CITY OF PALMER
ACTION MEMORANDUM NO. 12-035

Subject: Authorize the City Manager to Negotiate and Enter Into a Contract with ENSTAR Natural Gas Company for $59,560 to Re-Locate Underground Utility Lines on Trunk Road for the Purposes of Constructing an Access Road and Waterline as Part of the Palmer Southwest Utility System Extension Project, Phase IIa

Agenda of: April 24, 2012

Council Action: Authorized

Approved for presentation by:

City Manager Douglas B. Griffin
City Attorney
City Clerk

Certification of Funds:

Total amount of funds listed in legislation: $ 59,560

This legislation (√):

____ Has no fiscal impact

Creates:

√ A negative fiscal impact in the amount of: $ 59,560

____ A positive fiscal impact in the amount of: $ ____

√ Funds are budgeted from this (these) line item(s):

- 24-20-09-6225 (70% = $41,692 from Grant 67119)
- 24-02-09-6225 (30% = $17,868 from City Match for Grant 67119)
-

____ Funds are not budgeted. Budget modification is required. Affected line item(s):

-

Unrestricted/undesignated fund balance (after budget modification) $ ____

Director of Finance signature certifying funds: ____

Attachment(s):

- Plan Sheet of Project Area
- Spec Book Section 7
- Cost Estimate from ENSTAR Natural Gas Company

Summary statement: When plans were being developed for the water project known as the Palmer Southwest Utility System Extension, Phase IIa on the north side of the UAA Mat-Su College campus along Trunk Road, it was known that underground gas, telephone, and fiber optic lines would have to be moved.

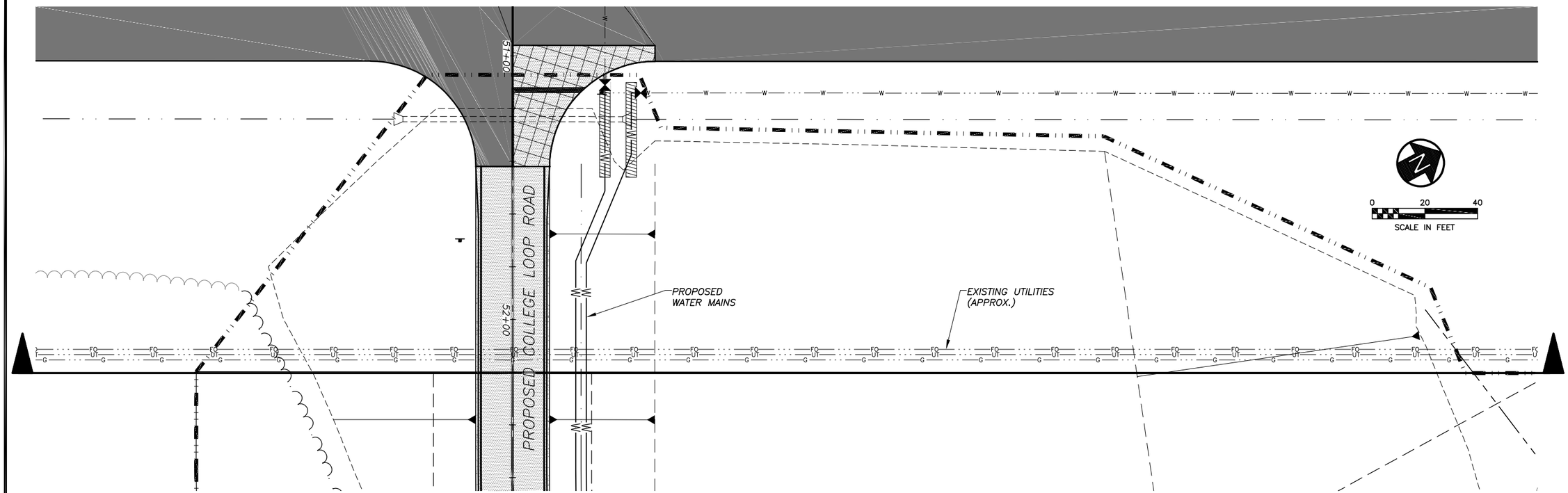
City staff and HDL Engineering decided it would be best to allow the City of Palmer, as project

Owner, to coordinate directly with ENSTAR Natural Gas Company (ENSTAR) for utility re-locations in order to save the 10% to 15% markup the project contractor would charge and to ensure a timely, smooth flow of the utility re-locations.

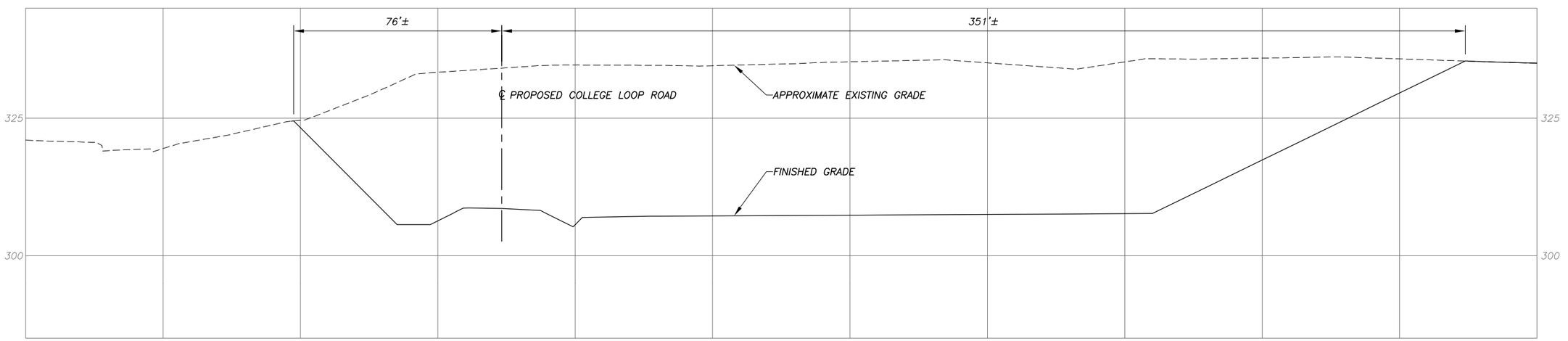
ENSTAR did not include a contingency amount so a 15% contingency is included with this request to cover unforeseen expenses associated with ENSTAR's work. If the contingency is not needed, it will not be used.

ENSTAR Cost Estimate =	$51,791.
15% Contingency =	$7,769.
Total =	$59,560.

Administration recommendation: Approve action memorandum 12-035.



PLAN



PROFILE

REVISIONS		
MARK	DATE	DESCRIPTION
1		
2		
3		
4		
5		

HATTENBURG DILLEY & LINNELL
Engineering Consultants
• ENGINEERING • EARTH SCIENCE
• SURVEYING • PLANNING
• PROJECT MANAGEMENT • ENVIRONMENTAL
(907) 854-2120 ANCHORAGE WWW.HDLAKA.COM
(907) 746-9230 PALMER

PALMER SOUTHWEST UTILITY EXTENSION PHASE IIa

SITE PREPARATION AND WATER SYSTEM EXTENSION

PALMER, ALASKA

SHEET TITLE
PROFILE ALONG WEST PROPERTY LINE FOR UTILITY RELOCATES

SHEET
1

DRAWN BY:	CHECKED BY:
TLC	DWL
DATE:	SCALE:
MAR. 2012	NONE

JOB NUMBER
08-029

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

B. Copies of Owner provided permits are provided in Appendix A Permits. Contractor shall abide by all permit requirements at no cost to owner.

SC-7.01 Add new paragraphs immediately after Paragraph 7.01.C:

D. Additional Work which may be occurring on the Site includes:
   1. Gas main relocation along Trunk Road to reflect final grades of this Project.
   2. Telecommunications relocation along Trunk road to reflect final grades of this Project.

E. Unrelated Work at Site.

   1. Other utility companies may be performing work within the project area, including but not limited to MEA, MTA, Enstar, GCI and other local utilities. Contractor shall coordinate and schedule work with these other activities at no additional cost to the Owner.

SC-7.02.A.1. Delete paragraphs 7.02.A and B in their entirety and insert the following:

A. The Contractor shall be responsible for coordination of the activities among the other prime contractors and subcontractors on the Site to ensure a safe, efficient working environment, including scheduling delivery of materials, storage of materials, sequencing of construction involving different crafts, resolving interface issues between crafts, scheduling testing, and all other aspects of the Work that do not impact the design or function of the Work.

SC-7.04 Add a new paragraph immediately after paragraph 7.03:

7.04 *Claims Between Contractors*

A. Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Owner, Engineer, or the construction coordinator, Contractor shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.

B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, the construction coordinator and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner, Engineer, Engineer's Consultants, or the construction coordinator to the extent said claim is based on or arises out of Contractor's performance of the Work. Should another contractor cause damage to the Work or property of Contractor or should the performance of work by any other contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, or the construction coordinator on account of any such damage or Claim.

CONTRACT FOR REIMBURSABLE ADJUSTMENTS TO ENSTAR FACILITIES NO. 41210

THIS AGREEMENT is between ENSTAR Natural Gas Company, a division of SEMCO Energy, Inc., (ENSTAR) whose address is 401 East International Airport Road, Anchorage, Alaska 99519 and the City of Palmer, whose address is 1316 South Bonanza Street, Palmer, Alaska, 99645-6952.

WHEREAS, City of Palmer has requested ENSTAR to relocate or otherwise adjust its facilities in the manner and at the location indicated below, and the parties desire to enter into a contract that will facilitate the timely completion of the Work, provide for payment to ENSTAR, and establish certain other terms and conditions.

NOW THEREFORE, in consideration of the premises, the parties agree as follows:

1. Description of the Work.
Lower approx 540-feet of 6-inch plastic along eastern ROW limit of new Trunk Road at location of proposed access road for the Matsu Community College. Work is in association with water line project for the college that is funded by the City of Palmer. Work will involve removing a section of gas line by cutting out section of line in area of planned excavation and capping ends of active line on either side. Following completion of civil work ENSTAR will come back in to install a new section of 6PL at 4-ft depth along the new ground profile and tie-in the ends to restore the 6PL to service. The time between when the 6PL line is taken out of service and when it is restored to service must be less than two weeks duration and must occur during a time when ENSTAR can confirm that the weather is nice and the gas system will not be burdened by the shutdown.

2. Payment. City of Palmer shall pay for the Work performed on a time and materials basis, which cost items will be appropriately increased to compensate ENSTAR for its administrative and construction overheads. In addition (if applicable), the City of Palmer shall pay the net book value of the ENSTAR facilities that are to be abandoned-in-place. The non-binding cost estimate for this project is **$51,791.**

ENSTAR will bill City of Palmer for actual costs following the completion of the Work. City of Palmer shall pay such balance within 30 days following the mailing of ENSTAR's billing. Any amount outstanding after 30 days will accrue interest at the rate of 10.5 percent per annum.

4. Performance. City of Palmer shall provide ENSTAR with written authorization to proceed. Upon receipt ENSTAR will conduct surveys, acquire permits, easements, and materials, and take other actions necessary to begin the Work. ENSTAR will complete the Work within a reasonable period of time of frost-free ground working conditions. In no event will ENSTAR be expected to complete the Work in less than 15 calendar days from the date on which City of Palmer provides written authorization to proceed. However, ENSTAR reserves the right to cancel this Agreement if, in its sole discretion, the Work is deemed too costly or impractical. Within 30 days of the date of such determination ENSTAR will return to City of Palmer any prepayment made in accordance with paragraph 2 above. Upon the return of the prepayment if any, this Agreement shall have no further force or effect.

5. Rights-of Way. City of Palmer will grant ENSTAR or will otherwise obtain at City of Palmer's expense all easements and rights-of way, and will sign all documents, necessary to permit the completion of the Work. ENSTAR will not be obligated to begin construction until all necessary easements, rights-of way, and other documents have been obtained.

6. Ownership of Facilities. The facilities and equipment installed in accordance with this Agreement are the property of and shall be under the control of ENSTAR.

7. Miscellaneous. This is the entire Agreement between the parties. It may not be modified except in writing. This Agreement shall be construed under the laws of Alaska. Any dispute hereunder will be resolved by the Alaska Superior Court at Anchorage. This Agreement is binding on the successors, assigns and legal representatives of the parties.

8. Notice. Notice under this Agreement may be mailed or faxed to the contact person listed below.

MSB
Contact Person: **Tom Cohenour**
Office Phone: **(907) 761-1350**

ENSTAR
Contact Person: **Vin Robinson, P.E.**
Office Phone: **(907) 334-7712**

9. Additional Terms.

- **All work will occur in frost-free ground.**
- **City of Palmer must provide the necessary survey information for ENSTAR to determine the elevation and alignment of the proposed facilities.**
- **A written fifteen-day notice is required from City of Palmer to schedule ENSTAR crews unless other arrangements are agreed to.**
- **ENSTAR will provide its own traffic control.**
- **ENSTAR will not be responsible for any facilities that are abandoned in place.**
  Any further disposal, if required, will be the responsibility of the City of Palmer or its contractor.
- **ENSTAR will not be responsible for the development of the Storm Water Pollution Prevention Plan (SWPPP), but will cooperate with the contractor or the City of Palmer's SWPPP plan (if applicable) and be responsible for ensuring proper Best Management Practice's are implemented during the time of construction. The contractor or City of Palmer will coordinate with ENSTAR by providing a copy of the SWPPP to ENSTAR.**
- **ENSTAR will be provided adequate work area and time during normal business hours to perform the Work.**
- **ENSTAR will not be responsible for clearing of the ROW. This estimate assumes that the contractor or City of Palmer will have taken care of clearing requirements prior to relocation work commencing.**
- **ENSTAR will not be responsible for asphalt cutting or replacement.**
- **ENSTAR will not be responsible for revegitation of any disturbed area.**
- **Overhead rates applied to the cost of the Work shall be those established by ADOT & PF Internal Review Annual Systems Audit for 2011.**
- **A duration of 14-days must not be exceeded between when the ENSTAR 6PL facility is removed from service until it is returned to service.**
- **ENSTAR reserves the right to not shut 6PL line down if weather conditions exist that cause the need for the line to remain in service (ie, as long as project occurs during typically warmer summer months this will not be a concern).**

10. Execution. By signing, City of Palmer acknowledges having read and understood each and every term and condition of this Agreement.

City of Palmer

By: _____

Its: _____

Date: _____

ENSTAR Natural Gas Company

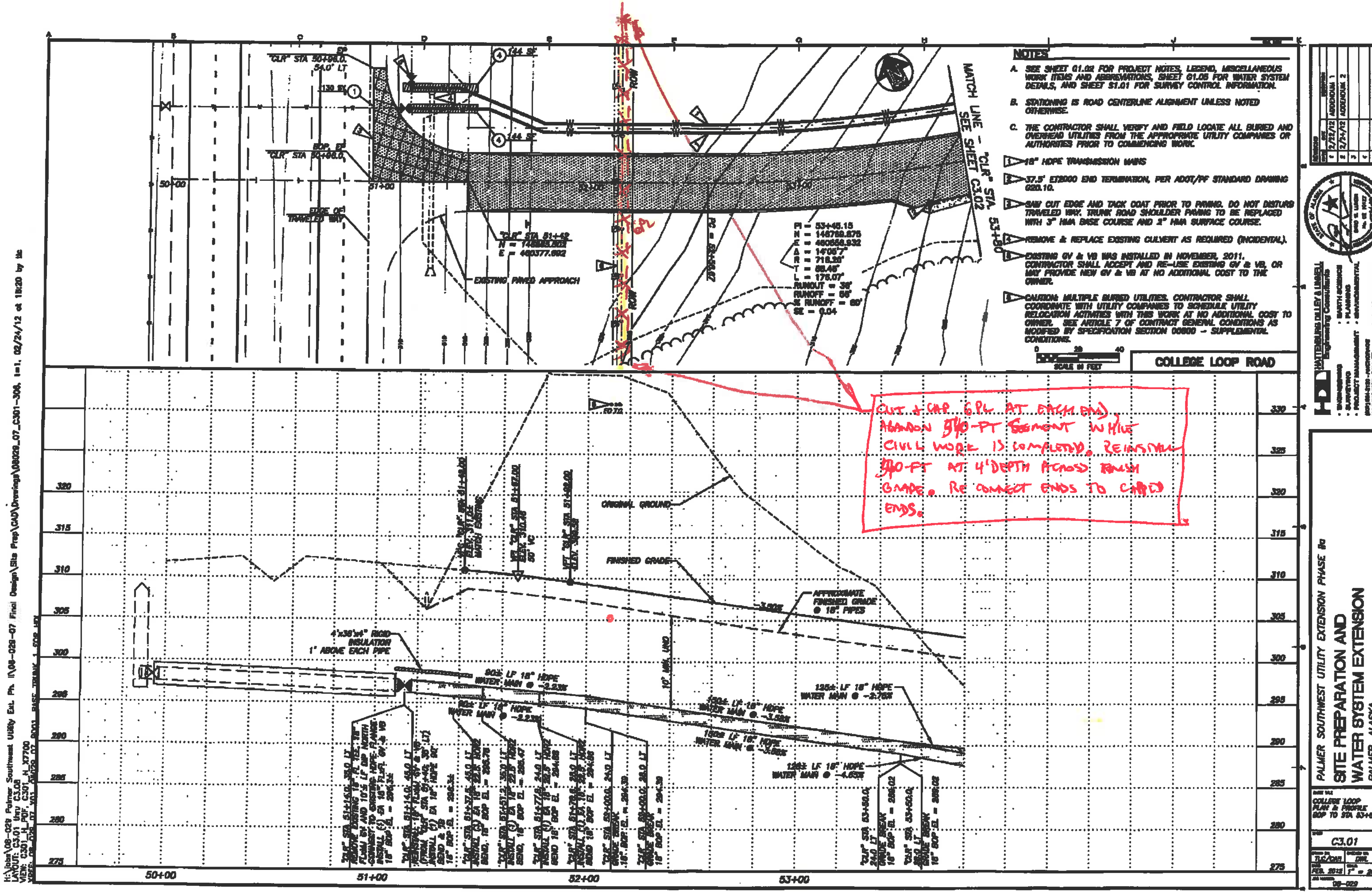
By: _____

Its: _____

Date: _____

PROJECT: Palmer Southwest Utility Extension Phase Iia
ENSTAR ER #: 41210
ESTIMATE DATE: 3/14/2012
Preliminary COST ESTIMATE

A.	Preliminary Engineering						
	6 Man Hrs. @	$50.00	per hour			$300.00	
	Construction Overhead =	83.13%	of Labor Cost			$249.00	
	Transportation & Equipment =	16.31%	of Labor Cost			$49.00	
	Payroll Tax =	28.31%	of Labor Cost			$85.00	
	Admin. & General Overhead =	93.90%	of Labor Cost			$282.00	
							$965.00
B.	Construction Engineering						
	Regular Time:	20	Man Hrs @	$52.00	per hour	$1,040.00	
	Overtime:	10	Man Hrs @	$78.00	per hour	$780.00	
	Payroll Tax =	28.31%	of Labor Cost			$515.00	
							$2,335.00
C.	Construction Labor						
	Regular Time:	120	Man Hrs @	$52.00	per hour	$6,240.00	
	Overtime:	30	Man Hrs @	$78.00	per hour	$2,340.00	
	Payroll Tax =	28.31%	of Labor Cost			$2,429.00	
							$11,009.00
D.	Construction Overhead						
		83.13%	of Labor Cost =				
		0.8313	* (B+C)				$8,646.00
E.	Materials and Supplies						$5,580.00
F.	Materials Handling Charge						
		23.19%	of Materials =				
		0.2319	* (E)				$1,294.00
G.	Transportation & Equipment						
		16.31%	of Const. Eng. & Labor =				
		0.1631	* (B+C)				$1,696.00
H.	Contract Construction						
	Creek Bore	0	ft @	$130.00	per ft	$0.00	
	Road Boring (2in -4in)	0	Ft @	$70.00	per ft	$0.00	
	Road Boring (6in-12in)	0	Ft @	$91.00	per ft	$0.00	
	Clearing	0	Ft @	$5.00	per ft	$0.00	
	Backhoe	50	Hrs @	$210.00	per hour	$10,500.00	
	Dozer	0	Hrs @	$145.00	per hour	$0.00	
	Vac Truck	0	Hrs @	$350.00	per hour	$0.00	
	Flaggers	0	Hrs @	$75.00	per hour	$0.00	
							$10,500.00
I.	Administrative & General Overhead						
		93.90%	of Labor Cost =				
		Excluding Payroll Tax					
		0.939	* (B+C)				$9,766.00
J.	Department of Labor Notice of Work Fee						
		1.0% of Sub Total over $25,000=					$0.00
						Total before Betterment	**$51,791.00**
K.	Betterment						$0.00
L.	10% Contingency						N/A
	TOTAL						**$51,791.00**


NOTES
A. SEE SHEET G1.02 FOR PROJECT NOTES, LEGEND, MISCELLANEOUS WORK ITEMS AND ABBREVIATIONS, SHEET G1.05 FOR WATER SYSTEM DETAILS, AND SHEET S1.01 FOR SURVEY CONTROL INFORMATION.
B. STATIONING IS ROAD CENTERLINE ALIGNMENT UNLESS NOTED OTHERWISE.
C. THE CONTRACTOR SHALL VERIFY AND FIELD LOCATE ALL BURIED AND OVERHEAD UTILITIES FROM THE APPROPRIATE UTILITY COMPANIES OR AUTHORITIES PRIOR TO COMMENCING WORK.
1 18" HDPE TRANSMISSION MAINS
2 37.5' ET2000 END TERMINATION, PER ADOT/PF STANDARD DRAWING G20.10.
3 SAW CUT EDGE AND TACK COAT PRIOR TO PAVING. DO NOT DISTURB TRAVELED WAY. TRUNK ROAD SHOULDER PAVING TO BE REPLACED WITH 3" HMA BASE COURSE AND 2" HMA SURFACE COURSE.
4 REMOVE & REPLACE EXISTING CULVERT AS REQUIRED (INCIDENTAL).
5 EXISTING GV & VB WAS INSTALLED IN NOVEMBER, 2011. CONTRACTOR SHALL ACCEPT AND RE-USE EXISTING GV & VB, OR MAY PROVIDE NEW GV & VB AT NO ADDITIONAL COST TO THE OWNER.
6 CAUTION: MULTIPLE BURIED UTILITIES. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO SCHEDULE UTILITY RELOCATION ACTIVITIES WITH THIS WORK AT NO ADDITIONAL COST TO OWNER. SEE ARTICLE 7 OF CONTRACT GENERAL CONDITIONS AS MODIFIED BY SPECIFICATION SECTION 00800 - SUPPLEMENTAL CONDITIONS.
SCALE IN FEET
COLLEGE LOOP ROAD
MATCH LINE - "CLR" STA. 53+80
SEE SHEET C3.02
EXISTING PAVED APPROACH
EDGE OF TRAVELED WAY
ORIGINAL GROUND
FINISHED GRADE
APPROXIMATE FINISHED GRADE @ 18" PIPES
4'x38'x4" RIGID INSULATION 1" ABOVE EACH PIPE
CUT & CAP 6PL AT EACH END, ABANDON 540-FT SEGMENT WHILE CIVIL WORK IS COMPLETED. REINSTALL 540-FT AT 4'DEPTH ACROSS FINISH GRADE. RE CONNECT ENDS TO CAPPED ENDS.
50+00
51+00
52+00
53+00
PALMER SOUTHWEST UTILITY EXTENSION PHASE IIa
SITE PREPARATION AND WATER SYSTEM EXTENSION
PALMER, ALASKA
COLLEGE LOOP PLAN & PROFILE BOP TO STA 53+80
C3.01

ENSTAR Natural Gas Company / Alaska Pipeline Company

Safety

ENSTAR Natural Gas Company provides natural gas service through 3,100 miles of gas mains to over 131,000 customers in South Central Alaska. ENSTAR's gas pipeline system is designed, installed, and maintained with the highest regard for safety in compliance with applicable federal, state, and local government statutes and regulations. ENSTAR is regularly inspected to ensure that its operation meets industry standards.

The US Department of Transportation Office of Pipeline Safety (DOT) oversees minimum safety regulations for the transportation of natural gas by pipelines. The DOT safety regulations are currently published in Title 49, Part 190, 191, 192 & 199 of the Code of Federal Regulations (CFR).

As an operator of a natural gas system, ENSTAR is required by the DOT regulations to:

1. Deliver gas safely and reliably to customers.
2. Provide training and written instruction for employees.
3. Establish written procedures to minimize hazards resulting from gas pipeline emergencies.
4. Keep records of inspections and testing.
5. Test employees in safety-sensitive positions for prohibited drugs and alcohol.

Pipeline Reliability

Natural gas pipelines have an outstanding safety record, especially when compared to other modes of transportation: According to the National Transportation Safety Board, in 2008, more than 42,000 transportation fatalities occurred on the highways, while aviation, boating and railroads accounted for another 2,000 fatalities. In contrast, there were only 12 fatalities associated with natural gas pipelines.

The largest single cause of pipeline accidents is excavator caused damages. Over 50% of the 500 damages to ENSTAR's pipelines last year were done by excavators that failed to obtain locates. Call before you dig, it's free and it's the law. Calling for locates is now as simple as dialing **811**. Dialing **811** anywhere in the United States connects you with the Locate Call Center for that area. In Alaska, dialing **811** connects you with Alaska Digline Inc. Alaska Digline Inc. will take your excavation information and notify all affected utilities. Utilities have two business days to mark their utilities after receiving your call.

Pressure Classification

Natural gas is a potentially dangerous, compressible gas. Gas pipelines with the highest pressure contain the highest stored potential energy and present the greatest risk. Caution is always warranted when working around natural gas facilities. **Extreme caution must be exercised whenever transmission pipelines are encountered. Contact ENSTAR Engineering Dept., (907) 264-3740 for specific instructions before working within 10 feet of any transmission pipeline.**

Pressure Classification	Pressure Rating Range	Pipeline Material
Transmission Pressure	Greater than 60 psig	Steel
Distribution Pressure	60 psig or less	Polyethylene, Steel, Copper

Recognizing ENSTAR's Pipelines

ENSTAR transmission pipelines are generally marked above ground with pipeline markers similar to the one shown. Transmission pipelines are located in the vicinity of the pipeline markers. Transmission pipelines are steel and range in size from 4" to 20" in diameter. They are typically coated with a protective coating. There is no single color but yellow and black are the predominant color while some are green or brown.

Typical ENSTAR Pipeline Marker

Distribution pipelines are steel, copper or polyethylene. These pipelines range in size from ½" diameter to 12" in diameter. Gas "Mains" are typically found in street right-of-ways or utility easements and supply the natural gas to an entire street or subdivision. They are typically steel or polyethylene and range in size from 2" to 12" in diameter.

Natural gas "service lines" are connected to the gas main and generally serve a single building or small group of buildings on private property. They are typically ½" to 1" in diameter. Service lines can be rigid steel, steel tubing, copper or polyethylene. Gas mains and service lines are generally steel or yellow in color.

Excavation Requirements for Natural Gas Pipelines

1 **Line Locating is a Free Service:** To request a locate, dial **811** the new Nationally recognized One-Call number and you will be connected to Alaska Digline Inc. Call at least two but not more than 15 working days before the date scheduled for beginning the excavation. Hand digging is advised when excavating within 2 feet of a marked facility. After ENSTAR has field marked with yellow paint, or flagged the location of an underground facility, the excavator is responsible for maintaining the markings. **Failure to call is a violation of state statutes and could result in fines well in excess of the cost of the damage.**

2 **Support for Steel Line Crossings:** If an excavation below a **steel gas** pipeline leaves the pipeline unsupported for a distance of more than 20 feet, the excavator must provide additional support for the pipeline. Support must be provided in a way as to not damage the pipe or its coating during construction, backfill placement, and compaction. Generally, a support spacing of 5 feet or less will provide the needed bracing. ENSTAR Engineering must approve all excavations crossing steel pipelines above 4-inch diameter. If support is required, ENSTAR engineering written approval is required prior to beginning construction. Call ENSTAR Engineering (907) 264-3740 for further information. Extra care must be taken when geotextile fabric and/or rigid insulation are used. In addition to continuous support under the pipeline, compacted fill material shall be placed between the geotextile fabric/rigid insulation and the pipeline. Care shall be taken to insure stability for the ENSTAR facility. Failure to properly protect ENSTAR's facilities could result in future damage if differential settlement occurs.

3 **Support for Polyethylene Line Crossings:** If an excavation is below a **polyethylene gas pipeline** the excavator must continuously support such pipeline during construction, backfill placement, and compaction. Geotextile fabric and/or rigid insulation shall be sufficiently separated from the polyethylene gas pipeline to prevent undue stress during the compaction/settlement process. (see item 8 clearance)

4 **Excavation Parallel to Pipeline:** When parallel excavations are expected to expose or undermine sections of pipeline, the excavator must notify ENSTAR engineering in advance. Care must be taken not to damage the pipeline, or to induce stresses due to differential settlement following construction**. Long parallel excavations exposing pipelines can be very dangerous if not properly performed and shall not be attempted without prior approval by ENSTAR.** Contact ENSTAR Engineering at 264-3740 for additional information.

5 **Blasting:** All blasting that is to be done within 500' of any Company Facility, shall be reviewed by an ENSTAR engineer, with the person performing the blasting and appropriate measures, (i.e. require minimum distance from facilities, minimize blasting charge intensity, etc.) shall be taken to protect the integrity of the Company's Facilities. A leak survey shall be performed after any blasting activity, which is within 500' of any Company Facility. The leak survey zone shall include all Company Facilities within 500' radius of the blasting.

6 **Trenchless Excavation (Vertical or Horizontal):** **Whenever a trenchless excavation (horizontal or vertical) is performed within 5 feet of a distribution pressure pipeline and 10 feet of a transmission pressure pipeline, the gas pipeline must be exposed to visually determine the exact location.** If the trenchless excavation is expected to cross the pipeline within the aforementioned distances, the pipeline in question shall be fully exposed to a minimum of 1 foot beneath the pipeline prior to the expected crossing to ensure that the pipeline is not unduly damaged due to ground movement in the immediate vicinity of the pipeline. **When performing a trenchless excavation parallel to a gas pipeline, the gas pipeline must be exposed at intervals of 25 feet or less to visually determine the pipeline's exact location.** Trenchless excavation is defined as drilling, directional drilling, boring, pile installation etc.

7 **Clearance:** Natural Gas pipelines require a **12 inch minimum separation from other underground structures** not associated with ENSTAR's pipeline system. Additional clearance from other underground structures may be required to allow proper maintenance and reduce the possibility of damage due to the proximity of other structures (49 CFR § 192.325.) This clearance requirement includes rigid insulation and geotextile fabrics. **ENSTAR requires a 36-inch minimum separation from certain electrical facilities, including any grounded components i.e. ground rods, non-insulated conductors and associated structures.**

8 **Pipeline Cover:** ENSTAR pipelines in public rights-of-way are generally installed with 36 inches to 48 inches of cover, and in private rights-of-way with 12 inches to 36 inches of cover. Projects that decrease cover or increase cover in excess of 60 inches must receive prior approval from ENSTAR Engineering Department (907) 264-3740**.** ENSTAR has limited ability to prevent the removal of cover over gas pipelines. Increasing pipeline cover more than 5 feet or decreasing pipeline cover to less than 3 feet may be considered a damage that may result in relocation of the gas pipeline at the expense of the Excavator. The depth of cover listed above cannot be assumed after installation. The excavator is responsible for any damage to ENSTAR pipelines regardless of the depth at which they are encountered.

9 **Inspection:** All excavations in the immediate vicinity of ENSTAR Natural Gas facilities (including backfill, compaction, temporary support, and shoring), is subject to prior approval and inspection by ENSTAR personnel. Transmission pipeline inspections are provided whenever an excavator is working within ten feet of a transmission pipeline. If it has been determined that there was excavation either by hand or machinery within 5 ft. of ENSTAR Natural Gas Distribution mains or 10ft. from ENSTAR Natural Gas Transmission mains without either locates or standby (qualified ENSTAR personnel), ENSTAR Natural Gas reserves the right to excavate to determine if there has been any damage to ENSTAR Natural Gas facilities. If damage has occurred ENSTAR Natural Gas has the right to charge the excavator for repairs.

Pipeline Components

Pipe Wall Protection

Dents, scrapes, gouges and scratches reduce pipeline wall thickness and affect the safety of the facility in two ways. First, the reduced wall thickness decreases the pressure at which the pipeline can safely operate. Second, the damage serves as a stress concentration that can cause a future brittle failure of the pipeline. **An ENSTAR representative must inspect each dent, scrape, gouge or scratch, no matter how small, before it is reburied.**

Corrosion Protection

ENSTAR's **steel** pipelines are protected from corrosion by a dielectric coating and an impressed current or galvanic anode cathodic protection system. Direct contact with metallic objects (a short) or removal of the protective coating can compromise this system. Contact the ENSTAR Engineering Department (907) 264-3740, whenever coating damage or a short is encountered. **An ENSTAR representative must inspect each short or section of damaged coating before it is reburied.**

Locate Wire Protection

ENSTAR's **polyethylene** pipelines are installed with a parallel copper wire, which is used to locate the pipeline. If the locate wire or wire coating is damaged, ENSTAR's ability to properly locate the pipeline may be severely compromised. Electrical continuity must be maintained. **An ENSTAR representative must inspect each possible locate wire damage before it is reburied.**

Service Line Excess Flow Valves

Excess Flow Valve (EFV) is a safety device installed in a natural gas service line near the gas main that is designed to automatically shut off the flow of natural gas in the event that the service line is broken. Effective February 12, 2010, all gas companies nationwide are required to install an EFV in any newly installed service line that serves one single family dwelling. Starting this year, ENSTAR will be installing an EFV in all new service lines that meet this requirement. ENSTAR will not be installing EFVs on service lines that branch to multiple buildings, multi-family, commercial or industrial structures. ENSTAR will not be installing EFVs on the existing 100,000 service line currently in use.

What does this mean to you as an Excavator?

Should you dig into a natural gas service line that has an EFV, the gas will blow for a short duration and shut off automatically if the flow of gas is sufficient to close the EFV. Damages that do not sever the service line completely may not cause the EFV to close and the gas will continue to blow. Regardless, **you must report all damages to ENSTAR immediately**. EFVs are designed to allow a small amount of "bleed-by" so they can be reset without excavating the gas main. Backfilling a damaged service line with gas bleeding underground is extremely dangerous and could fuel an explosion if it is not repaired timely. **Do not assume a damaged service is dead or abandoned if it is not blowing gas**. The EFV may have shut down the flow of gas. Report all damages immediately by calling 277-5551.

Please remember that the vast majority of ENSTAR service lines WILL NOT have an EFV. Should you damage a service line without an EFV, gas will blow at full line pressure until ENSTAR can arrive to shut it off. Your best protection against damaging underground utilities is to call 811 for locates and hand dig within 2' of locate marks.

What to do if You Damage a Gas Line or Smell Gas

If you damage a pipeline facility, call ENSTAR's 24-hour dispatch number at 277-5551. Call ENSTAR any time a gas line is broken, scraped, pulled, cut or otherwise damaged. **If the damage results in a release of natural gas and there is a danger to life or property, you should call the local Fire Department or 911.** Eliminate all ignition sources and evacuate the area of the damage. Wait for an ENSTAR employee to shut off the flow of gas and make repairs.

Gas lines that have been pulled, stretched, kinked or bent could be damaged underground away from where the line is connected. If you pull or stretch gas lines call ENSTAR at 277-5551 and an ENSTAR Representative will investigate for possible underground leakage.

Qualified Personnel Requirements

Only qualified individuals meeting all applicable requirements may perform work on ENSTAR Natural Gas Company facilities. At a minimum, such individuals must comply with applicable federal, state and local regulation, statutes, and ordinances.

For further information about ENSTAR, visit our web site @ www.enstarnaturalgas.com