



CONTRA COSTA COMMUNITY COLLEGE  
500 Court St, Martinez, CA 94553

DSA App. # 01-111746

Contra Costa College  
C-587 12kv Utility Upgrade

**ADDENDUM # 3** Date: June 30, 2011

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**NOTICE TO ALL CONTRACTORS:**

You are hereby notified of the following changes, clarifications and/or modifications to the original Contract Documents, Project Manual, Drawings, Specifications and/or previous Addenda. This Addendum shall supersede the original Contract Documents and previous Addenda wherein it contradicts the same, and shall take precedence over anything to the contrary therein. All other conditions remain unchanged.

This Addendum forms a part of the Contract Documents and modifies the original Contract Documents with DSA approval date of February 14, 2011. Acknowledge receipt of this Addendum in space provided on the Bid Proposal Form. Failure to acknowledge may subject Bidder to disqualification.

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**GENERAL INFORMATION:** None

**MODIFICATION AND CLARIFICATIONS TO THE PROJECT MANUAL:**

- Item 1      Replace Section 00300 "Bid Proposal Form." Section attached to this addendum.
- Item 2      Replace Section 00400 "Statement of Bidder's Qualifications." Section attached to this addendum.
- Item 3      At Section 00700 "Contract General Conditions," change Article 11, Paragraph 11.1.4.1 to read as follows: "Comprehensive General Liability Insurance with a combined single limit per occurrence of not less than \$1,000,000.00 and \$2,000,000.00 project specific aggregate, or Commercial General Liability Insurance (including automobile insurance) which provides limits of not less than:
  - (a) Per occurrence (combined single limit)                      \$1,000,000.00
  - (b) Project Specific Aggregate (for this project only)            \$2,000,000.00
  - (c) Products and Completed Operations                              \$1,000,000.00
  - (d) Personal and Advertising Injury Limits                            \$1,000,000.00"

- Item 4      At Section 01030 "Alternates." Section attached to this addendum.
- Item 5      Add Section 16416 "Padmount Sectionalizing Switch Two Positions"

**ATTACHMENT (S):**

- Item 1:      Specification Section 00300 "Bid Proposal Form"
- Item 2:      Specification Section 00400 "Statement of Bidder's Qualifications"
- Item 3:      Specification Section 01030 " Alternates"
- Item 4:      Specification Section 16416 " Padmount Sectionalizing Switch Two Positions"

Questions or Clarifications regarding this revised schedule shall be in writing addressed to:

Jovan Esprit – Contracts Manager  
Contra Costa Community College District  
500 Court St, Martinez, CA 94553

Email: [jesprit@4cd.edu](mailto:jesprit@4cd.edu)

Any bid received after the scheduled closing time for receipt of bids shall be returned to the bidder unopened. It is each bidder's sole responsibility to ensure its bid is timely delivered and received at the location designated as specified above.

**END OF ADDENDUM # 3**

**SECTION 00300**

**BID PROPOSAL FORM**

PROJECT NUMBER / NAME: **C-587 12 KV Utility Upgrade**

CAMPUS / LOCATION: **Contra Costa College, 2600 Mission Bell Drive, San Pablo, CA 94806**

DISTRICT: **CONTRA COSTA COMMUNITY COLLEGE DISTRICT  
500 Court St, Martinez, CA 94553**

Herein Referred to as "District"

**1. INTRODUCTION**

- A. The Bidder proposes to perform the Work for the Contract Sum and within the proposed Contract Time, based upon an examination of the site and the Bid and Contract Documents.
- B. The Bidder certifies this Bid is submitted in good faith.
- C. The Bidder agrees that the Contract Sum and other proposed terms will be considered in evaluating Bids and may be negotiated and adjusted before awarding of Contract.
- D. The signed copy of the Certification of the Visit to the Site shall be attached to the Bid Form Submittal.
- E. A fully executed Statement of Bidder's Qualifications signed by an authorized officer of the Bidder submitting the Bid shall be attached to the Bid Form.
- F. A fully executed Non-Collusion Affidavit signed by an authorized officer of the Bidder submitting Bid shall be attached to the Bid Form.
- G.
- H. The District shall award the contract to the lowest responsive and responsible Bidder. The evaluation of the low bid shall be based on the total of Item #3 Base Bid (which includes item 3.A, Allowance #1) plus Additive Alternate 4.A and 4.B.
- I.
- J. The District reserves the right to award the other Additive Alternates through change orders as budget allows.

**2. CONTRACT SUM**

**A. Total Bid Amount ( Base Bid Including Allowance #1 )**

For labor, materials, bonds, fixtures, equipment, tools, transportation, services, sales taxes and other costs necessary to complete the general construction in accordance with the Contract Documents, for a stipulated Contract Sum in the amount of:

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )

**3. ALLOWANCE #1**

The Contractor recognizes that the amount of the Base Bid provided above includes a stipulated sum of \$75,000 reserved for costs associated with additional work, labor, and/or materials beyond that included in Contract Documents, which is to be utilized at the sole discretion of the District.

**Contractor Authorized Signature:** \_\_\_\_\_

**4. ALTERNATES**

A. Horizontal Directional Drilling: Delete trenching and add horizontal directional drilling .

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )

B. Padmount Sectionalizing Switch: Delete padmount sectionalizing switch type SF-6 and add padmont sectionalizing switch type Dielectric.

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )

**5. COMPLETION TIME**

- A. For establishing the Date of Final Completion the contract time for the Base Bids shall be 120 calendar days after date of the Notice To Proceed. This time may be subject to modification to facilitate the work as mutually agreed upon at a later date.
- B. The Bidder certifies that the Bid is based on the Contract Time for completion as stated above and in the Contract Documents. Bidder further certifies that the Base Bid amount is sufficient to cover all labor, materials, central office and construction site overhead, profit, and all other costs related to the completion of the Project for the entire Project construction time for both the General Contractor and all Subcontractors, as stated above in paragraphs 2 and 3.

**6. ADDENDA**

A. The Bidder acknowledges receipt of the following Addenda, and certifies the Bid has provided for all modifications and considerations required therein.

None [ ]

Addendum No.: \_\_\_\_\_ dated \_\_\_\_\_

Addendum No.: \_\_\_\_\_ dated \_\_\_\_\_

Addendum No.: \_\_\_\_\_ dated \_\_\_\_\_

Addendum No.: \_\_\_\_\_ dated \_\_\_\_\_

Addendum No.: \_\_\_\_\_ dated \_\_\_\_\_

B. List of Additional Addenda Attached: Yes [ ] No [ ].

**7. DESIGNATION OF SUBCONTRACTORS**

- A. The Bidder has set forth a complete list indicating the type of work, name, and business address of each Subcontractor who will perform work in excess of one-half of one percent of the Contract Sum.
- B. Any portion of the work in excess of the specified amount having no designated Subcontractor shall be performed by the Bidder.
- C. Substitution of listed Subcontractors will not be permitted unless approved in advance by the District.
- D. Prior to signing the Contract, the District reserves the right to reject any listed Subcontractor.

	Type of Work	Subcontractor's	Business Address	License #
(1)	_____	_____	_____	_____
(2)	_____	_____	_____	_____
(3)	_____	_____	_____	_____
(4)	_____	_____	_____	_____
(5)	_____	_____	_____	_____

- D. Complete list of Subcontractors is attached: Yes [ ] No [ ]
- E. Continuation list of Subcontractors is attached: Yes [ ] No [ ]

**8. ACCEPTANCE AND AWARD**

- A. The District reserves the right to reject this Bid and to negotiate changes before or after execution of the Contract. This Bid shall remain open and shall not be withdrawn for a period of 90 days after Bid Opening date.
- B. If written notice of acceptance of this Bid is mailed or delivered to the Bidder within 90 days after the date set for the receipt of this Bid, or other time before it is withdrawn, the Bidder will execute and deliver to the District a Contract prepared by District with the required Surety Bonds and Certificates of Insurance, within 10 days after personal delivery or deposit in the mail of the notification of acceptance.
- C. Notice of acceptance or request for additional information may be addressed to the Bidder at the address provided.

**9. BID SECURITY**

- A. The required 10 percent (10%) Bid Security for this Bid is attached in the form of:
  - ( ) Bid Bond Issued By: \_\_\_\_\_
  - ( ) Certified or Cashier's Check No. \_\_\_\_\_
  - Issued by: \_\_\_\_\_

**10. BIDDER'S BUSINESS INFORMATION**

- A. **Individual [ ]:** \_\_\_\_\_
  - Personal Name: \_\_\_\_\_
  - Business Name: \_\_\_\_\_
  - Address: \_\_\_\_\_
  - \_\_\_\_\_ Zip Code: \_\_\_\_\_
  - Telephone: \_\_\_\_\_
  - Fax Number: \_\_\_\_\_
- B. **Partnership [ ]:** \_\_\_\_\_
  - Co-partners' Names: \_\_\_\_\_
  - Business Name: \_\_\_\_\_
  - Address: \_\_\_\_\_

\_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax Number: \_\_\_\_\_

C. **Corporation [ ]:** \_\_\_\_\_

Firm Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_ Zip Code \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax Number: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

President: \_\_\_\_\_

Secretary: \_\_\_\_\_

Treasurer: \_\_\_\_\_

Manager: \_\_\_\_\_

D. **Power of Attorney:** Name: \_\_\_\_\_

Title: \_\_\_\_\_

E. **Contractor License No.** \_\_\_\_\_ State of \_\_\_\_\_

F. Bidder is submitting this proposal on behalf of a Joint Venture. Names, license numbers, and relevant information are given on a separate attachment:  
Yes [ ] No [ ].

G. Upon request, furnish appropriate documentation to substantiate and/or support the data given.

11. The undersigned hereby certifies under penalty of perjury under the laws of the State of California that all the information submitted by the Bidder in connection with this Bid and all the representations herein made are true and correct.



**SECTION 00400**

**STATEMENT OF BIDDER'S QUALIFICATIONS**

I, \_\_\_\_\_ being first duly sworn, depose and say:  
(Name)

I am the \_\_\_\_\_ of \_\_\_\_\_  
(Title) (Company / Entity)

1. Bidder's Organization

1.1 Form of Entity of Bidder, i.e., corporation, partnership, etc.:

1.1.1 If **Corporation**, state the following:

State of incorporation: \_\_\_\_\_  
Date of incorporation: \_\_\_\_\_  
President: \_\_\_\_\_  
Secretary: \_\_\_\_\_  
Treasurer: \_\_\_\_\_

1.1.2 If **Partnership**, state the following:

Date of organization: \_\_\_\_\_  
Type of partnership: \_\_\_\_\_  
Names of all general partners; if any of the general partners are not natural persons, provide the information for each such general partner requested by 1.1.1, 1.1.2 and 1.1.4 as appropriate: \_\_\_\_\_

1.1.3 If **Proprietorship**, state the following:

Names for all proprietors: \_\_\_\_\_

1.1.4 If **Joint Venture**, state the following:

Date of organization: \_\_\_\_\_  
Names of all Joint Ventures; for each joint Venture, identify the form of entity and provide the information requested by 1.1.1, 1.1.2 and 1.1.3 above for each Joint Ventures, as appropriate:  
\_\_\_\_\_

1.1.5 If **Other** than listed above, describe type of organization and name all principals:  
\_\_\_\_\_

1.2 How many years has your organization been in business as a Contractor? \_\_\_\_\_

1.3 How many years has your organization been in business under its present name? \_\_\_\_\_

1.3.1 Identify any former names under which your organization has conducted business.

\_\_\_\_\_

2.0 Financial

2.1 Attach current audited, reviewed or compiled Financial Statement of your organization prepared by a Certified Public Accountant licensed in the State of California utilizing generally accepted accounting practices applied in a consistent manner. The Financial Statement must include a current balance sheet and income statement showing: (i) current assets (i.e., cash accounts receivable, accrued income, deposits, material inventory, etc.); (ii) net fixed assets; (iii) others assets; (iv) current liabilities (i.e., accounts payable, accrued salaries, accrued payroll taxes, etc.); and (v) other liabilities (i.e., capital, capital stock, earned surplus and retained earnings).

2.2. Is the attached Financial Statement for the identical organization of the Bidder?  
YES \_\_\_\_\_ NO \_\_\_\_\_  
If NO, explain the relationship and financial responsibility of the organization whose financial statement of provided (i.e., parent/subsidiary, etc.)

\_\_\_\_\_

3.0 Licensing

3.1 List all jurisdictions, other than the State of California, in which your organization is licensed to do business as a contractor, and for each jurisdiction listed, identify the class of license or description of the work permitted by the license.

\_\_\_\_\_

\_\_\_\_\_

3.2 California Contractor's License

3.2.1 License Number: \_\_\_\_\_

3.2.2 Expiration Date: \_\_\_\_\_

3.2.3 License Classification(s): \_\_\_\_\_

3.2.4 Responsible Managing Employee or Responsible Managing Officer:

\_\_\_\_\_

- 3.3 Has a claim or other demand ever been made against your organization's California Contractor's License Bond?  
NO \_\_\_\_\_ YES \_\_\_\_\_ (See Attached)

If YES, on a separate attachment state the following: (i) the name, address and telephone each such claimant; (ii) the date of each such claim or demand. (iii) the circumstances giving rise to each such claim or demand; and (iv) the disposition of each such claim or demand.

- 3.4 Has a complaint ever been filed against your organization's California Contractor's License with the California Contractor's License Board?  
NO \_\_\_\_\_ YES \_\_\_\_\_ (See Attached)

If YES, for each such complaint, identify the name of the complainant, the date of the complaint and the disposition thereof, including without limitation, any disciplinary action imposed by the California Contractor's License Board.

- 3.5 Attach to this statement true and correct copies of the following:

3.5.1 Your organization's California Contractor's License (the copy must clearly and legibly show: (i) the licensee name; (ii) the expiration date; and (iii) the classification(s) of licensure).

3.5.2 The Contractor's License Bond posted by your organization in connection with your organization's California Contractor's License pursuant to California Business & Professions Code 7071.5 and 7071.6 (the copy must clearly and legibly show; (i) the Bond number or other information sufficient for identification; (ii) the name, address and telephone number of the Surety on the Bond; (iii) the signature of the individual executing the Bond on behalf of the Surety and if such individual's authority is conferred by a power of attorney or by such individual's authority is conferred by a power of attorney or by such individual's designation as an attorney in fact on behalf of the Surety, include a clear and legible copy of such power of attorney or attorney in fact designation; (iv) the principal on such Bond; and (v) the expiration date of such Bond).

3.5.3 If your organization's California Contractor's License is issued by virtue of the qualification of a responsible managing employee or responsible managing officer of your organization, the Qualifier's Bond, if required pursuant to California business & Professions Code 7071.9 (the copy must clearly and legibly show; (i) the bond number or other information sufficient for identification; (ii) the name, address and telephone number of the Surety on the Bond; (iii) the signature of the individual executing the Bond on behalf of the Surety and if such individual's authority is conferred by a power of attorney or by such individual's designation as an attorney in fact on behalf of the Surety, include a clear and legible copy of such power of attorney or attorney in fact designation; (iv) the principal on such Bond; and (v) the expiration date of such Bond.

4.0 Experience

4.1 List the categories of work your organization typically performs with its own forces.

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4.2 Claims and suits (if you answer YES to any of the following, you must attach details).

4.2.1 Have any lawsuits or other proceedings ever been brought against your organization or any of its principals or officers in connection with any construction contract or construction project?

NO \_\_\_\_\_ YES \_\_\_\_\_

If YES, describe the circumstances, the amount or relief sought and the disposition of each such lawsuit or other proceeding.

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4.2.2 Has your organization ever filed a lawsuit or initiated other proceedings in connection with any construction contract or construction project?

NO \_\_\_\_\_ YES \_\_\_\_\_

If YES, describe the circumstances, the amount or relief sought and the disposition of each such lawsuit or other proceeding.

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4.2.3 Are there any judgments, orders or arbitration awards pending, outstanding or by which your organization or any of its officers or principals are bound by?

NO \_\_\_\_\_ YES \_\_\_\_\_

If YES, describe each such judgment, order or arbitration award and the present status of the satisfaction or discharge thereof.

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4.3 On a separate attachment, list all construction projects your organization has in progress and for each project listed, state; (i) a general description of the work performed or to be performed by your organization; (ii) the owner's name, name of the owner's representative, the owner's address and telephone number; (iii) the project architect, address and telephone number; (iv) percent presently completed and (v) the scheduled completion date.

4.4 On a separate attachment, list all construction projects completed by your organization in the past five years and for each project, state: (i) a general description of the work performed by your organization on the project; (ii) the owner's name, name of the owner's representative, the owner's address and telephone number; (iii) contract amount;

(iv) date of completion; and (v) whether the project was completed within contract time and contract budget.

4.5 Has your organization ever refused to sign a contract awarded to it?

NO \_\_\_\_\_ YES \_\_\_\_\_

If YES, on a separate attachment state the following: (i) describe each such contract; (ii) the owner's name, address and telephone number; (iii) a description of the project; and (iv) the circumstances of the refusal to sign the contract.

\_\_\_\_\_

4.6 Has your organization ever failed to complete a construction contract?

NO \_\_\_\_\_ YES \_\_\_\_\_

If YES, on a separate attachment state the following; (i) describe each such contract; (ii) the owner's name, address and telephone number; (iii) a description of the project; and (iv) the circumstances of the failure to complete.

\_\_\_\_\_

4.7 Has your organization ever been declared in default of a construction contract?

NO \_\_\_\_\_ YES \_\_\_\_\_

If YES, on a separate attachment state the following: (i) describe each such contract; (ii) the owner's name, address and telephone number; (iii) a description of the project; and (iv) the circumstances of the declaration of default.

\_\_\_\_\_

4.8 Has a claim or other demand ever been asserted against any Bid Bond, Performance Bond or Labor and Material Payment Bond posted by your organization in connection with any construction contract or your submittal of a proposal on a construction contract?

NO \_\_\_\_\_ YES \_\_\_\_\_

If YES, on a separate attachment state the following: (i) state the name, address and telephone number of each such claimant; (ii) the date of the claim; and (iii) the disposition thereof.

\_\_\_\_\_

5.0 References

(Include Name, Contact Person, Telephone, Facsimile, and Address of each reference provided).

5.1 Trade References (3 minimum)

\_\_\_\_\_

\_\_\_\_\_

5.2 Bank References

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5.3 Owner References (3 minimum)

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5.4 Statement of Contractor Work Experience and Qualifications.

If any question listed below in this Section of the Statement of Bidder's Qualifications (entitled "Statement of Contractor Work Experience") is not answered by marking "Yes" in response to that question, the Bid Proposal with which that Statement of Qualifications is submitted may be deemed by the District to be non-responsive and rejected on that basis.

A. Is your organization currently in good standing with the California Contractor's State License Board?

\_\_\_\_ Yes                      \_\_\_\_ No

B. Has your organization, under its current license, completed at least three (3) projects of similar size and complexity in an educational environment with a Three Million Dollar (\$3,000,000) contract minimum?

\_\_\_\_ Yes                      \_\_\_\_ No

If so, attach a separate sheet of paper, referring to this numbered question, and state: (i) the name of each project upon which you base your response to this question; (ii) a general description of the work performed by your organization on the project; (iii) the Owner, name of the owner's representative and a current address and telephone number of the owner and the owner's representative; and (iv) the project architect's name, address, telephone number and contact person.

C. Has the site superintendent **and** project manager that your organization will employ for this project previously completed, in the same capacity, at least three projects of similar size and complexity in an educational environment with a Three Million Dollar (\$3,000,000) contract minimum?

\_\_\_\_ Yes                      \_\_\_\_ No

If so, attach a separate sheet of paper, referring to this numbered question, and state: (i) the name of each project upon which you base your response to this question; (ii) a general description of the work performed by your organization on the project; (iii) the Owner, name of the owner's representative and the address and telephone number of the owner and the owner's representative; and (iv) the project architect's name, address, telephone number and contact person.

- D. Has your organization, under its current license, completed at least three (3) projects of similar size and complexity in an educational environment with a Three Million Dollar (\$3,000,000) contract minimum within the past five years?

\_\_\_ Yes                      \_\_\_ No

If so, attach a separate sheet of paper, referring to this numbered question, and state: (i) the name of each project upon which you base your response to this question; (ii) a general description of the work performed by your organization on the project; (iii) the Owner, name of the owner's representative and the address and telephone number of the owner and the owner's representative; and (iv) the project architect's name, address, telephone number and contact person.

6.0 Accuracy

The responses to each and all of the foregoing are complete and accurate; there are no omissions of material fact or information such that would render any of the foregoing false or misleading; there are no misstatements of fact in any of the foregoing

Executed this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, at \_\_\_\_\_  
(City)

\_\_\_\_\_  
(County) (State)

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

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name) (Title)

**END OF SECTION 00400**

**SECTION 01030**  
**ALTERNATES**

**PART 1 – GENERAL**

**1.1 RELATED DOCUMENTS**

- A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in this document, and provisions in the General Conditions and other Division 1 Specification Sections shall apply to this Section without limitation.

**1.2 RELATED REQUIREMENTS SPECIFIED IN OTHER SECTIONS**

- A. Section 00200 – “Instructions to Bidders”
- B. Section 00300 – “Bid Proposal Form”
- C. Section 01010 – “Summary of Work”
- D. Section 01290 – “Payment Procedures”
- E. Section 01310 – “Construction Scheduling”
- F. Section 01311 – “Project Management and Coordination”
- G. Section 01330 – “Submittal Procedures”
- H. Section 01740 – “Warranties and Guarantees”
- I. Section 01770 – “Contract Closeout Procedures”
- J. Divisions 2 through 16 Sections for Alternates requirements for the work in those Sections.

**1.3 SUMMARY**

- A. This Section includes administrative and procedural requirements governing Alternates. Each Alternate is identified by number and describes the basic changes to be made in the Work.

**1.4 REQUIREMENTS**

- A. Alternate pricing quoted on the Bid Proposal Form will be reviewed by the District, and accepted or rejected at District’s sole option. Any accepted Alternate(s) will be identified in the District-Contractor Agreement.
- B. See the Bid Proposal Form, Section 00300. Item 1.G, for District Bid evaluation procedure.
- C. All Alternates are either “additive” or “deductive” or “no change” to the Lump Sum Base Bid. The Contractor shall quote the amount for each Alternate in the space provided on the Bid Proposal Form.

- D. Failure to either quote an Alternate amount or the insertion of the words “no bid,” “none” or words of similar import, may be considered as not completing the Bid Proposal Form and may constitute disqualification of the entire bid at District’s sole discretion. Bidders may insert a zero dollar amount (\$0.00) in the Alternate price line of the Bid Proposal Form if the Bidder proposes to perform the Work of the Alternate with no additional change to the Contract Sum.
- E. The Base Bid and the Alternates are exclusive in their scope of Work. There is no overlap between or among the Base Bid and the Alternates.
- F. The cost of any item of work shall be included only once, in the Base Bid or in the Alternates.
- G. Each Alternate is intended to cover all of the Work required for a complete, finished job.
  - 1. Alternate Work includes all miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of the Alternate, but necessary to complete the Alternate Work according to the Contract Documents.

## **1.5 PROCEDURES**

- A. Modify or adjust affected adjacent Work as necessary to completely integrate Work of each accepted Alternate into the Project.
- B. Notification: Immediately following award of the Contract, Contractor shall notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted Alternate(s) under the same conditions as other Work of this Contract.

## **PART 2 - PRODUCTS**

### **2.1 DESCRIPTION OF ALTERNATES**

- A. Alternates are listed in Part 4 of the Bid Proposal Form, and hence are identified below as 4.A and 4.B.
  - A. Horizontal Directional Drilling: Delete trenching and add horizontal directional drilling as follows:
    - 1. Provide 12kV feeder routing via horizontal coring between new power pole (located at the intersection of Moraga Road and Castro Road) and Manhole 2A (adjacent to new Switchgear ‘SWGR1’). Verify unidentified existing underground utility lines and their respective inverts at locations with horizontal coring work.
    - 2. Provide 12kV feeder routing via horizontal coring between Manhole 2A (adjacent to new Switchgear ‘SWGR1’) and Manhole 3B (located along College Entrance/Castro Road). Verify unidentified existing underground utility lines and their respective inverts at locations with horizontal coring work.
    - 3. Provide 12kV feeder routing via trenching between Manhole 3B (located along College Entrance/Castro Road) and Manhole 4A (located along College Entrance/Castro Road).

Trenching with slack requirements shall be provided at this routing location where the routing crosses the Hayward Fault Line.\*

4. Provide new Manhole 4B (located along College Entrance/Castro Road and near the creek bridge) as a transition point for the 12kV feeder routing.
5. Provide 12kV feeder routing via horizontal coring between Manhole 4A (located along College Entrance/Castro Road) to Manhole 4B (located near the creek bridge). Verify unidentified existing underground utility lines and their respective inverts at locations with horizontal coring work.
6. Provide 12kV feeder routing via trenching between Manhole 4B (located near the creek bridge) and Manhole 5A (adjacent to new Sectionalizing Switches 'SS1' and 'SS2'). Trenching shall be provided at this routing location where the routing crosses the Creek Bridge.\*
7. Provide proper installation as required to avoid and/or minimize disruption and shut down of the campus.
8. Provide routing plans and details as part of the submittals process to illustrate alternate horizontal directional drilling.

B. Padmount Sectionalizing Switch: Delete Padmount Sectionalizing Switch SF-6 as specified in Section 16415. Provide Padmount Sectionalizing Switch Dielectric design as specified in Section 16416.

### **PART 3 - EXECUTION**

#### **3.1 GENERAL**

- A. Execute accepted alternates under the same conditions as other Work of this Contract.
- B. Coordination: Modify or adjust affected Work as required to completely and fully integrate that Work into the Project.

**END OF SECTION 01030**

**\*A3 SECTION 16416**

**PADMOUNT SECTIONALIZING SWITCH TWO POSITION**

**PART 1 - GENERAL**

**1.01 DESCRIPTION**

- A. The switch shall be three phase 5-way, with two load break switches and three fault interrupters. The switches and interrupters shall be of solid dielectric design with no gas or oil required and the switching shall be with vacuum bottles for long life. The unit shall be rated for 600 amps continuous operation at 15kV. The switch shall be padmount design with NEMA-3R, mild steel enclosure.

**1.02 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: The chosen manufacturer shall have at least 20 years' experience in manufacturing vacuum interrupter insulated medium voltage switchgear. The manufacturer of the switches shall be completely and solely responsible for the performance of the load break switch and fault interrupter as well as the complete integrated assembly as rated.
- B. The manufacturer shall furnish certification of ratings of the load break switch and the integrated switch assembly upon request. The switch shall be a 5-way with two load breaks and three interrupters.
- C. The switch shall comply with requirements of the latest revisions of applicable industry standards, including:
  - 1. ANSI C37.71, ANSI C37.72, ANSI C37.60, IEC 60265-1.
- D. The switch manufacturer shall be ISO 9001:2000 and ISO 14001:2004 certified.

**1.03 DELIVERY, STORAGE, AND HANDLING**

- A. The completed switch assembly shall be shipped preassembled at the factory. No field assembly shall be required.
- B. The contractor, if applicable, shall handle, transfer and move the switches in accordance with manufacturer's recommendations.

**1.04 SUBMITTALS**

- A. Manufacturer shall furnish a detailed list of rating and accessories and set of drawings defined as follows:
  - 1. Detailed front elevation with mounting
  - 2. Single line diagram
  - 3. Base plan
  - 4. Schematics

- B. Manufacturer shall furnish instructional manuals covering the installation of the switch and operation of its various components.

## **PART 2 - PRODUCTS**

### **2.01 SWITCH CONFIGURATION**

- A. Each switch shall be equipped with two 3-phase load switch ways and 3-phase load interrupter ways, as indicated on the one-line diagram.
- B. Switches shall be configured as front access with all bushings and operation switches on the same side, as indicated.
- C. Switch shall be 5-way with two load breaks and three interrupters.
- D. Interrupters shall be resettable with G&W type 3 vacuum interrupter control. The relay shall monitor the current on each phase using the integral encapsulated current transformer(s). The relay shall compare currents on each phase of the load circuits with pre-selected time current curves and cause the fault interrupters to interrupt the current at the appropriate time. The relay shall be powered from the current transformers molded into the epoxy encapsulation. No external power source shall be required for protection. Relay shall be capable of displaying the currents for each phase and neutral, cause of last trip and programming parameters without the need of a computer. Relay shall have function of trip amperes, ground fault, inrush restraint and time delay.

### **2.02 SWITCH CONSTRUCTION**

- A. General: Assembly shall be a deadfront design. The operating mechanism housing shall be stainless steel with a viewing window for verification of contact position. The housing shall be painted ANSI 70 light gray using corrosion-resistant epoxy paint. Operating handles shall be padlockable and adaptable to keylock schemes. The operating shaft shall be stainless steel providing maximum corrosion resistance. A double "O" ring shaft seal shall be used for a leak resistant, long life seal.
- B. Dielectric Vacuum Interrupter Dead Front Design: Each switching way is to be equipped with an internally mounted operating mechanism capable of providing quick-make, quick-break operation in either switching direction. The mechanism must be capable of delivering sufficient torque and shall be provided with latches for each position to assure load interrupting, fault closing and momentary ratings. All switch positions are to be clearly identified, padlockable and adaptable to keylock schemes. The operating mechanism shall be actuated from outside the switch tank with an operating handle. The operating shaft shall be made of stainless steel providing maximum corrosion resistance. A double "O" ring type operating shaft seal shall be used for a leak resistant, long life seal.
- C. Load Break Switches: The load break switch shall consist of vacuum bottle(s) encapsulated within solid dielectric epoxy modules with spring-assisted operating mechanism. For three phase switches the mechanism shall consist of three vacuum bottles mechanically linked to a single, spring-assisted operating mechanism. The operating mechanism shall be actuated from outside the mechanism housing.

- D. Fault Interrupters: The fault interrupter shall consist of vacuum bottle(s) and internal current transformer(s) encapsulated within solid dielectric epoxy modules with spring-assisted operating mechanism. For three phase interrupters, the mechanism shall consist of three vacuum bottles mechanically linked to a single spring-assisted operating mechanism. Electrical opening shall be by a solenoid that is activated from an interrupter relay. Closing (reset) of the interrupter shall be mechanical with the use of an operating mechanism actuated from outside the mechanism housing. The mechanical linkage assembly shall provide for a “trip-free” operation which allows the fault interrupter to operated independent of the operating handle.

**2.03 DESIGN RATINGS AND STANDARDS**

- A. Load Break Switches: Shall be designed and tested per applicable sections of ANSI C37.71-1987, ANSI C37.72-1987, and the latest version of IEC 60265 standards. Certified test reports shall be provided. The switch shall be rated:

Voltage Class, kV	15
Maximum design, voltage, kV	15.5
Impulse level (BIL), kV	110
Continuous and load break, A	630
One minute withstand (dry), AC kV	35
One minute withstand (dry), AC kV Production Test	34
15 minute withstand (dry), DC kV	53
Momentary current, kA, ASYM	20
Fault-close current, kA, ASYM	20
One second current, kA, SYM	12.5
Mechanical operations	2000

- B. Fault Interrupters: Shall be designed and tested per applicable sections of ANSI C37.71-1987, C37.72-1987, and ANSI C37.60-1981 and the latest version of IEC 60265. The fault interrupter shall be rated:

Voltage Class, kV	15
Maximum design, voltage, kV	15.5
Impulse level (BIL), kV	110
Continuous and load break, A	630
One minute withstand (dry), AC kV	35
One minute withstand (dry), AC kV Production Test	34
Symmetrical interrupting rating, kA	12.5
Asym. Interrupting rating, kA	20
Fault close current, kA, SYM	12.5
Mechanical operations	2000

C. ANSI C37.60 Fault Interrupting Duty:

Percent of Maximum Interrupting Rating	Approx. Interrupting Current, Amps	No. of Fault Interruptions
15-20%	2,000	44
45-55%	6,000	56
90-100%	12,500	16
Total # of Fault Interruptions: 16		

**2.04 CABLE ENTRANCES**

- A. Cable entrances shall be tested to IEEE 386 and be, as indicated on the switch drawing:
1. 600 amp G&W Quik-Change disconnectable apparatus bushing,

**2.05 ENCLOSURE**

- A. Enclosures shall be made of 12 gauge galvanized steel and manufactured to ANSI C37.72 and C57.12.28 standards. The enclosure shall be mounted independent of the switch allowing removal for ease of cable installation or future replacement if required. Enclosures shall be tamper-resistant incorporating hinged access doors with pentahead locking bolts and provisions for padlocking. The enclosure shall be provided with lifting provisions and painted with a Munsell 7.0GY3.29/1.5 green finish.

**2.06 PRODUCTION TESTING**

- A. Continuity test to assure correct internal connection.
- B. Hi-Pot test to determine dielectric strength of the unit.
- C. Pressure test to assure tank is completely sealed.
- D. Electrical TCC trip test.

**2.07 STANDARD COMPONENTS**

- A. The following shall be included as standard:
1. Welded steel tank painted light gray with stainless steel and brass fasteners.
  2. Lifting provisions.
  3. Grounding provisions for switch tank and all cable entrances.
  4. Stainless steel three line diagram and corrosion-resistant nameplates.
  5. Parking stands.
  6. Switch operating handle(s) with padlock provision and end stops.
  7. 12 gauge galvanized steel padmount enclosure painted Munsell green with stainless steel hinges and pentahead locking mechanisms.
  8. Switch shall have type 3 vacuum interrupter control.

## **2.08 OPTIONS**

- A. The following options shall be supplied:
1. 4/0 brass ground lug(s).
  2. Keylocks to lock in open position.
  3. 600 amp Apparatus Bushings.
  4. Auxiliary switches for remote switch position indication.

## **2.09 LABELING**

- A. Hazard Alerting Signs: The exterior of the padmounted enclosure (if furnished) shall be provided with "Warning--Keep Out--Hazardous Voltage Inside--Can Shock, Burn, or Cause Death" signs. Each unit of switchgear shall be provided with a "Danger--Hazardous Voltage--Failure to Follow These Instructions Will Likely Cause Shock, Burns, or Death" sign. The text shall further indicate that operating personnel must know and obey the employer's work rules, know the hazards involved, and use proper protective equipment and tools to work on this equipment. Each unit of switchgear shall be provided with a "Danger--Keep Away--Hazardous Voltage--Will Shock, Burn, or Cause Death" sign.
- B. Nameplates, Ratings Labels, and Connection Diagrams: Each unit of switchgear shall be provided with a nameplate indicating the manufacturer's name, catalog number, model number, date of manufacture, and serial number. Each unit of switchgear shall be provided with a ratings label indicating the following: voltage rating; main bus continuous rating; short-circuit rating; fault interrupter ratings including interrupting and duty-cycle fault-closing; and load break switch ratings including duty-cycle fault-closing and short-time.

**END OF SECTION \*A3**