“Request For Bids” – FY 14/15 DOUGLAS ST., MILLER ST., CAMINO ESCONDIDO WATER MAIN REPLACEMENT, CIP #3046

RFB #15/32/B

July 15, 2015

Addendum No. 1 – Clarifications and answers to questions following the Mandatory Pre-Bid Conference held July 10, 2015.

Project Manager & Water Division Engineer: Bill Huey, (505) 955-4273

Question 1: Will domestic materials be required for this project?

Answer: No. The Water Division would prefer to use domestic materials, but cannot require their use.

Question 2: What Entity or Agency is funding this project?

Answer: This project is funded by the City of Santa Fe without any State or Federal assistance.

Question 3: Plan sheet 3 of 5: Plans show 10” x 6” Tapping Sleeve, the Bid Schedule # 60 only shows a 10” x 4” Tapping Sleeve. Please clarity what will be expected.

Answer: A revised “Fixed Unit Price Schedule” has been prepared to correct errors that have been found. Proponents shall use the attached sheet for their Bid.

Question 4: Plan sheet 3 of 5: Plans show 6” x 6” Tapping Sleeve, the Bid schedule #50 only shows a 6” x 4” Tapping Sleeve. Please clarify what will be expected.

Answer: See answer to Question 3.

Question 5: Plan sheet 5 of 5: Plans show a 4” FlGxMJ Gate Valve, What Bid Item will this Valve be paid under?

Answer: See answer to Question 3.

Question 6: Plan sheet 5 of 5: Plans show a 2” Blow off, What Bid Item will this Blow off be paid under?

Answer: Bid Item 80.

Question 7: Bid Schedule #90 calls for 3 ea. 6” Gate Valves, plans show 4 ea. Please confirm quantities to be installed.

Answer: Plans do “show” four (4) 6-inch gate valves, but only show three (3) to be installed, as shown on the attached Fixed Unit Price Schedule.

Question 8: Bid Schedule #80 calls for 3 ea. 2” Gate Valves, plans show none. Please confirm (if) quantities are to be installed.

Answer: The two (2)-inch Gate Valve is to be used to construct the Blow off as shown on sheet 5 of 5. The specific details are shown on the “Standard Detail Sheet # 26”.

Question 9: How was imported Backfill amount determined?

Answer: The Bid quantity of Imported Backfill was determined based on the anticipated trench volume and the amount of bedding material expected to be of sub-standard grade. The actual amount utilized will be a field determination, with quantities set by the SDCW inspector.

Question 10: What is the maximum time allowed for the contract?

Answer: Ninety (90) days, calendar days after Notice to Proceed is issued

Question 11: Will a Revised Bid Schedule be issued?

Answer: See answer to question #3.

Question 12: Does the City have an Arborist on staff to assist with construction since some of the excavations will pass close to established trees?

Answer: Yes. The Public Utilities Division has an ISA Certified Arborist/Municipal Specialist on staff who will be available to assist the winning contractor when needed. He has provided information based on the A-300 BMP standards that I will attach to the end of this document.

Question 13: Will the Contractor be liable if a tree dies after its roots are cut?

Answer: Yes. The Contractor shall have access to Mr. Wood to assist with protection of the trees that may be harmed by excavation activities. The Contractor should also have sufficient insurance/bonding in place as well.

Question 14: What about vibration from equipment? What monitoring is to be done?

Answer: The City of Santa Fe will not require vibration monitoring or pre-construction video/photo surveys of the construction sites, but it is strongly recommended that this be done to protect the Contractor from damage claims.

Question 15: What are the Compaction requirements for this job?

Answer: One per every 500 - feet (liner) or portion thereof. Therefore, at a minimum, one test, with moisture for Douglas Street, one for Miller Street, and two for Camino Escondido. If conditions in the field warrant it, the inspector may call for more tests. See RFB page 67, section 7.6.1, page 106, Section 01025, 1.03 B. Bid Item No. 10, 20…; Bid Item No. 30 … and Bid Item No. 40 … .

E-mailed Questions:

Question 16: What is water rate for usage in Santa Fe for this project?

Answer: No potable water will be available from the City for use during construction. Reclaimed wastewater is currently selling for $3.37/1,000gallons from the Wastewater Division at 73 Paseo Real.

Question 17: Item 60 was removed10” x 4” Tapp?

Answer: Yes

Question 18: Why isn’t there a10” x 6” Tapp on as a Bid Item or was that eliminated also?

Answer: Yes

Question 19: Seen 90 calendar days but couldn’t locate liquidated damages?

Answer: Page 24, 5. B. $1,000.00 per calendar day.

FY 14/15 Douglas Street, Miller Street, Camino Escondido WATER MAIN REPLACEMENT, CIP # 3046, Bid '15/32/B

FIXED UNIT PRICE SCHEDULE

BID ITEM	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	AMOUNT
10	4-inch D.I. Water Main with Restraints and Fittings	LF	500	_____	_____
20	6-inch D.I. Water Main with Restraints and Fittings	LF	1205	_____	_____
30	Imported Backfill	CY	320	_____	_____
40	20" Meter Box Relocation/Replacement	EA	1	_____	_____
50	Tapping Sleeve w/ Tap, 6" X 6"	EA	3	_____	_____
60	Tapping Sleeve w/ Tap, 10" X 6"	EA	1	_____	_____
70	3-way Fire Hydrant Assembly	EA	1	_____	_____
80	2-inch Valve and Two Valve Boxes	EA	1	_____	_____
85	4-inch Valve and Box	EA	1	_____	_____
90	6-inch Valve and Box	EA	4	_____	_____
100	Asphalt Pavement Removal & Disposal	SY	375	_____	_____
110	Concrete Curb and Gutter Removal & Disposal	LF	15	_____	_____
120	Concrete Sidewalk Removal & Disposal	SY	10	_____	_____
130	Replace City Street Pavement	SY	375	_____	_____
140	Replace Concrete Curb & Gutter	LF	15	_____	_____
150	Replace Concrete Sidewalk	SY	10	_____	_____
160	Service Replacement, ¾"	EA	7	_____	_____
170	Service Replacement, 1 1/2"	EA	3	_____	_____
180	Service Transfer, ¾" – 1"	EA	35	_____	_____
190	Service Transfer, 2"	EA	3	_____	_____
200	Service Saddle ¾" – 1"	EA	36	_____	_____
210	Service Saddle 1 ½" – 2"	EA	2	_____	_____
220	Service Tubing ¾" – 1"	LF	220	_____	_____
230	Traffic Control	PER DAY	90	_____	_____

Total Bid Items 10-240		$ _____
NMGRT	8.3125%	$ _____
TOTAL BID	$ _____	

TOTAL BID AMOUNT: _____

The City reserves the right to alter quantities based on availablity of budget. If this will alter the bid amount, the bidder must note the percent increase for lesser quantities.

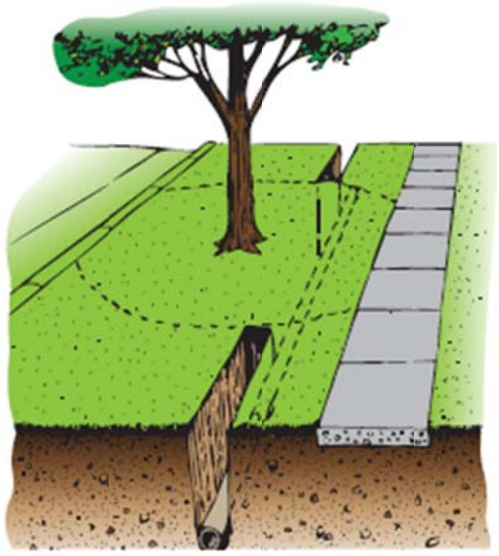
BMPs for trenching include the following:
• Protect the trunks of high-value trees from scraping and gouging to a height of at least 8 feet. (TPZ – Tree Protection Zone - discussed and defined below)
• Keep equipment and excavated backfill on the side furthest from the tree, not against the trunk.
• Place excavated backfill on a plastic or canvas tarp outside the CRZ. (Critical Root Zone defined below)
• Prune away jagged roots back to the trench wall closest to the tree. Use a handheld pruner or pruning saw to make sharp, clean cuts.
• Replace the backfill on the same day if at all possible. Cover exposed roots with wet burlap to prevent them from drying out; in hot dry conditions, small roots may be injured in as little as 30 minutes.
• Do not allow chemicals, trash, or other foreign debris to become mixed with the backfill.
• If earthwork specifications allow it, firm the backfill to the same compaction as the surrounding soil and no more.
• Water the backfill to prevent excessive root drying.

Critical Root Zone Protection

A critical step in retaining healthy trees during construction and development is the protection of tree roots from disturbance. Each tree has a critical root zone (CRZ) that varies by species and site conditions. The International Society of Arboriculture (ISA) defines CRZ as an area equal to 1-foot radius from the base of the tree's trunk for each 1 inch of the tree's diameter at 4.5 feet above grade (referred to as diameter at breast height).

Tree diameter	**Critical root zone radius**	**Total protection zone diameter, including trunk**
2 inches	2 feet	4+ feet
6 inches	6 feet	13.5 feet
20 inches	20 feet	42 feet
46 inches	46 feet	96 feet

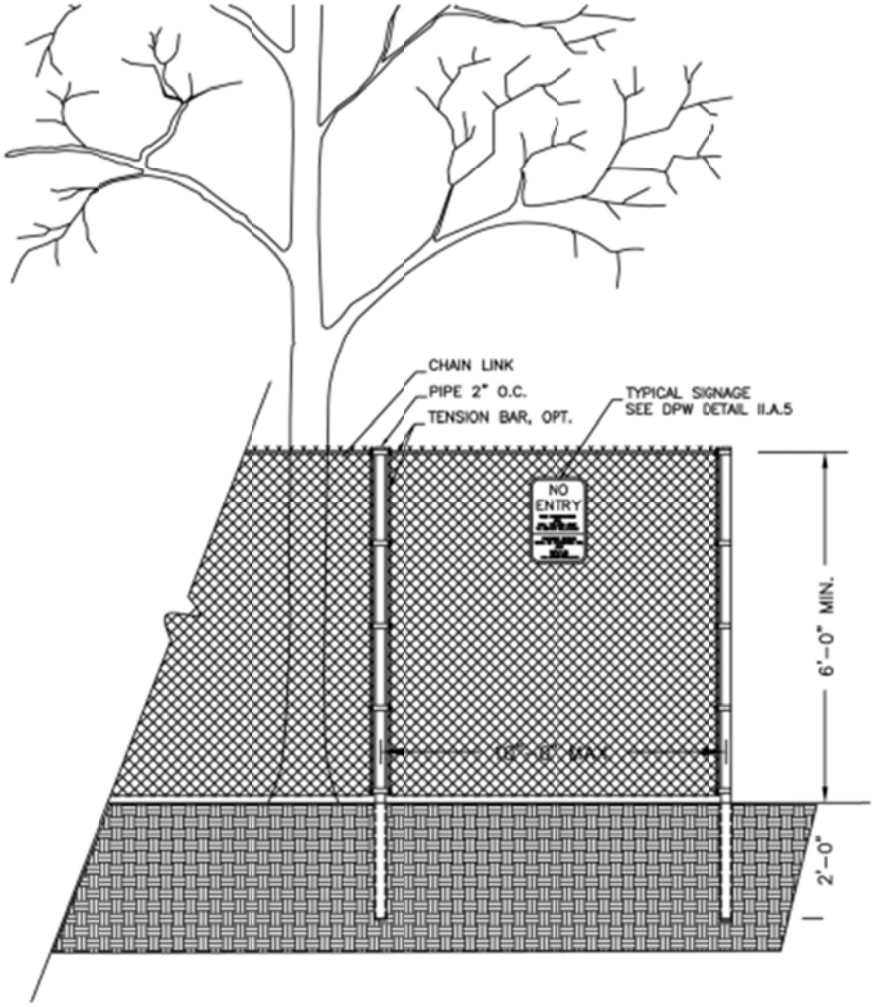
Workers performing such operations should understand that 85% of the mass of a tree's root system is located within the CRZ and that most of a tree's roots are within the top 18 inches of soil. Tunneling beneath the root zone will prevent loss of critical root mass if underground utilities must unavoidably be placed within the CRZ.



Proposed trench through a critical root zone. Adapted with permission by the City of Chattanooga.

Implementation & Monitoring during Construction. Establish a TPZ (Tree Protection Zone)

• Educate all workers on site about tree protection techniques and requirements during preconstruction meetings and by sharing this guidebook with them.
• Establish a TPZ based on a tree's CRZ (discussed above).
• Establish TPZs early, during site planning prior to construction.
• Erect barriers or sturdy fencing around individual trees or groups of trees to define and protect CRZs (see figure).
• Protect high-value trees with stem, branch, and root padding or wraps in addition to CRZ barriers.
• Clearly identify the perimeter of TPZs with highly visible signs.
• Establish one access route into the site and one exit route out of the site.
• Confine construction offices, vehicular parking, worker break sites, and material storage to locations outside TPZs.
• Avoid trenching through the CRZ of protected trees. Alter routes of underground infrastructure or use alternate methods such as pipe boring.
• Do not trench or excavate the soil within CRZs. Tunnel or bore at least 18 inches beneath CRZs to install utility lines.
• Where tree roots must be cut, make only sharp, clean cuts to promote root callusing and regeneration.
• Remove badly damaged trees that may attract insects and disease.
• Evaluate the potential of dead, damaged, or dying trees for wildlife habitat either as standing dead or woody debris if left onsite.
• Monitor tree health and compliance with tree protection requirements regularly during construction.



Fencing for tree protection. Reproduced with permission by the City of Arlington, Virginia.

THRUST RESTRAINT TABLE - POLY WRAPPED DUCTILE IRON
BENDS, TEES, CAPS/VALVES, & REDUCERS

(RESTRAINED JOINT LENGTHS IN FEET)

DIAMETER (IN.)	HORIZONTAL BENDS				CAPS / PLUGS / VALVES
	11-1/4° L_R	22-1/2° L_R	45° L_R	90° L_R	L_R
4	2	3	6	15	50
6	2	4	9	20	71
8	3	6	11	26	93
10	4	7	13	31	111
12	4	8	15	36	131

DIAMETER (IN.)	VERTICAL BENDS			
	11-1/4° L_R TOP/BOTTOM	22-1/2° L_R TOP/BOTTOM	45° L_R TOP/BOTTOM	90° L_R TOP/BOTTOM
4	5 / 2	10 / 3	21 / 6	N/A
6	7 / 2	15 / 4	30 / 9	N/A
8	10 / 3	19 / 6	39 / 11	N/A
10	11 / 4	23 / 7	46 / 13	N/A
12	13 / 4	27 / 8	55 / 15	N/A

SIZE (IN.) Lg/ Sm/ Run X Br.	TEES						REDUCERS
	Run L_R	Branch L_R	Run L_R	Branch L_R	Run L_R	Branch L_R	L_R
4 X 4	FJO	43	5	12	10	FJO	N/A
6 X 6	FJO	63	5	32	10	FJO	N/A
6 X 4	FJO	39	5	FJO	10	FJO	37
8 X 8	FJO	85	5	54	10	15	N/A
8 X 6	FJO	61	5	20	10	FJO	39
8 X 4	FJO	35	5	FJO	10	FJO	67
10 X 10	FJO	104	5	72	10	32	N/A
10 X 8	FJO	83	5	43	10	FJO	38
10 X 6	FJO	58	5	6	10	FJO	69
10 X 4	FJO	31	5	FJO	10	FJO	91
12 X 12	FJO	123	5	92	10	52	N/A
12 X 10	FJO	102	5	64	10	16	39
12 X 8	FJO	81	5	33	10	FJO	70
12 X 6	FJO	55	5	FJO	10	FJO	96
12 X 4	FJO	27	5	FJO	10	FJO	114

Table: This table is based on the EBAA Iron Megalug joint calculations program with the following input criteria: 3.5 ft. depth of bury (conservative); trench type 4; Poly Wrapped DI material; GM soil type; 150 psi test pressure; 1.5 safety factor. Specific calculations for restrained lengths are required for conditions not covered by this table. Values for verticle bends provided assume 3.5 feet of cover on the low side.

L_R: Length of restrained pipe, in feet, for each side of the fitting.

Minimum Restrained Length: A minimum restrained length of 5 ft. from the fitting joint is recommended. Vertical offsets shall be completely restrained between the top vertical fitting and the bottom vertical fitting.

FJO: Fitting Joint Only -- This includes at least a 1 ft. length of restrained pipe beyond the fitting joint.

Vertical Offset: Use 11-1/2° bends or 22-1/2° bends wherever possible due to the shorter restrained length requirements.

Caps/Plugs: Concrete blocking may be required by SDCW on a case-by-case basis in addition to mechanical restraint.

Pipe Lengths: Piping shall be laid out to minimize pipe joints near fittings. Wherever possible, full 20 ft. pipe lengths shall be utilized when connecting to fittings or valves. No pipe bell joints shall be used where fittings are less than 20 ft. apart.