-tired roller shall be done immediately behind the paver. The roller shall be used to achieve thorough compaction. The roller shall be used to achieve thorough compaction.

11) Prior to placing new asphalt paving adjacent to existing pavement, the contractor shall saw-cut a clean, straight edge along the existing pavement and apply a lock coat to this vertical surface.

WARRANTY
The contractor shall warrant all contractor provided materials and construction for a period of one year from the date of acceptance by the County or the Consultant. The Contractor will make any required warranty repairs promptly at no cost to the County. In the event of equipment failure the contractor shall respond within forty-eight hours. Warranty repairs shall comply with the provisions of this specification.

CONSTRUCTION SCHEDULE
The contractor shall conform to construction schedule with the County and Consultant at least 72 hours prior to starting work on site.

AS-BUILD DRAWINGS
Contractor shall provide to Consultant a complete set of to scale AS-Built drawings depicting the precise location of all existing and proposed utility lines, manholes, and structures. The drawings shall show proposed locations for piping and equipment. Photo documentation of the installation activities should also be included.



09 RDP DESIGN
GN-6

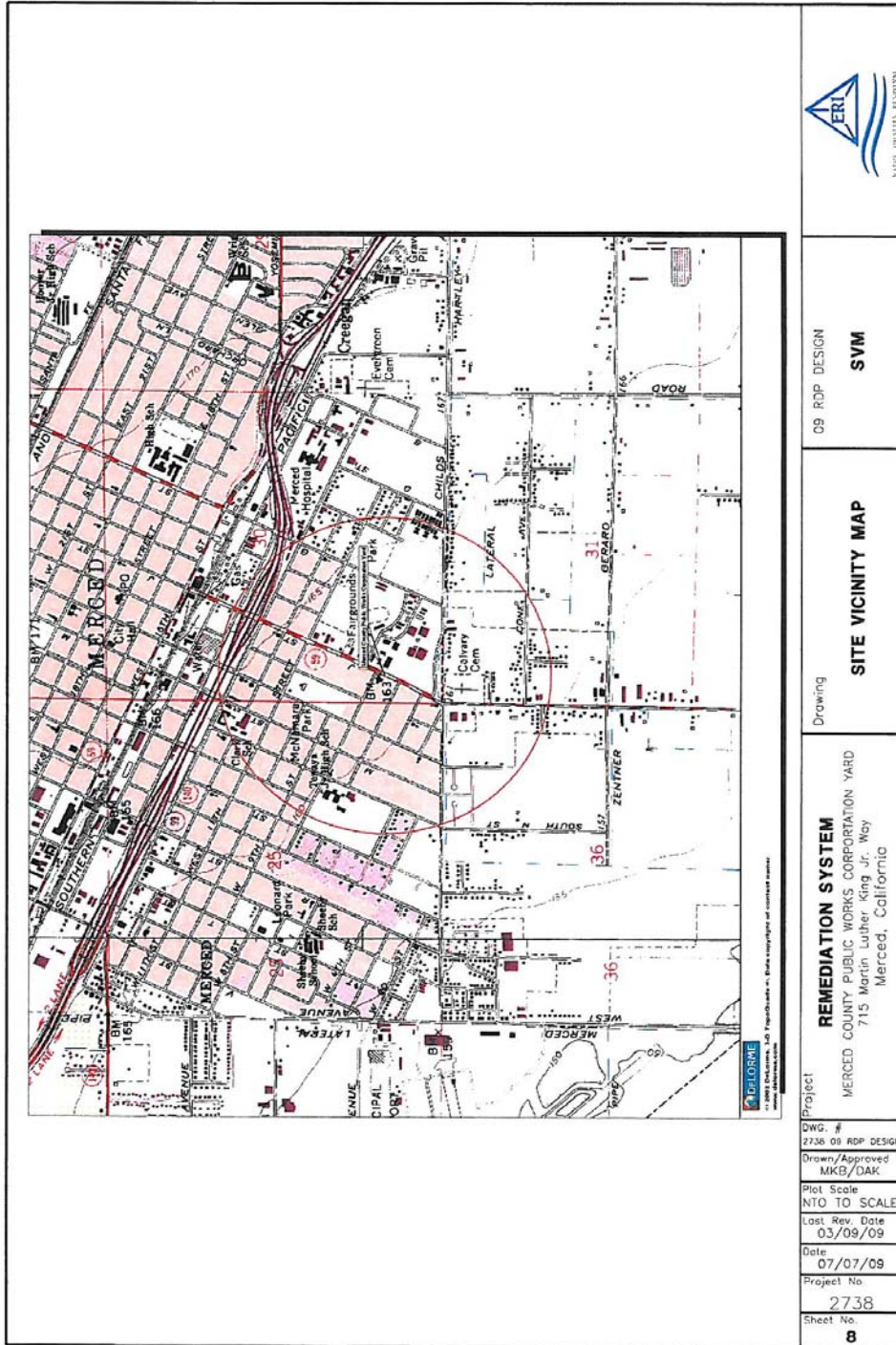
GENERAL NOTES AND SPECIFICATIONS

Drawing
REMEDICATION SYSTEM
MERCED COUNTY PUBLIC WORKS CORPORATION YARD
715 Martin Luther King Jr. Way
Merced, California

Project	DWC #
MERCED COUNTY PUBLIC WORKS CORPORATION YARD	2738 09 RDP DESIGN
Drawn/Approved	MKS/DAK
Plot Scale	NOT TO SCALE
Last Rev. Date	03/04/09
Date	07/07/09
Project No.	2738
Sheet No.	7

EXHIBIT 2 – SHEET 8 OF 14

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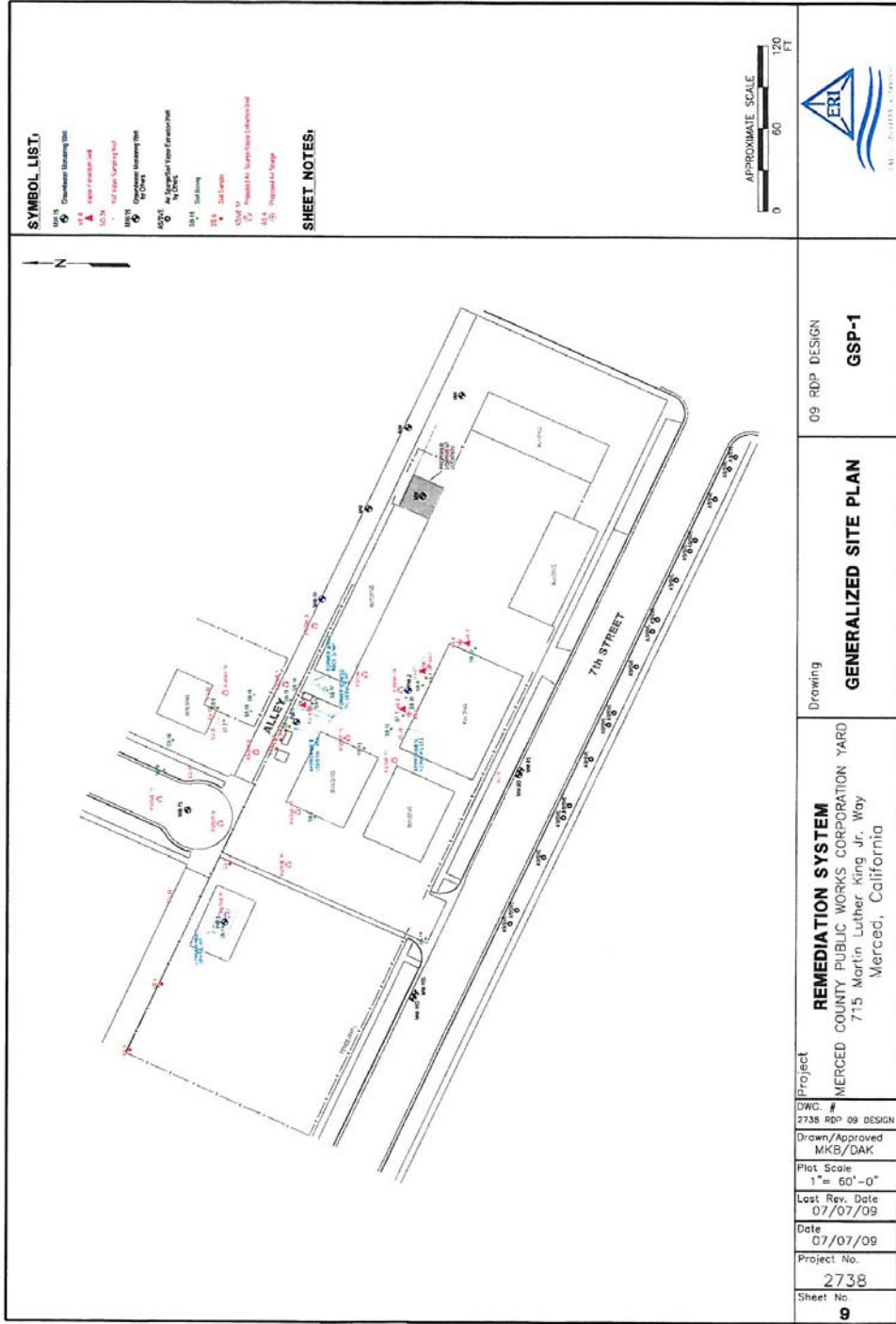
09 ROP DESIGN
SVM

Drawing
SITE VICINITY MAP

REMEDATION SYSTEM
MERCED COUNTY PUBLIC WORKS CORPORATION YARD
715 Martin Luther King Jr. Way
Merced, California

Project	MERCED COUNTY PUBLIC WORKS CORPORATION YARD 715 Martin Luther King Jr. Way Merced, California
DWG. #	2738-09 ROP DESIGN
Drawn/Approved	MKB/DAK
Plot Scale	NTS TO SCALE
Last Rev. Date	03/09/09
Date	07/07/09
Project No.	2738
Sheet No.	8

EXHIBIT 2 – SHEET 9 OF 14



SYMBOL LIST:

- MB-15: Remediation Monitoring Well
- MB-16: Remediation Monitoring Well
- MB-17: Remediation Monitoring Well
- MB-18: Remediation Monitoring Well
- MB-19: Remediation Monitoring Well
- MB-20: Remediation Monitoring Well
- MB-21: Remediation Monitoring Well
- MB-22: Remediation Monitoring Well
- MB-23: Remediation Monitoring Well
- MB-24: Remediation Monitoring Well
- MB-25: Remediation Monitoring Well
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- MB-92: Remediation Monitoring Well
- MB-93: Remediation Monitoring Well
- MB-94: Remediation Monitoring Well
- MB-95: Remediation Monitoring Well
- MB-96: Remediation Monitoring Well
- MB-97: Remediation Monitoring Well
- MB-98: Remediation Monitoring Well
- MB-99: Remediation Monitoring Well
- MB-100: Remediation Monitoring Well

SHEET NOTES:

- 1. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.
- 2. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.
- 3. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.
- 4. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.
- 5. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.
- 6. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.
- 7. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.
- 8. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.
- 9. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.
- 10. All remediation monitoring wells shall be installed in accordance with the Remediation Monitoring Well Installation Manual.

EXHIBIT 2 – SHEET 10 OF 14

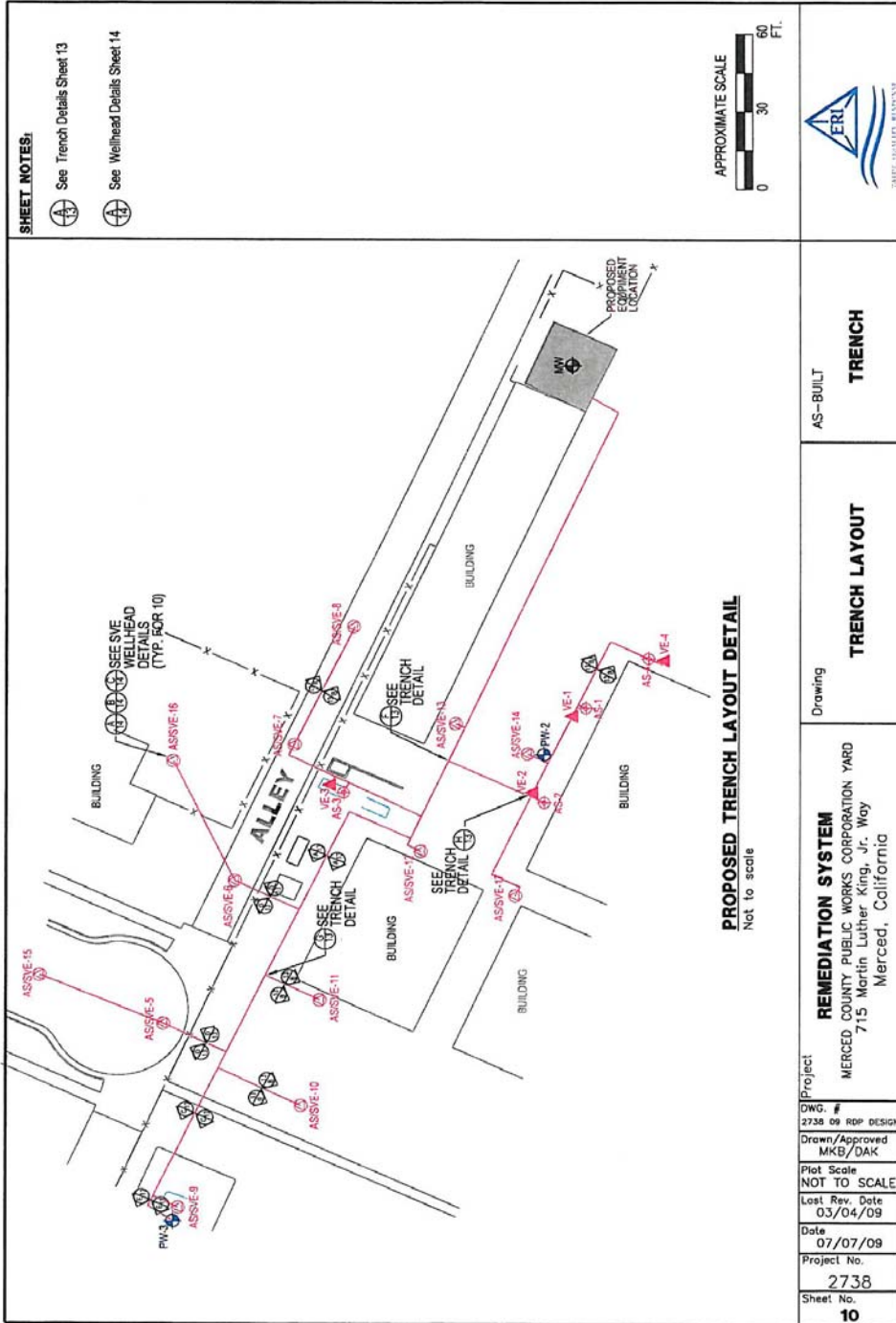
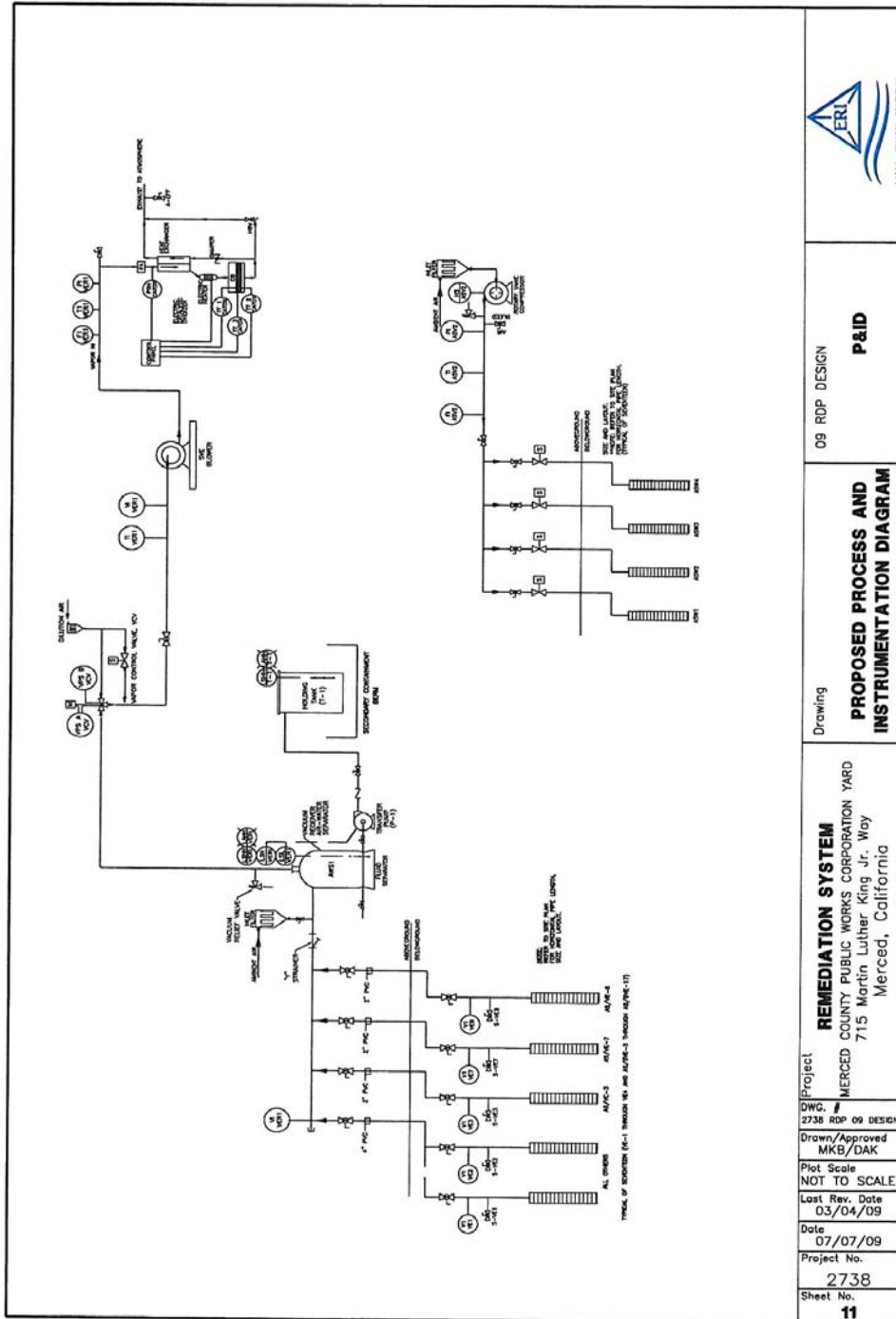


EXHIBIT 2 – SHEET 11 OF 14



09 RDP DESIGN
P&ID

Drawing
PROPOSED PROCESS AND INSTRUMENTATION DIAGRAM

Project
REMEDATION SYSTEM
 MERCED COUNTY PUBLIC WORKS CORPORATION YARD
 715 Martin Luther King Jr. Way
 Merced, California

DWG #
2738 RDP 09 DESIGN

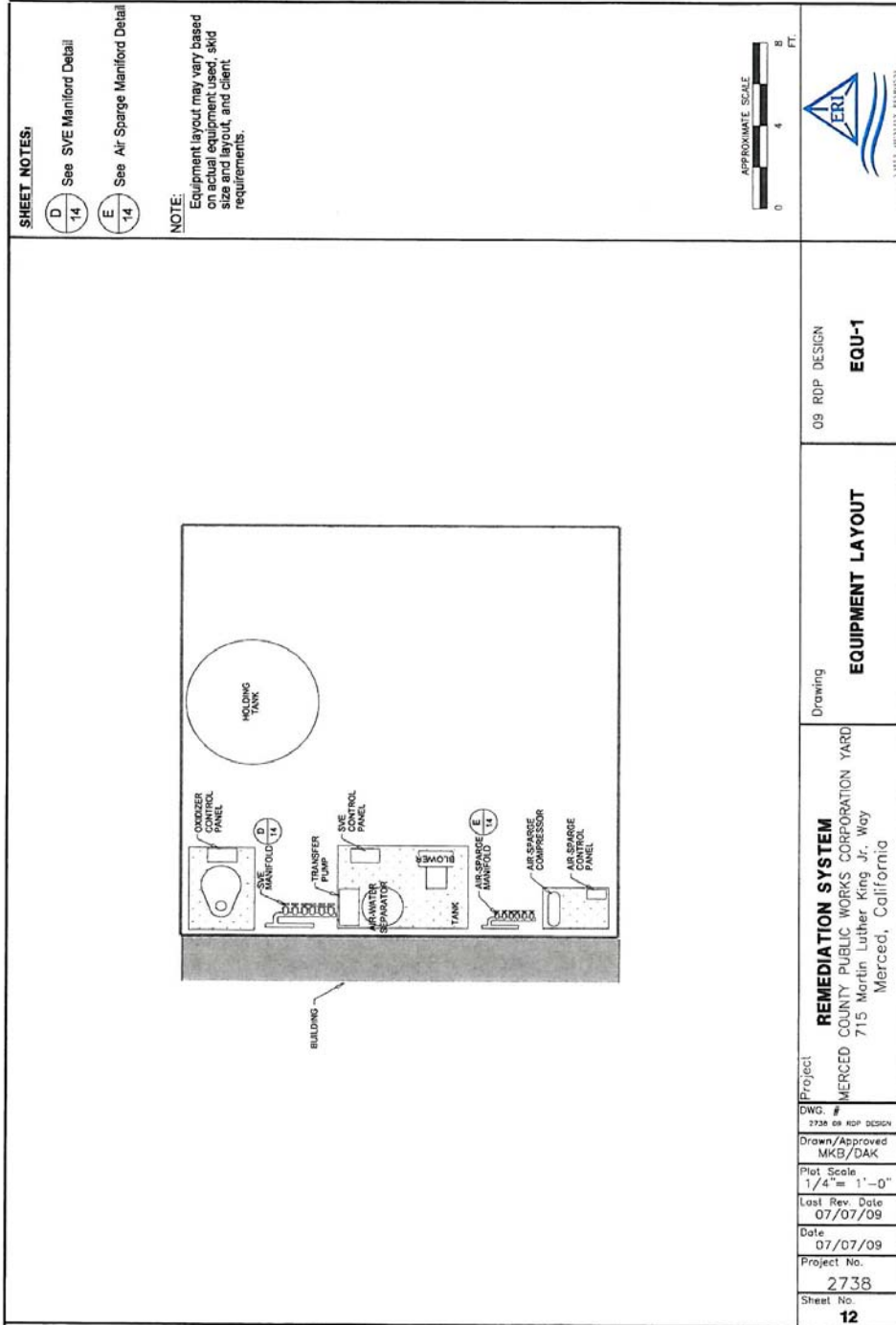
Drawn/Approved
MKB/DAK

Plot Scale
NOT TO SCALE

Last Rev. Date
03/04/09

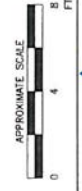
Date
07/07/09
Project No.
2738
Sheet No.
11

EXHIBIT 2 – SHEET 12 OF 14



SHEET NOTES:
 (D/14) See SVE Manifold Detail
 (E/14) See Air Sparge Manifold Detail

NOTE:
 Equipment layout may vary based on actual equipment used, skid size and layout, and client requirements.



Project	REMEDATION SYSTEM COUNTY PUBLIC WORKS CORPORATION YARD 715 Martin Luther King Jr. Way Merced, California
DWG. #	2738 08 RDP DESIGN
Drawn/Approved	MKB/DAK
Plot Scale	1/4" = 1'-0"
Last Rev. Date	07/07/09
Date	07/07/09
Project No.	2738
Sheet No.	12

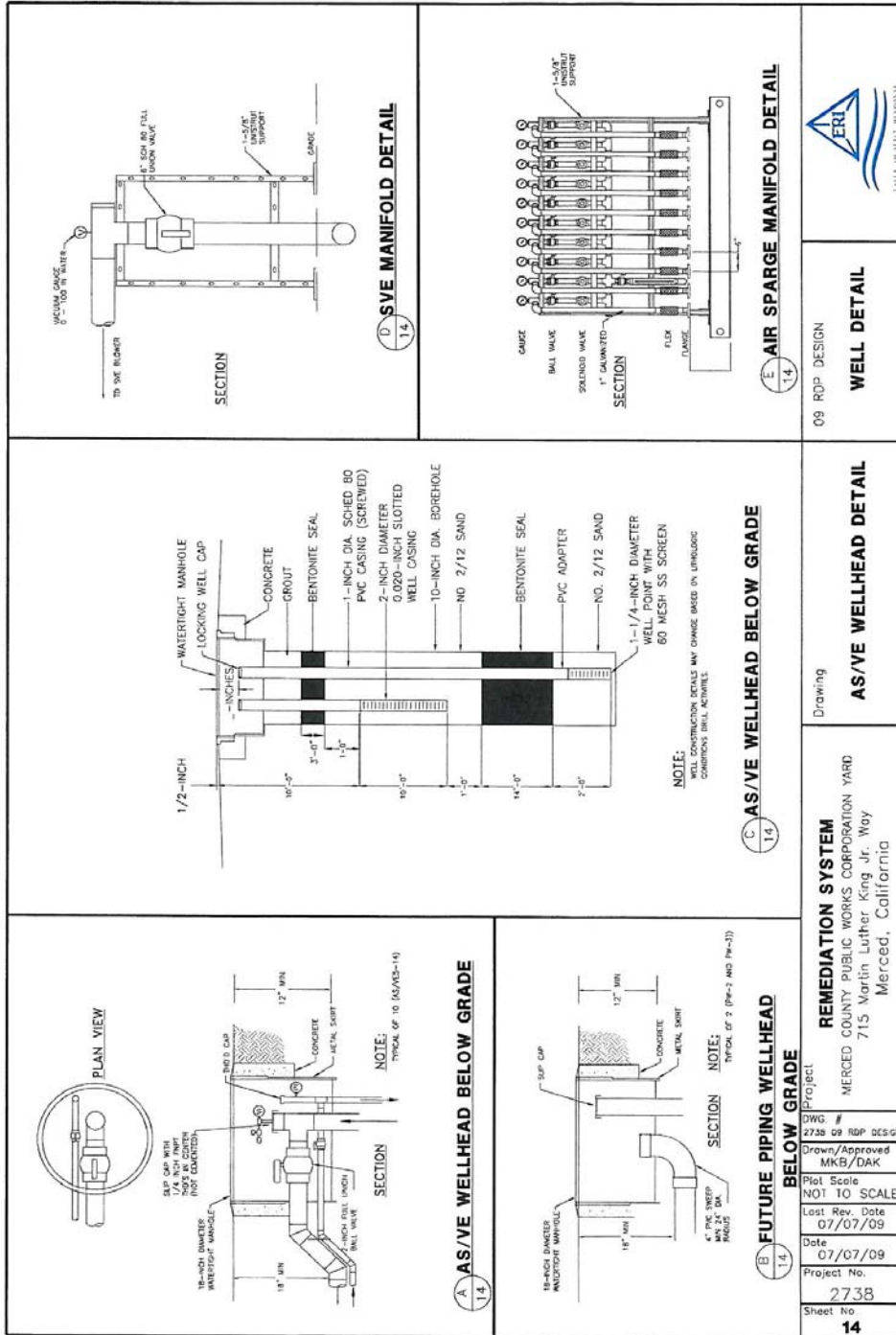
Drawing
EQUIPMENT LAYOUT
 08 RDP DESIGN
EGU-1

EXHIBIT 2 – SHEET 13 OF 14

<p>SECTION A PIPE TRENCH NOT TO SCALE</p>	<p>SECTION B PIPE TRENCH NOT TO SCALE</p>	<p>SECTION C PIPE TRENCH NOT TO SCALE</p>	<p>SECTION D PIPE TRENCH NOT TO SCALE</p>	<p>SECTION E PIPE TRENCH NOT TO SCALE</p>	<p>SECTION F PIPE TRENCH BRANCH DETAIL NOT TO SCALE</p>	<p>SECTION G PIPE TRENCH BRANCH DETAIL NOT TO SCALE</p>	<p>SECTION H PIPE TRENCH CORNER DETAIL NOT TO SCALE</p>	<p>09 RDP DESIGN DETAILS</p>	<p>Drawing CONSTRUCTION DETAILS</p>	<p>Project REMEDIAATION SYSTEM MERCED COUNTY PUBLIC WORKS CORPORATION YARD 715 Martin Luther King Jr. Way Merced, California</p> <p>DWC # 2738 09 RDP DESIGN</p> <p>Drawn/Approved MKB/DAK</p> <p>Plot Scale NOT TO SCALE</p> <p>Last Rev. Date 07/07/09</p> <p>Date 07/07/09</p> <p>Project No. 2738</p> <p>Sheet No. 13</p>
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EXHIBIT 2 – SHEET 14 OF 14



**ATTACHMENT A
SIGNATURE SHEET**

I/We the undersigned hereby certify that I/We am/are a duly authorized official of the company and have the authority to sign on behalf of the company and assure that all statements made in the bid are true. I/We agree to furnish and deliver the specified items/services at the prices stated herein, and have read, understand, and agree to the terms and conditions contained herein and on all of the attachments.

Name of Individual/Company: _____

Business Address: _____

Telephone No.: _____ Fax No.: _____

County Business License No. _____ Expiration Date: _____

Professional License No. _____ Expiration Date: _____

State Business License No. _____ Expiration Date: _____

Signature of Authorized Official: _____

Name/Title of Authorized Official: _____

E-Mail: _____

THIS PAGE MUST BE COMPLETED AND RETURNED WITH BID

**ATTACHMENT B
 BID COST SHEET**

I/We agree that the prices stated herein will be firm for ninety (90) calendar days from the Bid Submittal Deadline.

Item Number	Qty	Description (Model / Manufacture #)	Unit Price	Tax 8.75%	Total
01	1	PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS TO PURCHASE AND INSTALL AN AIR SPARGE/SOIL VAPOR EXTRACTION SYSTEM			
GRAND TOTAL				\$	
Date:		Signature:			

THIS PAGE MUST BE COMPLETED AND RETURNED WITH BID

**ATTACHMENT C
REFERENCE LIST**

1) NAME: _____

ADDRESS: _____

P.O. Box/Street City State Zip

CONTACT PERSON/TITLE: _____

TELEPHONE NUMBER: _____ FAX NUMBER: _____

DOLLAR AMOUNT OF CONTRACT: _____

DATE AND SERVICES PROVIDED: _____

2) NAME: _____

ADDRESS: _____

P.O. Box/Street City State Zip

CONTACT PERSON/TITLE: _____

TELEPHONE NUMBER: _____ FAX NUMBER: _____

DOLLAR AMOUNT OF CONTRACT: _____

DATE AND SERVICES PROVIDED: _____

3) NAME: _____

ADDRESS: _____

P.O. Box/Street City State Zip

CONTACT PERSON/TITLE: _____

TELEPHONE NUMBER: _____ FAX NUMBER: _____

DOLLAR AMOUNT OF CONTRACT: _____

DATE AND SERVICES PROVIDED: _____

THIS PAGE MUST BE COMPLETED AND RETURNED WITH BID

ATTACHMENT D – SUBCONTRACTOR LIST

SUBCONTRACTOR NO: 1 - COMPANY NAME: _____

ADDRESS: _____

CONTACT PERSON: _____ TITLE: _____

E-MAIL: _____ TELEPHONE NUMBER: _____

AMT. OF CONTRACT: _____ DATE AND TYPE OF SERVICE _____

SUBCONTRACTOR NO: 2 - COMPANY NAME: _____

ADDRESS: _____

CONTACT PERSON: _____ TITLE: _____

E-MAIL: _____ TELEPHONE NUMBER: _____

AMT. OF CONTRACT: _____ DATE AND TYPE OF SERVICE _____

SUBCONTRACTOR NO: 3 - COMPANY NAME: _____

ADDRESS: _____

CONTACT PERSON: _____ TITLE: _____

E-MAIL: _____ TELEPHONE NUMBER: _____

AMT. OF CONTRACT: _____ DATE AND TYPE OF SERVICE _____

SUBCONTRACTOR NO: 4 - COMPANY NAME: _____

ADDRESS: _____

CONTACT PERSON: _____ TITLE: _____

E-MAIL: _____ TELEPHONE NUMBER: _____

AMT. OF CONTRACT: _____ DATE AND TYPE OF SERVICE _____

SUBCONTRACTOR NO: 5 - COMPANY NAME: _____

ADDRESS: _____

CONTACT PERSON: _____ TITLE: _____

E-MAIL: _____ TELEPHONE NUMBER: _____

AMT. OF CONTRACT: _____ DATE AND TYPE OF SERVICE _____

THIS PAGE MUST BE COMPLETED AND RETURNED WITH BID