CITY OF COFFEYVILLE
BOARD OF COMMISSIONERS AGENDA ITEM

MEETING DATE	February 25, 2014	
RESOLUTION OR ORDINANCE NUMBER	R-14-15	
AGENDA TITLE	**Engineering Services for Substation B North Upgrade**	
REQUESTING DEPARTMENT	Electric	
PRESENTER	Gene Ratzlaff, Director of Utilities	
FISCAL INFORMATION	Cost as recommended: $62,800	Per Article 1.33A of the contract with CRNF, all costs of this project will be paid by the Electric Utility and reimbursed 100% by CRNF
	Budget Line Item:	810-5-020-478
	Balance Available	
	New Appropriation Required:	[ ] Yes [ ] No
PURPOSE	Provide engineering services to determine the most reliable and cost effective method to increase the capacity of Substation B North to accommodate growing electric load.	

BACKGROUND	Substation B North serves Coffeyville Resources Nitrogen Fertilizer (CRNF) with two 138KV/13.8KV 45/60/75 MVA transformers. The load has been below 75MW and is shared by both transformers. If a failure were to occur to one transformer that load could be transferred to the remaining transformer. However, in recent months the load has increased from 62MW to 77MW at the present time and will increase to 85MW in about a year. If a failure were to occur, it would exceed the capacity of one transformer which would require the customer to shed some of the load. It would probably take a year or more to repair/replace the transformer. An evaluation of the substation infrastructure is required to determine the most economical way to provide redundant capacity to serve the increased load.
SPECIAL NOTES	

ANALYSIS	The Electric Department issued Request for Qualifications (RFQ) to provide Engineering Services for Substation Improvements. Seven sealed RFQ's were received on October 16, 2013. A selection committee comprised of Electric Department staff and one CRNF representative selected three firms for interviews. The interviews included a presentation of their qualifications and approach to this project as well as a review of the substation site. The three firms are: • Garver • Lutz, Daily & Brain, LLC • Sega After the interviews each firm provided options on their approach to the design. The selection of the Engineering firm was based on the interviews, the firm's performance on similar sized projects, the individual team members experience and their approach to our project as documented in the emails received from each firm. The selection was not made solely on engineering costs. Each firms email response to the project approach has been attached for your review. The decision to award an engineering services contract to Garver was unanimous among all of those on the selection committee. A very preliminary estimate on total costs of this project is $3,300,000. All expenses related to this project will be paid by CRNF according to contract. For budget reasons and planning CRNF would like to approach this project in three phases. Phase 1 would include an evaluation of 2-3 options with a +/- 50% budgetary cost for each option and the pros and cons of each with a fixed cost from Garver Hold Point-CML&P and CRNF select an option. In phase 2 develop the option and generate +/- 25% total budgetary costs for timeline, lead times, etc. and a scope and fixed cost from Garver for this phase. Hold Point-CRNF secure budget. Phase 3 would be full implementation of the project with a scope of services and lump sum fee for this phase.

PUBLIC INFORMATION PROCESS	
BOARD OR COMMISSION RECOMMENDATION	
STAFF RECOMMENDATION	Staff recommends approval to pursue an Engineering Services agreement with Garver.
REFERENCE DOCUMENTS ATTACHED	Project Approach Email responses from Lutz, Garver and Sega, CRNF Contract

RESOLUTION NO. R-14-15

A RESOLUTION TO AUTHORIZE THE ISSUANCE OF A PURCHASE ORDER IN THE AMOUNT NOT TO EXCEED $62,800 TO GARVER TO PERFORM ENGINEERING DESIGN SERVICES FOR THE CITY OF COFFEYVILLE ELECTRIC UTILITY FOR PHASE ONE OF THE UPGRADE OF SUBSTATION B NORTH

BE IT RESOLVED by the Board of Commissioners of the City of Coffeyville, Kansas that the Finance Director be and is hereby authorized and directed to issue a purchase order in the not to exceed amount of $62,800 to Garver to perform engineering services for phase one of the upgrade of Substation B North.

ADOPTED THIS 25th day of February 2014

_____
David George, Mayor

ATTEST:

_____
Cindy Price, City Clerk

APPROVED AS TO FORM AND LEGALITY:

_____
Paul Kritz, City Attorney

AGREEMENT FOR PROFESSIONAL SERVICES
Coffeyville Municipal Light and Power
Coffeyville, Kansas
Project No. 13045020

THIS AGREEMENT FOR PROFESSIONAL SERVICES is made by and between **Coffeyville Municipal Light and Power** of **Coffeyville, Kansas** hereinafter referred to as "Owner," and **GARVER, LLC**, hereinafter referred to as the "GARVER".

The Owner intends to make the following improvements:

Installation of a new transformer and associated buswork, switches, breakers, as well as overhead and underground conductors to serve the Coffeyville Resources facility near Substation B North.

GARVER will provide professional services related to these improvements as described herein.

The Owner and GARVER in consideration of the mutual covenants in this contract agree in respect of the performance of professional services by GARVER and the payment for those services by the Owner as set forth below. Execution of the agreement by GARVER and the Owner constitutes the Owner's written authorization to GARVER to proceed on the date last written below with the services described herein. This agreement supersedes all prior written or oral understandings associated with services to be rendered, including any teaming agreements.

SECTION 1 - EMPLOYMENT OF GARVER

The Owner agrees to engage GARVER, and GARVER agrees to perform professional services in connection with the proposed improvements as stated in the sections to follow. These services will conform to the requirements and standards of the Owner and conform to the standards of practice ordinarily used by members of GARVER's profession practicing under similar conditions. For having rendered such services, the Owner agrees to pay GARVER compensation as stated in the sections to follow.

SECTION 2 - SCOPE OF SERVICES

This project will be divided into three phases of professional services. GARVER's scope of services for the first phase is described in attached Appendix A. GARVER will submit contract amendments defining the scope of work for subsequent phases of professional services and obtain written Owner approval before beginning.

SECTION 3 - PAYMENT

For the work described under SECTION 2 - SCOPE OF SERVICES, the Owner will pay GARVER on a lump sum basis. The Owner represents that funding sources are in place with the available funds necessary to pay GARVER.

If any payment due GARVER under this agreement is not received within 60 days from date of invoice, GARVER may elect to suspend services under this agreement without penalty or liquidated

damages assessed from the Owner.

The lump sum amount to be paid for the first phase under this agreement is $62,800. For informational purposes, GARVER's approximate current hourly rates for each employee classification are shown in Appendix B.

GARVER will submit fee amounts for subsequent phases of professional services and obtain written Owner approval before beginning.

The Owner will pay GARVER on a monthly basis, based upon statements submitted by GARVER to the Owner indicating the estimated proportion of the work accomplished. Payments not received within 60 days of invoice date will be subject to a one percent monthly simple interest charge. Any unused portion of the fee for the first phase, due to delays beyond GARVER's control, will be increased 6% annually with the first increase effective on or about July 1, 2014.

Additional Services (Extra Work). For work not described or included in Section 2 – Scope of Services but requested by the Owner in writing, the Owner will pay GARVER, for time spent on the project, at the rates shown in Appendix B for each classification of GARVER's personnel (may include contract staff classified at GARVER's discretion) plus reimbursable expenses including but not limited to printing, courier service, reproduction, and travel. The rates shown in Appendix B will be increased annually with the first increase effective on or about July 1, 2014.

SECTION 4 - OWNER'S RESPONSIBILITIES

In connection with the project, the Owner's responsibilities shall include, but not be limited to, the following:

1. Giving thorough consideration to all documents presented by GARVER and informing GARVER of all decisions within a reasonable time so as not to delay the work of GARVER.

2. Making provision for the employees of GARVER to enter public and private lands as required for GARVER to perform necessary preliminary surveys and other investigations.

3. Obtaining the necessary lands, easements and right-of-way for the construction of the work. All costs associated with securing the necessary land interests, including property acquisition and/or easement document preparation, surveys, appraisals, and abstract work, shall be borne by the Owner outside of this contract, except as otherwise described in Section 2 – Scope of Services.

4. Furnishing GARVER such plans and records of construction and operation of existing facilities, available aerial photography, reports, surveys, or copies of the same, related to or bearing on the proposed work as may be in the possession of the Owner. Such documents or data will be returned upon completion of the work or at the request of the Owner.

5. Furnishing GARVER a current boundary survey with easements of record plotted for the project property.

6. Paying all plan review and advertising costs in connection with the project.

7. Providing legal, accounting, and insurance counseling services necessary for the project and such auditing services as the Owner may require.

8. Furnishing permits, permit fees, and approvals from all governmental authorities having jurisdiction over the project and others as may be necessary for completion of the project.

9. Giving prompt written notice to GARVER whenever the Owner observes or otherwise becomes aware of any defect in the project or other events which may substantially alter GARVER's performance under this Agreement.

10. Owner will not hire any of GARVER's employees during performance of this contract and for a period of one year beyond completion of this contract.

11. Providing ground resistivity data for the existing ground grids at Substation B North and the Coffeyville Resources substation.

12. Furnishing GARVER a current geotechnical report for the proposed site of construction. GARVER will coordinate with the geotechnical consultant, the Owner has contracted with, on the Owner's behalf for the information that is needed for this project.

13. Selecting a firm that will provide testing and commissioning services.

SECTION 5 – MISCELLANEOUS

5.1 Instruments of Service

GARVER's instruments of service provided by this agreement consist of the printed hard copy reports, drawings, and specifications issued for the Assignment or Project; whereas electronic media, including CADD files, are tools for their preparation. As a convenience to the Owner, GARVER will furnish to the Owner both printed hard copies and electronic media. In the event of a conflict in their content, however, the printed hard copies shall take precedence over the electronic media.

GARVER's electronic media are furnished without guarantee of compatibility with the Owner's software or hardware, and GARVER's sole responsibility for the electronic media is to furnish a replacement for defective disks within thirty (30) days after delivery to the Owner.

GARVER retains ownership of the printed hard copy drawings and specifications and the electronic media. The Owner is granted a license for their use, but only in the operation and maintenance of the Project or Assignment for which they were provided. Use of these materials for modification, extension, or expansion of this Project or on any other project, unless under the direction of GARVER, shall be without liability to GARVER and GARVER's consultants. The Owner shall indemnify, defend, save harmless GARVER, GARVER's consultants, and the officers and employees of any of them from and against any and all claims, liabilities, damages, losses, and costs, including but not limited to costs of defense, arising out of the Owner's use of these materials for modification, extension, or expansion of this Project or on any other project not under the direction of GARVER.

Because data stored in electronic media form can be altered, either intentionally or unintentionally, by transcription, machine error, environmental factors, or by operators, it is agreed that the Owner shall indemnify, defend, save harmless GARVER, GARVER's consultants, and the officers and employees of any of them from and against any and all claims, liabilities, damages, losses, and costs, including but not limited to costs of defense, arising out of changes or modifications to the data in electronic media form in the Owner's possession or released to others by the Owner and for any use of the electronic media and printed hard copy drawings and specifications outside the license granted by

this provision.

5.2 Opinions of Cost

Since GARVER has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor(s)' methods of determining prices, or over competitive bidding or market conditions, GARVER's Estimates of Project Costs and Construction Costs provided for herein are to be made on the basis of GARVER's experience and qualifications and represent GARVER's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but GARVER cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from estimates prepared by GARVER.

The Owner understands that the construction cost estimates developed by GARVER do not establish a limit for the construction contract amount. If the actual amount of the low construction bid exceeds the construction budget established by the Owner, GARVER will not be required to re-design the project without additional compensation.

5.3 Underground Utilities

GARVER will not provide research regarding utilities and survey utilities located and marked by their owners as provided for in this agreement. Additionally, since many utility companies typically will not locate and mark their underground facilities prior to notice of excavation, GARVER is not responsible for knowing whether underground utilities are present or knowing the exact location of utilities for design and cost estimating purposes. Additionally, GARVER is not responsible for damage to underground utilities, unmarked or improperly marked, caused by geotechnical, potholing, construction, or other subconsultants working under a subcontract to this agreement.

GARVER will subcontract with a company specializing in locating underground utilities and will pass the direct cost plus 10 percent from the locating company to the Owner. GARVER will survey the locations marked by the locating company and the utility owners. GARVER will not be responsible for the completeness or accuracy of the markings made by locating company or utility owners, nor will GARVER be liable for costs incurred by the Owner due to incomplete or inaccurate utility markings.

5.4 Insurance

GARVER currently has in force, and agrees to maintain in force for the life of this Contract, the following minimum schedule of insurance:

Worker's Compensation	Statutory Limit
Automobile Liability (Combined Property Damage and Bodily Injury)	$500,000.00
General Liability (Combined Property Damage and Bodily Injury)	$1,000,000.00
Professional Liability	$2,000,000.00

5.5 Records

GARVER will retain all pertinent records for a period of two years beyond completion of the project.

Owner may have access to such records during normal business hours.

5.6 Indemnity Provision

Subject to the limitation on liability set forth in Section 5.8, GARVER agrees to indemnify the Owner for damages, liabilities, or costs (including reasonable attorneys' fees) to the extent the damages and costs are caused by the negligent acts, errors, or omissions of GARVER, its subconsultants, or any other party for whom GARVER is legally liable, in the performance of their professional services under this contract.

The Owner agrees to indemnify GARVER for damages, liabilities, or costs (including reasonable attorneys' fees) to the extent the damages and costs are caused by the negligent acts, errors, or omissions of the Owner, its agents, or any other party for whom the Owner is legally liable, in the performance of their professional services under this contract.

In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of GARVER and the Owner, they shall be borne by each party in proportion to its own negligence.

5.7 Design Without Construction Phase Services

In the event GARVER's Scope of Services under this agreement is not amended to include project observation or review of the Contractor's performance or any other substantial construction phase services, the Owner assumes all responsibility for interpretation of the Construction Contract Documents and for construction observation and supervision and waives any claims against GARVER that may be in any way connected thereto.

In addition, the Owner agrees, to the fullest extent permitted by law, to indemnify and hold GARVER harmless from any loss, claim or cost, including reasonable attorneys' fees and costs of defense, arising or resulting from the performance of such services by other persons or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to the Construction Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct of GARVER.

5.8 Limitation of Liability

In recognition of the relative risks and benefits of the project to both the Owner and GARVER, the risks have been allocated such that the Owner agrees, to the fullest extent permitted by law, to limit the liability of GARVER and its subconsultants to the Owner and to all construction contractors and subcontractors on the project for any and all claims, losses, costs, damages of any nature whatsoever or claims for expenses from any cause or causes, so that the total aggregate liability of GARVER and its subconsultants to all those named shall not exceed the insurance limits set forth in Section 5.4. Such claims and causes include, but are not limited to negligence, professional errors or omissions, strict liability, breach of contractor warranty, and indemnity obligations.

Notwithstanding any other provision to the contrary in this Agreement or a Work Authorization and to the fullest extent permitted by law, neither Owner nor Garver shall be liable, whether based on contract, tort, negligence, strict liability, warranty, indemnity, error and omission, or any other cause whatsoever, for any consequential, special, incidental, indirect, punitive, or exemplary damages, or damages arising from or in connection with loss of power, loss of use, loss of revenue or profit (actual or anticipated), loss by reason of shutdown or non-operation, increased cost of construction, cost of

capital, cost of replacement power or customer claims, and Owner hereby releases Garver, and Garver releases Owner, from any such liability.

5.8.1 Hazardous Materials

Nothing in this agreement shall be construed or interpreted as requiring Garver to assume any role in the identification, evaluation, treatment, storage, disposal, or transportation of any hazardous substance or waste. Notwithstanding any other provision to the contrary in this Agreement or a Work Authorization and to the fullest extent permitted by law, Owner shall indemnify, defend and save Garver and its affiliates, subconsultants, agents, suppliers, and any and all employees, officers, directors of any of the foregoing, if any, from and against any and all losses which arise out of the performance of the Services and relating to the regulation and/or protection of the environment, including, without limitation, losses incurred in connection with characterization, handling, transportation, storage, removal, remediation, disturbance, or disposal of hazardous material, whether above or below ground.

5.9 Mediation

In an effort to resolve any conflicts that arise during the design or construction of the project or following the completion of the project, the Owner and GARVER agree that all disputes between them arising out of or relating to this Agreement shall be submitted to non-binding mediation unless the parties mutually agree otherwise. If mediation is unsuccessful in resolving any conflicts, then either party may initiate any other form of dispute resolution, including litigation. The parties agree the District Court of Montgomery County, Kansas shall have exclusive jurisdiction over any litigation by and between the Owner and GARVER.

The Owner and GARVER further agree to include a similar mediation provision in all agreements with independent contractors and consultants retained for the project and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with subcontractors, subconsultants, suppliers or fabricators so retained, thereby providing for mediation as the primary method for dispute resolution between the parties to those agreements.

SECTION 6 - CONTROL OF SERVICES

This is a Kansas Contract and in the event of a dispute concerning a question of fact in connection with the provisions of this contract which cannot be disposed of by mutual agreement between the Owner and GARVER, the matter shall be resolved in accordance with the Laws of the State of Kansas.

This Agreement may be terminated by either party by seven (7) days written notice in the event of substantial failure to perform in accordance with the terms hereof by the one (1) party through no fault to the other party or for the convenience of the Owner upon delivery of written notice to GARVER. If this Agreement is so terminated, GARVER shall be paid for the time and materials expended to accomplish the services performed to date, as provided in SECTION 3 - PAYMENT; however, GARVER may be required to furnish an accounting of all costs.

SECTION 7 - SUCCESSORS AND ASSIGNS

The Owner and GARVER each bind themselves and their successors, executors, administrators, and assigns of such other party, in respect to all covenants of this Agreement; neither the Owner nor

GARVER shall assign, sublet, or transfer their interest in this agreement without the written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body which may be a party hereto.

SECTION 8 – APPENDICES AND EXHIBITS

8.1 The following Appendices and/or Exhibits are attached to and made a part of this Agreement:
- 8.1.1 Appendix A – Scope of Services
- 8.1.2 Appendix B – Hourly Rate Schedule

This Agreement may be executed in two (2) or more counterparts each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, Owner and GARVER have executed this Agreement effective as of the date last written below.

COFFEYVILLE MUNICIPAL LIGHT AND POWER	GARVER, LLC
By: _____ *Signature*	By: _____ *Signature*
Name: _____ *Printed Name*	Name: BROCK HOSKINS *Printed Name*
Title: _____	Title: EXEC VP/COO
Date: _____	Date: 2-17-2014
Attest: _____	Attest: _____

APPENDIX A – SCOPE OF SERVICES

2.1 General

Generally, the scope of services includes conceptual design services for improvements to Coffeyville Substation B North and the service to Coffeyville Resources. Improvements will consist primarily of the addition of one 45/60/75 MVA transformer to provide redundancy to the Coffeyville Resources facility, including overhead and underground transmission lines, breakers, switches, buswork, and associated structures. This project will be divided into multiple phases of professional services. This is the scope of work for the first phase.

2.2 Surveys

2.2.1 Design Surveys

Garver will not conduct surveys during the first phase.

2.3 Geotechnical Services

Geotechnical Services will not be required for the first phase.

2.4 Coordination

Garver will furnish concept plans for three options to Coffeyville Municipal Light and Power. Garver will meet with Coffeyville Municipal Light and Power and CVR to present the different options and answer questions about the options. Coordination between any other potentially affected utility will not be conducted during the first phase.

2.5 Studies

Garver will build a system model in ETAP software to represent a portion of the substation on the 138kV side and the load from the end user. Other sources and loads will be represented as aggregate sources and loads. This will be used for short circuit analysis, load flow and coordination studies once a final option has been selected by the Owner. The Owner will provide Garver with existing one-line diagrams, transformer information, breaker information, and source impedances, and all other information necessary for building the system model. Garver will conduct a site investigation to verify any equipment information that is not provided by the Owner.

2.6 Environmental Services

Garver will not perform any environmental services during the first phase.

2.7 Drainage Study

Garver will not develop a drainage report for the proposed improvements during the first phase.

2.8 Conceptual Design

The conceptual design phase submittal will include conceptual switching one-line drawings, conceptual protection one-line drawings, and conceptual plan view drawings for three options for providing redundancy at Coffeyville's Substation B for CVR. Garver will provide cost opinions of each option. Garver will also provide an option for replacing the Modicon PLC used for capacitor bank control. This conceptual submittal will be for the purpose of selecting an option to advance to the next phase of design. Garver will conduct two site visits, each expected to last two days, to meet with the Owner and conduct field investigations for the purpose of proposing viable options for upgrading the

system and verifying field conditions.

2.9 Preliminary Design

Preliminary design will not be included in the first phase.

2.10 Final Design

Final Design will not be included during the first phase.

2.11 Not Used

2.12 Bidding Services

Bidding Services will not be provided in the first phase.

2.13 Construction Phase Services

Construction Phase Services will not be provided during the first phase.

2.14 Project Deliverables

The following will be submitted to the Owner, or others as indicated, by Garver:

1. Three copies of the Conceptual Design.
2. Three copies of the Cost Opinion for each option provided in the conceptual design.
3. A written report comparing the three different options provided in the conceptual design.
4. Electronic files as requested, including all Auto-CAD drawing files.

2.15 Extra Work

The following items are not included under this agreement but will be considered as extra work:

1. Design phases beyond Conceptual.
2. Construction documents.
3. Redesign for the Owner's convenience or due to changed conditions after previous alternate direction and/or approval.
4. Submittals or deliverables in addition to those listed herein.
5. Pavement Design.
6. Design of any utilities relocation.
7. Retaining walls or other significant structural design beyond that required for electrical equipment foundations.
8. Site lighting design.
9. Design of a new Control House or Expansion of the existing Control House
10. Preparation of a Storm Water Pollution Prevention Plan (SWPPP). The construction contract documents will require the Contractor to prepare, maintain, and submit a SWPPP to DEQ.
11. Construction materials testing.
12. Environmental Handling and Documentation, including wetlands identification or mitigation plans or other work related to environmentally or historically (culturally) significant items, other than the work described in Paragraph 2.6.
13. Coordination with FEMA and preparation/submittal of a CLOMR and/or LOMR.
14. Services after construction, such as warranty follow-up, operations support, etc.
15. Relocation of transmission line and/or structures.
16. Structural steel design. Garver will provide loading and dimensional information so that the steel manufacturer can design the structures.

Extra Work will be as directed by the Owner in writing for an additional fee as agreed upon by the Owner and Garver.

2.16 Schedule

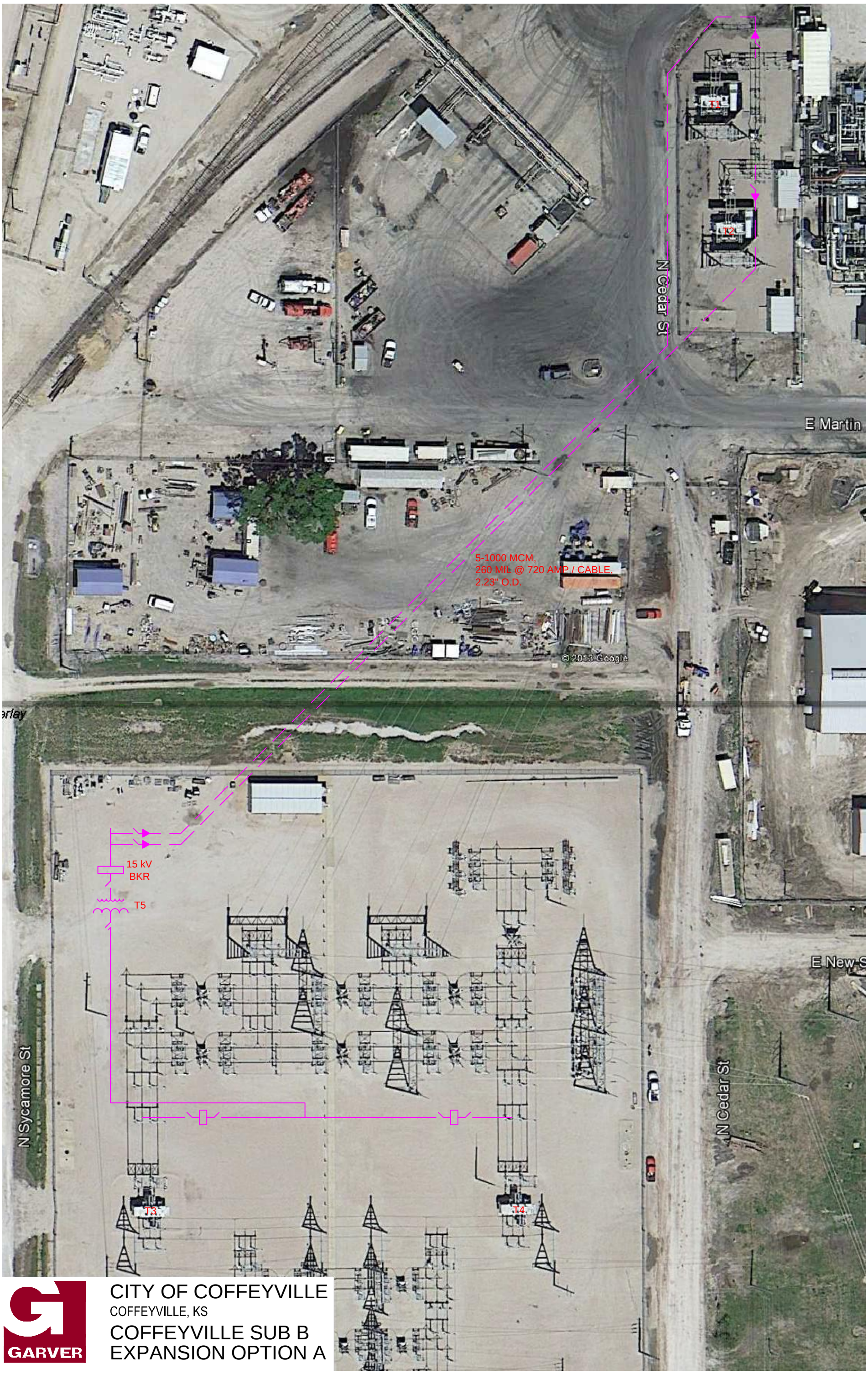
Garver shall begin work under this Agreement within ten (10) days of a Notice to Proceed and shall complete the work in accordance with the schedule below:

Phase Description	Calendar Days
Conceptual Design	45 days from start date

GARVER

APPENDIX B
CMLP - Substation B North
Garver Hourly Rate Schedule

Classification	Rates
Engineers / Architects	
E-1	$ 92.00
E-2	$ 107.00
E-3	$ 129.00
E-4	$ 150.00
E-5	$ 183.00
E-6	$ 228.00
M-1	$ 300.00
Planners / Environmental Specialist	
P-1	$ 108.00
P-2	$ 137.00
Designers	
D-1	$ 85.00
D-2	$ 99.00
D-3	$ 116.00
D-4	$ 138.00
Technicians	
T-1	$ 74.00
T-2	$ 84.00
T-3	$ 102.00
Surveyors	
S-1	$ 44.00
S-2	$ 55.00
S-3	$ 72.00
S-4	$ 105.00
S-5	$ 138.00
S-6	$ 163.00
2-Man Crew (Survey)	$ 169.00
3-Man Crew (Survey)	$ 210.00
2-Man Crew (GPS Survey)	$ 189.00
3-Man Crew (GPS Survey)	$ 230.00
Construction Observation	
C-1	$ 82.00
C-2	$ 114.00
C-3	$ 128.00
C-4	$ 163.00
Management/Administration	
M-1	$ 300.00
X-1	$ 52.00
X-2	$ 71.00
X-3	$ 99.00
X-4	$ 135.00



GARVER

CITY OF COFFEYVILLE

COFFEYVILLE, KS

COFFEYVILLE SUB B
EXPANSION OPTION A

Cindy Price

From: Robinson, Matthew J. <MJRobinson@GarverUSA.com>
Sent: Tuesday, December 03, 2013 3:36 PM
To: Gene Ratzlaff
Cc: Hennelly, Tom A.
Subject: Cost Estimate for Substation B North Modifications - Option A
Attachments: OptionA-B DJR 11-22-13-Model.pdf

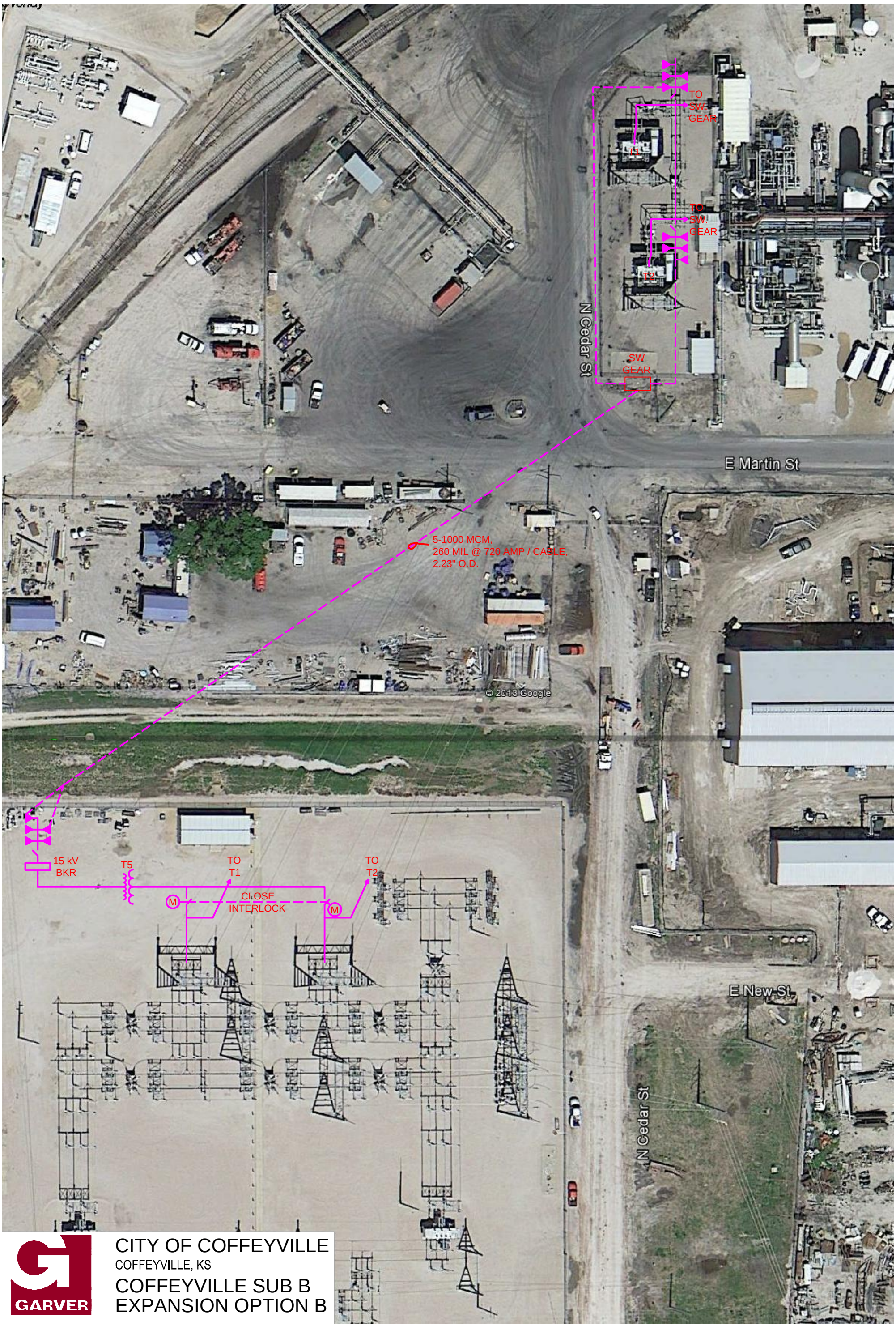
Gene,

For budgeting purposes for your client, the estimated cost for the construction of Substation B North, Option A is $3,000,000. Again this is an ball park figure and is subject to change based on the final scope, changes in equipment, modification of the Option, etc. The typical engineering fee that we would see associated with this would be $240,000 to $300,000. Again this is a ball park number and would be affected by the final scope. I've attached a PDF of Option A for reference.

We're finalizing the estimate for Option B and will get you a ball park number shortly.

Thank you,

Matthew J. Robinson, PE
Project Manager
Office: 479-527-9100
E-mail: MJRobinson@GarverUSA.com



GARVER

CITY OF COFFEYVILLE

COFFEYVILLE, KS

COFFEYVILLE SUB B
EXPANSION OPTION B

Cindy Price

From: Robinson, Matthew J. <MJRobinson@GarverUSA.com>
Sent: Tuesday, December 03, 2013 4:25 PM
To: Gene Ratzlaff
Cc: Hennelly, Tom A.
Subject: Cost Estimate for Substation B North Modifications - Option B
Attachments: OptionB DJR 11-20-13-Model.pdf

Gene,

For budgeting purposes for your client, the estimated cost for the construction of Substation B North, Option B is $2,600,000. Again this is a ball park figure and is subject to change based on the final scope, changes in equipment, modification of the Option, etc. The typical engineering design fee that we would see associated with this would be $210,000 to $260,000. Again this is a ball park number and would be affected by the final scope. I've attached a PDF of Option B for reference.

I didn't include construction observation in the engineering fee estimates (either Option A or Option B) as this has varied significantly from client to client.

Please let me know if you have any questions about either of these estimates.

Thank you,

Matthew J. Robinson, PE
Project Manager
Office: 479-527-9100
E-mail: MJRobinson@GarverUSA.com

LUTZ, DAILY & BRAIN, LLC CONSULTING ENGINEERS
6400 GLENWOOD, SUITE 200, OVERLAND PARK, KANSAS 66202
TELEPHONE: 913-831-0833 FAX: 913-831-1569 EMAIL: power@ldbeng.com

December 5, 2013

Also Sent Via Email
Mr. Gene Ratzlaff, Director
Coffeyville Municipal Light & Power (CML&P)
616 Spring
Coffeyville, KS 67337-1629

RE: Coffeyville Substation B Upgrades for Coffeyville Resources (CR)
Budgetary Estimate for Engineering Services

Dear Mr. Ratzlaff:

The budgetary estimate for engineering services for the design of the proposed Coffeyville Substation B Upgrades ranges from $57,000 to slightly over $100,000 depending on the project delivery method that is used.

Regardless of the project delivery method which is selected, a description of the scope and assumptions are listed below.

Scope - The estimate is based on adding the following equipment as shown in Figure 1:

1. New bay of 3 x 138KV circuit breakers similar to the existing breaker-and-a-half bays.
2. Two new 75MVA transformers located in the existing Substation B.
3. Two new 3000 amp, 13.8KV vacuum outdoor circuit breakers at Substation B.
4. Two new 3000 amp, 13.8KV vacuum indoor switchgear breakers at CR.
5. 2 x 1000 ft of overhead line.
6. Associated structures, foundations, relaying, and communications.

Drawings - The estimate assumes that existing AutoCAD drawings are available. The existing drawings will be used as a basis for the preparation of new drawings.

Equipment - The estimate assumes that new equipment either similar to or identical to existing equipment will be used.

Structures and Foundations - The estimate assumes that new structures and foundations either similar to or identical to existing structures and foundations will be provided.

Ground Grid - The estimate assumes a ground grid that will be either similar to or identical to the existing ground grid will be used.

Transfer Logic - The estimate assumes that transfer between the sources will be handled by logic in the Coffeyville Resources switchgear.

Relay Protection - The estimate assumes relay protection similar to or identical to the existing will be used.

Transformer Spill Protection - The estimate assumes that the new transformers will be piped into the existing transformer underground spill containment reservoir.

Rates - The estimate assumes that engineering hours will be expended in the first half of 2014.

Bid Documents – Bid documents will be either electronically posted or bidders will be requested to pay a non-refundable printing charge.

Selecting the project delivery method that best meets the needs of CML&P needs to be discussed.

There is the design-build also known as the Engineer-Procure-Construct (EPC)/turnkey project delivery method and the design-bid-build project delivery method, as well as hybrid project delivery methods which may be employed.

LD&B proposes to discuss the pros and cons of various project delivery methods with you and other involved CML&P staff and mutually select the project delivery method which best suits this project.

Some advantages of the design-build or EPC/turnkey project delivery method are that it avoids coordination with other contractors, since there is only one contractor for the entire project. It also offers the advantage that the work can sometimes be completed in a shorter period of time compared to other project delivery methods.

The design-bid-build project delivery method has several advantages, which include more control over equipment provided and a lower overall project cost, due to minimizing contingency allowances and markups.

Less engineering effort is required using the design-build or EPC/turnkey project delivery method, since the contractor will be doing some of the design work. More engineering effort is required with the design-bid-build approach, since there will be multi-prime contract packages with complete design. Separate contract packages would be issued for equipment procurement and one general installation contract package would be issued with all necessary details and technical specifications.

We look forward to working with CML&P and CR to discuss the project delivery method and to work together to achieve creative and cost effective solutions for the successful completion of this project.

Very truly yours,

LUTZ, DAILY & BRAIN, LLC

Bruce D. Smith, P.E.

tmr
w/enc
cc: Fred Lutz, Tom Shepard, Tom Lutz w/enc via email

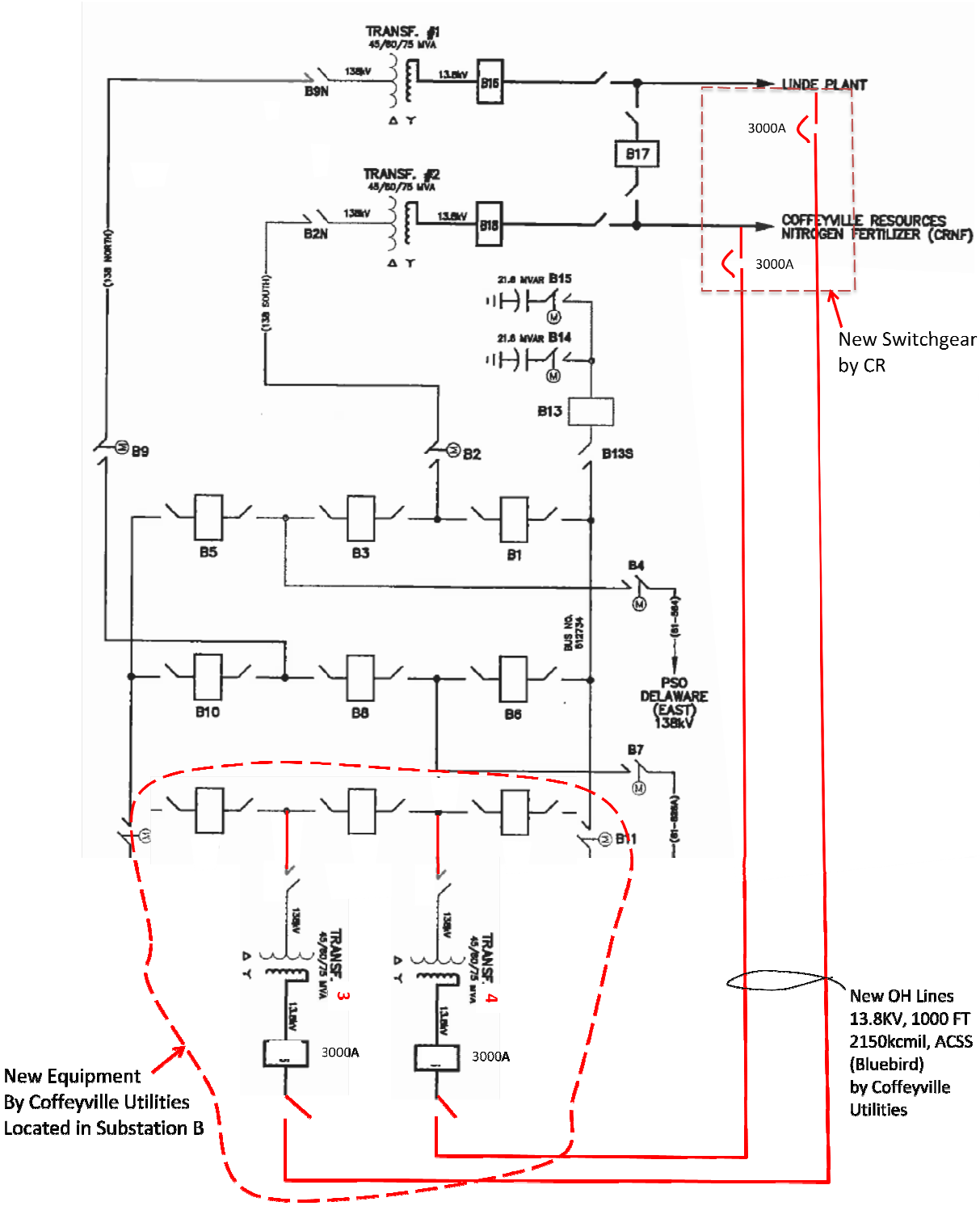


Figure 1--Substation B Upgrade Estimate Single Line

December 6, 2013

City of Coffeyville, Kansas
606 Spring Street
P.O. Box 1629
Coffeyville, KS 67337

Attention: Mr. Gene Ratzlaff

Re: City of Coffeyville
Design of 138/13.2-kV Substation B and Sub B North Additions
Proposal No. 406Q-13328

SUBJECT: PROPOSAL TO PROVIDE ENGINEERING SERVICES

Dear Mr. Ratzlaff:

Sega Inc. (Sega) appreciates the opportunity to submit this proposal to provide engineering services related to the 138/13.2-kV Substation B and Sub North Additions. This proposal includes engineering, drafting, construction observation, and ancillary services, as specified below, to prepare the documents necessary for the construction of this project. This proposal is based upon discussions with the City of Coffeyville (City) on November 18, 2013 to define need and scope.

PROJECT DESCRIPTION

The City's largest customer is served with two (2) 138/13.8-kV, 45/60/75 MVA transformers. The customer is planning to increase the plant load to 85-MW with more in the future. If one of the transformers should fail, the other transformer does not have the capacity to deliver the entire load. An evaluation of the substation infrastructure is required to determine the most economical way to provide redundant capability to serve the increased load.

Sega Inc.
16041 FOSTER
P.O. BOX 1000
OVERLAND PARK, KANSAS 66085-1000
www.segainc.com
PHONE 913-681-2881
FAX 913-681-8475

SCOPE OF WORK OPTIONS

The Scope of Engineering Services will be based on work performed for pervious Coffeyville projects. Sega intends to utilize the same designed equipment from those projects as much as possible. The Scope of Services indicated above includes the following summarized options:

Option 1 (and its variations) includes adding a third 138-13.8-kV, 75-MVA transformer to back up the two (2) existing transformers. In the event that one (1) of the two (2) existing transformers is taken out of service, the new transformer could be switched to deliver the power.

Physical Design Option 1A

1. Add a new 138/13.8-kV transformer 5 at Substation B and a new 13.8-kV circuit breaker at Sub B North. The bus exiting north from the 13.8-kV circuit breaker will be two (2) tiered, then branching off to the existing low bus between circuit breakers B17 and B18. The high bus will be high enough to clear the CRNF switchgear enclosure continuing to the north and then tap down to the bus between circuit breakers B16 and B17. One-line, sketches, and an example installation picture are in Appendix A - Option 1A.

   This is the simplest option, electrically, but will require a bundled conductor (up to three (3) conductors per phase depending on the size selected) for the 13.8-kV distribution line between the substations. An option to limit the length of the 13.8-kV distribution line would be to extend the north fence to enclose the grassy area. The 13.8-kV would be connecting hard bus from the new transformer and extend to the north and then east and then transition to a bundled conductor once the line reaches the intersection of East Martin St. and North Cedar St.

   Another option to replace the new hard bus at Sub B North is to use a cable bus system equivalent to one manufactured by MP Husky. A cable bus system can be investigated further if requested by the City.

Electrical Control Design Option 1A

1. Prepare schematics and wiring diagrams for the new transformer and circuit breaker and at least two (2) new relay panels. One (1) panel will be at each substation.

2. Prepare protective relay settings.

Physical Design Option 1B

1. Add a new 138/13.8-kV transformer 5 at Substation B and a new 13.8-kV circuit breaker at Sub B North. There will be two (2) underground feeder circuits connected to the bus side of the new 13.8-kV circuit breaker and then connecting to new or existing cubicles at each set of switchgear. One-line sketch is shown in Appendix B - Option 1B.

   This is another simple option electrically, but will require connecting to the existing switchgear enclosures. Permission from the customer and more detailed engineering will be required to investigate this Option 1B.

Electrical Control Design Option 1B

1. Prepare schematics and wiring diagrams for the new transformer and circuit breaker and at least two (2) new relay panels (one (1) panel will be at each substation) and two (2) switchgear feeder cubicles.

2 Prepare protective relay settings.

Physical Design Option 1C

1. Add a new 138/13.8-kV transformer 5 at Substation B and a new 13.8-kV circuit breaker at Sub B North. There will be one (1) underground feeder circuit exiting from the new 13.8-kV circuit breaker and then connecting to a new set of switchgear. Two (2) underground feeder circuits from the new switchgear will be connected to the new or existing cubicles at each set of existing switchgear. The feeder circuit for the new compressor building will be relocated to the new set of switchgear. One-line sketch is shown in Appendix C - Option 1C.

   This is another simple option electrically, but more complicated than options 1A and 1B. It will require a new switchgear enclosure connecting to the existing switchgear enclosures and relocating an existing feeder connection. Permission from the customer and more detailed engineering will be required to investigate this Option 1C.

Electrical Control Design Option 1C

1. Prepare schematics and wiring diagrams for the new transformer and circuit breaker and at least two (2) new relay panels (one (1) panel will be at each substation) and two (2) switchgear feeder cubicles.

2. Prepare protective relay settings.

Option 2 increases the capacity by replacing each existing transformer with larger power rated transformers.

Physical Design Option 2A

1. Option 2A is similar to option 1A, except the new 138/13.8-kV transformer 5 is installed at the southern end of Sub B North. The transmission line to existing transformer 2 will be rerouted to a new monopole dead end and will connect to new transformer 5. The transmission line to existing transformer 1 would be rerouted to transformer 2. A new line would connect from Substation B to existing transformer 1. These connections are shown in Appendix D - Option 2A Photo.

   This option will be investigated further if the previous options are not selected.

Physical Design Option 2B

1. Option 2B is similar to option 1B, except the new 138/13.8-kV transformer 5 is installed at the southern end of Sub B North. The transmission line to existing transformer 2 will be rerouted to a new monopole dead end and connect to new transformer 5. The transmission line to existing transformer 1 would be rerouted to transformer 2. A new line would connect from Substation B to existing transformer 1. These connections are shown in Appendix D - Option 2A Photo.

   This option will be investigated further if the previous options are not selected.

Physical Design Option 2C

1. Option 2C is similar to option 1C, except the new 138/13.8-kV transformer 5 is installed at the southern end of Sub B North. The transmission line to existing transformer 2 will be rerouted to a new monopole dead end and will connect to new transformer 5. The transmission line to existing transformer 1 would be rerouted to transformer 2. A new line would connect from Substation B to existing transformer 1. These connections are shown in Appendix D - Option 2A Photo.

   This option will be investigated further if the previous options are not selected.

SCOPE OF WORK OPTION 1A

The Scope of Services indicated above includes the following summarized items for Option 1A only. The engineering fee does not include the option in Option 1A of extending the fence at Substation B to the north. If a different option is selected, Sega will reevaluate the Scope and may adjust the engineering services fee accordingly.

Control Relay Panel Specification

1. Prepare a control relay panel specification:

    a. Includes controls and relays installed in at least two (2) new panels.

Structures and Equipment Specification

1. Prepare a structures and equipment specification:

    a. Includes all of the major equipment and steel structures.

Construction Specification

1. Prepare a construction specification:

    a. Includes construction indicated above for Substation B and Sub B North.

    b. Includes the testing required for the installation.

    c. Includes the schedule and sequence of construction required for the project.

2. Seven (7) visits are included for the following functions:

    a. Initial coordination meeting for project review.

    b. Two (2) coordination meetings with the City and Coffeyville Resources to discuss project scope.

    c. Permitting review meeting with the City.

    d. Pre-bid meeting with construction contract bidders.

    e. Pre-construction meeting to review the work.

    f. Pre-energization/energization of the work to review final testing.

3. Coordination with the City, during the bid period, and bidders, as necessary, to promote a proper understanding of the project requirements. Sega will review submitted proposals and provide recommendations.

4. We have included per diem costs for twenty-five (25) man-days per month for four (4) months for construction observation with the City and Contractor during the field construction period if requested. Sega will also be available remotely in the office during the entire field construction period.

5. It is anticipated a contract tester will be used for all testing.

6. Prepare an energization test procedure with preliminary items to be checked.

7. Final review of testing and functional performance testing prior to the energization of the equipment.

8. Prepare conforming to construction record AutoCAD drawings in accordance with any red marks or field construction notes and issue to the City. Eighty (80) man-hours are included for this work.

PROJECT TEAM

Scott Sibson, P.E., will be Sega's Project Manager for the project. Other staff will be assigned as necessary.

SCHEDULE

Currently, there is not a set schedule other than engineering and installing the equipment in an efficient manner. The schedule will be established after an option is chosen and Sega has received a Notice to Proceed.

CLARIFICATIONS

This proposal is based upon the following:

1. City will provide documents associated with the project: topographic survey and existing substation design drawings.

2. City will provide all filing fees, application fees, and permit fees to all Governmental Authorities having jurisdiction over the project.

3. The following services are specifically not included in this proposal. However, Sega can provide and/or assist in obtaining these services as additional scope if required:

    a. Surveying services to obtain an updated boundary, topographic survey, and tree survey.

    b. Preliminary or final platting or rezoning.

    c. Legal description and/or easement preparation.

    d. Wetland delineation or permitting.

    e. Environmental compliance studies such as SPCC, FEMA submittals, or operational NPDES permitting for industrial discharges.

    f. Soil remediation or soil decontamination engineering.

    g. Public improvement plans for roads, intersections, water lines, and sewer lines.

    h. Stormwater quantity or quality control design. Sega's proposal assumes that the stormwater storage facilities on-site and around the site are adequate. In other words, if a stormwater pond or a stormwater infiltration system is required by any permitting agency, Sega would provide these services on a time-and-expense basis.

4. Engineering/Design Services estimated cost is based on the drawing list in Appendix E - Proposed Drawing List.

5. The discovery, identification, presence, handling, disposal or removal of, or exposure of a person to hazardous materials pre-existing in any form at the Project, including, but not limited to, asbestos products or PCB.

COMPENSATION

The estimated costs for the engineering services described above are as follows:

1. Engineering/Design Services..... $385,000
2. Construction Observation/Support Services..... $160,000
3. Final Construction Record Preparation..... $ 10,000
4. Proposed Estimated Maximum..... $555,000

Sega proposes to perform the services described above for the indicated estimated maximum cost.

This proposal is offered in accordance with the General Services Agreement in place between the City and Sega.

This proposal is valid for sixty (60) days.

Thank you for the opportunity to present this proposal. Sega looks forward to working with you on this project. Please feel free to contact us if you have any questions concerning this proposal.

Sincerely,

SEGA INC.

Scott M. Sibson

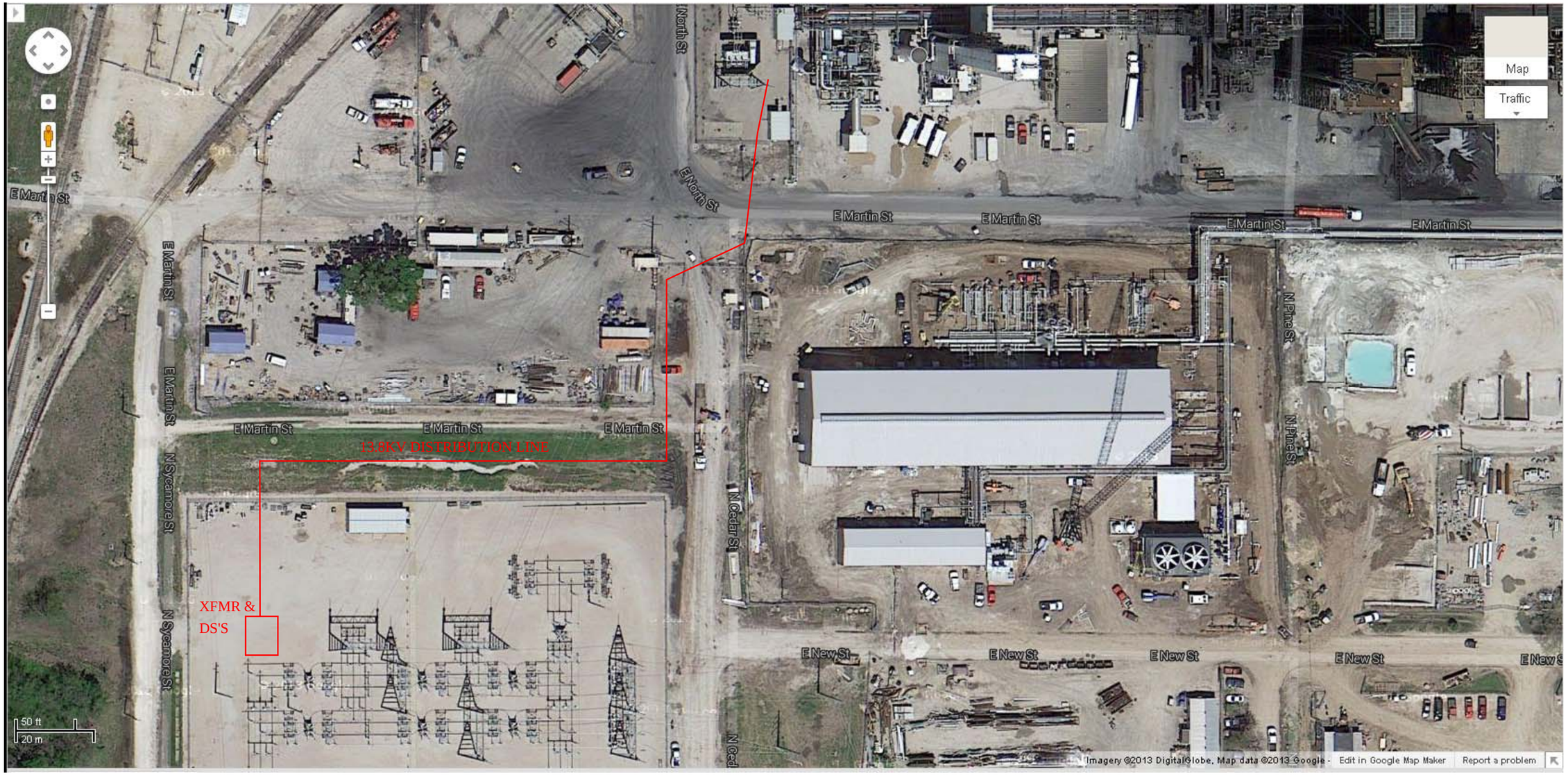
Scott M. Sibson, P.E.
Project Manager

SMS/jlr

Enc.

c: Steve Hinderliter
John Clayton

APPENDIX A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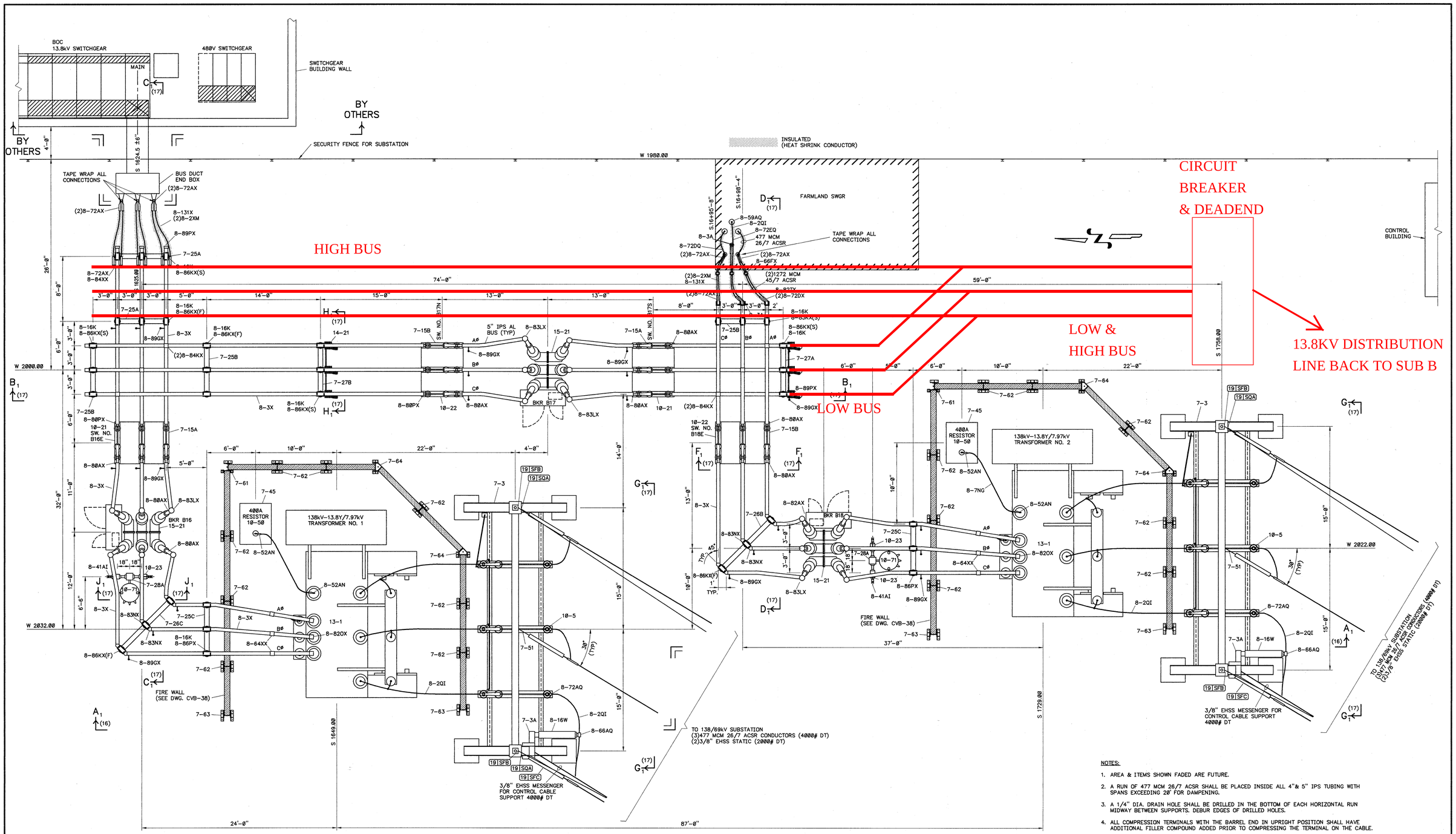
N Pine St
N Pine St
N Sycamore St
N Sycamore St
N Cedar St
E New St
E New St
E New St
E New St
E New St
13.8KV DISTRIBUTION LINE
XFMR &
DS'S
50 ft
20 m
Map
Traffic
Imagery ©2013 DigitalGlobe, Map data ©2013 Google -
Edit in Google Map Maker
Report a problem



NOTES:

1. AREA & ITEMS SHOWN FADED ARE FUTURE.
2. A RUN OF 477 MCM 26/7 ACSR SHALL BE PLACED INSIDE ALL 4"& 5" IPS TUBING WITH SPANS EXCEEDING 20' FOR DAMPENING.
3. A 1/4" DIA. DRAIN HOLE SHALL BE DRILLED IN THE BOTTOM OF EACH HORIZONTAL RUN MIDWAY BETWEEN SUPPORTS. DEBUR EDGES OF DRILLED HOLES.
4. ALL COMPRESSION TERMINALS WITH THE BARREL END IN UPRIGHT POSITION SHALL HAVE ADDITIONAL FILLER COMPOUND ADDED PRIOR TO COMPRESSING THE TERMINAL ON THE CABLE.
5. INSTALL ALL BREAKER, SWITCH NO'S & PHASING LETTERS, ITEM 8-250, AS DIRECTED BY THE OWNER.
6. ALL STRUCTURES WITH TUBULAR COLUMNS SHALL BE INSTALLED WITH LEVELING NUTS AND WASHERS BETWEEN FOUNDATION AND BASE PLATE.

REV.	DWN BY	CKD BY	DATE	
1	TB	JKW	12-31-98	ADDENDUM NO. 1
2	TB		1-28-99	REVISED TRANSF. PER MFGR DWGS
3	TB		2-8-99	REVISED TUBING RUNS TO TRANSFORMER
4	SRM	JKW	6-24-99	REVISED CONNECTIONS TO 400A RESISTOR & FARMLAND SWITCHGEAR, MOVED MESSENGER CABLE, ADDED EXPANSION BUS SUPPORT & LAMP RESISTOR TRANSFORMER & ADDED STAND OFF INSULATOR ON LINE JUMPER.
5	CDM	JKW	3-8-00	FINAL RECORD.

STEEL DEADEND STRUCTURE DESIGN

1. STRUCTURES ARE DESIGNED FOR THE UNBALANCED TENSION CAUSED BY THE REMOVAL OF ANY COMBINATION OF WIRES. THIS INCLUDES THE DEADENDING OF CONDUCTORS ON ONE SIDE OF THE STRUCTURE ONLY.
2. STRUCTURES ARE DESIGNED FOR CLASS "A" TYPE STRUCTURE PER NEMA SG6, PART 36, "OUTDOOR SUBSTATION STRUCTURES".
3. THE 25kV STRUCTURE IS DESIGNED FOR A MINIMUM SHORT CIRCUIT FORCE 1,000,000 kVA.

DESIGN TENSIONS (MAX.)

ITEM	LINE	STATIC	MESSENGER	ANGLE (DEG.)	CLASS
7-3	4000#	2000#	5600#	30	A

MINIMUM ELECTRICAL CLEARANCE REQUIREMENTS:

kV RATING	LINE TO GROUND FOR RIGID COND.	PHASE TO PHASE METAL TO METAL FOR RIGID COND.	HT. ABOVE GRADE
13.8	12"	24"	108"(9'-0")
138	56"	108"	146"(12'-2")

AMG

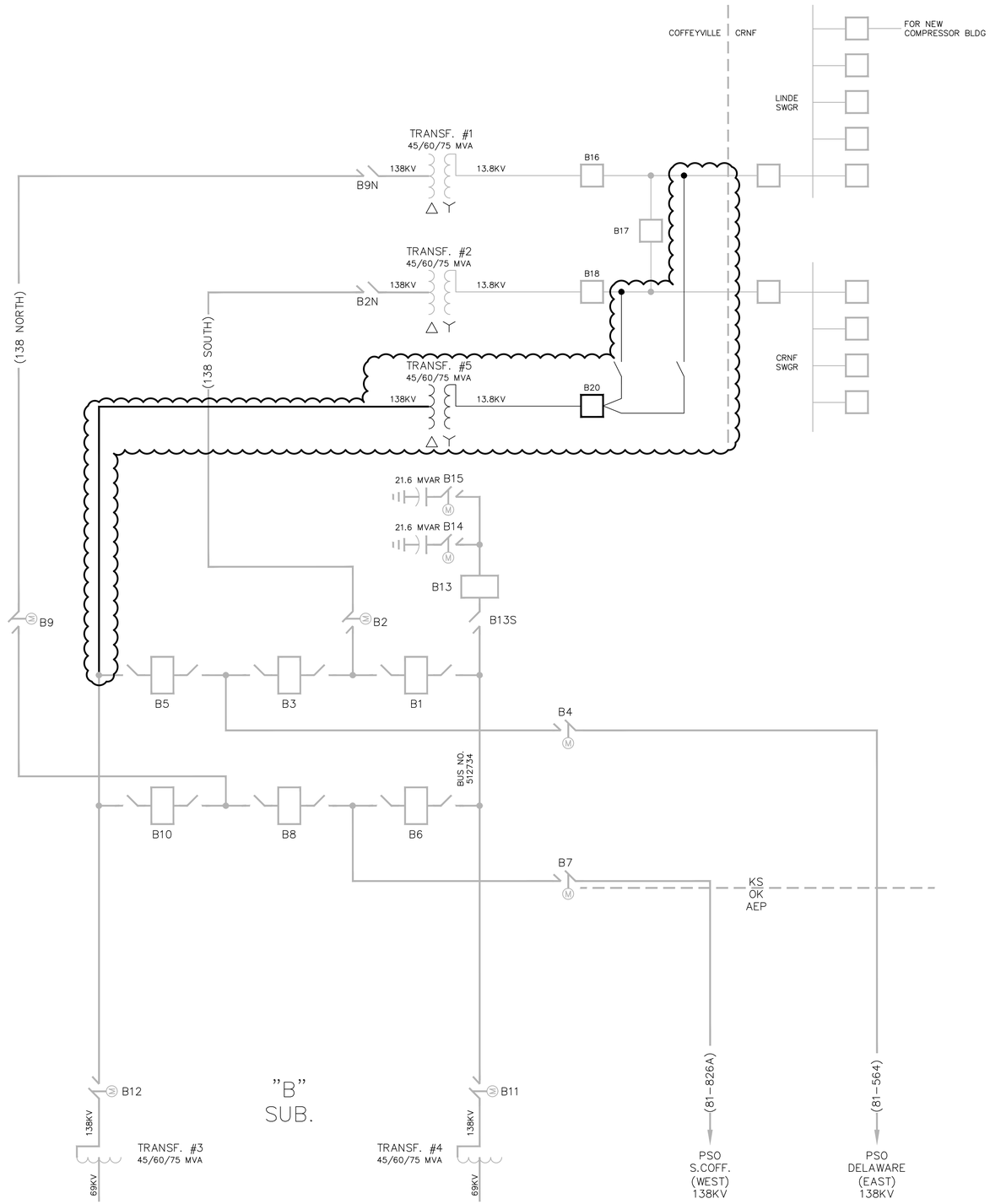
ALLGEIER, MARTIN & ASSOCIATES, INC.
CONSULTING ENGINEERS
JOPLIN, MISSOURI

CITY OF COFFEYVILLE
COFFEYVILLE, KANSAS

SUBSTATION B
138-13.2kV STRUCTURE PLAN

DWN. BY	CKD. BY	CAD DATE	DWN. BY	CKD. BY	CAD FILE	DRAWING NUMBER	REV.
TB	JKW	6-22-00			CVB-6	CVB-6	5
APPD. BY		DATE	APPD. BY		DATE / SCALE		
V. LAWSON 2035		12-11-98			3/16"=1'		

Example Bus
Pic
631279
Genie
Z-34/22
RSC
Equipment Rental
Genie Z-34/22



ENGINEERING & TECHNICAL SERVICES
16041 Foster
P.O. Box 1000
Overland Park, Kansas 66085-1000
(913) 681-2881
www.segainc.com

Sega Inc. - "State" State Certificate of Authority # ???

PROJECT LOCATION:

REV.	DATE	DESCRIPTION	DWN	CHK
A	12-4-13	SEGA PROPOSAL	MLM	SMS

CITY OF COFFEYVILLE

138KV SYSTEM ONE-LINE

DESIGN BY: SMS	CHECKED BY: BAC
DRAWN BY: MLM	DATE: 12-4-13
CLIENT I.D.	SEGA PROJECT NO.

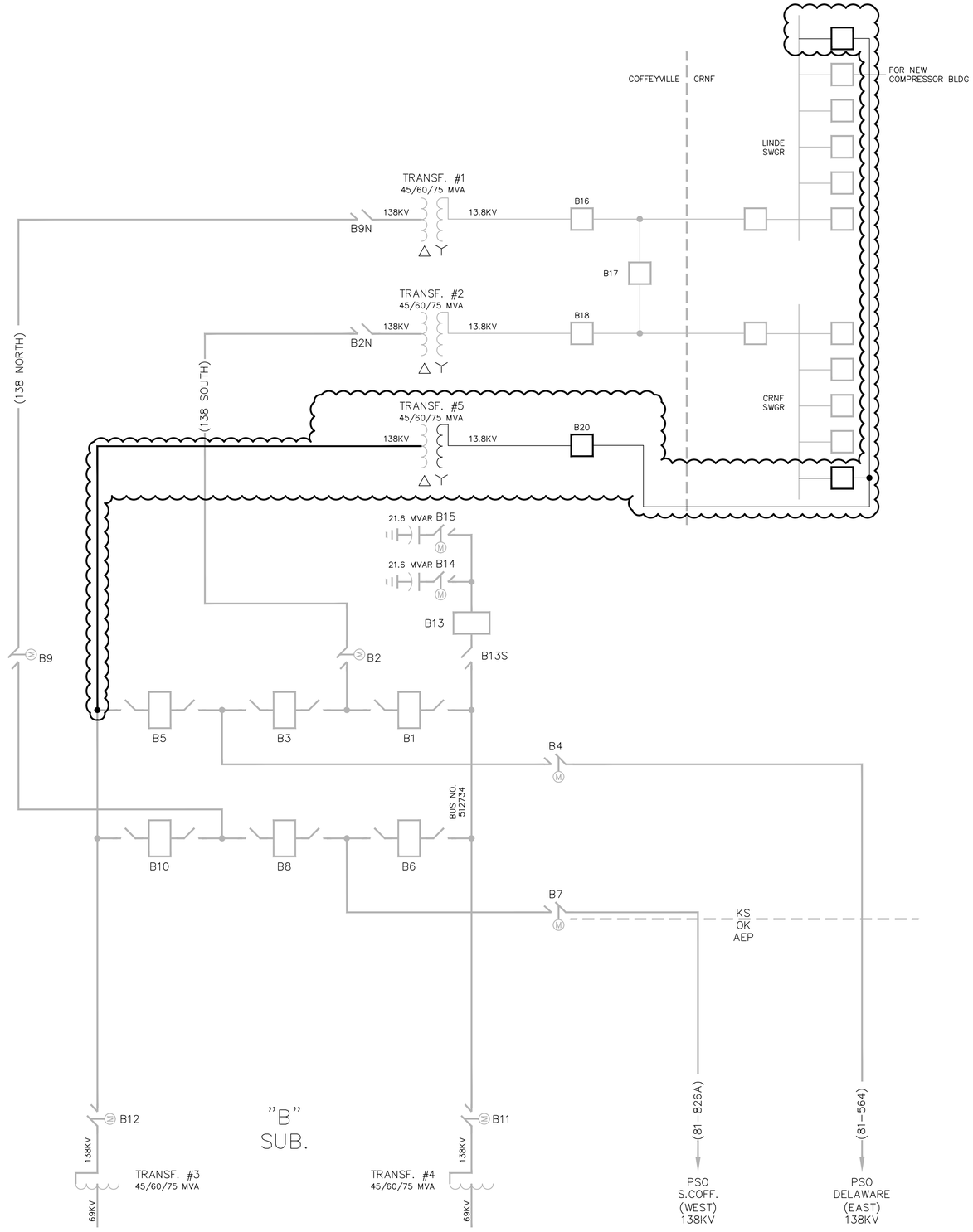
CADD FILE NAME: OPTION1A.DWG

DRAWING NO. OPTION1A

REV. A

K:\pd\PROPOSAL\OPTION1A.dwg Dec 04, 2013-10:10:50 am Mary Martin

APPENDIX B



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Sega Inc. – "State" State Certificate of Authority # ???

PROJECT LOCATION:

REV.	DATE	DESCRIPTION	DWN	CHK
A	12-4-13	SEGA PROPOSAL	MLM	SMS

CITY OF COFFEYVILLE

138KV SYSTEM ONE-LINE

DESIGN BY: SMS	CHECKED BY: BAC
DRAWN BY: MLM	DATE: 12-4-13
CLIENT I.D.	SEGA PROJECT NO.

CADD FILE NAME: OPTION1B.DWG

DRAWING NO. OPTION1B

REV. A

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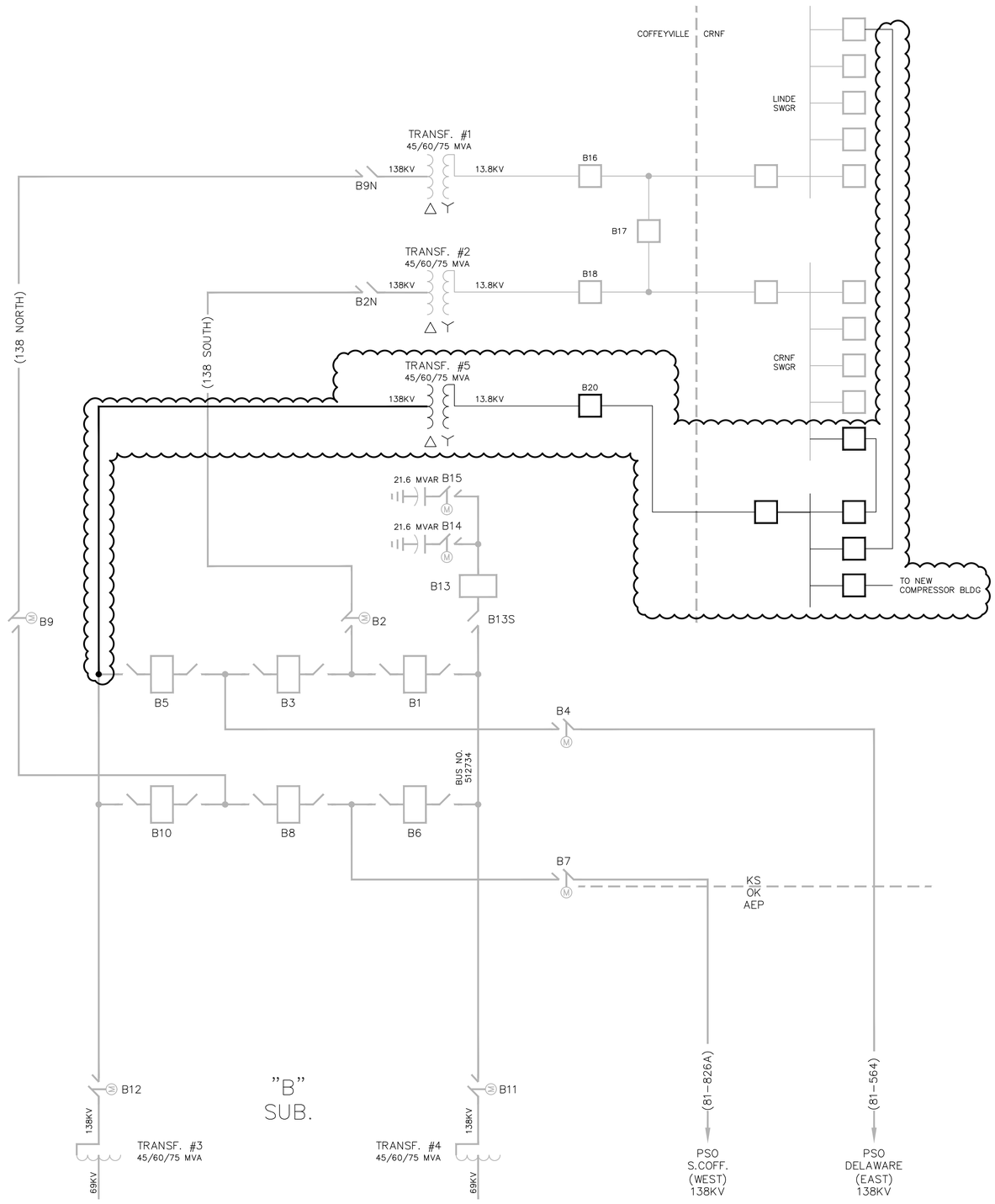
APPENDIX C



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Sega Inc. – "State" State Certificate of Authority # ???

PROJECT LOCATION:

REV.	DATE	DESCRIPTION	DWN	CHK
A	12-4-13	SEGA PROPOSAL	MLM	SMS

CITY OF COFFEYVILLE

138KV SYSTEM ONE-LINE

DESIGN BY: SMS	CHECKED BY: BAC
DRAWN BY: MLM	DATE: 12-4-13
CLIENT I.D.	SEGA PROJECT NO.

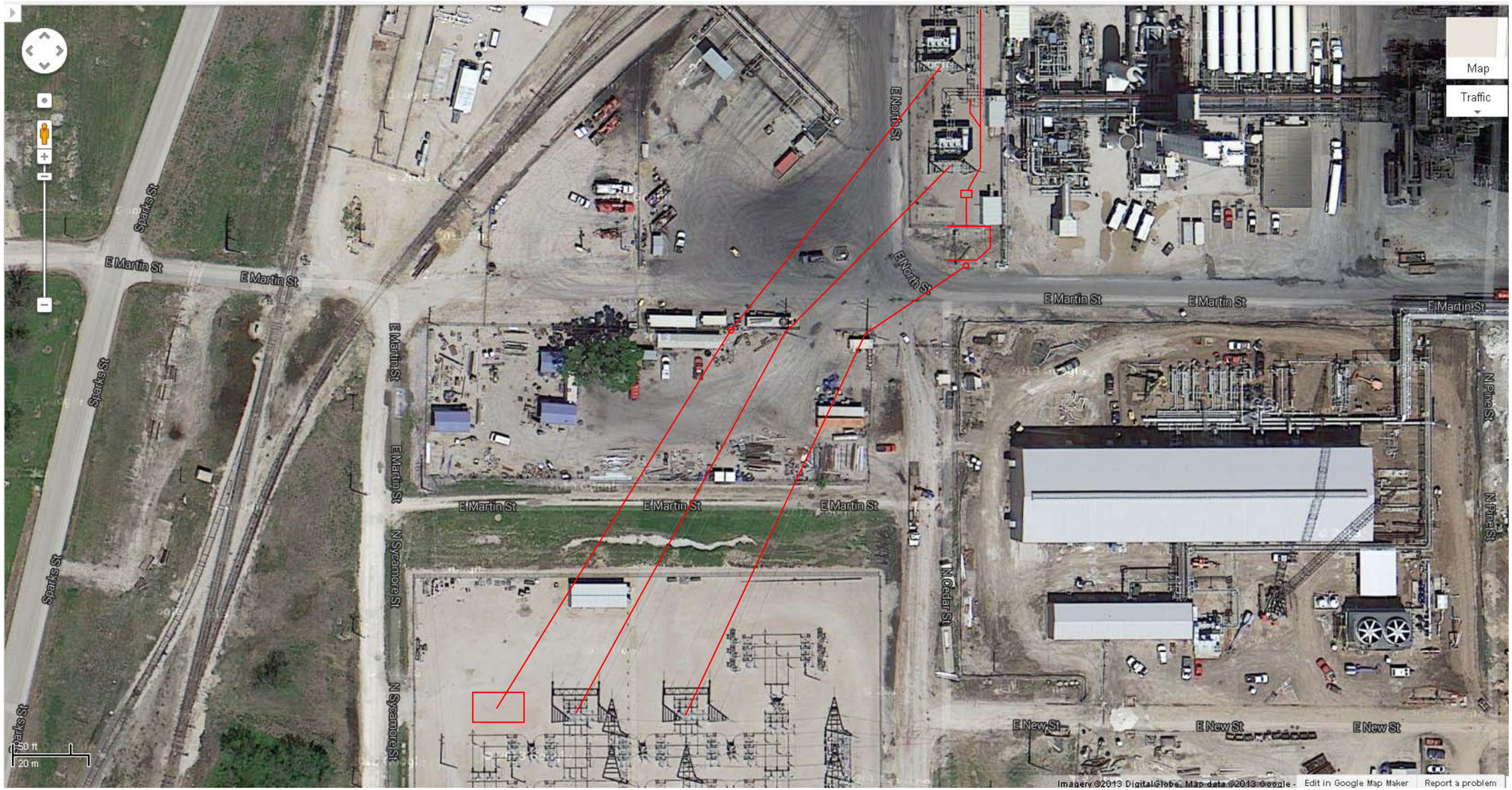
CADD FILE NAME: OPTION1C.DWG

DRAWING NO. OPTION1C

REV. A

K:\pd\PROPOSAL\OPTION1C.dwg Dec 04, 2013-10:13:50 am Mary Martin

APPENDIX D


Map
Traffic
Sparks St
E Martin St
E North St
N Sycamore St
N Cedar St
N Pine St
E New St
50 ft
20 m
Imagery ©2013 DigitalGlobe, Map data ©2013 Google
Edit in Google Map Maker
Report a problem

APPENDIX E

DRAWING NO	REV.	TITLE
CVB-1R1	2	13.8kV FUNCTIONAL DIAGRAM
CVB-120	2	13.8kV THREE LINE DIAGRAM
CVB-121	1	13.8kV CURRENT CIRCUITS FOR 13.8kV BUS NO. 1 & TRANSFORMER NO. 1
CVB-122	0	13.8kV CURRENT CIRCUITS FOR 13.8kV BUS NO. 2 & TRANSFORMER NO. 2
CVB-123	4	13.8kV POTENTIAL CIRCUITS
CVB-124	3	13.8kV METERING SCHEMATICS
CVB-136	4	DC SCHEMATIC FOR 13.8kV BKR. B16
CVB-137	3	DC SCHEMATIC FOR 13.8kV BKR. B17
CVB-138	2	DC SCHEMATIC FOR 13.8kV BKR. B18
CVB-139	3	DC SCHEMATICS FOR BKRs. B16 & B17 BKR. FAIL. & 13.8kV BUS NO. 1 DIFFERE
CVB-140	1	DC SCHEMATICS FOR BKR. B18 BKR. FAIL. & 13.8kV BUS NO. 2 DIFFERENTIAL
CVB-141	1	13.8kV BUS NO. 1 & TRANSFORMER NO. 1 OVERCURRENT RELAYS
CVB-145	4	13.8kV PLC DISCRETE INPUTS
CVB-146	2	13.8kV PLC RELAY OUTPUTS
CVB-147	1	13.8kV PLC ANALOG INPUTS
CVB-148	2	DC SCHEMATIC FOR 13.8kV STATION ANNUNCIATOR
CVB-149	2	MISCELLANEOUS AC & DC SCHEMATICS
CVB-170	5	WIRING DIAGRAM FOR PANEL 1F
CVB-170A	1	WIRING DIAGRAM FOR PANEL 1F AUXILIARY PANEL
CVB-171	3	WIRING DIAGRAM FOR PANEL 1R
CVB-171A	1	WIRING DIAGRAM FOR PANEL 1R AUXILIARY PANEL
CVB-172	5	WIRING DIAGRAM FOR PANEL 2F
CVB-172A	1	WIRING DIAGRAM FOR PANEL 2F AUXILIARY PANEL
CVB-173	1	WIRING DIAGRAM FOR PANEL 2R (TOP HALF WITHOUT TERMINAL BLOCKS)
CVB-173A	4	WIRING DIAGRAM FOR PANEL 2R (BOTTOM HALF WITH TERMINAL BLOCKS)
CVB-173B	2	WIRING DIAGRAM FOR PANEL 2R AUXILIARY PANEL
CVB-1R2	4	138kV FUNCTIONAL DIAGRAM
CVB-200	4	138kV THREE LINE DIAGRAM (NORTH SIDE OF 138kV RING BUS)
CVB-201	4	138kV THREE LINE DIAGRAM (SOUTH SIDE OF 138kV RING BUS)
CVB-203	6	MISCELLANEOUS 138kV CURRENT CIRCUITS
CVB-204	5	CURRENT CIRCUITS FOR TRANSFORMERs NO. 1 & NO. 2 DIFFERENTIAL
CVB-205	4	138kV CURRENT CIRCUITS FOR TRANSFORMERs NO. 3 & NO. 4 DIFFERENTIAL
CVB-223	4	138kV BREAKER NO. B5 CLOSE & TRIP NO. 1 DC SCHEMATIC
CVB-223A	5	138kV BREAKER NO. B5 TRIP NO. 2 DC SCHEMATIC
CVB-226	3	138kV BREAKER NO. B10 CLOSE & TRIP NO. 1 DC SCHEMATIC
CVB-226A	4	138kV BREAKER NO. B10 TRIP NO. 2 DC SCHEMATIC
CVB-237	3	138kV BKRs. B3 & B5 BREAKER FAILURE DC SCHEMATICS
CVB-239	3	138kV BKR. B10 BREAKER FAILURE DC SCHEMATIC
CVB-243	3	138/69kV TRANSFORMER NO. 3 DIFFERENTIAL DC SCHEMATIC
CVB-251	3	138kV PLC RELAY OUTPUTS FOR SCADA

DRAWING NO	REV.	TITLE
CVB-253	2	138kV PLC ANALOG OUTPUTS
CVB-254	5	138kV PLC DISCRETE INPUTS
CVB-256	7	MISCELLANEOUS AC & DC SCHEMATICS
CVB-271	2	WIRING DIAGRAM FOR PANEL 1R (TOP HALF WITHOUT TERMINAL BLOCKS)
CVB-271A	5	WIRING DIAGRAM FOR PANEL 1R (BOTTOM HALF WITH TERMINAL BLOCKS)
CVB-271B	2	WIRING DIAGRAM FOR PANEL 1R AUXILIARY PANEL
CVB-272	6	WIRING DIAGRAM FOR PANEL 2F (TOP HALF WITH TERMINAL BLOCKS)
CVB-272A	6	WIRING DIAGRAM FOR PANEL 2F (BOTTOM HALF WITHOUT TERMINAL BLOCKS)
CVB-272B	3	WIRING DIAGRAM FOR PANEL 2F AUXILIARY PANEL
CVB-275	5	WIRING DIAGRAM FOR PANEL 3R (TOP HALF WITHOUT TERMINAL BLOCKS)
CVB-275A	5	WIRING DIAGRAM FOR PANEL 3R (BOTTOM HALF WITH TERMINAL BLOCKS)
CVB-275B	1	WIRING DIAGRAM FOR PANEL 3R AUXILIARY PANEL
CVB-277	4	WIRING DIAGRAM FOR PANEL 4R (TOP HALF WITHOUT TERMINAL BLOCKS)
CVB-277A	5	WIRING DIAGRAM FOR PANEL 4R (BOTTOM HALF WITH TERMINAL BLOCKS)
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EXECUTION VERSION

AMENDED AND RESTATED ELECTRIC SERVICE AGREEMENT

BETWEEN

THE CITY OF COFFEYVILLE, KANSAS

AND

COFFEYVILLE RESOURCES NITROGEN FERTILIZERS, LLC

DATED AS OF AUGUST 1, 2010

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ELECTRIC SERVICE AGREEMENT

This AMENDED AND RESTATED AGREEMENT FOR ELECTRIC SERVICE (The "Agreement" or the "Terms and Conditions of Service") is made and entered into as of the first day of August, 2010, by and between the City of Coffeyville, Kansas ("City"), a municipal corporation organized and existing under the laws of the State of Kansas, and Coffeyville Resources Nitrogen Fertilizers, LLC (together with its successors and permitted assigns, "Coffeyville Resources"), a Delaware Limited Liability Company.

W I T N E S S E TH:

WHEREAS, the City purchases wholesale power and energy, and transmission capacity; and owns and operates its own generation, transmission, and distribution facilities to furnish retail electric service to the geographic area identified as the City's Certified Electric Service Territory pursuant to K.S.A. 66-1,170, *et seq.*; and

WHEREAS, Coffeyville Resources owns a nitrogen fertilizer facility (together with the associated Linde Air Separation Unit and any other related facilities, as further defined in Section 1.13 hereof, the "Facility") in the City's Certified Electric Service Territory[1], which is a retail customer of the City's municipal electric utility; and

WHEREAS, Coffeyville Resources and the City entered into that certain Agreement for Electric Service dated January 13, 2004 ("2004 Agreement") pursuant to which Coffeyville Resources purchases municipal electric service from the City; and

WHEREAS, the City and Coffeyville Resources have agreed to amend and restate the 2004 Agreement as set forth herein and that the Agreement and these Terms and Conditions of Service supersede and cancel all previous terms and conditions of service pertaining to the supplying and taking of the City's electric service by the Facility as of the Effective Date (as "Effective Date" is defined in Section 1.10 herein); and

WHEREAS, the City and Coffeyville Resources have agreed that these Terms and Conditions of Service shall govern the supplying by the City and taking by the Facility of the City's municipal electric service for the Facility within the City's Certified Electric Service Territory[1] as of the Effective Date;

NOW, THEREFORE, the City and Coffeyville Resources agree as follows:

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[1] ***As modified by the Kansas Corporation Commission on June 26, 2000, to include that portion of the Facility which originally was situated beyond the City's Certified Electric Service Territory at the time the City entered into that certain Electric Service Agreement with Farmland Industries, Inc.***

ARTICLE I. DEFINITIONS

The following terms included in this Agreement shall be defined as follows:

1.1 "AEP" shall mean the American Electric Power Company, Inc., a New York corporation, and the facilities of any electric company division, affiliate, and/or subsidiary of AEP and any purchaser, successor, or transferee of AEP or any of AEP's division, affiliates and/or subsidiaries. AEP and PSO transferred functional control of their transmission facilities that they own in the state of Oklahoma to SPP, which put the transmission service over AEP's and PSO's transmission facilities under the SPP tariff.

1.2 "Applicable Losses" shall be as defined in Section 1.02 of the Power and Energy Supply Contract.

1.3 "City" shall have the meaning given in the introductory paragraph.

1.4 "City Certified Electric Service Territory" shall mean the geographic area in which the City has the responsibility and exclusive right to supply retail electric service pursuant to K.S.A. 66-1,170, et seq.

1.5 "Coffeyville Resources" shall mean Coffeyville Resources Nitrogen Fertilizers, LLC, a limited liability company organized and existing under the laws of the State of Delaware, together with its successors and assigns.

1.6 Reserved.

1.7 Reserved.

1.8 Reserved.

1.9 "Distribution Facilities" shall mean any electric line used to furnish retail electric service, including any line from a Substation to an electric consuming facility, but such term does not include any transmission facilities (including the Transmission Facilities as defined in this Agreement). There are no Distribution Facilities used to furnish retail electric service to the Facility Delivery Point(s) pursuant to this Agreement.

1.10 "Effective Date" shall mean August 1, 2010.

1.11 Reserved.

1.12 Reserved.

1.13. "Facility" shall mean any piece of land or real estate or any building, structure, or improvement or portion thereof that make up the Coffeyville Resources nitrogen fertilizer facility, the associated Linde Air Separation Unit, and any other related facilities or enhancements within the City Certified Electric Service Territory and within the area highlighted on the attached Exhibit 10 that receives or may receive power through the Facility Delivery Point(s) as defined in 1.14.

1.14 "Facility Delivery Point(s)" shall mean the 13.8 kV metering location(s) in 138/13.8 kV Substation B, as depicted on Exhibit 3, attached hereto.

1.15 "Force Majeure" shall mean "acts of God," including but not limited to, flood, tornado, earthquake, storm, lightning or fire. Force Majeure shall also include labor strikes, slow downs, or walkouts, war, riot, civil disturbance, sabotage, or restraint by a court or public authority, which by the exercise of due diligence and foresight could not reasonably have been avoided. Force Majeure shall also include the temporary interruption or reduction in electric service, which, in the reasonable opinion of the City, is necessary to prevent severe system overload, or for the purpose of necessary maintenance, repairs, replacements, or installation of equipment. Except in the case of emergency, the City will give Coffeyville Resources as much prior notice as is reasonably possible of such temporary interruptions or reductions and will perform any necessary, replacements, repairs, or installation of equipment in accordance with a mutually agreeable schedule so as to cause the least inconvenience to the City and Coffeyville Resources. Force Majeure shall not excuse any failure to pay money when due.

1.16 "Good Utility Practice" shall mean 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. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

1.17 "Meter" shall mean any device or devices used to measure or register electric power and energy.

1.18 "Operation & Maintenance Charges" shall mean the actual City cost of operating, maintaining, repairing, replacing and insuring the Transmission Facilities serving the Facility plus the overhead mark-up, all as set forth in the Rate Schedule, but shall not include such costs included in a revenue requirement recovered by the City under the SPP Open Access Tariff.

1.19 "Payment Security Instrument" shall mean the instrument furnished pursuant to Article III hereof.

1.20 "Power and Energy Supply Contract" shall mean the Power Purchase and Sale Agreement by and between Grand River Dam Authority and the City of Coffeyville Kansas Effective as of August 1, 2007 (attached hereto as Exhibit 2), or any subsequent power and energy supply contracts executed by the City to serve the Facility.

1.21 "Power Factor" shall mean the ratio of real power (kW) to apparent power (kVA) for any given load and time. Generally, it is expressed as a percentage ratio.

1.22 "Power Factor Adjustment" shall mean an adjustment in the billing under the Rate Schedule if the Facility's Power Factor varies from the specified range of percentages set forth herein.

1.23 "PSO" shall mean the Public Service Company of Oklahoma.

1.24 "PSO Interconnection Agreement" shall mean the Interconnection Agreement between the City and Public Service Company of Oklahoma (PSO), attached hereto as Exhibit 4.

1.25 "Rate Schedule" shall mean the schedule, attached hereto as Exhibit A, setting forth the amount to be paid by Coffeyville Resources to the City for electric service.

1.26 "SPP" shall mean the Southwest Power Pool.

1.27 "SPP Charges" shall mean the charges imposed by the SPP under its Open Access Tariff and the SPP Network Integration Transmission Service Agreement for the provision of transmission service, ancillary services or other services by the SPP for the City's electric loads, including Coffeyville Resources, as apportioned to Coffeyville Resources in accordance Item 2 of the Rate Schedule, but shall not include any penalties for failure to comply with any SPP or North American Electric Reliability Corporation ("NERC") reliability standard.

1.28 "SPP Network Integration Transmission Service Agreement" shall mean the agreement between the City and SPP attached hereto as Exhibit 1 as the same may be amended from time to time pursuant to SPP's right to file unilateral changes to the SPP Network Integration Transmission Service Agreement under Section 205 of the Federal Power Act ("FPA") and the FERC's right to require changes under Section 206 of the FPA.

1.29 "SPP Open Access Tariff" shall mean the tariff approved by the Federal Energy Regulatory Commission pursuant to which SPP provides transmission service, including SPP Network Integration Transmission Service.

1.30 "Substation B" shall mean the 138/13.8 kV Substation as depicted on Exhibit 9, attached hereto.

1.31 "SWEPCO" shall mean Southwestern Electric Power Company.

1.32 "Transmission Capacity" shall mean the transmission transfer capability available to the City pursuant to the SPP Network Integration Transmission Service Agreement for the delivery of the City's entitlements (which would include electric power and energy up to the then current electric demand of the Facility) under the Power and Energy Supply Contract.

1.33 "Transmission Facilities" shall mean the City owned transmission facilities, inclusive of but not limited to, the two 138 kV transmission lines from the City/PSO Interconnection Point to and including Substation B used for the bulk transfer of energy from the City/PSO interconnection point to the Facility Delivery Point(s), but such term does not include any Distribution Facilities. For purposes of Section 4 of the Rate Schedule, Transmission Facilities shall include any future Direct Assignment Facilities.

1.33A "Direct Assignment Facilities" shall mean facilities or portions of facilities that are constructed by the City for the sole use or benefit of Coffeyville Resources, the cost and design of which is agreed to by Coffeyville Resources, in its sole discretion, and which the City has no obligation to construct in the absence of Coffeyville Resources' agreement to the design and cost thereof and cost recovery arrangements therefor. Any cost recovery agreements between the City and Coffeyville Resources for Direct Assignment Facilities shall be incorporated into this Agreement under Section 6 of the Rate Schedule.

1.34 "Transmission Wheeling Charge" shall mean the wheeling charge to Coffeyville Resources for energy transferred across the transmission system and/or through the SPP Network Integration Transmission Service Agreement, as set forth in the Rate Schedule.

ARTICLE II. ELECTRIC SERVICE CUSTOMER INFORMATION

2.1 Coffeyville Resources shall provide customer information to the City Finance Department for service to the Facility through the Facility Delivery Points. This information shall include the name of the individuals who will be responsible for processing the account payment and local operations, with their mailing addresses, fax and phone numbers.

ARTICLE III. PAYMENT SECURITY

3.1 Coffeyville Resources shall furnish the City with a Payment Security Instrument, which shall be (a) an irrevocable Letter of Credit from a bank or financial institution acceptable to the City, (b) a Payment Security Bond from an insurance company acceptable to the City, (c) such other equivalent instrument or instruments from an entity or entities acceptable to the City, or (d) an interest-bearing, cash collateralized trust account with a financial institution in trust of the City, in each case in the amount of three million dollars ($3,000,000), to cover Coffeyville Resources' obligations with respect to payment of the minimum Transmission Wheeling Charges and of monthly electric use billings. In the event Coffeyville Resources expands the Facility, and such expansion increases the average monthly electric charges by more than $125,000 per month measured at one hundred twenty (120) day intervals following the expansion, Coffeyville Resources shall increase the amount of the Payment Security Instrument by two (2) times the amount of the average increase.

3.2 In the event Coffeyville Resources breaches its requirement to make any of the payments or portions thereof as they become due for payment for the charges outlined in Section 3.1 above, and such breach has not been cured or corrected by Coffeyville Resources within ten (10) days after its receipt of written notice by the City to Coffeyville Resources of such breach, all of the remaining aggregate of payments shall immediately become due and payable. If said payment is not made by Coffeyville Resources within ten (10) days after its receipt of written notice by the City to Coffeyville Resources as set forth above, then the City will make demand for all of the remaining aggregate of payments against the issuer of the Payment Security Instrument.

3.3 The Payment Security Instrument identified above is attached hereto as Exhibit 5. As of the date of this Agreement, the form of the Payment Security Instrument is in the full amount of $3,000,000 and is acceptable in form to the City for its term thereof.

3.4 If the Payment Security Instrument furnished pursuant to this Article III expires or is terminated prior to the expiration of the term of this Agreement, then Coffeyville Resources shall furnish a substitute Payment Security Instrument acceptable to the City no later than forty-five (45) days prior to the expiration or termination date of the Payment Security Instrument, or pay the aggregate unpaid balance of the amounts secured and owing. If the full amount owing is not paid in full by Coffeyville Resources or an acceptable substitute Payment Security Instrument is not furnished within thirty-five (35) days prior to the expiration or termination date of the Payment Security Instrument, then the City will make demand for payment due and owing against the issuer of the Payment Security Instrument.

ARTICLE IV. ELECTRIC TRANSMISSION

4.1 The City and the SPP have entered into the SPP Network Integration Transmission Service Agreement. Pursuant to the SPP Network Integration Transmission Service Agreement, the City will have available for the delivery of the City's entitlements (which would include electric power and energy up to the then current electric demand of the Facility) under the Power and Energy Supply Contract. Subject to the right of SPP to curtail transmission service under and in accordance with its SPP Open Access Transmission Tariff and to the right of the SPP unilaterally to file amendments pursuant to Section 205 of the Federal Power Act, each day during the term of this Agreement, the City will have an amount of transmission transfer capability designated as Maximum Net Dependable Capacity ("MNDC") specified in Appendix 1 to the Network Integration Transmission Service Agreement. The current amount of the MNDC is 139 megawatts as of the Effective Date. The City will not curtail the delivery of electric power and energy required to the Facility in amounts up to 90 megawatts, except (i) as the SPP may require or provide pursuant to its Open Access Transmission Tariff, or (ii) due to Force Majeure.

During the Term of the Agreement, the City will use all reasonable efforts to maintain the SPP Network Integration Transmission Service Agreement in full force and effect, with an MDNC thereunder in an amount of no less than 139 MDNC. If, for any reason, the SPP Network Integration Transmission Service Agreement is unavailable during the Term of this Agreement, the City will use its best efforts to replace such agreement with a reasonably similar agreement.

4.2 If the Facility does not use the full amount of Transmission Capacity available for its use, the City may use such capacity to serve any retail customer within the City Certified Electric Service Territory without compensation to Coffeyville Resources. However, for any new commercial or industrial customer that individually has a peak demand of 2 megawatts or more, commencing operations subsequent to the date of execution of this Agreement, the City shall provide during the term of this Agreement, a $0.001 (1 mill) rebate to Coffeyville Resources for each kilowatt-hour of energy paid for by such customer that was wheeled across the Transmission Facilities to serve such customer. This rebate is limited to a maximum of $2,500,000 over the life of the Agreement. Notwithstanding anything to the contrary herein, the provisions of this Section 4.2 shall cease to be effective as of the commencement of the Extension Term.

4.3 Reserved.

4.4 Any net revenue generated by the City from the transmission of energy across the Transmission Facilities by another power provider to serve retail customers outside of the City Certified Electric Service Territory shall be shared equally with Coffeyville Resources. Notwithstanding anything to the contrary herein, the

provisions of this Section 4.4 shall cease to be effective as of the commencement of the Extension Term.

4.5 On or before July 1 of each year throughout the Term of this Agreement, Coffeyville Resources shall provide the City a written forecast of its estimated electrical demand during each calendar year during the ensuing ten year period.

4.6 Coffeyville Resources may not resell any of the Transmission Capacity made available to the Facility under this Agreement on the City's Transmission Facilities or through the SPP Network Integration Transmission Service Agreement.

4.7 Coffeyville Resources may not use any of the Transmission Capacity made available to the Facility under this Agreement on the City's Transmission Facilities or through the SPP Network Integration Transmission Service Agreement for any electric load or service except the Facility, without the written consent of the City as approved by the City's Governing Body, which consent shall not be unreasonably withheld, and subject to the limitations set forth in the SPP Network Integration Transmission Service Agreement and the PSO Interconnection Agreement. In the future, if it becomes legally permissible for Coffeyville Resources to obtain power and energy for its Coffeyville Refinery through the Transmission Capacity made available to the Facility on the City's Transmission Facilities or through the SPP Network Integration Transmission Service Agreement, subject to City approval, which approval shall not be unreasonably withheld, and the limitations set forth in the SPP Network Integration Transmission Service Agreement and the PSO Interconnection Agreement, Coffeyville Resources shall be allowed to do so under Items 2 and 3 of the Rate Schedule and by payment of any additional cost incurred by the City, inclusive of but not limited to capital investments for additional Transmission and Distribution Facilities if necessary.

4.8 The City shall not amend any Facility related provisions of the SPP Network Integration Transmission Service Agreement that are within the sole control of the City without written concurrence from Coffeyville Resources.

ARTICLE V. ELECTRIC POWER AND ENERGY

5.1 Reserved.

5.2 No later than six (6) months prior to the termination or expiration of any existing Power and Energy Supply Contract, Coffeyville Resources will deliver to the City a written forecast of its estimated monthly power and energy requirements for the Facility for the ten (10) year period beginning with the expiration date of the existing Power and Energy Supply Contract.

5.3 For periods subsequent to the Effective Date, Coffeyville Resources understands and agrees that the cost and any other obligations associated with any Power and Energy Supply Contract for additional power and energy or any subsequent Power and Energy Supply Contract shall be billed to and paid for by Coffeyville Resources under the Rate Schedule.

5.4 The City's obligation is limited to the extent that such power and energy are available through a firm Power and Energy Supply Contract(s), which, as provided above, the City shall use its best efforts in good faith to secure following Coffeyville Resources' delivery of the forecast of estimated power and energy requirements.

5.5 In the event power and energy cease to be available under the Power and Energy Supply Contract, the City shall use its best effort in good faith to obtain power and energy at the lowest price available delivered to the delivery point(s) on the GRDA, SWEPCO or PSO systems of SPP, consistent with the City's best judgment as to the reliability of the supplier, and upon such other terms and conditions as the City may reasonably require. Coffeyville Resources may reject any power and energy supply contract subsequent to such contract in effect on and as of the Effective Date hereunder, as proposed by the City. However, if Coffeyville Resources rejects a power and energy supply contract as proposed by the City, the City is relieved of any and all obligations and responsibilities to provide power and energy to the Facility until such time that the City and Coffeyville Resources can obtain a power and energy supply contract agreeable to both parties. Further, if Coffeyville Resources rejects a power and energy supply contract as proposed by the City, such action does not relieve Coffeyville Resources from its obligation and responsibility to pay any and all expenses or payments due or to become due in the future pursuant to this Agreement.

5.6 The City shall not amend any Facility related provisions of the Power and Energy Supply Contract that are within the sole control of the City without written concurrence from Coffeyville Resources.

ARTICLE VI. RATES AND CHARGES

6.1 Coffeyville Resources agrees to pay the City monthly during the term of this Agreement for electric service provided hereunder, in accordance with the Rate Schedule. A sample invoice calculated pursuant to this Agreement is attached hereto as Schedule A.

ARTICLE VII. BILLINGS AND PAYMENTS: TERMINATION OF SERVICE

7.1 The City's electric meters shall normally be read at approximately monthly intervals and bills for electric service shall normally be submitted to Coffeyville

Resources on monthly intervals. Whenever it is not possible with reasonable diligence to read a meter for a billing period, the City may submit an estimated bill based upon previous usage and other available information, with the amount of such bill to be subsequently adjusted as necessary when the next actual reading is obtained.

7.2 The City will electronically mail and/or fax on the billing date a bill for electric service to the Facility at the electronic address and/or facsimile number of the Facility, or at such other address and facsimile number designated by Coffeyville Resources pursuant to Article II herein. Failure to receive a bill in no way exempts Coffeyville Resources from liability for payment for electric service. Each bill will separately set out the SPP Charges due for the month.

7.3 Charges for electric service shall be due and payable monthly within 15 days after the billing date, and each monthly bill shall have stamped thereon the due date. In the event a monthly bill is not paid in full by the due date indicated thereon, an order shall be issued (subject to Section 7.7 hereof) causing the electric service to the Facility to be disconnected, for such nonpayment. Coffeyville Resources shall pay its electric bill via wire transfer to a wire transfer address as designated in writing by the City.

7.4 Coffeyville Resources shall pay a flat ten (10%) percent of the balance due as a late charge on any delinquent payment.

7.5 If electric service has been disconnected due to a breach of this Agreement by Coffeyville Resources, re-connection shall occur only upon total payment of the amount past due, any applicable late charge and payment of a reconnection service charge in the amount of Ten Thousand Dollars ($10,000).

7.6 In the event Coffeyville Resources should offer payment for any monthly electric bill, or portion thereof, by means of a check or order which has not been honored on account of insufficient funds of the maker to pay same, or because the check or order was drawn on a closed account or on a non-existent account, or otherwise dishonored (unless wrongfully dishonored), a check service charge in the amount of Ten Thousand Dollars ($10,000) shall be charged and collected as a service charge for proper handling and administration. Provided, in the event two (2) such dishonored checks or orders are made to the City for electric service within any last preceding twelve (12) month period, payment of each monthly electric bill by Coffeyville Resources shall be made and acceptable only by certified or cashier's check or wire transfer.

7.7 The City may discontinue electric service to the Facility for any of the reasons set forth below, after written notice stating the reason or reasons for such discontinuance has been given to Coffeyville Resources by delivery in accordance with Section 19.12 and by delivery to the address of the Facility or to such other

billing address requested by Coffeyville Resources as shown on the City's records, and the reason or reasons for such proposed discontinuance have not been cured or corrected by Coffeyville Resources within 10 days after receipt of such notice:

a) Non-payment of a bill for electric service;
b) Refusal by Coffeyville Resources or its representatives to provide the City reasonable access to its equipment located at the Facility;
c) Violation by Coffeyville Resources of any applicable federal, state, city, or regulatory agency laws, rules or regulations covering electrical service or services to the Facility;
d) Potential adverse effect of the Facility's equipment and/or appurtenances on service to other customers;
e) Violation of or non-compliance with any provision of this Agreement for service;
f) Failure of Coffeyville Resources to maintain current Payment Security Instruments as required pursuant to these Terms and Conditions of Service, except to the extent payment obligations have been satisfied by realizing through payment from the surety of a Payment Security Instrument or otherwise;
g) Failure of Coffeyville Resources to increase the amount of the Payment Security Interest as provided in Article 3; or
h) Failure of Coffeyville Resources to either pay the aggregate unpaid balance of the amounts secured and owing or furnish a substitute Payment Security Instrument as provided in Section 3.4.

7.8 The City may discontinue electric service without advance notice to Coffeyville Resources for any of the reasons set forth below:

a) Existence of a dangerous or defective condition related to the wiring or equipment at the Facility;
b) When a defective condition of wiring or equipment at the Facility results, or is likely to result, in danger to life or property or interference with proper service to others;
c) Fraudulent use of electricity; or
d) Tampering with the City's regulating and measuring equipment or other property.

7.9 Coffeyville Resources shall be responsible for all damage to, misuse of or loss of the City's property located at the Facility, unless caused by an act of God or the negligence of the City and its agents, Coffeyville Resources shall not authorize anyone to change, remove, or tamper with the City's property.

7.10 No regulating or measuring equipment, or other property or equipment owned by the City, wherever situated, whether located at the Facility or elsewhere, shall be tampered with or interfered with for the purpose of adjustment, fraudulent

adjustment or otherwise. In the event the City's electrical equipment has been tampered with, the City will follow the same procedures as for fraudulent use of electricity as outlined in these Terms and Conditions of Service.

7.11 For the purpose of these Terms and Conditions of Service, the term "Fraudulent Use of Electricity" shall include any unauthorized use of the City's electric service and facilities by Coffeyville Resources.

7.12 In the event fraudulent use of electricity or evidence of attempted fraudulent use of electricity is discovered, or where the City's regulating or measuring equipment or other property has been tampered with, electric service may be discontinued by the City without advance notice to the Facility. Electric service to the Facility will not be resumed until Coffeyville Resources shall have paid all bills including:

a) The charge for the estimated amount of electricity fraudulently consumed;
b) The cost of replacement or repair of any damaged City equipment; and
c) A re-connection charge of Ten Thousand Dollars ($10,000).

ARTICLE VIII. SERVICE CHARACTERISTICS

8.1 Service hereunder shall be at alternating current, 3-phase, 4-wire, 60 Hertz, 13.8Y/7.97 kV, 75 MVA with an allowable variation of 10% above or below nominal voltages.

8.2 The City will use its best efforts in good faith to supply continuous electric service at the Facility Delivery Points; provided, however that the foregoing shall not be deemed or construed to be a guarantee of continuity of service. It shall be the responsibility of Coffeyville Resources to install and maintain protective devices, which will protect the Facility's equipment or process during abnormal service conditions or the failure of part or all of the electric service. The provisions of the latest edition of the National Electrical Code and the National Electric Safety Code shall be considered as the minimum acceptable standard for the protection and safeguarding of persons, wiring and/or equipment of the Facility. In no event will the City be liable for any damages to Coffeyville Resources if the Facility equipment or process is not protected or safeguarded in conformity with such minimum code requirements, nor shall the City be liable for any service interruption, irregularities, or any other causes or abnormalities not caused by the sole negligence of the City.

8.3 In order to make necessary repairs to or replacements in the City's facilities for supplying electric service, the City reserves the right in accordance with Good Utility Practice, without incurring any liability therefor, to suspend service without notice to Coffeyville Resources for such periods as may be reasonably necessary. When conditions permit an attempt will be made to notify Coffeyville

Resources of such an outage. Insofar as is practicable, any interruption shall be made at a time, which will cause least reasonable inconvenience to the Facility.

8.4 The City also reserves the right to discontinue service to the Facility without advance notice, when a defective condition of wiring or equipment at the Facility results, or is likely to result, in danger to life or property or interference with proper service to others. Electric service to the Facility will not be resumed until the defective condition has been remedied to the satisfaction of the City. If such defective condition is the result of tampering with City equipment, the provisions related to the fraudulent use of electricity shall also apply.

8.5 The City will endeavor at all times to maintain and operate its electrical system with minimal interruption and voltage fluctuations consistent with economically realistic operations and with Good Utility Practice.

8.6 Whenever high or low voltage problems are suspected the City will check the voltage. If necessary, corrective adjustment to the voltage will be made without delay.

8.7 Electric service shall be provided to the Facility by two 13.8Y/7.97 kV, 75 MVA services.

8.8 Coffeyville Resources hereby authorizes agents of the City to enter the Facility at all times for any purpose incidental to the supplying of electric service, including, but not limited to, inspecting the Facility's equipment and connections; repairing, replacing or removing City property; or tree trimming and tree removal. Refusal on the part of Coffeyville Resources to provide reasonable access for the above purposes shall be deemed to be sufficient cause for discontinuance of service.

8.9 Any and all equipment, apparatus and devices placed or installed, or caused to be placed or installed by the City on or in the Facility's premises shall be and remain the property of the City, regardless of the mode or manner of annexation or attachment to real property. Upon the termination of this Agreement, the City shall, within a reasonable time, remove such equipment, apparatus, or devices.

8.10 City liability is limited as provided in Article XVI hereof.

ARTICLE IX. ELECTRIC STANDARDS FOR THE FACILITY

9.1 All of the Facility's electrical wiring and apparatus connected or to be connected to the City's Electric Service shall be at Coffeyville Resources' expense and shall be installed and maintained by Coffeyville Resources in accordance with the National Electrical Code and the National Electrical Safety Code. In the event of a conflict between the National Codes and an applicable municipal code, the latter shall govern. The City reserves the right to refuse to connect to any wiring or

apparatus which does not meet these Code requirements and the City may, without advance notice, discontinue service to the Facility when a defective condition of wiring or equipment is discovered at the Facility.

9.2 Facility electric power wiring, equipment and apparatus shall not produce harmonic currents and voltages which exceed the limitations set forth in IEEE Standard 519-1992 or the latest revision thereof, Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems.

9.3 If it is determined by the City that remedial action is required to correct an adverse condition produced by the Facility through use of any equipment causing such adverse condition, the City reserves the right, at Coffeyville Resources' expense, to install any suitable or special equipment on City facilities, or the City may at its option, require Coffeyville Resources to install such equipment reasonably necessary to limit such adverse condition.

ARTICLE X. METERING

10.1 All meters shall be furnished, installed and maintained by the City and remain its property. All meter bases, enclosures and other associated equipment shall be furnished and maintained by the City and remain its property. No metering equipment shall be by-passed for any reason, without prior approval of the City.

10.2 The City will test the accuracy of the Facility's meter(s) within twenty (20) days after a written request has been received from Coffeyville Resources. If the meter(s) tested is found to be more than one percent (1%) incorrect, the City will not charge for such test. If the meter(s) is found to be within the accuracy limits of plus or minus one percent (1%), the City will charge Coffeyville Resources its cost to cover the costs to perform such test, plus a ten percent (10%) overhead mark-up.

10.3 If the results of a meter(s) test shows the average error to be more than one percent (1%) fast or more than one percent (1%) slow, the City will adjust the bill as follows:

a) Fast Meters: The City shall refund Coffeyville Resources the overcharge based on the corrected meter reading for a period equal to one-half of the time elapsed since the last previous meter test, but not to exceed six months, or such shorter time period set forth in the applicable Power and Energy Supply Contract or the SPP Network Integration Transmission Service Agreement.

b) Slow Meters: The City shall charge Coffeyville Resources for the electricity consumed but not included in bills previously rendered, based on the corrected meter reading for a period equal to one-half of the time

elapsed since the last previous meter test, but not to exceed six months, or such shorter time period set forth in the applicable Power and Energy Supply Contract or the SPP Network Integration Transmission Service Agreement

10.4 If a meter is found not to register or to have been registering intermittently for any period, the City may charge an estimated amount of electricity used, which shall be calculated from interchange meter readings, or by averaging the amounts registered over corresponding periods in previous years, or in the absence of such information, over similar periods of known accurate measurement preceding or subsequent thereto.

10.5 If a meter is found to have an incorrect register, connection, multiplier, or constant the error shall be corrected. Where the error is adverse to Coffeyville Resources, the City will refund the excess charged for the amount of electricity incorrectly metered for the period of time not to exceed 6 months the meter was used for billing Coffeyville Resources, or such shorter time period set forth in the applicable Power and Energy Supply Contract or the SPP Network Integration Transmission Service Agreement. Where the error is adverse to the City, the City will charge Coffeyville Resources the undercharge for the amount of electricity incorrectly metered for the period of time not to exceed 6 months the meter was used for billing Coffeyville Resources, or such shorter time period set forth in the applicable Power and Energy Supply Contract or the SPP Network Integration Transmission Service Agreement.

ARTICLE XI. FORCE MAJEURE

11.1 Neither Coffeyville Resources nor the City shall be considered to be in default in respect to any obligation hereunder (other than obligations to pay costs and expenses due) pursuant to this Agreement, if either the City or Coffeyville Resources is prevented from fulfilling such obligation under this Agreement by reason of Force Majeure.

11.2 If either party is prevented from performing or hindered in performing any of its obligations by reason of Force Majeure, then it will make performance as soon as is reasonably feasible thereafter.

11.3 Force Majeure shall not relieve Coffeyville Resources of its obligations to pay those amounts identified as Items 1A, 2, 3 and 4 of the Rate Schedule, or to pay any costs of energy consumed prior to the Force Majeure event; provided, however, that to the extent the City has been relieved of the City's obligation(s) under the SPP Network Integration Transmission Service Agreement or the Power and Energy Supply Contract as a result of Force Majeure thereunder, Coffeyville Resources shall be relieved of the corresponding obligation(s) identified as Items 1A and 2 of the Rate Schedule.

ARTICLE XII. RIGHTS-OF-WAY AND ACCESS

12.1 When requested by the City, Coffeyville Resources shall provide to the City, at no cost to the City, necessary rights-of-way, easements, warranty deeds, or licenses on or across Coffeyville Resources owned real estate, at reasonable locations thereon, for the proper location upon such Coffeyville Resources real estate of City owned electric facilities, including Transmission Facilities that are reasonably utilized by the City for the delivery of power and energy at the Facility Delivery Point(s).

12.2 Authorized employees of the City shall have reasonable access to Facility premises at all reasonable times to inspect, repair, replace, or remove City facilities.

ARTICLE XIII. DELIVERY POINTS

13.1 The Facility Delivery Point(s) are set out on Exhibit 3, attached hereto.

13.2 Where a service connection cannot be made or maintained with adequate clearances without being interfered with by trees or other obstructions on the Facility's Premises, it will be the responsibility of Coffeyville Resources to provide whatever corrective measures are required.

ARTICLE XIV. TERM

14.1 This Agreement shall become effective on the execution of the same, and shall continue from that date of execution until July 1, 2019; provided, however, that at Coffeyville Resources' sole option and upon one hundred and eighty (180) days prior written notice provided by Coffeyville Resources to the City, this Agreement shall be extended from July 1, 2019 through June 30, 2024 (such five year extension period shall be referred to herein as the "Extension Term"); and provided, further, that the rates and charges applicable to such extension period shall be as set forth in the Rate Schedule.

ARTICLE XV. ASSIGNMENT

15.1 Except as otherwise provided herein; the rights and privileges of Coffeyville Resources under this Agreement are not assignable without the written consent of the City; such consent not to be unreasonably withheld.

15.2 The sale, subleasing or assignment by Coffeyville Resources of any interest in the Facility or this Agreement shall not relieve Coffeyville Resources or any successors or assigns from the performance of the covenants and conditions contained herein, without the written consent of the City as approved by the City's Governing Body. Such consent shall not be unreasonably withheld.

15.3 Prior to any sale, subleasing or assignment by Coffeyville Resources of any interest in the Facility or this Agreement, Coffeyville Resources and/or the transferee entity shall provide evidence reasonably satisfactory to the City that, at a minimum, the following conditions have been satisfied: (a) the transferee entity shall be knowledgeable in operations similar to the Facility, (b) the transferee entity shall be formed and existing as a legal entity under the laws of one of the states of the United States of America, and shall be qualified to do business in the State of Kansas, (c) the transferee entity shall expressly assume and agree to perform all of the obligations of Coffeyville Resources under this Agreement and any other agreement of Coffeyville Resources and the City relating to the Facility, and (d) that the Payment Security Instruments shall apply to the obligations of the transferee entity under this agreement. Copies of all transfer, sale, subleasing and assignment documents shall be delivered to the City.

15.4 If a sale, sublease or assignment is made following approval by the City as provided in this Article, the provisions of this Article shall continue in full force and effect and no further such sale, sublease or assignment shall be made except in compliance with the provisions of this Article.

15.5 Nothing contained herein shall prevent either the City or Coffeyville Resources from pledging, mortgaging, or assigning its rights under this Agreement as security for any indebtedness, and both the City and Coffeyville Resources may assign to the pledge or mortgagee (or to a trustee for the holder of such indebtedness), any money due or to become due and owing under this Agreement.

ARTICLE XVI. LIABILITY: LEGAL REMEDIES

16.1 Prior to delivery to Coffeyville Resources through the City's Meter(s) at the Facility Delivery Point(s), Coffeyville Resources shall not be liable for any damages of any type whatsoever related to the power and energy sold/purchased under this Agreement, unless such damages are the result of the negligence or willful misconduct of Coffeyville Resources.

Subsequent to the delivery through the meter(s) of the City at the Facility Delivery Points, Coffeyville Resources shall be deemed to be in exclusive control of, and liable for any damages of any type whatsoever related to the power and energy sold/purchased under thus Agreement, unless such damages are the result of the negligence or willful misconduct of the City.

16.2 If there is a breach of this Agreement by either the City or Coffeyville Resources, the non-breaching party shall have available to it all remedies available for breach of contract under the laws of the State of Kansas. However, neither the City nor Coffeyville Resources shall claim, nor shall the City or Coffeyville Resources be

permitted to recover punitive damages from the other, as a result of the breach of this Agreement by either the City or Coffeyville Resources.

16.3 In arriving at the determination of whether negligence was involved, accidents, acts of God, and other failures beyond the City's control, including but not limited to, Force Majeure events, shall not be considered negligence. Further, negligence may be determined against the City only if the City had prior actual notice of a system deficiency, and failed to initiate corrective measures within a reasonable time after receipt of such actual notice.

16.4 Neither party shall be liable to the other for any special, indirect, consequential or punitive damages, including but not limited to loss of power, loss of product or loss of revenues, however caused.

16.5 Notwithstanding anything herein to the contrary, it is expressly agreed between the parties that the City has not waived any rights it may be entitled to under the Kansas Tort Claims Act, K.S.A. 75-6101 et seq., as amended, and any agreements made by the City found to be inconsistent with the provisions of such Act are hereby declared to be null and void.

ARTICLE XVII. AMENDMENT(S) AND RESERVATION OF POWERS

17.1 This Agreement may only be amended by a written amendment executed in writing by both the City and Coffeyville Resources.

17.2 The City reserves to itself all of its governmental and proprietary powers not specifically limited by the provisions of this Agreement.

ARTICLE XVIII. MOTORS—STARTING PROCEDURES AND ALLOWABLE CURRENTS

18.1 Starting of any motor in the Facility shall not create an electric utility system voltage drop that will affect other electric utility customers and/or equipment.

18.2 Starting of the 37,000 HP synchronous motor will, for some 138 kV transmission configurations, require use of two 138 kV, 21.6 MVAR capacitor banks during the motor start mode. One or both 21.6 MVAR capacitor banks will normally be in-service for transmission VAR control. Use of the banks for motor starting will necessitate certain switching be accomplished to release the banks for motor starting, followed by additional switching for normal system operation.

18.3 Coffeyville Resources and the City shall follow a defined procedure for:

a) Preparation for motor start.

b) Procedure for motor start.

c) Switching following motor start.

18.4 The above procedure is set forth on Exhibit 6, as part of this Agreement.

18.5 The system effort required to start the motor may cause abnormally low voltages and abnormally high voltages; therefore, the City may be required to notify power users of the impending voltage variations. Coffeyville Resources shall give the City reasonable advance notice of any plans to start the motor. The failure of Coffeyville Resources to follow the complete starting procedure as set forth on Exhibit 6 shall cause Coffeyville Resources to be responsible for all resulting applicable damages.

18.6 Interference Producing Equipment (Harmonics): The Facility electric power distribution system on the load side of the 13.8 kV meters M3 and M4 may have nonlinear connected loads which could cause the flow of harmonic currents. These harmonic currents could cause interference with communication and other types of equipment and when coupled with reactive power compensation, could cause high levels of harmonic voltage and current distortion.

18.7 Coffeyville Resources agrees to provide control of any non-linear connected loads through the use of (1) Shunt filters, (2) Phase multiplication, or (3) Harmonic compensation or injection so that harmonic currents and voltages produced do not exceed those defined in IEEE Standard 519-1992 or the latest revision thereof, "Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems."

ARTICLE XIX. MISCELLANEOUS

19.1 This Agreement is executed by a duly authorized representative of the City who is fully authorized to execute this Agreement on behalf of the City, as evidenced by the City Resolution adopted by the Governing Body of the City and attached hereto as Exhibit 7.

19.2 This Agreement is executed by a duly authorized representative of Coffeyville Resources, who is fully authorized to execute this Agreement on behalf of Coffeyville Resources, as evidenced by the Secretary's Certificate of Coffeyville Resources attached hereto as Exhibit 8.

19.3 Coffeyville Resources agrees to maintain the Facility in good condition, repair and working order; Coffeyville Resources agrees to pay, as the same respectively become due, all taxes, assessments and other governmental charges at any time lawfully levied or assessed upon or against the Facility or any part thereof; and

Coffeyville Resources agrees to annually provide written documentation to the City that it has obtained and is maintaining all-risk casualty insurance on the Facility in an amount not less than the actual market value of the Facility, subject to reasonable deductibles or self-insured retentions.

19.4 This Agreement is the entire and final expression of the Agreement and it may not be contradicted by evidence of any prior or contemporaneous written or oral agreements or negotiations of the parties.

19.5 This Agreement shall be construed and enforced in accordance with the laws of the State of Kansas, in Kansas Courts.

19.6 The covenants terms and conditions of this Agreement shall extend to and be binding upon the successors, assigns, trustees, and/or receivers of the respective parties thereto.

19.7 The section headings hereof are for the convenience of referenced only and shall not be treated as a part of this Agreement or as affecting the true meaning of the provisions herein.

19.8 This Agreement may be executed simultaneously in multiple counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

19.9 This Agreement has been prepared from negotiations from all parties and no party shall be charged with having prepared this document in the event an ambiguity exists.

19.10 Should any paragraph be declared unconstitutional or unenforceable, the validity of the remaining provisions shall be given full force and effect.

19.11 Any waiver by the parties hereto of any breach of any parties' obligations under this Agreement shall not be deemed a continuing waiver and shall not prevent the parties hereto from exercising any remedy they may have for any succeeding breach of the same or other obligation.

19.12 All notices and communications required to be in writing pursuant to this Agreement shall be effective only if delivered personally, or sent by facsimile or certified mail, or by overnight delivery service to the following (or to such other address or facsimile number as designated in writing by one party to the other):

Coffeyville Resources Nitrogen Fertilizers, LLC
ATTN: Plant Manager
P.O. Box 5000
Coffeyville, KS 67337
(620) 252-4357 (fax)

with a copy to:

Coffeyville Resources Nitrogen Fertilizers, LLC
10 East Cambridge Circle Drive, Suite 250
Kansas City, Kansas 66103
Fax: (913) 982-5651
Attention: General Counsel

City of Coffeyville, Kansas
ATTN: City Manager
P.O. Box 1629/102 W. Seventh
Coffeyville, KS 67337
(620) 252-6175 (fax)

(SIGNATURES ARE ON THE NEXT PAGE)

IN WITNESS WHEREOF, the City and Coffeyville Resources have executed this Agreement as of the day and year first written above.

CITY OF COFFEYVILLE, KANSAS

By: _____

Name:
Title: Mayor

COFFEYVILLE RESOURCES NITROGEN FERTILIZERS, LLC

By: _____

Chief Executive Officer

RESOLUTION NO. R-10-122

A RESOLUTION TO (1) RATIFY THE SETTLEMENT AGREEMENT BY AND BETWEEN COFFEYVILLE RESOURCES NITROGEN FERTILIZERS, LLC, AND THE CITY OF COFFEYVILLE, KANSAS, EFFECTIVE AS OF AUGUST 1, 2010, AND (2) AUTHORIZE THE EXECUTION OF AN AMENDED AND RESTATED ELECTRIC SERVICE AGREEMENT BY AND BETWEEN THE CITY OF COFFEYVILLE, KANSAS AND COFFEYVILLE RESOURCES NITROGEN FERTILIZERS, LLC.

BE IT RESOLVED by the Board of Commissioners of the City of Coffeyville that the Settlement Agreement by and between Coffeyville Resources Nitrogen Fertilizers, LLC, effective as of August 1, 2010, relating to the litigation currently pending in the United States District Court for the District of Kansas, Case No. 10-1032-EFM-KMH, previously executed on behalf of the City by Jeffrey D. Morris, City Manager, and Paul M. Kritz, City Attorney, be and is hereby ratified and approved.

BE IT FURTHER RESOLVED that the Mayor be and is hereby authorized and directed to execute the Amended and Restated Electric Service Agreement by and between the City of Coffeyville, Kansas and Coffeyville Resources Nitrogen Fertilizers, LLC, and such other documents as may be necessary in conjunction therewith.

ADOPTED this 24th day of August 2010.

Alec Hendryx, Mayor

ATTEST:

Cindy Price, City Clerk

APPROVED AS TO FORM AND LEGALITY:

Paul M. Kritz, City Attorney

CITY OF COFFEYVILLE SEAL MONTGOMERY COUNTY, KANSAS

IN WITNESS WHEREOF, the City and Coffeyville Resources have executed this Agreement as of the day and year first written above.

CITY OF COFFEYVILLE, KANSAS

By: Alec Hendrix

Name:
Title: Mayor

COFFEYVILLE RESOURCES NITROGEN FERTILIZERS, LLC

By: _____

Chief Executive Officer

SECRETARY'S CERTIFICATE

This Secretary's Certificate is being delivered pursuant to Section 19.2 of the Amended and Restated Electric Services Agreement, dated as of August 1, 2010 (the "Agreement"), by and between the City of Coffeyville, Kansas and Coffeyville Resources Nitrogen Fertilizers, LLC ("Coffeyville Resources"). The undersigned, being the duly elected and acting Senior Vice President, General Counsel and Secretary of Coffeyville Resources, hereby certifies as follows:

John J. Lipinski is the duly elected and acting Chief Executive Officer and President of Coffeyville Resources, and is authorized to execute the Agreement on behalf of Coffeyville Resources.

Date: August 24, 2010

Edmund S. Gross,
Senior Vice President, General Counsel and Secretary

IN WITNESS WHEREOF, the City and Coffeyville Resources have executed this Agreement as of the day and year first written above.

CITY OF COFFEYVILLE, KANSAS

By: _____

Name:
Title: Mayor

COFFEYVILLE RESOURCES NITROGEN FERTILIZERS, LLC

By: _____

Chief Executive Officer

EXECUTION VERSION

EXHIBIT A RATE SCHEDULE

This rate schedule is based on exclusive use of the City's municipal electric utility service and, no electric service from any other source may be used by Coffeyville Resources at the Facility.

1. Demand, Energy and Power Cost Adjustment Charges

   A. The monthly Demand Charge shall be equal to the demand rate set forth in the Power and Energy Supply Contract with the Grand River Dam Authority, attached hereto as Exhibit 2, applicable during the relevant billing period, multiplied by Coffeyville Resources' thirty-minute interval demand at the time of the City's highest thirty-minute interval demand during the monthly billing period, adjusted for Applicable Losses as set forth in the Power and Energy Supply Contract, or the demand rate set forth in any subsequent power and energy supply contracts executed by the City.

   B. The monthly Energy Charge shall be equal to the energy rate set forth in the Power and Energy Supply Contract with the Grand River Dam Authority, attached hereto as Exhibit 2, applicable during the relevant billing period, multiplied by the total amount of energy (expressed in kilowatt-hours) delivered to Coffeyville Resources during the monthly billing period, adjusted for Applicable Losses as set forth in the Power and Energy Supply Contract, or the energy rate set forth in any subsequent power and energy supply contracts executed by the City.

   C. The monthly Power Cost Adjustment Charge shall be equal to the power cost adjustment rate set forth in the Power and Energy Supply Contract with the Grand River Dam Authority, attached hereto as Exhibit 2, applicable during the relevant billing period, multiplied by the total amount of energy (expressed in kilowatt-hours) delivered to Coffeyville Resources during the monthly billing period, adjusted for Applicable Losses as set forth in the Power and Energy Supply Contract, or the power cost adjustment rate set forth in any subsequent power and energy supply contracts executed by the City.

2. SPP Charges

   A. Monthly Transmission Charge payments in the sum determined in accordance with the Formula set forth below:

Coffeyville Resources shall pay a proportionate share of all transmission and ancillary service and charges for other services incurred by the City under the SPP Open Access Tariff in connection with the delivery of purchased power to the City's electric system, determined as follows:

$$MTC = [CuPTD / CiPTD] \times TTC, \text{ where}$$

MTC = Monthly Transmission Charge, which is Coffeyville Resources' proportionate share of the transmission and ancillary charges incurred by the City in connection with the delivery of purchased power to the City's electric system during the billing period, as set forth in the SPP's support for its monthly invoices to the City, which support shall be made available by the City to Coffeyville Resources concurrently with the delivery of the City's monthly bill to Coffeyville Resources.

CuPTD= Customer's Peak Transmission Demand shall be Coffeyville Resources' highest measured demand (corrected for losses, as required), at the time of the system peak used by the SPP to allocate transmission charges for Network Integration Transmission Service for the billing period.

CiPTD = City's Peak Transmission Demand, which shall be the City's highest measured demand (corrected for losses, as required), including the demand of Coffeyville Resources served under this rate, at the time of the system peak used by the SPP to allocate transmission charges for Network Integration Transmission Service for the billing period.

TTC = Total Transmission Costs, which includes all transmission, wheeling and ancillary charges incurred by the City associated with the delivery of purchased power to the City's electric system during the billing period.

3. Transmission Wheeling Charge

The per kilowatt-hour charge listed below for each kilowatt-hour of energy transferred on the City's Transmission Facilities or through the SPP Network Integration Transmission Service Agreement for the Facility pursuant to this Agreement.

Time Period	Per Kilowatt-hour Charge
[Effective Date] through June 30, 2019[1]	$0.003
July 1, 2019 through June 30, 2023[2]	$0.0035
July 1, 2023 through June 30, 2024[3]	$0.00375

[1] *Coffeyville Resources shall pay for a minimum of two hundred thousand dollars ($200,000.00) of Transmission Wheeling Charges annually, whether or not the Facility uses any power and energy. If the actual Transmission Wheeling Charge for any calendar year is less than said $200,000.00 minimum, then Coffeyville Resources' electric utility bill will be adjusted for any difference between said $200,000.00 minimum Transmission Wheeling Charge and the actual Transmission Wheeling Charge for that year. If a power and energy supply contract is not available, the Minimum Transmission Wheeling Charge shall be tolled until a new power and energy supply contract is obtained.*

[2] *Transmission Wheeling Charge for this period shall only be effective if Coffeyville Resources elects to extend the Term of this Agreement pursuant to Article XIV.*

[3] *Transmission Wheeling Charge for this period shall only be effective if Coffeyville Resources elects to extend the Term of this Agreement pursuant to Article XIV.*

4. Operation & Maintenance Charges

Coffeyville Resources shall reimburse the City its actual costs of operating, maintaining, repairing, replacing, and insuring the Transmission Facilities, plus a ten percent (10%) overhead markup, unless and to the extent that such costs are included in a revenue requirement recovered by the City under the SPP Open Access Tariff in which case there will be no such reimbursement.

5. Power Factor Adjustment

A Power Factor meeting the contractual requirements of the Transmission and Power Supply Providers must be maintained at the two metering locations (Meters M1 and M2) where the City's 138 kV transmission lines connect to Substation B.

The Power Factor of Facility will be measured through the meters (Meters M3 and M4) located at the Facility Delivery Point(s). The Power Factor of the City's transmission facilities connected to Substation B will be measured through meters (Meters M5 and M6) located on the high-voltage side of the 138/69 kV step-down transformers. The combined Power Factor of the City and the Facility electric loads will be augmented through the use of two 21.6 MVAR, 138 kV capacitor banks to assist in Power Factor correction. Coffeyville Resources may elect to use the Facility's 37,000 H.P. synchronous motor to fine-tune the Power Factor requirements.

The data obtained from meters M3 through M6 will be used to determine the MVAR requirements of the Facility and the City. To the extent not otherwise recovered under SPP Charges, the costs of any necessary reactive supply and voltage control ancillary services supplied by the SPP will be billed to Coffeyville Resources and the City accordingly. All additional costs incurred by the City to adjust the Facility's Power Factor deficiencies will be billed through part 5 of this Rate Schedule.

6. Direct Assignment Facilities

Any agreements for the recovery of costs associated with Direct Assignment Facilities shall be negotiated by the Parties in advance of the design, planning and construction of each Direct Assignment Facility proposed under the Agreement. Any such agreements shall be in writing and executed by both Parties.