



City of Grand Island

Tuesday, March 22, 2011

Council Session

Item G6

**#2011-68 - Approving Change Order #1 - Water Main District
456T - Engleman Road and Old Potash Hwy.**

Staff Contact: Gary R. Mader

Council Agenda Memo

From: Gary R. Mader, Utilities Director
Jason Eley, Interim City Attorney

Meeting: March 22, 2011

Subject: Water Main District 456T – Engleman Road and Old Potash Highway – Change Order #1

Item #'s: G-6

Presenter(s): Gary R. Mader, Utilities Director

Background

The referenced water main district is located in the westerly part of the City of Grand Island. The project will extend the main in Old Potash Highway westerly approximately 600 feet to Engleman Road, then northerly for one mile to the existing water main in 13th Street. When completed, the project will provide improved water flows, pressures, and redundancy to the northwest area of the City. A location site map is attached for reference. Diamond Engineering, of Grand Island, was the successful bidder for this project.

The current contract amount is \$497,326.50. The contractor proposes a change to the size of the water line casing to be installed under Old Potash Highway. The Change Order would decrease the amount of the contract by \$657.00. The new contract amount would be \$496,669.50.

Discussion

The originally specified casing was a 32” diameter x 0.500” thick steel casing. This sizing is from the Grand Island Specifications Division VI, Section 35.02 and Standard Plan 141A.

Diamond Engineering is proposing to use instead a 30” diameter x 0.368” steel casing. That size is an industry standard diameter and more readily available. It will meet the specified clearance requirements between the casing and the new water line. The proposed replacement casing wall thickness exceeds the minimum wall thickness specified by the Nebraska Department of Roads for pipelines crossing highways, and the

proposed replacement casing also complies with all other terms of the specifications including minimum yield and tensile strength, and inside and outside protective coatings.

Attached for reference are copies of Diamond Engineering's letter of request, their subcontractor's letter of material certification, and copies of the Nebraska Department of Roads – Policy for Accommodating Utilities on State Highway Right-of-Way; Construction of Pipelines, Section V.

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee
3. Postpone the issue to future date
4. Take no action on the issue

Recommendation

City Administration recommends that the Council approve Change Order #1 with the Diamond Engineering Company, reducing the original contract award amount of \$497,326.50 to \$496,669.50, which would reduce the contract in the amount of \$657.00.

Sample Motion

Move to approve Change Order #1 with the Diamond Engineering Company to allow use of the proposed replacement casing and to reduce the contract amount by \$657.00.



CHANGE ORDER #1

TO: The Diamond Engineering Company
1521 West Anna Street
PO Box 1327
Grand Island, NE 68802-1327

PROJECT: Water Main District 456T
Old Potash Highway and Engleman Road

You are hereby directed to make the following change in your contract:

1. Amend Contractor's Bid, Page C-1, Item C.1.01 – 32" Dia. x 0.500 Steel Casing x 73.0 L.F. x \$383.10/FT for a total price of \$27,966.30; and replace with 30" Dia. x 0.368" Steel Casing x 73.0 L.F. x \$374.10/FT for a total price of \$27,309.30, or a deduction of \$657.00.

ORIGINAL CONTRACT AMOUNT	\$497,326.50
Change Order #1	\$ <u>657.00</u>
AMENDED CONTRACT AMOUNT	\$496,669.50

Approval and acceptance of this Change Order acknowledges understanding and agreement that the original contract amount of \$497,326.50 will be reduced by \$657.00 for an amended contract amount of \$496,669.50. Additional claims will not be considered.

APPROVED: **CITY OF GRAND ISLAND**

By: _____
Mayor

Date: _____

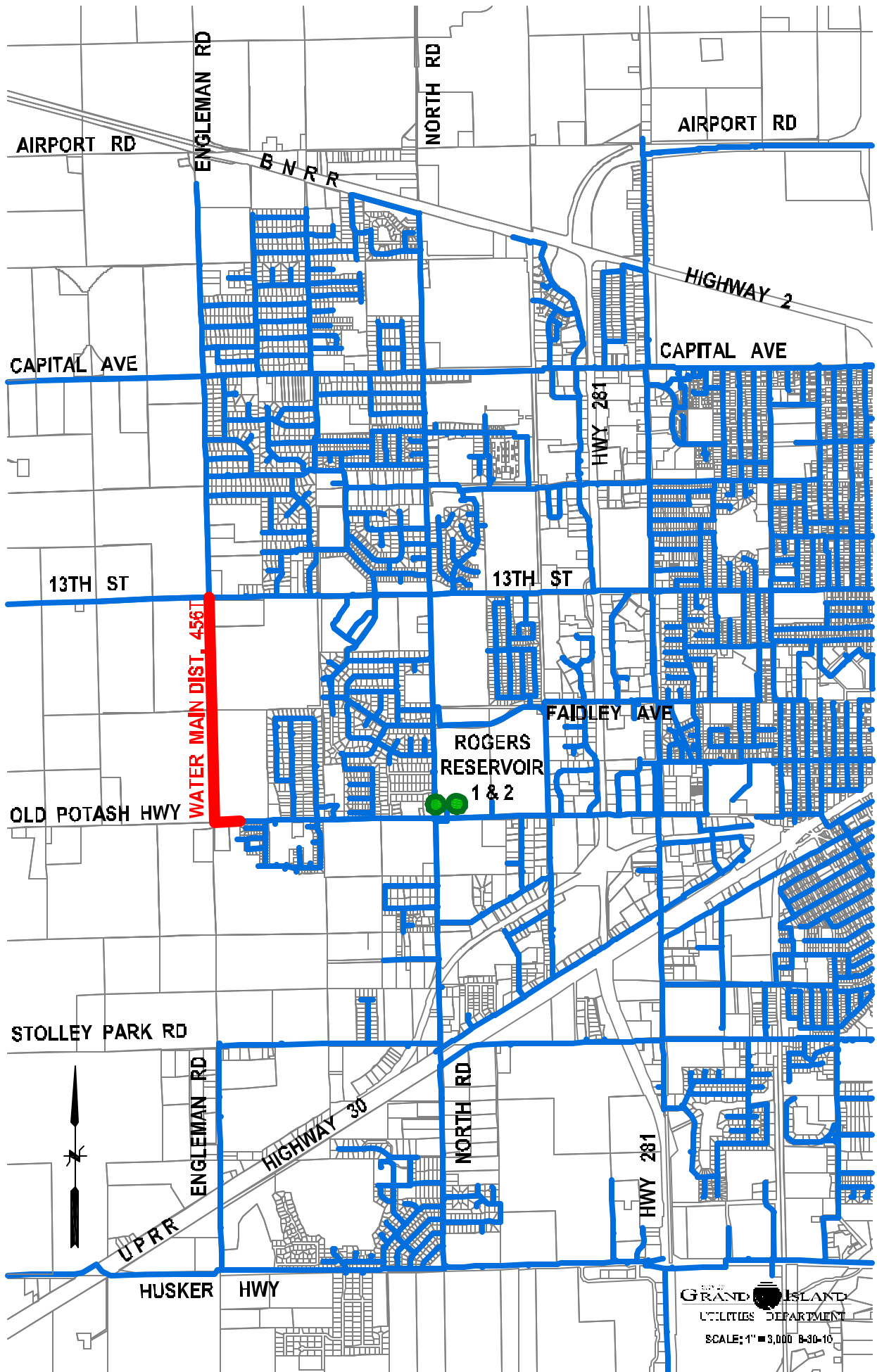
Attest: _____

Approved as to Form, City Attorney

ACCEPTED: **THE DIAMOND ENGINEERING COMPANY**

By: _____

Date: _____



AIRPORT RD

ENGLEMAN RD

NORTH RD

AIRPORT RD

B N R R

HIGHWAY 2

CAPITAL AVE

CAPITAL AVE

HWY 261

13TH ST

13TH ST

WATER MAIN DIST. 456T

FAIDLEY AVE

ROGERS RESERVOIR 1 & 2

OLD POTASH HWY

STOLLEY PARK RD

ENGLEMAN RD

HIGHWAY 30

NORTH RD

HWY 281



UPRR

HUSKER HWY

City of GRAND ISLAND UTILITIES DEPARTMENT

SCALE: 1" = 3,000' 8-30-10

March 2, 2011

Tom Barnes
City of Grand Island
Utilities Department
P.O. Box 1968
Grand Island, Ne 68802

COPY

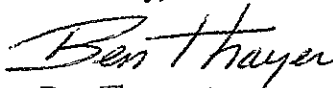
Re: Water Main District No. 456T Old Potash Hwy & Engleman Rd

Dear Mr. Barnes,

The purpose of this letter is to provide additional information as per your request regarding the 30" diameter steel casing we proposed in our letter of February 17, 2011.

- The 32" diameter casing specified in the contract documents is an odd size to the construction industry. It is difficult to find this size of casing and the required bore auger to install it.
- Our proposed 30" casing is an industry standard. The 30" casing is of adequate size to provide 4" of space between the outside diameter of the 20" carrier pipe and the inside diameter of the 30" casing as per City of Grand Island Standard Plan No. 141A.
- We propose to coat the inside and outside of the casing with two coats of IA 31 Asphaltic Coating manufactured by Iowa Paints.
- The City of Grand Island Specification requires a casing wall thickness of 0.500". This wall thickness is typically used for bores beneath railroad tracks which carry extremely heavy loads. Our proposed wall thickness of 0.368" exceeds the minimum wall thickness of 0.312" required by the State of Nebraska Department of Roads Policy for Accommodating Utilities on State Highway Right-of-Way Expressway, Major Arterial, and Scenic Highways.
- We offer a deduct in the amount of \$9.00 per linear foot of casing for a total estimated cost savings of \$657.00 for the 73 linear feet of casing called for in the contract.

Sincerely,



Ben Thayer
Project Coordinator
Diamond Engineering

Copy: K.W. Boring

February 17, 2011

Tom Barnes
City of Grand Island
Utilities Department
P.O. Box 1968
Grand Island, Ne 68802

COPY

Re: Water Main District No. 456T Old Potash Hwy & Engleman Rd

Dear Mr. Barnes,

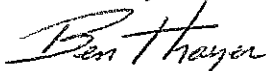
This letter is in response to your January 25, 2011 request for additional information on the 30" diameter steel casing our subcontractor proposes to use for the bore beneath Old Potash Highway. Enclosed please find:

- Letter of Certification from Crestwood Tubulars, Inc
- Nebraska Department of Roads (NDOR) Policy for Accommodating Utilities on State Highway Right-of Way, Part II

The steel casing proposed is 0.368" wall thickness. The NDOR requires a minimum wall thickness of 0.312" for 28" to 34" casing (table on page 13). The NDOR does not require a coating or lining.

There will be a cost savings offered to the City if this material substitution is acceptable.

Sincerely,



Ben Thayer
Project Coordinator
Diamond Engineering

Copy: K.W. Boring



P.O. Box 6950
ST. LOUIS, MO 63123
800-238-7473
314-842-8604
(FAX) 314-842-9064

November 15, 2010

K.W. Boring
P.O. Box 390665
Omaha, NE 68139
Fax: 402-896-4042
Attn: Wendy

COPY

Letter of Certification

The 320' of 30" X .368 new surplus steel pipe supplied on invoice #24145 will meet or exceed the minimum yield & tensile requirements of ASTM A139-B:

35,000 p.s.i. min. yield
60,000 p.s.i. min tensile

Sincerely

Ross Hammond
Crestwood Tubulars, Inc.

COPY



**Policy for
Accommodating Utilities
on
State Highway
Right-of-Way
2001**

Project Development Division

Director
Nebraska Department of Roads

Date

- (4) All voids or abandoned holes caused by boring or jacking are to be filled by pressure grouting when deemed necessary by the NDOR or appropriate governmental subdivision representative.
- (C) The hole diameter resulting from bored or tunneled installations shall not exceed the outside diameter of the utility pipe, cable or casing (including coating) by more than 38 mm (1-1/2 inches) on pipes with an inside diameter of 300 mm (12 inches) or less or 50 mm (two inches) on pipes with an inside diameter greater than 300 mm (12 inches). Voids outside pipes or casings that exceed these limitations shall be pressure grouted.

Section V – Encasement

- (A) An encasement shall be an oversize load-bearing casing, through which a carrier pipe is inserted in order to protect the roadway from damage and to provide for repair, removal or replacement of the pipeline without interference to highway traffic.

- (1) Encasement material:

Welded steel pipe meeting the Standard Specifications for electric fusion (arc-welded) steel pipe (designation A53 or A1 39 grade B) as specified in American Petroleum Institute Code #1102 or API 5L. (See page 13 for minimum wall thickness.)

For Plastic Polyvinyl Chloride Pipe (PVC) and Plastic Polyethylene Pipe (PE), see page 14 for minimum wall thickness.

- (2) Size of encasement:

The minimum diameter casing shall be at least two (2) nominal pipe sizes larger than the nominal size of the facility being encased, but in no case shall the casing be less than 50 mm (two inches) greater than the outside diameter of the facility being encased.

- (3) Transverse casing length:

- (a) Pipelines [except when flexible pipe is used as indicated in (b), (c) and (d) below] crossing highways with a diameter greater than 50 mm (two inches) shall wherever feasible have as a minimum, casing extending from the toe of the fill slope to the toe of the fill slope on the opposite side of the traveled way or 1.8 m (six feet) back of the curb.
- (b) Flexible pipe crossing the highway regardless of size and meeting the specifications (manufacturers' certification) under paragraphs (A) and (B) on pages 15 and 16 shall be cased as a minimum from the toe of the fill slope to the toe of the fill slope on the opposite side of the traveled way or 1.8 m (six feet) back of the curb wherever feasible.

(B) Utility Markers on the Right-of-Way:

Adequate markers shall be placed on the right-of-way line. The markers shall give the name and address of the owner and phone number to contact in case of emergency.

Section III – Underground Electrical Power and Communication Lines Crossing Highways Currently under Construction

Installation of underground electrical power and communication lines across or on highway construction projects may be permitted generally in accordance with the conditions of this policy if it is determined to be in the best interest of the traveling public by a representative of the NDOR or appropriate governmental subdivision having jurisdiction over the highway.

The approved methods of installation shall include open trenching, jacking, boring or tunneling. Other methods may be considered on an individual basis.

Section IV – Direct Bury Cable

Direct bury cable may be placed within the highway right-of-way; but, direct bury cable placed under the traveled way without casing shall have the diameter of the bored holes no more than 38 mm (1-1/2 inches) larger than the outside diameter of the cable.

Section V – Encasement

An easement shall be an oversize load bearing casing, conduit or duct through which a cable is inserted in order to protect the roadway from damage and to provide for repair, removal or replacement of the cable without interference to highway traffic. It is the responsibility of the owner of the utility facility to ensure that it complies with all applicable local, state, federal and franchise requirements and meets generally accepted industry standards in the selection of encasement materials.

(A) Encasement material:

- (1) Welded Steel Pipe, Smooth Wall that is in sound condition. Welded Steel Pipe shall have the following minimum wall thickness:

Encasement Specifications

Casing Diameter	Minimum Wall Thickness
Under 150 mm (6 in.)	Standard wall pipe of 5 mm (0.188") wall, as preferred
150 mm – 400 mm (6" – 16")	5 mm (0.188")
450 mm – 550 mm (18" – 22")	6 mm (0.250")
600 mm – 650 mm (24" – 26")	7 mm (0.281")
700 mm – 850 mm (28" – 34")	8 mm (0.312")
900 mm – 1200 mm (36" – 48")	8.7 mm (0.344")

RESOLUTION 2011-68

WHEREAS, the Diamond Engineering Company of Grand Island, Nebraska, was awarded the contract for Water Main District 456T, Engleman Road and Old Potash Highway, at the November 23, 2010 City Council meeting in the amount of \$497,326.50; and

WHEREAS, Diamond Engineering is proposing to use a different size steel casing that is an industry standard and more readily available than the specified casing; and

WHEREAS, the proposed replacement casing would result in a net contract price decrease of \$657.00; and

WHEREAS, Change Order #1 was prepared for the final construction contract adjustment, resulting in a final contract amount of \$496,669.50.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that Change Order #1 with the Diamond Engineering Company of Grand Island, Nebraska resulting in a final contract price of \$496,669.50, is hereby approved.

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Adopted by the City Council of the City of Grand Island, Nebraska, March 22, 2011.

Jay Vavricek, Mayor

Attest:

RaNae Edwards, City Clerk

Approved as to Form _____
March 18, 2011 City Attorney