



AGREEMENT FOR SERVICES

Date: August 29, 2005

OWNER INFORMATION

City of Rapid City
300 Sixth Street
Rapid City, SD 57701

Contact: Dan Coon, P.E.
Phone: (605) 394-4154
Fax: (605) 394-6636

CONSULTANT INFORMATION

HKM Engineering, Inc.
16 West 8th Street
Sheridan, WY 82801

Contact: Jeff B. Fuller, P.E.
Phone: (307) 672-9006
Fax: (307) 672-5214

Project Title: Elm Avenue Watermain Rehabilitation Project
City of Rapid City Project No. W05-1517

Description of Services:

HKM Engineering, Inc. will provide the City of Rapid City professional engineering and corrosion services to rehabilitate the cathodic protection system for the existing 20" diameter steel Elm Avenue watermain; and in the process provide the city with training, corrosion standards and equipment to enable city staff to perform these tasks in the future. The Scope of Services, Schedule of Values, and Project Schedule will be as described in Attachment A.

Contract Amount: Cost Reimbursable Not to Exceed \$98,340.00 Without Prior Authorization by the City of Rapid City.

BOTH PARTIES AGREE TO THE GENERAL TERMS AND CONDITIONS ATTACHED WHICH ARE A PART OF THIS AGREEMENT. WORK WILL COMMENCE UPON EXECUTION OF THIS AGREEMENT BY BOTH PARTIES AND A WRITTEN NOTICE TO PROCEED TO HKM ENGINEERING, INC. FROM THE CITY OF RAPID CITY.

I HEREBY APPROVE AND ACCEPT THIS AGREEMENT AND HAVE RECEIVED COPY OF SAME.

Accepted: City of Rapid City, South Dakota

By: _____
Mayor

Date: _____

Attested: _____
City Finance Officer

Date: _____

Accepted: City of Rapid City Engineering Services

By: [Signature]
Project Manager

Date: 9/2/05

Accepted by HKM Engineering:

By: [Signature]
Jeff B. Fuller, P.E., Region Manager

Date: 1 SEPTEMBER 2005

GENERAL TERMS and CONDITIONS**1. AUTHORIZATION TO PROCEED**

Execution of this **AGREEMENT** by the **City** will be authorization for **HKM** to proceed with the work, unless otherwise provided for in the **AGREEMENT**.

2. SALARY COSTS

HKM'S SALARY COSTS, when the basis of compensation, are the amount of wages or salaries paid **HKM** employees for work directly performed on **City's** project plus a percentage of all such wages or salaries to cover all payroll related taxes, payments, premiums and benefits.

3. DIRECT EXPENSES

HKM DIRECT EXPENSES, when part of the basis of compensation, are those costs incurred on, or directly for the **City's** project, including, but not limited to, necessary transportation costs, including current rates for **HKM** vehicles, meals and lodging, laboratory test and analyses; computer services, word processing services; telephone; printing; binding, and reproduction charges; all costs associated with outside consultants, subconsultants, subcontractors, and other outside services and facilities; and other similar costs. Reimbursement for **DIRECT ESPENSES** will be on the basis of actual charges when furnished by commercial sources and on the basis of current rates when furnished by **HKM**.

4. STANDARD OF CARE

The standard of care applicable to **HKM** services will be the degree of skill and diligence employed by professional engineering or consultants performing the same or similar services at the time **HKM** services are performed. **HKM** will reperform any services not meeting this standard without additional compensation.

5. TERMINATION

This **AGREEMENT** may be terminated for convenience on 30 day's written notice or for cause if either party fails substantially to perform through no fault of the other and does not commence correction of such nonperformance within five days of written notice and diligently complete the correction thereafter. On termination, **HKM** will be paid for all authorized work performed up to the termination date plus termination expenses, such as, but not limited to, reassignment of personnel, subcontract termination costs, and related closeout costs. If no notice of termination is given, relationships and obligations created by this **AGREEMENT** except **ARTICLE 7** will be terminated upon completion of all applicable requirements of this **AGREEMENT**.

6. PAYMENT TO HKM

Monthly invoices will be issued by **HKM** following the month in which the work was performed under this **AGREEMENT**. Invoices will be for the amount of the work completed during that period. Invoices will be for the actual hours worked on this project during the billing period, plus reimbursable expenses. A brief project progress report will be included with each invoice. Invoices are due and payable upon receipt. Interest at a rate of 1 percent per month, or that permitted by law if lesser, will be charged on all past-due amounts starting 30 days after date of invoice. Payments will first be credited to interest and then to principal. In the event of a dispute or contested billing, only that portion so contested will be withheld from payment, and the undisputed portion will be paid.

7. SEVERABILITY AND SURVIVAL

If any of the provisions contained in this **AGREEMENT** are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions shall not be impaired thereby. Limitations of liability and indemnities shall survive termination of this **AGREEMENT** for any cause.

8. REUSE OF DOCUMENTS

All designs, drawings, specifications, documents, and other work products of **HKM** are instruments of service for this Project, whether the Project is completed or not. Reuse by the **City**, or by others acting through or on behalf of the **City** of any

such instruments of service without the written permission of **HKM** will be at the **City** sole risk. The **City** agrees to indemnify and defend **HKM** from all claims, damages, losses, and expenses, including, but not limited to, direct, indirect, or consequential damages and attorney's fees, arising out of or related to such unauthorized reuse.

9. INDEMNIFICATION

HKM shall indemnify and hold harmless the **City** from and against any and all claims, demands, or actions from damages to property or injury to persons or other damage to persons or entities arising out of or resulting from, the performance of this Contract or the results of this Contract, provided such damage to property or injury to persons is due solely to the error, act, omission, or negligent act of **HKM** or any of its employees.

City shall, indemnify and hold harmless **HKM** from and against any and all claims, demands, or actions from damages to property or injury to persons or other damage to persons or entities arising out of, or resulting from, the performance of this Contract or the results of this Contract, provided such damage to property or injury to persons is due solely to the error, act, omission, or negligent act of **City** or any of its employees.

10. SOUTH DAKOTA LAW AND VENUE

The parties agree that any action at law, suit in equity, or judicial proceeding for the enforcement of this **AGREEMENT** or any provision thereof shall be instituted only in the courts of the **STATE OF SOUTH DAKOTA** and it is mutually agreed that this **AGREEMENT** shall be governed by the laws of the **STATE OF SOUTH DAKOTA** both as to interpretation and performance.

11. CIVIL RIGHTS ASSURANCES

During the performance of this Contract, **HKM** agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, disability or national origin. **HKM** will take affirmative action to ensure that applicants are employed, and employees are treated during employment, without regard to their race, color, religion, sex, or national origin.

12. CHANGES

The **City** or **HKM** may, from time to time, request changes in the Scope of Services to be performed hereunder. Such changes, including any increase or decrease in the amount of the **HKM'S** compensation, as agreed by and between the **City** and **HKM**, shall be incorporated in written amendment to this Contract.

13. INDEPENDENT CONTRACTOR STATUS

HKM shall be an independent contractor and shall have responsibility for and control over the details and means for providing the services. **HKM** can use subcontractors approved by the **City** to perform services usually performed by subcontractors.

14. RESPONSIBILITIES OF THE City

The **City** shall act on the following in a manner necessary to assure satisfactory completion of the Project.

A. DESIGNATE A REPRESENTATIVE

Designate the **City's** representative with respect to the **HKM'S** services to be performed under this Contract; and such person shall have complete authority to transmit instructions, receive information, and interpret and define the **City's** policies and decisions with respect to services covered by this Contract.

B. ACCESS TO RECORDS

The **City** will make available to **HKM** those records in the **City's** possession designated by **HKM** as being necessary for development of the Project.

Attachment A

City of Rapid City Elm Avenue Watermain Rehabilitation City of Rapid City Project No. W05-1517

Scope of Services

INTRODUCTION

This Scope of Services includes professional engineering and corrosion services to rehabilitate the cathodic protection system for the existing 20" diameter steel, Elm Avenue watermain from the existing low level reservoirs south to St Andrews Street, east along St. Andrews Street, south along Elm Avenue to the intersection with Elk Street, approximately 10,300 feet. Refer to Figure 1 attached to this Scope of Services.

With this project, the intent is to implement cathodic protection rehabilitation requirements for the existing 20" diameter steel waterline along Elm Avenue; and in the process, provide training and equipment, and standards for city staff to be able to address cathodic protection for new and rehabilitated infrastructure in the future.

Assumptions include:

- HKM and RUSTNOT previously (February, 2004) prepared a *Corrosion Study for City Metallic Water Transmission Mains: Elm Avenue 20" Steel transmission Main*. This rehabilitation scope of services is based on the information provided in that report.
- HKM and RUSTNOT will prepare a list of materials anticipated to be required for implementation of the identified rehabilitation efforts. As is the nature of these rehabilitation efforts, there may be some modifications to this list as excavations are performed. These materials are estimated to be between \$5000 and \$10,000, and are not included in this scope of services estimated fee.
- HKM and RUSTNOT will prepare a list of required cathodic testing equipment to be acquired. HKM will provide this list to the city for review, and purchase this equipment for use on this project. It is anticipated cost for the required equipment is \$5000, and is included in this scope of services estimated fee. The City will obtain ownership of this equipment for use on this project and thereafter.
- The fee estimate anticipates a number of items can be completed simultaneously (i.e. several test stations installations could be completed simultaneously; all continuity repair work could be completed during the same trip, etc.). This will optimize travel costs.
- The city utility crews will provide the equipment, materials and manpower to provide traffic control and perform the excavations required to expose the main; to install test stations, galvanic anodes and/or joint bonds; and all manpower, equipment and materials to reclaim any and all excavations.
- An independent excavator (WARAX Excavation) will be hired by HKM for the deep (23') excavation adjacent to the existing low level reservoir at the north end of the project. Costs for

this excavation by WARAX are included within this fee estimate.

- Although costs are not included in this fee estimate, WARAX will also be available to assist, if required, during test station or insulator installation. An approximate cost for WARAX for excavation for these test stations or insulators; and reclamation of these excavations may vary significantly due to specific location requirements. An estimated cost, including traffic control, if necessary, is from \$1,200 per excavation to \$4,200 per excavation.
- HKM and RUSTNOT will provide a introductory “training” session on pipeline corrosion and cathodic protection at the beginning of the project; utilize opportunities during the course of the rehabilitation efforts to “train” city staff in the requirements and maintenance of a corrosion protection system; and provide a “training” session at the completion of this project to summarize the work performed and delineate operation and maintenance requirements.
- This scope anticipates a certain number of service connections will be exposed and insulators installed to isolate service connections from the mainline. If it is apparent more services connections, requiring insulators, are needed, HKM will incorporate into this agreement, as additional services, a task to develop the specifications and details for installation of the insulators to the service connections. This effort is estimated to be an additional \$3,000 to \$4,000.

The outline numbers of this Scope of Services correspond to the outline numbers presented on the Microsoft Project 2000 Schedule and associated cost breakdowns attached to this Scope of Services.

1 WORK PLAN

1.1 Project Administration. For this project HKM Engineering will staff and manage a project team to provide specific project deliverables. This task will include the following elements:

- Provide qualified engineers and technicians to accomplish the required work effort; monitor budget and schedule; and prepare monthly invoices and project status reports.
- Provide ongoing senior review of project development and deliverables. Senior consulting staff will also be assigned to review all major deliverables prior to submittal.
- Coordinate communication between City staff and HKM Engineering and RUSTNOT project staff.
- Prepare invoices and monitor HKM Engineering and sub consultant project costs.
- Provide clerical support for project. (Meeting notes, copies, filing, etc.)

For this project, Jeff Fuller, P.E. will be the Project Administrator, Bill Spickelmire/RUSTNOT will be the principal Corrosion Control Specialist, Dayton Alsaker, P.E. will provide senior review and Dennis Lindberg and Justin Hill will provide technical assistance.

1.2 Develop Workplan.

1.2.1 Develop Workplan. A workplan (identified within this scope of services) will be developed identifying the rehabilitation efforts, schedule and fee estimate.

1.2.2 Coordinate with FMG. FMG, Inc. currently has an agreement with the City of

Rapid City for reconstruction of Elm Avenue from St. Patrick Street to East Utah Street. This reconstruction will impact portions of the 20" watermain. Particular coordination will be required for a proposed storm drain installation extending west from East Meade Street north along Elm Avenue and west into the alley between East Flormann Street and East Meade Street. This coordination may mean modifications to the timing of the rehabilitation efforts along this portion of watermain, locations of test stations and insulators, future relocation of the 20" watermain, and/or additional modifications to the rehabilitation effort.

1.3 Develop Design Criteria. The City of Rapid City is currently updating their city design standards. The city desires to insert design criteria for corrosion protection into this update. Due to the timing of this update, the City desires to insert general design criteria, for corrosion protection into this update. HKM and RUSTNOT will provide a draft and final of general corrosion protection design criteria for consideration for inclusion into the update of the city design standards.

1.4 Develop Materials List. Based on this Scope of Services, HKM and RUSTNOT will prepare a list of materials anticipated to be required for implementation of the identified rehabilitation efforts. As is the nature of these rehabilitation efforts, there may be some modifications to this list as excavations are performed. These materials are estimated to be between \$5000 and \$10,000, and are not included in this scope of services estimated fee.

1.5 City Demonstration/Training. HKM and RUSTNOT will prepare a brief (approximate 2 hours) discussion on corrosion principles and corrosion protection methods, and provide an overview of this rehabilitation project and the intended outcomes. This meeting will also serve as a project kick-off meeting with project and city staff.

2 FIELD WORK

2.1 Test Station Installations. This scope anticipates eight (8) test stations will be installed along the pipeline at crossings with other metallic utilities and to test for electrical continuity and electrical isolation. HKM/RUSTNOT will have an on-site representative to direct city crews, as needed.

2.1.1 Segment 1 – 1 test station. This scope anticipates one test station will be installed adjacent to the low reservoir located at the north end of this project. Note it is anticipated the excavation to locate the existing pipeline will be in excess of 23-foot deep.

2.1.2 Segment 3 – 3 test stations. This scope anticipates installation of three test stations along segment 3; including 2 at gas line crossings. HKM will coordinate the gas crossings with the local utility (MDU), prior to city crews being on site.

2.1.3 Segment 4 – 4 test stations. This scope anticipates installation of four test stations along segment 4.

2.2 Continuity Testing Repair. Segments 3 and 4 will be retested for continuity; segment 1 will be tested, following the installation of the test station at the north end, adjacent to the low reservoir. It is anticipated there is, at a minimum at least one high resistant segment, approximately 315 feet along segment 1, which will require 6 excavations to repair the open joint during continuity testing.

The process involves taking the length of the watermain without continuity and “cutting the length in one-half” to determine the high resistant span direction with additional testing. This process is repeated until the high resistant location is found and repaired.

2.3 Short Location. The previous report identified approximately 131 service connections, with the potential for shorts at these service connections, plus potentially at additional locations. We anticipate segments 1 and 2 will have few shorts, while segments 3 and 4 are more of an unknown and may experience a greater number of shorts.

The number of short locations is an unknown. We have estimated a number of shorts to be repaired to achieve electrical isolation; however as we execute this process the potential exists for the number of short locations to vary significantly. Also, depending upon the location, each identified short location will have a different level of effort to excavate and complete the repair. Short repairs will consist of installing an insulating union in the copper service lines. We have assumed 2 to 3 short repairs can be completed per day.

2.3.1 First Short Location. This identifies the first iteration to conduct the short location and current mapping testing to identify electrical shorts

2.3.2 First Short Repair. Excavations will be performed to repair electrical shorts. It is anticipated segment 1 will have few shorts (2), segment 2 will have few shorts (2), segments 3 and 4 have more unknowns and 8 shorts are anticipated for each of these segments, for a total of 20 excavations to identify locations of shorts.

2.3.3 Second Short Location. This is the second iteration to locate shorts.

2.3.4 Second Short Repair. This scope anticipates five excavations for the second iteration. This scope anticipates 5 excavations will be made to identify short locations, for this iteration.

2.3.5 Third Short Location. Following repair of the previous identified short locations, the water main will then be retested for continuity, and this scope anticipates two (2) locations will be identified as short locations.

2.3.6 Third Short Repair. The two (2) identified locations will be excavated and repaired.

2.3.7 Fourth Location. Following the third iteration of short repair, this scope anticipates the line will be retested, and will all pass the continuity test.

A change order can be initiated for additional shorts, those in excess of the 20 identified in task 2.3.2, if identified, to be excavated and repaired. These additional services may also include WARAX Excavation, if required to assist the city with these additional excavations.

2.4 Potential & Anode Survey. This work will be completed after the pipe is made electrically continuous and the known shorts have been repaired. It will consist of potential measurements and galvanic anode tests to evaluate the level of protection.

3 PROJECT CLOSEOUT.

3.1 Summary of work. We will provide a summary of the work conducted. This summary will identify the repairs and repair locations, as well as new test station locations, and record drawings of the work performed.

3.2 O & M Manual. We will provide an Operation and Maintenance Manual identifying materials used and contact names and numbers to procure additional materials, if required. Also, continuity test values will be provided and recommendations for procedures to implement to maintain the electrical continuity of this pipeline. The intent for this manual is also to serve as a guide to implement cathodic protection for future pipelines, as well as to address cathodic protection rehabilitation on existing lines as may arise in the future.

3.3 Cathodic Protection Details/Specifications. We will provide standard cathodic protection details and specifications for incorporation into the city standards.

4 TRAINING OF CITY PERSONNEL

4.1 Training with final testing. We will walk through the pipeline with city staff, demonstrate testing procedures and values, and provide input on interpretation of values during the entire course of the project.

4.2 Meeting Review/O & M Manual. We will meet with city staff and review the rehabilitation efforts, what was found and how it was rehabilitated. We will then go through the O & M Manual, discuss the materials, procedures and processes identified and respond to questions.

Project Schedule

The proposed project schedule is attached. This schedule is based on a Notice to Proceed date on or before September 20, 2005. Field work is scheduled for completion December 31, 2005 and the projected project completion date is March 24, 2006. The schedule will be adjusted, as necessary, per the actual date of the Notice to Proceed. The schedule may be modified, as necessary, for inclement weather, if the number of excavations is greater than anticipated, and/or depending upon the availability of city crews.

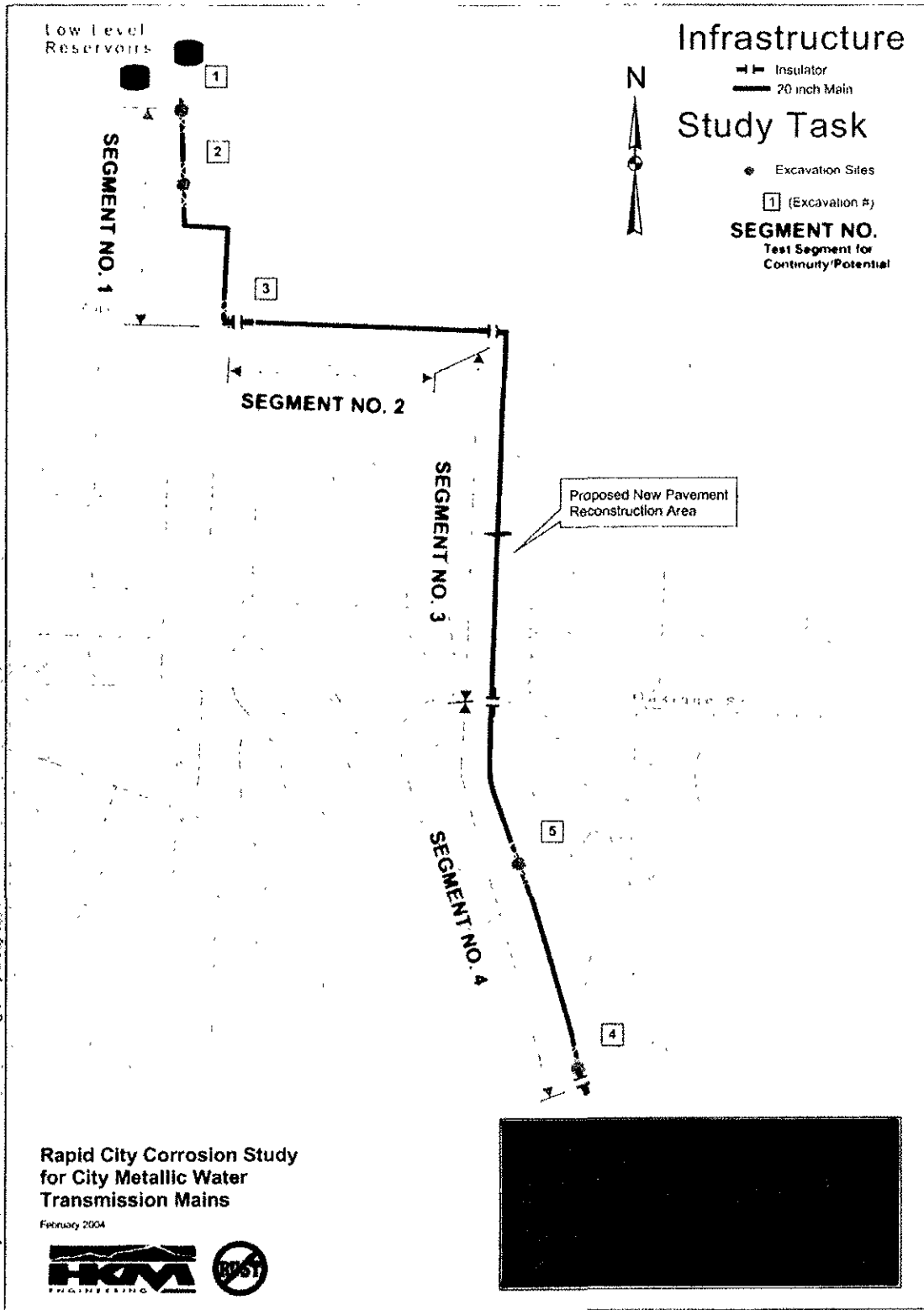
Estimated Fee

The fee estimate is based on the Scope of Services presented above, on the project schedule provided, the Schedule of Values provided, and the estimated hours and expenses as identified for each detailed task are included. Also provided are the total hours per staff estimated for this project.

The fee estimate provided is for professional engineering and corrosion protection services.

Materials and labor for excavations is provided by the City.

The fee will be administered as a cost reimbursable amount with a maximum not to exceed value of \$98,340, without prior written approval from the city.



Attachment A
Schedule of Values
 ELM AVENUE WATERMAIN REHABILITATION

ID		Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate
1	⬇	Bill Spickelmire	Work		B		100%	\$110.00/hr
2		RUSTNOT Expenses	Material		R			\$100.00
3		RUSTNOT Clerical	Work		R		100%	\$45.00/hr
4		Project Administrator	Work		P		100%	\$120.00/hr
5		Senior Engineer	Work		S		100%	\$105.00/hr
6	⬆	Staff Engineer	Work		S		100%	\$60.00/hr
7		Technician	Work		T		100%	\$55.00/hr
8		HKM Clerical	Work		H		100%	\$45.00/hr
9		HKM Expenses	Material		H			\$100.00
10		WARAX Excavation	Material		W			\$8,500.00
11		City Materials	Material		C			\$5,000.00

Attachment A

Outline Number	Task Name	Duration	Start	Finish	Cost	2006						
						Aug	Sep	Oct	Nov	Dec	Jan	Feb
0	ELM AVENUE WATERMAIN REHABILITATION	134 days	Tue 9/20/05	Fri 3/24/06	\$98,340.00							
1	Work Plan	108 days	Tue 9/20/05	Thu 2/16/06	\$24,970.00							
1.1	Project Administration	108 days	Tue 9/20/05	Thu 2/16/06	\$6,000.00							
1.2	Develop Workplan	5 days	Tue 9/20/05	Mon 9/26/05	\$6,680.00							
1.2.1	Develop Workplan	5 days	Tue 9/20/05	Mon 9/26/05	\$4,900.00							
1.2.2	Coordinate with FMG	4 days	Tue 9/20/05	Fri 9/23/05	\$1,780.00							
1.3	Develop Design Criteria	5 days	Fri 9/23/05	Thu 9/29/05	\$2,230.00							
1.4	Develop Materials List	5 days	Fri 9/23/05	Thu 9/29/05	\$2,060.00							
1.5	City Demonstration/Training	1 day	Fri 9/30/05	Fri 9/30/05	\$8,000.00							
2	Field Work	55 days	Mon 10/24/05	Fri 1/6/06	\$41,890.00							
2.1	Test Station Installations	12 days	Mon 10/24/05	Tue 11/8/05	\$16,270.00							
2.1.1	Segment 1 - 1 test station	2 days	Mon 10/24/05	Tue 10/25/05	\$11,430.00							
2.1.2	Segment 3 - 3 test stations	5 days	Wed 10/26/05	Tue 11/1/05	\$2,520.00							
2.1.3	Segment 4 - 4 test stations	5 days	Wed 11/2/05	Tue 11/8/05	\$2,320.00							
2.2	Continuity Testing Repair	10 days	Wed 11/9/05	Tue 11/22/05	\$5,800.00							
2.3	Short Location	23 days	Wed 11/23/05	Fri 12/23/05	\$15,180.00							
2.3.1	First Short Location	2 days	Wed 11/23/05	Thu 11/24/05	\$2,800.00							
2.3.2	First Short Repair	5 days	Fri 11/25/05	Thu 12/1/05	\$3,360.00							
2.3.3	Second Short Location	2 days	Fri 12/2/05	Mon 12/5/05	\$1,920.00							
2.3.4	Second Short Repair	5 days	Tue 12/6/05	Mon 12/12/05	\$2,300.00							
2.3.5	Third Short Location	2 days	Tue 12/13/05	Wed 12/14/05	\$1,260.00							
2.3.6	Third Short Repair	5 days	Thu 12/15/05	Wed 12/21/05	\$2,080.00							
2.3.7	Fourth Location	2 days	Thu 12/22/05	Fri 12/23/05	\$1,460.00							
2.4	Potential & Anode Survey	10 days	Mon 12/26/05	Fri 1/6/06	\$4,640.00							
3	Project Closeout	45 days	Mon 1/9/06	Fri 3/10/06	\$16,720.00							
3.1	Summary of Work	15 days	Mon 1/9/06	Fri 1/27/06	\$4,520.00							
3.2	O & M Manual	10 days	Mon 1/30/06	Fri 2/10/06	\$5,000.00							
3.3	Cathodic Protection Details/Specifications	20 days	Mon 2/13/06	Fri 3/10/06	\$7,200.00							
4	Training of City Personnel	10 days	Mon 3/13/06	Fri 3/24/06	\$14,760.00							
4.1	Training with Final Testing	5 days	Mon 3/13/06	Fri 3/17/06	\$9,280.00							
4.2	Meeting Review/O & M Manual	5 days	Mon 3/20/06	Fri 3/24/06	\$5,480.00							

Attachment A

Outline Number	Task Name	Duration	Start	Finish								
1.1	Project Administration	108 days	Tue 9/20/05	Thu 2/16/06								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	1%	\$990.00	\$0.00	\$0.00	\$990.00	9 hrs	0 hrs	0 hrs	0 hrs	9 hrs
	3	RUSTNOT Clerical	1%	\$360.00	\$0.00	\$0.00	\$360.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	4	Project Administrator	3%	\$3,360.00	\$0.00	\$0.00	\$3,360.00	28 hrs	0 hrs	0 hrs	0 hrs	28 hrs
	5	Senior Engineer	0%	\$210.00	\$0.00	\$0.00	\$210.00	2 hrs	0 hrs	0 hrs	0 hrs	2 hrs
	8	HKM Clerical	3%	\$1,080.00	\$0.00	\$0.00	\$1,080.00	24 hrs	0 hrs	0 hrs	0 hrs	24 hrs
1.2.1	Develop Workplan	5 days	Tue 9/20/05	Mon 9/26/05								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	28%	\$1,210.00	\$0.00	\$0.00	\$1,210.00	11 hrs	0 hrs	0 hrs	0 hrs	11 hrs
	4	Project Administrator	60%	\$2,880.00	\$0.00	\$0.00	\$2,880.00	24 hrs	0 hrs	0 hrs	0 hrs	24 hrs
	5	Senior Engineer	5%	\$210.00	\$0.00	\$0.00	\$210.00	2 hrs	0 hrs	0 hrs	0 hrs	2 hrs
	9	HKM Expenses	6	\$600.00	\$0.00	\$0.00	\$600.00	6	0	0	0	6
1.2.2	Coordinate with FMG	4 days	Tue 9/20/05	Fri 9/23/05								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	25%	\$880.00	\$0.00	\$0.00	\$880.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	4	Project Administrator	13%	\$480.00	\$0.00	\$0.00	\$480.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	5	Senior Engineer	13%	\$420.00	\$0.00	\$0.00	\$420.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
1.3	Develop Design Criteria	5 days	Fri 9/23/05	Thu 9/29/05								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	20%	\$880.00	\$0.00	\$0.00	\$880.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	3	RUSTNOT Clerical	15%	\$270.00	\$0.00	\$0.00	\$270.00	6 hrs	0 hrs	0 hrs	0 hrs	6 hrs
	5	Senior Engineer	15%	\$630.00	\$0.00	\$0.00	\$630.00	6 hrs	0 hrs	0 hrs	0 hrs	6 hrs
	8	HKM Clerical	25%	\$450.00	\$0.00	\$0.00	\$450.00	10 hrs	0 hrs	0 hrs	0 hrs	10 hrs
1.4	Develop Materials List	5 days	Fri 9/23/05	Thu 9/29/05								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	20%	\$880.00	\$0.00	\$0.00	\$880.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	2	RUSTNOT Expenses	4	\$400.00	\$0.00	\$0.00	\$400.00	4	0	0	0	4
	5	Senior Engineer	10%	\$420.00	\$0.00	\$0.00	\$420.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	8	HKM Clerical	20%	\$360.00	\$0.00	\$0.00	\$360.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
1.5	City Demonstration/Training	1 day	Fri 9/30/05	Fri 9/30/05								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	100%	\$880.00	\$0.00	\$0.00	\$880.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	2	RUSTNOT Expenses	7	\$700.00	\$0.00	\$0.00	\$700.00	7	0	0	0	7
	6	Staff Engineer	100%	\$480.00	\$0.00	\$0.00	\$480.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	7	Technician	100%	\$440.00	\$0.00	\$0.00	\$440.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	9	HKM Expenses	5	\$500.00	\$0.00	\$0.00	\$500.00	5	0	0	0	5
	11	City Materials	1	\$5,000.00	\$0.00	\$0.00	\$5,000.00	1	0	0	0	1
2.1.1	Segment 1 - 1 test station	2 days	Mon 10/24/05	Tue 10/25/05								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	25%	\$440.00	\$0.00	\$0.00	\$440.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	2	RUSTNOT Expenses	11	\$1,100.00	\$0.00	\$0.00	\$1,100.00	11	0	0	0	11
	7	Technician	50%	\$440.00	\$0.00	\$0.00	\$440.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	9	HKM Expenses	9.5	\$950.00	\$0.00	\$0.00	\$950.00	9.5	0	0	0	9.5
	10	WARAX Excavation	1	\$8,500.00	\$0.00	\$0.00	\$8,500.00	1	0	0	0	1
2.1.2	Segment 3 - 3 test stations	5 days	Wed 10/26/05	Tue 11/1/05								
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	20%	\$880.00	\$0.00	\$0.00	\$880.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs

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Outline Number	Task Name	Duration	Start	Finish								
"Segment 3 - 3 test stations" continued												
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	2	RUSTNOT Expenses	6	\$600.00	\$0.00	\$0.00	\$600.00	6		0	0	6
	7	Technician	20%	\$440.00	\$0.00	\$0.00	\$440.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	9	HKM Expenses	6	\$600.00	\$0.00	\$0.00	\$600.00	6		0	0	6
2.1.3	Segment 4 - 4 test stations			5 days				Wed 11/2/05	Tue 11/8/05			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	10%	\$440.00	\$0.00	\$0.00	\$440.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	2	RUSTNOT Expenses	5	\$500.00	\$0.00	\$0.00	\$500.00	5		0	0	5
	7	Technician	40%	\$880.00	\$0.00	\$0.00	\$880.00	16 hrs	0 hrs	0 hrs	0 hrs	16 hrs
	9	HKM Expenses	5	\$500.00	\$0.00	\$0.00	\$500.00	5		0	0	5
2.2	Continuity Testing Repair			10 days				Wed 11/9/05	Tue 11/22/05			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	30%	\$2,640.00	\$0.00	\$0.00	\$2,640.00	24 hrs	0 hrs	0 hrs	0 hrs	24 hrs
	2	RUSTNOT Expenses	8	\$800.00	\$0.00	\$0.00	\$800.00	8		0	0	8
	7	Technician	40%	\$1,760.00	\$0.00	\$0.00	\$1,760.00	32 hrs	0 hrs	0 hrs	0 hrs	32 hrs
	9	HKM Expenses	6	\$600.00	\$0.00	\$0.00	\$600.00	6		0	0	6
2.3.1	First Short Location			2 days				Wed 11/23/05	Thu 11/24/05			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	100%	\$1,760.00	\$0.00	\$0.00	\$1,760.00	16 hrs	0 hrs	0 hrs	0 hrs	16 hrs
	2	RUSTNOT Expenses	3	\$300.00	\$0.00	\$0.00	\$300.00	3		0	0	3
	7	Technician	50%	\$440.00	\$0.00	\$0.00	\$440.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	9	HKM Expenses	3	\$300.00	\$0.00	\$0.00	\$300.00	3		0	0	3
2.3.2	First Short Repair			5 days				Fri 11/25/05	Thu 12/1/05			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	20%	\$880.00	\$0.00	\$0.00	\$880.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	2	RUSTNOT Expenses	8	\$800.00	\$0.00	\$0.00	\$800.00	8		0	0	8
	7	Technician	40%	\$880.00	\$0.00	\$0.00	\$880.00	16 hrs	0 hrs	0 hrs	0 hrs	16 hrs
	9	HKM Expenses	8	\$800.00	\$0.00	\$0.00	\$800.00	8		0	0	8
2.3.3	Second Short Location			2 days				Fri 12/2/05	Mon 12/5/05			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	50%	\$880.00	\$0.00	\$0.00	\$880.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	2	RUSTNOT Expenses	3	\$300.00	\$0.00	\$0.00	\$300.00	3		0	0	3
	7	Technician	50%	\$440.00	\$0.00	\$0.00	\$440.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	9	HKM Expenses	3	\$300.00	\$0.00	\$0.00	\$300.00	3		0	0	3
2.3.4	Second Short Repair			5 days				Tue 12/6/05	Mon 12/12/05			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	15%	\$660.00	\$0.00	\$0.00	\$660.00	6 hrs	0 hrs	0 hrs	0 hrs	6 hrs
	2	RUSTNOT Expenses	6	\$600.00	\$0.00	\$0.00	\$600.00	6		0	0	6
	7	Technician	20%	\$440.00	\$0.00	\$0.00	\$440.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	9	HKM Expenses	6	\$600.00	\$0.00	\$0.00	\$600.00	6		0	0	6
2.3.5	Third Short Location			2 days				Tue 12/13/05	Wed 12/14/05			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	25%	\$440.00	\$0.00	\$0.00	\$440.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	2	RUSTNOT Expenses	3	\$300.00	\$0.00	\$0.00	\$300.00	3		0	0	3
	7	Technician	25%	\$220.00	\$0.00	\$0.00	\$220.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	9	HKM Expenses	3	\$300.00	\$0.00	\$0.00	\$300.00	3		0	0	3

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Outline Number	Task Name	Duration						Start	Finish			
2.3.6	Third Short Repair	5 days						Thu 12/15/05	Wed 12/21/05			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	10%	\$440.00	\$0.00	\$0.00	\$440.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	2	RUSTNOT Expenses	7	\$700.00	\$0.00	\$0.00	\$700.00	7	0	0	0	7
	7	Technician	20%	\$440.00	\$0.00	\$0.00	\$440.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	9	HKM Expenses	5	\$500.00	\$0.00	\$0.00	\$500.00	5	0	0	0	5
2.3.7	Fourth Location	2 days						Thu 12/22/05	Fri 12/23/05			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	25%	\$440.00	\$0.00	\$0.00	\$440.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	2	RUSTNOT Expenses	4	\$400.00	\$0.00	\$0.00	\$400.00	4	0	0	0	4
	7	Technician	25%	\$220.00	\$0.00	\$0.00	\$220.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	9	HKM Expenses	4	\$400.00	\$0.00	\$0.00	\$400.00	4	0	0	0	4
2.4	Potential & Anode Survey	10 days						Mon 12/26/05	Fri 1/6/06			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	20%	\$1,760.00	\$0.00	\$0.00	\$1,760.00	16 hrs	0 hrs	0 hrs	0 hrs	16 hrs
	2	RUSTNOT Expenses	11	\$1,100.00	\$0.00	\$0.00	\$1,100.00	11	0	0	0	11
	7	Technician	20%	\$880.00	\$0.00	\$0.00	\$880.00	16 hrs	0 hrs	0 hrs	0 hrs	16 hrs
	9	HKM Expenses	9	\$900.00	\$0.00	\$0.00	\$900.00	9	0	0	0	9
3.1	Summary of Work	15 days						Mon 1/9/06	Fri 1/27/06			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	13%	\$1,760.00	\$0.00	\$0.00	\$1,760.00	16 hrs	0 hrs	0 hrs	0 hrs	16 hrs
	3	RUSTNOT Clerical	5%	\$270.00	\$0.00	\$0.00	\$270.00	6 hrs	0 hrs	0 hrs	0 hrs	6 hrs
	4	Project Administrator	3%	\$480.00	\$0.00	\$0.00	\$480.00	4 hrs	0 hrs	0 hrs	0 hrs	4 hrs
	5	Senior Engineer	7%	\$840.00	\$0.00	\$0.00	\$840.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	8	HKM Clerical	22%	\$1,170.00	\$0.00	\$0.00	\$1,170.00	26 hrs	0 hrs	0 hrs	0 hrs	26 hrs
3.2	O & M Manual	10 days						Mon 1/30/06	Fri 2/10/06			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	21%	\$1,870.00	\$0.00	\$0.00	\$1,870.00	17 hrs	0 hrs	0 hrs	0 hrs	17 hrs
	2	RUSTNOT Expenses	4	\$400.00	\$0.00	\$0.00	\$400.00	4	0	0	0	4
	4	Project Administrator	11%	\$1,080.00	\$0.00	\$0.00	\$1,080.00	9 hrs	0 hrs	0 hrs	0 hrs	9 hrs
	5	Senior Engineer	10%	\$840.00	\$0.00	\$0.00	\$840.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	8	HKM Clerical	23%	\$810.00	\$0.00	\$0.00	\$810.00	18 hrs	0 hrs	0 hrs	0 hrs	18 hrs
3.3	Cathodic Protection Details/Specifications	20 days						Mon 2/13/06	Fri 3/10/06			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	15%	\$2,640.00	\$0.00	\$0.00	\$2,640.00	24 hrs	0 hrs	0 hrs	0 hrs	24 hrs
	3	RUSTNOT Clerical	50%	\$360.00	\$0.00	\$0.00	\$360.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs
	4	Project Administrator	8%	\$1,440.00	\$0.00	\$0.00	\$1,440.00	12 hrs	0 hrs	0 hrs	0 hrs	12 hrs
	5	Senior Engineer	10%	\$1,680.00	\$0.00	\$0.00	\$1,680.00	16 hrs	0 hrs	0 hrs	0 hrs	16 hrs
	8	HKM Clerical	15%	\$1,080.00	\$0.00	\$0.00	\$1,080.00	24 hrs	0 hrs	0 hrs	0 hrs	24 hrs
4.1	Training with Final Testing	5 days						Mon 3/13/06	Fri 3/17/06			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	85%	\$3,740.00	\$0.00	\$0.00	\$3,740.00	34 hrs	0 hrs	0 hrs	0 hrs	34 hrs
	2	RUSTNOT Expenses	15	\$1,500.00	\$0.00	\$0.00	\$1,500.00	15	0	0	0	15
	6	Staff Engineer	110%	\$2,640.00	\$0.00	\$0.00	\$2,640.00	44 hrs	0 hrs	0 hrs	0 hrs	44 hrs
	9	HKM Expenses	14	\$1,400.00	\$0.00	\$0.00	\$1,400.00	14	0	0	0	14
4.2	Meeting Review/O & M Manual	5 days						Mon 3/20/06	Fri 3/24/06			
	<i>ID</i>	<i>Resource Name</i>	<i>Units</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>	<i>Work</i>	<i>Ovt. Work</i>	<i>Baseline Work</i>	<i>Act. Work</i>	<i>Rem. Work</i>
	1	Bill Spickelmire	28%	\$1,210.00	\$0.00	\$0.00	\$1,210.00	11 hrs	0 hrs	0 hrs	0 hrs	11 hrs

Attachment A

Outline Number	Task Name	Duration					Start	Finish				
"Meeting Review/O & M Manual" continued												
ID	Resource Name	Units	Cost	Baseline Cost	Act. Cost	Rem. Cost	Work	Ovt. Work	Baseline Work	Act. Work	Rem Work	
2	RUSTNOT Expenses	10	\$1,000.00	\$0.00	\$0.00	\$1,000.00	10		0	0	10	
5	Senior Engineer	20%	\$840.00	\$0.00	\$0.00	\$840.00	8 hrs	0 hrs	0 hrs	0 hrs	8 hrs	
7	Technician	65%	\$1,430.00	\$0.00	\$0.00	\$1,430.00	26 hrs	0 hrs	0 hrs	0 hrs	26 hrs	
9	HKM Expenses	10	\$1,000.00	\$0.00	\$0.00	\$1,000.00	10		0	0	10	

Attachment A
ELM AVENUE WATERMAIN REHABILITATION

ID	Resource Name	Work									
1	Bill Spickelmire	260 hrs									
ID	Task Name	Units	Work	Delay	Start	Finish	Cost	Baseline Cost	Act. Cost	Rem. Cost	
2	Project Administration	1%	9 hrs	0 days	Tue 9/20/05	Thu 2/16/06	\$990.00	\$0.00	\$0.00	\$990.00	
4	Develop Workplan	28%	11 hrs	0 days	Tue 9/20/05	Mon 9/26/05	\$1,210.00	\$0.00	\$0.00	\$1,210.00	
5	Coordinate with FMG	25%	8 hrs	0 days	Tue 9/20/05	Fri 9/23/05	\$880.00	\$0.00	\$0.00	\$880.00	
6	Develop Design Criteria	20%	8 hrs	0 days	Fri 9/23/05	Thu 9/29/05	\$880.00	\$0.00	\$0.00	\$880.00	
7	Develop Materials List	20%	8 hrs	0 days	Fri 9/23/05	Thu 9/29/05	\$880.00	\$0.00	\$0.00	\$880.00	
8	City Demonstration/Training	100%	8 hrs	0 days	Fri 9/30/05	Fri 9/30/05	\$880.00	\$0.00	\$0.00	\$880.00	
11	Segment 1 - 1 test station	25%	4 hrs	0 days	Mon 10/24/05	Tue 10/25/05	\$440.00	\$0.00	\$0.00	\$440.00	
12	Segment 3 - 3 test stations	20%	8 hrs	0 days	Wed 10/26/05	Tue 11/1/05	\$880.00	\$0.00	\$0.00	\$880.00	
13	Segment 4 - 4 test stations	10%	4 hrs	0 days	Wed 11/2/05	Tue 11/8/05	\$440.00	\$0.00	\$0.00	\$440.00	
14	Continuity Testing Repair	30%	24 hrs	0 days	Wed 11/9/05	Tue 11/22/05	\$2,640.00	\$0.00	\$0.00	\$2,640.00	
16	First Short Location	100%	16 hrs	0 days	Wed 11/23/05	Thu 11/24/05	\$1,760.00	\$0.00	\$0.00	\$1,760.00	
17	First Short Repair	20%	8 hrs	0 days	Fri 11/25/05	Thu 12/1/05	\$880.00	\$0.00	\$0.00	\$880.00	
18	Second Short Location	50%	8 hrs	0 days	Fri 12/2/05	Mon 12/5/05	\$880.00	\$0.00	\$0.00	\$880.00	
19	Second Short Repair	15%	6 hrs	0 days	Tue 12/6/05	Mon 12/12/05	\$660.00	\$0.00	\$0.00	\$660.00	
20	Third Short Location	25%	4 hrs	0 days	Tue 12/13/05	Wed 12/14/05	\$440.00	\$0.00	\$0.00	\$440.00	
21	Third Short Repair	10%	4 hrs	0 days	Thu 12/15/05	Wed 12/21/05	\$440.00	\$0.00	\$0.00	\$440.00	
22	Fourth Location	25%	4 hrs	0 days	Thu 12/22/05	Fri 12/23/05	\$440.00	\$0.00	\$0.00	\$440.00	
23	Potential & Anode Survey	20%	16 hrs	0 days	Mon 12/26/05	Fri 1/6/06	\$1,760.00	\$0.00	\$0.00	\$1,760.00	
25	Summary of Work	13%	16 hrs	0 days	Mon 1/9/06	Fri 1/27/06	\$1,760.00	\$0.00	\$0.00	\$1,760.00	
26	O & M Manual	21%	17 hrs	0 days	Mon 1/30/06	Fri 2/10/06	\$1,870.00	\$0.00	\$0.00	\$1,870.00	
29	Training with Final Testing	85%	34 hrs	0 days	Mon 3/13/06	Fri 3/17/06	\$3,740.00	\$0.00	\$0.00	\$3,740.00	
30	Meeting Review/O & M Manual	28%	11 hrs	0 days	Mon 3/20/06	Fri 3/24/06	\$1,210.00	\$0.00	\$0.00	\$1,210.00	
27	Cathodic Protection Details/Specifications	15%	24 hrs	0 days	Mon 2/13/06	Fri 3/10/06	\$2,640.00	\$0.00	\$0.00	\$2,640.00	
2	RUSTNOT Expenses	115									
ID	Task Name	Units	Work	Delay	Start	Finish	Cost	Baseline Cost	Act. Cost	Rem. Cost	
7	Develop Materials List	4	4	0 days	Fri 9/23/05	Thu 9/29/05	\$400.00	\$0.00	\$0.00	\$400.00	
8	City Demonstration/Training	7	7	0 days	Fri 9/30/05	Fri 9/30/05	\$700.00	\$0.00	\$0.00	\$700.00	
11	Segment 1 - 1 test station	11	11	0 days	Mon 10/24/05	Tue 10/25/05	\$1,100.00	\$0.00	\$0.00	\$1,100.00	
12	Segment 3 - 3 test stations	6	6	0 days	Wed 10/26/05	Tue 11/1/05	\$600.00	\$0.00	\$0.00	\$600.00	
13	Segment 4 - 4 test stations	5	5	0 days	Wed 11/2/05	Tue 11/8/05	\$500.00	\$0.00	\$0.00	\$500.00	
14	Continuity Testing Repair	8	8	0 days	Wed 11/9/05	Tue 11/22/05	\$800.00	\$0.00	\$0.00	\$800.00	
16	First Short Location	3	3	0 days	Wed 11/23/05	Thu 11/24/05	\$300.00	\$0.00	\$0.00	\$300.00	
17	First Short Repair	8	8	0 days	Fri 11/25/05	Thu 12/1/05	\$800.00	\$0.00	\$0.00	\$800.00	
18	Second Short Location	3	3	0 days	Fri 12/2/05	Mon 12/5/05	\$300.00	\$0.00	\$0.00	\$300.00	
19	Second Short Repair	6	6	0 days	Tue 12/6/05	Mon 12/12/05	\$600.00	\$0.00	\$0.00	\$600.00	
20	Third Short Location	3	3	0 days	Tue 12/13/05	Wed 12/14/05	\$300.00	\$0.00	\$0.00	\$300.00	
21	Third Short Repair	7	7	0 days	Thu 12/15/05	Wed 12/21/05	\$700.00	\$0.00	\$0.00	\$700.00	
22	Fourth Location	4	4	0 days	Thu 12/22/05	Fri 12/23/05	\$400.00	\$0.00	\$0.00	\$400.00	
23	Potential & Anode Survey	11	11	0 days	Mon 12/26/05	Fri 1/6/06	\$1,100.00	\$0.00	\$0.00	\$1,100.00	
26	O & M Manual	4	4	0 days	Mon 1/30/06	Fri 2/10/06	\$400.00	\$0.00	\$0.00	\$400.00	
29	Training with Final Testing	15	15	0 days	Mon 3/13/06	Fri 3/17/06	\$1,500.00	\$0.00	\$0.00	\$1,500.00	
30	Meeting Review/O & M Manual	10	10	0 days	Mon 3/20/06	Fri 3/24/06	\$1,000.00	\$0.00	\$0.00	\$1,000.00	
3	RUSTNOT Clerical	28 hrs									
ID	Task Name	Units	Work	Delay	Start	Finish	Cost	Baseline Cost	Act. Cost	Rem. Cost	
2	Project Administration	1%	8 hrs	0 days	Tue 9/20/05	Thu 2/16/06	\$360.00	\$0.00	\$0.00	\$360.00	
6	Develop Design Criteria	15%	6 hrs	0 days	Fri 9/23/05	Thu 9/29/05	\$270.00	\$0.00	\$0.00	\$270.00	
25	Summary of Work	5%	6 hrs	0 days	Mon 1/9/06	Fri 1/27/06	\$270.00	\$0.00	\$0.00	\$270.00	
27	Cathodic Protection Details/Specifications	50%	8 hrs	0 days	Mon 2/13/06	Tue 2/14/06	\$360.00	\$0.00	\$0.00	\$360.00	
4	Project Administrator	81 hrs									
ID	Task Name	Units	Work	Delay	Start	Finish	Cost	Baseline Cost	Act. Cost	Rem. Cost	
2	Project Administration	3%	28 hrs	0 days	Tue 9/20/05	Thu 2/16/06	\$3,360.00	\$0.00	\$0.00	\$3,360.00	

Attachment A
ELM AVENUE WATERMAIN REHABILITATION

ID	Resource Name	Work										
"Project Administrator" continued												
		<i>ID</i>	<i>Task Name</i>	<i>Units</i>	<i>Work</i>	<i>Delay</i>	<i>Start</i>	<i>Finish</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>
		4	Develop Workplan	60%	24 hrs	0 days	Tue 9/20/05	Mon 9/26/05	\$2,880.00	\$0.00	\$0.00	\$2,880.00
		5	Coordinate with FMG	13%	4 hrs	0 days	Tue 9/20/05	Fri 9/23/05	\$480.00	\$0.00	\$0.00	\$480.00
		25	Summary of Work	3%	4 hrs	0 days	Mon 1/9/06	Fri 1/27/06	\$480.00	\$0.00	\$0.00	\$480.00
		26	O & M Manual	11%	9 hrs	0 days	Mon 1/30/06	Fri 2/10/06	\$1,080.00	\$0.00	\$0.00	\$1,080.00
		27	Cathodic Protection Details/Specifications	8%	12 hrs	0 days	Mon 2/13/06	Fri 3/10/06	\$1,440.00	\$0.00	\$0.00	\$1,440.00
5	Senior Engineer	58 hrs										
		<i>ID</i>	<i>Task Name</i>	<i>Units</i>	<i>Work</i>	<i>Delay</i>	<i>Start</i>	<i>Finish</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>
		4	Develop Workplan	5%	2 hrs	0 days	Tue 9/20/05	Mon 9/26/05	\$210.00	\$0.00	\$0.00	\$210.00
		5	Coordinate with FMG	13%	4 hrs	0 days	Tue 9/20/05	Fri 9/23/05	\$420.00	\$0.00	\$0.00	\$420.00
		6	Develop Design Criteria	15%	6 hrs	0 days	Fri 9/23/05	Thu 9/29/05	\$630.00	\$0.00	\$0.00	\$630.00
		7	Develop Materials List	10%	4 hrs	0 days	Fri 9/23/05	Thu 9/29/05	\$420.00	\$0.00	\$0.00	\$420.00
		25	Summary of Work	7%	8 hrs	0 days	Mon 1/9/06	Fri 1/27/06	\$840.00	\$0.00	\$0.00	\$840.00
		26	O & M Manual	10%	8 hrs	0 days	Mon 1/30/06	Fri 2/10/06	\$840.00	\$0.00	\$0.00	\$840.00
		30	Meeting Review/O & M Manual	20%	8 hrs	0 days	Mon 3/20/06	Fri 3/24/06	\$840.00	\$0.00	\$0.00	\$840.00
		27	Cathodic Protection Details/Specifications	10%	16 hrs	0 days	Mon 2/13/06	Fri 3/10/06	\$1,680.00	\$0.00	\$0.00	\$1,680.00
		2	Project Administration	0%	2 hrs	0 days	Tue 9/20/05	Thu 2/16/06	\$210.00	\$0.00	\$0.00	\$210.00
6	Staff Engineer	52 hrs										
		<i>ID</i>	<i>Task Name</i>	<i>Units</i>	<i>Work</i>	<i>Delay</i>	<i>Start</i>	<i>Finish</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>
		8	City Demonstration/Training	100%	8 hrs	0 days	Fri 9/30/05	Fri 9/30/05	\$480.00	\$0.00	\$0.00	\$480.00
		29	Training with Final Testing	110%	44 hrs	0 days	Mon 3/13/06	Fri 3/17/06	\$2,640.00	\$0.00	\$0.00	\$2,640.00
7	Technician	170 hrs										
		<i>ID</i>	<i>Task Name</i>	<i>Units</i>	<i>Work</i>	<i>Delay</i>	<i>Start</i>	<i>Finish</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>
		8	City Demonstration/Training	100%	8 hrs	0 days	Fri 9/30/05	Fri 9/30/05	\$440.00	\$0.00	\$0.00	\$440.00
		11	Segment 1 - 1 test station	50%	8 hrs	0 days	Mon 10/24/05	Tue 10/25/05	\$440.00	\$0.00	\$0.00	\$440.00
		12	Segment 3 - 3 test stations	20%	8 hrs	0 days	Wed 10/26/05	Tue 11/1/05	\$440.00	\$0.00	\$0.00	\$440.00
		13	Segment 4 - 4 test stations	40%	16 hrs	0 days	Wed 11/2/05	Tue 11/8/05	\$880.00	\$0.00	\$0.00	\$880.00
		14	Continuity Testing Repair	40%	32 hrs	0 days	Wed 11/9/05	Tue 11/22/05	\$1,760.00	\$0.00	\$0.00	\$1,760.00
		16	First Short Location	50%	8 hrs	0 days	Wed 11/23/05	Thu 11/24/05	\$440.00	\$0.00	\$0.00	\$440.00
		17	First Short Repair	40%	16 hrs	0 days	Fri 11/25/05	Thu 12/1/05	\$880.00	\$0.00	\$0.00	\$880.00
		18	Second Short Location	50%	8 hrs	0 days	Fri 12/2/05	Mon 12/5/05	\$440.00	\$0.00	\$0.00	\$440.00
		19	Second Short Repair	20%	8 hrs	0 days	Tue 12/6/05	Mon 12/12/05	\$440.00	\$0.00	\$0.00	\$440.00
		20	Third Short Location	25%	4 hrs	0 days	Tue 12/13/05	Wed 12/14/05	\$220.00	\$0.00	\$0.00	\$220.00
		21	Third Short Repair	20%	8 hrs	0 days	Thu 12/15/05	Wed 12/21/05	\$440.00	\$0.00	\$0.00	\$440.00
		22	Fourth Location	25%	4 hrs	0 days	Thu 12/22/05	Fri 12/23/05	\$220.00	\$0.00	\$0.00	\$220.00
		23	Potential & Anode Survey	20%	16 hrs	0 days	Mon 12/26/05	Fri 1/6/06	\$880.00	\$0.00	\$0.00	\$880.00
		30	Meeting Review/O & M Manual	65%	26 hrs	0 days	Mon 3/20/06	Fri 3/24/06	\$1,430.00	\$0.00	\$0.00	\$1,430.00
8	HKM Clerical	110 hrs										
		<i>ID</i>	<i>Task Name</i>	<i>Units</i>	<i>Work</i>	<i>Delay</i>	<i>Start</i>	<i>Finish</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>
		2	Project Administration	3%	24 hrs	0 days	Tue 9/20/05	Thu 2/16/06	\$1,080.00	\$0.00	\$0.00	\$1,080.00
		6	Develop Design Criteria	25%	10 hrs	0 days	Fri 9/23/05	Thu 9/29/05	\$450.00	\$0.00	\$0.00	\$450.00
		7	Develop Materials List	20%	8 hrs	0 days	Fri 9/23/05	Thu 9/29/05	\$360.00	\$0.00	\$0.00	\$360.00
		26	O & M Manual	23%	18 hrs	0 days	Mon 1/30/06	Fri 2/10/06	\$810.00	\$0.00	\$0.00	\$810.00
		25	Summary of Work	22%	26 hrs	0 days	Mon 1/9/06	Fri 1/27/06	\$1,170.00	\$0.00	\$0.00	\$1,170.00
		27	Cathodic Protection Details/Specifications	15%	24 hrs	0 days	Mon 2/13/06	Fri 3/10/06	\$1,080.00	\$0.00	\$0.00	\$1,080.00
9	HKM Expenses	102.5										
		<i>ID</i>	<i>Task Name</i>	<i>Units</i>	<i>Work</i>	<i>Delay</i>	<i>Start</i>	<i>Finish</i>	<i>Cost</i>	<i>Baseline Cost</i>	<i>Act. Cost</i>	<i>Rem. Cost</i>
		4	Develop Workplan	6	6	0 days	Tue 9/20/05	Mon 9/26/05	\$600.00	\$0.00	\$0.00	\$600.00
		8	City Demonstration/Training	5	5	0 days	Fri 9/30/05	Fri 9/30/05	\$500.00	\$0.00	\$0.00	\$500.00

Attachment A
ELM AVENUE WATERMAIN REHABILITATION

ID	Resource Name	Work								
"HKM Expenses" continued										
ID	Task Name	Units	Work	Delay	Start	Finish	Cost	Baseline Cost	Act. Cost	Rem. Cost
11	Segment 1 - 1 test station	9.5	9.5	0 days	Mon 10/24/05	Tue 10/25/05	\$950.00	\$0.00	\$0.00	\$950.00
12	Segment 3 - 3 test stations	6	6	0 days	Wed 10/26/05	Tue 11/1/05	\$600.00	\$0.00	\$0.00	\$600.00
13	Segment 4 - 4 test stations	5	5	0 days	Wed 11/2/05	Tue 11/8/05	\$500.00	\$0.00	\$0.00	\$500.00
14	Continuity Testing Repair	6	6	0 days	Wed 11/9/05	Tue 11/22/05	\$600.00	\$0.00	\$0.00	\$600.00
16	First Short Location	3	3	0 days	Wed 11/23/05	Thu 11/24/05	\$300.00	\$0.00	\$0.00	\$300.00
17	First Short Repair	8	8	0 days	Fri 11/25/05	Thu 12/1/05	\$800.00	\$0.00	\$0.00	\$800.00
18	Second Short Location	3	3	0 days	Fri 12/2/05	Mon 12/5/05	\$300.00	\$0.00	\$0.00	\$300.00
19	Second Short Repair	6	6	0 days	Tue 12/6/05	Mon 12/12/05	\$600.00	\$0.00	\$0.00	\$600.00
20	Third Short Location	3	3	0 days	Tue 12/13/05	Wed 12/14/05	\$300.00	\$0.00	\$0.00	\$300.00
21	Third Short Repair	5	5	0 days	Thu 12/15/05	Wed 12/21/05	\$500.00	\$0.00	\$0.00	\$500.00
22	Fourth Location	4	4	0 days	Thu 12/22/05	Fri 12/23/05	\$400.00	\$0.00	\$0.00	\$400.00
23	Potential & Anode Survey	9	9	0 days	Mon 12/26/05	Fri 1/6/06	\$900.00	\$0.00	\$0.00	\$900.00
29	Training with Final Testing	14	14	0 days	Mon 3/13/06	Fri 3/17/06	\$1,400.00	\$0.00	\$0.00	\$1,400.00
30	Meeting Review/O & M Manual	10	10	0 days	Mon 3/20/06	Fri 3/24/06	\$1,000.00	\$0.00	\$0.00	\$1,000.00
10	WARAX Excavation	1								
ID	Task Name	Units	Work	Delay	Start	Finish	Cost	Baseline Cost	Act. Cost	Rem. Cost
11	Segment 1 - 1 test station	1	1	0 days	Mon 10/24/05	Tue 10/25/05	\$8,500.00	\$0.00	\$0.00	\$8,500.00
11	City Materials	1								
ID	Task Name	Units	Work	Delay	Start	Finish	Cost	Baseline Cost	Act. Cost	Rem. Cost
8	City Demonstration/Training	1	1	0 days	Fri 9/30/05	Fri 9/30/05	\$5,000.00	\$0.00	\$0.00	\$5,000.00