

EXHIBIT 1

Interlocal Agreement

CONTRACT NO. CRCP-200

BETWEEN THE

COLORADO RIVER COMMISSION OF NEVADA

AND THE

CLARK COUNTY WATER RECLAMTION DISTRICT

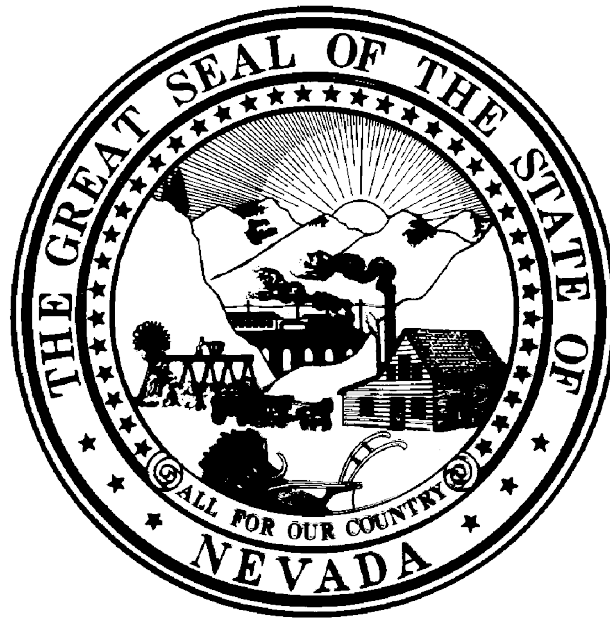
FOR THE

CONSTRUCTION, OPERATION AND MAINTENANCE

OF ELECTRICAL FACILITIES

STATE OF NEVADA

COLORADO RIVER COMMISSION OF NEVADA



INTERLOCAL AGREEMENT

CONTRACT NO. CRCPDP-200

BETWEEN THE

COLORADO RIVER COMMISSION OF NEVADA

AND THE

CLARK COUNTY WATER RECLAMATION DISTRICT

FOR THE

CONSTRUCTION, OPERATION AND MAINTENANCE

OF ELECTRIC FACILITIES

**INTERLOCAL AGREEMENT
CONTRACT NO. CRCPDP-200
BETWEEN THE
COLORADO RIVER COMMISSION OF NEVADA
AND THE
CLARK COUNTY WATER RECLAMATION DISTRICT
FOR THE
CONSTRUCTION, OPERATION AND MAINTENANCE
OF ELECTRIC FACILITIES**

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EXHIBIT 1—SCOPE OF WORK

**INTERLOCAL AGREEMENT
CONTRACT NO. CRCPDP-200
BETWEEN THE
COLORADO RIVER COMMISSION OF NEVADA
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CLARK COUNTY WATER RECLAMATION DISTRICT
FOR THE
CONSTRUCTION, OPERATION AND MAINTENANCE
OF ELECTRIC FACILITIES**

1. PARTIES

This INTERLOCAL AGREEMENT CONTRACT is made pursuant to Nevada Revised Statutes (“NRS”) Chapter 277, between the State of Nevada, acting by and through its COLORADO RIVER COMMISSION OF NEVADA (“Commission” or “CRC”), acting both as a principal on its own behalf and as an agent on behalf of the state, and the CLARK COUNTY WATER RECLAMATION DISTRICT (“CCWRD” or “Contractor”), a political subdivision of the State of Nevada created pursuant to NRS Chapter 318.

2. EXPLANATORY RECITALS

- 2.1. The CRC proposes to purchase materials and design, construct, operate and maintain facilities (“Facilities”) for the CCWRD depicted in the Scope of Work, attached hereto as Exhibit 1, which is incorporated herein in its entirety.
- 2.2. NRS 538.166 authorizes the CRC to construct, operate and maintain utilities for the generation and transmission of electricity; and, NRS 704.787 authorizes the CRC to sell electricity and provide transmission and distribution services to the Southern Nevada Water Authority (“SNWA”) and its member agencies for their water and wastewater operations. The CCWRD is a member of the SNWA.
- 2.3. The CRC is willing to purchase materials and design, construct, operate and maintain the Facilities and the CCWRD is willing to fund the cost of the CRC’s purchase of materials, design, construction, operation and maintenance of the Facilities.

IN CONSIDERATION of the foregoing recitals and the mutual covenants contained herein, the Parties hereto agree as follows:

3. DEFINITIONS

- 3.1. As used in this Contract, except as expressly provided or unless the context otherwise requires, the words and terms defined in subsections 3.2 to 3.16, inclusive, when initially capitalized and whether in singular or plural, have the meanings ascribed to

them in those subsections.

- 3.2. **“Commission”** means the Colorado River Commission of Nevada (“CRC”) or the executive director of the Commission, acting on behalf of the Commission.
- 3.3. **“BOT”** means the Board of Trustees which is the governing body of the Clark County Water Reclamation District.
- 3.4. **“Construction Budget”** means the budget for all costs of purchasing materials and designing, bidding and constructing the Facilities, which is approved by the BOT and described in section 7 of this Contract.
- 3.5. **“Construction Schedule”** means the Construction Schedule developed and updated by the CRC for the design and construction of the Facilities.
- 3.6. **“Contract”** means this Contract No. CRCPDP-200 between the CRC and the CCWRD.
- 3.7. **“Emergency”** is an abnormal system condition, which requires immediate manual or automatic action to protect the health and safety of the workmen or the public; to prevent loss of firm load, or equipment damage; or to prevent tripping of the system elements that could adversely affect the reliability of the electric facilities.
- 3.8. **“Executive Director”** means the executive director of the CRC, or his or her designee.
- 3.9. **“Facilities”** means the 69-kv substations and accompanying distribution systems to be designed and constructed by the CRC for CCWRD, that are depicted in Exhibit 1 Scope of Work.
- 3.10. **“Operational”** means having been constructed, installed, and placed in service in accordance with the designs and specifications applicable thereto and being capable of continuous use for the delivery of energy, subject to de-energization for short periods of time to complete design modifications, warranty repairs, or correction of minor items discovered during testing and checkout.
- 3.11. **“Operation and Maintenance Budget”** means the budget for all costs of operating, maintaining, repairing and replacing the Facilities, which is described in section 11 of this Contract.
- 3.12. **“Party” or “Parties”** means the CRC or the CCWRD, or both, as the case may be.
- 3.13. **“Project Cost”** means all costs incurred by the CRC for the performance of Project Work as described in paragraph 3.14 of this Contract, including the CRC’s reasonable administrative costs in connection therewith.
- 3.14. **“Project Work”** means all work performed by CRC to purchase materials and design, permit, construct, and to place in full operational service the Facilities requested herein and as described in Exhibit 1 Scope of Work.

- 3.15. **“Prudent Utility Practices”** means any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. The term is not intended to be limited to the optimum practice, method or act to the exclusion of all others, but rather to the acceptable practices, methods, or acts generally accepted in the Western Systems Coordinating Council region.
- 3.16. **“Uncontrollable Force”** means any cause beyond the reasonable control of the Party affected, including but not limited to failure of facilities, flood, earthquake, storm, lightning, fire, epidemic, war, riot, civil disturbance, labor disturbance, sabotage, accident, unlawful actions or omission by others, restraint by court or public authority, which, by exercise of due diligence and foresight, the Party could not reasonably have been expected to avoid. Uncontrollable Force is expressly understood to include the inability to acquire for any particular Component of the Facilities the necessary environmental permits, land use or other required authorizations from the United States, or other permits or authorizations.

4. TERM OF CONTRACT

This Contract shall become effective on the date when it is fully executed. The initial period of the contract shall be a term of five (5) years, unless it is terminated early as otherwise provided in section 14 of this Contract. This Contract may be renewed for up to four (4) five (5) year terms, with written agreement of the Parties ninety (90) days prior to the termination date.

5. FACILITIES

The CRC shall construct the Facilities depicted in Exhibit 1 Scope of Work.

6. DEVELOPMENT OF THE FACILITIES

- 6.1. Design and Construction. The CRC shall design and construct the Facilities in accordance with Prudent Utility Practice, the latest edition of the National Electric Safety Code, and the latest edition of the National Electrical Code. The Parties shall meet as requested by either Party to coordinate design efforts.
- 6.2. Not-to-Exceed-Amount. CRC shall design and construct the Facilities, and perform Operation and Maintenance of the Facilities for the first 90 days, for a not-to-exceed amount of twelve million three hundred thousand dollars (\$12,300,000.00).

6.3. Completion Date. The CRC shall use its best efforts to ensure that the Facilities are operational by April 16, 2010. The foregoing date shall be extended (1) as the CRC and the CCWRD may agree as evidenced by amendment of this Contract, or (2) if, and to the extent, the CRC is prevented from meeting such date by reason of (i) an Uncontrollable Force, or (ii) any failure of the CCWRD to give approvals, obtain permits or provide funding to the CRC pursuant to this Contract.

6.4. Designs and Specifications. The CRC shall develop designs and specifications for the Facilities. The CRC shall provide designs and specifications to the CCWRD for review, on a schedule agreed upon by the CCWRD Manager of Engineering and the CRC Assistant Director of Engineering and Operations, which shall be prior to the dates on which the CRC anticipates first issuing a request for bids, issuing a request for proposals, or entering into a contract for the procurement of materials or construction services.

The CCWRD's review shall be for the limited purpose of determining that the designs and specifications are in conformity with this Contract. Upon written approval by the CCWRD Manager of Engineering, the designs and specifications submitted by the CRC shall be deemed acceptable to the CCWRD. Any modifications to designs or specifications similarly shall be subject to approval of the CCWRD, other than field modifications made after award of the relevant contract that do not increase the cost of the Project Work by more than one percent (1%) when considered individually, or ten percent (10%) when considered collectively with all other field modifications. CRC shall provide promptly to the CCWRD records of such field modifications.

6.5. Construction Schedule. The CRC shall develop and regularly update a construction schedule using Microsoft Project® that shall serve as the design and construction schedule for the Facilities. The CRC shall provide to the CCWRD the construction schedule, and all revisions thereto. Upon written approval by the CCWRD Manager of Engineering, the construction schedule, and all revisions thereto, shall be deemed acceptable to the CCWRD.

6.6. Required Land for the Facilities. The CCWRD owns all interest in real property necessary for the construction and operation of the Facilities.

6.7. Grant of Access. The CCWRD grants to the CRC, all easements, rights-of-way, licenses, permits, or other access rights to enter upon real property in which the CCWRD has an interest or upon which the CCWRD is entitled to enter, to the extent necessary for the CRC to complete the Project Work and for operation and maintenance of the Facilities. CRC employees and contractors shall comply with

CCWRD security procedures when they access CCWRD property in carrying out their duties under this Contract.

- 6.8. Permitting. The CCWRD shall prepare, or cause to be prepared, any environmental impact statement, environmental assessment, or other document required by any applicable land such as the National Environmental Policy Act, the Endangered Species Act, the National Historic Preservation Act, section 404 of the Clean Water Act, or similar local, state and federal environmental law to the extent such documents are not prepared by a local, state or federal agency. The CCWRD shall have the responsibility for obtaining all environmental permits for the Facilities under local, state or federal law, including but not limited to any permits required from the Corps of Engineers, the U.S. Fish and Wildlife Service, and the Nevada Division of Environmental Protection.
- 6.9. Cooperation. The Parties shall assist each other by providing documentation and providing other forms of support as needed for obtaining right of way, permitting, and other authorizing processes.
- 6.10. Design and Construction Authorized Representatives. After approval of this Interlocal Agreement Contract the CRC and the CCWRD shall each identify in writing a designated representative, and at any time a Party may identify in writing a designated alternate to that representative, for design and construction matters (“D&C Authorized Representative”). The D&C Authorized Representative shall serve as the point of contact and coordination of design, material procurement and construction matters. Either Party may change the designation of its D&C Authorized Representative and its alternate, upon written notice given to the other and confirmed promptly by written notice.
- 6.11. Meetings. The D&C Authorized Representatives of the Parties shall meet at least monthly, at such time(s) as may be mutually agreed upon, to review design and construction issues or other matters relating to the Facilities.
- 6.12. Start of Construction. Nothing in this Contract obligates the CRC to initiate construction of the Facilities until all required permits and authorizations have been obtained.
- 6.13. Operational Status. The CRC shall provide written notice to the CCWRD when the Facilities become Operational.

7. PROJECT COSTS, BUDGETS AND PAYMENTS

- 7.1. Project Costs. Project Costs shall include the following:
 - 7.1.1. All direct, indirect and overhead costs of construction of the Facilities.

- 7.1.2. All costs, including any rental charges, of materials, supplies, tools, machinery, equipment and apparatus used in connection with the Facilities.
- 7.1.3. All costs of labor, services, and studies provided or performed for the design or development of the Facilities.
- 7.1.4. All premiums, deductibles, and other costs of project insurance, which shall include, but not be limited to insurance for builders' risk, arising out of or resulting from this Contract or developing the Facilities.
- 7.1.5. All federal, state or local taxes of any character imposed upon the Facilities, if applicable.
- 7.1.6. Payroll of the CRC's staff that perform work relating to the Facilities, including customary labor loading charges applicable thereto, such as Social Security tax, federal or state unemployment taxes, and time-off allowances; and other expenses the CRC incurs in development of the Facilities.
- 7.1.7. CRC's allocated administrative and general expenses to cover the costs of services rendered by it in development of the Facilities.
- 7.2. Fee for Service. The CRC shall not be entitled to a fee, price, percentage, or any other compensation over and above the costs of services rendered by them in the performance of the Project Work.
- 7.3. Construction Budget. The CRC shall prepare and submit to the CCWRD on or before June 30, 2009, or at such later time as the CCWRD Manager of Engineering and the CRC Assistant Director of Engineering and Operations may agree in writing, a proposed Construction Budget for all Project Costs for Project Work. All Construction Budget Project Costs for Project Work are subject to the CCWRD BOT approval, therefore, the proposed Construction Budget shall separately state design, material and construction costs. In addition, the proposed Construction Budget must reflect expected expenditures by calendar year month and inflationary increases, if any. The proposed Construction Budget shall include those costs incurred by the CRC for Project Work prior to the submission of the Construction Budget to the CCWRD. Such costs incurred prior to the submission of the Construction Budget shall be included in the amount shown in the Construction Budget for the first month following the date of approval of the Construction Budget. Once the Construction Budget has been approved by CCWRD BOT, the CCWRD Manager of Engineering shall provide an approved budget (in writing) to CRC and such budget shall constitute the Construction Budget.
- 7.4. Adherence to Construction Budgets. The CRC shall expend, or authorize the expenditure of funds for Project Work only in conformity with the then-effective

Construction Budget. The CCWRD shall compensate the CRC for Project Costs as agreed upon by the Parties in the Construction Budget.

- 7.5. Funding Advances and Billing Process. Funding advances and billing shall be processed in accordance with Section E of Exhibit 1 Scope of Work.
- 7.6. Tracking Expenditures. The CRC shall record, track and monitor expenditures for work performed pursuant to this Contract, and monthly provide CCWRD with records of invoices and payroll. If at any time the CRC becomes aware that the monthly amounts or the total Construction Budget amount shall be exceeded by the CRC, then the CRC shall submit to the CCWRD a proposed revision to the Construction Budget.
- 7.7. Revisions to the Construction Budget. Should it become necessary, the CRC may propose revisions to the Construction Budget after the Construction Budget has been approved by the CCWRD Manager of Engineering. Proposed revisions to the Construction Budget, along with a written explanation of the basis for the change, shall be submitted to the CCWRD for consideration. Once approved in writing by the CCWRD Manager of Engineering, the revised budget which may be subject to CCWRD BOT approval, shall constitute the Construction Budget.
- 7.8. Failure to Agree on Construction Budgets or Provide Advance Funding. If (1) the CCWRD and the CRC fail to agree upon the Construction Budget or any revision thereto requiring BOT approval, or (2) the CCWRD fails to advance funds to the CRC pursuant to this Contract, then the Authorized D&C Representatives shall meet within fourteen (14) days to attempt to develop an alternative design to meet CCWRD budget constraints. In the event that the Authorized D&C Representatives cannot resolve the issues and finalize the Construction Budget or funding issue, they shall provide to the CCWRD General Manager and the CRC Executive Director a written document identifying the issues under dispute and presenting each Party's proposed resolution of each issue. The CCWRD's General Manager and the CRC's Executive Director shall meet within seven (7) days of receipt of this document, and attempt to resolve the issues set forth therein. In the event that the CCWRD General Manager and the CRC's Executive Director cannot resolve the issues and finalize the Construction Budget or funding issue, this Contract shall be deemed terminated, and the CRC shall be under no obligation to continue to develop the Facilities. Such termination shall not affect the CRC's legal rights, including the right to collect all amounts owed to the CRC by the CCWRD, if any. Such amounts may include, without limitation, unfunded Project Costs. It is the intention of the Parties that the CRC shall not be required to ever advance any funds or provide any construction

services unless it has received funds in advance from the CCWRD.

- 7.9. Final Accounting. Within one hundred and twenty calendar (120) days after the completion of construction and development, the CRC shall determine the actual Project Costs for the Facilities, and shall forward such information to the CCWRD.
- 7.10. Refunds. If the actual cost is less than the amount advanced by the CCWRD as determined by the final accounting, and the construction of the facilities is either completed or terminated, the CRC shall refund the difference within thirty (30) days following completion or termination of the work. Neither Party shall pay interest on refunds.

8. OWNERSHIP OF PROPERTY

It is understood and agreed by the Parties that Facilities constructed or caused to be constructed by the CRC pursuant to this Contract are and shall remain the exclusive property of the CCWRD.

9. ENERGY PURCHASES AND SALES

The purchase or sale of energy by either Party to the other Party shall be done pursuant to a separate agreement between the Parties.

10. OPERATION AND MAINTENANCE

- 10.1. Division of Responsibility. The CRC shall operate and maintain the Facilities.
- 10.2. Operation and Maintenance Practices. Operation and maintenance of the Facilities shall be in accordance with Prudent Utility Practice.
- 10.3. Switching at the CCWRD Substation. All switching for clearance purposes within the fenced perimeter of the CCWRD Substation shall be under the direction and operational jurisdiction of the CRC, as set forth in sections L and M of Exhibit 1 Scope of Work.
- 10.4. Interconnected Utility Clearances. Upon request, and proper scheduling, each Party shall issue to the other, an interconnected utility clearance, in accordance with Prudent Utility Practices.
- 10.5. O&M Authorized Representatives. Thirty (30) calendar days before any Component of the Facilities becomes Operational, the CRC and the CCWRD shall each identify in writing a designated representative, and at any time a Party may identify in writing a designated alternate to that representative, for operation and maintenance matters ("O&M Authorized Representative"). The O&M Authorized Representative shall serve as the point of contact and coordination for operation and maintenance matters, including but not limited to switching procedures, clearances, standard operating procedures, maintenance plans and programs, and budgets. Either Party may change the

designation of its O&M Authorized Representative and its alternate, upon written notice given to the other and confirmed promptly by written notice.

- 10.6. Meetings. The O&M Authorized Representatives of the Parties shall meet at least annually, no later than February 15th, and at such other time(s) as may be mutually agreed upon, to review budgets, to coordinate operation and maintenance schedules and to discuss other matters relating to the Facilities.
- 10.7. Standard Operating Procedures. The O&M Authorized Representatives of the Parties shall establish and agree to guidelines and operating procedures and any other matters relating to the operation of the Facilities which are not specifically defined herein.

11. CHARGE FOR OPERATION AND MAINTENANCE OF THE FACILITIES

- 11.1. Responsibility. The CCWRD shall be responsible for the cost of the CRC's operation, maintenance, repair and replacement of the Facilities.
- 11.2. Operation and Maintenance Budget. Thirty (30) calendar days before any Component of the Facilities becomes Operational, and annually thereafter on or before February 15th, the CRC shall prepare and submit to the CCWRD a proposed annual Operation and Maintenance Budget for the Facilities. The periods covered by the Operation and Maintenance Budget shall coincide with the CRC's fiscal year, which runs July 1st through June 30th of each year. The proposed Operation and Maintenance Budget shall separately state operation, maintenance, and replacement costs, and direct and indirect costs associated with each. The proposed Operation and Maintenance Budget shall reflect expected expenditures by month. Following submission, the O&M Authorized Representatives shall meet to resolve any disputes regarding the proposed Operation and Maintenance Budget. Once approved in writing by the O&M Authorized Representatives and the CCWRD BOT, the submitted budget shall constitute the Operation and Maintenance Budget.
- 11.3. Adherence to Operation and Maintenance Budgets. The CRC shall expend funds to operate, maintain, repair and replace the Facilities only in conformity with the then-effective Operation and Maintenance Budget, except for significant repairs necessitated by Uncontrollable Forces or Emergencies.
- 11.4. Billing Process. The CRC shall issue a monthly bill to the CCWRD based on the Operation and Maintenance Budget for the succeeding month plus any cost incurred by the CRC on behalf of CCWRD to restore service following an Uncontrollable Force or Emergency during the current month.
- 11.5. Tracking Expenditures. The CRC shall record, track and monitor expenditures for work performed related to the operation, maintenance, repair and replacement of the Facilities,

and monthly provide CCWRD with records of invoices and payroll. If at any time the CRC becomes aware that the monthly amounts or the total Operation and Maintenance Budget amount will be exceeded by the CRC, then the CRC shall submit to the CCWRD a proposed revision to the Operation and Maintenance Budget.

- 11.6. Revisions to the Operation and Maintenance Budget. Should it become necessary, the CRC may propose to CCWRD revisions to the Operation and Maintenance Budget after the Operation and Maintenance Budget has been approved by the O&M Authorized Representatives along with a written explanation of the basis for the proposed revisions. Once approved in writing by the O&M Authorized Representatives and the CCWRD BOT, the approved revised budget shall constitute the Operation and Maintenance Budget.
- 11.7. Annual Accounting. Within sixty calendar (60) days following the end of the CRC's fiscal year, the CRC shall determine the actual operation, maintenance, repair and replacement costs expended on the Facilities, and shall forward such information to the CCWRD.
- 11.8. Refunds. If the actual cost of operation, maintenance, repair and replacement of the Facilities is less than the amount advanced by the CCWRD as determined by the annual accounting, the CRC shall refund the difference to the CCWRD or shall apply the difference to upcoming amounts owed by the CCWRD for operation, maintenance, repair and replacement of the Facilities, as requested by the CCWRD. Neither Party shall pay interest on refunds.

12. UNCONTROLLABLE FORCES AND EMERGENCY COSTS

The CRC shall immediately notify the CCWRD of Uncontrollable Forces or Emergencies that result in the need for repairs which are estimated to require expenditure in excess of five thousand dollars (\$5,000.00) by the CRC. The CRC shall take all actions necessary to restore service promptly and as cost-effectively as possible following an Uncontrollable Force or Emergency. The CCWRD shall compensate the CRC for operation and maintenance of the Facilities as agreed upon by the Parties in the Operation and Maintenance Budget and for costs following an Uncontrollable Force or Emergency.

13. INSURANCE

The Project Work and Facilities shall be covered by insurance paid for by the CCWRD. The CRC and the CCWRD shall jointly determine and agree on the type and amount of insurance coverage for the Facilities no later than September 15, 2009. Insurance shall only be procured from insurance companies authorized to do business in Nevada under a then subsisting certificate

of insurance issued by the Nevada Commissioner of Insurance, and A Best Key Rating of B++ or better.

14. TERMINATION

- 14.1. Termination. This Contract may be terminated prior to the date specified in section 4 upon any one of the following conditions:
 - 14.1.1. By mutual written consent of the Parties.
 - 14.1.2. By the CRC if the CCWRD fails to advance or otherwise provide funds required by this Contract in accordance with Section 7.9.
 - 14.1.3. By the CRC if the CCWRD fails to meet its obligations under this Contract.
 - 14.1.4. By the CCWRD if the CRC fails to meet its obligations under this Contract.
- 14.2. Financial Obligations. Termination of this Contract shall not terminate any Party's financial or performance obligation to any Party hereunder for funds expended or owing under contracts for which payment has been authorized prior to the date of such termination, and such termination shall not impair or be construed to limit a Party's legal right to collect amounts owed, if any, or to compel performance for tasks previously paid for.
- 14.3. Obligation to Construct. Termination of this Contract shall cease the obligation of the CRC to construct, operate or maintain the Facilities, except as required to complete work that CCWRD is paying for under section 14.2.

15. LIABILITY

- 15.1. Except as herein provided and except to the extent of any matter covered by project insurance, neither Party, nor its respective directors, officers or employees, shall be liable to the other Party for any loss or damage of any kind or nature, including direct, indirect or consequential losses or damages, resulting from the past or future performance or nonperformance of their respective duties or obligations pursuant to this Contract related to the Project. Each Party expressly releases the other Party, and their respective directors, officers, and employees, from any claim, demand, obligation or liability against or of such other Party, its directors, officers, and employees, for any such loss or damage. If any judgment is rendered against either Party, or its respective directors, officers or employees, for any loss or damage which is covered by project specific insurance, but for which for any reason payment is not made to that Party, the Party awarded such judgment shall not execute, levy or otherwise enforce such judgment, including recording or effecting a judgment lien, against the other Party, or its respective directors, officers or employees. Notwithstanding the above provisions, the

parties do not waive any cause of action, claim, right or remedies against non-Parties for damages which are contributed to or caused by others.

- 15.2. The provisions of this section must not be construed so as to relieve any insurer of its obligation to pay any insurance proceeds in accordance with the terms and conditions of valid and collectible insurance policies.

16. NOTICES

- 16.1. Any notice, demand or request required or authorized by this Contract must in writing, signed on behalf of the Party by an authorized representative, and delivered in person or sent by registered or certified mail, postage prepaid, to the persons specified below:

To the CRC:

George M. Caan, Executive Director
Colorado River Commission of Nevada
555 East Washington Avenue, Suite 3100
Las Vegas, Nevada 89101-1065
Phone No.: (702) 486-2686
Fax No.: (702) 486-2695
E-mail: gcaan@crc.nv.gov

To the CCWRD:

Richard Mendes, General Manager
Clark County Water Reclamation District
5857 East Flamingo Road
Las Vegas, Nevada 89122
Phone No.: (702) 668-8143
Fax No.: (702) 668-9160
E-mail: rmendes@cleanwaterteam.com

- 16.2. Either Party may at any time, by written notice to the other Party, designate different or additional persons or different addresses for the giving of notices, demands or request hereunder.
- 16.3. In addition to the methods of communication described in subsection 16.1, either Party may use telecopy or facsimile transmission. Communications related to scheduling provided from and to the operating personnel of either Party may be accomplished by electronic mail. Where telecopy, facsimile, or electronic mail is utilized, the sending Party must keep a contemporaneous record of the communication.
- 16.4. This section does not apply to notices, demands or requests of a routine nature, such as a demand for money due. These communications must be given in a manner prescribed by the Authorized Representative.

17. ASSIGNMENT OF CONTRACT

This Contract shall be binding on, and inure to the benefit of, the Parties and their respective heirs, legal representatives, successors and permitted assigns. However, neither Party may assign or otherwise transfer its rights under this Contract without the prior written approval of the other Party, which approval must not be unreasonably withheld. Any assignment or other transfer of this Contract does not relieve the Parties of any obligation hereunder.

18. AUDIT

The CRC shall retain, and the CCWRD shall have the right to audit, cost records for Project Work, operation, maintenance, repair and replacement of the Facilities, for a given fiscal year for two (2) years following the end of that CRC fiscal year. Thereafter the CCWRD shall not have any right to audit such cost records or to request an adjustment of the costs calculated by the CRC.

19. ACCESS TO BOOKS AND RECORDS

Each Party is entitled to free access at all reasonable times to the books and records of the other Party relating to activities under this Contract, with the right at any time during office hours to make copies of those books and records, consistent with the terms of section 18.

20. DISPUTE RESOLUTION

- 20.1. Each Party shall designate a senior officer who is authorized to resolve any dispute arising under, out of, or in relation to any provision of this Contract and, unless otherwise expressly provided herein, to exercise the authority of a Party to make decisions by mutual agreement. The Parties agree to attempt in good faith to resolve all such disputes promptly, and to provide each other with reasonable access during normal business hours to any and all records, information, and data pertaining to the dispute.
- 20.2. If such a dispute is not resolved pursuant to subsection 20.1 within thirty (30) days after a Party has received notice referring the dispute to the designated senior officer of the Party, either Party may request that the dispute be submitted to mediation or binding arbitration by the American Arbitration Association (“AAA”). The Party requesting mediation or binding arbitration shall provide notice to the other Party of its request.
- 20.3. The mediation or arbitration must be conducted in accordance with the provisions of this Contract, the applicable provisions of the Uniform Arbitration Act of 2000 in chapter 38 of the NRS, and, where not inconsistent with this Contract and Nevada law, the applicable rules and procedures of the AAA. The mediation or arbitration must be held in Las Vegas, Nevada, or at any other mutually agreed upon location. Each Party shall

bear its own expenses (including attorneys' fees) with respect to the mediation or arbitration. The Parties shall share the expenses of the mediator or arbitrators equally. The mediators or arbitrators conducting a proceeding under this subsection shall have no authority to award to any Party consequential, incidental, punitive, exemplary, special, or indirect damages, or any lost profits or business interruption damages, whether by virtue of any law or otherwise.

- 20.4. If neither Party to a dispute not resolved pursuant to subsection 20.1 requests mediation or arbitration, the dispute may be brought to any court of competent jurisdiction within the State of Nevada.
- 20.5. If the Parties engage in mediation or arbitration pursuant to this section that does not resolve a dispute, then either party may bring the dispute to any court of competent jurisdiction within the State of Nevada.


21. GENERAL CONTRACT PROVISIONS

- 21.1. Documents. Each Party agrees, upon request by the other Party, to make, execute, and deliver any and all documents reasonably required to implement the terms, covenants, and conditions of this Contract.
- 21.2. Exhibits. Inasmuch as certain provisions of this Contract may change from time to time during the term hereof, they shall be set forth in amended exhibits agreed upon by the O&M Authorized Representatives of the Parties. The initial Exhibit 1 Scope of Work is attached hereto and all future exhibits by this reference are incorporated herein and made a part hereof, and shall remain in effect in accordance with its terms unless superseded by an amended version of the exhibit approved by the Parties.
- 21.3. No Third-Party Beneficiaries. This Contract is made solely for the benefit of the Parties and their respective permitted successors and assigns, and no other person or entity shall have or acquire any right, as a third-party beneficiary or otherwise, by virtue of this Contract.
- 21.4. Waiver. By mutual written consent of all the Parties, performance by one or more of the Parties of any obligation under this Contract may be excused or waived. No delay in exercising any right or remedy shall constitute a waiver thereof, and no waiver by any Party of the breach of any covenant of this Contract shall be construed as a waiver of any preceding or succeeding breach of the same or any other covenant or condition of this Contract.
- 21.5. Amendment. None of the terms and conditions of this Contract may be changed in any manner by any action or inaction of either Party unless in writing executed by the Parties.

- 21.6. Specific Enforcement. The Parties agree that the provisions of this Contract, other than provisions requiring the payment of money, shall be specifically enforceable,
- 21.7. Independent Terms, Covenants, Conditions. Each term, covenant and condition set forth and contained in this Contract is deemed to be an independent term, covenant or condition, and the obligation of any Party to perform any or all of the terms, covenants, and conditions to be kept and performed by it is not conditioned on the performance by any or all of the other Parties of any or all of the terms, covenants or conditions to be kept and performed by them.
- 21.8. Severability. If any of the terms, covenants or conditions of this Contract, or the application of any such term, covenant or condition to any person or circumstance, is held invalid by any court having jurisdiction in the premises, the remainder of this Contract, and the application of such term, covenant or condition to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby. Should any provision of this Contract be declared invalid or prohibited, the Parties shall in good faith negotiate a new provision to replace the provision declared invalid or prohibited, and amend this Contract to include such provision.
- 21.9. Headings. The section headings in this Contract are intended for convenience only and shall not be construed as interpretations of the text of the Contract.
- 21.10. Entire Agreement. This Contract, including all exhibits hereto, constitutes the entire agreement between the Parties pertaining to all matters hereunder. There are no oral promises, conditions, representations, understandings, interpretations or term of any kind as conditions or inducements to the execution hereof or in effect between the Parties. No change, addition, or deletion may be made to this Contract except by a written amendment executed by the Parties.
- 21.11. Governing Law. This Contract is governed by the laws of the State of Nevada.
- 21.12. Authority to Contract. Each Party represents to the other that it has full power and authority to execute this Agreement and to perform its obligations under this Agreement, and that it has taken all requisite action to authorize such execution and performance.
- 21.13. Counterparts. This Contract may be executed in any number of counterparts, and each executed counterpart shall have the same force and effect as an original instrument as if both the Parties to the aggregated counterparts had signed the same instrument.

IN WITNESS WHEREOF, the Parties have executed this Contract.

State of Nevada, acting by and through
Its COLORADO RIVER COMMISSION
OF NEVADA




George M. Caan
Executive Director

6/10/09

Date

Approved as to form:




Ann C. Pongracz
Senior Deputy Attorney General

6/09/09

Date

CLARK COUNTY WATER RECLAMATION DISTRICT

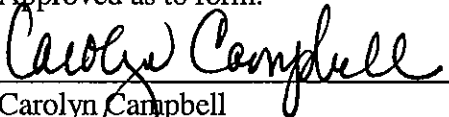


Richard Mendes
General Manager

4/2/09

Date

Approved as to form:



Carolyn Campbell
Deputy District Attorney

5/18/09

Date

EXHIBIT 1

Scope of Work

CONTRACT NO. CRCPDP-200
BETWEEN THE
COLORADO RIVER COMMISSION OF NEVADA
AND THE
CLARK COUNTY WATER RECLAMATION DISTRICT
FOR THE
CONSTRUCTION, OPERATION AND MAINTENANCE
OF ELECTRIC FACILITIES

Approved:

CCWRD **Date**

CRC **Date**

CLARK COUNTY WATER RECLAMATION DISTRICT SCOPE OF WORK

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CLARK COUNTY WATER RECLAMATION DISTRICT SCOPE OF WORK

A. EXECUTIVE SUMMARY

The Clark County Water Reclamation District (CCWRD) has requested that the Colorado River Commission of Nevada (CRC) purchase materials, and design, construct, operate and maintain CCWRD-owned substations and medium voltage distribution facilities to be located at the CCWRD Central Plant and Advanced Water Treatment facilities at 5857 East Flamingo Road in Las Vegas, Nevada 89122.

CRC is agreeable to purchasing materials, and designing, constructing, operating and maintaining CCWRD's facilities, subject to the terms set forth in the Interlocal Agreement Contract No. CRCPDP-200 between the CCWRD and the CRC to establish specific roles and responsibilities.

As indicated in this Scope of Work, CRC will design, construct and energize the substations and associated 15-kV underground distribution circuits, and perform Operation and Maintenance of these Facilities for the first 90 days, for a not-to-exceed amount of twelve million three hundred thousand dollars (\$12,300,000.00). This amount does not include previous funds expended by CCWRD on materials and designs, and does not include the cost of work to be performed by NV Energy to extend overhead 69-kV transmission lines to the substations. It further does not include the cost of work to be performed by the CCWRD on the distribution circuits as detailed in this Scope of Work.

On-site construction of the required substations is expected to commence in December of 2009. Energization of one transformer bank at each of the three substations is expected to occur by mid April of 2010. Energization of the second transformer bank at the Surge Pond Substation is expected to occur by the end of April 2010.

B. BACKGROUND

The CCWRD is currently planning the construction of additional facilities at its Central Plant and Advanced Water Treatment (AWT) facilities. These facilities will increase electrical load and will necessitate the construction of additional substation capacity and distribution feeders within the Central Plant and AWT site.

The existing Central Plant and AWT are currently served from several substations and distribution feeders owned and operated by NV Energy. A single line depiction of the electrical system serving the Central Plant and AWT is provided in Appendix A.

The CCWRD desires to replace these existing NV Energy owned and operated substations with new, customer-owned substations that are dedicated to serving only CCWRD facilities and loads.

Three new substations are planned to serve the existing and planned increase in load. These substations are:

- Surge Pond
- Rochelle
- AWT

From these new substations, underground distribution circuits will be constructed that will tie to the existing underground feeders at the site and to new 15-kV switchgear. A single line diagram depicting the planned substation facilities and the new underground distribution circuits is provided in Appendix B.

The proposed new substations will be interconnected to existing NV Energy 69-kV transmission lines. Through an agreement between CCWRD and NV Energy, NV Energy has designed the loop-in and loop-out of its Winterwood-Clark 69-kV transmission line to serve the Surge Pond Substation. NV Energy is currently designing a loop-in and loop-out of its Winterwood-Henderson 69-kV transmission line to serve the Rochelle Substation and a loop-in and loop-out of its Winterwood-Linquist 69-kV transmission line to serve the AWT Substation.

C. UTILITY RESPONSIBILITY

NV Energy is currently the electric utility responsible for electric service to the CCWRD at the Central Plant and AWT facility. No change in utility responsibility is being considered at this time. The purchase of energy from any entity other than NV Energy will be done pursuant to a separate agreement. In order to provide dedicated substation facilities to serve its loads, the CCWRD had determined to provide its own facilities and to receive electric service from NV Energy at a 69-kV delivery level following completion and energization of the new substations.

The CCWRD will coordinate with NV Energy regarding the change in the delivery location and voltage, and will negotiate a change the nature of its electric service from distribution to transmission.

D. CRC ROLE AND RESPONSIBILITY

The CCWRD has requested the CRC purchase materials, and design, construct, operate and maintain electric facilities for the required new substations and medium voltage distribution circuits to designated demarcation points as discussed later in this Scope of Work. The electrical facilities located at the Central Plant and the AWT will remain under the ownership of the CCWRD.

The details of CRC's roles and responsibilities will be provided in the Interlocal Agreement Contract No. CRCPDP-200 between the CCWRD and the CRC. The details will be based upon the Scope of Work, demarcation points, schedules and costs contained within this Scope of Work.

No change in responsibility for the design and construction of the 69-kV transmission line extensions to the new substations is contemplated. These extensions of existing NV Energy 69-kV transmission lines will be designed, constructed, owned and operated by NV Energy.

E. FUNDING

The CCWRD will provide advance monthly payment to the CRC for design, purchase of materials and construction of the substation and distribution circuit facilities and their operation and maintenance. As discussed later in this Scope of Work, the CRC has prepared an initial project cost estimate. This estimate will be used to develop a cash flow statement that will serve as the basis for payments. As project work progresses, the CRC will prepare updates of the project cost estimate and cash flow statement and once approved by the CCWRD, these will serve as the basis for future payments. CRC will provide CCWRD with monthly updates of invoices and payroll expenses.

F. PRIOR SUBSTATION DESIGN AND MATERIAL PROCUREMENT

Under an agreement with NV Energy, the CCWRD has funded substation design efforts by NV Energy and procurement of certain substation materials. The CCWRD has requested the CRC utilize these prior funded designs and purchased materials to the extent possible in CRC's completion of the new substations. A list of the purchased materials is provided in Appendix C.

The CRC has reviewed the previously purchased materials and believes they can be utilized in the completion of the three planned substations. However, the control system and protection schemes are still under review and modifications to the relay panels may be necessary. The cost of equipment and materials already purchased by the CCWRD are not included in the CRC estimate to complete the project contained in this Scope of Work.

It is imperative that CCWRD obtain copies of vendor drawings, including outline drawings, loading drawings, nameplate drawings, wiring diagrams, installation instructions, and related items from NV Energy and provide copies of these documents to CRC by June 15, 2009.

Design work that has been prepared by NV Energy for the three planned substations appears to be at a very preliminary stage. These designs will be supplemented and completed as necessary by the CRC.

G. PRIOR DISTRIBUTION CIRCUIT DESIGN

The design drawings prepared by NV Energy for the planned distribution circuit ductbanks are provided in Appendix D to this Scope of Work. The CRC has reviewed these previously prepared designs and believes additional details must be provided for

construction, including ductbank depths, concrete requirements, and similar details. The ductbank designs will be supplemented as necessary by the CRC.

In addition, in order to allow for remote supervisory control and data acquisition (SCADA) communication to CRC's operation center at the Newport Substation, CRC proposes the installation of additional conduit in the distribution ductbanks. Specifically a 2-inch communication conduit is required in all distribution ductbanks.

H. SUBSTATION DESIGN AND CONSTRUCTION SCOPE OF WORK

The CRC will prepare complete and detailed calculations, designs, estimates, material specifications and construction specifications and provide related services for the design and construction of the substations. Such designs and specifications will include at a minimum, bills of materials, equipment sizes and ratings, material requirements, performance parameters, layout details, construction details and all other information required to procure, install, erect and construct the substations. In completion of its responsibilities, the CRC may perform the following activities.

- Prepare periodic updates of the initial conceptual substation cost estimate and cash flow statement.
- Prepare periodic updates of the initial substation construction schedule.
- Prepare engineering studies necessary to size equipment, select fuses and determine relay settings.
- Conduct detailed subsurface explorations in order to prepare foundation and grounding system designs. If the CCWRD has geotechnical data for the Central Plant and AWT facility that can be provided, this task will not be required.
- Conduct site surveys of the substation sites and prepare grading plans, drainage plans and layout drawings.
- Prepare documents containing drawings, technical specifications, bid instructions, bid forms, contracts, general conditions and related items for the procurement of owner-furnished materials for the substations. The CRC will issue purchase contracts to selected vendors for material procurement.
- Review and approve submittals from vendors for owner-furnished material.
- Conduct factory inspections of owner-furnished materials as deemed appropriate and necessary.
- Prepare design and bid documents containing drawings, technical specifications, bid instructions, bid forms, contracts, general conditions and related items for the substation construction contract.
- Locate and stake baseline and reference points for the substations.

- Evaluate bids received for the substation construction contract and award contract to the bidder providing the best bid based upon the selection procedures established by the CRC.
- Obtain a dust control permit for substation construction activities.
- Review contractor submittals for compliance with the substation construction contract.
- Provide construction management services during construction of the substations.
- Conduct field testing and inspection of substation equipment and facilities, and complete functional testing and energization of all substations.
- Prepare as-built drawings for the substations.

I. DISTRIBUTION FEEDER DESIGN AND CONSTRUCTION SCOPE OF WORK

The CRC will design and construct the distribution feeder ductbanks to the first switch located outside of each substation. The CCWRD will design and construct the distribution feeder ductbanks from the switch vaults to the termination of the feeder at the CCWRD switchgear. The CRC will furnish and install all necessary cable, terminations, and pad mounted switches between the substations and the CCWRD 15-kV switchgear.

In support of CRC's responsibilities, the CRC will prepare complete and detailed calculations, designs, estimates, material specifications and construction specifications and to provide related services for the design and construction of the distribution feeders. Such designs and specifications will provide at a minimum, bills of materials, equipment sizes and ratings, material requirements, performance parameters, layout details, construction details and all other information required to procure, install, erect and construct the facilities that CRC is responsible for. In completion of its responsibilities, the CRC may perform the following activities.

- Prepare periodic updates of the initial conceptual distribution circuit cost estimate and cash flow statement.
- Prepare periodic updates of the initial distribution circuit construction schedule.
- Prepare engineering studies necessary to verify cable sizes
- Conduct site surveys of the ductbank locations as necessary to supplement existing data and prepare plan and profile drawings.
- Prepare documents containing drawings, technical specifications, bid instructions, bid forms, contracts, general conditions and related items for the procurement of owner-furnished materials for the distribution circuits, including cable and terminations. The CRC will issue material contracts to selected vendors for material procurement.

- Review and approve submittals from vendors for owner-furnished material.
- Conduct factory inspections of owner-furnished materials as deemed appropriate and necessary.
- Prepare design and bid documents containing drawings, technical specifications, bid instructions, bid forms, contracts, general conditions and related items for the ductbank construction contract and the cable installation contracts, which may be included in the substation construction contract.
- Locate and stake reference points for the ductbanks.
- Evaluate bids received for the ductbank construction and cable installation contract and award contract to the bidder providing the best bid based upon the selection procedures established by the CRC.
- Obtain a dust control permit for ductbank construction activities.
- Review contractor submittals for compliance with the ductbank construction contract.
- Provide construction management services during construction of the distribution circuits.
- Conduct field testing and inspection of distribution circuits, and complete functional testing and energization of all circuits.
- Prepare as-built drawings for the distribution circuits.

J. PERMITTING

As part of the CCWRD's overall expansion and modification of the Central Plant and AWT facilities, the CCWRD will obtain any necessary right of way, conditional use permit and grading permits for the substation facilities. The CRC will obtain dust control permits at the time of construction.

K. SUBSTATION DESIGN

The CRC has reviewed the designs prepared by NV Energy for the Surge Pond, Rochelle, and AWT substations. The design of each substation calls for a loop-in and loop-out of a 69-kV transmission line, the installation of up to four 20 MVA transformers, and the installation of a main and transfer distribution bus structure with the capability of supporting nine outgoing distribution feeders. This appears to be a standard NV Energy substation design, not necessarily optimized for the needs of the CCWRD.

At this time substation steel and bus work has not been purchased and as such modifications to optimize for CCWRD needs can be made. CRC proposes to modify the

planned NV Energy substation design in consultation with CCWRD to optimize each for the intended long-term load.

Attached in Appendix E are single line diagrams of the CRC proposed substations that have been used for cost estimating purposes. This design is largely based on the NV Energy design, with minor modifications to improve reliability to the CCWRD by adding additional 69-kV breakers. Changes to this proposed design may occur following further consultation with CCWRD.

As shown by the substation single line diagrams, initially one power transformer will be installed at the Rochelle Substation and one at the AWT Substation and two power transformers will be installed at the Surge Pond Substation.

L. DEMARCATIION POINTS CRC – NV ENERGY

For design and construction purposes, the proposed demarcation point between NV Energy responsibility and CRC responsibility will be the three-pole, self-supporting, 69-kV line termination structures set inside the substation fence. CRC proposes NV Energy retain all work associated with these structures including deadending incoming conductor at these structures. CRC proposes all work downstream of these structures to be performed by CRC, including installation of jumpers from the deadend structures to line isolating switches located in the substation. The proposed points of demarcation are further identified on the single line diagrams in Appendix E.

For operation and maintenance purposes, it is proposed the operational demarcation will be the 69-kV line isolating switches on the line side of the 69-kV breakers.

M. DEMARCATIION POINTS CRC - CCWRD

For design and construction purposes, the proposed demarcation point for ductbank construction responsibility between CCWRD and CRC will be the first switch vault located outside of each substation as shown by Appendices B and D. The CCWRD will set and install these designated vaults and all downstream ductbanks.

In reviewing the NV Energy design, CRC is not sure there is a need to install switches on these vaults, given that the distribution system is dedicated to CCWRD purposes, and given that CCWRD does not have further expansion plans that would necessitate switches. CRC has prepared the cost estimate assuming switches will be installed, but will consult with CCWRD before procurement of any pad mount 15-kV switch.

For 15-kV cable installation, the CRC will be responsible for installation and termination of all cable between the substations and the CCWRD 15-kV switchgear, including termination at intermediate switches installed by CRC, if any.

For operation and maintenance purposes, CRC will operate and maintain all CCWRD equipment and devices within the substation fences. CRC will operate and maintain all

distribution feeders between the substation and the CCWRD switchgear, unless CCWRD requests to retain this responsibility in any subsequent operation and maintenance agreement.

N. METERING

The current NV Energy design provides for revenue metering of the 15-kV distribution feeders. Given that the CCWRD will be altering its delivery point from the 15-kV level to the 69-kV level, CRC intends to install 69-kV primary metering on the high-side of each substation. CRC will not provide secondary revenue class metering of distribution circuits unless requested otherwise by CCWRD.

O. CRC COMMUNICATIONS

The CRC intends to remotely monitor and operate the planned substation facilities. This will be accomplished from CRC's control center located at the Newport Substation complex in Henderson, Nevada.

CRC proposes to transmit data and control signals from the Rochelle and Surge Pond Substations to the AWT Substation via fiber optic cables installed in 2-inch conduits located in the distribution ductbanks. Data and control signals from the AWT Substation will be transmitted via a directional radio at the AWT Substation to a matching directional radio at the CRC's communication vault at which point it will enter CRC's self-healing fiber optic communication ring for transmission to the Newport Substation.

P. NV ENERGY COMMUNICATIONS

CRC is unaware of NV Energy required communications to primary metering at the new substations. The nature of required communication will be determined in consultation with the CCWRD and NV Energy. The cost of any equipment to support NV Energy communication requirements has not been included in the cost estimates in this Scope of Work.

Q. STATION SERVICE POWER

Station service power for each of the substations will come from single phase, completely self protected 7200-240/120 volt, 100 kVA station power transformer located at each substation. Station service power from the CCWRD Central Plant or the AWT facility will not be required.

R. FENCING

Given the location of the proposed substations within the CCWRD complex, screening, ornate fencing, landscaping or other visual enhancements will not be required around the substations. CRC will install 8-foot high chain link fencing around each of the three substations.

S. SCHEDULE

On-site construction of the required substations is expected to commence in December of 2009. Energization of one transformer bank at each of the three substations is expected to occur by mid April of 2010. Energization of the second transformer bank at the Surge Pond Substation is expected to occur by the end of April 2010.

The schedule shown in Exhibit F has been prepared based on the assumption that the CRC and the CCWRD enter into an interlocal contract for design and construction of the electric facilities by June 9, 2009.

T. ESTIMATED COST

For planning purposes, CRC has estimated the costs to construct the three substations and the 15-kV distribution circuits. These costs are summarized in the following table. Detailed estimates are provided in Appendices G and H at the end of this Scope of Work. All costs listed below are in 2009 dollars.

Facility	Costs
Surge Pond Substation	\$2,568,000
Rochelle Substation	\$4,178,000
AWT Substation	\$2,169,000
15-kV Distribution Circuits	\$1,417,000
Total	\$10,332,000

The above costs do not include any amounts for project permitting and right-of-way acquisition, other than the supply of technical data to the CCWRD. The above costs include 20% for contingency given the preliminary level of estimating, but they do not include costs for operation and maintenance of the facilities after construction.

The costs quoted are for planning purposes only. The costs are based upon conceptual planning and historical costs for similar facilities. The costs are not based on detailed designs or unit pricing. **Actual costs will vary from those quoted.** Additional estimates will be prepared by CRC and provided to the CCWRD during development of the electrical facilities. These estimates will be prepared at the planning, design budgeting and construction stages of the project.

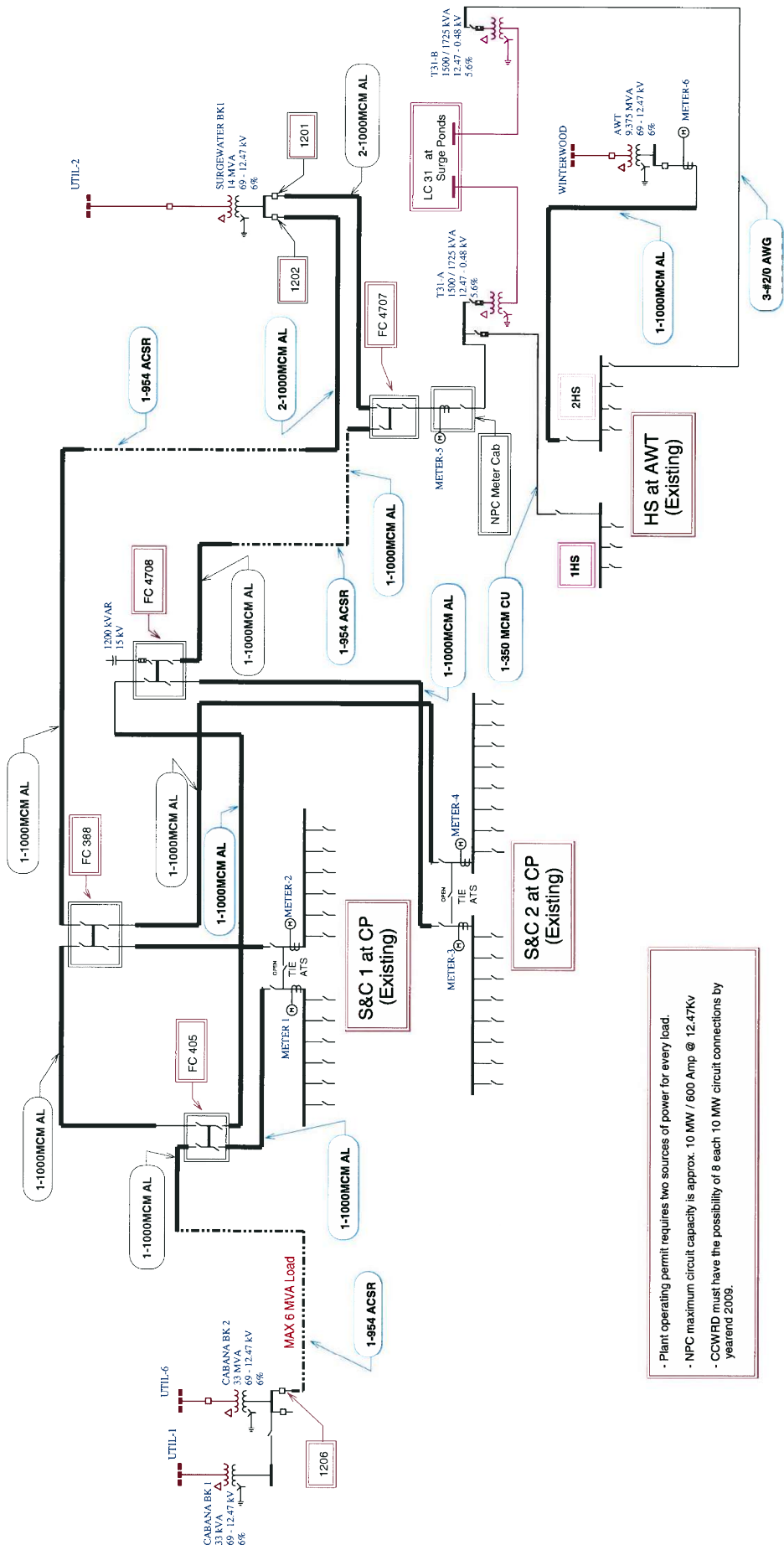
Appendix A

Existing Electrical System Single Line Diagram

Approved:

CCWRD **Date**

CRC **Date**



- Plant operating permit requires two sources of power for every load.
- NPC maximum circuit capacity is approx. 10 MW / 600 Amp @ 12.47Kv
- CCWRD must have the possibility of 8 each 10 MW circuit connections by yearend 2009.

Existing NPC SERVICES AND 12.47 KV DISTRIBUTION WITHIN THE CCWRD TREATMENT PLANT

RLM: 2 April 2009

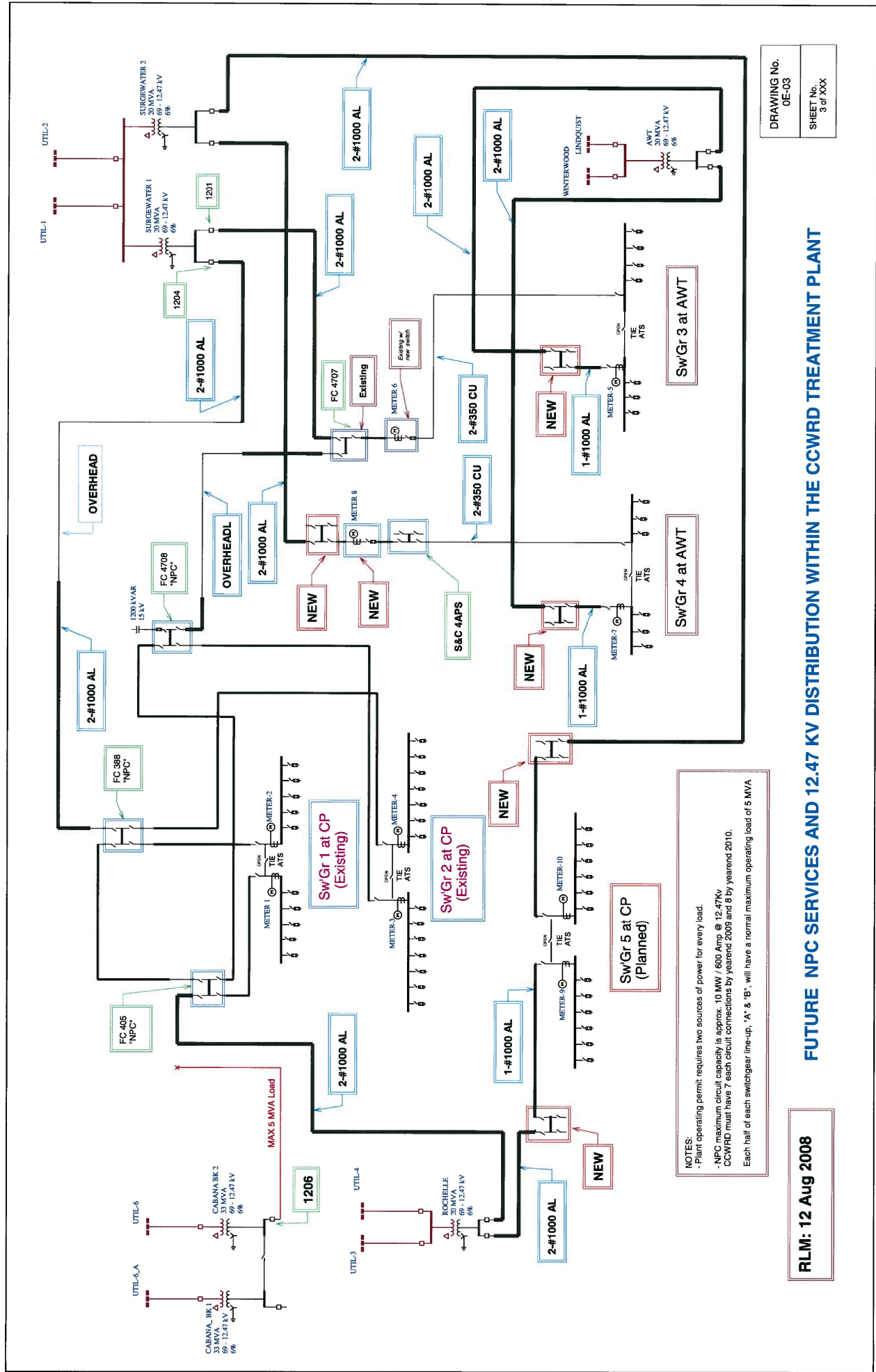
Appendix B

Proposed Electrical System Single Line Diagram

Approved:

CCWRD **Date**

CRC **Date**



FUTURE NPC SERVICES AND 12.47 KV DISTRIBUTION WITHIN THE CCWRD TREATMENT PLANT

NOTES:
 - Plant operating permit requires two sources of power for every load.
 - NPC maximum circuit capacity is approx. 10 MW / 600 Amp @ 12.47KV
 - CCWRD must have 7 each circuit connections by yearend 2008 and 8 by yearend 2010.
 - Each half of each switchgear line-up, "A" & "B", will have a normal maximum operating load of 5 MVA

DRAWING No.
OE-03

SHEET No.
3 of XXX

RLM: 12 Aug 2008

Appendix C

CCWRD Previously Procured Substation Materials

Approved:

CCWRD **Date**

CRC **Date**

CCWRD Previously Procured Substation Materials	
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Surge Pond Substation	
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Item	Quantity
Transformer, 67/12.47-kV, 12/16/20 MVA	2
Breaker, 69 kV	2
Switches, Motor Operated, 69-kV	3
Switches, Group Operated, 69-kV	5
Control Building, Pre-Fabricated with Relay Panels	1

AWT Substation	
-----------------------	--

Item	Quantity
Transformer, 67/12.47-kV, 12/16/20 MVA	1
Breaker, 69 kV	2
Switches, Motor Operated, 69-kV	3
Switches, Group Operated, 69-kV	5
Control Building, Pre-Fabricated with Relay Panels	1

Rochelle Substation	
----------------------------	--

Item	Quantity
Breaker, 69 kV	1

Appendix D

Previously Prepared Distribution Ductbank Designs

Approved:

CCWRD **Date**

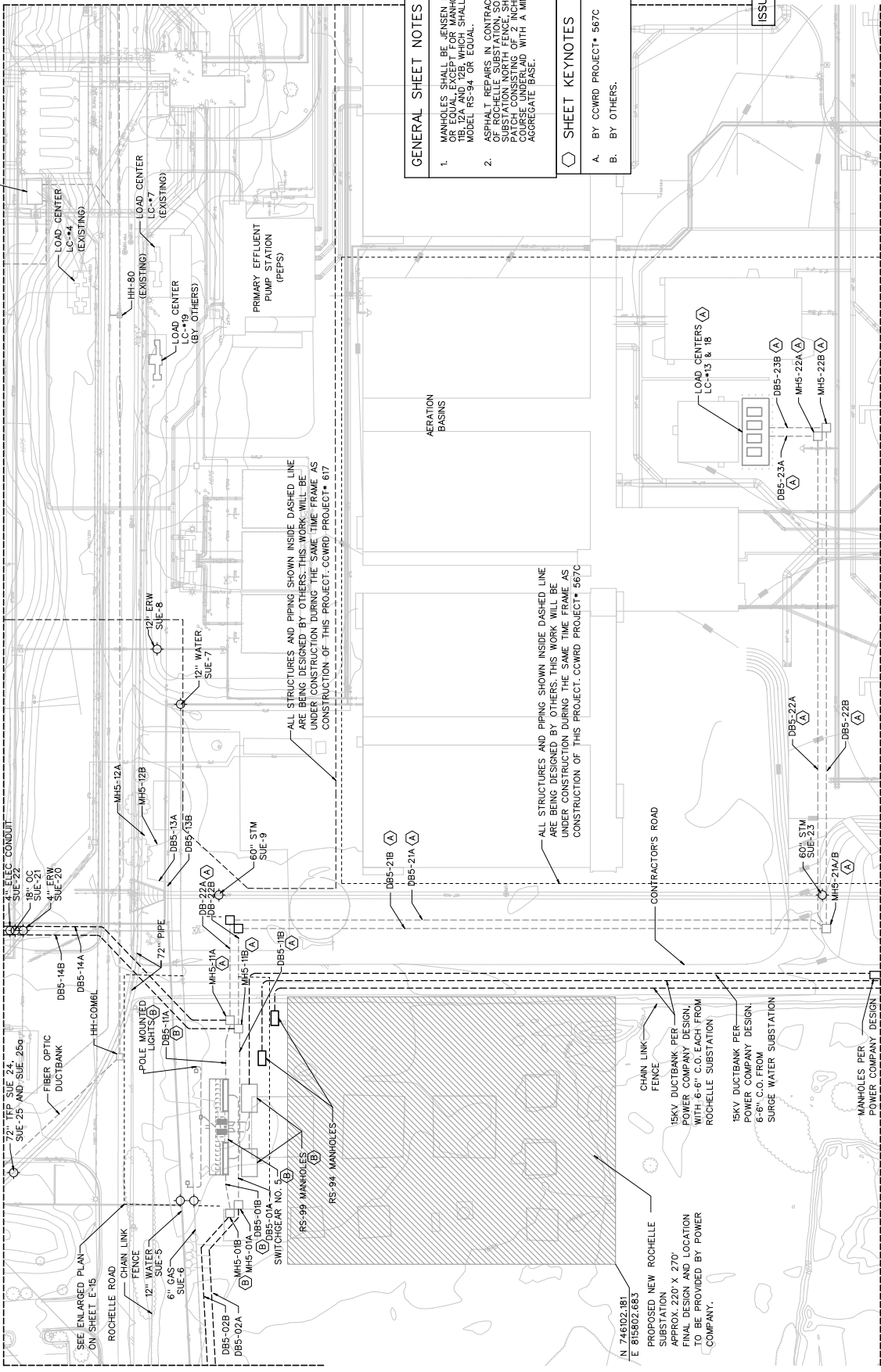
CRC **Date**



MATCHLINE - SEE SHEET E-5

MATCHLINE - SEE SHEET E-4

INTERMEDIATE PUMP STATION (IPS)
ELECTRICAL BUILDING (EXISTING)



GENERAL SHEET NOTES

- MANHOLES SHALL BE JENSEN PRECAST MODEL 775 OR EQUIVALENT EXCEPT FOR MANHOLE NO. 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.
- ASPHALT REPAIRS IN CONTRACTOR'S ROAD, EAST OF ROCHELLE SUBSTATION, SOUTH OF THE INTERMEDIATE PUMP STATION, SHALL BE DONE BY THE CONTRACTOR. THE REPAIRS SHALL BE DONE WITH A MINIMUM OF 8 INCHES OF AGGREGATE BASE.

SHEET KEYNOTES

- A. BY COWD PROJECT 567C
- B. BY OTHERS.

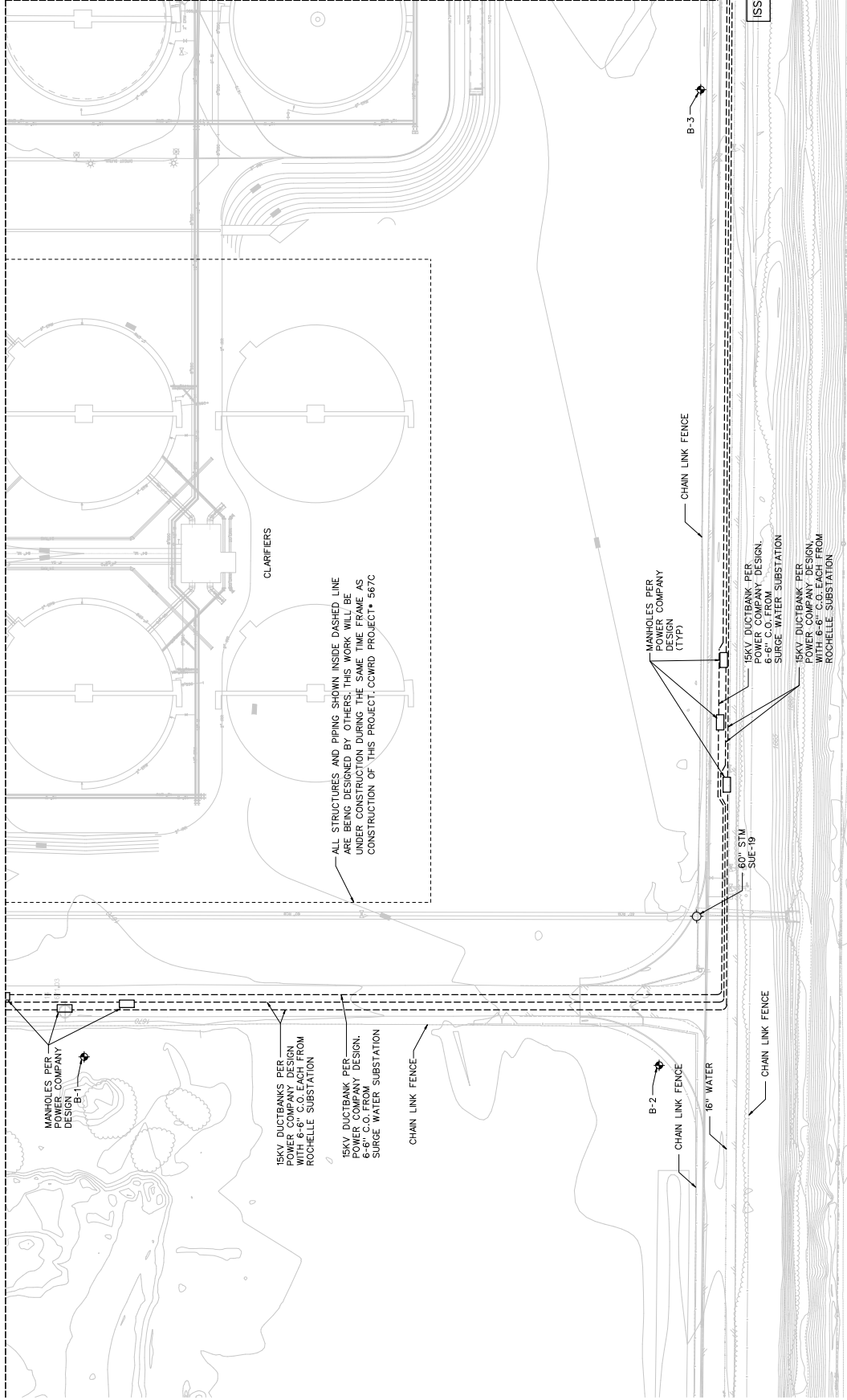
ISSUED FOR 100% REVIEW



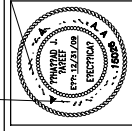
MATCHLINE - SEE SHEET E-7

REV		DATE	BY	DESCRIPTION
FILE: E06-Rdld.dgn Model: E06-Rdld.dgn Plot Date: 06-MAY-2009 20:02 User: Jowad Lateef Plot Scale: 40:1				
DESIGNED: J. LATEEF PROJECT MANAGER'S NAME: J. LATEEF LICENSE NO. 055026 DATE 05/05/09				
DRAWN: J. LATEEF PROJECT MANAGER'S NAME: J. LATEEF LICENSE NO. 055026 DATE 05/05/09				
CHECKED: SAHMAN PROJECT MANAGER'S NAME: J. LATEEF LICENSE NO. 055026 DATE 05/05/09				
SCALE: 0 1/2 1 1/2 2 1/2 3 1/2 4 1/2 5 1/2 6 1/2 7 1/2 8 1/2 9 1/2 10 1/2 11 1/2 12 1/2 13 1/2 14 1/2 15 1/2 16 1/2 17 1/2 18 1/2 19 1/2 20 1/2 21 1/2 22 1/2 23 1/2 24 1/2 25 1/2 26 1/2 27 1/2 28 1/2 29 1/2 30 1/2 31 1/2 32 1/2 33 1/2 34 1/2 35 1/2 36 1/2 37 1/2 38 1/2 39 1/2 40 1/2 41 1/2 42 1/2 43 1/2 44 1/2 45 1/2 46 1/2 47 1/2 48 1/2 49 1/2 50 1/2 51 1/2 52 1/2 53 1/2 54 1/2 55 1/2 56 1/2 57 1/2 58 1/2 59 1/2 60 1/2 61 1/2 62 1/2 63 1/2 64 1/2 65 1/2 66 1/2 67 1/2 68 1/2 69 1/2 70 1/2 71 1/2 72 1/2 73 1/2 74 1/2 75 1/2 76 1/2 77 1/2 78 1/2 79 1/2 80 1/2 81 1/2 82 1/2 83 1/2 84 1/2 85 1/2 86 1/2 87 1/2 88 1/2 89 1/2 90 1/2 91 1/2 92 1/2 93 1/2 94 1/2 95 1/2 96 1/2 97 1/2 98 1/2 99 1/2 100 1/2				
WARNING: IF THIS DRAWING IS USED FOR CONSTRUCTION, THE USER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. THE USER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED.				
SUBMITTED BY: MOHAMMAD J. LATEEF PROJECT MANAGER'S NAME: J. LATEEF LICENSE NO. 055026 DATE 05/05/09				
DESIGNED: J. LATEEF PROJECT MANAGER'S NAME: J. LATEEF LICENSE NO. 055026 DATE 05/05/09				
DRAWN: J. LATEEF PROJECT MANAGER'S NAME: J. LATEEF LICENSE NO. 055026 DATE 05/05/09				
CHECKED: SAHMAN PROJECT MANAGER'S NAME: J. LATEEF LICENSE NO. 055026 DATE 05/05/09				
CLARK COUNTY WATER RECLAMATION DISTRICT SWITCHGEAR NO. 5 AND DUCTBANKS PROJECT #624				
ELECTRICAL SITE PLAN - 4				
SHEET E-6				
JOB NO. 110011				

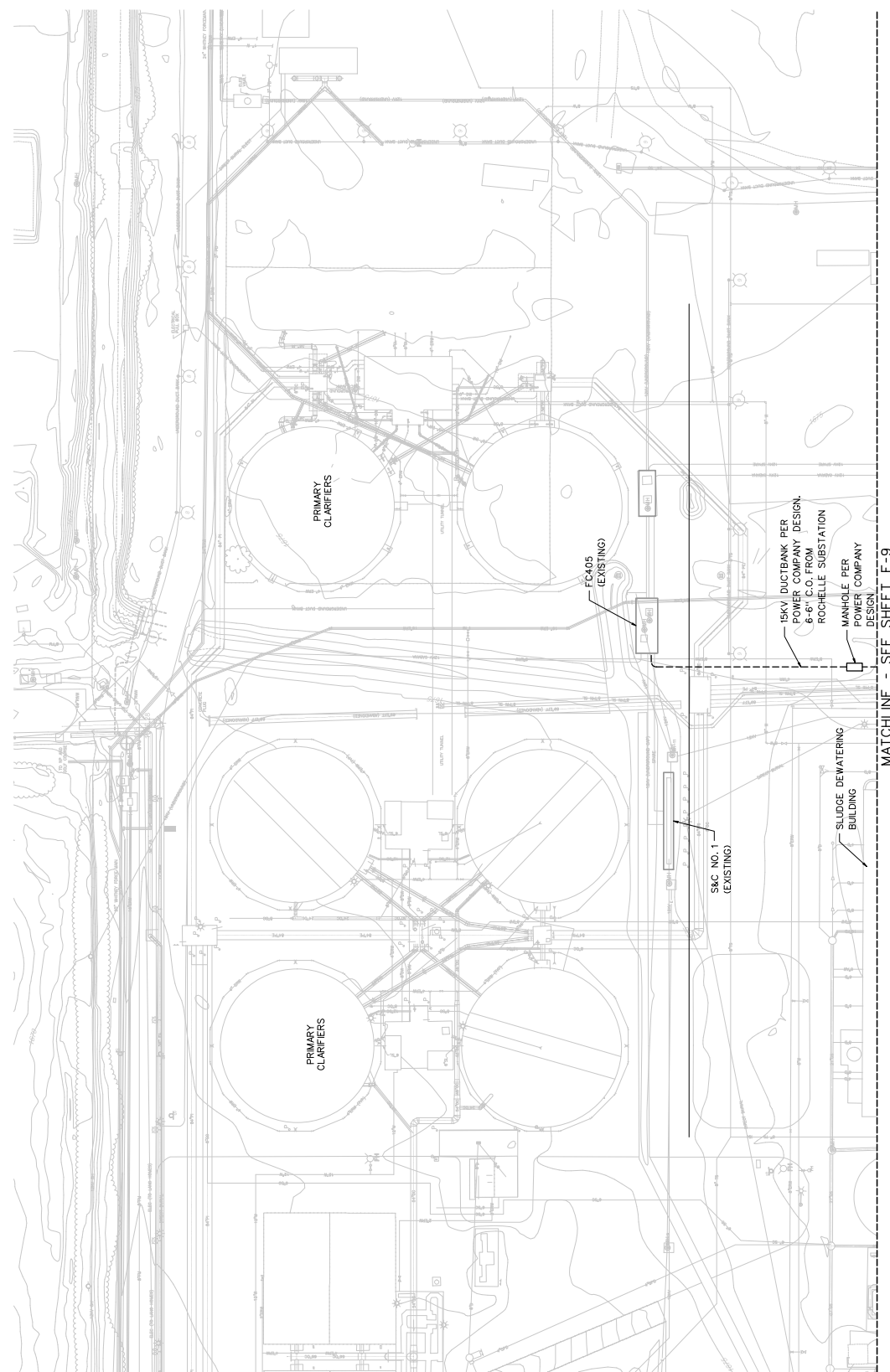
MATCHLINE - SEE SHEET E-6



ISSUED FOR 100% REVIEW

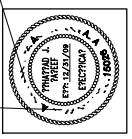


SHEET		E-7		Job No. 310011	
ELECTRICAL		SITE PLAN - 5		CLARK COUNTY WATER RECLAMATION DISTRICT	
PROJECT #624		SWITCHGEAR NO. 5 AND DUCTBANKS		PROJECT #624	
MWH		Las Vegas		05/05/09	
SUBMITTED BY		MOHAMMAD J. LATEEF		05/05/09	
PROJECT MANAGER'S NAME		KENNETH E. LYKENS JR.		05/05/09	
COMPANY OFFICER'S NAME		KENNETH E. LYKENS JR.		05/05/09	
DESIGNED - J. LATEEF		DRAWN - J. LATEEF		CHECKED - SAHIMAI	
SCALE		1" = 40'		NOT TO SCALE	
WARNING		IF THIS DRAWING IS USED FOR CONSTRUCTION, THE USER ASSUMES ALL LIABILITY FOR ANY ERRORS OR OMISSIONS.		NOT TO SCALE	
REV		DATE		BY	
DESCRIPTION					



MATCHLINE - SEE SHEET E-9

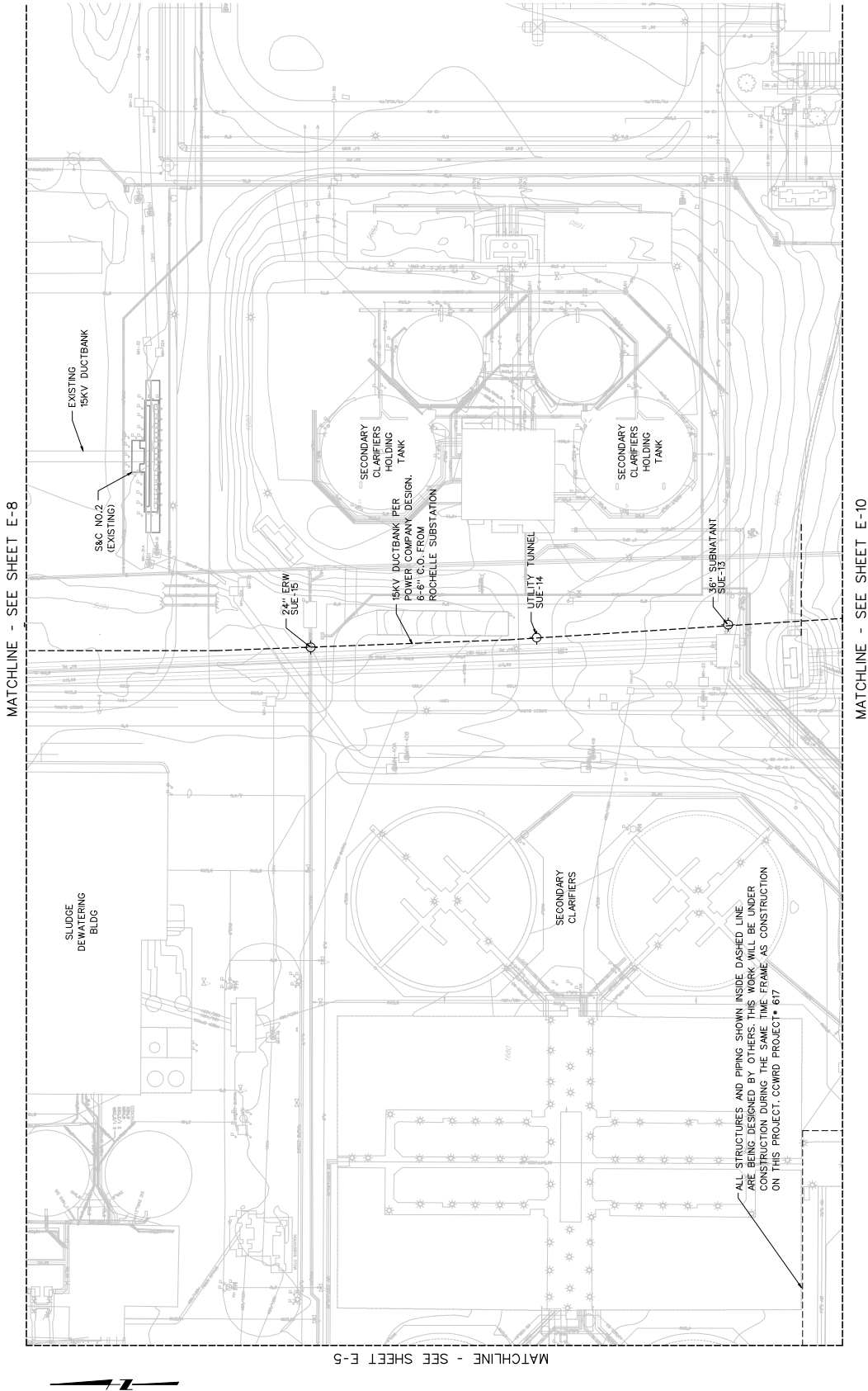
ISSUED FOR 100% REVIEW



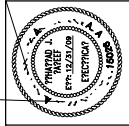
REV	DATE	BY	DESCRIPTION

SCALE	WARNING	DESIGNED - J. LATEEF	SUBMITTED BY	05/05/09
1" = 40'	0 1/2 1 IF THIS BAR DOES NOT SCALE, THEN DRAWING IS NOT TO SCALE	DRAWN - J. LATEEF	MOHAMMAD A. LATEEF	05/05/09
		CHECKED - SAHIMAN	(PROJECT MANAGER'S NAME)	
			KENNETH E. LYKENS JR.	
			(COMPANY OFFICER'S NAME)	

CLARK COUNTY WATER RECLAMATION DISTRICT SWITCHGEAR NO. 5 AND DUCTBANKS PROJECT #624	MWH Las Vegas Nevada	ELECTRICAL SITE PLAN - 6	SHEET E-8 JOB No. 310011
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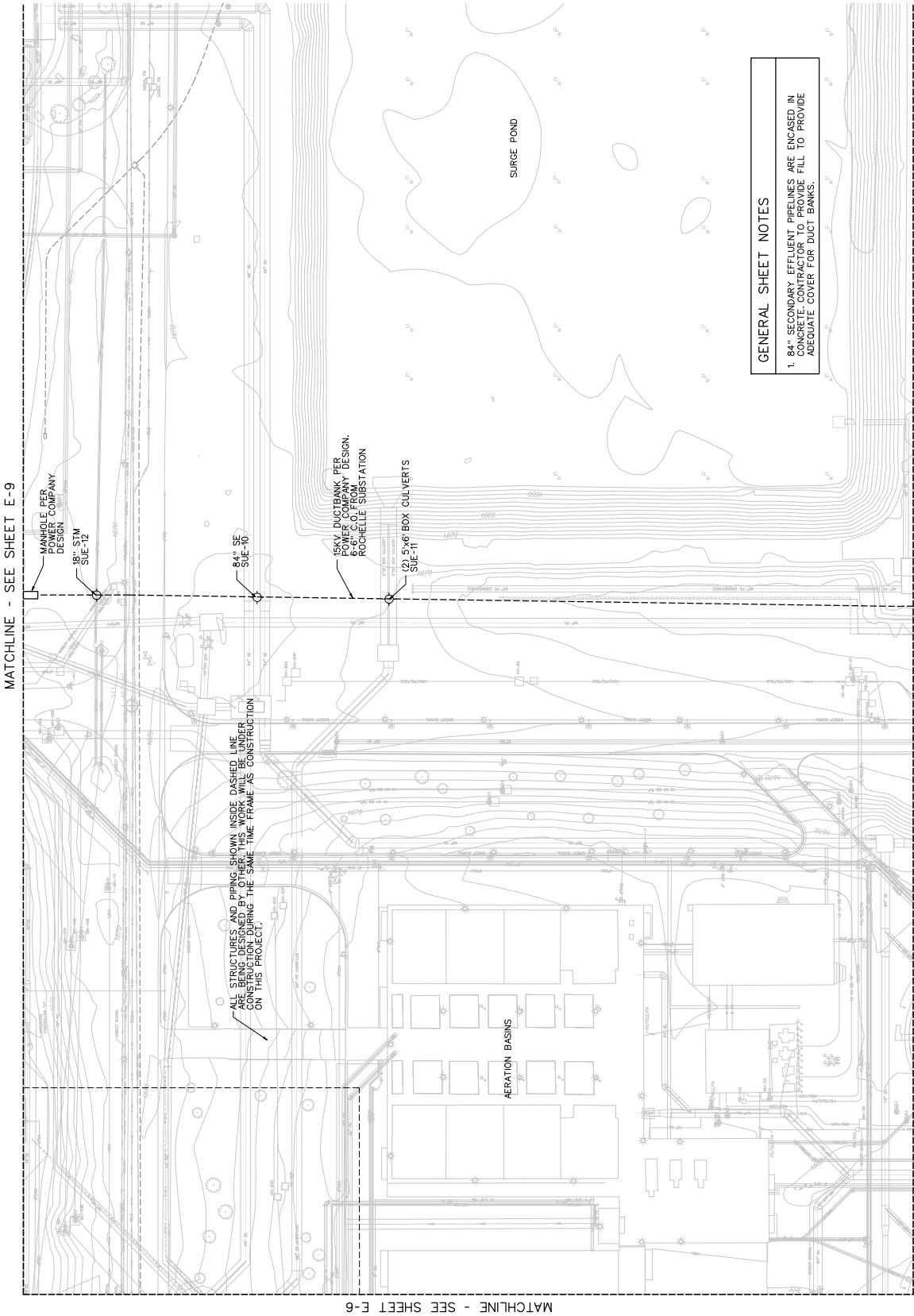
ISSUED FOR 100% REVIEW



REV	DATE	BY	DESCRIPTION

SCALE	WARNING	DESIGNED - J. LATEEF	SUBMITTED BY	05/05/09
1" = 40'	0 1/2 1 IF THIS BAR DOES NOT SCALE, THEN DRAWING IS NOT TO SCALE	DRAWN - J. LATEEF	MOHAMMAD J. LATEEF (PROJECT MANAGER'S NAME)	05/05/09
		CHECKED - SAHIMAN	KENNETH E. LYKENS, JR. (COMPANY OFFICER'S NAME)	05/05/09

CLARK COUNTY WATER RECLAMATION DISTRICT SWITCHGEAR NO. 5 AND DUCTBANKS PROJECT #624	MWH Las Vegas Nevada	ELECTRICAL SITE PLAN - 7	SHEET E-9
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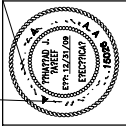


MATCHLINE - SEE SHEET E-9

MATCHLINE - SEE SHEET E-11

GENERAL SHEET NOTES

1. 84" SECONDARY EFFLUENT PIPELINES ARE ENCASED IN CONCRETE. CONTRACTOR TO PROVIDE FILL TO PROVIDE ADEQUATE COVER FOR DUCT BANKS.



ISSUED FOR 100% REVIEW

REV	DATE	BY	DESCRIPTION

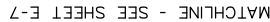
SCALE	WARNING
1" = 40'	0 1/2 1
	IF THIS BAR DOES NOT SCALE, THEN DRAWING IS NOT TO SCALE

SUBMITTED BY	DESIGNED - J. LATEEF
PROJECT MANAGER'S NAME: MOHAMMAD J. LATEEF	LICENSE NO. 055026
DATE: 05/05/09	DATE: 05/05/09
(COMPANY OFFICER'S NAME) KENNETH E. LYKENS, JR.	LICENSE NO. *****

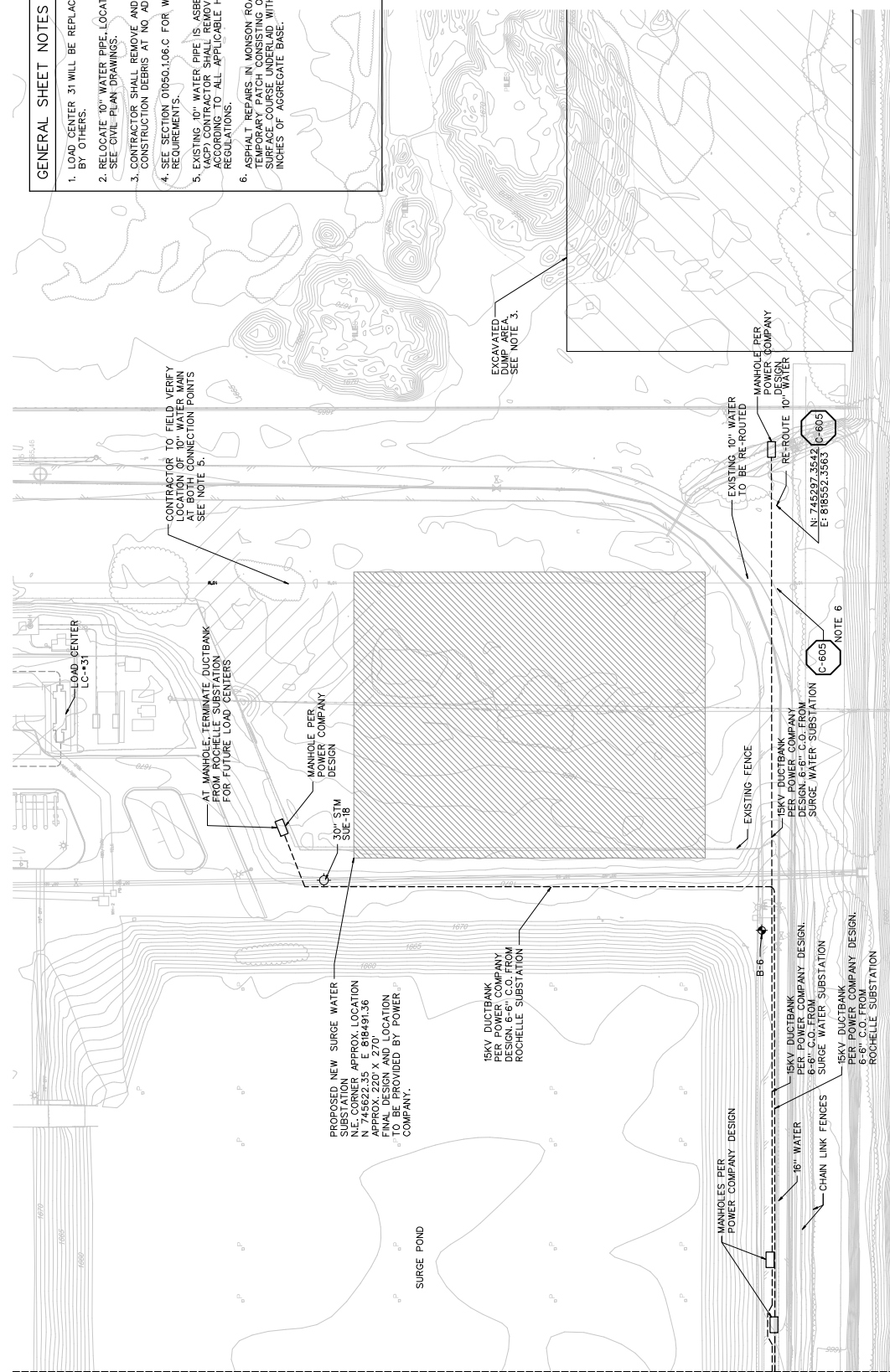


CLARK COUNTY WATER RECLAMATION DISTRICT
SWITCHGEAR NO. 5 AND DUCTBANKS
PROJECT #624

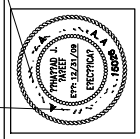
MATCHLINE - SEE SHEET E-10



1. SUE INVESTIGATION SUGGESTS THAT SURGE POND OVERFLOW PIPE IS CONCRETE ENCASED TO BOTTOM OF ASPHALT ROAD. IF NECESSARY, SOUTH OF THE ACCESS ROAD, THIS POINT, IF NECESSARY, CONTRACTOR SHALL PROVIDE FILL TO PROVIDE MINIMUM SPECIFIED COVER OVER DUCT BANK ALONG ROAD EMBANKMENT. IF NECESSARY, CONTRACTOR TO RESTORE FENCE AFTER COMPLETION OF DUCT BANK.



- GENERAL SHEET NOTES**
1. LOAD CENTER 31 WILL BE REPLACED IN THE FUTURE BY OTHERS.
 2. RELOCATE 10" WATER PIPE LOCATED EAST OF SUBSTATION. SEE CIVIL PLAN DRAWINGS.
 3. CONTRACTOR SHALL REMOVE AND DISPOSE ALL PROJECT CONSTRUCTION DEBRIS AT NO ADDITIONAL COST TO OWNER. REQUIREMENTS.
 4. SEE SECTION 01050.1.06.C FOR WATER MAIN SHUTDOWN
 5. EXISTING 10" WATER PIPE IS ASBESTOS CONCRETE PIPE (ACP). CONTRACTOR SHALL REMOVE EXISTING ACP ACCORDING TO ALL APPLICABLE HEALTH AND SAFETY REGULATIONS.
 6. ASPHALT REPAIRS IN MONSON ROAD SHALL BE BY TEMPORARY PATCH CONSISTING OF 2 INCHES OF ASPHALT SURFACE COURSE UNDERLAD WITH A MINIMUM OF 6 INCHES OF AGGREGATE BASE.



ISSUED FOR 100% REVIEW

REV	DATE	BY	DESCRIPTION

SCALE	WARNING	SUBMITTED BY	DESIGNED - J. LATEEF	05/05/09
1" = 40'	0 1/2 1 IF THIS BAR DOES NOT SCALE THEN DRAWING IS NOT TO SCALE	MOHAMMAD J. LATEEF (PROJECT MANAGER'S NAME)	PER POWER COMPANY DESIGN	DATE
		KENNETH E. LYKENS JR. (COMPANY OFFICER'S NAME)	15KV DUCTBANK PER POWER COMPANY DESIGN	05/05/09
			15KV DUCTBANK PER POWER COMPANY DESIGN	DATE

SHEET	E-12	Job No. 310011
CLARK COUNTY WATER RECLAMATION DISTRICT		
SWITCHGEAR NO. 5 AND DUCTBANKS		
PROJECT #624		
ELECTRICAL		
SITE PLAN - 10		

Appendix E



CRC Proposed Substation Single Line Diagrams

Approved:

CCWRD **Date**

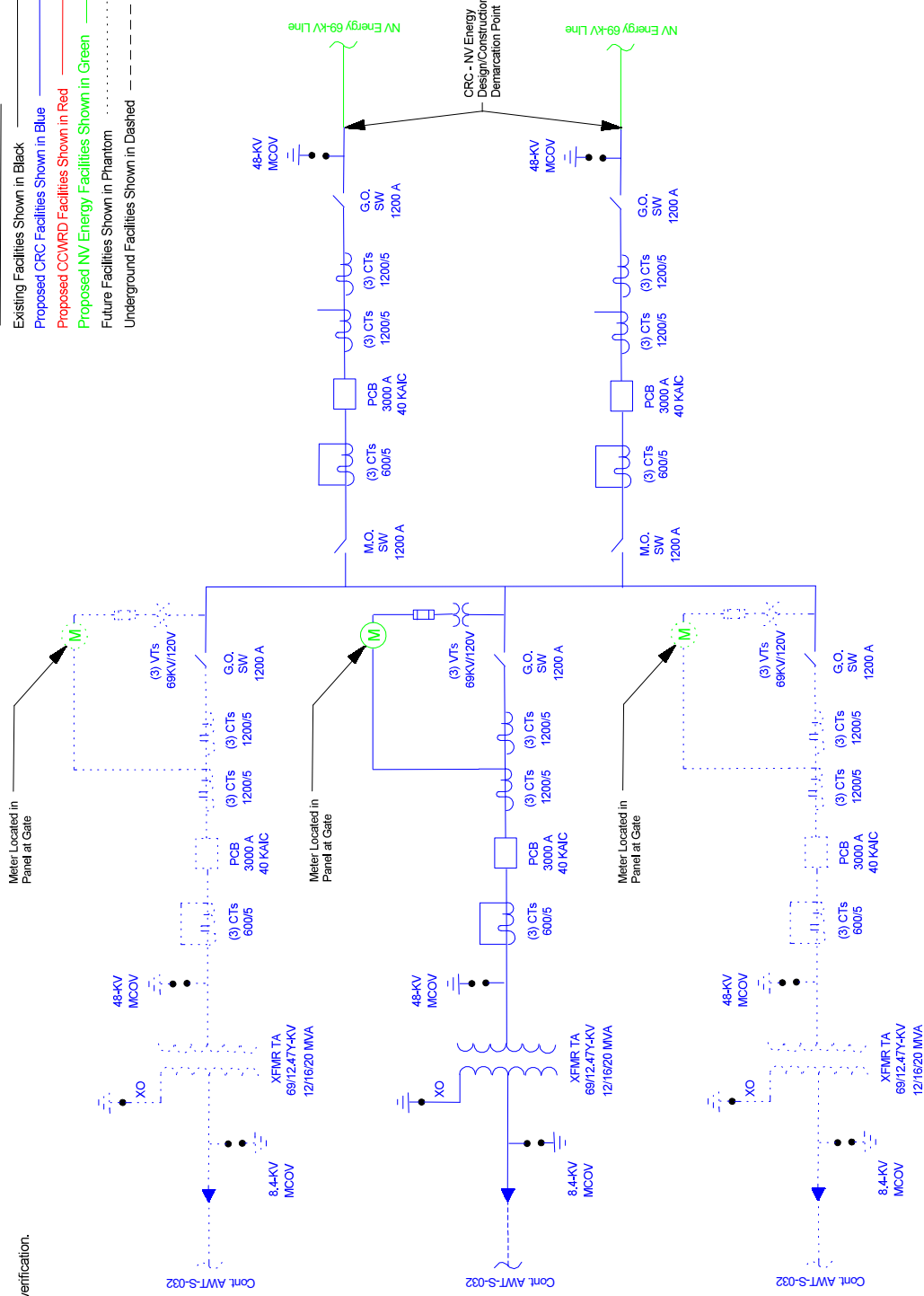
CRC **Date**

NOTES

1. Ratings shown are preliminary, subject to design verification.
2. Device numbers to be determined.
3. Control and low voltage wiring not shown.
4. Single ratio current transformer shown as  with quantity in ().
5. Single ratio bushing current transformer shown as  with quantity in ().

LEGEND

- Existing Facilities Shown in Black
Proposed CRC Facilities Shown in Blue
Proposed COWRD Facilities Shown in Red
Proposed NV Energy Facilities Shown in Green
Future Facilities Shown in Phantom
Underground Facilities Shown in Dashed



ISSUED FOR SYSTEM
PLANNING PURPOSES

No.	Date	Revision
1		
2		
3		
4		
5		



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555 East Washington Ave., Suite 3100
Las Vegas, Nevada 89101
(702) 486-2670



AWT Substation
Single Line Diagram

Scale: None

Date: 4/11/09

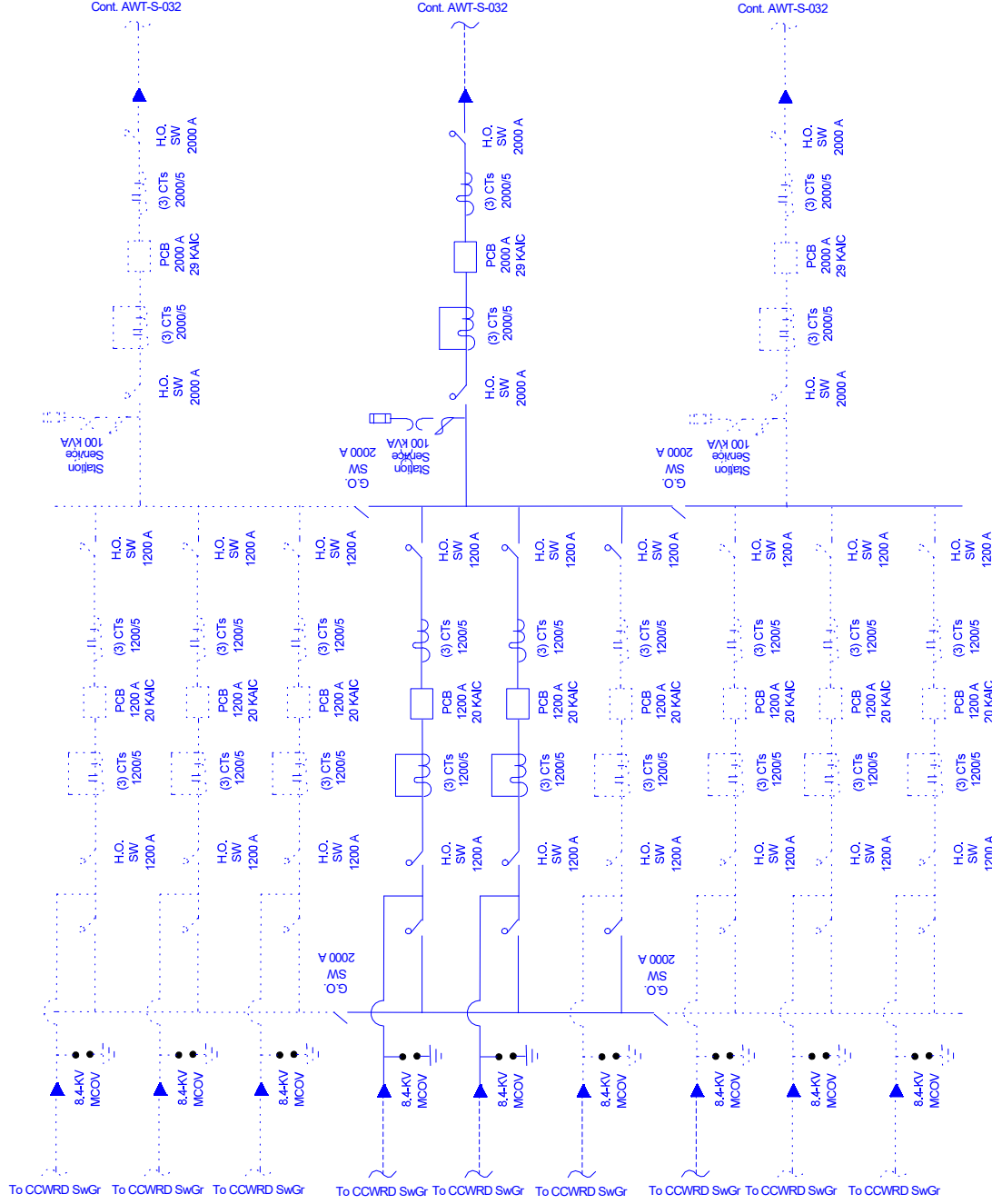
Drawing No.: AWT-S-031-1

NOTES

1. Ratings shown are preliminary, subject to design verification.
2. Device numbers to be determined.
3. Control and low voltage wiring not shown.
4. Single ratio current transformer shown as  with quantity in ().
5. Single ratio bushing current transformer shown as  with quantity in ().

LEGEND

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- Proposed CCWRD Facilities Shown in Red
- Proposed NV Energy Facilities Shown in Green
- Future Facilities Shown in Phantom
- Underground Facilities Shown in Dashed



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AWT Substation
Single Line Diagram

Revision

No.	Date
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

ISSUED FOR SYSTEM
PLANNING PURPOSES

Scale: None

Date: 4/11/09

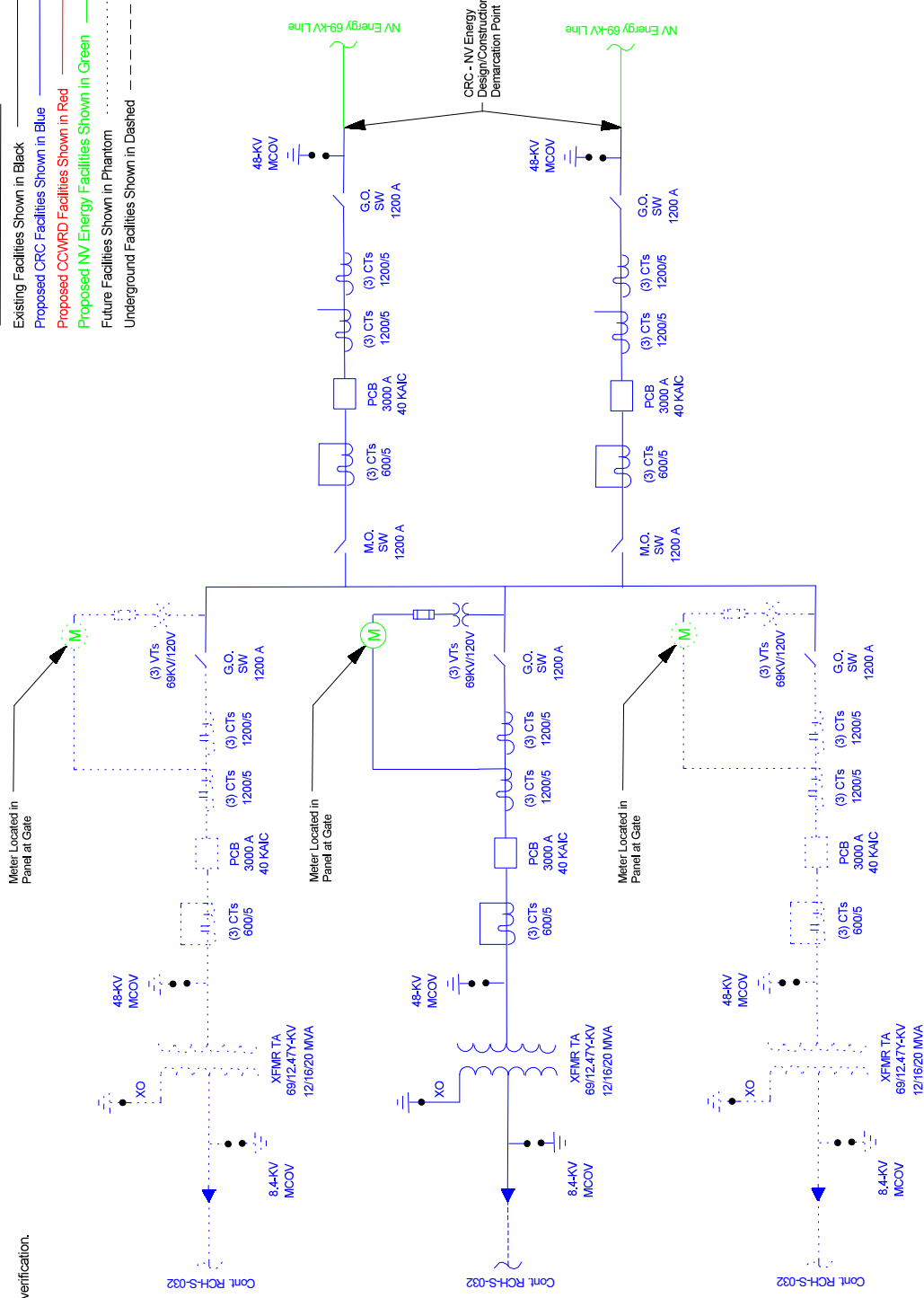
Drawing No.: AWT-S-032-1

NOTES

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2. Device numbers to be determined.
3. Control and low voltage wiring not shown.
4. Single ratio current transformer shown as  with quantity in ().
5. Single ratio bushing current transformer shown as  with quantity in ().



LEGEND

- Existing Facilities Shown in Black
Proposed CRC Facilities Shown in Blue
Proposed COWRD Facilities Shown in Red
Proposed NV Energy Facilities Shown in Green
Future Facilities Shown in Phantom
Underground Facilities Shown in Dashed



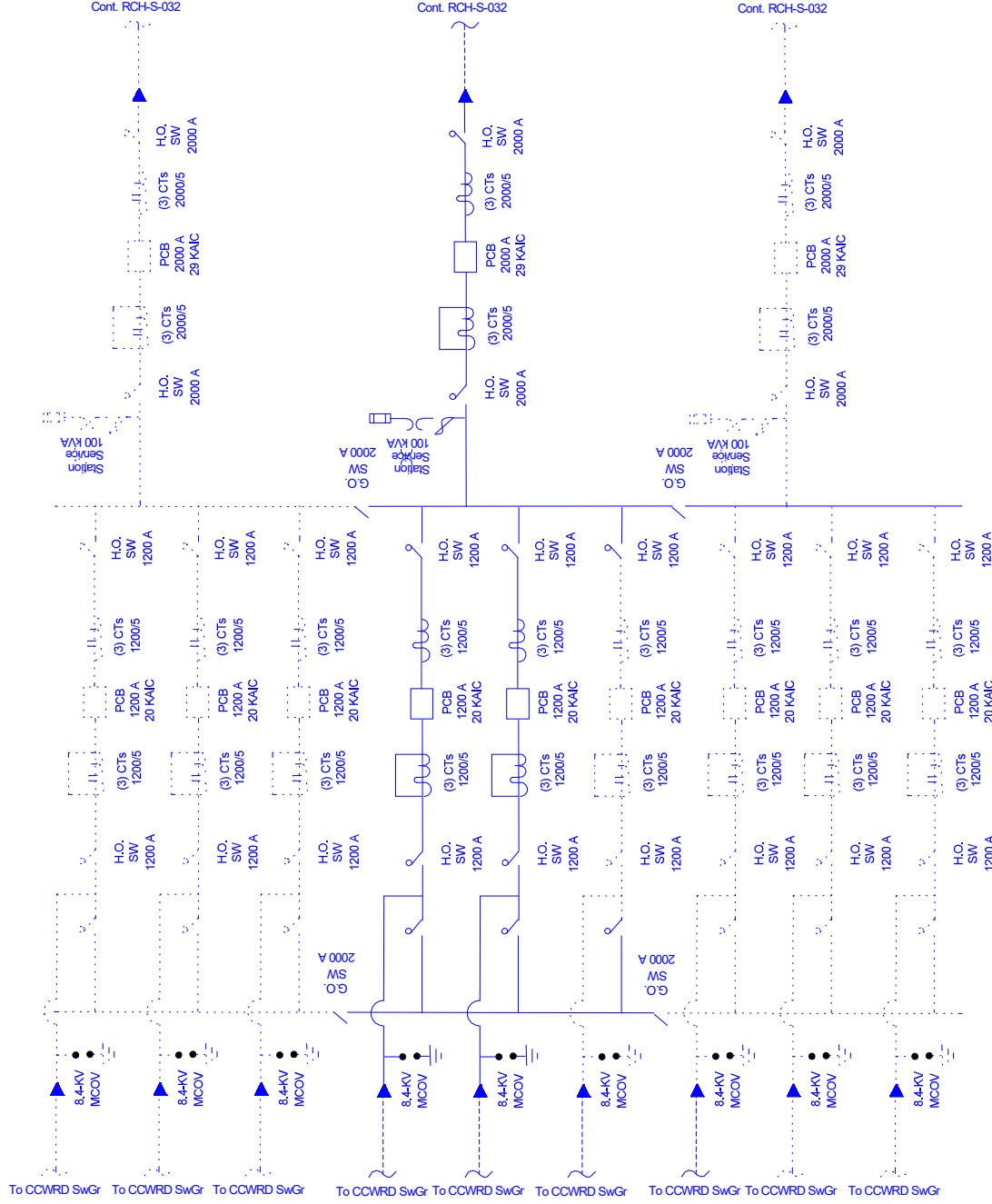
ISSUED FOR SYSTEM PLANNING PURPOSES	Colorado River Commission of Nevada		Rochelle Substation	
	555 East Washington Ave., Suite 3100		Single Line Diagram	
	Las Vegas, Nevada 89101			
	(702) 486-2670			
	Scale: None		Date: 4/11/09	
			Drawing No.: RCH-S-031-1	

NOTES

1. Ratings shown are preliminary, subject to design verification.
2. Device numbers to be determined.
3. Control and low voltage wiring not shown.
4. Single ratio current transformer shown as  with quantity in ().
5. Single ratio bushing current transformer shown as  with quantity in ().

LEGEND

- Existing Facilities Shown in Black
- Proposed CRC Facilities Shown in Blue
- Proposed CCWRD Facilities Shown in Red
- Proposed NV Energy Facilities Shown in Green
- Future Facilities Shown in Phantom
- Underground Facilities Shown in Dashed



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Rochelle Substation Single Line Diagram

Revision

No.	Date
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

ISSUED FOR SYSTEM
PLANNING PURPOSES

Scale: None

Date: 4/11/09

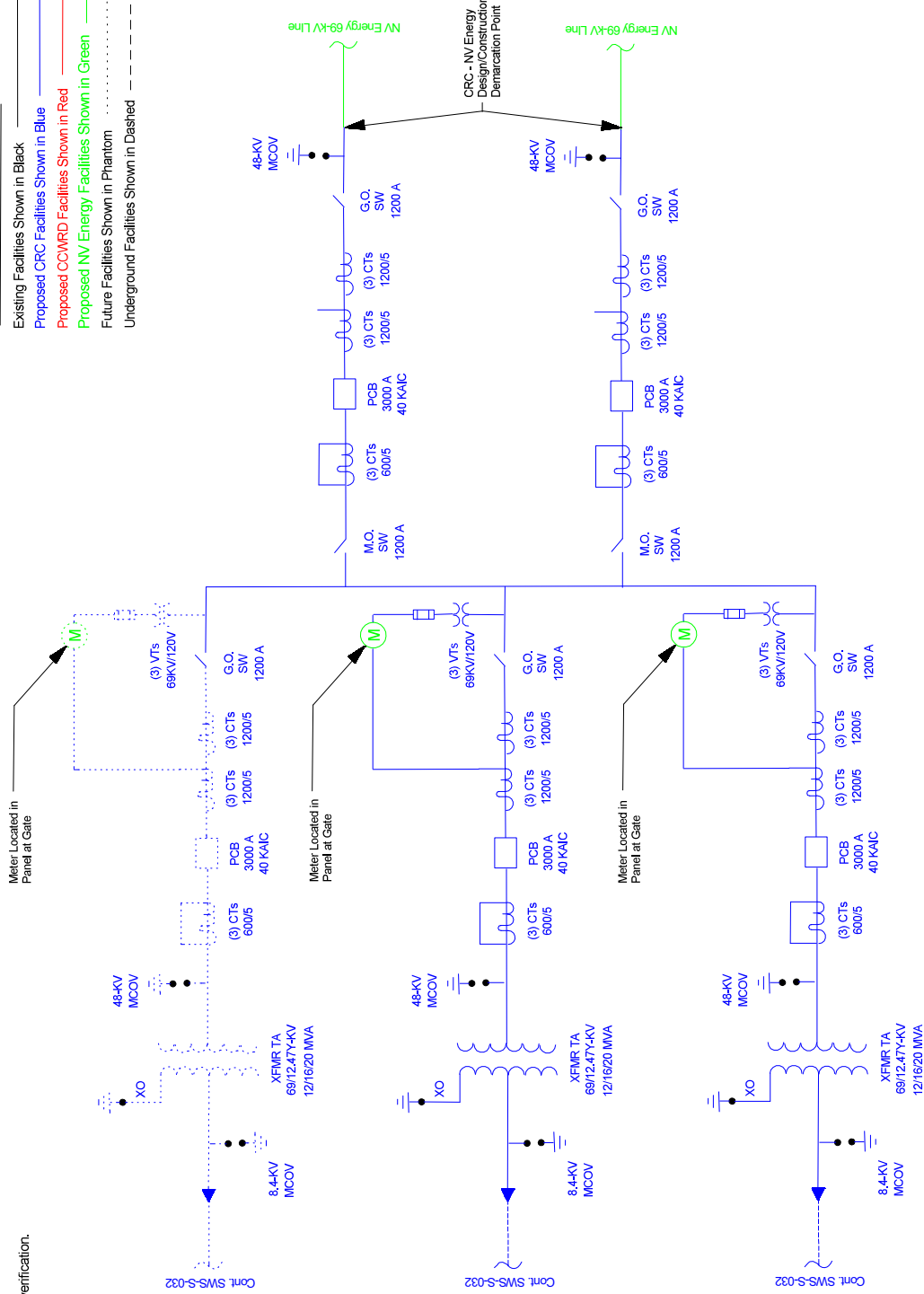
Drawing No.: RCH-S-032-1

NOTES

1. Ratings shown are preliminary, subject to design verification.
2. Device numbers to be determined.
3. Control and low voltage wiring not shown.
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Future Facilities Shown in Phantom
Underground Facilities Shown in Dashed



ISSUED FOR SYSTEM
PLANNING PURPOSES

No.	Date	Revision
1		
2		
3		
4		
5		



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Las Vegas, Nevada 89101
(702) 486-2670



Surge Pond Substation
Single Line Diagram

Scale: None

Date: 4/11/09

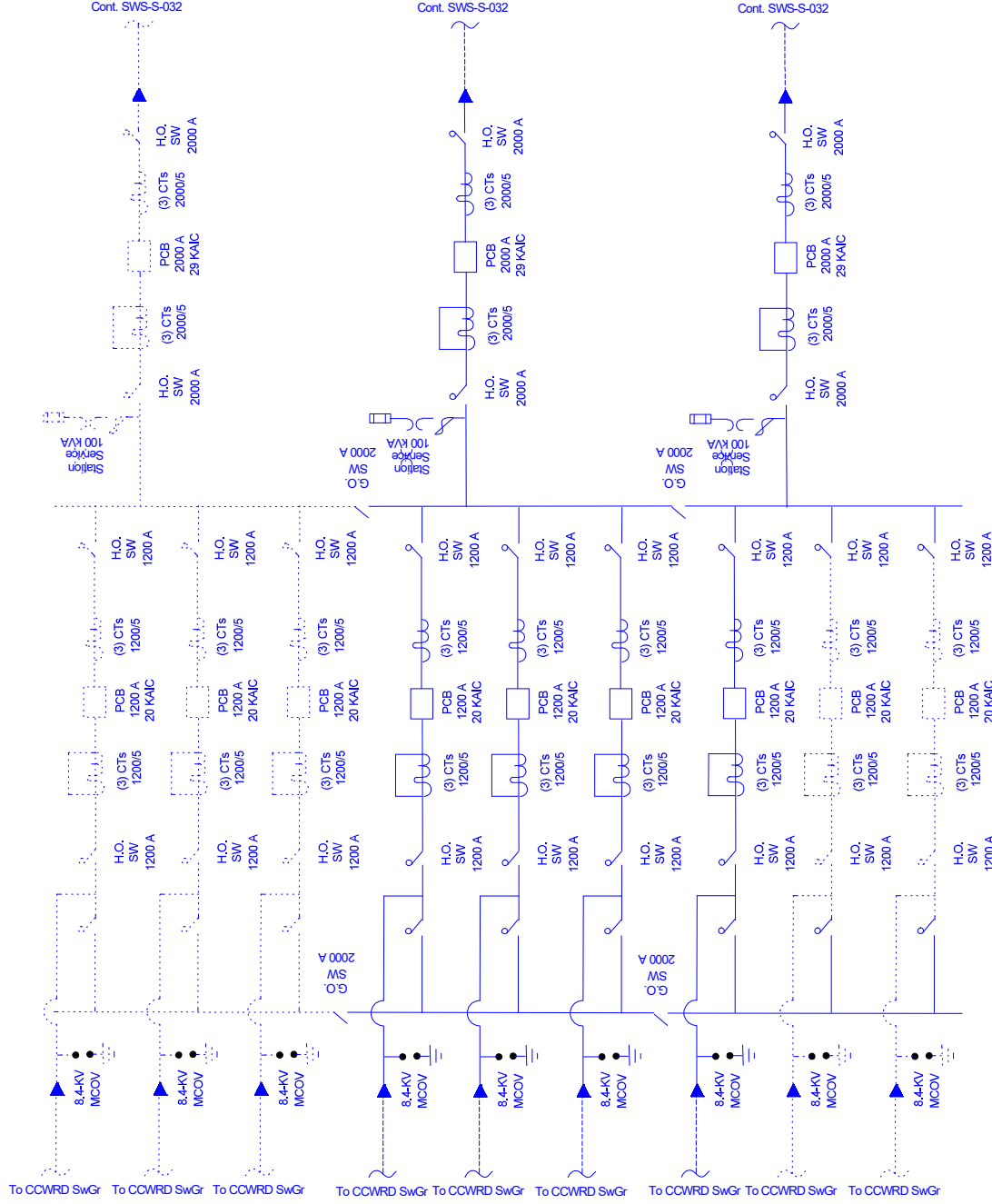
Drawing No.: SWS-S-031-1

NOTES

1. Ratings shown are preliminary, subject to design verification.
2. Device numbers to be determined.
3. Control and low voltage wiring not shown.
4. Single ratio current transformer shown as  with quantity in ().
5. Single ratio bushing current transformer shown as  with quantity in ().

LEGEND

- Existing Facilities Shown in Black
- Proposed CRC Facilities Shown in Blue
- Proposed CCWRD Facilities Shown in Red
- Proposed NV Energy Facilities Shown in Green
- Future Facilities Shown in Phantom
- Underground Facilities Shown in Dashed



No.	Date	Revision
1		
2		
3		
4		
5		

ISSUED FOR SYSTEM
PLANNING PURPOSES



Colorado River Commission of Nevada
555 East Washington Ave., Suite 3100
Las Vegas, Nevada 89101
(702) 486-2670

Surge Pond Substation
Single Line Diagram

Scale: None

Date: 4/11/09

Drawing No.: SWS-S-032-1

Appendix F

Project Schedule

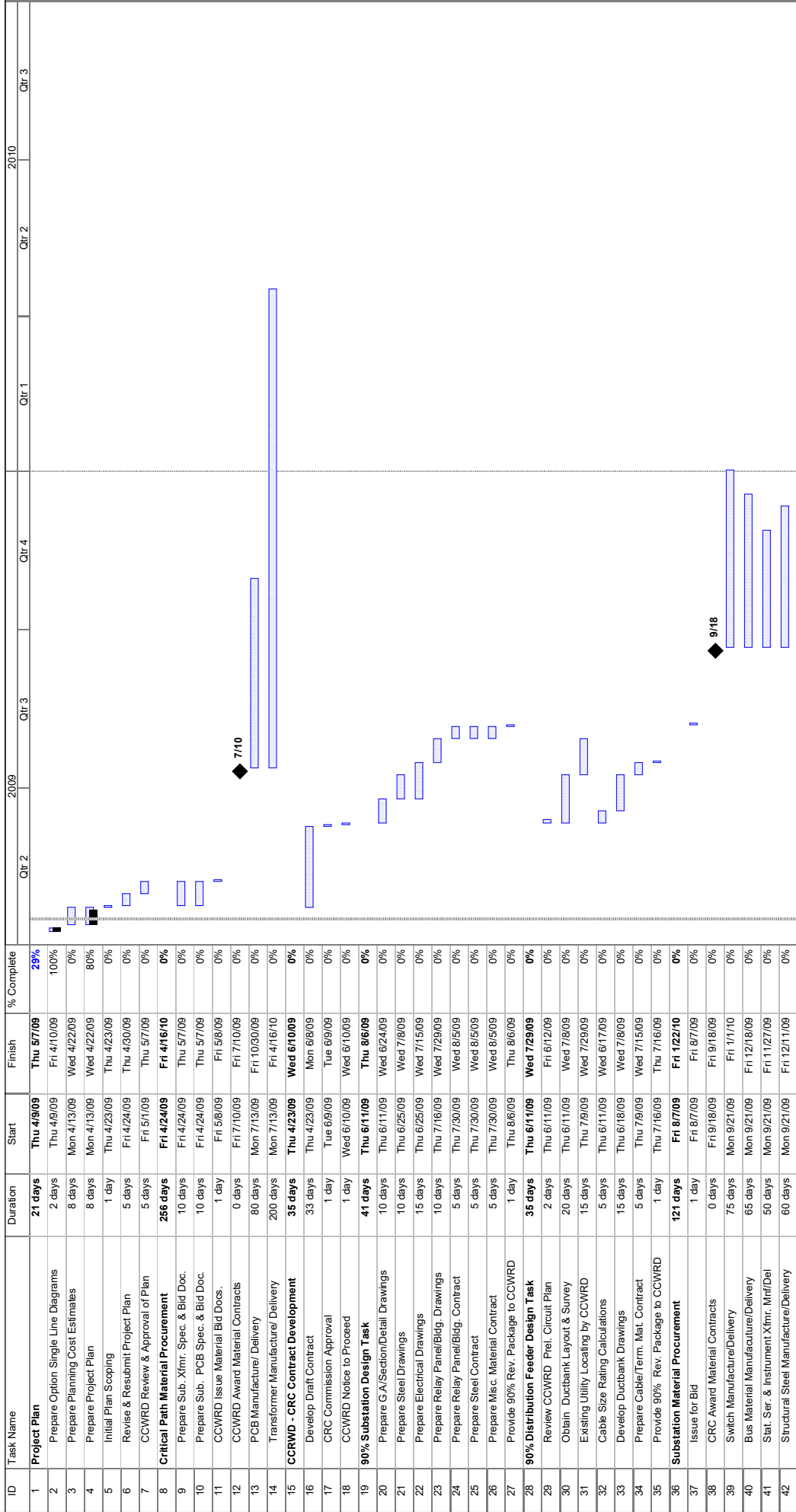
Approved:

CCWRD **Date**

CRC **Date**

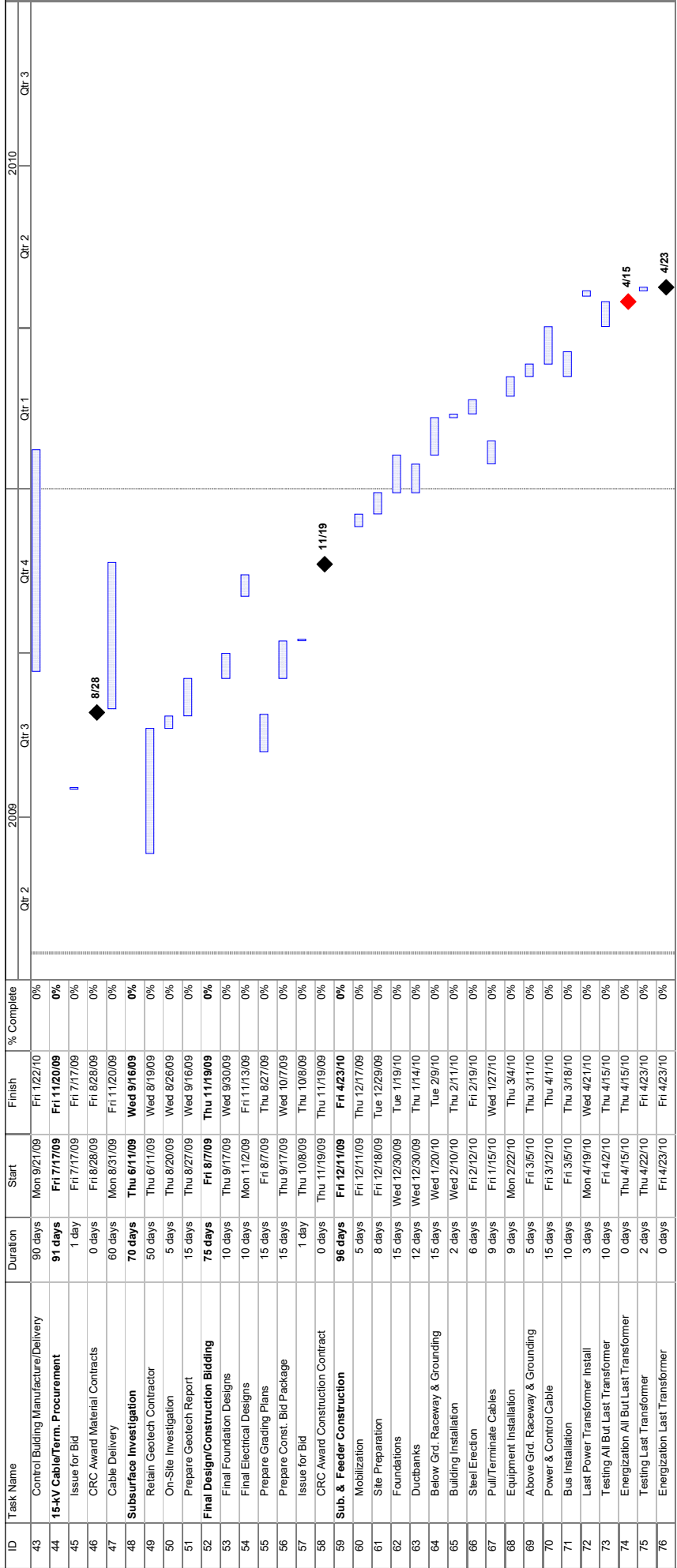


Colorado River Commission of Nevada
555 East Washington Avenue, Suite 3100
Las Vegas, Nevada 89101





Colorado River Commission of Nevada
555 East Washington Avenue, Suite 3100
Las Vegas, Nevada 89101



Appendix G

Ductbank and Cable Cost Estimate

Approved:

CCWRD **Date**

CRC **Date**



COLORADO RIVER COMMISSION OF NEVADA
555 East Washington Ave., Suite 3100
Las Vegas, Nevada 89101
(702) 856-3611 - Fax (702) 856-3617

COST ESTIMATE		Date Prepared: 4/14/2009
Project: Clark County Water Reclamation District		Facility: Distribution System
Description: Estimate Based on Preliminary Planning. See CCWRD Drawing RLM: 12 Aug 2008 Install 15-kV underground distribution circuits. Install ductbank to first switch vault. Install pad mount switches. Install cable and terminations. Soil conditions assumed suitable for thermal dissipation.		
Notes: Assumes 55,000 feet of 1000 kcmil aluminum conductor. Does not include switch vaults to be furnished and installed by CCWRD. Assume 3,400 lineal feet of ductbank. Assumes reinforcing bar not required in ductbanks Assumes trench depth 70 inches. Assumes existing poles guyed for riser structures.		

Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor/Eq.		
	Ductbank					
1	Excavation & Fill	Cu Yds.	\$0.00	\$10.05	1,469	\$14,766.28
2	Warning Tape, 6", Red	Ft.	\$0.09	\$0.07	3,400	\$555.90
3	Conduit, 6-inch, Schedule 40	Ft.	\$6.35	\$3.17	20,400	\$194,340.60
4	Conduit, 2-inch, Schedule 40	Ft.	\$1.01	\$0.86	3,400	\$6,359.70
5	Ductspacers	Ea	\$4.90	\$10.41	680	\$10,411.48
6	Concrete, 300 psi, 3/8" Aggregate	Cu Yds.	\$89.25	\$13.48	756	\$77,616.71
	Conductor and Cable					
7	1000 kcmil, 15 kV EPR, One Third Neutral	Ft.	\$8.72	\$2.83	54,900	\$633,765.60
8	Cable Terminations, 15-kV, Elbow	Ea.	\$116.55	\$65.55	45	\$8,194.50
9	Cable Terminations, 15-kV, Substation Riser	Ea.	\$158.55	\$79.35	24	\$5,709.60
10	ADSS Cable, 24-Fiber, Single Mode	Ft.	\$0.69	\$1.76	9,150	\$22,440.38
	Distribution Switch					
11	Pad Mount Switch, 600 Amp, Three-Pole, Manual	Ea.	\$5,722.50	\$332.35	5	\$30,274.25
12	Ground Rod, copperbonded, 5/8" x 8'	Ea.	\$12.60	\$70.15	5	\$413.75
13	Ground Rod Clamp, copperbonded, 5/8"	Ea.	\$2.63	\$8.64	5	\$56.31
14	2/0 AWG, copper conductor, stranded, soft drawn	Ft.	\$0.35	\$0.12	150	\$69.92
	Riser Structure					
15	Hook Oper. Disconnect. - 15 kV, 600 Amp	Ea.	\$162.75	\$270.25	6	\$2,598.00
16	Surge Arrester - 7.6 kV MCOV Riser Class	Ea.	\$44.63	\$74.75	6	\$716.25
17	Equipment Mounting Bracket	Ea.	\$219.45	\$89.70	2	\$618.30
18	Deadend Conductor & Neutral	Ea.	\$505.53	\$1,199.45	2	\$3,409.97
19	Conduit Riser, Brackets and Sweep	Ea.	\$855.49	\$672.64	2	\$3,056.25
20	Guying and Anchors	Ea.	171.68	\$794.65	2	\$1,932.66

Estimate Status: **Planning**

Basis:

Planning - Conceptual Design
 Design - Final Design and Quantities
 Construction - Bid Values



COLORADO RIVER COMMISSION OF NEVADA
555 East Washington Ave., Suite 3100
Las Vegas, Nevada 89101
(702) 856-3611 - Fax (702) 856-3617

Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor/Eq.		
	ADSS Installation Overhead Lines					
21	Tangent Structures, Pull Through Trunion Clamps	Ea.	\$30.18	\$64.40	12	\$1,134.92
22	ADSS Deadend	Ea.	\$99.39	\$121.73	2	\$442.24
23	ADSS Cable, 24-Fiber, Single Mode	Ft.	\$0.69	\$4.81	1,000	\$5,500.00
	Site Development					
24	Access Road Development	Acres	\$0.00	\$715.00	0	\$0.00
25	Structure Pad Development	Acres	\$0.00	\$715.00	0	\$0.00
26	Restoration	Acres	\$0.00	\$1,700.00	0	\$0.00
	Land Acquisition					
27	Land Acquisition	Acre	\$0.00	\$0.00	0	\$0.00
	Permitting, Survey, Engineering					
28	Engineering & Project Mgt. @ 10%	Lot	\$0.00	\$102,438.36	1	\$102,438.36
29	Construction Mgt. @ 2.5% of Materials	Lot	\$0.00	\$25,609.59	1	\$25,609.59
30	Material Procurement and Proj. Mgt. @2.5%	Lot	\$0.00	\$18,317.37	1	\$18,317.37
31	Geotechnical Investigations	Ea.	\$0.00	\$6,200.00	0	\$0.00
32	Engineering Survey	Lot	\$0.00	\$6,800.00	1	\$6,800.00
33	Construction Staking	Mi.	\$0.00	\$2,480.00	0.6	\$1,596.97
34	Testing	Hrs.	\$0.00	\$85.00	16	\$1,360.00
35	Biological Monitors	Hrs.	\$0.00	\$52.00	0	\$0.00
36	Environmental Permitting	Lot	\$0.00	\$0.00	0	\$0.00
37	Building Permits	Lot	\$0.00	\$8,600.00	0	\$0.00
38	Grading Permits	Lot	\$0.00	\$12,500.00	0	\$0.00
	Total Project Cost					\$1,180,505.84
	Contingency @ 20%					\$236,101.17
	Planning Level Budget Estimate					\$1,417,000

Notice Regarding Estimate

The quoted amounts for labor, equipment, and materials are estimates only. Actual costs may vary from those quoted. The Customer shall be responsible for the actual cost incurred as recorded by the Colorado River Commission. Cost records shall be available for review by the Customer. If actual cost exceeds the estimated cost by more than 20%, the Customer shall be notified before further costs are incurred.

Estimate Status: **Planning**

Basis:

Planning - Conceptual Design
Design - Final Design and Quantities
Construction - Bid Values

Appendix H

Substation Cost Estimates

Approved:

CCWRD **Date**

CRC **Date**



COLORADO RIVER COMMISSION OF NEVADA
555 East Washington Ave., Suite 3100
Las Vegas, Nevada 89101
(702) 856-3611 - Fax (702) 856-3617

COST ESTIMATE		Date Prepared: 4/17/2009
Project: Clark County Water Reclamation District		Facility: AWT Substation
Description: Estimate Based on Preliminary Planning. See drawing AWT-S-031 and AWT-S-032 Construct Partial 15-kV main & transfer bus. Install 15-kV and 69-kV breakers. Install power transformer. Install switches, structures, foundations, raceway, buswork, breakers, site work, grounding, fencing, yard surfacing, control building, relay panels, and DC system. Complete SCADA programming.		
Notes Assumes use of CCWRD pre-purchased materials. Does not include 69-kV deadend structure installed by NV Energy.		

Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor		
1	Transmission Structure	Lb.	\$2.52	\$2.07	0	\$0.00
2	Transmission Pole Anchor Bolt Cage	Lb.	\$1.89	\$2.07	0	\$0.00
3	Single Deadend H Frame	Lb.	\$2.52	\$2.07	0	\$0.00
4	Double Deadend H Frame	Lb.	\$2.52	\$2.07	0	\$0.00
5	Deadend Anchor Bolt Cage	Lb.	\$1.89	\$2.07	0	\$0.00
6	Static Mast	Lb.	\$2.52	\$2.07	15,600	\$71,604.00
7	Static Mast Anchor Bolt Cage	Lb.	\$1.89	\$2.07	1,800	\$7,128.00
8	69 kV Single Insulator Stand	Lb.	\$2.23	\$1.84	2,178	\$8,855.75
9	69 kV High Bus Support	Lb.	\$2.23	\$1.84	3,192	\$12,978.67
10	69 kV Switch Stand	Lb.	\$2.23	\$1.84	6,936	\$28,201.78
11	15 kV Bus Support	Lb.	\$2.23	\$1.84	696	\$2,829.94
12	15 kV Distribution Structure	Lb.	\$2.23	\$1.84	34,520	\$140,358.32
13	15 kV Cable termination Stand	Lb.	\$2.23	\$1.84	3,660	\$14,881.56
14	VT Support	Lb.	\$2.23	\$1.84	2,166	\$8,806.96
15	CT Support	Lb.	\$2.23	\$1.84	1,083	\$4,403.48
16	Ground Grate	Lb.	\$2.23	\$1.84	1,055	\$4,289.63
17	Bus 3" sch 40 Aluminum	Ft.	\$22.26	\$46.00	953	\$65,051.78
18	Bus 1 1/2" sch 40 Aluminum	Ft.	\$19.74	\$32.20	144	\$7,479.36
19	Insulators - 69 kV Suspension (Dead-End)	Ea.	\$162.75	\$149.50	0	\$0.00
20	Insulators - 69 kV Station Post	Ea.	\$267.75	\$103.50	27	\$10,023.75
21	Insulators - 15 kV Station Post	Ea.	\$39.90	\$40.25	48	\$3,847.20
22	Group Op. Sw. - 69 kV V-Type Center Break, 1200 Amp	Ea.	\$8,100.75	\$3,162.50	7	\$22,137.50
23	Group Op. Sw. - 15 kV V-Type Center Break, 2000 Amp	Ea.	\$4,436.25	\$2,875.00	1	\$7,311.25
24	Group Op. Sw. - 15 kV Vertical Break, 2000 Amp	Ea.	\$3,675.00	\$2,875.00	0	\$0.00
25	Surge Arrester - 48 kV MCOV Station Class	Ea.	\$1,732.50	\$189.75	6	\$11,533.50
26	Surge Arrester - 8.4 kV MCOV Station Class	Ea.	\$367.50	\$103.50	6	\$2,826.00
27	Surge Arrester - 8.4 kV MCOV Distribution Class	Ea.	\$126.00	\$74.75	0	\$0.00
28	Hook Stick Switch - 12 kV, 2000 Amp	Ea.	\$498.75	\$241.50	12	\$8,883.00
29	Tandem Transfer Switch	Ea.	\$498.75	\$241.50	0	\$0.00
30	Regulator Bypass Switch	Ea.	\$892.50	\$276.00	1	\$1,168.50
31	Fused Disconnect Switch - 15 kV	Ea.	\$871.50	\$253.00	6	\$6,747.00

Estimate Status: **Planning**

Basis:

Planning - Conceptual Design
 Design - Final Design and Quantities
 Construction - Bid Values



COLORADO RIVER COMMISSION OF NEVADA
555 East Washington Ave., Suite 3100
Las Vegas, Nevada 89101
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Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor		
32	Power Circuit Breaker - 138 kV, 2000 Amp	Ea.	\$79,800.00	\$1,265.00	4	\$167,190.00
33	Power Circuit Breaker - 15 kV, 2000 Amp	Ea.	\$16,858.80	\$690.00	1	\$17,548.80
34	Power Circuit Breaker - 15 kV, 1200 Amp	Ea.	\$15,765.75	\$690.00	2	\$32,911.50
35	Switched Shunt Capacitors, 1,200 kVAR	Ea.	\$50,400.00	\$13,800.00	0	\$0.00
36	Relay Cabinet , NEMA Enclosure	Ea.	\$33,600.00	\$920.00	0	\$0.00
37	Instrument Transformer, 69 kV Class, Single Phase	Ea.	\$3,255.00	\$345.00	6	\$21,600.00
38	Instrument Transformer, 15 kV Class, Single Phase	Ea.	\$4,331.25	\$345.00	0	\$0.00
39	Power Transformer - 12/16/20 MVA, 69-7.2/12.47 kV	Ea.	\$840,000.00	\$57,500.00	1	\$57,500.00
40	Station Service Trans. - 7.2 kV, 1 - Bushing, 15 kVA	Ea.	\$1,260.00	\$862.50	1	\$2,122.50
41	Scada System	Ea.	\$9,182.25	\$10,056.75	1	\$19,239.00
42	Communication Equipment	Ea.	\$44,100.00	\$2,875.00	1	\$46,975.00
43	Below Grade Raceway	Lot	\$11,368.00	\$100,011.67	1	\$111,379.67
44	Above Grade Conduit System	Lot	\$6,720.00	\$9,583.33	1	\$16,303.33
45	Control Cable - 600 Volt	Ft.	\$2.52	\$2.99	21,933	\$120,852.67
46	Cable Trench	Ft.	\$46.20	\$97.75	212	\$30,517.40
47	Power Transformer Foundation	Cu Yds.	\$399.00	\$632.50	11	\$11,759.10
48	Control Building Foundation	Cu Yds.	\$399.00	\$632.50	47	\$48,171.05
49	Single Insulator Foundation	Cu Yds.	\$399.00	\$632.50	9	\$9,345.39
50	High Bus Support/Disconnect Switch Foundation	Cu Yds.	\$399.00	\$632.50	22	\$22,662.06
51	138 kV Circuit Breaker Foundation	Cu Yds.	\$399.00	\$632.50	16	\$16,091.40
52	15 kV Bus Support Foundation	Cu Yds.	\$399.00	\$632.50	6	\$6,106.48
53	15 kV Breaker Foundation	Cu Yds.	\$399.00	\$632.50	5	\$5,384.43
54	URD Cable Terminal and Arrestor Support Foundation	Cu Yds.	\$399.00	\$632.50	6	\$6,230.26
55	Deadend H-Frame Foundation	Cu Yds.	\$399.00	\$632.50	0	\$0.00
56	Static Mast Foundation	Cu Yds.	\$399.00	\$632.50	31	\$32,182.80
57	VT Foundation	Cu Yds.	\$399.00	\$632.50	9	\$9,345.39
58	Switched Shunt Capacitor Foundation	Cu Yds.	\$399.00	\$632.50	0	\$0.00
59	Site Preparation	Lot	\$4,200.00	\$27,600.00	1	\$31,800.00
60	Station Gravel	Cu Yds.	\$26.25	\$25.88	579	\$30,164.93
61	Station Fence - Chain Link	Ft.	\$18.90	\$24.15	1,000	\$43,050.00
62	Station Grounding	Sq Ft.	\$0.53	\$1.04	64,009	\$99,854.04
63	Control Building & Accessories	Lot	\$252,000.00	\$51,750.00	1	\$51,750.00
64	125 VDC Battery Charger	Lot	\$23,100.00	\$1,725.00	1	\$1,725.00
65	Station Lighting	Ea.	\$945.00	\$632.50	18	\$28,395.00
66	Engineering & Project Mgt. @ 10%	Lot	\$0.00	\$154,950.41	1	\$154,950.41
67	Construction Mgt. @ 2.5%	Lot	\$0.00	\$38,737.60	1	\$38,737.60
68	Material Procurement and Proj. Mgt. @2.5%	Lot	\$0.00	\$19,262.45	1	\$19,262.45
69	Geotechnical Investigations	Ea.	\$0.00	\$6,200.00	1	\$6,200.00

Estimate Status: **Planning**

Basis:

Planning - Conceptual Design

Design - Final Design and Quantities

Construction - Bid Values



COLORADO RIVER COMMISSION OF NEVADA
555 East Washington Ave., Suite 3100
Las Vegas, Nevada 89101
(702) 856-3611 - Fax (702) 856-3617

Base Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor		
70	Engineering Survey	Lot	\$0.00	\$6,800.00	1	\$6,800.00
71	Construction Staking	Acre	\$0.00	\$5,000.00	3	\$15,000.00
72	Testing	Hrs.	\$0.00	\$85.00	200	\$17,000.00
73	Biological Monitors	Hrs.	\$0.00	\$52.00	0	\$0.00
74	Environmental Permitting	Lot	\$0.00	\$0.00	0	\$0.00
75	Building Permits	Lot	\$0.00	\$8,600.00	0	\$0.00
76	Grading Permits	Lot	\$0.00	\$12,500.00	0	\$0.00
77	Land Acquisition	Lot	\$0.00	\$0.00	0	\$0.00
Total Project Cost						\$1,807,454.57
Contingency @ 20%						\$361,490.91
Planning Level Budget Estimate						\$2,169,000

Estimate Limitation:

The quoted amounts for labor, equipment, and materials are estimates only. Actual costs may vary from those quoted. The Customer shall be responsible for the actual cost incurred as recorded by the Colorado River Commission of Nevada. Cost records shall be available for review by the Customer. If actual cost exceeds the estimated cost by more than 20%, the Customer shall be notified before further costs are incurred.

Estimate Status: **Planning**

Basis:

Planning - Conceptual Design

Design - Final Design and Quantities

Construction - Bid Values



COLORADO RIVER COMMISSION OF NEVADA
555 East Washington Ave., Suite 3100
Las Vegas, Nevada 89101
(702) 856-3611 - Fax (702) 856-3617

COST ESTIMATE		Date Prepared: 4/17/2009
Project: Clark County Water Reclamation District		Facility: Rochelle Substation
Description: Estimate Based on Preliminary Planning. See drawing RCH-S-031 and RCH-S-032 Construct Partial 15-kV main & transfer bus. Install 15-kV and 69-kV breakers. Install power transformer. Install switches, structures, foundations, raceway, buswork, breakers, site work, grounding, fencing, yard surfacing, control building, relay panels, and DC system. Complete SCADA programming.		
Notes Assumes use of CCWRD pre-purchased materials. Does not include 69-kV deadend structure installed by NV Energy.		

Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor		
1	Transmission Structure	Lb.	\$2.52	\$2.07	0	\$0.00
2	Transmission Pole Anchor Bolt Cage	Lb.	\$1.89	\$2.07	0	\$0.00
3	Single Deadend H Frame	Lb.	\$2.52	\$2.07	0	\$0.00
4	Double Deadend H Frame	Lb.	\$2.52	\$2.07	0	\$0.00
5	Deadend Anchor Bolt Cage	Lb.	\$1.89	\$2.07	0	\$0.00
6	Static Mast	Lb.	\$2.52	\$2.07	15,600	\$71,604.00
7	Static Mast Anchor Bolt Cage	Lb.	\$1.89	\$2.07	1,800	\$7,128.00
8	69 kV Single Insulator Stand	Lb.	\$2.23	\$1.84	2,178	\$8,855.75
9	69 kV High Bus Support	Lb.	\$2.23	\$1.84	3,192	\$12,978.67
10	69 kV Switch Stand	Lb.	\$2.23	\$1.84	6,936	\$28,201.78
11	15 kV Bus Support	Lb.	\$2.23	\$1.84	696	\$2,829.94
12	15 kV Distribution Structure	Lb.	\$2.23	\$1.84	34,520	\$140,358.32
13	15 kV Cable termination Stand	Lb.	\$2.23	\$1.84	3,660	\$14,881.56
14	VT Support	Lb.	\$2.23	\$1.84	2,166	\$8,806.96
15	CT Support	Lb.	\$2.23	\$1.84	1,083	\$4,403.48
16	Ground Grate	Lb.	\$2.23	\$1.84	1,055	\$4,289.63
17	Bus 3" sch 40 Aluminum	Ft.	\$22.26	\$46.00	953	\$65,051.78
18	Bus 1 1/2" sch 40 Aluminum	Ft.	\$19.74	\$32.20	144	\$7,479.36
19	Insulators - 69 kV Suspension (Dead-End)	Ea.	\$162.75	\$149.50	0	\$0.00
20	Insulators - 69 kV Station Post	Ea.	\$267.75	\$103.50	27	\$10,023.75
21	Insulators - 15 kV Station Post	Ea.	\$39.90	\$40.25	48	\$3,847.20
22	Group Op. Sw. - 69 kV V-Type Center Break, 1200 Amp	Ea.	\$8,100.75	\$3,162.50	7	\$78,842.75
23	Group Op. Sw. - 15 kV V-Type Center Break, 2000 Amp	Ea.	\$4,436.25	\$2,875.00	1	\$7,311.25
24	Group Op. Sw. - 15 kV Vertical Break, 2000 Amp	Ea.	\$3,675.00	\$2,875.00	0	\$0.00
25	Surge Arrester - 48 kV MCOV Station Class	Ea.	\$1,732.50	\$189.75	6	\$11,533.50
26	Surge Arrester - 8.4 kV MCOV Station Class	Ea.	\$367.50	\$103.50	6	\$2,826.00
27	Surge Arrester - 8.4 kV MCOV Distribution Class	Ea.	\$126.00	\$74.75	0	\$0.00
28	Hook Stick Switch - 12 kV, 2000 Amp	Ea.	\$498.75	\$241.50	12	\$8,883.00
29	Tandem Transfer Switch	Ea.	\$498.75	\$241.50	0	\$0.00
30	Regulator Bypass Switch	Ea.	\$892.50	\$276.00	1	\$1,168.50
31	Fused Disconnect Switch - 15 kV	Ea.	\$871.50	\$253.00	6	\$6,747.00

Estimate Status: **Planning**

Basis:

Planning - Conceptual Design
 Design - Final Design and Quantities
 Construction - Bid Values



COLORADO RIVER COMMISSION OF NEVADA
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Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor		
32	Power Circuit Breaker - 138 kV, 2000 Amp	Ea.	\$79,800.00	\$1,265.00	4	\$244,460.00
33	Power Circuit Breaker - 15 kV, 2000 Amp	Ea.	\$16,858.80	\$690.00	1	\$17,548.80
34	Power Circuit Breaker - 15 kV, 1200 Amp	Ea.	\$15,765.75	\$690.00	2	\$32,911.50
35	Switched Shunt Capacitors, 1,200 kVAR	Ea.	\$50,400.00	\$13,800.00	0	\$0.00
36	Relay Cabinet , NEMA Enclosure	Ea.	\$33,600.00	\$920.00	6	\$207,120.00
37	Instrument Transformer, 69 kV Class, Single Phase	Ea.	\$3,255.00	\$345.00	6	\$21,600.00
38	Instrument Transformer, 15 kV Class, Single Phase	Ea.	\$4,331.25	\$345.00	0	\$0.00
39	Power Transformer - 12/16/20 MVA, 69-7.2/12.47 kV	Ea.	\$840,000.00	\$57,500.00	1	\$897,500.00
40	Station Service Trans. - 7.2 kV, 1 - Bushing, 15 kVA	Ea.	\$1,260.00	\$862.50	1	\$2,122.50
41	Scada System	Ea.	\$9,182.25	\$10,056.75	1	\$19,239.00
42	Communication Equipment	Ea.	\$44,100.00	\$2,875.00	1	\$46,975.00
43	Below Grade Raceway	Lot	\$11,368.00	\$100,011.67	1	\$111,379.67
44	Above Grade Conduit System	Lot	\$6,720.00	\$9,583.33	1	\$16,303.33
45	Control Cable - 600 Volt	Ft.	\$2.52	\$2.99	21,933	\$120,852.67
46	Cable Trench	Ft.	\$46.20	\$97.75	212	\$30,517.40
47	Power Transformer Foundation	Cu Yds.	\$399.00	\$632.50	11	\$11,759.10
48	Control Building Foundation	Cu Yds.	\$399.00	\$632.50	47	\$48,171.05
49	Single Insulator Foundation	Cu Yds.	\$399.00	\$632.50	9	\$9,345.39
50	High Bus Support/Disconnect Switch Foundation	Cu Yds.	\$399.00	\$632.50	22	\$22,662.06
51	138 kV Circuit Breaker Foundation	Cu Yds.	\$399.00	\$632.50	16	\$16,091.40
52	15 kV Bus Support Foundation	Cu Yds.	\$399.00	\$632.50	6	\$6,106.48
53	15 kV Breaker Foundation	Cu Yds.	\$399.00	\$632.50	5	\$5,384.43
54	URD Cable Terminal and Arrestor Support Foundation	Cu Yds.	\$399.00	\$632.50	6	\$6,230.26
55	Deadend H-Frame Foundation	Cu Yds.	\$399.00	\$632.50	0	\$0.00
56	Static Mast Foundation	Cu Yds.	\$399.00	\$632.50	31	\$32,182.80
57	VT Foundation	Cu Yds.	\$399.00	\$632.50	9	\$9,345.39
58	Switched Shunt Capacitor Foundation	Cu Yds.	\$399.00	\$632.50	0	\$0.00
59	Site Preparation	Lot	\$4,200.00	\$27,600.00	1	\$31,800.00
60	Station Gravel	Cu Yds.	\$26.25	\$25.88	579	\$30,164.93
61	Station Fence - Chain Link	Ft.	\$18.90	\$24.15	1,000	\$43,050.00
62	Station Grounding	Sq Ft.	\$0.53	\$1.04	64,009	\$99,854.04
63	Control Building & Accessories	Lot	\$252,000.00	\$51,750.00	1	\$303,750.00
64	125 VDC Battery Charger	Lot	\$23,100.00	\$1,725.00	1	\$24,825.00
65	Station Lighting	Ea.	\$945.00	\$632.50	18	\$28,395.00
66	Engineering & Project Mgt. @ 10%	Lot	\$0.00	\$300,569.94	1	\$300,569.94
67	Construction Mgt. @ 2.5%	Lot	\$0.00	\$75,142.48	1	\$75,142.48
68	Material Procurement and Proj. Mgt. @2.5%	Lot	\$0.00	\$55,015.08	1	\$55,015.08
69	Geotechnical Investigations	Ea.	\$0.00	\$6,200.00	1	\$6,200.00

Estimate Status: **Planning**

Basis:

Planning - Conceptual Design

Design - Final Design and Quantities

Construction - Bid Values



COLORADO RIVER COMMISSION OF NEVADA
555 East Washington Ave., Suite 3100
Las Vegas, Nevada 89101
(702) 856-3611 - Fax (702) 856-3617

Base Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor		
70	Engineering Survey	Lot	\$0.00	\$6,800.00	1	\$6,800.00
71	Construction Staking	Acre	\$0.00	\$5,000.00	3	\$15,000.00
72	Testing	Hrs.	\$0.00	\$85.00	200	\$17,000.00
73	Biological Monitors	Hrs.	\$0.00	\$52.00	0	\$0.00
74	Environmental Permitting	Lot	\$0.00	\$0.00	0	\$0.00
75	Building Permits	Lot	\$0.00	\$8,600.00	0	\$0.00
76	Grading Permits	Lot	\$0.00	\$12,500.00	0	\$0.00
77	Land Acquisition	Lot	\$0.00	\$0.00	0	\$0.00
Total Project Cost						\$3,481,426.86
Contingency @ 20%						\$696,285.37
Planning Level Budget Estimate						\$4,178,000

Estimate Limitation:

The quoted amounts for labor, equipment, and materials are estimates only. Actual costs may vary from those quoted. The Customer shall be responsible for the actual cost incurred as recorded by the Colorado River Commission of Nevada. Cost records shall be available for review by the Customer. If actual cost exceeds the estimated cost by more than 20%, the Customer shall be notified before further costs are incurred.

Estimate Status: **Planning**

Basis:

Planning - Conceptual Design
 Design - Final Design and Quantities
 Construction - Bid Values



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COST ESTIMATE		Date Prepared: 4/17/2009
Project: Clark County Water Reclamation District		Facility: Surge Pond Substation
Description: Estimate Based on Preliminary Planning. See drawing SWS-S-031 and SWS-S-032 Construct Partial 15-kV main & transfer bus. Install 15-kV and 69-kV breakers. Install power transformer. Install switches, structures, foundations, raceway, buswork, breakers, site work, grounding, fencing, yard surfacing, control building, relay panels, and DC system. Complete SCADA programming.		
Notes Assumes use of CCWRD pre-purchased materials. Does not include 69-kV deadend structure installed by NV Energy.		

Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor		
1	Transmission Structure	Lb.	\$2.52	\$2.07	0	\$0.00
2	Transmission Pole Anchor Bolt Cage	Lb.	\$1.89	\$2.07	0	\$0.00
3	Single Deadend H Frame	Lb.	\$2.52	\$2.07	0	\$0.00
4	Double Deadend H Frame	Lb.	\$2.52	\$2.07	0	\$0.00
5	Deadend Anchor Bolt Cage	Lb.	\$1.89	\$2.07	0	\$0.00
6	Static Mast	Lb.	\$2.52	\$2.07	15,600	\$71,604.00
7	Static Mast Anchor Bolt Cage	Lb.	\$1.89	\$2.07	1,800	\$7,128.00
8	69 kV Single Insulator Stand	Lb.	\$2.23	\$1.84	2,178	\$8,855.75
9	69 kV High Bus Support	Lb.	\$2.23	\$1.84	3,192	\$12,978.67
10	69 kV Switch Stand	Lb.	\$2.23	\$1.84	6,936	\$28,201.78
11	15 kV Bus Support	Lb.	\$2.23	\$1.84	696	\$2,829.94
12	15 kV Distribution Structure	Lb.	\$2.23	\$1.84	34,520	\$140,358.32
13	15 kV Cable termination Stand	Lb.	\$2.23	\$1.84	3,660	\$14,881.56
14	VT Support	Lb.	\$2.23	\$1.84	2,166	\$8,806.96
15	CT Support	Lb.	\$2.23	\$1.84	1,083	\$4,403.48
16	Ground Grate	Lb.	\$2.23	\$1.84	1,055	\$4,289.63
17	Bus 3" sch 40 Aluminum	Ft.	\$22.26	\$46.00	953	\$65,051.78
18	Bus 1 1/2" sch 40 Aluminum	Ft.	\$19.74	\$32.20	144	\$7,479.36
19	Insulators - 69 kV Suspension (Dead-End)	Ea.	\$162.75	\$149.50	0	\$0.00
20	Insulators - 69 kV Station Post	Ea.	\$267.75	\$103.50	27	\$10,023.75
21	Insulators - 15 kV Station Post	Ea.	\$39.90	\$40.25	48	\$3,847.20
22	Group Op. Sw. - 69 kV V-Type Center Break, 1200 Amp	Ea.	\$8,100.75	\$3,162.50	7	\$22,137.50
23	Group Op. Sw. - 15 kV V-Type Center Break, 2000 Amp	Ea.	\$4,436.25	\$2,875.00	1	\$7,311.25
24	Group Op. Sw. - 15 kV Vertical Break, 2000 Amp	Ea.	\$3,675.00	\$2,875.00	0	\$0.00
25	Surge Arrester - 48 kV MCOV Station Class	Ea.	\$1,732.50	\$189.75	6	\$11,533.50
26	Surge Arrester - 8.4 kV MCOV Station Class	Ea.	\$367.50	\$103.50	12	\$5,652.00
27	Surge Arrester - 8.4 kV MCOV Distribution Class	Ea.	\$126.00	\$74.75	0	\$0.00
28	Hook Stick Switch - 12 kV, 2000 Amp	Ea.	\$498.75	\$241.50	24	\$17,766.00
29	Tandem Transfer Switch	Ea.	\$498.75	\$241.50	0	\$0.00
30	Regulator Bypass Switch	Ea.	\$892.50	\$276.00	2	\$2,337.00
31	Fused Disconnect Switch - 15 kV	Ea.	\$871.50	\$253.00	12	\$13,494.00

Estimate Status: **Planning**

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Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor		
32	Power Circuit Breaker - 138 kV, 2000 Amp	Ea.	\$79,800.00	\$1,265.00	4	\$167,190.00
33	Power Circuit Breaker - 15 kV, 2000 Amp	Ea.	\$16,858.80	\$690.00	2	\$35,097.60
34	Power Circuit Breaker - 15 kV, 1200 Amp	Ea.	\$15,765.75	\$690.00	4	\$65,823.00
35	Switched Shunt Capacitors, 1,200 kVAR	Ea.	\$50,400.00	\$13,800.00	0	\$0.00
36	Relay Cabinet , NEMA Enclosure	Ea.	\$33,600.00	\$920.00	0	\$0.00
37	Instrument Transformer, 69 kV Class, Single Phase	Ea.	\$3,255.00	\$345.00	6	\$21,600.00
38	Instrument Transformer, 15 kV Class, Single Phase	Ea.	\$4,331.25	\$345.00	0	\$0.00
39	Power Transformer - 12/16/20 MVA, 69-7.2/12.47 kV	Ea.	\$840,000.00	\$57,500.00	2	\$115,000.00
40	Station Service Trans. - 7.2 kV, 1 - Bushing, 15 kVA	Ea.	\$1,260.00	\$862.50	1	\$2,122.50
41	Scada System	Ea.	\$9,182.25	\$10,056.75	1	\$19,239.00
42	Communication Equipment	Ea.	\$44,100.00	\$2,875.00	1	\$46,975.00
43	Below Grade Raceway	Lot	\$17,052.00	\$150,017.50	1	\$167,069.50
44	Above Grade Conduit System	Lot	\$10,080.00	\$14,375.00	1	\$24,455.00
45	Control Cable - 600 Volt	Ft.	\$2.52	\$2.99	32,900	\$181,279.00
46	Cable Trench	Ft.	\$46.20	\$97.75	212	\$30,517.40
47	Power Transformer Foundation	Cu Yds.	\$399.00	\$632.50	23	\$23,518.20
48	Control Building Foundation	Cu Yds.	\$399.00	\$632.50	47	\$48,171.05
49	Single Insulator Foundation	Cu Yds.	\$399.00	\$632.50	9	\$9,345.39
50	High Bus Support/Disconnect Switch Foundation	Cu Yds.	\$399.00	\$632.50	22	\$22,662.06
51	138 kV Circuit Breaker Foundation	Cu Yds.	\$399.00	\$632.50	16	\$16,091.40
52	15 kV Bus Support Foundation	Cu Yds.	\$399.00	\$632.50	6	\$6,106.48
53	15 kV Breaker Foundation	Cu Yds.	\$399.00	\$632.50	10	\$10,768.86
54	URD Cable Terminal and Arrestor Support Foundation	Cu Yds.	\$399.00	\$632.50	6	\$6,230.26
55	Deadend H-Frame Foundation	Cu Yds.	\$399.00	\$632.50	0	\$0.00
56	Static Mast Foundation	Cu Yds.	\$399.00	\$632.50	31	\$32,182.80
57	VT Foundation	Cu Yds.	\$399.00	\$632.50	9	\$9,345.39
58	Switched Shunt Capacitor Foundation	Cu Yds.	\$399.00	\$632.50	0	\$0.00
59	Site Preparation	Lot	\$4,200.00	\$27,600.00	1	\$31,800.00
60	Station Gravel	Cu Yds.	\$26.25	\$25.88	579	\$30,164.93
61	Station Fence - Chain Link	Ft.	\$18.90	\$24.15	1,000	\$43,050.00
62	Station Grounding	Sq Ft.	\$0.53	\$1.04	64,009	\$99,854.04
63	Control Building & Accessories	Lot	\$252,000.00	\$51,750.00	1	\$51,750.00
64	125 VDC Battery Charger	Lot	\$23,100.00	\$1,725.00	1	\$1,725.00
65	Station Lighting	Ea.	\$945.00	\$632.50	18	\$28,395.00
66	Engineering & Project Mgt. @ 10%	Lot	\$0.00	\$181,850.03	1	\$181,850.03
67	Construction Mgt. @ 2.5%	Lot	\$0.00	\$45,462.51	1	\$45,462.51
68	Material Procurement and Proj. Mgt. @2.5%	Lot	\$0.00	\$42,912.78	1	\$42,912.78
69	Geotechnical Investigations	Ea.	\$0.00	\$6,200.00	2	\$12,400.00

Estimate Status: **Planning**

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Base Item	Description	Unit	Cost Per Unit		Quantity	Extended Price
			Material	Labor		
70	Engineering Survey	Lot	\$0.00	\$6,800.00	1	\$6,800.00
71	Construction Staking	Acre	\$0.00	\$5,000.00	3	\$15,000.00
72	Testing	Hrs.	\$0.00	\$85.00	200	\$17,000.00
73	Biological Monitors	Hrs.	\$0.00	\$52.00	0	\$0.00
74	Environmental Permitting	Lot	\$0.00	\$0.00	0	\$0.00
75	Building Permits	Lot	\$0.00	\$8,600.00	0	\$0.00
76	Grading Permits	Lot	\$0.00	\$12,500.00	0	\$0.00
77	Land Acquisition	Lot	\$0.00	\$0.00	0	\$0.00
Total Project Cost						\$2,139,925.58
Contingency @ 20%						\$427,985.12
Planning Level Budget Estimate						\$2,568,000

Estimate Limitation:

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