

ADDENDUM NO. 2

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES

PROJECT NAME: **Market Street Realignment**

DATE: 1/18/2013

This addendum should be included in and be considered part of the plans and specifications for the Market Street Realignment Project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum and submit with their bid. Information pertaining to the contract addendum items listed on the Pre-Bid Meeting Agenda can be found in the additions listed below and are cross referenced to the items on the Pre-Bid Meeting Agenda by the letters in parentheses behind the additions listed below.

PROJECT NO.: **40-00300**

GENERAL:

- **Pre-bid Sign-In List**
- **Pre-bid Agenda**
- **Pre-bid Meeting Minutes.**
- **Questions and Answers.**
- **Receipt of Addendum No. 2 Acknowledgement**
- **SBEDA Affirmative Procurement Initiative**
- **Letter of Supplemental Geotechnical Recommendations**
- **Note** – The Contractor will need to supply shop drawings for the chilled water piping within seven (7) calendar days from the date of the bid opening. This note has been added to the Chilled Water Plans.
- **Addendum 3 Information.** There will be an Addendum No. 3 that will be posted on the City of San Antonio's web-site on or about January 29, 2013. This addendum will remove all improvements along the south side of Market Street from the back of the curb to the south since the Convention Center Design Build Team will be constructing improvements in that area. It will also provide for a modification of the stormwater planter details among other minor updates. It will also eliminate Retaining Wall No. 7 north of Commerce Street and the landscape improvements in front of it. Landscape related specifications (9003 – 9008) will be re-issued with minor changes noted. The final date and time for questions to be submitted is noon on January 25. No questions submitted after noon on January 25 will be addressed in Addendum 3.

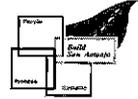
PROPOSAL / SPECIFICATION UPDATES: The documents listed below are to replace those previously issued.

- **010 Invitation for Bids.** This update post-pones the bid date until February 5th, 2013 at 2:00 p.m. C.S.T. as stated on the updated and attached IFB form.
- **020 Bid Form Template. (a)(c)** The estimate changed and the yellow highlighting was removed.
- **025 Unit Pricing Form.** This update has additional items of work and updates to some quantities.
- **060 Supplemental Conditions. (b)** Milestones and liquidated damages changed.
- **096 Project Wage Decision.** The publication date changed.
- **List of Governing Specifications.** Added CoSA Standard Specifications 205, 307, 413, 505 and 511. Added TxDOT Standard Specifications 275, 495 and 508. Added SAWS Standard Specifications 100, 101 and 852. Added special provisions and special specifications listed below.
- **Updated Special Specifications**
 - **SAWS SS 3000 Handling Asbestos Cement Pipe. (l)** Added the Appendices.
 - **AT&T SS 9100 AT&T Telecommunication System. (q)** This update includes the AT&T Construction Contract Coordinators information.
- **Updated SAWS Special Conditions**
 - **SAWS Long Lead Time Item List**
 - **SAWS Chilled Water Shutdown and Staging at SAWS Heating & Cooling Plant**
- **Updated Plan Sheets** as listed within the attached Table of Updated Plan Sheets (e – sheets 963-972) (i – sheets 956-957) (j, r – sheet 15)

PROPOSAL / SPECIFICATION ADDITIONS: The documents listed below are added:

- **Bid Bond**
- **Special Provisions**
 - CoSA SP 9800 Project Signs
 - TxDOT SP 275-003 Cement Treatment (Road Mixed)
- **Special Specifications**
 - COSA SS 9010 Valmont Illumination Street Light Assembly (m)
 - COSA SS 9011 Greenstar LED Luminaire, Galaxy XD – GLX30 & GLX48 (m)
 - COSA SS 9012 Landscape Forms Pedestrian Light (m)
 - COSA SS 9013 Landscape Forms Hawthorn Bollard Light (m)
 - COSA SS 9014 Waste Management Plan for Class 2 Non-Hazardous Soils (k)(o)
 - COSA SS 9015 Vertical Circulator (g)
 - COSA SS 9016 Stormwater Planter (Plan Sheets 225-226)
 - COSA SS 9017 Temporary Closure of Market Street
 - COSA SS 9018 Ornamental Fence and Gate
 - COSA SS 9019 Pedestrian Enhancements on Commerce Street (h)
 - CPS SS 9200 CPS Energy Electrical Conduit System (p)

Sign-In Sheet

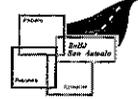


Project: Market Street Realignment
Meeting: Pre-Bid Conference

Place: Plaza B Room
Date: 1-8-13, 2:00 pm

Name	Company	Phone	Email
David McBeth, PE	COSA-CIMS	210-207-6342	david.mcbeth@sanantonio.gov
Bianca Thorpe, PE <i>BT</i>	COSA-CIMS	210-207-1484	bianca.thorpe@sanantonio.gov
Sonia Cantu, EIT	COSA-CIMS	210-207-3317	sonia.cantu@sanantonio.gov
Carlos Arcila, EIT	COSA-CIMS	210-207-2799	carlos.arcila@sanantonio.gov
Pete Rodriguez	COSA-CIMS	210-207-8154	pete.rodriguez@sanantoni.gov
<i>Adrian Valdez</i>	<i>Texas Sterling</i>	<i>210-340-2133</i>	<i>AVALDEZ@TEXASSTERLING.COM</i>
<i>Andrew Garcia</i>	<i>CPS ENERGY</i>	<i>210-353-2913</i>	<i>argarcia@cpsenergy.com</i>
<i>AMY MITCHELL</i>	<i>MIG</i>	<i>510-845-7549 ext. 197</i>	<i>amym@migcom.com</i>
<i>BOB AUSTIN</i>	<i>URS</i>	<i>210-321-4980</i>	<i>bob.austin@urs.com</i>
<i>David Hedlund</i>	<i>URS</i>	<i>210-321-1129</i>	<i>david.hedlund@urs.com</i>
<i>Michael Maestas</i>	<i>MAI</i>	<i>210-366-1988</i>	<i>mmaestas@maesce.com</i>
<i>ERNEST MAESTAS</i>	<i>MAI</i>	<i>210-366-1988</i>	<i>emaestas@maesce.com</i>
<i>Mehmet boz</i>	<i>URS</i>	<i>210-321-1113</i>	<i>mehmet.boz@urs.com</i>
<i>BREGER GARRISON</i>	<i>URS</i>	<i>210-321-1118</i>	<i>BREGER.GARRISON@URS.COM</i>
<i>Joel P. VALDEZ</i>	<i>CAS</i>	<i>210-248-9083</i>	<i>Joel.Valdez@CASENGINEERS.COM</i>
<i>Ronny Chinick</i>	<i>CobbFendley</i>	<i>210 535-0598</i>	<i>RChinick@cobbFendley.com</i>
<i>EVER GARZA</i>	<i>COBBFENDLEY</i>	<i>810 826-4611</i>	<i>fgarza@cobbFendley.com</i>
<i>Alvin Zigmund</i>	<i>ZACHRY</i>	<i>210-494-3531</i>	<i>Pam.Erwin@Zachrycorp.com</i>
<i>TONY Hildebrand</i>	<i>SAECO Elect. + Utility</i>	<i>210-695-2526</i>	<i>thildebrano@saecolectric.com</i>
<i>NABILA BOUTROS</i>	<i>SEA, Inc.</i>	<i>210-735-9202</i>	<i>nboutros@seatx.com</i>
<i>Sam O. Palomero</i>	<i>SEA, Inc</i>	<i>210-735-9202</i>	<i>spalomero@seatx.com</i>

Sign-In Sheet



Project: Market Street Realignment

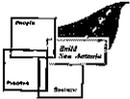
Place: Plaza B Room

Meeting: Pre-Bid Conference

Date: 1-8-13, 2:00 pm

Name	Company	Phone	Email
DANIEL MORALES	SEA, INC.	210-735-9202	dmorales@seatr.com
RYAN DETRY	EZBEL Construction	210-736-6595	ryandetry@ezbel.com
Jessica Castiglione	TXDOT	210-665-6305	jessica.castiglione@yahoo.com
Carol Newman	COSA / CIMS ^{RE. ACQUISITION}	210 207 8119	Carol.newman@sanantonio.gov
JUAN B. ALCAZAR	GDA	210-208-9400	jalcazar@GDA-US.COM
ALAN LOPEZ	COSA-CIMS	210-207-3334	alan.lopez@sanantonio.gov
JUSTIN S. HOUGH	ARIAS ASSOCIATES	210-308-5884	JHOUGH@ARIASINC.COM
ELIZABETH VIDAL	COSA-CIMS	207-2092	ELIZABETH.VIDAL@SANANTONIO.GOV
JAMES LUTZ	Pape-Dawson	210 375 9000	JLUTZ@PAPE-DAWSON.COM
John Tyler Kuyfford	Pape Dawson PHD	210 375 9000 207-7306	jtyler@pape-dawson.com Koyfford@SANANTONIO.GOV
MD. MOAZZEM HOSSAIN	CIMS - COSA	210-207-4640	MD.HOSSAIN@SANANTONIO.GOV
Veronica Barefield	CIMS - COSA	210-207-8345	Veronica.Barefield@sanantonio.gov
David Lopez	CIMS - COSA	210-207-5001	David.Lopez@sanantonio.gov
Mike Denning	CPS Energy	210-353-2822	jmdenning@cpsenergy.com
DAN MYERS	SAWS	210 233 3911	daniel.myers@saws.org
Dan Lanctot	SAWS	233-3614	dan.lanctot@saws.org
Nina Bittle	SAWS	233-3461	nina.bittle@saws.org
JOE CARRENO	SAWS	233-3466	elcarreno@saws.org
JOHN KAZNOWSKI	SAWS	210-233-3696	JKAZNOWSKI@SAWS.ORG

Sign-In Sheet



Project: Market Street Realignment

Place: Plaza B Room

Meeting: Pre-Bid Conference

Date: 1-8-13, 2:00 pm

Name	Company	Phone	Email
K.W. Chan	K-MING & ASSOC	(210) 736-6623	kwchan@kming.com
FRANK SNYDER	SAWS	(910) 833-3931	JSnyder@SAWS.ORG
STEVEN LARGE	GARRETT Mechanical	210-616-0125	SLARGE@GARRETTMECHANICAL.COM
Jeremy Hobson	Garrett Mechanical	210-616-0125	jhobson@garrettmecanical.com
Butch Leist ^{SBE} _{NEW BEA}	Hill Country Bridge	210 913 7155	bleist@hillcountrybridge.com
NERI, KEVIN	Oldcastle/CustomCast	512 350 7486	KEVIN.NERI@OLDCASTLE.COM
BRANDON WHITE	JERDON ENT	210-590-1110	BRANDON@JERDONLP.COM
EDWARD MERY	COSA Pw. ROW	210-207-6949	EDWARD.MERY@SANANTONIO.GOV
ABEL GUZMAN	COBB-FENDLEY	(210) 826-4611	aguzman@cobbhendley.com
Elizabeth Porterfield	COSA-OHP	210-207-3327	elizabeth.porterfield@sanantonio.gov
Henry Estrada	COSA-DCD-PASA	210 207-8024	henry.estrada@sanantonio.gov
Ruben Guerrero	COSA-Constructors	210-207-7997	Ruben.Guerrero@SanAntonio.gov
John E. Cantu	COSA-Environmental	210-207-1450	john.cantu@sanantonio.gov
JAMES C. WUCINSKI	COSA-CIMS	207-7042	James.WUCINSKI@ " "
DAVID McBERTH	" "	207-6342	david.mebeth@sanantonio.gov
ANTHONY MOY	OPS ENERGY (GAS)	353-2648	AMMOY@OPSENERGY.COM
Pete Rodriguez	COSA CIMS	207-2154	pete.rodriguez@sanantonio.gov
Chris ALONSO	COSA CIMS	207-2120	CHRISTOPHER.ALONSO@SanAntonio.gov
Kenneth Heinzmann	COSA-CIM HBCL Expansion	207-4337	Kenneth.Heinzmann@SanAntonio.gov
LeAnn Lindquist-Thome	COSA-CIMS " "	207-4359	leann.lindquist-thome@SanAntonio.gov

MEETING SIGN-IN SHEET

Capital Improvements Management Services



NAME	ORGANIZATION	PHONE	EMAIL
JERRY MARTIN	MKI Const & Services	210-444-2013	JM MARTIN SA @SOC GLOBAL.NET
Dale Kornegay	BORTON CO	713-907-7715	dkornegay@bortunco.com
Homero Garcia	BIS TEPSCO INC.	832-347-4798	hgarcia@bis.tepsco.com
MICHAEL CARDONA	HUNT ZACHRY JV	210-871-2854	michael.cardona@zachrycorp.com
Ted Staack	Zachry Construction	210-871-2856	ted.staack@zachrycorp.com
Bon Ramirez	COSA-CIMS CONTRACTS	210-207-8063	ronald.ramirez@sanantonio.gov
Brenda Navarro	COSA-CIMS-SBO	210-207-5442	brenda.navarro@sanantonio.gov
Luis E. Maltos	CIMS	207-8223	luis.maltos@sanantonio.gov
David Palacios	CIMS-Lab	207-2099	david.palacios@San Antonio.gov

**Market Street Realignment
Pre-Bid Meeting Agenda
2:00 pm to 3:00 pm
January 8, 2013**

1. Review of Bid Submittal Requirements and Contract Documents
2. Review Project Scope of Improvements
3. Review Construction Schedule, Sequence, and Milestones
4. Review Contract Addendum Items:
 - a. Form 020
 - b. Form 060
 - c. Bid Alternate 1: Diversion of Traffic
 - d. Item 9002 – Temporary Suspension of Work for Special Events
 - e. Chilled Water Line in West Frontage Road n/o Cesar Chavez Blvd.
 - f. Chilled Water Line along front of SAWS H&C Plant
 - g. Vertical Circulator Structure (Stairway & Elevator)
 - h. Pedestrian Enhancements on Commerce Street
 - i. Construction Staging Area
 - j. Coordination with Convention Center Expansion
 - k. Contaminated Soil Removal
 - l. SAWS A.C. Pipe Removal Specification
 - m. Illumination Specifications
 - n. Utility Lines on Cross-Section Sheets
 - o. Waste Management Plan
 - p. CPS Electric Specifications
 - q. AT&T Special Specifications
 - r. Time Warner Special Specifications
 - s. Stamped Concrete Pattern and Bronze Insert
 - t. Landscaping Clarifications
 - u. Other Items
5. Q & A

Market Street Realignment Pre-Bid Meeting Minutes

January 8, 2013

The meeting was called to order and a general introduction of the purpose of the meeting was provided by Ron Ramirez, Contracts Manager for the City. A sign-in sheet was passed around.

The following topics pertaining to the project were presented by City staff:

1. Labor information including a review of the Heavy and Highway Wage Decision by the U.S. Department of Labor regarding worker labor rates.
2. SBEDA requirements.
3. Bid submittal requirements and Contract information.

The CIMS Project Manager, Luis Maltos, presented background information about the Market Street Realignment project and the Convention Center Expansion project. He then introduced the URS Project Manager, Dave Hedlund.

The URS Project Manager reviewed the following items:

1. A description of the project improvements.
2. A review of the construction schedule, construction phasing, and milestones dates for completion of selected improvements.
3. A description of the two traffic control alternatives being considered by the City, including maintenance of traffic within the project area for the full duration of the construction contract, and an alternative that would detour all traffic out of the project area for a certain period of time.
4. An explanation that the low bid would be a combination of the amount of the base bid plus the amount of the traffic control Bid Alternate that would include an amount of savings for not having to maintain traffic within the project area for the full duration of the contract if the City elects to implement the Bid Alternate detour.
5. A review of numerous items listed on the agenda that would be addressed in Addendum No. 2 as well as a few items that would be designed and a contract price negotiated later. These items include the vertical circulator at the west end of the pedestrian bridge and the pedestrian enhancements at the Commerce Street crossing of IH-37.

This was followed by questions and answers. The questions asked during the meeting are included on the Q&A form in Addendum No. 2.

Market Street Questions from Prospective Bidders

1. Q: How would contractors be able to ask questions about Addendum No. 2?
A: We hope that all initial questions can be submitted by January 16, but we will look at the schedule and evaluate this. Note: The bid date has been changed to February 5 and a third Addendum will be posted on the City's web-site on or about January 29. Questions can be submitted until noon on January 25. No questions received after noon on January 25 will be answered in Addendum No. 3.
2. Q: Is there a Project Manager selected?
A: the project will be managed by Ruben Guerro's staff.
3. Q: How can we get the Pre-Bid Sign-In Sheet?
A: It is posted on the City's website and will be included in Addendum No. 2.
4. Q: Where is the project phasing shown in the plans?
A: Project phasing is shown on Sheets 35-37 of the plans.
5. Q: Instead of using only 10-foot wide panels on the retaining walls, can 5-foot wide panels be used on every other column?
A: The project must be bid as shown on the plans. Following award of the contract, alternatives can be submitted for consideration.
6. Q: Is there a CD available with plans and specifications for the Market Street Realignment?
A: A CD can be obtained from URS Corporation at a cost of \$175.
7. Q: Just one section of the pipe in the plans says it should be Grout Lined, but other places it says Carbon Steel. The fittings on the pipe aren't grout lined, so it is confusing.
A: All proposed chilled water pipes shall be interior grout lined (mortar lined) carbon steel as shown on the plans and specification section 336313, paragraph 3.2.A. All chilled water fittings (elbows and tees) shall be made of segmentally welded sections of hydrostatically tested pipe, and shall be coated and insulated carbon steel in accordance with chilled water pipe requirements.
8. Q: The hot water tap says stainless steel; shouldn't they be carbon steel like the pipe?
A: There are no hot water taps for the chilled water mains. Hot taps shown on the plans are for live tapping into existing chilled water pipes without interruption to existing services. Hot tap saddles shall be stainless steel as shown on the "Hot-Tap Details" sheet.
9. Q: The chilled water plans show the pipe to be mortar lined – is this correct?
A: See answer to Question No. 7.
10. Q: The plans call for the chilled water hot taps to be stainless steel – is this correct?
A: See answer to Question No. 8.

11. Q: Are the CPS electric manholes at station 17+95 and station 23+00 necessary due to the large excavation required to install? Removal would increase the manhole spacing to roughly 400-feet.
- A: This work must be bid as shown on the plans. Any change must be approved by CPS.
12. Q: There is a bid item for CPS Electric Vault construction. Is this included in the project?
- A: Vault construction is not a part of this project. This bid item will be removed.
12. Q: The current directional bores for electric conduit may need to change to conventional bores according to a CPS detail that outlines conventional bore requirements. This change could require the current HDPE casing shown to be increased in size.
- A: This will be clarified in Addendum No. 3.
13. Q: The CPS electric manholes shown on the plans are 7'x7'x7'. Typically they are 8'x8'x8' for installing 12 conduits.
- A: The manholes shown will work but there may need to be a modification to the end wall by the supplier or contractor.
14. Q: There are several traffic signal pay items in the bid tab with no quantities. Will quantities for these items be provided for later?
- A: Yes. These will be included in Addendum No. 2.
15. Q: There are missing pay items. Is anyone reconciling the traffic signal plan sheet quantities back to the bid tab?
- A: Yes. These will be reconciled in Addendum No. 2.
16. Q: Will traffic signal preemption phase selectors be needed and, if so, what quantity?
- A: No preemption selectors will be needed.
17. Q: for removal of existing traffic signals, will a pay item for salvage be added?
- A: The existing traffic signals within this project are owned by TxDOT and maintained by the City. We are checking with TxDOT to see if they want to salvage any of the traffic signal equipment and will include the response in Addendum No. 3.

**CITY OF SAN ANTONIO
DEPARTMENT OF CAPITAL IMPROVEMENTS MANAGEMENT SERVICES
CONTRACT SERVICES DIVISION**

RECEIPT OF ADDENDUM NUMBER 2 IS HEREBY ACKNOWLEDGED FOR PLANS
AND SPECIFICATIONS FOR CONSTRUCTION OF Market Street Realignment FOR
WHICH BIDS WILL BE OPENED ON TUESDAY, FEBRUARY 5, 2013 AT 2:00 P.M. C.S.T.

THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID
PACKAGE.

Company Name: _____

Address: _____

City/State/Zip Code: _____

Date: _____

Signature: _____

Print Name/Title: _____

Project Name: Market Street Realignment

Pre-Submittal Date: January 8, 2013

SBEDA Affirmative Procurement Initiative: 25% SBE Subcontracting Goal and 20% M/WBE Subcontracting Goal

I. Subcontracting Program

- **25%** must be subcontracted to certified SBE(s) designated within San Antonio Metropolitan Statistical Area (SAMSA)
- **20%** must be subcontracted to certified M/WBE(s) designated within San Antonio Metropolitan Statistical Area (SAMSA)
- Certified M/WBE's must also be certified SBE's
- First tier certified SBE(s) and M/WBE(s) only will count toward the percentage goal
- Respondents must demonstrate their intent to accomplish this requirement by submitting the appropriate documentation with their response (Subcontractor/Supplier Utilization Form)
- Failure of a respondent to submit the Subcontractor/Supplier Utilization Form or meet the subcontracting requirement will deem its response nonresponsive
- ***SBE Prime participation does NOT count towards SBE Subcontracting goal***
- ***M/WBE Prime participation does NOT count toward M/WBE Subcontracting goal***
- ***Respondents must submit their Utilization Plan based on "base bid" only***

II. Eligibility Criteria

- Eligibility Certification:
 - SBE
 - SBE and M/WBE (AABE/ABE/HABE/NABE/WBE)
 - Certified through the South Central Texas Regional Certification Agency (SCTRCA) to perform commercially-useful function
- Be considered small under SBA size standards for specific industry category of work being proposed
- Headquartered or demonstrate "significant business presence" (20% of total company employees) regularly based in the SAMSA (Atascosa, Bandera, Bexar, Comal, Guadalupe, Kendall, Medina, or Wilson) for at least one year
- Submit **Subcontractor/Supplier Utilization Form** with response (failure to do so will deem bid non-responsive)
- SBEDA staff can assist with priority certification while solicitation is open
- For additional information, contact Ruben Flores ruben.a.flores@sanantonio.gov and/or Brenda Navarro at 210.207.5442 brenda.navarro@sanantonio.gov

III. Waivers & Exceptions

- A full or partial waiver of a specified subcontracting goal may be requested, for good cause, by submitting the *Respondent Subcontracting Waiver Request* form with the solicitation response
 - Form is available at www.sanantonio.gov/edd/SmallBusiness/
 - Waiver request must fully document subcontractor unavailability despite good faith efforts to comply with the goal
- Respondent may request, for good cause, an Exception to the application of the SBEDA Program by submitting the *Exception to SBEDA Program Requirements Request* form with the solicitation response
 - Form available at www.sanantonio.gov/edd/SmallBusiness/
 - Exception request must fully document why:
 - ◆ Value of contract is below \$50,000;
 - ◆ No commercially-useful subcontracting opportunities exist; or
 - ◆ Type of contract is outside scope of the SBEDA Ordinance
- For Waivers or Exceptions, contact Aurora Perkins at 210.207.3996 or aurora.perkins@sanantonio.gov

Project Name: Market Street Realignment

Pre-Submittal Date: January 8, 2013

SBEDA Affirmative Procurement Initiative: 25% SBE Subcontracting Goal and 20% M/WBE Subcontracting Goal

IV. Central Vendor Registry (CVR)

- All contractors/consultants wishing to do business with the City must first register in the CVR
- To begin the registration process, please go to <http://www.sanantonio.gov/purchasing/SAePS.aspx>
- For technical assistance please call (210) 207-0118



January 15, 2012
Arias Job No. 2012-147

Mr. Dave Hedlund, PE
Senior Project Manager
URS Corporation
9901 IH-10 West, Suite 350
San Antonio, TX 78230

RE: Supplemental Geotechnical Engineering Recommendations
Market Street Realignment
San Antonio, Texas

Dear Mr. Hedlund:

Structural Engineering Associates, Inc. (SEA) the structural engineer of record for the Market Street Realignment project, requested that we evaluate the feasibility of using higher ultimate base frictional resistance values for MSE Wall Nos. 3, 4, 5, and 6 for the expansive clay bearing soils. In addition, they requested that we provide WinCore Foundation Capacity plots for the proposed Pedestrian Bridge and Overhead Signs. Our geotechnical recommendations for retaining walls and bridges were presented in Arias' Geotechnical Report (Arias Job No. 2012-147) dated January 2, 2013.

Based on our value engineering evaluation of the expansive clay soils, we have concluded that the parameters given in Table 1 below can be used to evaluate potential sliding for the above referenced MSE walls. A factor of safety of at least 1.5 is recommended against potential sliding:

Table 1: Revised Wall Design Frictional Ultimate Resistance Parameters - MSE Wall Nos. 3, 4, 5 & 6

Case	Description	C psf	ϕ deg.	c' psf	ϕ' deg.	tan ϕ' deg.	Ultimate Limiting Friction psf
Short Term Undrained	Stiff FAT CLAY (fill and/or native)	1,000 to 2,000	0	--	--	--	1,000
Long Term Drained	Stiff FAT CLAY (fill and/or native)	--	--	50	20	0.364	1,000
Short Term Undrained or Long Term Drained	Crushed Limestone Transfer Pad	--	--	0	37	0.75	--

We understand that SEA's present design for the bridge is based on Boring B-10. The WinCore Foundation Capacity plots were provided for B-10 in our previously referenced geotechnical report. However, Borings B-10, B-11, and B-12 were drilled in the vicinity of the Pedestrian Bridge. Please find attached the WinCore Foundation Capacity plots for Borings B-11 and B-12 for: (a) 30-inch diameter drilled piers for a design load of 56 tons at the abutment, and (b) 36-inch diameter drilled piers for a design load of 150 tons at the bents.

Since the soil conditions at Boring B-12 result in the deepest piers, we recommend that the design of drilled piers for the Pedestrian Bridge be based on Boring B-12. For the 150 ton design load for the 36-inch pier, the capacity plot for combined shaft resistance and point bearing results in a tip elevation of 615.78 feet, which corresponds to about 1.5 feet above stiff fat clay. Accordingly, we recommend the piers be extended deeper to penetrate through the stiff clay and at least 3 feet into the hard fat clay; thus, the estimated tip elevation is 606 feet. We recommend the drilled piers at the abutment extend to a similar tip elevation of 606 feet.

We understand that an overhead sign is planned along the new West Frontage Road at approximately Station 18+95 (West Frontage Road stationing). Boring B-8 is closest to this overhead sign location. Another overhead sign is planned near the new intersection of the realigned Market Street and the West Frontage Road at approximately Station 16+00 (Market Street stationing). Boring B-3 is closest to this overhead sign location. We understand that the design compression load is 90 tons for the overhead signs. We have attached WinCore Foundation Capacity plots for Borings B-3 and B-8.

As previously noted in our geotechnical report, piers for the Pedestrian Bridge and the Overhead Signs should be spaced at least 2.5 pier diameters center to center to achieve the allowable capacities given on the above noted plots. If piers were spaced closer than this, then reductions in capacity would be necessary to account for group effects. In addition, for determining tip elevations of these piers for allowable tension loads, the "dashed" plot identified as "w/o Point Bearing" should be used at the appropriate boring location. Furthermore, the pier tip elevations for the Pedestrian Bridge and Overhead Signs should meet all of the following criteria:

- Allowable Compression Loading based on the "w/ Point Bearing" plots as noted above;
- Minimum tip elevation of 606 feet for the Pedestrian Bridge, based on Boring B-12;
- Allowable Tension Loading based on the "w/o Point Bearing";
- Minimum of 3 feet into hard clay; and
- Minimum of 25 feet below lowest adjacent finish grade for uplift consideration due to swelling clay.

If you have any questions about the recommendations presented herein or the attached WinCore Foundation Capacity plots, please do not hesitate to contact us.

Sincerely,
ARIAS & ASSOCIATES, INC.
TBPE Registration No: F-32


Timothy J. Fox, P.E.
Senior Geotechnical Engineer




Spencer A. Higgs, P.E.
Director of Engineering

Attachments: WinCore Foundation Capacity Plots for Borings B-3, B-8, B-11, and B-12

Distribution via email: david.hedlund@urs.com; bob.austin@urs.com; nboutros@seatx.com



FOUNDATION CAPACITY

WinCore
Version 3.1

County Bexar
Highway IH-37
Control

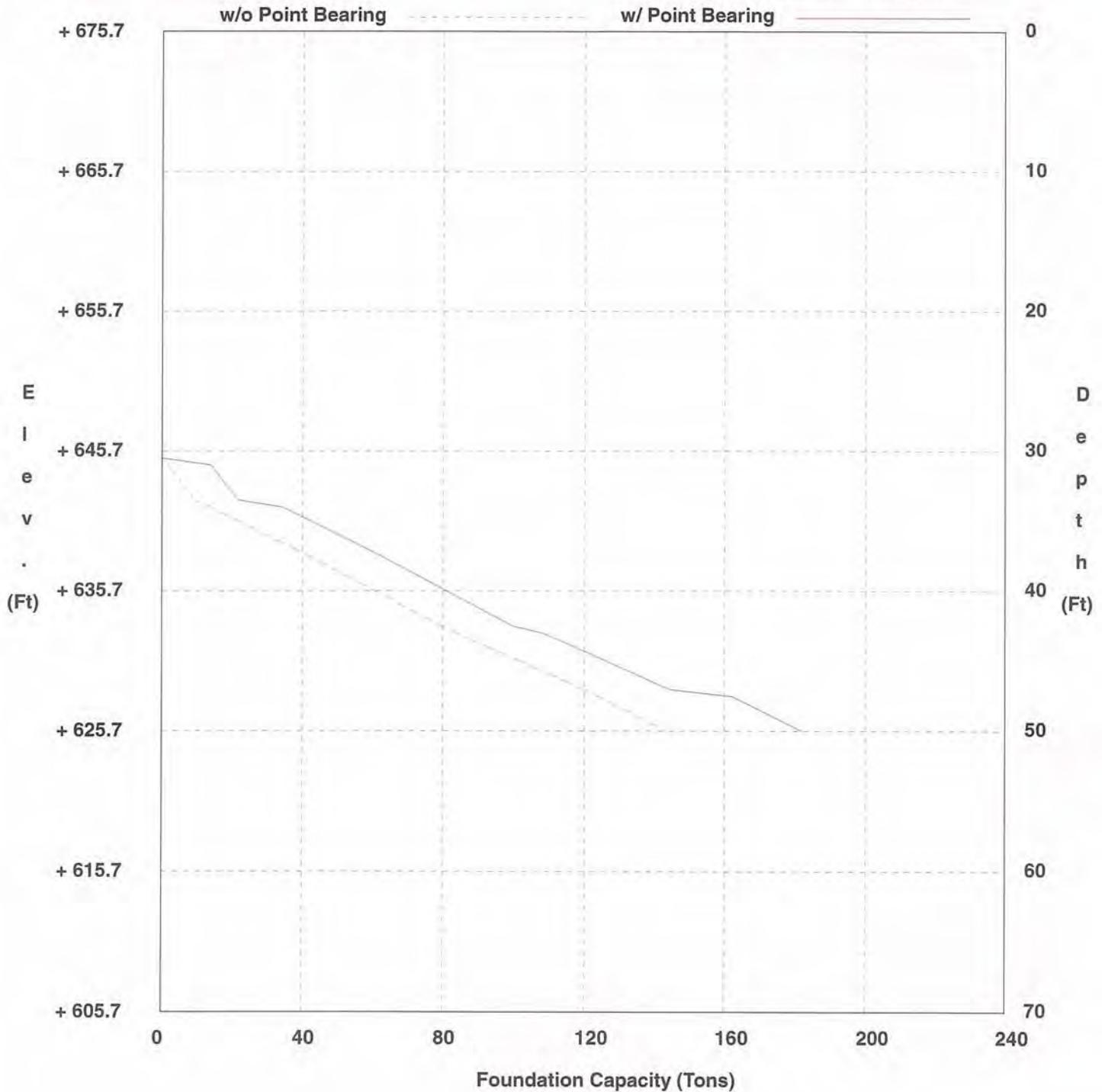
Hole B-3
Structure Retaining Walls
Station
Offset

District 15
Date 6/21/2012
Grnd. Elev. 675.72 ft
GW Elev. 644.42 ft

36 inch Drilled Shaft
90 ton Design Load
Tip Elevation = + 634.22

+675.72 Top Hole Elevation
+645.22 Disregard Elevation

Disregard above hard strata disabled
Pb: 2 Diameters Below Tip Checked
TCP Capacity Values Used
0.7 Soil Reduction Factor Used





FOUNDATION CAPACITY

WinCore
Version 3.1

County Bexar
Highway IH-37
Control

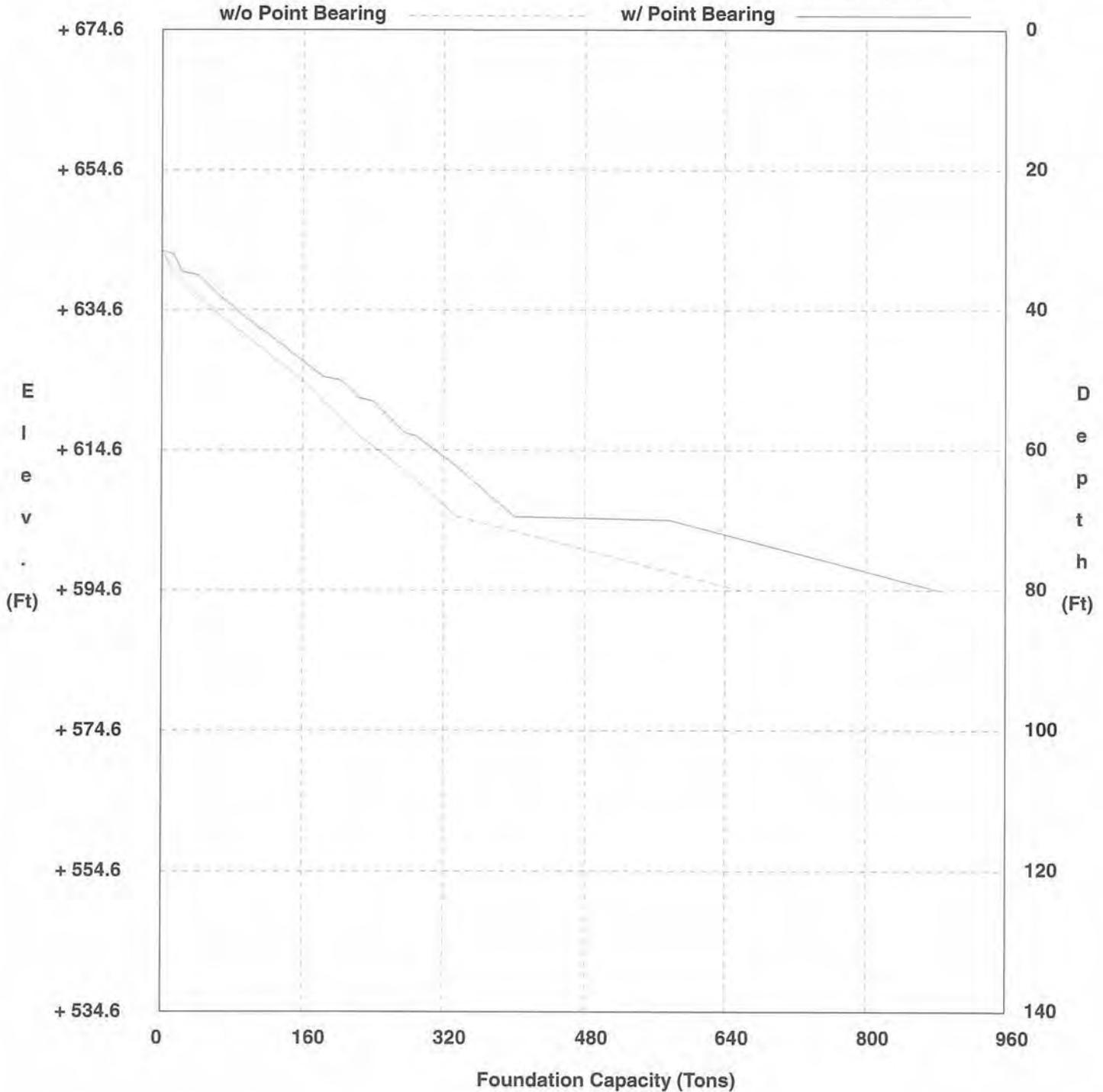
Hole B-8
Structure Bridges
Station
Offset

District 15
Date 6/18/2012
Grnd. Elev. 674.59 ft
GW Elev. 640.20 ft

36 inch Drilled Shaft
90 ton Design Load
Tip Elevation = + 634.09

+674.59 Top Hole Elevation
+643.09 Disregard Elevation

Disregard above hard strata disabled
Pb: 2 Diameters Below Tip Checked
TCP Capacity Values Used
0.7 Soil Reduction Factor Used





FOUNDATION CAPACITY

WinCore
Version 3.1

County Bexar
Highway IH-37
Control

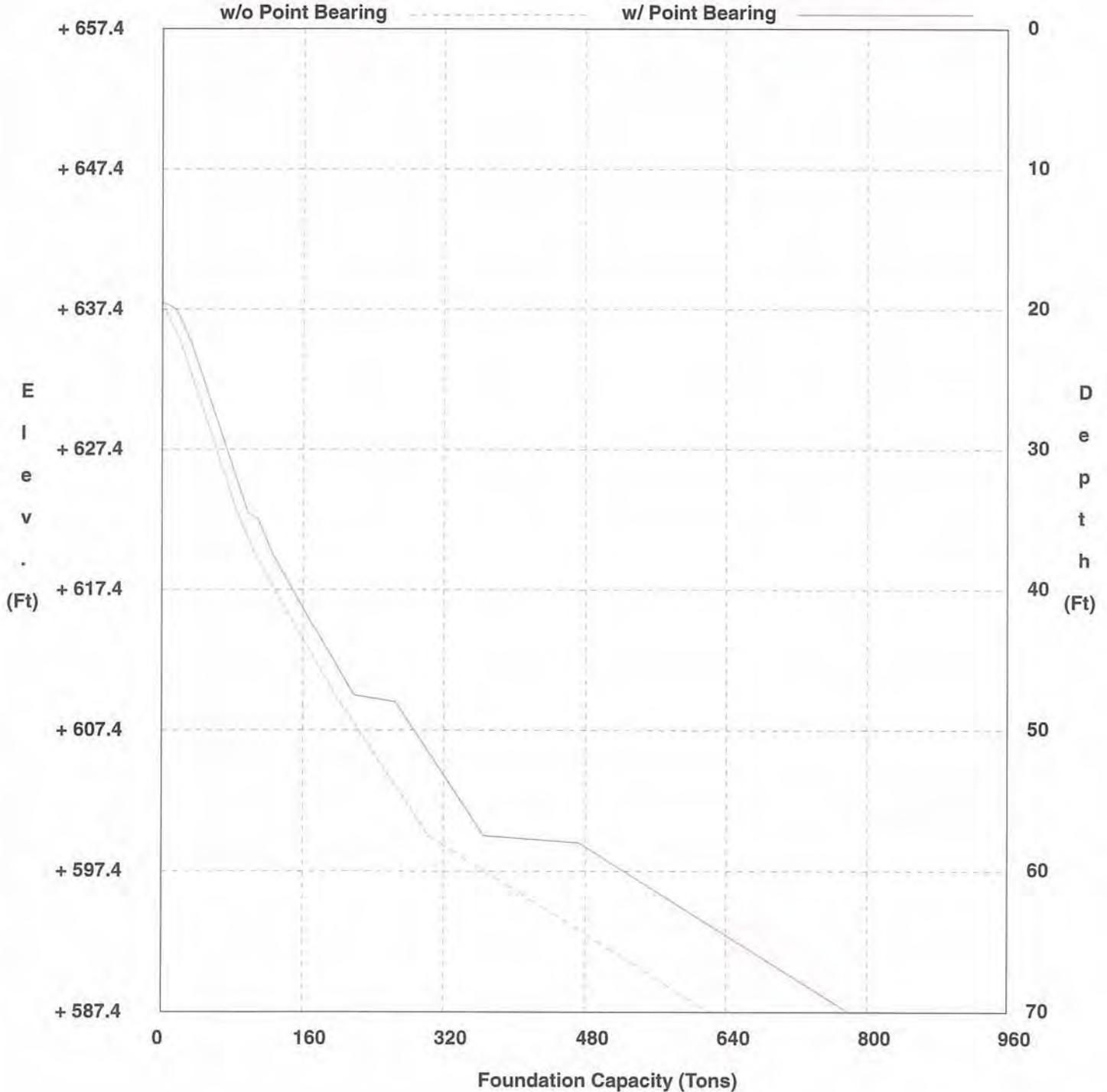
Hole
Structure B-11
Bridges
Station
Offset

District 15
Date 6/21/2012
Grnd. Elev. 657.42 ft
GW Elev. N/A

30 inch Drilled Shaft
56 ton Design Load
Tip Elevation = + 630.42

+657.42 Top Hole Elevation
+637.92 Disregard Elevation

Disregard above hard strata disabled
Pb: 2 Diameters Below Tip Checked
TCP Capacity Values Used
0.7 Soil Reduction Factor Used





FOUNDATION CAPACITY

WinCore
Version 3.1

County Bexar
Highway IH-37
Control

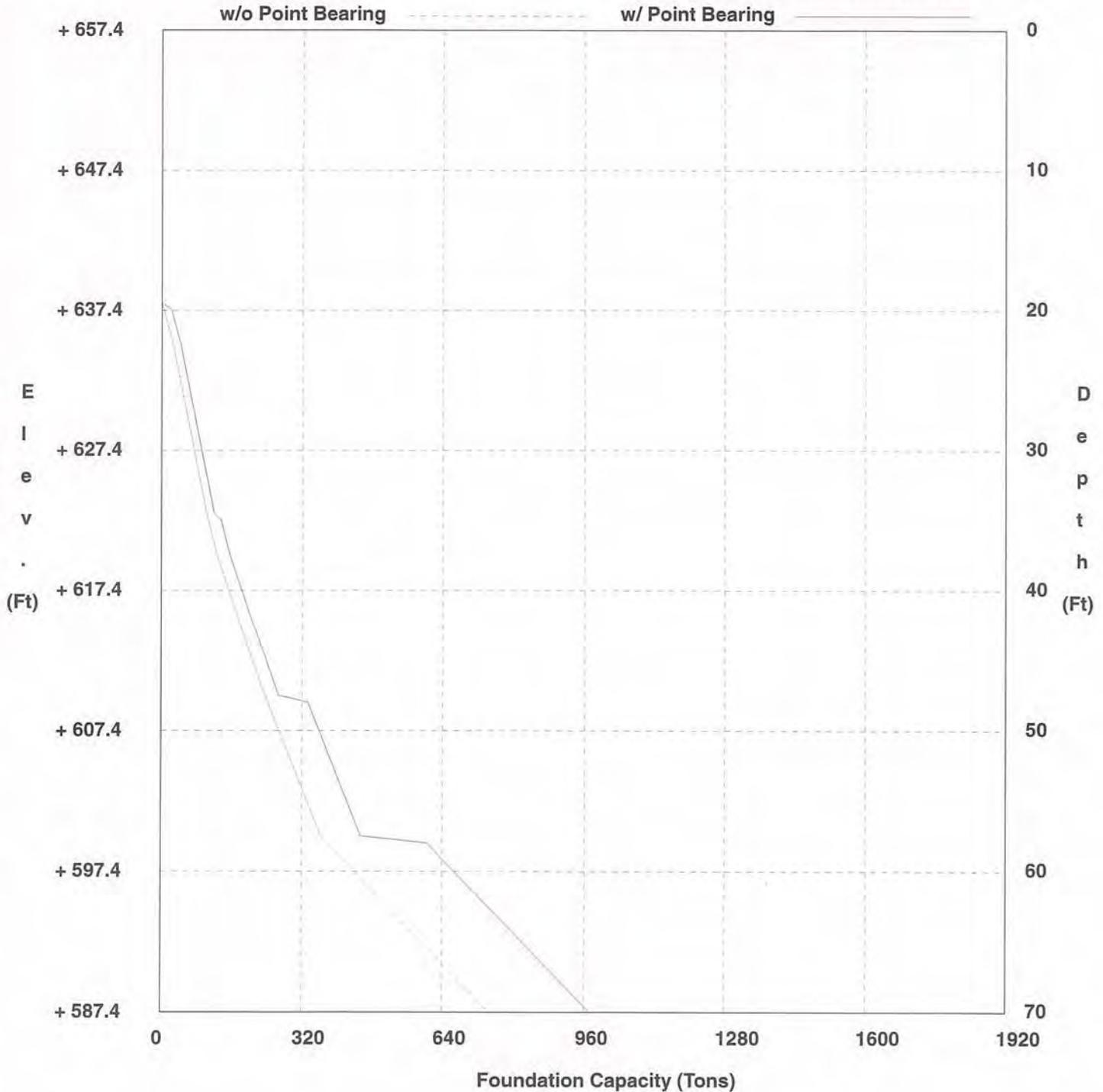
Hole B-11
Structure Bridges
Station
Offset

District 15
Date 6/21/2012
Grnd. Elev. 657.42 ft
GW Elev. N/A

36 inch Drilled Shaft
150 ton Design Load
Tip Elevation = + 620.42

+657.42 Top Hole Elevation
+637.92 Disregard Elevation

Disregard above hard strata disabled
Pb: 2 Diameters Below Tip Checked
TCP Capacity Values Used
0.7 Soil Reduction Factor Used





FOUNDATION CAPACITY

WinCore
Version 3.1

County Bexar
Highway IH-37
Control

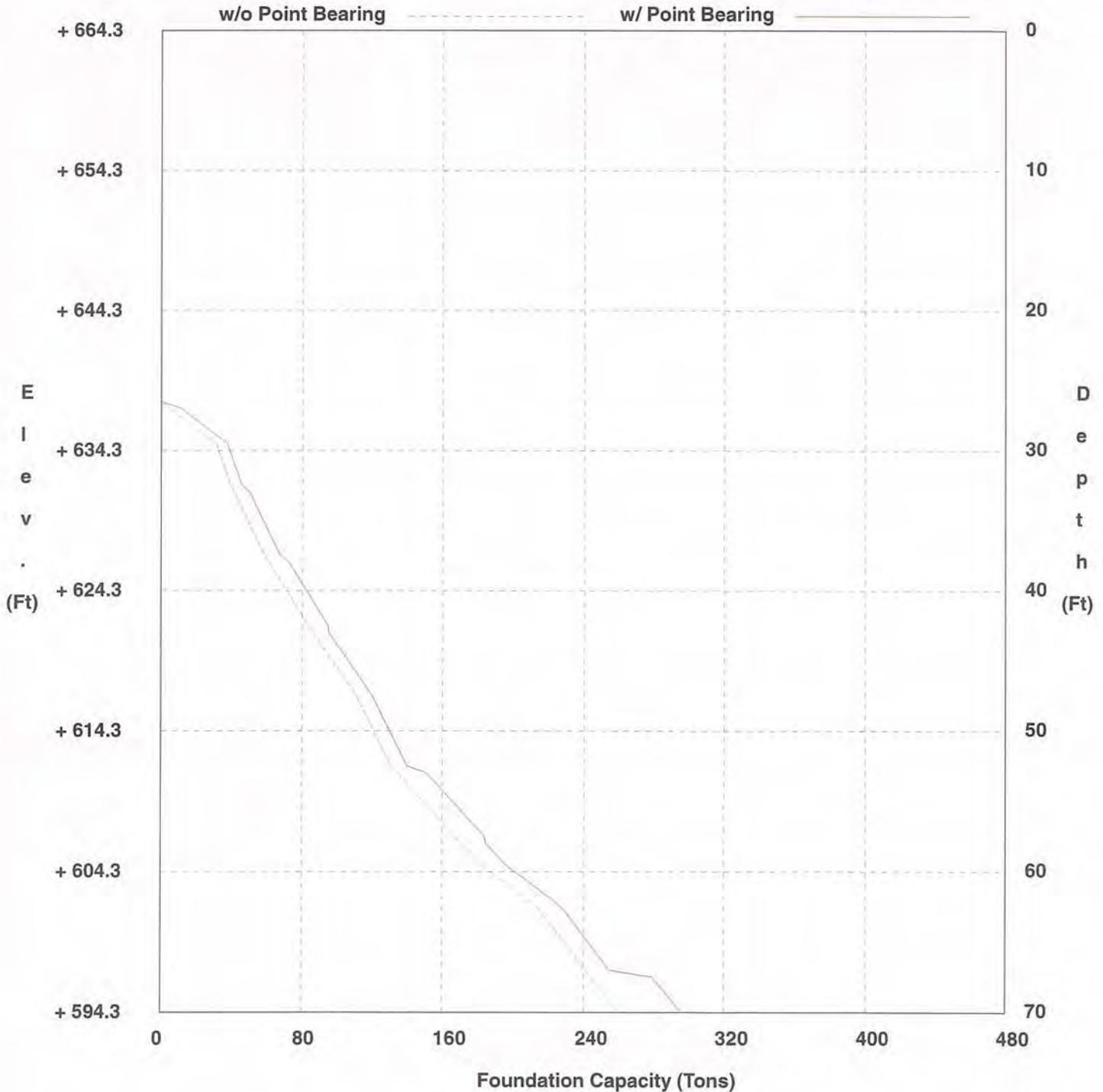
Hole
Structure B-12
Bridges
Station
Offset

District 15
Date 6/25/2012
Grnd. Elev. 664.28 ft
GW Elev. N/A

30 inch Drilled Shaft
56 ton Design Load
Tip Elevation = + 629.78

+664.28 Top Hole Elevation
+637.78 Disregard Elevation

Disregard above hard strata disabled
Pb: 2 Diameters Below Tip Checked
TCP Capacity Values Used
0.7 Soil Reduction Factor Used





FOUNDATION CAPACITY

WinCore
Version 3.1

County Bexar
Highway IH-37
Control

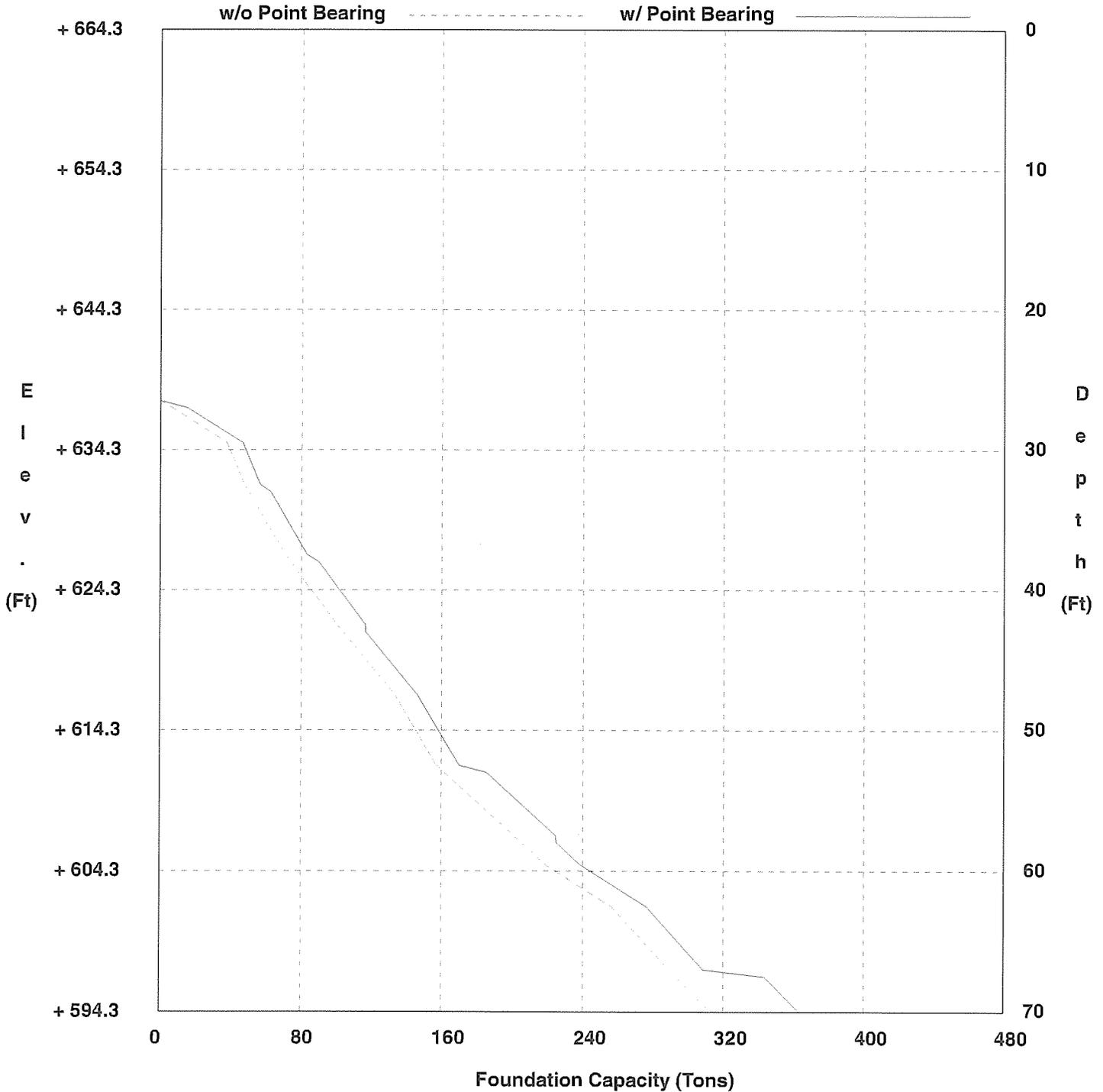
Hole B-12
Structure Bridges
Station
Offset

District 15
Date 6/25/2012
Grnd. Elev. 664.28 ft
GW Elev. N/A

36 inch Drilled Shaft
150 ton Design Load
Tip Elevation = + 615.78

+664.28 Top Hole Elevation
+637.78 Disregard Elevation

Disregard above hard strata disabled
Pb: 2 Diameters Below Tip Checked
TCP Capacity Values Used
0.7 Soil Reduction Factor Used



CITY OF SAN ANTONIO

Issued By: CIMS Department
ID NO.: 40-00300

Date Issued: December 28, 2012
Page 1 of 1

**FORMAL INVITATION FOR BIDS (IFB) and CONTRACT
MARKET STREET REALIGNMENT #40-00300**

Sealed bids, subject to the Terms and Conditions of this Invitation for Bids and other contract provisions, will be received at the Office of the City Clerk, City Hall, 100 Military Plaza, 2nd floor San Antonio, Tx 78205 until **2:00 p.m. CST on Tuesday, February 5, 2013** and publicly read aloud at **114 W. Commerce, Municipal Plaza Building "B" Room**. This is the *solicitation deadline*. Bids must be submitted in a sealed envelope and clearly marked with the due date of bid, bidder name, Project Name and ID NO. The City is not responsible for submissions not clearly and appropriately marked. Late submissions will be rejected and returned to bidder. A Non-Mandatory Pre-submittal conference will be held at 114 W. Commerce, San Antonio, TX 78205 in the B Room on Tuesday, January 8, 2013 at 2:00 pm.

TABLE A - This invitation includes the following Contract Documents:

010 Invitation for Bids and Contract Signature Page	060 Subcontractor/Supplier Utilization Plan
020 Bid Form	075 Supplemental Conditions
025 Unit Pricing Form	076 Performance Bond
030 Qualification Questionnaire	081 Payment Bond
040 Standard Instructions to Respondent	081 General Conditions for Construction Contracts
050.01 SBEDA Guidelines	095 SAWS Special Conditions
	095 Heavy/Hwy Wage Decision

Plans, Specifications and Special Conditions may be purchased at a cost of **\$175.00** per set (tax included) from the office of **URS Corporation 9901 IH-10, Ste 350**, San Antonio, TX 78230 Phone- (210) 377-3764. No refund will be made for plan sets that are returned. Addenda will be posted on the web at www.sanantonio.gov/rfp listings along with this solicitation. Changes to Plans, Specifications and Special Conditions will be included in an addendum and may be obtained from the office of **URS Corporation**. Bidder understands and agrees that bidder is responsible for obtaining addenda and adhering to all requirements in addenda. City is not responsible for incorrect information obtained through other sources.

The following documents (fully completed and with original signatures) constitute the required information to be submitted as a part of the bid proposal clearly marked on the outside of the sealed envelope with the due date of bid, bidder name, Project Name and ID NO as follows:

- | | |
|---|---|
| 1.) 010 Invitation for Bids and Contract Signature Page | 5.) Bid Bond |
| 2.) 020 Bid Form | 6.) Subcontractor/Supplier Utilization Plan |
| 3.) 025 Unit Pricing Form | 7.) Signed Addenda Acknowledgement Forms |
| 4.) 030 Qualification Questionnaire | |

This is a Qualified Low Bid Solicitation. It is understood and agreed that the work is to be completed in full on or before **550** calendar days. This project includes hazardous environmental work. This project requires **2** project sign(s).

Respondents must demonstrate commitment to satisfy a twenty-five percent (25%) SBE subcontracting goal and twenty percent (20%) M/WBE subcontracting goal. In the absence of a waiver granted by the Small Business Office, failure of a Respondent to commit to satisfying the S/M/WBE subcontracting goals shall render its response NON-RESPONSIVE.

This is a Public Works Contract and chapter 2258 of the Texas Government Code requires that not less than the prevailing wage rate for work of a similar character in this locality shall be paid all laborers, workmen, and mechanics employed in the construction thereof. The Wage Decision Number **TX130016 01/04/2013 TX16** shall be used on this contract, which is available on the web at <http://www.wdol.gov/dba.aspx#0>.

The undersigned, by his/her signature, represents that he/she is authorized to bind the bidder to fully comply with Contract Documents for the amount(s) shown on the accompanying bid sheet(s). The work proposed to be done shall be accepted when fully completed and finished to the entire satisfaction of the City. The undersigned certifies all prices contained in this bid have been carefully checked and are submitted as correct and final. The Bidder by submitting this bid and signing below, acknowledges that he/she has received & read the entire Bid and Contract document and agrees to be bound by the terms therein, has received all Addenda, and agrees to the terms, conditions, and requirements of the bidder's bid proposal and all documents listed in TABLE A above and the enabling Ordinance and associated documentation that form the entire Contract upon approval by the City Council.

Official Name of Company (legal): _____

_____/_____
Original Signature of Person Authorized to Sign Bid/Contract Date Signer's Name: _____
(Please Print or Type)

CITY OF SAN ANTONIO

Project Name: Market Street Realignment
ID NO.: 40-00300

Date Issued: January 18, 2013
Page 1 of 2

020

BID FORM

The estimated construction budget for this contract is \$[\$27,051,000.00]

I. BASE BID

Amount of Street/Roadway Construction Base Bid (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of SAWS Water Base Bid (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of SAWS Sewer Base Bid (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of SAWS Chilled Water Base Bid (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of CPS Base Bid (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of AT&T Base Bid (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of Time Warner Cable Base Bid (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Total Amount of Base Bid (Insert Amount in Words and Numbers):

_____ \$ _____

II. ALTERNATES

Amount of each Alternates (if applicable) insert in Numbers: If Applicable, or write N/A, if not applicable

Additive Alternate #1: _____ \$ _____

Amount of Additive Alternate #1 (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of SAWS Water (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of SAWS Sewer (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of SAWS Chilled Water (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of CPS (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of AT&T (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Amount of Time Warner Cable (Insert Amount in Words and Numbers): If Applicable, or write N/A, if not applicable

_____ \$ _____

Total Amount of Bid for Additive Alternate #1 (Insert Amount in Words and Numbers):

_____ \$ _____

Revised Base Bid (Insert Amount in Words and Numbers):

_____ \$ _____

III. UNIT PRICES

Bidders shall submit unit pricing on the 025 Unit Pricing form, and it shall be attached immediately following this sheet.

IV. ALLOWANCES (if applicable)

Official Name of Company (legal)

Telephone No.

Address

Fax No.

City, State and Zip Code

E-mail Address

Name of the proposed **Project Manager:** _____

Name of the proposed **Site Superintendent:** _____

SUPPLEMENTAL CONDITIONS

1. **When submitting a bid in person, visitors to City Hall must allow time for security measures.** Visitors to City Hall will be required to enter through the east side of the building. The public will pass through a metal detector and x-ray machine located in the lobby. All packages, purses and carried items will be scanned during regular business hours of 7 a.m. to 7 p.m. After the public proceeds through the metal detector, they will sign in and receive a visitor's badge. For those that might require the use of a ramp, entry is available on the south side of the building (Dolorosa side). Security will meet the visitor in the basement with a hand scanner.
2. **Scope of the Work -** The Contractor shall furnish all the materials and perform all the Work called for in the Contract Documents and more specifically described in the Plans and Specification for the Project entitled.
3. The Contractor shall begin Work at the job site within seven (7) calendar days after the date of the Owner's written Authorization to Proceed issued by the Owner's Representative.
4. **Liquidated Damages for Delay in Substantial Completion & Final Completion:** Contractor shall pay Owner the sum indicated on the table below for each and every calendar day of unexcused delay in achieving Substantial Completion/Final Completion beyond the Scheduled Completion/Final Completion Dates. Any sums due and payable hereunder by Contractor shall be payable, not as a penalty, but as Liquidated Damages representing an estimate of delay damages likely to be sustained by Owner, estimated at the time of executing the Contract. Such Liquidated Damages shall apply regardless of whether Contractor has been terminated by Owner prior to Substantial Completion, so long as Contractor's actions or inactions contributed to the delay. Such Liquidated Damages shall be in addition to and not in preclusion of any recovery of actual damages resulting from other defects in Contractor's performance hereunder for matters other than delays in Substantial Completion/Final Completion. When Owner reasonably believes that Substantial Completion/Final Completion will be inexcusably delayed, Owner shall be entitled, but not required, to withhold from any amounts otherwise due to Contractor an amount then believed by Owner to be adequate to recover liquidated damages applicable to such delays. If and when Contractor overcomes the delay in achieving Substantial Completion/Final Completion, or any part thereof, for which Owner has withheld payment, Owner promptly shall release to Contractor those funds withheld but no longer applicable as Liquidated Damages.
5. Contractor is to bid standard plan quantities based on the unit rates provided in the summary sheets. Contractor is to submit a separate bid for the TCP alternate. The total project low bid calculation will include a summation of the bid set and TCP alternate bid. The contractor selection is based upon the lowest qualified aggregate bid.
6. Liquidated damages will be calculated based on the project milestones as shown in the tables below.

Liquidated Damages for the Base Bid Traffic Control Plan			
Contractual Milestone	Contractual Milestone Description and Requirements	Milestone Date	Liquidated Damages
1	Contractor must complete Phase 2, Step 2 on Market Street and on the West Frontage Road per sheets 82-85, abandon Bowie Street, & construct Pedestrian Bridge.	11/1/2013	\$5,000/day
2	Contractor must complete the southbound exit ramp to Cesar Chavez as defined in sheets 92 & 93. Work includes IH 37 signing, final hotmix, final pavement markings, and final signing of said exit ramp to Sta. 26+00.	3/14/2014	\$5,000/day
3	Construction must satisfy significant completion status. All roadways must be open to traffic and no detours or lane closures will be allowed beyond this date. The roadways must be striped and signed to final configuration.	8/1/2014	\$5,000/day
4	Final Completion	10/3/2014	\$1,500/day

Liquidated Damages for the Alternate Bid Traffic Control Plan			
Contractual Milestone	Contractual Milestone Description and Requirements	Milestone Date	Liquidated Damages
1	Contractor must complete Phase I Step I of the Traffic Control Plan in its entirety and install the Additive Alternate Detour Plan. Fully implement the Additive Alternate Detour Plan so that it is open and functioning.	9/14/2013	\$5,000/day
2	Contractor must complete the southbound exit ramp to Cesar Chavez as defined in sheets 92 & 93. Work includes IH 37 signing, final hotmix, final pavement markings, and final signing of said exit ramp to Sta. 26+00.	3/14/2014	\$5,000/day
3	Construction must satisfy significant completion status. All roadways must be open to traffic and no detours or lane closures will be allowed beyond this date. The Additive Alternate Detour Plan must be discontinued and removed. Intersections along the detour route should be returned to their original configurations or as described in the alternate detour construction documents. All roadways in the detour route and within the Market Street Project must be opened to traffic and be striped and signed to final configuration.	8/1/2014	\$5,000/day
4	Final Completion	10/3/2014	\$1,500/day

7. If the City chooses the Additive Alternate Detour Plan, the Contractor will not be compensated for the Traffic Control Plan items within the Phase 2 Step 2 base bid. If the City chooses the Additive Alternate Detour Plan, the Contractor will be notified of its decision no later than by the Notice to Proceed date.

8. The Contract Sum - The Owner shall pay the Contractor for the proper performance of the Contract, subject to additions and deduction provided therein, the Contract sum is listed in the Purchase Order.

9. Partial Payment - Each month, the Owner shall make a progress payment as approved by the Owner's Representative in accordance with the General Conditions.

10. Acceptance and Final Payment - Final Payment shall be due on final Owner acceptance of the Project Work, provided the Contract has been completed by Contractor as provided in the General Conditions. Before issuance of the final payment, the Contractor shall submit an affidavit and reasonable additional supporting evidence if required, as satisfactory to the Director of Finance, City of San Antonio, that all labor payrolls, construction materials and supply bills, subcontractors, and other indebtedness connected with the Work have been paid in full, or that an outstanding debt is being disputed and that the corporate surety or its agent is processing the outstanding claim and is willing to defend and/or indemnify the City should the City make final Contract payment.

11. Contractor shall comply with Standard Specification 1000 in its invoicing.

General Decision Number: TX130016 01/04/2013 TX16

Superseded General Decision Number: TX20120016

State: Texas

Construction Types: Heavy and Highway

Counties: Atascosa, Bandera, Bastrop, Bell, Bexar, Brazos, Burleson, Caldwell, Comal, Coryell, Guadalupe, Hays, Kendall, Lampasas, McLennan, Medina, Robertson, Travis, Williamson and Wilson Counties in Texas.

HEAVY (excluding tunnels and dams, not to be used for work on Sewage or Water Treatment Plants or Lift / Pump Stations in Bell, Coryell, McClennon and Williamson Counties) and HIGHWAY Construction Projects

Modification Number	Publication Date
0	01/04/2013

* SUTX2011-006 08/03/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (Paving and Structures).....	\$ 12.56	
ELECTRICIAN.....	\$ 26.35	
FORM BUILDER/FORM SETTER Paving & Curb.....	\$ 12.94	
Structures.....	\$ 12.87	
LABORER Asphalt Raker.....	\$ 12.12	
Flagger.....	\$ 9.45	
Laborer, Common.....	\$ 10.50	
Laborer, Utility.....	\$ 12.27	
Pipelayer.....	\$ 12.79	
Work Zone Barricade Servicer.....	\$ 11.85	
PAINTER (Structures).....	\$ 18.34	
POWER EQUIPMENT OPERATOR: Agricultural Tractor.....	\$ 12.69	
Asphalt Distributor.....	\$ 15.55	
Asphalt Paving Machine.....	\$ 14.36	
Boom Truck.....	\$ 18.36	
Broom or Sweeper.....	\$ 11.04	
Concrete Pavement Finishing Machine.....	\$ 15.48	
Crane, Hydraulic 80 tons or less.....	\$ 18.36	
Crane, Lattice Boom 80 tons or less.....	\$ 15.87	
Crane, Lattice Boom over 80 tons.....	\$ 19.38	
Crawler Tractor.....	\$ 15.67	
Directional Drilling Locator.....	\$ 11.67	
Directional Drilling Operator.....	\$ 17.24	
Excavator 50,000 lbs or Less.....	\$ 12.88	
Excavator over 50,000 lbs...\$	17.71	
Foundation Drill, Truck Mounted.....	\$ 16.93	
Front End Loader, 3 CY or Less.....	\$ 13.04	
Front End Loader, Over 3 CY.\$	13.21	
Loader/Backhoe.....	\$ 14.12	
Mechanic.....	\$ 17.10	
Milling Machine.....	\$ 14.18	

Motor Grader, Fine Grade....	\$ 18.51
Motor Grader, Rough.....	\$ 14.63
Pavement Marking Machine....	\$ 19.17
Reclaimer/Pulverizer.....	\$ 12.88
Roller, Asphalt.....	\$ 12.78
Roller, Other.....	\$ 10.50
Scraper.....	\$ 12.27
Spreader Box.....	\$ 14.04
Trenching Machine, Heavy....	\$ 18.48
Servicer.....	\$ 14.51
Steel Worker	
Reinforcing.....	\$ 14.00
Structural.....	\$ 19.29
TRAFFIC SIGNAL INSTALLER	
Traffic Signal/Light Pole	
Worker.....	\$ 16.00
TRUCK DRIVER	
Lowboy-Float.....	\$ 15.66
Off Road Hauler.....	\$ 11.88
Single Axle.....	\$ 11.79
Single or Tandem Axle Dump	
Truck.....	\$ 11.68
Tandem Axle Tractor w/Semi	
Trailer.....	\$ 12.81
WELDER.....	\$ 15.97

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the

Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

CITY OF SAN ANTONIO, TEXAS
MARKET STREET REALIGNMENT
GOVERNING SPECIFICATIONS

All standard City of San Antonio, Texas Department of Transportation, and San Antonio Water System specifications, special provisions and special specifications applicable to this project are identified as follows:

CITY OF SAN ANTONIO
STANDARD SPECIFICATIONS FOR CONSTRUCTION (JUNE 2008)

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
100	MOBILIZATION
101	PREPARING RIGHT-OF-WAY
106	BOX CULVERT EXCAVATION AND BACKFILLING
202	PRIME COAT
203	TACK COAT
205	HOT MIX ASPHALTIC CONCRETE PAVEMENT
208	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT
209	CONCRETE PAVEMENT
306	STRUCTURAL EXCAVATION
307	CONCRETE STRUCTURES
308	DRILLED SHAFTS AND UNDER-REAMED FOUNDATIONS
309	PRECAST REINFORCED CONCRETE BOX CULVERTS
401	REINFORCED CONCRETE PIPE
403	STORM SEWER JUNCTION BOXES AND INLETS
406	JACKING, BORING AND TUNNELING
407	CONCRETE ENCASEMENT, CRADLES, SADDLES, AND COLLARS
409	CAST IRON CASTINGS
410	SUBGRADE FILLER
413	FLOWABLE FILL
500	CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER
502	CONCRETE SIDEWALKS AND DRIVEWAYS
503	ASPHALTIC CONCRETE, PORTLAND CEMENT CONCRETE, AND GRAVEL DRIVEWAYS
505	CONCRETE RIPRAP
506	CONCRETE RETAINING WALL – COMBINATION TYPE
507	CHAIN LINK WIRE FENCE
511	CUTTING AND REPLACING PAVEMENTS (TRENCH REPAIR)
520	HYDROMULCH
524	CONCRETE STEPS
526	FIELD OFFICE
531	SIGNS

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
535	HOT APPLIED THERMOPLASTIC PAVEMENT MARKINGS
537	RAISED PAVEMENT MARKERS
540	TEMPORARY EROSION, SEDIMENTATION AND WATER POLLUTION PREVENTION & CONTROL
550	TRENCH EXCAVATION SAFETY PROTECTION
551	SPECIAL SHORING
600	TRAFFIC SIGNAL GENERAL CONDITIONS
615	TRAFFIC SIGNAL CONTROLLER CABINET
618	CONDUIT
620	ELECTRICAL CONDUCTORS
624	GROUND BOXES
628	ELECTRICAL SERVICES
633	BATTERY BACKUP SYSTEM FOR TRAFFIC SIGNAL
655	CONTROLLER FOUNDATION AND PEDESTAL POSTS
680	INSTALLATION OF HIGHWAY TRAFFIC SIGNALS
681	TEMPORARY TRAFFIC SIGNALS
682	VEHICLE AND PEDESTRIAN SIGNAL HEADS
683	LED COUNTDOWN PEDESTRIAN SIGNAL MODULE
684	TRAFFIC SIGNAL CABLES
686	TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL)
687	PEDESTAL POLE ASSEMBLIES
688	PEDESTRIAN DETECTORS AND VEHICLE LOOP DETECTORS
693	INTERNALLY LIGHTED STREET NAME SIGN ASSEMBLIES
695	EMERGENCY VEHICLE TRAFFIC SIGNAL PRIORITY CONTROL SYSTEM
696	RADAR VEHICLE DETECTION DEVICES (RVDD)
700	SCHEDULE
1000	WEB PORTAL

CITY OF SAN ANTONIO SPECIAL PROVISIONS

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
	SPECIAL PROVISION UPDATE MAY 2009
	SPECIAL PROVISION UPDATE FEBRUARY 2010
	SPECIAL PROVISION UPDATE JUNE 2010
	SPECIAL PROVISION UPDATE TO THE GENERAL CONDITIONS
526SPL	FIELD OFFICE
680SPL	INSTALLATION OF HIGHWAY TRAFFIC SIGNALS
9800	PROJECT SIGNS

CITY OF SAN ANTONIO SPECIAL SPECIFICATIONS

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
535.XX	BIKE PAVEMENT MARKINGS
9000	PROJECT SIGNS
9001	GROUT COLUMNS
9002	TEMPORARY SUSPENSION OF WORK
9003	SITE FURNISHINGS
9004	LANDSCAPE CONCRETE COLOR AND FINISHES
9005	CRUSHED STONE, GRAVEL, AND COBBLES
9006	IRRIGATION
9007	PLANTING
9008	SUBSURFACE DRAINAGE FOR LANDSCAPE AREAS
9009	GEOGRID FOR BASE AND EMBANKMENT REINFORCEMENT
9010	VALMONT ILLUMINATION STREET LIGHT ASSEMBLY
9011	GREENSTAR LED LUMINAIRE, GALAXY XD – GLX30 & GLX48
9012	LANDSCAPE FORMS PEDESTRIAN LIGHT
9013	LANDSCAPE FORMS HAWTHORN BOLLARD LIGHT
9014	SPECIAL ENVIRONMENTAL SPECIFICATION FOR CLASS 2 NON-HAZARDOUS SOILS
9015	VERTICAL CIRCULATOR
9016	STORMWATER PLANTER
9017	TEMPORARY CLOSURE OF MARKET STREET
9018	ORNAMENTAL FENCE AND GATE
9019	PEDESTRIAN ENHANCEMENTS ON COMMERCE STREET

TEXAS DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF
HIGHWAYS, STREETS, AND BRIDGES 2004

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
0104	REMOVING CONCRETE
0110	EXCAVATION (132)
0132	EMBANKMENT (100)(204)(210)(216)(400)
0160	TOPSOIL
0164	BROADCAST SEED (162)(166)(168)
0168	VEGETATIVE WATERING
0247	FLEXIBLE BASE (105)(204)(210)(216)(520)
0275	CEMENT TREATMENT (ROAD-MIXED) (132)(204)(210)(216)(247)(300)(310)(520)
0340	DENSE-GRADED HOT-MIX ASPHALT (METHOD) (210)(300)(301)(320)(520)(585)
0342	PERMEABLE FRICTION COURSE (PFC) (210)(300)(301)(320)(520)(585)
0400	EXCAVATION AND BACKFILL FOR STRUCTURES (132)(401)(420)(421)
0401	FLOWABLE BACKFILL
0403	TEMPORARY SPECIAL SHORING (423)
0416	DRILLED SHAFT FOUNDATIONS (420)(421)(440)(448)
0420	CONCRETE STRUCTURES (400)(404)(421)(426)(427)(438)(440)(448)
0422	REINFORCED CONCRETE SLAB (420)(421)(440)
0423	RETAINING WALLS (110)(132)(400)(420)(421)(424)(440)(445)(556)
0425	PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS (420)(421) (424)(426)(427)(434)(440)(442)
0428	CONCRETE SURFACE TREATMENT (427)
0432	RIPRAP (420)(421)(427)(440)
0442	METAL FOR STRUCTURES (441)(445)(446)(447)(448)(449)
0450	RAILING (420)(421)(424)(440)(441)(442)(445)(446)(448)
0452	REMOVE RAILING
0454	BRIDGE EXPANSION JOINTS (429)(442)
0460	CORRUGATED METAL PIPE (400)(445)
0464	REINFORCED CONCRETE PIPE (400)
0465	MANHOLES AND INLETS (400)(420)(421)(440)(471)
0471	FRAMES, GRATES, RINGS, AND COVERS (441)(445)(448)
0481	PVC PIPE FOR DRAINS (400)
0495	RAISING EXISTING STRUCTURES
0496	REMOVING STRUCTURES (430)
0502	BARRICADES, SIGNS, AND TRAFFIC HANDLING
0508	CONSTRUCTING DETOURS
0512	PORTABLE CONCRETE TRAFFIC BARRIER (420)(421)(424)(440)(442)
0514	PERMANENT CONCRETE TRAFFIC BARRIER (400)(416)(420)(421)(424)(440) (442)(448)
0540	METAL BEAM GUARD FENCE (421)(445)(529)(542)(544)
0542	REMOVING METAL BEAM GUARD FENCE
0545	CRUSH CUSHION ATTENUATORS (421)
0610	ROADWAY ILLUMINATION ASSEMBLIES (421)(441)(442)(445)(446)(449)(616) (620)
0617	TEMPORARY ROADWAY ILLUMINATION (416)(610)(613)(614)(618)(620)(621) (622)(624)(627)(628)

0618 CONDUIT (400)(445)(476)(622)
0620 ELECTRICAL CONDUCTORS

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
0624	GROUND BOXES (421)(440)
0628	ELECTRICAL SERVICES (441)(445)(449)(618)(620)(627)(656)
0636	ALUMINUM SIGNS (643)
0644	SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES (421)(440)(441)(442) (445)(634)(636)(643)(656)
0647	LARGE ROADSIDE SIGN SUPPORTS AND ASSEMBLIES (421)(440)(441)(442) (445)(634)
0650	OVERHEAD SIGN SUPPORTS (416)(420)(421)(441)(442)(445)(449)(618)
0658	DELINEATOR AND OBJECT MARKER ASSEMBLIES (445)
0662	WORKZONE PAVEMENT MARKINGS (666)(668)(672)(677)
0666	REFLECTORIZED PAVEMENT MARKINGS (316)(318)(662)(677)(678)
0672	RAISED PAVEMENT MARKERS (677)(678)
0677	ELIMINATE EXISTING PAVEMENT MARKINGS AND MARKERS (300)(302)(316)
0690	MAINTENANCE OF TRAFFIC SIGNALS (416)(421)(476)(610)(618)(620)(622)(624) (625)(627)

TxDOT SPECIAL PROVISIONS

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
132-007	EMBANKMENT
275-003	CEMENT TREATMENT (ROAD MIXED)
416-001	DRILLED SHAFT FOUNDATIONS
420-002	CONCRETE STRUCTURES
421-035	HYDRAULIC CEMENT CONCRETE
424-002	PRECAST CONCRETE STRUCTURES (FABRICATION)
425-001	PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS
448-002	STRUCTURAL FIELD WELDING
450-001	RAILING
502-033	BARRICADES, SIGNS, AND TRAFFIC HANDLING
512-002	PORTABLE CONCRETE TRAFFIC BARRIER
514-002	PERMANENT CONCRETE TRAFFIC BARRIER
540-031	METAL BEAM GUARD FENCE
556-003	PIPE UNDERDRAINS
610-005	ROADWAY ILLUMINATION ASSEMBLIES
617-003	TEMPORARY ROADWAY ILLUMINATION
620-001	ELECTRICAL CONDUCTORS
624-014	GROUND BOXES
628-003	ELECTRICAL SERVICES
636-014	ALUMINUM SIGNS
666-014	REFLECTORIZED PAVEMENT MARKINGS
672-034	RAISED PAVEMENT MARKERS
690-009	MAINTENANCE OF TRAFFIC SIGNALS

TxDOT SPECIAL SPECIFICATIONS

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
4601	PRESTRESSED GROUND ANCHORS
8260	LED COUNTDOWN PEDESTRIAN SIGNAL MODULE
8615	RADAR ADVANCE DETECTION DEVICES
6007	REMOVING TRAFFIC SIGNALS
6834	PORTABLE CHANGEABLE MESSAGE SIGN

SAN ANTONIO WATER SYSTEM
SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION
JUNE 2009

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
100	MOBILIZATION
101	PREPARATION OF RIGHT-OF-WAY
550	TRENCH EXCAVATION SAFETY PROTECTION
804	EXCAVATION, TRENCHING AND BACKFILL
808	REINFORCED CONCRETE VAULTS
814	DUCTILE IRON PIPE
816	STEEL PIPE INSTALLATION
818	PVC (C-900) PIPE INSTALLATION
820	CONCRETE STEEL CYLINDER PIPE INSTALLATION
824	SERVICE SUPPLY LINES
828	GATE VALVES
830	BUTTERFLY VALVES
831	CUT-IN TEES
833	METER AND METER BOX INSTALLATION
834	FIRE HYDRANTS
836	GREY-IRON AND DUCTILE-IRON FITTINGS
839	ANCHORAGE AND THRUST BLOCKING
840	WATER TIE-INS
841	HYDROSTATIC TESTING OPERATIONS
844	BLOWOFF ASSEMBLIES
846	AIR RELEASE ASSEMBLIES
847	DISINFECTION
852	SANITARY SEWER MANHOLES
856	JACKING, BORING OR TUNNELING PIPE
858	CONCRETE ENCASEMENT, CRADLES, SADDLES AND COLLARS
862	ABANDONEMENT OF SEWER MAINS AND MANHOLES

SAWS SPECIAL SPECIFICATIONS

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
3000	REMOVAL, TRANSPORT AND DISPOSAL OF AC PIPE

Chilled Water and Recycled Water

DIVISION 1 - GENERAL REQUIREMENTS

010010	SUMMARY OF WORK
010025	MEASUREMENT AND PAYMENT
010300	SUBMITTALS
010400	QUALITY CONTROL
010720	PROJECT RECORD DOCUMENTS

DIVISION 2 – EXISTING CONDITIONS (NOT USED)

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
DIVISION 3 – CONCRETE	
030600	GROUT
DIVISION 4 – MASONRY (NOT USED)	
DIVISION 5 – METALS (NOT USED)	
DIVISION 6 – WOOD, PLASTICS AND COMPOSITES (NOT USED)	
DIVISION 7 – THERMAL AND MOISTURE PROTECTION (NOT USED)	
DIVISION 8 – OPENINGS (NOT USED)	
DIVISION 9 - FINISHES	
090900	PAINTING
DIVISION 10 – SPECIALTIES (NOT USED)	
DIVISION 11 – EQUIPMENT (NOT USED)	
DIVISION 21 – FIRE SUPPRESSION (NOT USED)	
DIVISION 22 – PLUMBING (NOT USED)	
DIVISION 23 – HEATING VENTILATING AND AIR CONDITIONING (NOT USED)	
DIVISION 26 – ELECTRICAL	
260110	CATHODIC PROTECTION
DIVISION 27 – COMMUNICATION (NOT USED)	
DIVISION 28 – ELECTRIC SAFETY & SECURITY (NOT USED)	
DIVISION 31 – EARTHWORK	
(In Accordance with COSA STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND SAWS SPECIFICATIONS FOR WATER & SANITARY SEWER CONSTRUCTION)	
DIVISION 32 – EXTERIOR IMPROVEMENTS	
(In Accordance with COSA STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND SAWS SPECIFICATIONS FOR WATER & SANITARY SEWER CONSTRUCTION)	
DIVISION 33 – UTILITIES	
330500	COMMON WORK RESULTS
332600	RECYCLED WATER MAIN PIPE
332640	VALVES
336313	UNDERGROUND CHILLED WATER

CITY PUBLIC SERVICE
SPECIAL SPECIFICATIONS FOR CONSTRUCTION

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
9200	CPS ENERGY ELECTRICAL CONDUIT SYSTEM
9201	CPS ENERGY NATURAL GAS DISTRIBUTION SYSTEM

AT&T
SPECIAL SPECIFICATIONS FOR CONSTRUCTION

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
9100	AT&T TELECOMMUNICATION SYSTEM

San Antonio Water System Standard Specifications for Construction

ITEM NO. 3000 SPECIFICATIONS FOR HANDLING ASBESTOS CEMENT PIPE

INTRODUCTION

This item shall govern the uncovering, dislodging, handling, removing, transporting, and disposing of asbestos cement (AC) pipe and other asbestos containing materials (ACM). AC pipe is also known as transite pipe. AC pipe typically contains from 15% to 20% chrysotile and crocidolite asbestos and is considered to be an asbestos-containing material. The disturbance and/or removal of this material is governed by the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 Code of Federal Regulations (CFR) 61; by the Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1101; the State of Texas Occupation Code, Chapter 1954 and Health and Safety Code Chapters 361 and 363; and the Texas Administrative Code (TAC), 25 TAC Chapter 295 and 30 TAC Chapter 330.3 and 330.171. The material is classified by definition under 40 CFR 61, Subpart M, Section 61.141 as Category II, non-friable ACM, unless, when dry, it can be crumbled, pulverized, or reduced to powder by hand pressure. At that time, it becomes classified as regulated ACM (RACM) and subject to regulation under Subpart M. It is the intent of this specification to define procedures that maintain the AC pipe in an intact state. Contractors shall not use procedures that subject the AC pipe to forces that will crumble, pulverize, or reduce to powder the AC pipe. By using procedures that have a low to no probability of fiber release, the pipe retains its classification as Category II, non-friable ACM. These procedures will protect workers from the health risk associated with airborne asbestos.

References to the City of San Antonio (COSA) pertain only to those joint bid projects, where joint jurisdiction occurs due to the contract's binding agreement. Definitions used and incorporated as part of this specification are located in Appendix One. Applicable standards and guidelines used and incorporated as part of this specification are located in Appendix Two.

3000.1 DESCRIPTION

This item shall consist of the uncovering, dislodging, handling, removing, transporting, and disposing of AC pipe, joints, wrappings and other ACM. To comply with NESHAP and OSHA requirements, this project will require workers trained in using wet technique procedures to dislodge and remove AC pipe, AC pipe joints, valves (any type) containing ACM, and any surrounding soils that may contain ACM. The Contractor shall develop an Asbestos Removal Work Plan, herein referred to as "the Plan", (see Appendix Three, Example Procedures) that provides specific and detailed procedures they and/or any of their subcontractors will follow to maintain the AC pipe in an intact state. The Plan shall specify the wet techniques to be followed when the pipe collars are dislodged. The Plan shall include procedures/actions to be followed if the intact AC pipe becomes broken and the possibility exists of asbestos fibers becoming airborne. By regulatory definition, if and when the pipe and/or collar are broken, they become a regulated ACM (RACM) and subject to NESHAP. The Plan shall state or reference procedures in the contractor's Safety and health program document that they will follow to comply with the federal OSHA asbestos standard. Finally, the Plan shall contain provisions for the

San Antonio Water System Standard Specifications for Construction

environmentally compliant disposal of the intact AC pipe and any RACM created during the removal process. The Plan shall be provided to the San Antonio Water System (SAWS) at the pre-construction (pre-con) meeting for its review and approval prior to initiating uncovering operations to verify the contractor has met the contractual requirements. No handling and disposing of SAWS AC pipe will begin without approval from SAWS. Any ACM encountered that is not SAWS pipe and not previously identified by SAWS or shown on SAWS plans will be not be authorized for disposal payment. Preparation and submission of the Plan shall be considered subsidiary to the work required and no direct payment will be made.

If the project is joint bid with COSA, the Plan shall also be submitted to COSA Environmental representatives for their review and approval, as required. The Contractor shall comply with the COSA and any other agencies requirements. Any uncovering, dislodging, handling, or disposing of AC pipe and associated written handling and removal plans, such as an abatement plan, required by another agency will be paid for by that agency using their specification/bid item number. Again, no handling and disposing of SAWS AC pipe will begin without approval from SAWS.

To meet and/or exceed NESHAP and OSHA guidelines, the contractor may subcontract the AC pipe handling plan and work to an Environmental Protection Agency (EPA) accredited and Texas Department of State Health Services (DSHS) licensed asbestos abatement contractor, DSHS licensed asbestos consultant, and DSHS air monitoring technician.

NESHAP guidelines apply to facility projects in which the combined amount of regulated asbestos containing material (RACM) is at least 260 linear feet (LF) or 35 cubic feet or 160 square feet. This means that if the combined amount of RACM is at least 260 linear feet of the AC pipe, including AC collars, and it is expected to become or becomes crumbled, pulverized, or reduced to powder, then the project is subject to the NESHAP provisions of reporting and asbestos emission control paragraphs in 40 CFR Section 61.145. If the DSHS RACM limit of 260 LF is exceeded, the contractor is responsible for any DSHS administrative fees and fines. The contractor shall be responsible for submitting the DSHS notification with copies to SAWS and COSA Environmental Division for joint bid projects.

If the scope of the project may involve the threshold amount (260 linear feet or greater), a Demolition/Renovation Notification Form will be sent to DSHS by the Contractor. This form shall be post-marked no later than 10 working days prior to the start of any asbestos handling work.

All projects involving AC pipe require that NESHAP and OSHA standards are met and/or exceeded. The contractor shall perform all work in a manner that meets or exceeds those standards. The contractor shall have and follow a written Plan that describes their detailed handling and disposal procedures of the AC pipe. The contractor shall submit copies of the Plan to SAWS for review and approval and for joint bids, COSA Environmental representatives, as required. OSHA requires that during any ACM disturbance, regardless of amount, the asbestos worker(s) shall be protected from potential airborne asbestos exposure in excess of the permissible exposure limit or excursion limit as stipulated in 29 CFR 1926.1101.

San Antonio Water System Standard Specifications for Construction

MEASUREMENT

3000.2 SUBMITTALS AND NOTICES

- A. At the Pre-construction Conference/Meeting the following shall be submitted for review and approval to SAWS, and when applicable COSA Environmental representatives, as required:
1. The Plan in accordance with: NESHAP, OSHA, this Special Specifications, Item Number 3000, and State requirements. The number of copies submitted of the Plan is the same as the number of copies required under other bid submittal requirements with one copy being submitted electronically. The work plan shall provide detailed procedures for retaining the AC pipe's Category II, non-friable NESHAP classification. The contractor shall incorporate working with ACM and complying with mandated OSHA requirements for Class II, asbestos work in their project specific Safety and Health Plan. The guidance provided in these special specifications is not intended and does not constitute an asbestos abatement project design as described under 25 TAC, Chapter 295.
 2. Submit proof satisfactory to SAWS, and as applicable, COSA Environmental representatives, that required permits, site location, and arrangements for transport and disposal of asbestos containing waste material (ACWM) have been made that meet Texas environmental statutes and regulations. Include the name of the transporter, their Texas asbestos transporter license number, and the name of the approved landfill where the AC pipe and ACM waste will be buried.
- B. During Asbestos Handling and Disposal Activities: Submit copies to SAWS and if applicable, COSA Environmental representatives of all transport manifests, trip tickets, and disposal receipts for all ACWM removed from the work area during the project. The Contractor will sign manifests as the SAWS's representative (generator) for the AC pipe and provide copies to the SAWS Construction Inspection Department for final payment.

3000.3 CONSTRUCTION REQUIREMENTS

- A. The Work includes all work specified herein, to include mobilization and demobilization, labor, materials, overhead, profit, taxes, transportation, disposal fees, administrative fees, and incidental cost. Estimating areas, quantities, and weight are the sole responsibility of the Contractor.
- B. The Contractor shall remove and double bag with 6-mil polyethylene sheeting to yield a total of at least 12-mil, the asbestos pipe in the trench or immediately when it comes out of the trench, seal, label, transport, and dispose of all Category II non-friable ACM and RACM in compliance with applicable current Federal, State and local regulations, laws, ordinances, rules, standards and regulatory agency recommended requirements.
- C. The Contractor shall notify SAWS and, if applicable COSA representatives, at least 72 hours prior to beginning uncovering, dislodging, handling, and removing the AC pipe. AC pipe uncovering, dislodging, handling, and/or removing shall be conducted during regular business hours, 8 a.m. to 5 p.m., Monday-Friday. No uncovering, dislodging, handling, and or removing of AC pipe outside of the normal business

San Antonio Water System Standard Specifications for Construction

hours or during the weekend is allowed unless special circumstances require the contractor to do so and the work has been approved in writing at least 72 hours before the commencement of the work.

- D. Time is of the essence in removing the ACM from the project area. All work must be completed within the time period specified in the contract. SAWS, and if applicable COSA representative will be responsible for coordinating this work in high-density areas, such as schools, church facilities, and residential areas.
- E. All notifications required to state regulatory agencies will be made by the Contractor with copies provided to SAWS and as applicable, COSA representatives, including but not limited to the DSHS Demolition/Renovation Notification Form. If 260 linear feet or greater of RACM pipe will become crumbled, pulverized, or reduced to powder, the project is subject to NESHAP regulations and a Demolition/Renovation Notification Form will be sent to DSHS by the Contractor. This form will need to be post-marked no later than 10 working days prior to the start of any asbestos disturbance.
- F. The Contractor shall have an on-site supervisor, who is an OSHA Competent Person, present on the job site at all times that the AC pipe work is in progress. This supervisor shall be thoroughly familiar with and experienced at asbestos pipe handling using wet techniques and shall be familiar with and shall enforce the use of all safety procedures and equipment. He/she shall be knowledgeable of all applicable EPA, OSHA, and DSHS asbestos requirements and guidelines.
- G. The Contractor has: sole and primary responsibility for the “means and/or methods” of the work; an obligation to SAWS to inspect all stages of the work; and sole responsibility to supervise the performance of the work. Certain work practices for AC pipe disturbance are prohibited as per Section 3000.5.C.
- H. The Contractor shall be responsible for site safety and for taking all necessary precautions to protect the Contractor’s, SAWS, and COSA personnel and the public from airborne asbestos exposure and/or injury. The Contractor shall be responsible for maintaining the integrity of the work area.
- I. The Contractor shall confine operations at the site to the area requiring interface with the AC pipe and the general site area in close proximity to the project. The Contractor will not unreasonably encumber the site with materials or equipment. If ACWMs are required to be stored overnight in a secured area, the waste material and waste containers shall be labeled according to OSHA and EPA, and the State of Texas requirements, & containerized to preclude unauthorized disturbance of the ACWMs.
- J. The Contractor shall be responsible for obtaining and coordinating waste disposal and transport of ACWM to a Texas Commission on Environmental Quality (TCEQ) permitted asbestos waste landfill. Waste manifests shall be generated for the transport of the AC pipe and ACWMs from the project site to the landfill disposal site. The Contractor will sign the manifests as the SAWS’s representative (generator) for the AC pipe and provide copies to the SAWS Construction Inspection Department for final payment.

3000.4 SITE SECURITY

San Antonio Water System Standard Specifications for Construction

The Contractor shall demarcate the area of AC pipe interface (“regulated area”) with barrier tape and warning signs, per OSHA regulation 29 CFR 1926.1101. Access to the regulated area will be limited to authorized personnel and visitors. The contractor shall identify in their site specific safety and health plan how they intend to limit access and who is authorized to be in the demarcated area.

3000.5 AC PIPE HANDLING

- A. General: Any project involving AC pipe, the Contractor shall comply with OSHA standards and shall develop a Safety and Health Plan that complies with SAWS Specification 902, Construction Safety and Health Program requirements.
- B. The Contractor shall uncover, dislodge, handle, remove, transport, and dispose of all AC pipe specified in the SAWS bid documents/plans for this project using wet technique procedures. All work involving AC pipe and other ACM products must be addressed in the Plan. The Contractor shall take precautions to prevent damage to adjacent structures and material/finished material not required for AC pipe handling.
- C. Prohibited Work Practices and Engineering Controls: Contractors shall not use procedures that subject the AC pipe to forces that will crumble, pulverize, or reduce to powder the AC pipe. The following work practices and engineering controls shall **not** be used for work related to AC pipe or for work which disturbs ACM, regardless of asbestos exposure or the results of Initial Exposure Assessments:
1. High-speed abrasive disc saws and sanders not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.
 2. Carbide-tipped cutting blades.
 3. Electrical drills, chisels, and rasps used to make field connections in AC pipe.
 4. Shell cutters used to cut entry holes in AC pipe.
 5. A hammer and chisel without using wet techniques to remove pipe connections.
 6. Compressed air used to remove asbestos or material containing asbestos.
 7. Dry sweeping, dry shoveling, or other dry clean-up of dust and ACM debris.
 8. Employee rotation as a means of reducing employee exposure to asbestos.
- D. General Removal Work Practices: See Appendix Three for an example of the detailed general work practices a contractor could use in preparing an Asbestos Removal Work Plan. If the contractor uses the example, they must expand upon the provisions in the appendix to describe its specific procedures. The appendix is provided for illustrative purposes only. If the contractor employs this example, SAWS requires greater site specific detail to be included in the Plan submitted for approval.
- E. Disposal bags for RACM shall be 6-mil polyethylene and labeled as required by EPA regulation 40 CFR 61.150 (a)(1)(iv) or OSHA requirement 29 CFR 1926.1101(k)(8).
- F. Stick-on labels identifying the generator’s name (SAWS) and address and the project site location shall be applied to any asbestos waste disposal bag that contains RACM, as per EPA or OSHA and Department of Transportation requirements.
- G. Abandonment of AC water mains/pipes:

San Antonio Water System Standard Specifications for Construction

1. The Contractor is responsible for isolating the existing mains to remain in place by capping, plugging and blocking as necessary. The opening of an abandoned AC water main and all other openings or holes shall be blocked off by manually forcing cement grout or concrete into & around the openings in sufficient quantity to provide a permanent watertight seal. Abandonment of AC water mains will be considered subsidiary to the work required, & no direct payment will be made.
 2. Abandonment of Valves that contain ACM: Valves to be abandoned in the execution of the work shall have the valve box and extension packed with sand to within eight inches (8") of the street surface. The remaining eight inches (8") shall be filled with 3,000 psi concrete or an equivalent sand-cement mix and finished flush with the adjacent pavement or ground surface. The valves covers shall be salvaged & returned to SAWS. The abandonment of valves containing ACM will be considered subsidiary to the work required, & no direct payment will be made.
 3. Verification of Removal & Clean-up Procedures: The Contractor's on-site Competent Person shall inspect the work area, verify, and certify that no residual AC pipe fragments and debris remain.
- H. Disposal Procedures: Submit copies to SAWS Environmental Division and, if applicable COSA Environmental representatives, of all transport manifests, trip tickets, and disposal receipts for all asbestos waste materials removed from the work area during the project. The Contractor will sign manifests as the SAWS representative (generator) for the AC pipe and provide copies to SAWS Construction Inspections for final payment.

3000.6 Payment

The work performed per items shall be paid for at the unit price bid per lineal foot for the various sizes of AC pipe removed. The lineal foot bid price shall include "Removal, Transportation, and Disposal," which prices shall be full compensation for the work herein specified including the furnishing of all materials, equipment, tools and for the material disposal, submittals, and labor necessary to complete the work. No payment shall be made for the Plan.

3000.7 Bid Item

Removal, Transportation, and Disposal (Lineal Foot)

STANDARD PLAN NOTE:

Asbestos Cement (AC) pipe, also known as transite pipe, contains asbestos-containing material (ACM) and is located within the project limits. Special waste management procedures and health and safety requirements are applicable when handling, removing, and disposing of this pipe. Payment for such work is to be made under Special Specification Item No 3000, "Special Specification for Handling Asbestos Cement Pipe".

Appendix One

DEFINITIONS

As used anywhere in Item No. 3000, Specifications for Handling Asbestos-Cement Pipe, including all appendices, the following shall be defined to mean:

- A. Amended Water – Water to which a surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM.
- B. Approval – Means the SAWS contract requirements have been met but does not mean that the SAWS stipulates any written documents adequately comply with federal and state occupational safety and health regulatory requirements.
- C. Asbestos – A group of naturally occurring silicate minerals and includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that has been chemically treated and/or altered.
- D. Asbestos Containing Material (ACM) – Material or products that contain more than 1.0% of any kind of asbestos.
- E. Asbestos Containing Waste Material (ACWM) – Asbestos containing material or asbestos contaminated objects requiring disposal.
- F. Authorized Personnel – Any person authorized by the Contractor and required by work duties to be present in the regulated area.
- G. Authorized Visitor – SAWS representatives, and any representative of a regulatory or other agency having jurisdiction over the project.
- H. Asbestos Consultant – A person licensed by the Texas Department of State Health Services to perform the following asbestos abatement related functions in public buildings:
 - (1) Project design; (2) Asbestos surveys and condition assessment of ACM; (3) Asbestos Management Planning; (4) The collection of bulk material samples, airborne substance samples and the planning of sampling strategies; (5) Owner-representative services for asbestos abatement projects or O&M programs, including air monitoring and project management; (6) Consultation regarding regulatory compliance and all aspects of technical specifications and contract documents; and (7) The selection, fit testing, and appropriate use of personal protection equipment & the development of asbestos related engineering controls.
- I. Abatement Contractor – The company, agency, or entity licensed by the Texas Department of State Health Services that has been retained to perform asbestos abatement and other associated functions.
- J. Class II Asbestos Work (OSHA Standard) – Activities involving the removal of ACM, which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

San Antonio Water System Standard Specifications for Construction

- K. Competent Person – An individual who is capable of identifying existing asbestos hazards in the workplace, can select the appropriate control strategy for asbestos exposure, and who has the authority to take prompt corrective measures to eliminate them.
- L. Friable Asbestos – Asbestos containing material, that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure and includes previously non-friable material that has become damaged to the extent that, when dry, it may be crumbled, pulverized, or reduced to powder by hand pressure.
- M. NESHAP – The National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).
- N. OSHA – The Occupational Safety and Health Administration.
- O. Regulated Area – An area established by the Contractor or employer to demarcate areas where asbestos work is conducted and any adjoining area where debris and waste from such asbestos work accumulate; and an area within which airborne concentrations of asbestos exceed or there is a reasonable possibility they may exceed the permissible exposure limit.
- P. Regulated Asbestos Containing Material (RACM) – (1) Friable asbestos material; (2) Category I non-friable ACM that has become friable; (3) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or, (4) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by forces expected to act on the material in the course of the demolition or renovation operations regulated by 40 CFR Part 61, Subpart M.
- Q. Staging area – A pre-selected area where wrapped or containerized asbestos containing waste material will be placed prior to removal from the project site.
- R. Surfactant – A chemical wetting agent added to water to improve penetration.
- S. Uncovering operations – The use of mechanical, pneumatic, and/or manual procedures that disturb the material and/or soil above and/or around the AC pipe that would expose personnel to the AC pipe.

Appendix Two

APPLICABLE STANDARDS AND GUIDELINES

All work under these specifications shall be done in strict accordance with all applicable Federal, State, and local regulations, standards, and codes governing asbestos disturbance, handling, removal and disposal. Work activities shall also comply with SAWS and City of San Antonio Specifications related to safety and health.

The most recent edition of any relevant regulation, standard, or code shall be in effect. Where there is a conflict between the regulations, standards, codes, and/or these specifications, the most stringent requirements shall apply.

As a minimum, the Contractor shall comply with the applicable portions of the following:

- A. Occupational Safety and Health Administration (OSHA) including but not limited to:
 - 1. Title 29 Code of Federal Regulations (CFR) Section 1926 – Safety and Health Regulations for Construction
 - 2. Title 29 CFR Section 1926.1101 – Safety and Health Regulations for Construction - Asbestos.
 - 3. Title 29 CFR Section 1910.134 – Occupational Health and Safety Standards - Respiratory Protection.
 - 4. Title 29 CFR Section 1910.1020 – Occupational Health and Safety Standards - Access to Employee Exposure and Medical Records.
 - 5. Title 29 CFR Section 1910.1200 – Occupational Health and Safety Standards - Hazard Communication.
- B. Environmental Protection Agency (EPA) including but not limited to:
 - Title 40 Code of Federal Regulations Part 61 Subpart M – National Emission Standard for Asbestos.
- C. Texas Statutes, including but not limited to:
 - 1. Occupation Code, Chapter 1954, Asbestos Health Protection
 - 2. Health and Safety Code Chapters 361 and 363, Solid Waste
- D. Texas Administrative Code including but not limited to:
 - 1. Department of State Health Services, Title 25, Chapter 295, Subchapter C – Texas Asbestos Health Protection.
 - 2. Texas Administrative Code, Title 30, Chapter 330 Municipal Solid Waste.
- E. Department of Transportation – Hazardous Materials Regulations 49 CFR, Parts 170 – 180.
- F. SAWS Specification 902 Safety and Health Program

Appendix Three

Example of Procedures for Handling SAWS AC Pipe

The following is an example of procedures for handling SAWS AC pipe. A contractor could use them as a basis for preparing an Asbestos Removal Work Plan. The contractor must expand upon the provisions of this appendix to describe its specific procedures. This appendix is provided for illustrative purposes only. The contractor is required to develop a site specific Asbestos Removal Work Plan that complies with the provisions of this specification. If the contractor employs this example, SAWS will require greater site specific detail to be included in the plan submitted for approval.

Scope of Work: Describe the work and be specific as to the intended involvement with the existing AC pipe. For example: abandoning/removing X feet of AC pipe; tying into a section of an existing waterline and replacing one section (X feet) of pipe to make the connection; or connecting into an existing section of AC pipe by tapping into the AC pipe.

1. Excavation to pipe

- Excavate to within X inches/feet of the section of AC pipe to be replaced/removed. Depending upon the depth of the excavation, shoring may be needed following company procedures (provide or reference those procedures).
- Once the pipe is located, excavate (by machine or hand) on one/both sides of the pipe to expose the collars and pipe. Dig the earth from around the collars by hand to create a clearance space completely around the collar. **DO NOT SCRAPE OR ABRASE THE PIPE WITH THE EXCAVATION DEVICE(S).**
- Set up pumps to evacuate any residual water when the AC pipe is dislodged.

2. Wet method use

- Make the amended water solution by mixing 1 ounce of a liquid detergent (Dawn, Joy, other) with 2 to 3 gallons of water in a 2 to 3 gallon mist sprayer. Other size sprayers may be used.
- Wet each portion of the pipe, normally just the collar, to be removed with the amended water (water/soap) solution.
- Use the mist sprayer to produce a “mist” application and continuously wet the collars throughout the wrapping, cracking, and removal process. A worker shall be assigned to and is responsible for this procedure during the entire dislodging process.

3. Only cracking AC pipe collars is approved

- Wrap wet towels/burlap/other defined absorbent material around the collar. Wrap the collar with at least two layers of 6-mil polyethylene sheeting to provide a total of at least 12-mil. It is recommended that additional poly be used on the collars to minimize possible tearing of the plastic.

San Antonio Water System Standard Specifications for Construction

- Place another layer of wet towels/burlap/ other defined absorbent material on the wrapped collar.
- Use the flat head end of a sledgehammer to crack the collar while continuously “misting” the collar. Strike the collar on the side of the section of pipe to be removed to prevent the remaining section of pipe from being broken.
- Put all of the pieces of collar into a 6-mil polyethylene waste bag. Look for small pieces that may have been generated during the cracking process, wet them, and place them in the waste bag.

NOTE: When the collars are cracked and removed from a shutdown waterline, residual water may drain from the dislodged AC pipe. Follow company safety procedures to control the water (provide or reference those procedures).

4. Double bag all AC waste materials

- All visible AC pipe materials including collars, towels, rubber gloves, gaskets, and other items suspected of containing asbestos shall be double bagged using two (2) 6-mil AC waste bags. The inner bag contents shall be mist sprayed with amended water or mixed with water from the trench prior to closing to maintain the contents wet. Close the bag when it is half full by twisting the top of the bag and sealing with moisture resistant tape.
- If the asbestos waste bag is small enough, it may be placed inside the section of intact pipe before the pipe is wrapped in at least two layers of 6-mil poly. If placing the waste bag inside the pipe, do not force it causing it to tear.

5. Removal of pipe and waste bag from trench

- All sections of “intact” pipe shall be wrapped in a minimum of two (2) layers of 6-mil poly sheets (12-mil total) while in the trench and lifted out of the trench using only nylon slings. If the trench contains water, the pipe shall be lifted out of the trench using only nylon slings and placed on a minimum of two (2) layers of 6-mil poly sheets (12-mil total) on the ground next to the trench.
- Wrap each pipe segment in at least 12-mil of poly and secure with tape.
- Lift the ACM waste bag(s) from the trench and move it/them to a secure location to prevent accidental contact with the bag(s) that would cause it/them to tear.

NOTE: Any valves, bends, tees, fittings, or other items that have AC pipe connected shall be wrapped whole as required with the same minimum total of 12-mil of poly material.

6. AC Pipe and Waste Storage/Transfer

- Wrapped AC pipe and ACM waste bags shall be stored in a secure area away from traffic that could damage the wrapped pipe and/or waste bags while awaiting transport to the permitted landfill.
- If daily transport to a permitted landfill cannot be provided, a roll-off type dumpster/disposal container may be used to hold only the wrapped AC pipe and bagged RACM waste to prevent damage to the wrapping.

San Antonio Water System Standard Specifications for Construction

- DO NOT TOSS THE PIPE OR WASTE BAGS INTO THE ROLL-OFF OR DISPOSAL CONTAINER.
 - DO NOT MIX SPOILS WITH THE AC WRAPPED PIPE AND AC WASTE.
- All wrapped or bagged materials shall be moved to the AC pipe/waste fenced holding area for storage. If a roll-off or other type disposal container is used, place the wrapped pipe and waste bags in the roll-off/container using methods that do not cause the wrapping/bagging to be torn.
 - Any bagged or wrapped materials that are torn in handling shall be mended and taped. If the tear is too extensive for a simple tape repair, wrap/bag with an additional equivalent of 12-mil minimum thickness of poly wrap/bagging.

7. AC Pipe and Waste Disposal

The wrapped AC pipe and ACM bagged waste shall be transported to an approved AC waste landfill with the manifests being generated at the time of transfer. Include the name of the transporter, their Texas asbestos transporter license number, and the name of the permitted landfill where the AC pipe and ACM waste will be buried.

- END -

SPECIAL SPECIFICATION

9100

AT&T Telecommunication System

1. Description.

This Item will govern the installation of all facilities belonging to AT&T-Texas, hereinafter referred to as AT&T. The Contractor and approved Subcontractors shall construct all required utility adjustments within the limits of this project including any peripheral adjustments that may not have been discovered during the design process. Contracts with subcontractors for AT&T's installation shall require the subcontractor to comply with this special specification. These adjustments shall be paid for directly as detailed in Measurement and Payment of this Special Specification.

1.01 Definitions

- A. Bellcore Practices. Refers to AT&T telecommunication construction and maintenance practices accepted and in use by all AT&T personnel and contractors working in this project region. This information is documented in AT&T guidelines and manuals that collectively are referred to as Bellcore Practices and may include best practices that are not written but have been otherwise communicated to AT&T personnel and contractors. Any Contractor that works on the AT&T portion of the project must have and be familiar with the most current Bellcore Practices.
- B. Cable/Fiber. Denotes copper cable and/or fiber optic cable. The Contractor must obtain cable prints from AT&T for information on type and size of Cable/Fiber to be placed. Cable/Fiber may be aerial, buried or underground.
- C. Conduit. Piping material that will be used to house telephone cables. The words "conduit", "duct" and "piping" may be used interchangeably in this specification.
- D. Conduit Structure (Duct Bank). Groups of conduits arranged in tiers and encased as specified in the plans.
- E. Underground. Refers to facilities housed inside conduit. This excludes facilities that are placed directly in the ground which are referred to as buried facilities.

2. Materials.

2.01 AT&T will furnish all materials required for installing telecommunication system complete in place, such as pipe, fittings, cable, fiber, pre-cast manholes, markers, etc.

A. Procurement of Materials.

1. All materials proposed for AT&T within this project shall be provided by AT&T. Contractor shall request materials through AT&T Manager-Construction Contract Coordinator, Vicente Perez (210) 434-8549.
2. Cables that are greater than 1500 pair shall be requested at least 40 days prior to required delivery date. Fiber and smaller cables shall be requested at least 30 days prior to required delivery date.
3. Contractor is to install cable within 60 calendar days after receipt of cable.
4. Conduit, manholes and all other materials, other than cable, shall be requested at least 2 weeks prior to required delivery.
5. Remote terminal cabinets, mounting brackets, grounding trees and power switches shall be requested at least 30 days prior to required delivery and must be installed within 90 calendar days after taking delivery.
6. Serving Area Interface (SAI), mounting brackets, and grounding trees shall be requested at least 30 days prior to required delivery and must be installed within 90 calendar days after taking delivery.
7. In the event that special order items have been identified in the plan set, these items shall be requested at least 30 days prior to required delivery.

B. Miscellaneous Material. All other non-telecommunication system materials, such as casing pipe, galvanized iron pipe, shoring materials, backfill, mortar, tools, supplies, equipment, etc. required to properly complete the work will be furnished by the Contractor, except as otherwise noted. Unless otherwise directed in the plans, all materials furnished by the Contractor must meet COSA and AT&T minimum requirements. In the event that a discrepancy exists between COSA and AT&T material specifications, the Contractor must adhere to the more stringent specification.

C. Backfill. All backfill will be in accordance with TXDOT Item 400, "Excavation and Backfill for Structures

1. Bedding. All bedding will be bank sand beginning 2 in. below the bottom of the duct bank and extending to 12 in. above top of the duct bank, as shown on the construction plans.
2. Cement Stabilized Backfill. All cement-stabilized backfill will be in conformance with TXDOT Item 400, "Excavation and Backfill for Structures." Cement-stabilized backfill will be used to fill trench from top of bedding to bottom of subgrade whenever an excavation is under and within ten feet of a roadway.
3. Original Material Backfill (Type A). Type A backfill will be used whenever an excavation is a distance of 10 ft. or greater from an existing or proposed edge of pavement. Material used for this backfill will be equivalent to original material or better, free of debris, compacted 90%-95% standard proctor density in 8 in. lifts.

D. Encasement.

1. Concrete Encasement. All concrete encasement material will conform to TXDOT Item 421, "Hydraulic Cement Concrete." Class B concrete will be utilized for encasement of conduits wherever plans indicate concrete encasement.
2. Steel Encasement. Steel Encasement will be of a sufficient diameter to encase the conduit(s), will be of a minimum length equivalent to the width of the proposed frontage road fill slope on each side or as noted on the plan sheets, and have a minimum wall thickness of 1/4 in.
3. HDPE Encasement. HDPE encasement will be of a sufficient diameter to encase the conduit(s), will be a minimum length equivalent to the width of the proposed frontage road fill slope on each side or as noted on the plan sheets, and will have a minimum SDR 11 wall thickness.

E. Foundation. All concrete foundations will conform to TXDOT Item 420, "Concrete Structures." Class A concrete will be utilized for foundations wherever plans indicate foundation.

F. Manholes and Handholes.

1. Pre-cast manholes and handholes. All pre-cast manholes and handholes will be provided by AT&T.
2. Cast-in-place manholes and handholes. All materials used for cast-in-place manholes and handholes will conform to Bellcore Practices Section 622-505-210. Hydraulic cement with a nominal compressive strength of 4000 psi in conformance with ASTM C150 will be used. Rebar will be

deformed steel bars having a 60,000 psi yield strength conforming to ASTM A615.

- G. Defective or Damaged Material. All materials will be inspected for defects prior to being lowered into the trench. Any defective, damaged, or unsound material will be repaired or replaced as directed. Should damaged materials be placed, the Contractor will furnish at the Contractor's expense all labor and materials required for removing and replacing the defective material. Should the Contractor damage the materials after installation, the Engineer may permit the damaged section to be cut from the length unless it is the opinion of the Engineer that the entire length was damaged. The cost and replacement of broken materials will be at the expense of the Contractor.
- H. Protective Concrete Cap. All materials shall be provided by the Contractor and shall conform to TXDOT Item 421, "Portland Cement Concrete" and TXDOT Item 440, "Reinforcing Steel." Class "A" concrete shall be used unless otherwise noted.
- I. Aerial Installation. All poles, anchors, guys, strand, U-guard, standoff brackets, and miscellaneous hardware shall be provided by AT&T.

3. Construction.

- 3.01 General Requirements. All work performed by the Contractor and Subcontractor must adhere to AT&T regional guidelines, TxDOT requirements, and the latest editions of both the Bellcore Practices and National Electric Safety Code (NESC).
 - A. The Contractor and Subcontractor must follow the more stringent requirements whenever the items listed above vary amongst each other.
 - B. In the event that discrepancies exist between the above items and any applicable legal and/or safety requirement of a federal, state or local authority, the more stringent requirement must be followed. The Contractor's work is subject to inspection by both TxDOT and AT&T. All personnel must be familiar with Buried Plant: Precautions and Maintenance to Existing Systems, BR 629-100-010 Paragraph 1 prior to beginning work on any buried facilities.
 - C. Contractor. The Subcontractor that installs the underground telephone system must be an approved AT&T Contractor in good standing with AT&T. Contractor must verify with AT&T prior to finalizing the Subcontract for AT&T work to obtain a current listing of approved contractors. Other qualified Contractors not included in the list are allowed, if approved by AT&T.

3.02 Coordination with AT&T

- A. Slotted Manholes. All manholes proposed as pre-cast slotted shall not be ordered until contractor has verified field conditions are adequate for placement. Otherwise, manhole shall be cast in place.
- B. Cable/Fiber Splicing.
 - 1. All splicing involved in this project shall be performed by AT&T.
 - 2. Contractor will coordinate construction and material orders through AT&T Manager-Construction Contract Coordinator, Vincente Perez (210) 434-8549.
 - 3. Requests for splicing shall be made to AT&T Splicing Coordinator at least 2 weeks prior to required splicing start date. Cables will be installed in stages to allow sufficient working room inside new manholes for splicing. Prior to installing any cables, Contractor shall discuss cable installation order and phases with AT&T Manager-Construction Contract Coordinator. AT&T will identify the maximum number of cables allowed to be installed at one time for each individual manhole.

3.03 Trench Excavation. Trench excavation and backfilling as required to complete the underground telecommunication system installation will be performed in accordance with TXDOT Item 400, "Excavation and Backfill for Structures", as outlined herein, as shown on the plans and as directed. Blasting to perform the excavation will not be allowed unless authorized in the plans or in writing by the Engineer.

- A. Trenches for Cable/Fiber, Conduit and Conduit Structure must also comply with the following requirements:
 - 1. Width of Trenches will be in conformance with Bellcore Practices Section 622-020-901 Paragraph 11.20
 - 2. Depth of Trenches will be in conformance with Bellcore Practices Section 622-020-901 Paragraph 11.21
 - 3. Grade of Trenches will be in conformance with Bellcore Practices Section 622-020-901 Paragraph 11.22
- B. Manhole and Handhole Excavations. The width and depth of excavation for manholes and handholes will be determined by the lines and grades as established on the plans, dimensions of the manholes and handholes, manhole

and handhole orientation, as described in Article 400.4 of TXDOT Item 400, "Excavation and Backfill for Structures" or as approved.

- C. Classification of Excavations. No classification of excavated materials will be delineated. Excavation and trench work will include the removal and subsequent handling of all materials excavated in accordance with TXDOT Item 400, "Excavation and Backfill for Structures."
- D. Excavation Below Grade. Any part of the bottom of the trench excavated below the limits specified in Section III, paragraph C., a., (1), "Depth of Trenches," will be corrected with approved material and compacted in a manner as described in Article 400.3 of TXDOT Item 400, "Excavation and Backfill for Structures" and as directed.
- E. Protections and Restoration of Underground Structures and Facilities.
 - 1. Facilities other than AT&T's. Contractor will protect and restore underground structures in accordance with Bellcore Practices Section SW622-020-901, Paragraphs 11.01-11.04.
 - 2. AT&T Facilities. The Contractor will adjust and support existing telephone conduit wherever indicated on plans in accordance with Bellcore Practices Section 622-300-300 "Main Conduit Restoration and Rearrangement."
- F. Trench Excavation Protection. All trench excavation protection will be accomplished in accordance with Bell System Practice Section 622-020-901.
- G. Backfill. All backfill and backfill operations will be in accordance with TXDOT Item 400, "Excavation and Backfill for Structures," as described herein and as directed. Where, in the opinion of the Engineer, it is necessary to maintain traffic across a trench, the Contractor will install temporary metal bridges as necessary to facilitate the movement of traffic.
- H. Foundation. All foundation installations will be in accordance with TXDOT Item 422.3 "Construction" Section A "Cast-in-place."
- I. Remote Terminal. All telecommunication installations at remote terminal sites will be in accordance with Bellcore Practices. Site preparation for new remote terminal installations will be in accordance with TXDOT Item 100 "Preparing of Right of Way". Landscaping for new remote terminal sites will be in accordance with TXDOT Item 193 "Landscape Establishment".
- J. Serving Area Interface (SAI). All telecommunication installations at SAI sites will be in accordance with Bellcore Practices. Site preparation for new SAI

installations will be in accordance with TXDOT Item 100 "Preparing of Right of Way". Landscaping for new SAI sites will be in accordance with TXDOT Item 193 "Landscape Establishment".

K. Pavement. The Contractor will remove pavement and surfaces as part of the trench excavation in accordance with TXDOT Item 400, "Excavation and Backfill for Structures." The removal and restoration of pavement and surfaces will be based upon the minimum trench width as described in Section II, paragraph A., 1., a., "Width of Trenches" plus 2-in. on each side of the trench.

1. Concrete Surfaces. All removal of concrete surfaces (sidewalks, driveways, etc.) will be performed in accordance with TXDOT Item 104, "Removing Concrete."

L. Boring. Installation of casing pipe and conduit(s) by bore shall be in conformance with TXDOT Item 476, "Jacking, Boring, or Tunneling Pipe or Box." Bore spacer shall be installed in accordance with manufacturer's guidelines.

M. Directional Boring. Installation of casing pipe and conduit(s) by horizontal directional drill shall be in conformance with the North American Society of Trenchless Technology (NASTT), "Mini-Horizontal Directional Drilling Manual" (1995) or ASTM F 1962 "Standard Guide for Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit under Obstacles including River Crossings."

N. Manholes and Handholes. Manholes and handholes will be of the size and type as shown on the plans. All manholes and handholes will be set to the lines and grades as shown on the plans. Manholes will have a minimum 60-in. cover from finished grade to the top of the manhole box unless specified otherwise on the plans or as directed by AT&T. Handholes will be placed in line with final grade except where noted otherwise on the plans or as directed by AT&T.

1. Pre-Cast Manholes. All pre-cast manholes and handholes will be installed according to Bellcore Practices Section 622-506-200, "Precast Concrete Manholes, 38Y Types, Installation."

2. Cast-In-Place Manholes. All cast in place manholes will be constructed in accordance with Bellcore Practices Section 622-505-210, "Concrete Manholes, Cast in Place Construction"

O. Conduit and Conduit Structures

1. General Requirements. Contractor shall start work at a tie-in point, unless otherwise indicated on the plans or directed by the Engineer. The work area shall be maintained in a neat and orderly fashion.
2. Duct Bank. Contractor will refer to Bellcore Practices Section 622-340-201SW "C Plastic PVC & C Polypropylene Direct Buried in Soil Main Conduit" for placing the conduit, including construction of curves, sweeps, and grade changes. This Item will cover requirements for mandreling, installing mule tape in each installed duct, and plugging all installed ducts at each end.
3. Defective or Damaged Material. All materials will be inspected for defects prior to being lowered into the trench. Any defective, damaged, or unsound material will be repaired or replaced as directed. Should damaged materials be placed, the Contractor will furnish at the Contractor's expense all labor and materials required for removing and replacing the defective material. Should the Contractor damage the materials after installation, the Engineer may permit the damaged section to be cut from the length unless it is the opinion of the Engineer that the entire length was damaged. The cost and replacement of broken materials will be at the expense of the Contractor.

P. Cables

1. Buried/Underground

- i. Installation. Contractor will install cables per Bellcore Practices Section 628-200-208 "Placing Underground Cable."
- ii. Cable Racking. Racking of cables will be in accordance with Bellcore Practices Section 632-305-215, "Cable Racking, Cable Arrangements in Manholes" for up to 20 ducts.

2. Aerial

- i. Before starting any aerial cable placing operations, all personnel must be familiar with the Bellcore practices in the 620, 621, and 627 Divisions.
- ii. Before placing any setting any poles, anchors, or guys all personnel must be familiar with Bellcore practices in the 620, 621, and 627 Divisions. In addition, to the most current National Electric Code guidelines and safety practices.

- Q. Marker Posts. Posts identifying AT&T facility locations will be placed in accordance with AT&T standards at a maximum spacing of 500 linear feet

along installation. Posts will also be installed at handholes, manholes, street crossings, changes in direction of AT&T facilities and as directed by AT&T.

- R. Installing Manholes over Existing Conduit. Contractor will refer to Bellcore Practices 622-300-205 “Special Construction” and 622-300-300 “Main Conduit Restoration and Rearrangement” when constructing manholes over existing conduit.
- S. Adjusting Existing Manholes. All manhole frame and covers will be adjusted in accordance with TXDOT Item 479, "Adjusting Manholes and Inlets."
- T. Removing Existing Facilities. All abandoned telephone facilities, including manholes and conduit, to be removed will be accomplished in accordance with TXDOT Item 496, "Removing Structures." An AT&T approved contractor shall remove all existing cables and conduit as necessary for the installation of the new facility and for the connectivity between existing and new facilities; however, an AT&T approved contractor is not required to perform any other AT&T removals once the existing facility is abandoned in place.
- U. Protective Concrete Cap. Concrete caps will be constructed above existing telecommunication facilities at locations specified and to the dimensions detailed on the plans in conformance with TXDOT Item 421, "Hydraulic Cement Concrete."
- V. Lowering Existing Ducts. Contractor will refer to Bellcore Practices and procedures when adjusting existing conduits in place. Contractor shall not perform any adjustments without prior notice to the utility owner. The Contractor must allow for Utility owner's inspection, if requested.
- W. Contractor is responsible for hauling of cable and fiber material from AT&T storage facility; Contractor must coordinate this Item through AT&T Manager-Construction Contract Coordinator, Vincente Perez (210) 434-8549.

4. Measurement.

- 4.01 Trench Excavation and Backfill. This Item will not be measured for payment but will be considered subsidiary to the buried facility installed in the trench.
- 4.02 Trench Excavation Protection. Trench Excavation protection will be measured by the plan footage. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2, “Plans Quantity Measurement.” Additional measurements or calculations will be made if adjustments of quantity are required.

- 4.03 Concrete Surfaces. The removal of concrete curb, sidewalk, driveway, medians and/or islands required to be removed and replaced due to underground telephone system construction will not be measured separately but will be considered subsidiary to the structure installed.
- A. Cut and Restore Pavement. Cutting and restoring pavement will not be measured for payment, but will be considered subsidiary to the Item installed in the trench.
 - B. Concrete Encasement. This Item will not be measured for payment, but will be considered subsidiary to the Item installed in the trench.
 - C. Foundation. This Item will not be measured for payment, but will be considered subsidiary to the Item installed.
- 4.04 Remote Terminal. This Item will be measured by each site installed, complete in place for "Remote Terminal (Tele)". This is a plans quantity measurement Item. All labor and equipment required for building the remote terminal including, but not limited to the installation of all telecommunication facilities into the remote terminal, placing the cabinet, installing mounting brackets, preparing the site, building the foundation, landscaping, re-grading, erosion control, traffic control, establishing electrical service and connectivity, transfer switches, grounding, and driveways will be considered incidental to this Item.
- 4.05 Serving Area Interface (SAI). This Item will be measured by each site installed, complete in place for "SAI (Tele)". This is a plans quantity measurement Item. All labor and equipment required for building the SAI including, but not limited to the installation of all telecommunication facilities into the SAI, placing the equipment, placing the hardware, installing mounting brackets, preparing the site, building the foundation, landscaping, re-grading, erosion control, traffic control, grounding, and driveways will be considered incidental to this Item.
- 4.06 Manholes and Handholes. Manholes and handholes will be measured by each size and type installed, complete in place. This is a plans quantity measurement Item. Neck, rings, frames and covers will not be measured for payment, but will be considered subsidiary to the structure installed.
- 4.07 Conduit and Conduit Structures (Duct Banks). Conduit will be measured by the linear foot for the various types and sizes of conduit structures shown on the plans. This is a plans quantity measurement Item. Excavation, furnishing and placing backfill, removing and replacing pavement structure, sod, riprap, curbs or other surface, furnishing and installing all piping, fittings, sweeps, bends, repair couplings, adaptors, ground box/manhole/handhole termination kits, pre-assembled split repair kits, lubrication access fittings, expansion joints, concrete and underground mylar conduit marking tape, mule tape, and all labor, tools, equipment

and incidentals will not be measured for payment but will be considered subsidiary to the conduit structure installed. Mandreling will not be paid for separately, but will be considered subsidiary to the conduit installation.

- A. The lengths of duct bank will be measured along the duct between the outside faces of manholes or handholes or other connected facility as shown on the plans.
 - B. Where the installation involves connection to an existing conduit, the measurement will be made from the point of connection to the existing conduit.
- 4.08 Cable/Fiber. Copper cable and fiber optic cable will be measured by the plan footage for “Cable UG (Tele)”, “Fiber UG (Tele)”, “Cable Aerial (Tele)”, “Fiber Aerial (Tele)”, “Cable Buried (Tele)”, “Fiber Buried (Tele)”, “Innerduct (Tele)”, and “Air Pipe (Tele)” as shown on the plans complete in place, including rodding and pulling, and installation of pedestals, risers and marker posts. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2, “Plans Quantity Measurement.” Additional measurements or calculations will be made if adjustments of quantity are required.
- 4.09 Markers. Markers will not be measured directly but will be considered subsidiary to the cable/fiber installed.
- 4.10 Boring. “Directional Bore” and “Jack and Bore” will be measured by the plan linear footage for the type and size shown on the plans. Casings and galvanized iron pipe will not be measured directly but considered subsidiary to the bore installation. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, “Plans Quantity Measurement.”
- 4.11 Installing Manhole Over Existing Conduit. This Item will not be measured directly, but will be considered subsidiary to the manhole measurement.
- 4.12 Adjust Existing Manhole. This Item will be measured per each manhole adjusted. Trench excavation on the outside of the manhole will not be measured but will be considered subsidiary to this Item.
- 4.13 Remove Existing Facilities.
- A. Conduit. Existing conduit removed wherever indicated on the plans will be measured by the plan footage for “Remove (Tele)”. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, “Plans Quantity Measurement.”

- B. Manholes and Handholes. Manholes and/or handholes removed will be measured per item as shown on the plans for “Remove Structure (Tele). This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, “Plans Quantity Measurement.”
- C. Poles. Existing poles removed will be measured per each item specified for removal on the plans for “Remove Structure (Tele). This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, “Plans Quantity Measurement.” All other above ground appurtenances will be considered subsidiary to the conduit removal.

- 4.14 Protective Concrete Cap. This Item shall be measured by the foot of concrete cap, complete-in-place.
- 4.15 Lowering Existing Ducts/Cable. This Item shall be measured by the foot of linear adjustment complete-in-place.
- 4.16 Pole Installation. This item “Pole (Tele)” shall be measured per each item by size and type.

5. Payment.

- 5.01 The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the Items hereinafter described. The prices will be full compensation for furnishing and hauling all materials; for all excavation and backfill; for trench excavation protection; dewatering, shaping and fine grading of trench; for cutting and restoring pavements; for boring or directional boring, steel or HDPE casing; for removing and replacing concrete surfaces; for placing, joining and racking of pipe and conduit structures; for manholes, for handholes, risers, rings and covers, for placement of cable/fiber, pedestals, marker posts and for all other items of material, labor, equipment, tools; for all testing and incidentals necessary to complete the work in accordance with the plans and specifications.
- 5.02 Trench Excavation and Backfill. Payment for excavation and backfill for the installation of telephone facilities will not be paid for directly but will be considered part of the price bid for the specific Item installed.
- 5.03 Trench Excavation Protection. Payment for excavation protection for the installation of telephone facilities will be paid in accordance with TXDOT Item 402, “Trench Excavation Protection” for “Trench Excavation Protection (Tele).”

- 5.04 Pavement. Payment for cutting and restoring pavement will not be paid for directly but will be considered part of the price bid for the specific structure installed.
- 5.05 Concrete Encasement. Payment for concrete encasement will not be paid for directly but will be considered part of the price bid for the specific Item installed.
- 5.06 Foundation. Payment for foundation will not be paid for directly but will be considered part of the price bid for the specific Item installed.
- 5.07 Remote Terminal. Payment for remote terminal installations will be made per each "Remote Terminal (Tele)" complete in place as specified on the plans. This price will be full compensation for all labor, tools and equipment required for building the remote terminal including, but not limited to the installation of all telecommunication facilities into the remote terminal, placing the cabinet, installing mounting brackets, preparing the site, building the foundation, landscaping, re-grading, erosion control, traffic control, establishing electrical service and connectivity, grounding, driveways, coordinating and installing transfer switches and furnishing and installing all non-telecommunication system materials.
- 5.08 Serving Area Interface (SAI). Payment for SAI installations will be made per each "SAI (Tele)" complete in place as specified on the plans. This price will be full compensation for all labor, tools and equipment required for building the SAI including, but not limited to the installation of all telecommunication facilities into the SAI, placing the hardware, installing mounting brackets, preparing the site, building the foundation, landscaping, re-grading, erosion control, traffic control, grounding, and driveways.
- 5.09 Manholes and Handholes. Payment for manhole installations will be made by the each for "Manhole (Tele)" of the size specified complete in place with all racking, ladder, and bonding hardware, rings, frames, covers and joint sealing compound and will be as detailed on the plans. Payment for handhole installations will be made by the each for "Handhole (Tele)" complete in place with all racking, bonding hardware, rings, bricks, frames, covers and joint sealing compound and will be as detailed on the plans.
- 5.10 Conduit and Conduit Structures. Payment for conduit installations will be made at the unit price bid for "Conduit (Tele)" of the size and type of conduit specified. This price will be full compensation for installing conduit, excavating, furnishing and placing backfill, replacing pavement structure, sod, riprap, curbs or other surface; for furnishing and installing all fittings, sweeps, bends, repair couplings, adaptors, ground box/manhole/handhole termination kits, pre-assembled split repair kits, lubrication access fittings, expansion joints, concrete and underground mylar conduit marking tape; and for all labor, tools, equipment and incidentals.

- 5.11 Cable/Fiber. Payment for cable/fiber installations will be made by the plan linear foot for “Cable UG (Tele)”, “Fiber UG (Tele)”, “Cable Aerial (Tele)”, “Fiber Aerial (Tele)”, “Cable Buried (Tele)”, “Fiber Buried (Tele)”, “Innerduct (Tele)”, and “Air Pipe (Tele)” as specified on the plans, complete in place. This price will be full compensation for rodding and pulling, installing risers, pedestals, marker posts; excavating, furnishing and placing backfill, replacing pavement structure, sod, riprap, curbs or other surface; for furnishing and installing all fittings, sweeps, bends, repair couplings, adaptors, ground box/manhole termination kits, pre-assembled split repair kits, aerial risers, U-Guards, standoff brackets, lubrication access fittings, expansion joints, concrete and underground mylar conduit marking tape; and for all labor, tools, equipment and incidentals necessary to complete the work.
- 5.12 Marker Posts. Payment for this Item will not be made directly but will be considered incidental to the manhole installation.
- 5.13 Boring. Payment for this Item will be made at the unit price bid for “Jack and Bore” or “Directional Bore” of the length specified on the plans, complete-in-place. This will be full compensation for installing the bore, furnishing and installing the casing, pulling conduit, cable/fiber; excavating and supporting bore pits, furnishing and placing backfill, replacing pavement structure, sod, riprap, curbs or other surface; for furnishing all bore equipment, fluids, supplies, fittings, labor, tools, equipment and incidentals necessary to complete the work.
- 5.14 Installation over Existing Facilities. Payment for this Item will not be made directly, but will be considered incidental to the manhole installation.
- 5.15 Adjust Existing Manhole. Payment for this Item will be made by the each for “Adjust Manhole (Tele).”
- 5.16 Remove Existing Facilities. Payment for this Item will be made by the plan quantities for “Remove (Tele)” and “Remove Structure (Tele)” for the type of structure removed.
- 5.17 Protective Concrete Cap. Payment will be made at the unit price bid for “Concrete Cap (Tele)” of the concrete class and reinforcement specified.
- 5.18 Lowering Existing Ducts/Cable. Payment will be made at the unit price bid for “Lowering Exist Ducts/Cable (Tele)” of the length specified on the plans, complete in place.
- 5.19 Pole Installation. This item “Pole (Tele)” shall be measured per each item by size and type.

SAWS Long Lead Time Item List - All bidders shall include in their bid packages a Long Lead Time Item List (LLTIL) identifying all San Antonio Water System (SAWS) work related material and items requiring a long lead time to be made available at the project site. Any item with a procurement lead time (from placement of order to delivery to the project site) of greater than 6 calendar weeks must be included in the LLTIL. Supplementary Provisioning Technical Documentation (SPTD), as prepared by the actual manufacturer of the item, is required for the codification and cataloging of all items listed in the LLTIL. The SPTD must accompany the LLTIL.

All bidders shall include in their bid package all required submittal data for the LLTIL items to the City of San Antonio (COSA) for review and approval. Failure to enclose in the bid package the LLTIL, SPTD and complete material data (submittals) for all LLTIL items prescribed herein shall automatically disqualify the bid.

After review and approval of the submitted material data for all items on the LLTIL, the COSA shall provide the apparent low bidder a list of approved LLTIL items in writing. Within 7 calendar days after receiving the list of approved LLTIL items, the apparent low bidder shall submit the pipe layout drawings (Make-and-Lay drawings) for the chilled water pipes to the COSA for review and approval by SAWS. Failure to submit the Make-and-Lay drawings prescribed herein shall automatically disqualify the bid.

Within 1 day after Council Award of the contract the Contractor shall immediately procure all the approved LLTIL items. The COSA agrees to reimburse the Contractor for all approved LLTIL items and material delivered on site.

As a minimum, the following shall be included in the LLTIL:

1. Chilled water steel pipes
2. Chilled water pipe insulations
3. Steel casings
4. Hot-taps for chilled water
5. Pipe stops for chilled water

SAWS Chilled Water Shutdown and Staging at SAWS Heating & Cooling Plant

A. Chilled Water Shutdowns – The CONTRACTOR shall, as a condition of this contract, prepare a detailed work sequence plan for each Work Area and Sub-Work Area where applicable in order to maintain uninterrupted operations of the Alamodome facility for all Alamodome events. A copy of the Alamodome Conversion Calendar will be made available to the bidders upon request.

The CONTRACTOR shall not operate any chilled water valve without the presence of authorized personnel from the SAWS Heating and Cooling Department. Any and all shutdowns of chilled water services must be coordinated with SAWS in writing. The CONTRACTOR shall contact Frank Salazar by telephone at 233-3125, and in writing, prior to operating any chilled water valve and any shutdown or tie-in. All shutdowns or tie-ins must be pre-approved by SAWS in writing at least one (1) month in advance. The CONTRACTOR's Work is to be sequenced in such a manner to ensure that any and all Work Categories that will result in unavoidable chilled water shutdowns shall be limited to not more than 48 consecutive hours and no more than a single occurrence for any individual approved shutdown. Such work sequence plan, when accepted by SAWS, shall not be altered without SAWS prior written consent.

Work sequence plan shall be arranged by the CONTRACTOR to ensure the minimum inconvenience to the Alamodome facility and SAWS Heating and Cooling Plant, including but not limited to:

1. Chilled Water Service to the Alamodome
2. Utility Services to the Alamodome
3. Vehicular access along public streets to SAWS Heating and Cooling Plant
4. Pedestrian access along sidewalks to SAWS Heating and Cooling Plant
5. Ingress and egress from SAWS Heating and Cooling Plant
6. Dust Control adjacent to SAWS Heating and Cooling Plant
7. Debris Control adjacent to SAWS Heating and Cooling Plant

B. No Staging at SAWS Heating and Cooling Plant – The CONTRACTOR shall not stage materials, equipment, or supplies in front of the SAWS Heating and Cooling Plant beyond the limits of construction. The CONTRACTOR shall confine his construction operations within the construction limits indicated on the Drawings and shall exercise due care in placing construction tools, equipment, excavated materials, and supplies so as not to cause any damage to property and any interference with access to SAWS facilities. If the CONTRACTOR requires additional easement for his operations, the CONTRACTOR is solely responsible for acquisition and maintenance of the easement at the CONTRACTOR's own expense.

The CONTRACTOR shall erect a 6-foot height temporary construction fence along the construction limits in front of the SAWS Heating and Cooling Plant. If SAWS authorizes, in writing, the use of SAWS property for staging purposes, any direct or indirect damage caused by any act, omission, neglect, or misconduct in the execution of the Work by the CONTRACTOR, shall be restored by the CONTRACTOR to their original or better condition at the CONTRACTOR's expense.

C. Pedestrian Access and Use – The CONTRACTOR shall maintain pedestrian access and thoroughfare along all walkways and allow pedestrian access to all areas of SAWS Heating and Cooling Plant at all times.

D. Dust Control – The CONTRACTOR shall execute Work by methods that minimize the creation of dust and provide positive means, appropriate amounts of water or other appropriate substances, to prevent dust from dispersing into the atmosphere.

BID BOND

**Conforms with The American Institute of
Architects, A.I.A. Document No. A-310**

KNOW ALL BY THESE PRESENTS, That we, _____

_____ as Principal, hereinafter called the Principal,

and the _____,

of _____, a corporation duly organized under

the laws of the State of _____, as Surety, hereinafter called the Surety, are held and firmly bound unto

_____ as Obligee, hereinafter called the Obligee,

In the sum of ***FIVE PERCENT OF TOTAL AMOUNT BID ***

Dollars (5% TAB), for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for _____

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____, _____.

(Seal)
Principal

Witness

}

Title

Witness

}

Attorney-in-Fact

SPECIAL PROVISION
9800-COSA
Project Signs

1 DESCRIPTION: This item shall consist of providing, installing, and maintaining and (at the completion of the project) removing two (2) 4' X 8' project signs. The signs shall conform to the configuration and details indicated in a special sheet in the project specifications titled PROJECT SIGN DETAILS. These signs shall be installed at locations to be determined by the inspector.

2 MATERIAL: The signs shall be made of 3/4" plywood, grade A-C or better and each shall be mounted on two (2) 4" X 4" X 12' - 0" posts.

3 INSTALLATION: The installation will require embedding all posts a minimum of 3' - 0" below the ground.

4 PAYMENT: No direct payment will be made to the contractor for the work and materials required in providing, installing, maintaining and removing the signs. Such work and materials shall be considered subsidiary to the several items of work for which unit prices are provided in the proposal.

98 in.

48 in.



CITY OF SAN ANTONIO

CIMS/CLIENT DEPARTMENT

PROJECT NAME

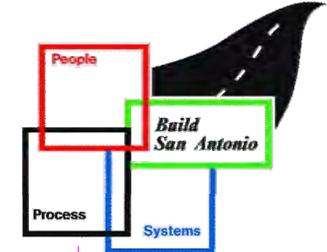
\$ AMOUNT CAPITAL IMPROVEMENTS PROJECT

FUNDING SOURCE:

ENGINEER/ARCHITECT:

CONTRACTOR:

**Capital Improvements
Management Services**



Our Mission:
Together, Dedicated to Our Community
...Building a Great San Antonio

ALL TEXT
BLACK LETTERS

WHITE
BACK-
GROUND

CITY MANAGER
Sheryl Sculley

MAYOR
Julián Castro

CITY ENGINEER/
CIMS DIRECTOR
Mike Frisbie, P.E.

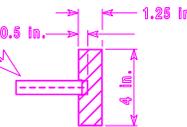
CITY COUNCIL
Diego M. Bernal
Ivy R. Taylor
Leticia Ozuna
Rey Saldaña
David Medina, Jr.

Ray Lopez
Cris Medina
W. Reed Williams
Elisa Chan
Carlton Soules

FOR MORE INFORMATION CALL 207-8140
AFTER HOURS EMERGENCIES CALL 311 AND REFER TO PROJECT: PROJECT NAME

LEFT BORDER SHALL BE DETERMINED USING THE LONGEST LINE CENTERED ON THE SIGN PROVIDING EQUAL BORDERS

EXTERIOR TYPE HIGH DENSITY OVERLAID PLYWOOD OR OTHER APPROVED MATERIAL SUITABLE FOR SIGNS.



PROVIDE ADEQUATE SUPPORTS FOR SIGN AS SITE CONDITIONS MAY REQUIRE AND KEEP SIGN PROPER DISTANCE ABOVE PREVAILING GRADE TO PERMIT PUBLIC VIEWING

GRADE

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!\$ & - () < > ; : , . / ?

SPECIAL PROVISION

275---003

Cement Treatment (Road-Mixed)

For this project, Item 275, "Cement Treatment (Road-Mixed)," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 275.4. Construction, Section D. Mixing. The second paragraph is voided and replaced with the following:

After mixing, the Engineer may sample the mixture at roadway moisture and test in accordance with Tex-101-E, Part III, to determine compliance with the gradation requirements in Table 1.

Article 275.4. Construction, Section E. Compaction. The first paragraph is voided and replaced by the following:

Compact the mixture in one lift using density control unless otherwise shown on the plans. Complete compaction within 2 hours after the application of water to the mixture of material and cement.

Article 275.6 Payment. The first paragraph is voided and replaced by the following:

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid in accordance with Section 275.5.A, "Cement," and Section 275.5.B, "Cement Treatment."

Article 275.6 Payment, Section B. Cement Treatment is voided and replaced by the following:

B. Cement Treatment. Cement treatment will be paid for at the unit price bid for "Cement Treatment (Existing Material)," "Cement Treatment (New Base)," or "Cement Treatment (Mixing Existing Material and New Base)," for the depth specified. No payment will be made for thickness or width exceeding that shown on the plans. This price is full compensation for shaping existing material, loosening, mixing, pulverizing, spreading, applying cement, compacting, finishing, curing, curing materials, blading, shaping and maintaining shape, replacing mixture, disposing of loosened materials, processing, hauling, preparing secondary subgrade, water, equipment, labor, tools, and incidentals.

ITEM 9010
VALMONT ILLUMINATION STREET LIGHT ASSEMBLY

1. **DESCRIPTION:** This item shall consist of providing and installing Valmont 16 Flat tapered fluted steel illumination poles, Huntington aluminum bases, and Windsor steel arms at the locations and in accordance with the information and details shown on the plans and in accordance with the manufacturer's directions.
2. **MATERIAL:** The poles shall be Valmont Street Light Pole Model No. 775E250, 26-foot 2-inches long, 7.75-inches in diameter, 7 gauge wall thickness, and tavern green color, with an Acorn Finial top. Bases shall be Model No. HN24, 34-inch height, 24-inch diameter, and tavern green color. Arms shall be single Windsor style, 6-foot long, and tavern green color.
3. **INSTALLATION:** Installation of the illumination poles, bases, and steel arms shall be performed in accordance with the plans and the manufacturer's directions. Installation of the poles will require drilled shaft foundations 30-inches in diameter and 8-feet in depth. An extra 4-foot 6-inches Class C concrete column extension shall be added on top of the foundation if the street light pole is installed inside a storm water planter, so that the pole base is above the storm water planter.
4. **SUBMITTALS:** Contractor shall submit product data, material certificates, maintenance data, and shop drawings.
5. **MEASUREMENT:** This item will be measured as each Valmont Illumination Street Light Assembly installed.
6. **PAYMENT:** Payment for furnishing and installing illumination poles, bases and arms shall be at the contract bid price for INS VALMONT 26 FT 2 IN TAVERN GREEN STREET LIGHT ASSEMBLY (INCLUDES POLE, BASE, AND ARM).

ITEM 9011
GREENSTAR LED LUMINAIRE, GALAXY XD – GLX30 & GLX48

1. **DESCRIPTION:** This item shall consist of providing and mounting Greenstar Galaxy-XD GLX30 and GLX48 luminaires to poles at the locations and in accordance with the information and details shown on the plans and in accordance with the manufacturer's directions.
2. **MATERIAL:** The luminaires shall be model GLX30 or GLX48, as specified in plans, both with dimensions 36.2-inches by 11-inches x 10.4-inches.
3. **INSTALLATION:** Installation of the luminaires shall be performed in accordance with the manufacturer's directions.
4. **SUBMITTALS:** Contractor shall submit product data, material certificates, maintenance data, and shop drawings.
5. **MEASUREMENT:** This Item will be measured as each Greenstar LED Luminaire of the model and wattage specified.
6. **PAYMENT:** Payment for furnishing and installing model GLX30 luminaire shall be at the contract bid price for INS GREENSTAR LED LUMINAIRE, GALAXY XD-GLX30 MODEL, 68W. Payment for furnishing and installing model GLX48 luminaire shall be at the contract bid price for INS GREENSTAR LED LUMINAIRE, GALAXY XD-GLX48 MODEL, 109W.

ITEM 9012
LANDSCAPEFORMS PEDESTRIAN LIGHT

1. **DESCRIPTION:** This item shall consist of providing and installing Landscape forms pedestrian lighting assemblies at the locations and in accordance with the information and details shown on the plans and in accordance with the manufacturer's directions.
2. **MATERIAL:** Illumination assemblies shall be Type 3 Alcott pedestrian lighting and shall be metallic bronze in color. Illumination assemblies shall contain cast aluminum housing and cabinet and extruded aluminum pole. Illumination assemblies shall be 12-feet in length with 12-inch diameter base and 21-inch diameter housing.
3. **INSTALLATION:** Installation of the illumination assemblies shall be performed in accordance with the manufacturer's installation guide. Installation of the illumination assemblies will require an 18-inch diameter x 48-inches deep drill shaft foundation.
4. **SUBMITTALS:** Contractor shall submit product data, material certificates, maintenance data, and shop drawings.
5. **MEASUREMENT:** This Item will be measured as each Landscape Forms Pedestrian Light.
6. **PAYMENT:** Payment for furnishing and installing pedestrian light assemblies shall be at the contract bid price for INS LANDSCAPEFORMS 12 FT METALLIC BRONZE ALCOTT PEDESTRIAN LIGHT.

ITEM 9013
LANDSCAPEFORMS HAWTHORN BOLLARD LIGHT

1. **DESCRIPTION:** This item shall consist of providing and installing Landscape forms Hawthorne lighting assemblies at the locations and in accordance with the information and details shown on the plans and in accordance with the manufacturer's directions.
2. **MATERIAL:** Illumination assemblies shall be Hawthorne style and metallic bronze in color. Illumination assemblies shall contain cast aluminum housing, LED cartridge, and cabinet and stainless steel base plate. Illumination assemblies shall be 37-inches in length with 7-inch diameter base and 11-inch diameter housing.
3. **INSTALLATION:** Installation of the illumination assemblies shall be performed in accordance with the manufacturer's installation guide. Installation of the illumination assemblies will require an 18-inch diameter drill shaft that extends 36-inches deep or to the frostline (whichever is deeper).
4. **SUBMITTALS:** Contractor shall submit product data, material certificates, maintenance data, and shop drawings.
5. **MEASUREMENT:** This Item will be measured as each Landscape Forms Hawthorn Bollard Light.
6. **PAYMENT:** Payment for furnishing and installing illumination assemblies shall be at the contract bid price for INS LANDSCAPEFORMS 3 FT 1 IN METALLIC BRONZE HAWTHORN BOLLARD LIGHT.

ITEM 9014
SPECIAL ENVIRONMENTAL SPECIFICATION FOR CLASS 2 NON-HAZARDOUS SOILS

9014.1 Introduction: In November 2012, the City conducted an environmental subsurface investigation to determine the presence or absence of impacted media associated with potential releases from known historical semi-industrial activities in the area. During the subsurface investigation, one area of concern (AOC) was identified within the project limits. The area (AOC-1) was associated with former stores, a dry cleaner, and a factory and is shown on Project Layout Sheet 1 of 3.

Construction activities located in AOC-1 will require environmental monitoring and management of soils containing heavy metals. Based on the results of this investigation, heavy metals impacts were identified in the subsurface soils within the project limits in the area where proposed storm sewer improvements, gas improvements, traffic signal improvements, and storm water planters are planned. Please refer to the Project Layout Sheets to see where affected soils will be potentially encountered during construction activities.

AOC-1 is located along West Frontage Road between STA 10+40 to STA 11+40. Impacted depths range from surface to approximately 7 feet below ground surface. For areas with asphalt or concrete, the impacted area begins underneath the asphalt and sub-base. For unpaved areas, the impacted area will begin from the existing surface. Based on laboratory analyses, the soils are classified as Class 2 Non-hazardous Waste. The total estimated quantity of impacted soil is shown in the plans.

Copies of the subsurface investigation report titled "Phase II Environmental Site Assessment for Market Street Realignment," dated December 2012, are available for review and may be obtained from the CIMS Environmental Project Manager, Ms. Lety Arzate at (210) 207-1408 or by email at: Leticia.Arzate@sanantonio.gov

Soils excavated from areas not addressed in this report and that do not exhibit signs of contamination (i.e., odor, discoloration, visual observation of fuel, etc.) shall be handled as non-impacted material and staged separately from suspect impacted soils. Soils from the suspected impacted area (AOC 1) identified in the construction plans will require management and disposal of in accordance with this environmental specification. However, it is highly recommended that impacted soils be reused on site, if possible.

Construction practices must comply with all applicable regulations concerning the prevention of stormwater pollution, as detailed in COSA's Storm Water Pollution Prevention Plan (SW3P) Manual. New fill materials, such as topsoil, to be placed in COSA right-of-way (ROW) shall be obtained from a certified clean source outside the project limits. The Contractor shall provide documentation to the City's inspector to support this requirement.

Decontamination of equipment must be conducted prior to moving from a suspected impacted area to a non-impacted area. It is highly recommended to start first with the non-impacted areas and to move to the potentially impacted areas. The Contractor shall be required to document decontamination procedures and waste generated as part of decontaminating of heavy equipment and trucks. Soils from potentially impacted areas shall not be tracked on roadways. Any soils tracked onto roadways shall be immediately removed.

Appropriate decontamination shall be conducted within a designated area where it is possible to contain and collect decontamination-generated fluids and solids. These decontamination wastes shall be placed

into appropriate containers for characterization and profiling prior to final disposal. The Contractor may, at their discretion, place the decontamination waste with the suspect impacted soil.

9014.2 Description: This item consists of the evaluation for management, transportation, and disposal of impacted soils, site safety and hazardous materials training, and development and implementation of a Site Specific Health and Safety Plan, and environmental oversight in accordance with the specification requirements outlined below.

ITEM 9014.3 Management, Transportation and Disposal of Impacted Soils: Soils at the location identified in Table 1 may contain or have the potential to contain heavy metals (RCRA metals) impacted media.

Project Design Data						Environmental Data			
AOC No.	Addresses	Nearest Cross Street	From Sta.	To Sta.	Improvements of Concern	Impacted Media		Contaminant Type	On-Site Monitoring Required
						Ground water	Soil		
1	Commerce Street	Commerce Street and the new West Frontage Road	STA 10+40	STA 11+40	Storm sewer, CPS, Traffic Signals, and Storm water planters	No	Yes from 0 feet to 7 feet Bgs	Arsenic, barium, mercury, and lead	Yes ¹

Table 1 Notes:

AOC: Area of Concern

Bgs – Below Ground Surface

1) Onsite monitoring must be provided by Contractor’s environmental consultant for workers handling impacted materials. COSA’s environmental consultant is responsible for providing environmental oversight and monitoring to ensure that impacted media is properly excavated, transported, and disposed of to a licensed landfill and contractor is in compliance with these special specifications.

Table 1

Note: The stationing shown above is the stationing shown on the street plans for the West Frontage Road.

Table 2 provides the maximum detected contaminant concentrations associated with this impacted location. Management of the affected soil shall be governed at a minimum by the following management procedures and guidelines below.

	AOC 1 Soil (mg/kg)	TRRP Tier 1 PCLs ^{Tot} Soil _{comb} (mg/kg)*	Texas Specific Background Levels (mg/kg)*	TRRP Tier 1 PCLs ^{GW} Soil _{ing} (mg/k)*	TRRP Tier 1 PCLs ^{air} GW _{Inh-V} (mg/L)
Depth bgs	SB-2 2.5 to 5-ft bgs				
Chemicals of Concern					
Arsenic	6.74	24	5.9	5.0	NL
Barium	493	8100	300	440	
Lead	921	500	15	3.0	NL
Mercury	1.15	3.6	0.04	0.0078	7.3
Selenium	1.18	310	0.3	2.3	NL
<p>Bolded value indicated that concentration has exceeded the total soil combined PCL for that chemical. PCLs: Protective Concentration Levels bgs: below ground surface ND: non-detect NL: No listed NA: Not Applicable D: Sample was diluted</p> <p>* This information might be found at the Texas Commission of Environmental Quality (TCEQ) web site [http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html]. The chemicals listed in this table only reflect partial information of the potential chemicals that may be found during the construction activities. It is the contractor's environmental consultant's responsibility to monitor the area where the potential contaminants exist, as it is outlined in this document.</p>					

Table 2

The Contractor's environmental consultant will be responsible for providing environmental oversight and air monitoring activities for their construction workers in the affected area. The environmental consultant will be on-site to perform air monitoring activities for workers working in AOC-1. The purpose of the air monitoring is to assess the potential dust arising from construction activities and potential exposure to construction workers in the affected area. Additionally, the City will provide environmental oversight to ensure the Contractor complies with the environmental specifications, monitor potential air contaminants resulting from construction activities within the surrounding community, and ensure all environmental work is conducted in accordance with applicable federal, state and local regulations.

The specific area, station numbers, cross-sections, and affected utility locations are shown on the sheets listed on the project layouts. Specific procedures required for AOC-1 are listed below:

AOC-1: Removal of affected soil within AOC-1, consisting of heavy metals impacts, will be required. The proposed storm “A” sewer system and associated laterals / inlets, gas improvements, traffic signal improvements, and storm water planters are located in this affected area. Therefore, special handling procedures and field screening of soils underneath the top soils and sub-base material or existing surface (unpaved areas) will have to be performed in AOC-1.

The impacted media generated during construction activities in AOC-1 shall be managed by disposing off-site at a licensed Texas Commission on Environmental Quality (TCEQ) landfill. It is anticipated that soils from surface to a maximum depth of 7 feet bgs are considered suspect soils and would require management and disposal at a licensed landfill. The excavated soils are classified as Class 2 Non-hazardous waste based on laboratory analyses. The Contractor will be required to coordinate and notify the City’s representative 48 hours in advance prior to beginning work in AOC-1.

All impacted soils excavated from the known impacted area at selected interval depths, identified by station numbers, locations, and shown in the plans shall be transferred directly into the transporting trucks. It is the Contractor’s responsibility to ensure all dump trucks used to transport this waste are equipped with operating tarps. If the tarps are not effective, the City’s inspector or City’s representative will remove trucks from this project. The City inspector or City’s representative will also determine if trucks need to be lined with polyethylene sheeting or not.

The impacted soil shall be transported to and disposed of at a facility authorized by the TCEQ to accept such materials. The City or City’s representative will obtain a preliminary waste disposal authorization from local disposal facilities for contaminated soil disposal. However, the disposal facility may require additional sampling of the excavated soils for waste characterization purposes. It will be the Contractor’s responsibility to conduct additional soil sampling and analyses, if necessary, for waste characterization and disposal purposes. The selected disposal facility shall be approved by the City, prior to beginning work in affected area.

The Contractor will be required to obtain all necessary waste hauler permits and waste disposal manifests to transport and dispose of affected soil at a licensed landfill. Specifically, the trucks transporting the affected material will be required to have a solid waste haulers permit. This permit is a local requirement, and will be verified prior to beginning work in the affected area. In the event the permit is not obtained or available, the inspector will immediately remove the truck from the construction project. Additionally, trucks hauling affected soil to a licensed landfill without this permit are subject to fine by the City of San Antonio, Code Enforcement. Contractor will be required to provide documentation of truck information, such as company, truck numbers, permit numbers, etc. prior to beginning work in AOC-1.

The Contractor shall notify the City’s Inspector or City’s representative at least 48 hours in advance of hauling materials to the approved landfill. Waste manifests shall be used to transport impacted materials from the impacted area to the final disposal site(s). The City or City’s representative will sign the waste manifests as the generator for the impacted soils. Copies of the disposal records for the soils shall be submitted to the City’s Inspector. The Construction Inspector will forward this documentation to the Capital Improvements Management Services (CIMS), Environmental Management Division (EMD).

The City shall be notified immediately when impacted soils and/or groundwater are encountered at locations not identified in this report. The notification should include the station numbers, specific points, exact locations, type of impacted media, evidence of impact, and measures taken to contain the impacted media and prevent public access. The impacted soil and/or groundwater shall not be removed from the location without prior City’s approval.

The work will be paid under Item 9014.2 “Transportation and Disposal of Impacted Soils,” and includes all equipment, time, materials, and labor required to complete the work. The bid proposal estimated quantity is based on the best information available as a result of the environmental investigation and in no way correlates to actual payment made for Bid Item 9014.2. Final payment for Bid Item 9014.2 will be based entirely on actual quantities of materials accepted by the TCEQ certified landfill facility and approved by the City. Five percent of the total amounts of pay Items 9014.2.1 – 9014.2.4 will be withheld until all disposal documentation is received by the City.

9014.4 Site Safety and Hazardous Materials Training: Because of the potential for exposure to hazardous materials, all contractors, employees, and subcontractors working in or near the areas of known impacted media must be required to have successfully completed a 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) course in accordance with the Occupational Safety and Health Administration (OSHA) guidelines contained in 29 Code of Federal Regulations 1910.120 and retain current certification. The site health and safety supervisor shall have completed the 8-hour HAZWOPER Supervisory Training course.

The Contractor shall be responsible for providing this training to their employees and subcontractors’ employees. The Contractor shall make current completion certifications available for inspection at any time during the project.

Please note, costs of hazardous materials training, medical surveillance, personal protective equipment, and any other required measure to complete the project specified in CFR 1910.120 are not reimbursable, but incidental to the overall costs of the project.

9014.5 Ground Water or Runoff Water: During the course of the project, water, either stormwater or groundwater, may accumulate in the open excavations. It is in the best interest of the contractor to provide soil berms or other protective measures around the excavated trench to prevent water intrusion. A map showing protective measures for stormwater intrusion is shown in Figure 1 below. In the event that removal of water from the excavation is necessary, proper characterization and disposal is required by the Contractor. Specifically, the Contractor shall collect at a minimum one water sample from the affected area. This water sample shall be analyzed for RCRA heavy metals. Laboratory analyses of samples collected must be conducted in accordance with standard Environmental Protection Agency (EPA) methods. Upon approval by the City, non-contaminated water may be discharged into the storm sewer system per the National Pollutant Discharge Elimination System (NPDES) permit. Contaminated water must be removed and disposed of in accordance with all federal, state, and local requirements at the Contractors expense. The Contractor shall be responsible for submitting analytical data and disposal documentation to the City of San Antonio, Capital Improvements Management Department, Construction Inspections. Construction Inspections will forward the documentation to the Environmental Services Division.

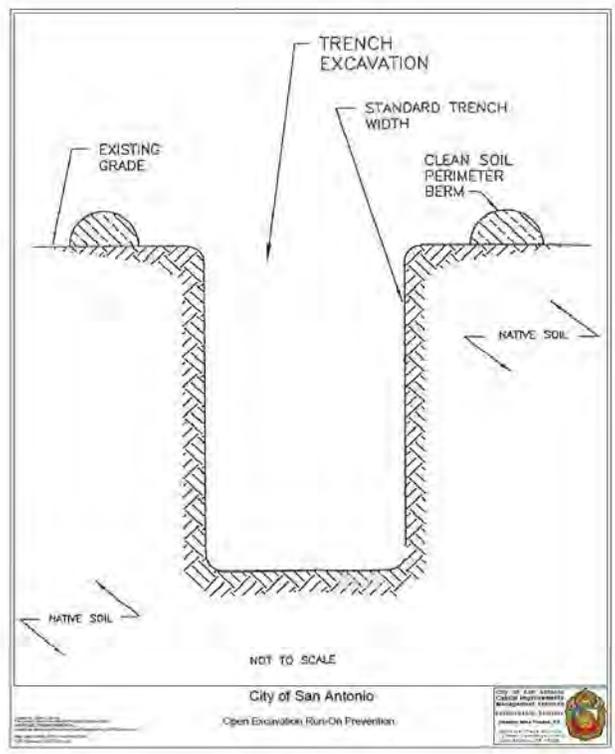


Figure 1

Payment for Section 9014.5, “Groundwater or Runoff Water”, will be incidental to Section 9014.3, “Transportation and Disposal of Impacted Soils”.

9014.6 Site Specific Health and Safety Plan: The Contractor shall prepare and implement a Site Specific Health and Safety (H&S) Plan. The Contractor must also provide a competent Environmental Consultant who will comply and implement the Site Specific H&S Plan on behalf of the Contractor. The Environmental Consultant must also be responsible for providing environmental oversight, air monitoring and aiding the Contractor, City Inspector(s), and/or City’s representative in coordinating the handling and disposition of impacted media at the construction site.

The Contractor’s H&S Plan must comply with applicable regulations contained in 29 CFR 1910.120. The Contractor should review and apply the standards found in Section 1910.120 (hazardous waste operations), Subsection M (personal protective equipment), and Subsection Z (toxic and hazardous substances). Additionally, the Contractor should review and incorporate into the H&S Plan all relevant construction procedures which are regulated by Section 1926. The H&S Plan shall be submitted to the City of San Antonio, CIMS, Environmental Management Division (EMD) for review prior to beginning construction activities in the impacted area. Once the Contractor H&S Plan meets the requirements below, the Contractor may begin construction activities in the affected area.

Where the various sections of the Occupational Safety and Health Administration (OSHA) regulations require specific subplans/programs, such as Confined Space, Lockout/Tagout, Hazard Communication, Excavation and Trenching, etc., written documentation shall be developed by the Contractor that is specific for the potential hazards associated with this construction effort. This is in addition to standard OSHA requirements for this type of construction project. Appropriate traffic control devices and

location access limitation devices shall be utilized according to applicable regulations and the approved H&S Plan.

The H&S Plan shall include at a minimum the following information:

- 1) A health and safety risk analysis for each location, task, or operation to be performed by the Contractor.
- 2) A description of the training to be provided to location workers to comply with 29 CFR 1910.120(f).
- 3) List of engineering controls, work practices, and personal protective equipment to be provided by the Contractor to the Contractor's employees for each task or operation to be performed. These must comply with 29 CFR 1910.120(g).
- 4) A description of the frequency and type of air monitoring to be provided to comply with 29 CFR 1910.120(h), including the concentrations of contaminants or air constituents that will cause the Contractor to take actions to increase or decrease protective measures.
- 5) A description of location control measures to be used to comply with 29 CFR 1910.120(d).
- 6) A decontamination plan to comply with requirements of 29 CFR 1910.120(k). This plan must address both personnel and equipment decontamination and disposal of decontamination-generated fluids and materials.
- 7) An emergency response and spill containment plan to comply with 29 CFR 1910.120(i and j).
- 8) A confined space entry program to comply with 29 CFR 1910.146.
- 9) An excavation safety program to comply with 29 CFR 1926, Subpart P.
- 10) A location map, with a route and phone number, to the nearest emergency medical facility.
- 11) Personal Protective Equipment (PPE) levels shall be defined as appropriate to location contaminant concentrations in order to maintain worker safety.
- 12) A truck route map showing the designated route from the project site to the proposed disposal facility.
- 13) A description of how the impacted media will be handled during construction activities. With information provided in Tables 1 and 2, the Contractor's consultant will describe the Contractor's plan to manage, transport, and dispose of impacted soils.

The Contractor shall add additional elements to the H&S Plan, as required, for the safe execution of the project. The Contractor must include a written statement that they are committed to employing/enforcing the H&S Plan and will be implemented for all project operations. All workers and visitors to the site shall be informed of the H&S Plan and shall sign a statement acknowledging their commitment to following the procedures of the H&S Plan. The Contractor will be required to submit a finalized copy of the H&S Plan, a copy of the 40-hour HAZWOPER training certifications, and a copy of the 8-hour supervisory training certificates of all employees qualified to work within the impacted area to the City

of San Antonio, CIMS – EMD, prior to beginning construction in the affected area. CIMS EMD will review the submittals and determine whether the Contractor meets the requirements or not.

The tables shown above should be used by the Contractor to develop the H&S Plan. Table 1 provides a summary of the impacted location identified by station numbers within the project limits. Table 2 presents the maximum detected level of contaminants concentrations (RCRA Metals), identified at the sampled locations within the project limits. There is the possibility that other contaminants could be encountered within the project limits. If the Contractor suspects additional contamination or impacted media outside the designated areas, the Contractor shall notify the construction inspector, City’s inspector, and/or City’s representative immediately.

This work will be paid under Item 9014.6, “Site Specific Health and Safety Plan,” and includes all time, materials, and labor required to prepare the required document. This document must be prepared with specific information for the project. Generic documents will not be accepted.

9014.7 Measurement. The transportation of class 2 non-hazardous soils will be measured by the cubic yard in its original position as computed by the method of average end areas. The loose volume of class 2 non-hazardous soils deposited in a landfill disposal facility will be 1.3 time the volume in its original position.

These are plans quantity measurement items. The quantity to be paid is the quantity shown in the proposal. Additional measurements or calculations will be made if adjustments of quantities are required.

Shrinkage or swelling factors will not be considered in determining the calculated quantities.

The preparation and implementation of a Site Specific Health and Safety Plan will be measured by each one prepared and implemented and paid for as provided under “Payment”. For the purposes of this project, contractor only needs to prepare a site specific health and safety plan for the impacted area.

9014.8 Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for the bid items specified within 9014.9. This price is full compensation for loading, handling, hauling, and disposal of the Class 2 non-hazardous soils (including any fees or permits required) and is full compensation for the time, materials, and labor required to prepare the Site Specific Health and Safety Plan.

9014.9 Bid Item

9014.3.1 Transportation to Disposal Facility (Class 2 Non-Hazardous Soil) (COSA) – per C.Y.

9014.3.2 Landfill Disposal (Class 2 Non-Hazardous Soil) (COSA) – per C.Y.

9014.3.3 Transportation to Disposal Facility (Class 2 Non-Hazardous Soil) (CPS) – per C.Y.

9014.3.4 Landfill Disposal (Class 2 Non-Hazardous Soil) (CPS) – per C.Y.

9014.6.1 Preparation and Implementation of a Site Specific Health and Safety Plan – per L.S.

ITEM 9015

Vertical Circulator

This specification is an allowance for \$250,000.00 that will be bid by every bidder to construct a vertical circulator at the southwest corner of the west frontage road and Montana Street. The Vertical Circulator will provide access for pedestrians and bicyclists from ground level to the pedestrian bridge level over the west frontage road and over Montana Street and will include stairs and a freight elevator.

Description: Furnish materials, tools, equipment and labor to construct a Vertical Circulator which will be specified within the plans and specifications. The Vertical Circulator will be developed and made available to the Contractor once the Convention Center Design-Build team has developed enough of the Convention Center's plans and aesthetics to allow the Vertical Circulator to be designed functionally and aesthetically to compliment the Convention Center expansion. At that time the City will request a proposal for construction.

Measurement and Payment: Item 9015.1 will be measured and paid for as a Lump Sum Item.

Bid Items:

Item 9015.1 – Vertical Circulator

SPECIAL SPECIFICATION 9016

Storm Water Planters

9016.1. Description. Furnish, construct, and install one-cell, two-cell, or three-cell storm water planters as shown at the storm water planter structural details and roadway details.

9016.2. Materials.

A. General. Furnish materials in accordance with the following:

- TxDOT Item 420, “Concrete Structures”
- TxDOT Item 421, “Hydraulic Cement Concrete”
- TxDOT Item 440, “Reinforcing Steel”
- TxDOT Item 464, “Reinforced Concrete Pipe.”

Provide cast-in-place or precast, formed or machine-made, storm water planters. Use Class C concrete with and for all other cast-in-place Storm Water Planters. Furnish concrete for machine-made precast storm water planters in accordance with ASTM C 1433. When sulfate-resistant concrete is required, do not use Class C fly ash.

B. Fabrication.

1. Cast-in-Place. Meet TxDOT Item 420, “Concrete Structures.”

2. Formed Precast. Meet TxDOT Item 424, “Precast Concrete Structures (Fabrication).”

3. Machine-Made Precast. Furnish machine-made precast storm water planters in accordance with ASTM C 1433. Ensure that concrete is placed uniformly in the forms. Compact by mechanical devices to ensure dense concrete. Mix concrete in a central batch plant or other approved batching facility from which the quality and uniformity of the concrete can be ensured. Do not use transit-mixed concrete.

C. Testing.

1. Cast-in-Place. Provide test specimens that meet TxDOT Item 421, “Hydraulic Cement Concrete.”

2. Formed Precast. Produce test specimens in accordance with Tex-704-I.

3. Machine-Made Precast. Make test specimens in test cylinders at the same time and in the same manner as the sections they represent. Make a minimum of 4 test cylinders for each day’s production run and each mix design. Cure test cylinders in the same manner and for the same times as the sections they represent. Test the specimens in accordance with Tex-704-I.

4. Testing Equipment. The producer must furnish all equipment required for testing concrete for storm water planters produced in a precasting plant.

D. Lifting Holes. For precast storm water planters, provide no more than 4 lifting holes in each section. Lifting holes may be cast, cut into fresh concrete after form removal, or drilled. Provide lifting holes of sufficient size for adequate lifting devices based on the size and weight of the storm water planter section. Do not use lifting holes larger than 3 in. in diameter. Do not cut more than 1 longitudinal wire or 2 circumferential wires per layer of reinforcing steel when locating lift holes. Repair spalled areas around lifting holes.

E. Marking. Mark precast storm water planters with the following:

- name or trademark of the producer;

City of San Antonio Special Specifications for Construction

- date of manufacture;
- stormwater planter size; and
- match marks for proper installation, when required, under TxDOT Section 462.2.F, “Tolerances.”

Indent markings into the storm water planters or paint them with waterproof paint.

F. Tolerances. Ensure that precast sections of either type meet the following requirements:

- The inside vertical and horizontal dimensions do not vary from plan requirements by more than 1/2 in. or 1%, whichever is greater.
- The horizontal or vertical plane at each end of the storm water planters does not vary from perpendicular by more than 1/2 in. or 1%, whichever is greater, measured on the inside faces of the section.
- The sides of a section at each end do not vary from being perpendicular to the top and bottom by more than 1/2 in. or 1%, whichever is greater, when measured diagonally between opposite interior corners.

Ensure that wall thicknesses are not less than shown on the plans except for occasional deficiencies not greater than 1/4 in. or 5%, whichever is greater. If proper jointing is not affected, thicknesses in excess of plan requirements are acceptable.

Deviations from the above tolerances will be acceptable if the sections can be fitted at the plant or job site and the joint opening at any point does not exceed 1 in. Use match marks for proper installation on sections that have been accepted in this manner.

G. Defects and Repair. Fine cracks on the surface of the member that do not extend to the plane of the nearest reinforcement are acceptable unless the cracks are numerous and extensive. Repair cracks that extend into the plane of the reinforcing steel in an approved manner. Excessive damage, honeycomb, or cracking will be subject to structural review.

H. Storage and Shipment. Store precast sections on a level surface. Do not place any load on the sections until design strength is reached and curing is complete. Shipment of sections is permissible when the design strength and curing requirements have been met.

9016.3. Construction.

A. Excavation, Shaping, Bedding, and Backfill. Excavate, shape, bed, and backfill in accordance with TxDOT Item 400, “Excavation and Backfill for Structures. For all storm water planters where joints consist of materials other than mortar, immediate backfilling is permitted. Take precautions in placing and compacting the backfill to avoid any movement of the storm water planters or damage to the joints. Remove and replace storm water planters damaged by the Contractor at no expense to the City.

B. Placement of Stormwater Planters. When precast storm water planters are used, place them in conformance with the plans or as directed. Place material to be used between storm water planters as shown on the plans or as directed. Unless otherwise authorized, start the laying of storm water planters on the bedding with the abutting sections properly matched. Fit, match, and lay the storm water planters to form a smooth, uniform storm water system true to the established lines and grades. Remove and re-lay, without extra compensation, storm water planters that are not in alignment or that show excessive settlement after laying. Form and place cast-in-place storm water planters in accordance with TxDOT Item 420, “Concrete Structures.”

C. Jointing. Unless otherwise shown on the plans, use any of the jointing materials in accordance with the jointing requirements specified in TxDOT Item 464, “Reinforced Concrete Pipe.”

D. Connections and Stub Ends. Make connections of storm water planter sub-drains to pipes, storm drains, inlets or storm drain appurtenances as shown on the plans. Connect storm water planters to any required walls, inlets, curbs, riprap, or other structures as shown on the plans or as directed. Repair any damage to the existing structure resulting from making the connections. Plug any holes in the wall of the storm water planter to be placed by the street (not the shorter web-walls) with mortar or concrete and cure.

9016.4. Measurement. This Item will be measured by the foot. Measurement will be made between the ends of the storm water planters. Where inlets, walls, manholes, junction chambers, or other structures are included in lines of storm water planters, the length of storm water planter section tying into the structure wall will be included for measurement, but no other portion of the structure length or width will be included. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal. Additional measurements or calculations will be made if adjustments of quantities are required.

9016.5. Payment. The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Storm Water Planters” of the size specified. This price is full compensation for constructing, furnishing, and transporting sections; preparation and shaping of the bed; backfill material; jointing of sections; jointing material; connections to new or existing structures; breaking back, removing and disposing of portions of the existing structure and replacing portions of the existing structure as required to make connections; concrete and reinforcing steel; and equipment, labor, materials, tools, and incidentals. Protection methods for excavations greater than 5 ft. deep will be measured and paid for as required under CoSA Item 550, “Trench Excavation Safety Protection,” or TxDOT Item 403, “Temporary Special Shoring.” Excavation, shaping, bedding, and backfill will be paid for in accordance with TxDOT Item 400, “Excavation and Backfill for Structures.”

9016.6. BID ITEM:

9016.1 CONCRETE STRUCTURE (STORM WATER PLANTER – 4’-5’ WIDE) – PER LINEAR FOOT.

9016.2 CONCRETE STRUCTURE (STORM WATER PLANTER – 5’-6’ WIDE) – PER LINEAR FOOT.

9016.3 CONCRETE STRUCTURE (STORM WATER PLANTER – 6’-7’ WIDE) – PER LINEAR FOOT.

9016.4 CONCRETE STRUCTURE (STORM WATER PLANTER – 7’-13’ WIDE) – PER LINEAR FOOT.

ITEM 9017

Temporary Closure of Market Street

The City is considering two traffic control plans for the Market Street Realignment project. The first (base bid) traffic control plan would maintain traffic within the project area for the full duration of the construction period. This traffic control plan is shown on sheets 41-104 of the plans and the items of work are included in the base bid. The second traffic control plan is the Additive Alternate Detour Plan which provides a temporary closure of Market Street and diverts traffic out of the project area between September 14, 2013 and August 1, 2014. This Additive Alternate Detour Plan requires the contractor to install, maintain, and remove the traffic diversion items as shown on sheets 1071 – 1080 of the plans. These items of work are included in the Additive Alternate Detour Plan. In addition to providing a total price for the Additive Alternate Detour Plan on the 020 Bid Form for diverting traffic out of the construction area between September 14, 2013 and August 1, 2014, the contractor shall provide a dollar amount of the cost savings that will result in the base bid if the temporary closure of Market Street is approved. This cost savings will constitute a credit against the base bid for traffic control.

Description: This item is composed of the cost savings (Item 9017.1) due to the temporary closure of Market Street which is the amount of savings the City will realize as a credit against the base bid for traffic control due to the Temporary Closure of Market Street between September 14, 2013 and August 1, 2014.

Schedule: The traffic control and construction phasing plan for both the base bid and this Additive Alternate Detour Plan will be based on four project milestones. The Milestones and their liquidated damages per day for the Base Bid and the Additive Alternate Detour Plan are contained within the Supplemental Conditions Form 060. The Milestones for this Additive Alternate Detour Plan are:

- Milestone 1 – By 9/14/2013, the Contractor must complete Phase 1 Step 1 of the traffic control plan and install the Additive Alternate Detour Plan for the temporary closure of Market Street if the City approves this Additive Alternate Detour Plan. The detour must be fully implemented and functioning by 9/14/2013 as described in the Traffic Control Notes and Narrative Plans or liquidated damages will be assessed per Form 060 Supplemental Conditions.
- Milestone 2 – By 3/14/2014 the Contractor must complete the southbound exit ramp to Cesar Chavez as defined in Phase 3, sheets 92 & 93 which includes placement of freeway signs, final

hotmix, final pavement markings, and final signing of IH 37 and of said exit ramp to Station 26+00 or liquidated damages will be assessed per Form 060 Supplemental Conditions.

- Milestone 3 – By 8/1/2014 the Contractor must have installed Phase 3 Traffic Control and open Market Street to traffic and the Additive Alternate Detour Plan must be discontinued and removed. Intersections along the detour route should be returned to their original configurations or as described in the alternate detour construction documents. All construction should satisfy significant completion status. The intersections must have overlays and striping complete and be opened to traffic or liquidated damages per Form 060 Supplemental Conditions damages will be charged until milestone 3 is satisfied.
- Milestone 4 – By 10/3/2014 all construction should be complete.

Measurement and Payment: Item 9017.1 will not be measured or paid for, but will be a cost savings listed as a lump sum credit to the project cost as a result of a temporary closure of Market Street.

Bid Items:

Item 9017.1 – Traffic Control Credit due to the Temporary Closure of Market Street (Lump Sum).

SPECIAL SPECIFICATION 9018
ORNAMENTAL FENCE AND GATE

9018.1. DESCRIPTION: Furnish and install commercial steel ornamental fence and gate.

9018.2. MATERIALS: Before installation of the chain link fence, furnish certification from the fence materials manufacturer stating that all fencing materials comply with the requirements of this Item. Use only new materials.

A. References.

- ASTM A653/A653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
- ASTM B117 - Practice for Operating Salt-Spray (Fog) Apparatus.
- ASTM D523 - Test Method for Specular Gloss.
- ASTM D714 - Test Method for Evaluating Degree of Blistering in Paint.
- ASTM D822 - Practice for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Light and Water Exposure Apparatus.
- ASTM D1654 - Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.
- ASTM D2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.
- ASTM D2794 - Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- ASTM D3359 - Test Method for Measuring Adhesion by Tape Test.
- ASTM F2408 – Ornamental Fences Employing Galvanized Steel Tubular Pickets.

B. **Manufacturer.** The commercial ornamental steel fence system shall be Ameristar Aegis Plus Majestic 3-ring style or approved equal.

C. **Framework.** Steel material for fence framework (i.e. tubular pickets, rails and posts), when galvanized prior to forming, shall conform to the requirements of ASTM A924/A924M, with a minimum yield strength of 45,000 psi (310 MPa). The steel shall be hot-dip galvanized to meet the requirements of ASTM A653/A653M with a minimum zinc coating weight of 0.60 oz/ft² (276 g/m²), Coating Designation G-60.

D. **Fence Pickets.** Material for fence pickets shall be 3/4" square x 17 Ga. tubing. The cross-sectional shape of the rails shall conform to the manufacturer's ForeRunner™ double-wall design with outside cross-section dimensions of 1.50" square and a minimum thickness of 14 Ga. Picket holes in the ForeRunner rail shall be spaced 4.70" o.c. Picket retaining rods shall be 0.125" diameter galvanized steel. High quality PVC grommets shall be supplied to seal all

picket-to-rail intersections. Fence posts and gate posts shall meet the minimum size requirements of Table 1.

Table 1 – Minimum Sizes for Aegis Plus Posts				
<u>Fence Posts</u>	<u>Panel Height</u>			
2-1/2" x 12 Ga.	Up to & Including 8' Height			
3" x 12 Ga.	Over 8' Up to & Including 10' Height			
4" x 11 Ga.	Over 10' Height			
<u>Gate Height</u>				
<u>Gate Leaf</u>	<u>Up to & Including 6'</u>	<u>Over 6' Up to & Including 8'</u>	<u>Over 8' Up to & Including 10'</u>	<u>Over 12'</u>
Up to 4'	2 1/2" x 12Ga.	3" x 12 Ga.	4" x 11 Ga.	4" x 11 Ga.
4'1" to 6'	3" x 12Ga.	3" x 12 Ga.	4" x 11 Ga.	4" x 11 Ga.
6'1" to 8'	4" x 11 Ga.	4" x 11 Ga.	6" x 3/16"	6" x 3/16"
8'1" to 10'	4" x 11 Ga.	6" x 3/16"	6" x 3/16"	6" x 3/16"
10'1" to 12'	6" x 3/16"	6" x 3/16"	6" x 3/16"	8" x 1/4"
12'1" to 16'	6" x 3/16"	6" x 3/16"	8" x 1/4"	8" x 1/4"

- E. **Length.** Pickets, rails and posts shall be pre-cut to specified lengths. ForeRunner rails shall be pre-punched to accept pickets.
- F. **Grommets.** Grommets shall be inserted into the pre-punched holes in the rails and pickets shall be inserted through the grommets so that pre-drilled picket holes align with the internal upper raceway of the ForeRunner rails (Note: This can best be accomplished by using an alignment template). Retaining rods shall be inserted into each ForeRunner rail so that they pass through the pre-drilled holes in each picket, thus completing the panel assembly.
- G. **Coating.** The manufactured galvanized framework shall be subjected to the PermaCoat® thermal stratification coating process (high-temperature, in-line, multi-stage pretreatment/wash (with zinc phosphate), an electrostatic spray application of any epoxy base, and a separate electrostatic spray application of a polyester finish. The base coat shall be a thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils

(0.0508mm). The topcoat shall be a “no-mar” TGIC polyester powder coat finish with a minimum thickness of 2 mils (0.0508mm). The color shall be (specify Black, Bronze, White or Desert Sand). The stratification-coated framework shall be capable of meeting the performance requirements for each quality characteristic shown in Table 2.

Table 2 – Coating Performance Requirements		
<u>Quality Characteristics</u>	<u>ASTM Test Method</u>	<u>Performance Requirements</u>
Adhesion	D3359 – Method B	Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).
Corrosion Resistance	B117, D714 & D1654	Corrosion Resistance over 3,500 hours (Scribed per D1654; failure mode is accumulation of 1/8” coating loss from scribe or medium #8 blisters).
Impact Resistance	D2794	Impact Resistance over 60 inch lb. (Forward impact using 0.625” ball).
Weathering Resistance	D822 D2244, D523 (60° Method)	Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).

H. **Loading.** Completed panels shall be capable of supporting a 400 lb. load (applied at midspan) without permanent deformation. Panels without rings shall be biasable to a 12.5% change in grade.

I. **Gates.** Swing gates shall be fabricated using 1.5” x 14ga. Forerunner double channel rail, 1.75” sq. x 14ga. gate ends, and 3/4” sq. x 17ga. pickets. Gates that exceed 6’ in width will have a 1.5” sq. x 14ga. intermediate upright. All rail and upright intersections shall be joined by welding. All picket and rail intersections shall also be joined by welding.

9018.3. CONSTRUCTION: Erect the ornamental fence to the lines and grades established on the plans. Overall height of the fence when erected is the height above the grade shown.

A. **Fence Installation.** Fence post shall be spaced according to Table 3, plus or minus ½”. For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade. Fence panels shall be attached to posts with brackets supplied by the manufacturer. Posts shall be set in concrete footers having a minimum depth of 36” (Note: In some cases, local restrictions of freezing weather conditions may require a greater depth). The “Earthwork” and “Concrete” sections of this specification shall govern material requirements for the concrete footer. Posts setting by other methods such as plated posts or grouted core-drilled footers are permissible only if shown by engineering analysis to be sufficient in strength for the intended application.

Table 3 – Aegis Plus – Post Spacing By Bracket Type									
Span				8' Nominal (92" Rail)					
Post Size	2-1/2"	3"	2-1/2"	3"	2-1/2"	3"	2-1/2"	3"	
Bracket Type	Commercial Universal Blvd. (BB311)		Commercial Line Blvd. (BB310)		Commercial Flat Mount (BB306)		Commercial Swivel (BB312)*		
Post Settings ± ½" O.C.	95-1/2"	96"	95-1/2"	96"	95-1/2"	96"	*97"	*97-1/2"	
Span				6' Nominal (73.25" Rail)					
Post Size	2-1/2"	3"	2-1/2"	3"	2-1/2"	3"	2-1/2"	3"	
Bracket Type	Commercial Universal Blvd. (BB311)		Commercial Line Blvd. (BB310)		Commercial Flat Mount (BB306)		Commercial Swivel (BB312)*		
Post Settings ± ½" O.C.	76-3/4"	77-1/4"	76-3/4"	77-1/4"	76-3/4"	77-1/4"	*78-1/4"	*78-3/4"	
*Note: When using BB304 swivel brackets on either or both ends of a panel installation, care must be taken to ensure the spacing between post and adjoining pickets meets applicable codes. This will require trimming one or both ends of the panel.									

B. **Maintenance.** When cutting/drilling rails or posts adhere to the following steps to seal the exposed steel surfaces; 1) Remove all metal shavings from cut area. 2) Apply zinc-rich primer to thoroughly cover cut edge and/or drilled hole; let dry. 3) Apply 2 coats of custom

finish paint matching fence color. Failure to seal exposed surfaces per steps 1-3 above will negate warranty. Ameristar spray cans or paint pens shall be used to prime and finish exposed surfaces; it is recommended that paint pens be used to prevent overspray. Use of non-Ameristar parts or components will negate the manufactures' warranty.

- C. **Gate Installation.** Gate posts shall be spaced according to the manufacturers' gate drawings, dependent on standard out-to-out gate leaf dimensions and gate hardware selected. Type and quantity of gate hinges shall be based on the application; weight, height, and number of gate cycles. The manufacturers' gate drawings shall identify the necessary gate hardware required for the application. Gate hardware shall be provided by the manufacture of the gate and shall be installed per manufacturer's recommendations.

- D. **Cleaning.** The contractor shall clean the jobsite of excess materials; post-hole excavations shall be scattered uniformly away from posts.

9018.3. MEASUREMENT. Ornamental fence will be measured by the foot of acceptable fence installed. Gate will be paid by the number of acceptable gate installed. Only ornamental fence and gate located as shown on the plans or approved by the Engineer will be measured for payment.

9018.4. PAYMENT. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Ornamental Fence" and "Ornamental Gate". This price is full compensation for furnishing the tools, equipment, materials, testing, labor, and incidentals required to install grout columns meeting the requirements of the plans.

9018.5 Bid Items:

Item 9018.1 – Ornamental Fence – per linear foot.

Item 9018.2 – Ornamental Gate – per number of gates.

ITEM 9019

Pedestrian Enhancements on Commerce Street

This specification is an allowance for \$600,000.00 that will be bid by every bidder to construct pedestrian enhancements on Commerce Street within the project limits. Said pedestrian enhancements will be designed and specified within the plans and specifications that will be developed by September 1, 2013. Once the plans and specifications are developed, the City will request a proposal for construction.

Description: Furnish materials, tools, equipment and labor to construct pedestrian enhancements on Commerce Street within the project limits as specified within the plans and specifications. Said plans and specifications will be developed and made available to the contractor by September 1, 2013.

Measurement and Payment: Item 9019.1 will be measured and paid for as a Lump Sum Item.

Bid Items:

Item 9019.1 – Pedestrian Enhancements on Commerce Street

SPECIAL SPECIFICATION

9200

CPS Energy Electrical Conduit System

1. Description.

This Item will govern the installation of all facilities belonging to CPS Energy, hereinafter referred to as CPS. The Contractor and approved Subcontractors shall construct all required utility adjustments within the limits of this project including any peripheral adjustments that may not have been discovered during the design process. Contracts with subcontractors for CPS's installation shall require the subcontractor to comply with this special specification. These adjustments shall be paid for directly as detailed in Measurement and Payment of this Special Specification.

1.01 Definitions

- A. CPS Energy Construction Standards. Refers to CPS underground electrical conduit construction and maintenance practices accepted and in use by all CPS personnel and contractors working in this project region. This information is documented in CPS guidelines and manuals that collectively are referred to as CPS Energy Practices and may include best practices that are not written but have been otherwise communicated to CPS personnel and contractors. Any Contractor that works on the CPS portion of the project must have and be familiar with the most current CPS Energy Practices.
- B. Conduit. Piping material that will be used to house underground electrical conduit. The words "conduit", "duct" and "piping" may be used interchangeably in this specification.
- C. Conduit Structure (Duct Bank). Groups of conduits arranged in tiers and encased as specified in the plans.

2. Materials.

2.01 CPS will furnish all materials required for installing underground electrical conduit system complete in place, such as pipe, fittings, pre-cast manholes, markers, etc.

A. Procurement of Materials.

- 1. All materials proposed for CPS within this project shall be provided by CPS. Contractor shall request materials through CPS Construction.

- B. Miscellaneous Material. All other non-underground electrical conduit system materials, such as casing pipe, galvanized iron pipe, shoring materials, backfill, mortar, tools, supplies, equipment, etc. required to properly complete the work will be furnished by the Contractor, except as otherwise noted. Unless otherwise directed in the plans, all materials furnished by the Contractor must meet COSA and CPS minimum requirements. In the event that a discrepancy exists between COSA and CPS material specifications, the Contractor must adhere to the more stringent specification.

- C. Backfill. All backfill will be in accordance with TXDOT Item 400, "Excavation and Backfill for Structures"
 - 1. Bedding. All bedding will be bank sand beginning 2 in. below the bottom of the duct bank and extending to 12 in. above top of the duct bank, as shown on the construction plans.
 - 2. Cement Stabilized Backfill. All cement-stabilized backfill will be in conformance with TXDOT Item 400, "Excavation and Backfill for Structures." Cement-stabilized backfill will be used to fill trench from top of bedding to bottom of subgrade whenever an excavation is under and within ten feet of a roadway.
 - 3. Original Material Backfill (Type A). Type A backfill will be used whenever an excavation is a distance of 10 ft. or greater from an existing or proposed edge of pavement. Material used for this backfill will be equivalent to original material or better, free of debris, compacted 90%-95% standard proctor density in 8 in. lifts.

- D. Encasement.
 - 1. Concrete Encasement. All concrete encasement material will conform to TXDOT Item 421, "Hydraulic Cement Concrete." Class B concrete will be utilized for encasement of conduits wherever plans indicate concrete encasement.
 - 2. Steel Encasement. Steel Encasement will be of a sufficient diameter to encase the conduit(s), will be of a minimum length equivalent to the width of the proposed frontage road fill slope on each side or as noted on the plan sheets, and have a minimum wall thickness of 1/4 in.
 - 3. HDPE Encasement. HDPE encasement will be of a sufficient diameter to encase the conduit(s), will be a minimum length equivalent to the width of the proposed frontage road fill slope on each side or as noted on the plan sheets, and will have a minimum SDR 11 wall thickness.

- E. Foundation. All concrete foundations will conform to TXDOT Item 420, "Concrete Structures." Class A concrete will be utilized for foundations wherever plans indicate foundation.
- F. Manholes and Handholes.
 - 1. Pre-cast manholes and handholes. All pre-cast manholes and handholes will be provided by CPS.
- G. Defective or Damaged Material. All materials will be inspected for defects prior to being lowered into the trench. Any defective, damaged, or unsound material will be repaired or replaced as directed. Should damaged materials be placed, the Contractor will furnish at the Contractor's expense all labor and materials required for removing and replacing the defective material. Should the Contractor damage the materials after installation, the Engineer may permit the damaged section to be cut from the length unless it is the opinion of the Engineer that the entire length was damaged. The cost and replacement of broken materials will be at the expense of the Contractor.
- H. Protective Concrete Cap. All materials shall be provided by the Contractor and shall conform to TXDOT Item 421, "Portland Cement Concrete" and TXDOT Item 440, "Reinforcing Steel." Class "A" concrete shall be used unless otherwise noted.

3. Construction.

- 3.01 General Requirements. All work performed by the Contractor and Subcontractor must adhere to CPS regional guidelines, TXDOT requirements, and the latest editions of both the CPS Energy Practices and National Electric Safety Code (NESC).
 - A. The Contractor and Subcontractor must follow the more stringent requirements whenever the items listed above vary amongst each other.
 - B. In the event that discrepancies exist between the above items and any applicable legal and/or safety requirement of a federal, state or local authority, the more stringent requirement must be followed. The Contractor's work is subject to inspection by both TXDOT and CPS. All personnel must be familiar with CPS Energy Standard 812-01 "Signs, Safety-Danger and General Safety" prior to beginning work.
 - C. Contractor. The Subcontractor that installs the Electrical Conduit System must be an approved CPS Energy Contractor in good standing with CPS. Table 1 below lists vendors that satisfy this requirement at the time this specification was printed; however, the Contractor must verify with CPS prior to finalizing

the Subcontract for CPS work to obtain a current listing of approved contractors. Other qualified Contractors not included in the list are allowed, if approved by CPS.

3.02 Coordination with CPS

- A. Slotted Manholes. All manholes proposed as pre-cast slotted shall not be ordered until contractor has verified field conditions are adequate for placement. Otherwise, manhole shall be cast in place.

3.03 Trench Excavation. Trench excavation and backfilling as required to complete the underground electrical conduit system installation will be performed in accordance with TXDOT Item 400, "Excavation and Backfill for Structures", as outlined herein, as shown on the plans and as directed. Blasting to perform the excavation will not be allowed unless authorized in the plans or in writing by the Engineer.

- A. Manhole and Handhole Excavations. The width and depth of excavation for manholes and handholes will be determined by the lines and grades as established on the plans, dimensions of the manholes and handholes, manhole and handhole orientation, as described in Article 400.4 of TXDOT Item 400, "Excavation and Backfill for Structures" or as approved.
- B. Classification of Excavations. No classification of excavated materials will be delineated. Excavation and trench work will include the removal and subsequent handling of all materials excavated in accordance with TXDOT Item 400, "Excavation and Backfill for Structures."
- C. Excavation below Grade. Any part of the bottom of the trench excavated below the limits specified in Section III, paragraph C., a., (1), "Depth of Trenches," will be corrected with approved material and compacted in a manner as described in Article 400.3 of TXDOT Item 400, "Excavation and Backfill for Structures" and as directed.
- D. Backfill. All backfill and backfill operations will be in accordance with TXDOT Item 400, "Excavation and Backfill for Structures," as described herein and as directed. Where, in the opinion of the Engineer, it is necessary to maintain traffic across a trench, the Contractor will install temporary metal bridges as necessary to facilitate the movement of traffic.
- E. Foundation. All foundation installations will be in accordance with TXDOT Item 422.3 "Construction" Section A "Cast-in-place."
- F. Pavement. The Contractor will remove pavement and surfaces as part of the trench excavation in accordance with TXDOT Item 400, "Excavation and

Backfill for Structures.” The removal and restoration of pavement and surfaces will be based upon the minimum trench width as described in Section II, paragraph A., 1., a., "Width of Trenches" plus 2-in. on each side of the trench.

1. Concrete Surfaces. All removal of concrete surfaces (sidewalks, driveways, etc.) will be performed in accordance with TXDOT Item 104, “Removing Concrete.”
- G. Boring. Installation of casing pipe and conduit(s) by bore shall be in conformance with TXDOT Item 476, “Jacking, Boring, or Tunneling Pipe or Box.” Bore spacer shall be installed in accordance with manufacturer’s guidelines.
- H. Directional Boring. Installation of casing pipe and conduit(s) by horizontal directional drill shall be in conformance with the North American Society of Trenchless Technology (NASTT), “Mini-Horizontal Directional Drilling Manual” (1995) or ASTM F 1962 “Standard Guide for Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit under Obstacles including River Crossings.”
- I. Manholes and Handholes. Manholes and handholes will be of the size and type as shown on the plans. All manholes and handholes will be set to the lines and grades as shown on the plans. Manholes will have a minimum 60-in. cover from finished grade to the top of the manhole box unless specified otherwise on the plans or as directed by CPS. Handholes will be placed in line with final grade except where noted otherwise on the plans or as directed by CPS. All pre-cast manholes and handholes will be installed according to CPS Energy Standards 349-06 - Manholes, Precast with Duct Terminators.”
- J. Conduit and Conduit Structures
1. General Requirements. Contractor shall start work at a tie-in point, unless otherwise indicated on the plans or directed by the Engineer. The work area shall be maintained in a neat and orderly fashion.
 2. Duct Bank. Contractor will refer to CPS Energy Standard Spacers, Interlocking 730-06 Conduit for underground Duct-Banks and 730-07 “Conduit, Electrical, High Density Polyethylene” for placing the conduit, including construction of curves, sweeps, and grade changes. This Item will cover requirements for mandreling, installing mule tape in each installed duct, and plugging all installed ducts at each end.
 3. Defective or Damaged Material. All materials will be inspected for defects prior to being lowered into the trench. Any defective, damaged, or unsound material will be repaired or replaced as directed. Should damaged

materials be placed, the Contractor will furnish at the Contractor's expense all labor and materials required for removing and replacing the defective material. Should the Contractor damage the materials after installation, the Engineer may permit the damaged section to be cut from the length unless it is the opinion of the Engineer that the entire length was damaged. The cost and replacement of broken materials will be at the expense of the Contractor.

- K. Adjusting Existing Manholes. All manhole frame and covers will be adjusted in accordance with TXDOT Item 479, "Adjusting Manholes and Inlets."
- L. Protective Concrete Cap. Concrete caps will be constructed above existing underground electrical conduit facilities at locations specified and to the dimensions detailed on the plans in conformance with TXDOT Item 421, "Hydraulic Cement Concrete."
- M. Contractor is responsible for hauling of material from CPS storage facility; Contractor must coordinate this Item through CPS Construction Manager.

4. Measurement.

- 4.01 Trench Excavation and Backfill. This Item will not be measured for payment but will be considered subsidiary to the buried facility installed in the trench.
- 4.02 Trench Excavation Protection. Trench Excavation protection will be measured by the plan footage. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2, "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantity are required.
- 4.03 Concrete Surfaces. The removal of concrete curb, sidewalk, driveway, medians and/or islands required to be removed and replaced due to underground electrical conduit system construction will not be measured separately but will be considered subsidiary to the structure installed.
 - A. Cut and Restore Pavement. Cutting and restoring pavement will not be measured for payment, but will be considered subsidiary to the Item installed in the trench.
 - B. Concrete Encasement. This Item will not be measured for payment, but will be considered subsidiary to the Item installed in the trench.
 - C. Foundation. This Item will not be measured for payment, but will be considered subsidiary to the Item installed.

- 4.04 Manholes and Handholes. Manholes and handholes will be measured by each size and type installed, complete in place. This is a plans quantity measurement Item. Neck, rings, frames and covers will not be measured for payment, but will be considered subsidiary to the structure installed.
- 4.05 Conduit and Conduit Structures (Duct Banks). Conduit will be measured by the linear foot for the various types and sizes of conduit structures shown on the plans. This is a plans quantity measurement Item. Excavation, furnishing and placing backfill, removing and replacing pavement structure, sod, riprap, curbs or other surface, furnishing and installing all piping, fittings, sweeps, bends, repair couplings, adaptors, ground box/manhole/handhole termination kits, pre-assembled split repair kits, lubrication access fittings, expansion joints, concrete and underground mylar conduit marking tape, mule tape, and all labor, tools, equipment and incidentals will not be measured for payment but will be considered subsidiary to the conduit structure installed. Mandreling will not be paid for separately, but will be considered subsidiary to the conduit installation.
- A. The lengths of duct bank will be measured along the duct between the outside faces of manholes or handholes or other connected facility as shown on the plans.
 - B. Where the installation involves connection to an existing conduit, the measurement will be made from the point of connection to the existing conduit.
- 4.06 Markers. Markers will not be measured directly but will be considered subsidiary to the underground electrical conduit installed.
- 4.07 Boring. "Directional Bore" and "Jack and Bore" will be measured by the plan linear footage for the type and size shown on the plans. Casings and galvanized iron pipe will not be measured directly but considered subsidiary to the bore installation. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, "Plans Quantity Measurement."
- 4.08 Adjust Existing Manhole. This Item will be measured per each manhole adjusted. Trench excavation on the outside of the manhole will not be measured but will be considered subsidiary to this Item.
- 4.09 Remove Existing Facilities.
- A. Conduit. Existing conduit removed wherever indicated on the plans will be measured by the plan footage for "Remove (Elec)". This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, "Plans Quantity Measurement."

B. Manholes and Handholes. Manholes and/or handholes removed will be measured per item as shown on the plans for "Remove Structure (Elec). This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, "Plans Quantity Measurement."

4.10 Protective Concrete Cap. This Item shall be measured by the foot of concrete cap, complete-in-place.

4.11 Lowering Existing Ducts. This Item shall be measured by the foot of linear adjustment complete-in-place.

5. Payment.

5.01 The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the Items hereinafter described. The prices will be full compensation for furnishing and hauling all materials; for all excavation and backfill; for trench excavation protection; dewatering, shaping and fine grading of trench; for cutting and restoring pavements; for boring or directional boring, steel or HDPE casing; for removing and replacing concrete surfaces; for placing, joining and racking of pipe and conduit structures; for manholes, for handholes, risers, rings and covers, for placement of underground electrical conduit, pedestals, marker posts and for all other items of material, labor, equipment, tools; for all testing and incidentals necessary to complete the work in accordance with the plans and specifications.

5.02 Trench Excavation and Backfill. Payment for excavation and backfill for the installation of underground electrical conduit facilities will not be paid for directly but will be considered part of the price bid for the specific Item installed.

5.03 Trench Excavation Protection. Payment for excavation protection for the installation of underground electrical conduit facilities will be paid in accordance with TXDOT Item 402, "Trench Excavation Protection" for "Trench Excavation Protection (Elec)."

5.04 Pavement. Payment for cutting and restoring pavement will not be paid for directly but will be considered part of the price bid for the specific structure installed.

5.05 Concrete Encasement. Payment for concrete encasement will not be paid for directly but will be considered part of the price bid for the specific Item installed.

5.06 Foundation. Payment for foundation will not be paid for directly but will be considered part of the price bid for the specific Item installed.

- 5.07 Manholes and Handholes. Payment for manhole installations will be made by the each for "Manhole (Elec)" of the size specified complete in place with all racking, ladder, and bonding hardware, rings, frames, covers and joint sealing compound and will be as detailed on the plans. Payment for handhole installations will be made by the each for "Handhole (Elec)" complete in place with all racking, bonding hardware, rings, bricks, frames, covers and joint sealing compound and will be as detailed on the plans.
- 5.08 Conduit and Conduit Structures. Payment for conduit installations will be made at the unit price bid for "Conduit (Elec)" of the size and type of conduit specified. This price will be full compensation for installing conduit, excavating, furnishing and placing backfill, replacing pavement structure, sod, riprap, curbs or other surface; for furnishing and installing all fittings, sweeps, bends, repair couplings, adaptors, ground box/manhole/handhole termination kits, pre-assembled split repair kits, lubrication access fittings, expansion joints, concrete and underground mylar conduit marking tape; and for all labor, tools, equipment and incidentals.
- 5.09 Marker Posts. Payment for this Item will not be made directly but will be considered incidental to the manhole installation.
- 5.10 Boring. Payment for this Item will be made at the unit price bid for "Jack and Bore" or "Directional Bore" of the length specified on the plans, complete-in-place. This will be full compensation for installing the bore, furnishing and installing the casing, pulling conduit, excavating and supporting bore pits, furnishing and placing backfill, replacing pavement structure, sod, riprap, curbs or other surface; for furnishing all bore equipment, fluids, supplies, fittings, labor, tools, equipment and incidentals necessary to complete the work.
- 5.11 Installation over Existing Facilities. Payment for this Item will not be made directly, but will be considered incidental to the manhole installation.
- 5.12 Adjust Existing Manhole. Payment for this Item will be made by the each for "Adjust Manhole (Elec)."
- 5.13 Remove Existing Facilities. Payment for this Item will be made by the plan quantities for "Remove (Elec)" and "Remove Structure (Elec)" for the type of structure removed.

Table of Updated Plan Sheets		
Sheet #	Sheet Title	Update Description
2	Index of Sheets (1 of 3)	Added sheets in the index
4	Index of Sheets (3 of 3)	Added sheets in the index
5	Project Layout (1 of 3)	Added environmental soil and potential staging areas
6	Project Layout (2 of 3)	Added potential staging areas
15	Supplemental General Notes (COSA)	Added notes
18	Quantity Estimate (1 of 2)	Updated quantities
19	Quantity Estimate (2 of 2)	Updated quantities
20	Roadway and Removal Quantities (1 of 2)	Updated quantities
21	Roadway and Removal Quantities (2 of 2)	Updated quantities
28	Traffic Control Plan Summaries	S Bowie St Traffic Control Revised
29	Traffic Control Plan Summaries	S Bowie St Traffic Control Revised
30	Traffic Control Plan Summaries	S Bowie St Traffic Control Revised
31	Traffic Control Plan Summaries	S Bowie St Traffic Control Revised
32	Traffic Control Plan Summaries	S Bowie St Traffic Control Revised
33	Traffic Control Plan Summaries	S Bowie St Traffic Control Revised
34	Traffic Control Notes & Narrative	S Bowie St Traffic Control Revised
35	Traffic Control Notes & Narrative	S Bowie St Traffic Control Revised
36	Traffic Control Notes & Narrative	S Bowie St Traffic Control Revised
37	Traffic Control Notes & Narrative	S Bowie St Traffic Control Revised
39	Traffic Control Plan Sheet Layout Maps	S Bowie St Traffic Control Revised
40	Phase 1 Step 1 Sheet 1 Of 15	S Bowie St Traffic Control Revised
41	Phase 1 Step 1 Sheet 2 Of 15	S Bowie St Traffic Control Revised
42	Phase 1 Step 1 Sheet 3 Of 15	S Bowie St Traffic Control Revised
43	Phase 1 Step 1 Sheet 4 Of 15	S Bowie St Traffic Control Revised
44	Phase 1 Step 1 Sheet 5 Of 15	S Bowie St Traffic Control Revised
45	Phase 1 Step 1 Sheet 6 Of 15	S Bowie St Traffic Control Revised
46	Phase 1 Step 1 Sheet 7 Of 15	S Bowie St Traffic Control Revised
47	Phase 1 Step 1 Sheet 8 Of 15	S Bowie St Traffic Control Revised
48	Phase 1 Step 1 Sheet 9 Of 15	S Bowie St Traffic Control Revised
49	Phase 1 Step 1 Sheet 10 Of 15	S Bowie St Traffic Control Revised
50	Phase 1 Step 1 Sheet 11 Of 15	S Bowie St Traffic Control Revised
51	Phase 1 Step 1 Sheet 12 Of 15	S Bowie St Traffic Control Revised
52	Phase 1 Step 1 Sheet 13 Of 15	S Bowie St Traffic Control Revised
53	Phase 1 Step 1 Sheet 14 Of 14	S Bowie St Traffic Control Revised
54	Phase 1 Step 1 Sheet 15 Of 15	S Bowie St Traffic Control Revised
54A	TCP Phase 1 Step 1 Temporary Widening Horizontal Alignment Data	S Bowie St Traffic Control Revised
54B	TCP Phase 1 Step 1 Temporary Widening Plan & Profile	S Bowie St Traffic Control Revised
55	Phase 1 Step 2 Sheet 1 Of 15	S Bowie St Traffic Control Revised
56	Phase 1 Step 2 Sheet 2 Of 15	S Bowie St Traffic Control Revised
57	Phase 1 Step 2 Sheet 3 Of 15	S Bowie St Traffic Control Revised
58	Phase 1 Step 2 Sheet 4 Of 15	S Bowie St Traffic Control Revised
59	Phase 1 Step 2 Sheet 5 Of 15	S Bowie St Traffic Control Revised
60	Phase 1 Step 2 Sheet 6 Of 15	S Bowie St Traffic Control Revised
61	Phase 1 Step 2 Sheet 7 Of 15	S Bowie St Traffic Control Revised
62	Phase 1 Step 2 Sheet 8 Of 15	S Bowie St Traffic Control Revised
63	Phase 1 Step 2 Sheet 9 Of 15	S Bowie St Traffic Control Revised
64	Phase 1 Step 2 Sheet 10 Of 15	S Bowie St Traffic Control Revised
65	Phase 1 Step 2 Sheet 11 Of 15	S Bowie St Traffic Control Revised
65A	Phase 1 Step 2 Sheet 12 Of 15	S Bowie St Traffic Control Revised
65B	Phase 1 Step 2 Sheet 13 Of 15	S Bowie St Traffic Control Revised
65C	Phase 1 Step 2 Sheet 14 Of 14	S Bowie St Traffic Control Revised
65D	Phase 1 Step 2 Sheet 15 Of 15	S Bowie St Traffic Control Revised
131-160	Removal Layouts	Issued for construction, updated callouts
170	Market Plan and Profile (1 of 5)	Added pavement area, ornamental fence, callouts
171	Market Plan and Profile (2 of 5)	Added callouts
172	Market Plan and Profile (3 of 5)	Added pavement area, ornamental fence, callouts
173	Market Plan and Profile (4 of 5)	Added callouts
174	Market Plan and Profile (5 of 5)	Added callouts
175	Commerce Plan and Profile (1 of 4)	Changed stormwater planters to planters
176	Commerce Plan and Profile (2 of 4)	Changed stormwater planters to planters
181	WFR Plan and Profile (1 of 13)	Added callouts and environmental soil
182	WFR Plan and Profile (2 of 13)	Added callouts
184	WFR Plan and Profile (4 of 13)	Added callouts
185	WFR Plan and Profile (5 of 13)	Added callouts
186	WFR Plan and Profile (6 of 13)	Added callouts
187	WFR Plan and Profile (7 of 13)	Added callouts
188	WFR Plan and Profile (8 of 13)	Added callouts
189	WFR Plan and Profile (9 of 13)	Added callouts
193	WFR Plan and Profile (13 of 13)	Added callouts
196	Montana Plan and Profile (1 of 3)	Added callouts
197	Montana Plan and Profile (1 of 3)	Added callouts
198	Montana Plan and Profile (3 of 3)	Added callouts
199	SB Exit Ramp to CC Plan and Profile (1 of 5)	Added callouts
202	SB Exit Ramp to CC Plan and Profile (4 of 5)	Updated grout columns
214	Pedestrian Walkway Plan and Profile	Added callouts

Sheet #	Sheet Title	Update Description
215	Intersection Layout (1 of 4)	Added north arrow
216	Intersection Layout (2 of 4)	Changed stormwater planters to planters
218	Intersection Layout (4 of 4)	Updated crosswalk width
220	Roadway Details (2 of 4)	Updated retaining wall "A" detail
222	Roadway Details (4 of 4)	Added ornamental fence details
223	Grout Column Details (1 of 2)	Updated grout columns
224	Grout Column Details (2 of 2)	Updated grout columns
300	Traffic Rail Foundation Standard	Added Standard
301	Drainage Summary	Updated quantities to reflect addendum 2 changes
311	System B & C Hydraulic Computations 2 of 3	Updated Calculations to reflect addendum 2 changes
312	System B & C Hydraulic Computations 3 of 3	Updated Calculations to reflect addendum 2 changes
313	Storm Sewer System "A" Plan & Profile 1 of 7	Reflect Chilled water and gas proposed locations
314	Storm Sewer System "A" Plan & Profile 2 of 7	Reflect Chilled water and gas proposed locations
315	Storm Sewer System "A" Plan & Profile 3 of 7	Reflect Chilled water and gas proposed locations
316	Storm Sewer System "A" Plan & Profile 4 of 7	Reflect Chilled water and gas proposed locations
317	Storm Sewer System "A" Plan & Profile 5 of 7	Reflect Chilled water and gas proposed locations
318	Storm Sewer System "A" Plan & Profile 6 of 7	Show note for Class 2 Non-hazardous soil
335	Storm Sewer System "C" Plan & Profile 1 of 3	Move storm drain away from ROW
336	Storm Sewer System "C" Plan & Profile 2 of 3	Move storm drain away from ROW
340	Storm Sewer System "A" Inlet Cross Sections	Show note for Class 2 Non-hazardous soil
353	Junction Box Node B120	Revised Table of Estimated Quantities.
441	Bridge Layout (Sheet 1 of 3)	Revised Station Equation at Intersection of BL IH-37 SB Exit Ramp and IH-37 West Frontage Road Turnaround; Revised horiz and min vert clearances; Revised Boring Log B-8; provided dimension from CL Bridge Drain to CL Bent; added new NBI No.
442	Bridge Layout (Sheet 2 of 3)	Revised callout for min vert clearance at Bent No. 6; provided dimension from CL Bridge Drain to CL Bent.
443	Bridge Layout (Sheet 3 of 3)	Added footnotes 1 & 2; provided dimension from CL Bridge Drain to CL Bent.
444	Estimated Quantities and Bearing Seat Elevations	Revised Bent 2 (FWD) and Bent 3 (BK) Bearing Seat Elevations.
445	Foundation Layout (Sheet 1 of 3)	Revised Station Equation at Intersection of BL IH-37 SB Exit Ramp and IH-37 West Frontage Road Turnaround.
446	Foundation Layout (Sheet 2 of 3)	Revised AT&T location.
450	Abutment No. 9	Revised Bars T on Elevation view and Table of Estimated Quantities.
451	Interior Bent No. 2	Revised distance to CL PVC Drain; Added note designated thus *.
452	Interior Bent No. 3	Revised distance to CL PVC Drain; Added note designated thus *.
453	Interior Bent No. 4	Added note designated thus *.
454	Interior Bent No. 5	Added note designated thus *.
455	Interior Bent No. 6	Revised distance to CL PVC Drain; Added note designated thus *.
456	Interior Bent No. 7	Revised distance to CL PVC Drain; Added note designated thus *.
457	Interior Bent No. 8	Added note designated thus *.
458	Column and Footing Details (Sheet 1 of 2)	Added notes; Minor revisions to Sections A-A and B-B and Table of Estimated Quantities.
459	Column and Footing Details (Sheet 2 of 2)	Revised arrangement of top and bottom bars in footing, Table of Estimated Quantities and added other minor miscellaneous clarifications.
464	201.30' Prestr Conc Girder Unit 1 (Sheet 2 of 2)	Revised Table of Section Depths.
466	323.00' Prestr Conc Girder Unit 2 (Sheet 2 of 2)	Minor revisions to Table of Section Depths.
468	330.00' Prestr Conc Girder Unit 3 (Sheet 2 of 2)	Revised Table of Section Depths.
472	Bridge Drain Details BD-2 (SPL) (Welded) (Sheet 2 of 3)	Revised max and min distance to CL PVC Pipe; Deleted Splash Pad Plan & Elevation; Added notes referring to Drainage sheets.
473	Bridge Drain Details BD-2 (SPL) (Welded) (Sheet 3 of 3)	Showed thickened slab end and rebars on Slab Reinforcing Near Bents Details; Revised limits of callout for "See Bridge Layout Sheets" locating CL Drain relative to CL Bent.
474	Bridge Layout	Plan View: Provided Minimum Horiz Clearance, called-out the nom face of PR3 and added 2-3" dia PVC conduits; added General notes 8 thru 11; revised end walkway Sta; added boring no. 12; revised drilled shaft lengths; added "front face of abutment No. 3 Backwall" after "End Bridge".
475	Bridge Typical Section	Added note 2 and minor miscellaneous callouts.
476	Estimated Quantities	Revised Drilled Shaft quantities.
477	Exterior Bent No. 1	Added "Begin Bridge" on the plan view; added sleeves for 3" dia conduits on the elevation view; revised bars T and Table of Estimated Quantities; added call-out for the length of drilled shaft.
478	Interior Bent No. 2	Revised bars T and Table of Estimated Quantities.
479	Abutment No. 3	Revised Drilled Shaft Rebars; added sleeves for the 3" dia conduits on the elevation view; revised Sec A-A to show CL dowels D; revised Table of Estimated Quantities; called-out Bars H on the elevation view.
481	80.50' Prestr Conc Box Beam Unit (Sheet 1 of 2)	Revised Interior Diaphragm Spacing for Beam 5B20 (SPL); Added recess in slab at the future canopy column locations; revised note designated by *.
482	80.50' Prestr Conc Box Beam Unit (Sheet 2 of 2)	Added "Future Canopy Column to Box Beam 5B20 (SPL) Connection Details"; added Table of Estimated Quantities; added Detail A.
483	Prestressed Concrete Box Beam Designs - BBND	Revised Optional Design Criteria; Revised footnote 2 under General Notes; Revised Non-Standard Strand Pattern and added 5B20(MOD) Box Beams Section.
509	Pedestrian Rail Type PR3 (Sheet 1 of 2)	Revised Minimum Slab Thickness and Note 12. Showed Beam 5B20 (Mod) on Pilaster End View.
510	Pedestrian Rail Type PR3 (Sheet 2 of 2)	Revised Minimum Slab Thickness and Note 12. Showed Beam 5B20 (Mod) on Section Thru Pilaster.
516	Estimated Retaining Wall Quantities	Revised Summary of Estimated Quantities Table.
517	Retaining Wall No. 1 Layout Sheet 1 of 3)	Deleted HL93 Loading above Title Block.
518	Retaining Wall No. 1 Layout Sheet 2 of 3)	Added Illumination Poles on the plan, 2" dia PVC conduit in rail on Typical Section and added note referring to the Illumination Sheets. Deleted HL93 Loading above Title Block.
519	Retaining Wall No. 1 Layout Sheet 3 of 3)	Deleted HL93 Loading above Title Block.

Sheet #	Sheet Title	Update Description
531	Retaining Wall No. 3 Layout	Revised wall elevations near end of wall; added bottom of wall elevations; added Layout of Rail PR3 Pilasters; revised Estimated Quantities and added General Note No. 7.
532	Retaining Wall No. 4 Layout	Revised wall stations and elevations near begin of wall; added PR3 Rail on part of the wall and on the Estimated Quantities Table; added Layout of Rail PR3 Pilasters; added General Note No. 7.
533	Retaining Wall No. 5 Layout	Revised top of wall elevations; added fin grade and bottom of wall elevations; revised payment height on Sec A-A and revised Rail (TY T 551) (Mod) quantity.
534	Retaining Wall No. 6 Layout	Revised top of wall elevations; added fin grade and bottom of wall elevations; revised payment height on Sec A-A; added Illumination pole on the plan, conduit in the rail and General Note No. 7.
535	Retaining Wall No. 7 Layout	Deleted HL93 Loading above Title Block.
552	MSE Retaining Wall Standard RW(MSE)	Provided Design Parameters Table and added LL Surcharge for Ret Walls 3 & 4.
554	Overhead Sign Bridge OSB # 1 Layout	Revised D.S Length for the right column; added note 3.
555	Overhead Sign Bridge OSB # 3 Layout	Revised D.S. Lengths; added note 3.
557	Overhead Sign Bridge Column and Footing Details	Revised Drilled Shaft quantities.
642	Traffic Signal Layout	Added S.S. 9014 Soil Removal
701	Landscape Site Plan	Detail reference added
702	Landscape Site Plan	Detail reference added
704	Landscape Site Plan	Detail reference added
705	Landscape Site Plan	Detail reference added
709	Landscape Site Plan	Detail reference added
714	Landscape Site Plan	Detail reference added
717	Landscape Site Plan	Detail reference added
721	Landscape Site Plan	Detail reference added
725	Irrigation Notes	Recycled water notes added
726	Irrigation Legend	Changes to reflect recycle water use
727	Irrigation Plan	Adjustments to bubbler locations
728	Irrigation Plan	Adjustments to bubbler locations
731	Irrigation Plan	A7 edit
733	Irrigation Plan	edit at B3
736	Irrigation Plan	Adjustment at Market intersection
740	Irrigation Plan	Add irrigation at Ped. Bridge retaining wall planter
748	Irrigation Plan	Add irrigation at Ped. Bridge retaining wall planter
766	Planting Plan	Plant/Tree edits to accommodate stormwater planter web walls
767	Planting Plan	Plant/Tree edits to accommodate stormwater planter web walls
770	Planting Plan	South planter converted from stormwater planting to typical planting
772	Planting Plan	East intersection planter converted--stormwater planting to typ. planting
775	Planting Plan	Intersection planter converted--stormwater planting to typ. planting
791	Construction Details	Detail 4 edits
792	Construction Details	Detail 1 "Notes" edits
793	Site Furnishings	Tree guard height and diameter added
794	Construction Details	Concrete Paving #5 spec. changed
795	Construction Details	Concrete Paving #5 spec. changed
796	Construction Details	Sheet Added
807	EPIC	Updated environmental soil
814	Illumination Layout	updated item No. 9010-9013 (addendum 2)
816	Illumination Layout	updated item No. 9010-9013 (addendum 2)
817	Illumination Layout	moved lights P17-P19 & associated conduits
818	Illumination Layout	moved fixture P17-P19, updated item no. 9010-9013
820	Illumination Layout	updated item No. 9010-9013 (addendum 2)
822	Illumination Layout	updated item No. 9010-9013 (addendum 2)
825	Illumination Layout	updated item No. 9010-9013 (addendum 2)
827	Illumination Layout	updated item No. 9010-9013 (addendum 2)
829	Illumination Layout	updated item No. 9010-9013 (addendum 2)
830	Illumination Layout	added SS 9014 - soil removal
831	Illumination Layout	updated item No. 9010-9013 (addendum 2)
833	Illumination Layout	updated item No. 9010-9013 (addendum 2)
835	Illumination Layout	updated item No. 9010-9013 (addendum 2)
837	Illumination Layout	updated item No. 9010-9013 (addendum 2)
839	Illumination Layout	updated item No. 9010-9013 (addendum 2)
841	Illumination Layout	updated item No. 9010-9013 (addendum 2)
843	Illumination Layout	updated item No. 9010-9013 (addendum 2)
845	Illumination Layout	updated item No. 9010-9013 (addendum 2)
847	Illumination Layout	updated item No. 9010-9013 (addendum 2)
849	Illumination Layout	updated item No. 9010-9013 (addendum 2)
851	Illumination Layout	updated item No. 9010-9013 (addendum 2)
853	Illumination Layout	updated item No. 9010-9013 (addendum 2)
855	Illumination Layout	updated item No. 9010-9013 (addendum 2)
858	Illumination Layout	updated item No. 9010-9013 (addendum 2)
860	Illumination Layout	updated item No. 9010-9013 (addendum 2)
862	Illumination Layout	updated item No. 9010-9013 (addendum 2)
897-901	Utility Layout	Added callouts and notes
903-907	Utility Layout	Added callouts and notes
951	Chilled Water Cover	Updated order of sheets
952	Chilled Water Summary of Quantities	Revised quantities
953	Chilled Water General Notes	Added notes
955	Chilled Water Project Layout	Added new alignment for Line D
956	Chilled Water Line D Plan and Profile	Added new sheet for Line D

Sheet #	Sheet Title	Update Description
957	Chilled Water Line D Plan and Profile	Added new sheet for Line D
958-963	Chilled Water Line A Plan and Profile	Updated profile
964	Chilled Water Plan and Profile - Emergency Tap	Updated configuration
965-973	Chilled Water Line B Plan and Profile	Updated profile
974	Chilled Water Trench Details	Revised typical trench details
986-987	Recycled Water Plan and Profile	Revised alignment of RW main
860	Illumination Layout	updated item No. 9010-9013 (addendum 2)
862	Illumination Layout	updated item No. 9010-9013 (addendum 2)
1035	CPS Project Layout	Added note
1040	CPS West Frontage Road Plan And Profile (5 of 14)	Added environmental soil
1071	Traffic Control Plan Summaries (Bid Alternate 1)	Updated quantities
1072	Traffic Control Alternative Notes & Narrative	Updated narrative
1078	Traffic Control Alternative Market St At Bowie St	Updated sheet