

CITY OF SAN ANTONIO
DEPARTMENT OF CAPITAL IMPROVEMENTS
MANAGEMENT SERVICES

PROJECT NAME: **BROADWAY CORRIDOR, PHASE IIIA**

DATE: January 26, 2011

ADDENDUM NO. 2

This addendum shall be included in and be considered part of the plans and specifications for the above named project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum at the time he receives it.

Addendum No. 2 is issued to update the Plans, Construction Specifications and Bid Proposal. The attached documents should be used in place of the same title found within the plans and specification book.

1. Replace the bid proposal form (025 Unit Pricing Form). The attached documents should be used in place of the documents of the same title found within the specification book and in place of the Project Quantities summary found within the plans.
2. **Project Manual**
 - a. Replace the Table of Contents with the attached Table of Contents revised by Addendum 2
 - b. Replace the Master List of Governing Specifications, Special Provisions, and Special Specifications with the attached Master List of Governing Specifications, Special Provisions, and Special Specifications revised by Addendum 2.
 - c. Section 161 Compost: Add this section to the Project Manual; Attachment "A"
 - d. Section 166 Fertilizer: Add this section to the Project Manual; Attachment "B".
 - e. Section 192 Landscape Planting: Add this section to the Project Manual; Attachment "C".
 - f. Section 193 Landscape Establishment: Add this section to the Project Manual; Attachment "D".
 - g. Wireless Communications Equipment at Traffic Signal, add this section to the Project Manual.

3. Specifications

- a. 2160.5. QUALIFICATIONS: Change paragraph to read: "Subcontractor experienced in conservation of masonry and/or metals, including at least one project involving electrolytic reduction."

4. San Sewer (Lateral)

- a. All sewer laterals shall be pressure rated pipe. Adapters from pressure rated to non pressure rated pipes or fittings, etc. shall be considered incidental to the pay item for SAN SEWER (LATERALS) with no separate pay item. All laterals must be below waterlines.

5. Plans

- a. Supplemental General Notes
 - i. Replace Sheet 11, Supplemental General Notes, as revised by Addendum 2.
- b. Summary of Sheet Quantities
 - i. Replace Sheets 13 thru 16, Summary of Sheet Quantities, as revised by Addendum 2
- c. Temporary Signal Layouts
 - i. Replace sheets 26 and 27, Temporary Signal Layout, as revised by Addendum 2.
- d. Traffic Control Plan
 - i. Replace Sheets 31, 34 thru 39, 47, 48, 50 thru 59, 61, 63 thru 65, 68 and 69, Traffic Control Plan, as revised by Addendum 2.
 - ii. Add sheet 130B, Barricade and Construction Details
- e. Pavement Plan and Profile
 - i. Replace Sheet 141, 143, 145 and 147, Pavement Plan and Profile, as revised by Addendum 2.
 - ii. Add sheet 143B, Pavement Plan and Profile STA 30+00 to 34+00 to the plans.
- f. Intersection Layout
 - i. Replace Sheet 150, Intersection Layout, Hildebrand and Broadway, as revised by Addendum 2
- g. Pavement Markings
 - i. Replace Sheet 258, Pavement Markings, as revised by Addendum 2.

- ii. Add sheet 258B, Pavement Markings Broadway Street to the plans.
 - iii. Replace Sheet 259, Pavement Markings Hildebrand Avenue, as revised by Addendum 2.
- h. Traffic Signal Layout
 - i. Replace Sheet 285, Traffic Signal Layout Hildebrand and Broadway, as revised by Addendum 2.
 - ii. Add sheet 294A, Battery Backup System Layout (TM-BBS-08) to the plans
- i. SAWS Water Plans
 - i. The San Antonio River waterline crossing has been deleted from this project. This has been accomplished as follows:
 - 1. Delete Sheet 1 of 13 of the SAWS Water Plans and substitute attached revised Sheet 1 of 13.
 - 2. Delete Sheet 8 of 13 of the SAWS Water Plans and substitute attached revised Sheet 8 of 13.
- j. Landscape Architectural Drawings
 - i. Revise Planting Plan: See Attachments "E" and "F".
 - ii. Revise Tree Preservation Inventory: See Attachment "G".
 - iii. Add Planting Details: See Attachments "H" and "I".
 - iv. Revise Site Irrigation Plan: See Attachment "J".

6. Questions Received from Plan Holders:

- a. Do you know if CPS is supplying their material?
 - i. No, CPS is not supplying any of the material included in the project. Contractors will need to supply all of the items that are listed on the 025 form.
- b. I was looking through the bid items and couldn't find a pay item for trench or trench protection. Is this supposed to be subsidiary to something?
 - i. There is an item "Trench Excavation Safety Protection" included in the Street and Drainage bid items; however it does not include trench protection for the duct bank. Additional pay item for "Trench Excavation Safety Protection" is added to the "Ductbank" bid items.
- c. 15" PVC Sewer pipe for this project is tagged as ASTM D-2241 (SDR 26 IPS Pressure Pipe). Unfortunately, this type of pipe is not manufactured in 15" (SDR 26 ASTM D-3034

only). What alternative pipe would you like us to offer the contractors bidding this project?

- i. Revise 15" (SDR 26) S.S. Pipe (ASTM 2241) references on plan and profiles to read 15" PVC (SDR 26) S.S. Pipe (ASTM 3034). However, the contractor is reminded to comply with TCEQ 290.44(e)(4)(B)(iii) with regard to Waterline installation and Wastewater main or lateral installation. Bid item 412 has been added for, "Cement (2.5 bags per CY) Stabilized Sand", to be used around sewer lines at waterline crossings. All sewer lines must be below waterlines.

Waterlines cross the 15" sanitary sewer at Stations:

15" SANITARY SEWER ALONG BROADWAY	WATER CROSSING	SHEET NO.
STA: 18+75.94, 10.40' RT	6" W	4 OF 14
STA: 21+07.53, 10.40 RT	8" W	4 OF 14
STA: 22+55.55, 7.27' RT	6" W	5 OF 14
STA: 24+72.16, 1.05' RT	12" W	5 OF 14
STA: 25+27.21, 4.56' LT	8" W	5 OF 14
STA: 28+34.50	8" W	6 OF 14
STA: 21+65.98	8" W	7 OF 14

Quantity of Cement Stabilized Sand = 25CY

- d. Will you be adding a pay item to provide for the temporary traffic signals on the project?
 - i. Temporary Traffic Signal Pay item (681.1) will be added.
- e. Can you provide details of the temporary traffic signals desired (e.g. type and size of poles, down guys if needed, etc.)
 - i. The Traffic Control plans include signal phasing utilizing the existing poles, span wire and proposed poles and signals.
- f. It appears temporary video detection is required for the temporary signals. Will a pay item to provide for temporary video detection be added? May we utilize the permanent VIVDS equipment for temporary use or will separate equipment be desired?

- i. Temporary video detection will be required. Temporary video detection pay item 694.5 will be added. The permanent VIVDS cannot be reused if the signal is to be operating continuously. This can only be allowed if the traffic is controlled by SAPD during the switchover.
- g. Would you please identify the type of electrical service desired and include pay items to provide for the construction.
 - i. TY D (120/240). Electrical Services pay item 628.1 added.
- h. It appears the plans are incomplete in the provision for interconnecting signals. Difficult to tell what is intended. Please clarify the equipment desired for the interconnecting of the traffic signals and provide pay items and quantities.
 - i. Yes, there is a wireless interconnect system at all intersections. Install wireless access point assembly per attached list "Wireless Communications Equipment at Traffic Signal". No separate pay item, consider subsidiary to Item 680, "Installation of Highway Traffic Signals".
- i. Preemption detectors and cabling is noted but it appears phase selectors would be needed. Please confirm if phase selectors are required and if so, please provide a pay item and quantity.
 - i. We will need 2-channel phase selectors. Emergency Preemption Phase Selector pay item (695.2) added.
- j. Would you please consider adding a pay item 680 to provide for the overall construction of the intersections?
 - i. Pay Item 680 added.
- k. For the ILSN sign assemblies, could you please confirm the size desired and if you prefer single or double sided.
 - i. 8 foot, double sided. Item 693.1 is updated on the 025 form accordingly.
- l. While nothing is mentioned in the plans, will battery backup systems be desired? If so, now would be a great time to add.
 - i. Yes, battery backup systems are desired per controller cabinet foundation detail "TM-BBS-08" attached. Battery Backup System pay item (633.1) added.
- m. The pay item for Central Control Units identifies 3 are to be supplied. Usually only one central control unit is provided per project. Would you please confirm the quantity of computers desired?
 - i. VIVDS Central Controller(s) are not required. Item will be removed from the plans and the 025 form.

- n. For the permanent pedestrian signals, will countdown LED's be required?
 - i. Yes, all shall be LED countdown type. Item 683.1 – LED Countdown Pedestrian Signal Module added.
- o. Are the towers, in their existing condition structurally sound to accept the live loads of construction workers/activities?
 - i. Yes, with the exception of roof areas.
- p. Are the towers, in their proposed condition structurally sound to accept the new and or modified dead loads?
 - i. Yes, with the exception of roof areas.
- q. If the answer to questions 1 and 2 is yes (or the like), then no structural compromises are foreseen; but if the answer is no, what would be the proper course of action and or remedy.
 - i. Provision is made for selective repairs
- r. If the results of the vibration monitoring yield unfavorable results with respect to the vibration tolerances; what would happen to the construction activity, and how then would densities be achieved?
 - i. This would have to be addressed during construction.
- s. Please provide a primavera, or other similar schedule, that has been developed by COSA or Engineer in the development of the Project Schedule.
 - i. We will not provide the Primavera or other similar schedule.
- t. Need a pay item for curb inlet gravel filter bags with related quantities (SW3P calls for them).
 - i. Gravel filter bags to be paid for as Item TxDOT 506.2041, TEMP SDMT CONT FENCE (INLET PROTECTION).
- u. Regarding SS Item 2150 Stucco Repair. They are having difficulty finding someone with the proper qualifications. Can you please provide some names of craftsman that will meet the qualifications?
 - i. Carlos Cotes and Cisi Jary.

7. Clarifications on the SAWS Olmos Basin C-3 Sewer Line Project:

- a. On the Special Provisions to the Standard Specifications and Special Specifications included in the Project Manual related to the San Antonio Water System Olmos Basin C-3 Sewer Line Project, delete references to “Section 1300 Submittals” and replace with “submittal requirements included in Section 085 General Conditions for City of San Antonio Heavy/Highway Construction Contracts.”
- b. Note that Bid Items 100 Mobilization and 101 Preparing Right-of-Way related to the San Antonio Water System Olmos Basin C-3 Project shall conform to the San Antonio Water System Standard Specifications for Construction Items 100 Mobilization and 101 Preparing Right-of-Way.

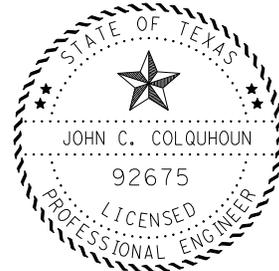
8. Addendum Acknowledgement Form

- a. Attached is the Addendum Acknowledgement Form. Please fill out and sign the form and include it with the Bid package to acknowledge receipt of addenda.

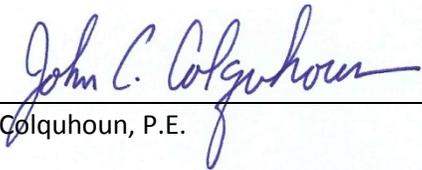
ATTACHMENTS

- Revised 025 Unit Pricing Form
- Project Manual Table of Contents
- Project Manual, Master List of Governing Specifications, Special Provisions, and Special Specifications.
- Attachment “A”, Section 161, Compost (8-1/2” x 11”)
- Attachment “B”, Section 166, Fertilizer (8-1/2” x 11”)
- Attachment “C”, Section 192, Landscape Planting (8-1/2” x 11”)
- Attachment “D”, Section 193, landscape Establishment (8-1/2” x 11”)
- Wireless Communications Equipment at Traffic Signal
- Revised Supplemental General Notes, Sheet 11
- Revised Summary of Sheet Quantities, Sheets 13 thru 16
- Revised Temporary Signal Layouts, Sheets 26 and 27
- Revised Traffic Control Plans, Sheets 31, 34 thru 39, 47, 48, 50 thru 59, 61, 63 thru 65, 68 and 69
- Sheet 130B, Barricade and Construction Details.
- Revised Pavement Plan and Profile, Sheets 141, 143, 145, and 147.
- Sheet 143B, Pavement Plan and Profile STA 30+00 to 34+00 to the plans.
- Revised Intersection Layout, Sheet 150
- Revised Pavement Marking Layouts, Sheets 258 and 259
- Sheet 258B, Pavement Markings Broadway Street.
- Revised Traffic Signal Layout, Sheet 285.
- Sheet 294A, Battery Backup System Layout (TM-BBS-08)
- Revised SAWS Water Plans Cover Page sheet 1 of 13

- Revised SAWS Water plan sheet 8 of 13
- Attachment "E" and "F" (2 pages 11" x 17", dated January 25, 2011)
- Attachment "G" (1 page 11" x 17", dated January 25, 2011)
- Attachment "H" and "I" (2 pages 11" x 17", dated January 25, 2011)
- Attachment "J" (1 page 11" x 17", dated January 25, 2011)
- Addendum Acknowledgement Form.



FREESE AND NICHOLS, INC
TEXAS REGISTERED ENGINEERING FIRM F-2144



John C. Colquhoun, P.E.

1/26/2011
Date

END OF ADDENDUM #2

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
STREETS AND DRAINAGE BASE BID									
	COSA			CAT 5 ETHERNET CABLE	LF	72			
	COSA			BELDEN POWER CABLE	LF	76			
	COSA			#6 THHN/THWN	LF	106			
	COSA 110.2.1			TRANSPORTATION TO DISPOSAL FACILITY [COSA]	CY	1727			
	COSA 110.2.2			TRANSPORTATION TO DISPOSAL FACILITY [SAWS SEWER]	CY	1550			
	COSA 110.2.3			TRANSPORTATION TO DISPOSAL FACILITY [SAWS WATER]	CY	1256			
	COSA 110.2.4			TRANSPORTATION TO DISPOSAL FACILITY [CPS GAS]	CY	85			
	COSA 110.2.5			TRANSPORTATION TO DISPOSAL FACILITY [CPS DUCT BANK]	CY	882			
	COSA 110.2.6			LANDFILL DISPOSAL [COSA]	CY	1727			
	COSA 110.2.7			LANDFILL DISPOSAL [SAWS SEWER]	CY	1550			
	COSA 110.2.8			LANDFILL DISPOSAL [SAWS WATER]	CY	1256			
	COSA 110.2.9			LANDFILL DISPOSAL [CPS GAS]	CY	85			
	COSA 110.2.10			LANDFILL DISPOSAL [CPS DUCT BANK]	CY	882			
	COSA 234.1			BASE REINFORCEMENT	SY	22912			
	COSA 308.1			DRILLED SHAFTS (24")	LF	18			
	COSA 308.1			DRILLED SHAFTS (30")	LF	44			
	COSA 308.1			DRILLED SHAFTS (36")	LF	84			
	COSA 308.1			DRILLED SHAFTS (48")	LF	20			
	COSA 509.1			METAL BEAM GUARD RAIL	LF	71			
	COSA 526.1			FIELD OFFICE	EA	1			
	COSA 540.7			CONSTRUCTION PERIMETER FENCE	LF	225			
	COSA 615.1			TRAFFIC SIGNAL CONTROLLER ASSEMBLY (TYPE 332 CABINET)	EA	3			
A2	COSA 618.1			CONDUIT (2 INCH/PVC SCHEDULE 40)	LF	242			
	COSA 618.3			CONDUIT (4 INCH/PVC SCHEDULE 40)	LF	803			
	COSA 620.1			ELECTRICAL CONDUCTORS (NO. 6)(BARE)	LF	51			
	COSA 620.2			ELECTRICAL CONDUCTORS (NO. 8)(BARE)	LF	999			
	COSA 624.8			GROUND BOXES TYPE D (162922) W/ APRON	EA	11			
A2	COSA 628.1			ELECTRICAL SERVICES (TYPE D) (120/240V)	EA	3			
A2	COSA 633.1			BATTERY BACKUP SYSTEM	EA	3			
	COSA 636.1			ALUMINUM SIGNS (TYPE A)	SF	318			
	COSA 655.1			TYPE 332 CONTROLLER FOUNDATION	EA	3			
A2	COSA 680.1			INSTALLATION OF HIGHWAY TRAFFIC SIGNALS (SYSTEM)	EA	3			
A2	COSA 681.1			TEMPORARY TRAFFIC SIGNALS	EA	3			
	COSA 682.1			INSTALL VEHICLE SIGNAL SECTION WITH BACK PLATE (3 SECTIONS)	EA	35			
	COSA 682.2			INSTALL VEHICLE SIGNAL SECTION WITH BACK PLATE (4 SECTIONS)	EA	3			
A2	COSA 683.1			LED COUNTDOWN PEDESTRIAN SIGNAL MODULE	EA	20			
A2	COSA 684.1			TRAFFIC SIGNAL CABLES (TYPE A)(14 AWG)(CONDUCTOR NO. 4)	LF	1280			
A2	COSA 684.1			TRAFFIC SIGNAL CABLES (TYPE A)(14 AWG)(CONDUCTOR NO. 9)	LF	3273			
	COSA 686.1			INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 24')(LUM)	EA	2			
	COSA 686.1			INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 28')(LUM)	EA	1			
	COSA 686.1			INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 32')	EA	1			
	COSA 686.1			INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 36')	EA	2			
	COSA 686.1			INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 36')(LUM)	EA	1			
	COSA 686.1			INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 40')(LUM)	EA	2			
	COSA 686.1			INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 44')(LUM)	EA	1			
	COSA 686.1			INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 55')(LUM)	EA	1			
	COSA 686.1			INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (2 ARM 40-24')(LUM)	EA	1			
	COSA 687.1			PEDESTRIAN POLE ASSEMBLIES	EA	2			
	COSA 688.2			PEDESTRIAN DETECTORS (2 INCH PUSH BUTTON)	EA	20			
	COSA 691.2			ANTENNA [OMNI DIRECTIONAL]	EA	2			
	COSA 693.1			INTERNALLY LIGHTED STREET NAME SIGNS (D/8)	EA	12			
	COSA 694.1			VIVDS PROCESSOR SYSTEM	EA	3			
	COSA 694.2			VIVDS CAMERA ASSEMBLY	EA	20			

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	COSA 694.4			VIVDS SET-UP SYSTEM	EA	3			
A2	COSA 694.5			VIVDS TEMPORARY	EA	3			
	COSA 694.6			VIVDS COMMUNICATION CABLE (COAXIAL)	LF	1330			
A2	COSA 695.2			EMERGENCY PREEMPTION PHASE SELECTOR (2-CHANNEL)	EA	0			
	COSA 695.3			EMERGENCY PREEMPTION DETECTOR	EA	8			
	COSA 695.4			EMERGENCY PREEMPTION DETECTOR CABLE	LF	825			
	TxDOT 110	2001		STREET EXCAVATION	CY	9819			
	TxDOT 110	2002		EXCAVATION (CHANNEL)	CY	281			
	TxDOT 132	2003		EMBANKMENT (FINAL)(ORD COMP)(TY B)	CY	314			
	TxDOT 162	2002		BLOCK SODDING	SY	3074			
	TxDOT 169	2002		SOIL RETENTION BLANKETS (CL2) (TY H)	SY	39			
A2	TxDOT 341	2011		D-GR HMA(QCQA) TY-B PG64-22	TON	16093			
A2	TxDOT 341	2048		D-GR HMA(QCQA) TY-C SAC-B PG70-22	TON	4072			
	TxDOT 354	2021		PLANE ASPH CONC PAV(0" TO 2")	SY	2800			
	TxDOT 400	2001		STRUCT EXCAV	CY	132			
	TxDOT 402	2001		TRENCH EXCAVATION SAFETY PROTECTION	LF	4100			
	TxDOT 403	2001		TEMPORARY SPL SHORING	SF	4000			
	TxDOT 420	2001		CL A CONC (MISC) (HEADWALL)	CY	29			
	TxDOT 420	2002		CL A CONC (MISC) (FLOOR BLOCKS)	CY	3			
	TxDOT 432	2038		RIPRAP (CONC) (CL A)	CY	27			
	TxDOT 462	2025		PRECAST REINFORCED CONCRETE CULVERT (9' x 6')	LF	1566			
	TxDOT 462	2062		PRECAST REINFORCED CONCRETE CULVERT (12' x 6')	LF	1116			
	TxDOT 464	2005		REINFORCED CONCRETE PIPE (CLASS III)(24" DIA)	LF	976			
	TxDOT 464	2007		REINFORCED CONCRETE PIPE (CLASS III)(30" DIA)	LF	3			
	TxDOT 464	2009		REINFORCED CONCRETE PIPE (CLASS III)(36" DIA)	LF	299			
	TxDOT 465	2089		MANH (COMPL) (JUNCT BOX) (TY 1)	EA	7			
	TxDOT 465	2090		MANH (COMPL) (JUNCT BOX) (TY 2)	EA	5			
	TxDOT 465	2091		SPECIAL JUNCTION BOXES (Complete) (22.5'x9' Drop Structure)	EA	1			
	TxDOT 465	2091		SPECIAL JUNCTION BOXES (Complete) (15'x6' Drop Structure)	EA	1			
	TxDOT 465	2091		SPECIAL JUNCTION BOXES (Complete) (16'x16' Drop Structure)	EA	1			
	TxDOT 465	2094		MANH (COMPL) (TY2) (PIPE RISER)	EA	6			
	TxDOT 465	2145		INLET (COMPL) (TRAFFIC) (TY X-3)	EA	2			
	TxDOT 465	2192		INLET EXT (TY I - E)	EA	13			
	TxDOT 465	2259		INLET (COMPL) (CURB) (TY I) (10')	EA	17			
	TxDOT 465	2405		INLET (COMPL) (CURB) (TY C)	EA	3			
	TxDOT 465	2474		INLET (COMPLETE) (TYPE C - E)	EA	2			
	TxDOT 465	2385		INLET (COMPL) (CURB) (SPL) (10')	EA	1			
	TxDOT 465	2385		INLET (COMPL) (CURB) (SPL) (20')	EA	2			
	TxDOT 502	2001		BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	18			
	TxDOT 506	2003		ROCK FILTER DAMS (INSTALL) (TY3)	LF	80			
	TxDOT 506	2009		ROCK FILTER DAMS (REMOVE)	LF	80			
	TxDOT 506	2016		CONSTRUCTION EXITS (INSTALL) (TY1)	SY	156			
	TxDOT 506	2019		CONSTRUCTION EXITS (REMOVE)	SY	156			
	TxDOT 506	2034		TEMPORARY SEDIMENT CONTROL FENCE	LF	1030			
	TxDOT 506	2041	012	TEMP SDMT CONT FENCE (INLET PROTECT)	LF	725			
A2	TxDOT 512	2008		PORT CTB (FUR & INST) (LOW PROF) (TY 1)	LF	12615			
A2	TxDOT 512	2009		PORT CTB (FUR & INST) (LOW PROF) (TY 2)	LF	740			
A2	TxDOT 512	2044		PORT CTB (REMOVE) (LOW PROF) (TY 1)	LF	12615			
A2	TxDOT 512	2045		PORT CTB (REMOVE) (LOW PROF) (TY 2)	LF	740			
	TxDOT 529	2001		CONCRETE CURB TYPE I	LF	6323			
	TxDOT 529	2014		CONC CURB (TY C)	LF	315			
	TxDOT 530	2010		CONCRETE DRIVEWAY (COMMERCIAL)	SY	661			
	TxDOT 531	2005		CURB RAMPS (TY 1)	EA	4			
	TxDOT 531	2006		CURB RAMPS (TY 2)	EA	10			
	TxDOT 531	2010		CURB RAMPS (TY 7)	EA	8			

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	TxDOT 531	2015		NEW P.C. CONCRETE SIDEWALKS, 4 IN. THICKNESS	SY	2059			
	TxDOT 531	2041		CURB RAMP (TYPE 10)	EA	4			
	TxDOT 531	2046		CURB RAMP (TYPE 11)	EA	1			
	TxDOT 550	2009		CHAIN LINK FENCE (INSTALL) (4')	LF	60			
	TxDOT 636	2001		ALUMINUM SIGNS (TY A)	SF	111			
	TxDOT 644	2001		INS SM RD SN SUP&AM TY 10BWG(1) SA(P)	EA	39			
	TxDOT 644	2004		INS SM RD SN SUP&AM TY 10BWG(1) SA(T)	EA	2			
	TxDOT 644	2056		RELOCATE SM RD SN SUP & AM TY 10BWG	EA	2			
	TxDOT 644	2060		REMOVE SM RD SN SUP & AM	EA	26			
	TxDOT 662	2001		WK ZN PAV MRK NON-REMOV (W) 4" (BRK)	LF	7075			
	TxDOT 662	2004		WK ZN PAV MRK NON-REMOV (W) 4" (SLD)	LF	2553			
	TxDOT 662	2012		WK ZN PAV MRK NON-REMOV (W) 8" (SLD)	LF	2091			
	TxDOT 662	2016		WK ZN PAV MRK NON-REMOV (W) 24" (SLD)	LF	343			
	TxDOT 662	2031		WK ZN PAV MRK NON-REMOV (Y) 4" (DOT)	LF	125			
	TxDOT 662	2032		WK ZN PAV MRK NON-REMOV (Y) 4" (SLD)	LF	9139			
	TxDOT 662	2064		WK ZN PAV MRK REMOV (W) 4" (BRK)	LF	23303			
	TxDOT 662	2065		WK ZN PAV MRK REMOV (W) 4" (DOT)	LF	233			
	TxDOT 662	2067		WK ZN PAV MRK REMOV (W) 4" (SLD)	LF	21082			
	TxDOT 662	2075		WK ZN PAV MRK REMOV (W) 8" (SLD)	LF	4274			
	TxDOT 662	2079		WK ZN PAV MRK REMOV (W) 24" (SLD)	LF	824			
	TxDOT 662	2084		WK ZN PAV MRK REMOV (W) (ARROW)	EA	6			
	TxDOT 662	2094		WK ZN PAV MRK REMOV (W) (WORD)	EA	6			
	TxDOT 662	2098		WK ZN PAV MRK REMOV (Y) 4" (DOT)	LF	574			
A2	TxDOT 662	2099		WK ZN PAV MRK REMOV (Y) 4" (SLD)	LF	56444			
	TxDOT 662	2106		WK ZN PAV MRK REMOV (Y) 24" (SLD)	LF	489			
A2	TxDOT 666	2003		REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE BROKEN	LF	7257			
	TxDOT 666	2006		REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE DOT	LF	204			
A2	TxDOT 666	2012		REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE SOLID	LF	198			
	TxDOT 666	2036		REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 8IN, 100 MILS, WHITE	LF	2825			
	TxDOT 666	2048		REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, WHITE	LF	1976			
	TxDOT 666	2054		REFL PAV MRK TY I (W) (ARROW) (100MIL)	EA	22			
	TxDOT 666	2054A		REFL PAV MRK TY I (Y) (ARROW) (100MIL)	EA	26			
	TxDOT 666	2069A		REFL PAV MRK TY I (Y) (DBL ARROW) (100MIL)	EA	1			
	TxDOT 666	2096		REFL PAV MRK TY I (W) (WORD) (100MIL)	EA	22			
	TxDOT 666	2108		REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW DOT	LF	167			
	TxDOT 666	2111		REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW SOLID	LF	7400			
	TxDOT 666	2132		REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, YELLOW	LF	151			
	TxDOT 666	2141		REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, YELLOW, MED NOSE 100mil	EA	2			
A2	TxDOT 666	2142		REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE BROKEN	EA	7257			
	TxDOT 666	2143		REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE DOT	LF	204			
A2	TxDOT 666	2145		REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE SOLID	LF	198			
	TxDOT 666	2153		REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 8IN, 100 MILS, WHITE	LF	2743			
	TxDOT 666	2157		REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, WHITE	LF	1976			
	TxDOT 666	2160		REF PAV MRK TY II (W) (ARROW)	EA	22			
	TxDOT 666	2160A		REF PAV MRK TY II (Y) (ARROW)	EA	26			
	TxDOT 666	2165A		REF PAV MRK TY II (Y) (DBL ARROW)	EA	1			
	TxDOT 666	2173		REF PAV MRK TY II (W) (WORD)	EA	22			
	TxDOT 666	2177		REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW DOT	LF	167			
	TxDOT 666	2178		REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW SOLID	LF	7400			
	TxDOT 666	2185		REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, YELLOW	LF	151			
	TxDOT 666	2188		REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, YELLOW, MED NOSE	EA	2			
	TxDOT 672	2015		REFL PAV MRK (TY II A-A)	EA	221			
	TxDOT 672	2017		REFL PAV MRKR TY II-C-R	EA	438			
	TxDOT 772	2003		POST AND CABLE FENCE(NEW INSTALLATION)	LF	837			
	TxDOT 6834	2001		PORTABLE CHANGEABLE MESSAGE SIGN	DAY	2640			

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	SS911.1			VIBRATION MONITORING (STUMP GATE)	EA	1			
	SS911.2			VIBRATION MONITORING (CACTUS)	EA	1			
	SS911.3			VIBRATION MONITORING (ENTRY TOWERS)	EA	2			
	SS912			LIMESTONE BLOCK WALL	EA	300			
	TxDOT 100	XXXX		REMOVE EXISTING ENTRANCE GATE	EA	1			
	XXXX			INSTALL NEW ENTRANCE GATE	EA	1	\$42,000.00	\$ 42,000.00	
	SS2441.1			IRRIGATION - NEW IRRIGATION SYSTEM (UIW)	EA	1			
	SS2441.2			IRRIGATION - NEW IRRIGATION SYSTEM (AT&T)	EA	1			
	SS2480.1			SHRUB & VINE PLANTING	SF	5200			
	SS2480.2			GROUNDCOVER PLANTING	SF	2750			
	SS2480.3			TREE PLANTING - 15 GALLON	EA	25			
	SS2480.4			TREE PLANTING - 2" CALIPER	EA	3			
	SS2480.5			SODDING	SY	460			
	SS2480.6			TREE PROTECTION	EA	57			
	SS2480.7			STEEL EDGING	LF	1210			
	SS2480.8			GREENSCREEN - 6' HEIGHT	LF	116			
	SS2480.9			GREENSCREEN - 4' HEIGHT	LF	110			
	SS2486.1			DECOMPOSED GRANITE PAVING	SF	2250			
	SS2486.2			RIVER ROCK PAVING	SF	390			
	COSA 101.1			PREPARING RIGHT-OF-WAY	LS	1			
	COSA 100.2			INSURANCE AND BONDING	LS	1			
	COSA 100.1			MOBILIZATION	LS	1			

TOTAL STREET AND DRAINAGE BASE BID _____

SAWS SEWER MAIN BASE BID									
	100			MOBILIZATION	LS	1			
	101			PREPARING RIGHT-OF-WAY	LS	1			
A2	412			CEMENT (2.5 BAGS PER CY) STABILIZED SAND	CY	25			
	511.3			REPLACING WITH HOT ASPH. CONC PVMT. (12" COMP. DEPTH)	SY	1540			
	550			SAN SEWER (TRENCH EXCAVATION PROTECTION)	LF	3078			
	848			SAN SEWER (15 INC PVC SDR 26) (6' - 10')	LF	184			
	848			SAN SEWER (15 INC PVC SDR 26) (10' - 14')	LF	330			
	848			SAN SEWER (15 INC PVC SDR 26) (14' - 18')	LF	1047			
	848			SAN SEWER (15 INC PVC SDR 26) (18' - 22')	LF	83			
	848			SAN SEWER (10 INC PVC SDR 26) (14'-18')	LF	53			
	848			SAN SEWER (8 INC PVC SDR 26) (0'-6')	LF	35			
	848			SAN SEWER (8 INC PVC SDR 26) (6'-10')	LF	524			
	848			SAN SEWER (8 INC PVC SDR 26) (10'-14')	LF	708			
	848			SAN SEWER (8 INC PVC SDR 26) (14'-18')	LF	114			
	852.1			SAN SEWER (MANHOLE STRUCTURE)	EA	14			
	852.2			SAN SEWER (DROP MANHOLE STRUCTURE)	EA	6			
	852.3			SAN SEWER (EXTRA DEPTH)	VF	144			
	854			SAN SEWER (LATERAL)	LF	1501			
	854.1			SAN SEWER CLEANOUT	EA	40			
	858			CONCRETE ENCASEMENT, CRADLES, SADDLES & COLLARS	CY	37			
	860			SAN SEWER VERTICAL STACK	VF	54			
	864			SAN SEWER (BY-PASS PUMPING)	LS	1			
	866			SAN SEWER (PRE-TELEVISION INSPECTION) (8"-15")	LF	4590			
	866			SAN SEWER (TELEVISION INSPECTION) (8"-15")	LF	3078			
	1010			FLOWABLE FILL	CY	2750			

TOTAL SAWS SEWER MAIN BASE BID _____

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
SAWS WATER MAIN BASE BID									
	100			MOBILIZATION	LS	1			
	101			PREPARING RIGHT-OF-WAY	LS	1			
	511.3			REPLACING WITH HOT ASPH. CONC PVMT.	SY	1970			
A2	550			TRENCH EXCAVATION SAFETY PROTECTION	LF	3895			
A2	814			12" DUCTILE IRON PIPE (Restrained)	LF	30			
	818			4" PVC WATERLINE (Restrained)	LF	35			
	818			6" PVC WATERLINE (Restrained)	LF	35			
	818			8" PVC WATERLINE (Restrained)	LF	710			
	818			12" PVC WATERLINE (Restrained)	LF	3005			
	818			20" PVC WATERLINE (Restrained)	LF	115			
	824			RELAY 1/2" LONG SERVICE	EA	1			
	824			RELAY 3/4" SHORT SERVICE	EA	3			
	824			RELAY 3/4" LONG SERVICE	EA	3			
	824			RELAY 1" SHORT SERVICE	EA	2			
	824			RELAY 1" LONG SERVICE	EA	4			
	824			RELAY 2" SHORT SERVICE	EA	2			
	824			RELAY 2" LONG SERVICE	EA	1			
	824			RELAY 4" SHORT SERVICE	EA	2			
	824			RELAY 6" SHORT SERVICE	EA	3			
	824			RELAY 8" SHORT SERVICE	EA	3			
	824			RELAY 8" LONG SERVICE	EA	1			
	824			NEW 2" LONG SERVICE	EA	1			
	828			4" GATE VALVE	EA	1			
	828			6" GATE VALVES	EA	1			
	828			8" GATE VALVES	EA	6			
	828			12" GATE VALVES	EA	7			
	833			EXISTING METER AND METER BOX RELOCATION	EA	17			
	833			METER BOX	EA	17			
	834			FIRE HYDRANT	EA	14			
	836			PIPE FITTINGS ALL SIZES AND TYPES	TON	7			
	840			4" WATER TIE IN	EA	1			
	840			6" WATER TIE IN	EA	4			
A2	840			8" WATER TIE IN	EA	1			
	840			10" WATER TIE IN	EA	1			
	840			20" WATER TIE IN	EA	2			
	841			HYDROSTATIC TESTING	EA	7			
A2	844			2" BLOWOFF ASSEMBLY (PERMANENT)	EA	3			
A2	844			2" BLOWOFF ASSEMBLY (TEMPORARY)	EA	5			
	844			4" BLOWOFF ASSEMBLY (TEMPORARY)	EA	1			
	846			1" AIR RELEASE VALVE	EA	1			
	856.2			18" CARRIER PIPE	LF	42			
A2	856.2			24" CARRIER PIPE	LF	44			
	856.2			36" CARRIER PIPE	LF	30			
	856.3			CASING 18"	LF	42			
A2	856.3			CASING 24"	LF	44			
	856.3			CASING 36"	LF	30			
	858			CONCRETE SADDLE	CY	10			
	1010			FLOWABLE FILL	CY	550			
	3000.14			REMOVAL, TRANSPORTATION AND DISPOSAL OF AC PIPE	LS	1			
	3000.15			ASBESTOS ABATEMENT WORK PLANS	LS	1			

TOTAL SAWS WATER MAIN BASE BID _____

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
DUCT BANK									
	CPS 101-05			CONCRETE FOR PROTECTIVE COVER OR FILL (2000 PSI PEA GRAVEL)	CY	503			
	CPS 101-06			CONTROLLED LOW STRENGTH MATERIAL (FLOWABLE FILL), ENGINEERED MIX DESIGNS	CY	2634			
	CPS 349-04			MANHOLE, PRECAST, WITH KNOCKOUTS (10x10x10)	EA	1			
	CPS 349-04			MANHOLE, PRECAST, WITH KNOCKOUTS (8x8x10)	EA	1			
	CPS 349-04			MANHOLE, PRECAST, WITH KNOCKOUTS (8x8x8)	EA	1			
	CPS 730-02			CONDUIT FITTINGS 4" CAP	EA	66			
	CPS 730-02			CONDUIT FITTINGS 2" CAP	EA	9			
	CPS 730-06			SPACERS, INTERLOCKING, CONDUIT, FOR UNDERGROUND DUCT BANKS	EA	17025			
	CPS 730-02			CONDUIT FITTINGS 2.5" 90 DEGREE ELBOW	EA	14			
	CPS 741-14			JUNCTION BOX, SINGLE PHASE, FEED-THRU, FOR 15KV AND 35 KV CABLE (TYPE J)	EA	1			
A2	TxDOT 402	2001		TRENCH EXCAVATION SAFETY PROTECTION	LF	5332			
	TxDOT 618	2018		CONDUIT (2 INCH/PVC SCHEDULE 40)	LF	5256			
	TxDOT 618	2020		CONDUIT (2.5 INCH/PVC SCHEDULE 40)	LF	1919			
	TxDOT 618	2024		CONDUIT (4 INCH/PVC SCHEDULE 40)	LF	68087			
	TxDOT 624	2017		GROUND BOX TY J (484836)	EA	10			
	XXXXX			STREET LIGHT FOUNDATION	EA	10			

TOTAL DUCT BANK BASE BID _____

PARK MITIGATION									
A2	SS161			COMPOST MANUFACTURED TOPSOIL - BOS	CY	10			
A2	SS166			FERTILIZER	LS	1			
A2	SS192			LANDSCAPE PLANTING - 'DT' TREE	EA	9			
A2	SS192			LANDSCAPE PLANTING - 'UC-4' TREE	EA	2			
A2	SS192			LANDSCAPE PLANTING - 'TD-4' TREE	EA	6			
A2	SS192			LANDSCAPE PLANTING - 'RC' TREE	EA	12			
A2	SS193			VEGETATIVE WATERING	LS	1			
A2	SS193			PLANT MAINTENANCE, EA. PLANT	EA	27			
	TxDOT 516.1			BERMUDA SODDING - TIF 419	SY	820			
	SS2010.1			CONSTRUCTION FENCE - 6' TEMPORARY	LF	890			
	SS2030.1			TREATMENT OF EXISTING TREES	LS	1			
	SS2040.1			LANDSCAPE PROTECTION	LS	1			
	SS2050.1			LANDSCAPE MAINTENANCE	LS	1			
	SS2100.1			METAL CONSERVATION - FENCES AND GATES	LS	1			
	SS2110.1			METAL CONSERVATION - LANTERNS	LS	1			
	SS2120.1			STONE WALL CONSERVATION	LS	1			
A1	SS2140			FOUNDATION UNDERPINNING- WEST ENTRY TOWER	EA	10			
	SS2150.1			STUCCO REPAIR - REMOVE AND REPLACE	SF	1			
	SS2150.2			STUCCO REPAIR - FILL CRACKS	LF	1			
	SS2150.3			STUCCO REPAIR - REPLICATE MISSING CAST STONE TRIM	LF	1			
	SS2150.4			STUCCO REPAIR - REPLICATE MISSING CAST STONE ORNAMENTS	EA	1			
	SS2150.5			STUCCO REPAIR - REMOVE AND REATTACH LOOSE TRIM	LF	1			
	SS2150.6			STUCCO REPAIR - PATCH DAMAGED CAST STONE AND STUCCO	SF	1			
	SS2160.1			REALKALIZATION	LS	1			
	SS2170			ARCHITECTURAL CONSERVATION	LS	1			
	SS2174.1			SKYLIGHT RESTORATION	LS	1			
	SS2173			STEEL DOORS	EA	2			
	SS2175			THERMOPLASTIC-POLYOLEFIN ROOFING	LS	1			
	SS2280.1			CEMENT SCULPTURE (TRABAJO RUSTICO) CONSERVATION	LS	1	\$45,000.00	\$ 45,000.00	
	SS2300.1			ORNAMENTAL METAL FENCE - (4 FT HIGH)	LF	72			
	SS2320.1			ANTIQUITIES VIOLATION SIGN	EA	7			
	SS2340.1			TEMPORARY LANDSCAPE IRRIGATION SYSTEM	LS	1			
	SS2400.1			ELECTRICAL SYSTEM	LS	1			

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	SS2410.1			PLUMBING SYSTEM	LS	1			

TOTAL PARK MITIGATION BASE BID _____

C3 SEWER LINE									
	100			MOBILIZATION	LS	1			
	101			PREPARING RIGHT-OF-WAY	LS	1			
	SAWS 550		SP550	TRENCH EXCAVATION SAFETY PROTECTION	LF	180			
	COSA 551		SP551	TEMPORARY SPECIAL SHORING	LS	1			
	COSA 503			REPLACE PORTLAND CEMENT CONCRETE DRIVEWAY - COMMERCIAL (AT&T)	SY	136			
	COSA 511			CUTTING AND REPLACING PAVEMENT, REPLACING WITH PERMANENT BASE AND PAVEMENT (HILDEBRAND AVE)	SY	119			
	COSA 511			CUTTING AND REPLACING PAVEMENT, REPLACING WITH TEMPORARY BASE AND PAVEMENT (HILDEBRAND AVE)	SY	119			
	COSA 511			CUTTING AND REPLACING PAVEMENT, REPLACING WITH BASE AND PAVEMENT (INCARNATE WORD UNIVERSITY)	SY	100			
	COSA 511			CUTTING AND REPLACING PAVEMENT, REPLACING WITH PORTLAND CEMENT CONCRETE PAVEMENT (INCARNATE WORD UNIVERSITY)	SY	94			
	COSA 500			CONCRETE CURB	LF	75			
	SAWS 848		SP848	DUAL 42" GRAVITY SEWER. FRPM ASTM D-3262, SN 72. INCLUSIVE OF EXCAVATION, STRUCTURAL CONCRETE ENCASEMENT, BACKFILL, AND DEWATERING.	LF	75			
	SAWS 848		SP848	54" GRAVITY SEWER. FRPM ASTM D-3262, SN 72. INCLUSIVE OF EXCAVATION, BEDDING, BACKFILL, AND DEWATERING.	LF	106			
	SAWS 849		SP849	AIR AND DEFLECTION TESTING - 42" GRAVITY SEWER.	LF	150			
	SAWS 849		SP849	AIR AND DEFLECTION TESTING - 54" GRAVITY SEWER	LF	106			
	SAWS 866		SP866	SEWER MAIN TELEVISION INSPECTION - 42" GRAVITY SEWER	LF	150			
	SAWS 866		SP866	SEWER MAIN TELEVISION INSPECTION - 54" GRAVITY SEWER	LF	106			
	SAWS 850		SP850	JUNCTION STRUCTURE MANHOLE "A". INCLUSIVE OF STRUCTURAL EXCAVATION, PLUGS, MH RISERS/CONE/RING & COVER, COATING, FLOWABLE FILL, TESTING, CUTTING OF EXISTING PIPE	LS	1			
	SAWS 850		SP850	JUNCTION STRUCTURE MANHOLE "B". INCLUSIVE OF STRUCTURAL EXCAVATION, MH RING AND COVER, COATING, FLOWABLE FILL, TESTING	LS	1			
	SAWS 850		SP850	JUNCTION STRUCTURE MANHOLE "C". INCLUSIVE OF STRUCTURAL EXCAVATION, PLUGS, MH RING & COVER, COATING, FLOWABLE FILL, TESTING, CUTTING OF EXISTING PIPES.	LS	1			
	SAWS 853		SP853	TEE BASE FIBERGLASS MANHOLE, WATERTIGHT, 54" DIA. BASE WITH 60" DIA. RISER	EA	1			
	SAWS 853		SP853	TEE BASE FIBERGLASS EXTRA DEPTH 60" DIA. MANHOLE RISER	VF	8.7			
	SAWS 858		SP858	CONCRETE COLLAR AT CONNECTION OF EXISTING RCP PIPE TO PROPOSED FRPM PIPE	LS	1			
	SAWS 854		SP854	RECONNECT 6" SANITARY SEWER SERVICE. INCLUSIVE OF 48" DIA. MANHOLE.	LS	1			
	SAWS 862		SP862	ABANDON IN-PLACE EXISTING 24" SANITARY SEWER MAIN. INCLUSIVE OF CUTTING/PLUGGING AND GROUTING OF LINE.	LF	246			
	SAWS 862		SP862	ABANDON IN-PLACE EXISTING 54" SANITARY SEWER MAIN. INCLUSIVE OF CUTTING/PLUGGING AND GROUTING OF LINE.	LF	150			
	SAWS 862		SP862	REMOVAL OF EXISTING 24" OR 54" PIPELINE (NO SEPARATE PAY ITEM).	LF	75			
	SAWS 862		SP862	ABANDON IN-PLACE EXISTING SANITARY SEWER MANHOLE / JUNCTION STRUCTURE.	EA	3			
	SAWS 862		SP862	REMOVE EXISTING SANITARY SEWER MANHOLE / JUNCTION STRUCTURE.	EA	2			
	1540			FLOW MANAGEMENT AND BY-PASS PUMPING.	LS	1			

TOTAL C3 SEWER LINE BASE BID _____

CPS GAS BASE BID									
				Install Gas Main or Casing (distance as measured along the top of trench) (2" Plastic Pipe and Tracer Wire)	FT	1004			
				Install Gas Main or Casing (distance as measured along the top of trench) (8" Plastic Pipe and Tracer Wire)	FT	2482			

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
				Rerun and Lower Gas Service off New Main (Main to Meter) Sizes 1" through 4" (Short Side)	EA	2			
				Rerun and Lower Gas Service off New Main (Main to Meter) Sizes 1" through 4" (Long Side)	EA	1			
				Rerun and Lower Gas Service off New Main (Main to 1 ft. inside Prop. Line) Sizes 1" through 4" (Short Side)	EA	2			
				Replace existing steel service riser on customer premises with new anodeless riser, rebuilding to standard, and tie into existing plastic service line (1" through 2" risers)	EA	1			
				Civic Service installation by directional drilling from plastic main. Install 4" plastic pipe from service tap to service riser using directional drilling (includes removal of existing service pipe sections necessary for bore). Length from entry to exit. (Drilling in dirt)	FT	402			
				Uncover and abandon active gas mains only when main is not being replaced. (Includes installation of stoppler fitting(s) on steel mains, purge and plug ends (2" through 4" steel)	EA	2			
				Uncover and kill existing service at the main. Remove service riser when no other service work is done at this location (1-1/4" through 2" service)	EA	2			
				Civic Street Restoration Adjustment, when required. To be used as directed by the CPS Representative (Flowable Fill)	CY	320			
				Civic Street Restoration Adjustment, when required. To be used as directed by the CPS Representative (Asphalt)	SY	960			
				Civic Street Restoration Adjustment, when required. To be used as directed by the CPS Representative (Concrete/Flatwork)	SF	378			
				Contractor to hire TD Williams to provide all labor and necessary fittings for the Plugging and Hot Tapping Operation on existing 16" steel gas main. Contractor to provide any additional labor necessary to complete hot tapping and plugging. (Plug 16" Stopple fitting)	EA	1			

- NOTE A: For each of the items above, the Contractor's work is to include: trenching, joining, testing, coating steel, building and painting risers and meter set-ups, connecting new pipe to existing pipe and installing all necessary fittings for tie-ins such as, stopper fittings and 3-way stopper tees, valves, insulating joints, Installing all necessary cathodic protection devices such as CPTLB's and anodes, sand padding, backfilling and compacting to consistency of original soil, replacing paving, curbs, and sidewalks removed or damaged during construction, and cleanup as may be necessary in each instance.
- NOTE B: Trenching is considered to be the normal method of service installation and is required on all service adjustments. A gas service can be rerun by INSERTION, when the old service is PULLED from the riser to one foot inside the property line, ONLY at the discretion of the CPS Energy Inspector.
- NOTE C: Bid quantities shown are estimates by CPS Energy. Per foot prices shall be applied to the actual distance measured along the top of the trench or the actual length of the bore, as applicable
- NOTE D: Unit prices shall include insurance costs. CPS Energy's insurance requirements are specified in Exhibit GAS-6.
- NOTE E: The COST to abandon the existing main(s) is not an ADDITIONAL item and is to be included in the Unit Price(s) for this item

TOTAL CPS GAS BASE BID

SUMMARY

TOTAL STREET AND DRAINAGE BASE BID \$ _____ -

TOTAL SAWS SEWER MAIN BASE BID \$ _____ -

TOTAL SAWS WATER MAIN BASE BID \$ _____ -

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
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TOTAL DUCTBANK BASE BID \$ _____ -

TOTAL PARK MITIGATION BASE BID \$ _____ -

TOTAL C3 SEWER BASE BID \$ _____ -

TOTAL CPS GAS BASE BID \$ _____ -

TOTAL BID AMOUNT \$ _____ -

ADDITIVE ALTERNATE BID #1									
	1	COSA 234.1		BASE REINFORCEMENT	SY	5143			
	1	TxDOT 110	2001	STREET EXCAVATION	CY	1612			
	1	TxDOT 132	2003	EMBANKMENT (FINAL)(ORD COMP)(TY B)	CY	93			
	1	TxDOT 162	2002	BLOCK SODDING	SY	129			
A2	1	TxDOT 341	2011	D-GR HMA(QCQA) TY-B PG64-22	TON	3550			
A2	1	TxDOT 341	2048	D-GR HMA(QCQA) TY-C SAC-B PG70-22	TON	1157			
A2	2	TxDOT 354	2021	PLANE ASPH CONC PAV(0" TO 2")	SY	2880			
	1	TxDOT 402	2001	TRENCH EXCAVATION SAFETY PROTECTION	LF	900			
	1	TxDOT 462	2025	PRECAST REINFORCED CONCRETE CULVERT (9' x 6')	LF	40			
	1	TxDOT 462	2062	PRECAST REINFORCED CONCRETE CULVERT (12' x 6')	LF	503			
	1	TxDOT 464	2005	REINFORCED CONCRETE PIPE (CLASS III)(24" DIA)	LF	312			
	1	TxDOT 464	2111	REINFORCED CONCRETE PIPE (CLASS III)(72" DIA)	LF	6			
	1	TxDOT 465	2089	MANH (COMPL) (JUNCT BOX) (TY 1)	EA	2			
	1	TxDOT 465	2091	SPECIAL JUNCTION BOXES (Complete) (15'x12' Drop Structure)	EA	1			
	1	TxDOT 465	2094	MANH (COMPL) (TY2) (PIPE RISER)	EA	2			
	1	TxDOT 465	2145	INLET (COMPL) (TRAFFIC) (TY X-3)	EA	3			
	1	TxDOT 465	2192	INLET EXT (TY I - E)	EA	4			
	1	TxDOT 465	2259	INLET (COMPL) (CURB) (TY I) (10')	EA	6			
	1	TxDOT 465	2405	INLET (COMPL) (CURB) (TY C)	EA	2			
	1	TxDOT 465	2474	INLET (COMPLETE) (TYPE C - E)	EA	2			
	1	TxDOT 465	2305	SPECIAL INLETS (COMPL) (GRATE) (27'x6')	EA	1			
	1	TxDOT 506	2041	012 TEMP SDMT CONT FENCE (INLET PROTECT)	LF	245			
	1	TxDOT 512	2008	PORT CTB (FUR & INST) (LOW PROF) (TY 1)	LF	533			
	1	TxDOT 512	2009	PORT CTB (FUR & INST) (LOW PROF) (TY 2)	LF	20			
	1	TxDOT 512	2044	PORT CTB (REMOVE) (LOW PROF) (TY 1)	LF	533			
	1	TxDOT 512	2045	PORT CTB (REMOVE) (LOW PROF) (TY 2)	LF	20			
A2	2	TxDOT 528	2004	LANDSCAPE PAVERS	SY	48			
A2	1	TxDOT 529	2001	CONCRETE CURB TYPE I	LF	1544			
	1	TxDOT 530	2010	CONCRETE DRIVEWAY (COMMERCIAL)	SY	97			
	1	TxDOT 531	2010	CURB RAMPS (TY 7)	EA	7			
	1	TxDOT 531	2015	NEW P.C. CONCRETE SIDEWALKS, 4 IN. THICKNESS	SY	865			
	1	TxDOT 636	2001	ALUMINUM SIGNS (TY A)	SF	41			
	1	TxDOT 644	2001	INS SM RD SN SUP&AM TY 10BWG(1) SA(P)	EA	5			
	1	TxDOT 644	2056	RELOCATE SM RD SN SUP & AM TY 10BWG	EA	1			
	1	TxDOT 644	2060	REMOVE SM RD SN SUP & AM	EA	5			
	1	TxDOT 662	2001	WK ZN PAV MRK NON-REMOV (W) 4" (BRK)	LF	763			
	1	TxDOT 662	2004	WK ZN PAV MRK NON-REMOV (W) 4" (SLD)	LF	534			
	1	TxDOT 662	2064	WK ZN PAV MRK REMOV (W) 4" (BRK)	LF	1260			

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRPTION	UNIT OF MEASURE	APPROX QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	1	TxDOT 662	2067	WK ZN PAV MRK REMOV (W) 4" (SLD)	LF	1703			
A2	1	TxDOT 662	2079	WK ZN PAV MRK REMOV (W) 24" (SLD)	LF	81			
A2	1	TxDOT 662	2099	WK ZN PAV MRK REMOV (Y) 4" (SLD)	LF	3246			
A2	1	TxDOT 666	2003	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE BROKEN	LF	3038			
	1	TxDOT 666	2036	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 8IN, 100 MILS, WHITE	LF	334			
	1	TxDOT 666	2048	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, WHITE	LF	342			
	1	TxDOT 666	2054	REFL PAV MRK TY I (W) (ARROW) (100MIL)	EA	3			
	1	TxDOT 666	2096	REFL PAV MRK TY I (W) (WORD) (100MIL)	EA	3			
	1	TxDOT 666	2111	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW SOLID	LF	905			
	1	TxDOT 666	2132	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, YELLOW	LF	83			
A2	1	TxDOT 666	2142	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE BROKEN	EA	3038			
	1	TxDOT 666	2153	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 8IN, 100 MILS, WHITE	LF	334			
	1	TxDOT 666	2157	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, WHITE	LF	342			
	1	TxDOT 666	2160	REF PAV MRK TY II (W) (ARROW)	EA	3			
	1	TxDOT 666	2173	REF PAV MRK TY II (W) (WORD)	EA	3			
	1	TxDOT 666	2178	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW SOLID	LF	905			
	1	TxDOT 666	2185	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, YELLOW	LF	83			
	1	TxDOT 672	2015	REFL PAV MRK (TY II A-A)	EA	42			
	1	TxDOT 672	2017	REFL PAV MRKR TY II-C-R	EA	101			
	1	TxDOT 6834	2001	PORTABLE CHANGEABLE MESSAGE SIGN	DAY	240			
	1	COSA 101.1		PREPARING RIGHT-OF-WAY	LS	1			
	1	COSA 100.2		INSURANCE AND BONDING	LS	1			
	1	COSA 100.1		MOBILIZATION	LS	1			

TOTAL ADDITIVE ALTERNATE BID #1 _____

ADDITIVE ALTERNATE BID #2									
	2	SS2320.2		INTERPRETIVE PANEL SIGN - MIRAFLORES MASTER PLAN	EA	1			
	2	SS2320.3		INTERPRETIVE PANEL SIGN - SIGNIFICANT SITE FEATURE	EA	3			

TOTAL ADDITIVE ALTERNATE BID #2 _____

_____ certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out. _____ Acknowledged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

Title: _____

Table of Contents

010	Invitation for Bids and Contract Signature Page for Broadway Corridor Phase IIIA.....	3
020	Bid Form.....	4-5
025	Unit Pricing Form	6-15
030	Contractor’s Qualifications/Information	16-20
040	Standard Instructions to Respondents.....	21-28
050	Small Business Economic Development Advocacy (SBEDA) Program.....	29-33
052	Good Faith Effort Plan (For Contracts \$200,000 or Greater).....	34-37
053	Letter of Intent for Contracts Utilizing Small Business Contracting Goals.....	38
054	Request for Approval: Change to Original Affirmed List of Subcontractors/Suppliers	39
060	Supplemental Conditions	40
061	Additional Supplemental Conditions.....	41-42
	Performance Bond	43
	Payment Bond.....	44
085	General Conditions for City of San Antonio Heavy/Highway Construction Contracts	45-108
	Heavy Highway Wage Decision TX 100041 MOD#0 03122010.....	109-113
095	Special Conditions for San Antonio Water System Water & Sanitary Sewer Construction	114-115
	City of San Antonio, Specifications, Special Conditions & Plans “Broadway Corridor Phase IIIA (Carnahan) Prepared by Freese & Nichols, Inc.....	116-435
	Geotechnical Engineering Study, Broadway Corridor, Phase III-A Proposed Pavement Reconstruction, Overlay & Drainage Improvements Prepared by Arias & Associates.....	436-526
	Additional Pavement Recommendations, Proposed Broadway Corridor, Phase III-A Proposed Pavement Reconstruction, Overlay & Drainage Improvements Prepared by Arias & Associates.....	527-528
	Tree Art Protection Miraflores Park, Geotechnical Investigation Report Prepared by Freese & Nichols, Inc.	529-560
	Environmental Specifications For the Waste Management Plan	561-587
	CPS Energy Requirements and Specifications for Construction of Natural Gas Distribution Facilities on the Broadway Corridor Phase IIIA.....	588-646
	Test Hole Data Sheet prepared by CobbFendley and Associates	647-664
	Street Light Foundation Detail	665
	Wireless Communications Equipment at Traffic Signal.....	666

**MASTER LIST OF GOVERNING SPECIFICATIONS,
SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS
Broadway Corridor Phase IIIA (Carnahan)**

GOVERNING SPECIFICATIONS

City of San Antonio Standard Specifications for Construction - June 2008

SPEC NO.	TITLE
100	Mobilization
101	Preparing Right-of-Way
104	Street Excavation
230	Base And Pavement Replacement
234	Geogrid For Base or Embankment Reinforcement
300	Concrete
301	Reinforcing Steel
302	Metal For Structures
307	Concrete Structures
308	Drilled Shafts and Under-Reamed Foundations
400	Excavation, Trenching And Backfilling
403	Storm Sewer Junction Boxes And Inlets
409	Cast Iron Castings
410	Subgrade Filler
441	Steel Structures
445	Galvanizing
447	Structural Bolting
448	Structural Field Welding
449	Anchor Bolts
471	Frames, Grates, Rings and Covers
500	Concrete Curb
503	Asphaltic Concrete, Portland Cement Concrete and Gravel Driveways
509	Metal Beam Guard Rail
511	Cutting and Replacing Pavement
515	Topsoil
516	Sodding
520	Hydromulching
526	Field Office
551	Temporary Special Shoring
615	Traffic Signal Controller Cabinet
618	Conduit
620	Electrical Conductors
624	Ground Boxes
628	Electrical Service
633	Battery Backup System
636	Aluminum Signs
655	Controller Foundation and Pedestal Posts
680	Installation of Highway Traffic Signals
681	Temporary Traffic Signals
682	Vehicle And Pedestrian Signal Heads

**MASTER LIST OF GOVERNING SPECIFICATIONS,
SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS
Broadway Corridor Phase IIIA (Carnahan)**

GOVERNING SPECIFICATIONS

City of San Antonio Standard Specifications for Construction - June 2008

SPEC NO.	TITLE
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
691	Spread Spectrum Radios for Traffic Signals
693	Internally Lighted Street Name Sign Assemblies
694	Video Imaging Vehicle Detection System
695	Emergency Vehicle Traffic Signal Priority Control System
700	Cost Loaded Project Schedules
1000	Web Portal
COSA	#6 THHN/THWN
COSA	Belden Power Cable
COSA	CAT 5 Ethernet Cable

Texas Department of Transportation Standard Specifications for Construction

SPEC NO.	TITLE
100	Preparing Right of Way
110	Excavation
132	Embankment
162	Sodding for Erosion Control
169	Soil Retention Blankets
341	Dense-Graded Hot-Mix Asphalt (QC/QA)
354	Planing and Texturing Pavement
400	Excavation and Backfill for Structures
402	Trench Excavation Protection
403	Temporary Special Shoring
420	Concrete Structures
432	Riprap
462	Concrete Box Culverts and Storm Drains
464	Reinforced Concrete Pipe
465	Manholes and Inlets
500	Mobilization
502	Barricades Signs and Traffic Handling
506	Temporary Erosion Sedimentation and Environmental Controls
512	Portable Concrete Traffic Barrier
528	Colored Textured Concrete and Landscape Pavers
529	Concrete Curb Gutter and Combined Curb and Gutter
530	Intersections Driveways and Turnouts
531	Sidewalks
550	Chain Link Fence

**MASTER LIST OF GOVERNING SPECIFICATIONS,
SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS
Broadway Corridor Phase IIIA (Carnahan)**

GOVERNING SPECIFICATIONS

Texas Department of Transportation Standard Specifications for Construction

SPEC NO.	TITLE
618	Conduit
624	Ground Boxes
636	Aluminum Signs
644	Small Roadside Sign Supports and Assemblies
662	Work Zone Pavement Markings
666	Reflectorized Pavement Markings
672	Raised Pavement Markers
772	Post and Cable Fence
6834	Portable Changeable message sign

SAWS Standard Specifications for Construction

SPEC NO.	TITLE
100	Mobilization
101	Preparation of right-of-Way
300	Concrete (Natural Aggregate)
301	Reinforcing Steel
307	Concrete Structures
511	REPLACING WITH HOT ASPH. CONC PVMT.
550	Trench Excavation Safety Protection
804	Excavation, Trenching and Backfill
814	Ductile Iron Pipe
818	PVC (C-900) Pipe Installation
824	Service Supply Lines (Water)
828	Gate Valves
833	Meter and Meter Box Installation
834	Fire Hydrants
836	Grey-Iron and Ductile-Iron Fittings
840	Water Tie-Ins
841	Hydrostatic Testing Operations
844	Blowoff Assemblies
846	Air Release Assemblies
848	Sanitary Sewers
849	Air and Deflection Testing (Sanitary Sewer)
850	Sanitary Sewer Structures
852	Sanitary Sewer Manholes
853	Sanitary Sewer Glass-Fiber Reinforced Polyester (FRP) Manholes
854	Sanitary Sewer Laterals
856	Jacking, Boring or Tunneling Pipe
858	Concrete Encasement, Cradles, Saddles, and Collars
860	Vertical Stacks
862	Abandonment of Sewer Mains and Manholes

**MASTER LIST OF GOVERNING SPECIFICATIONS,
SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS
Broadway Corridor Phase IIIA (Carnahan)**

GOVERNING SPECIFICATIONS

SAWS Standard Specifications for Construction

SPEC NO.	TITLE
864	Bypass Pumping
866	Sewer Main Television Inspection
869	Project Signs
1010	Flowable Fill

GOVERNING SPECIFICATIONS

CPS Energy Standard Specifications for Construction

SPEC NO.	TITLE
CPS 101-05	CONCRETE FOR PROTECTIVE COVER OR FILL (2000 PSI PEA GRAVEL)
CPS 101-06	CONTROLLED LOW STRENGTH MATERIAL (FLOWABLE FILL), ENGINEERED MIX DESIGNS
CPS 730-02	CONDUIT FITTINGS
CPS 730-06	SPACERS, INTERLOCKING, CONDUIT, FOR UNDERGROUND DUCT BANKS
CPS 741-14	JUNCTION BOX, SINGLE PHASE, FEED-THRU, FOR 15KV AND 35 KV CABLE (TYPE J)

**MASTER LIST OF GOVERNING SPECIFICATIONS,
SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS
Broadway Corridor Phase IIIA (Carnahan)**

SPECIAL PROVISIONS TO STANDARD SPECIFICATIONS

City of San Antonio Standard Specifications for Construction - June 2008

SPEC NO.	TITLE
403	Storm Sewer Junction Boxes And Inlets
520	Hydromulching
526	Field Office
700	Cost Loaded Project Schedules

Texas Department of Transportation Standard Specifications for Construction

SPEC NO.	TITLE
506 SP012	Temporary Erosion Sedimentation and Environmental Controls

SAWS Standard Specifications for Construction

SPEC NO.	TITLE
300	* Concrete (Natural Aggregate)
301	* Reinforcing Steel
307	* Concrete Structures
550	* Trench Excavation Safety Protection
551	* Temporary Special Shoring
804	* Excavation, Trenching, and Backfilling
848	* Sanitary Sewers
849	* Air and Deflection Testing (Sanitary Sewer)
850	* Sanitary Sewer Structures
853	* Sanitary Sewer Glass-Fiber Reinforced Polyester (FRP) Manholes
854	* Sanitary Sewer Laterals
858	* Concrete Encasement, Cradles, Saddles, and Collars
862	* Abandonment of Sewer Mains and Manholes
866	* Sewer Main Television Inspection
869	* Project Signs

* These Special Provisions only apply to the C3 sewer crossing

**MASTER LIST OF GOVERNING SPECIFICATIONS,
SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS
Broadway Corridor Phase IIIA (Carnahan)**

SPECIAL SPECIFICATIONS

City of San Antonio

SPEC NO.	TITLE
110	Environmental and Safety Concerns for Handling of Impacted Media
161	Compost
166	Fertilizer
192	Landscape Planting
193	Landscape Establishment
800	Project Sign
SS911	Vibration Monitoring
SS912	Limestone Block Wall
SS2010	Temporary Facilities and Controls
SS2030	Treatment of Existing Trees
SS2040	Landscape Protection
SS2050	Landscape Maintenance
SS2100	Metal Conservation - Fences and Gates
SS2110	Metal Conservation - Lanterns
SS2120	Stone Wall Restoration
SS2140	Foundation Underpinning - West Entry Tower
SS2150	Stucco Repair
SS2160	Realkalization
SS2170	Architectural Conservation
SS2173	Steel Doors
SS2174	Skylight Restoration
SS2175	Thermoplastic-polyolefin Roofing
SS2280	Cement Sculptures (Trabajo Rustico) Restoration
SS2300	Ornamental Metal Fence
SS2320	Park Signs
SS2340	Temporary Landscape Irrigation Systems
SS2400	Electrical Systems
SS2410	Plumbing Systems
SS2441	Irrigation System
SS2480	Planting
SS2486	Decomposed Granite & River Rock Paving

SAWS Special Specifications for Construction

1540	Flow Management and By-Pass Pumping
2504	Fiberglass Reinforced Polymer Mortar Pipe
3000	Special Specification for Handling Asbestos Cement Pipe

ITEM 161

COMPOST

161.1. Description. Furnish and place compost as shown on the plans.

161.2. Materials. Furnish compost that has been produced by aerobic (biological) decomposition of organic matter and meets the requirements of Table 1. Compost feedstock may include, but is not limited to, leaves and yard trimmings, biosolids, food scraps, food-processing residuals, manure or other agricultural residuals, forest residues, bark, and paper. Ensure compost and wood chips do not contain any visible refuse, other physical contaminants, or any substance considered harmful to plant growth. Do not use materials that have been treated with chemical preservatives as a compost feedstock or as wood chips. Do not use mixed municipal solid waste compost. Provide compost meeting all applicable 40 CFR 503 standards for Class A biosolids and TCEQ health and safety regulations as defined in the TAC, Chapter 332, including the time and temperature standards in Subchapter B, Part 23. Meet the requirements of the United States Composting Council (USCC) Seal of Testing Assurance (STA) program.

Before delivery of the compost, provide quality control (QC) documentation that includes the following:

- the feedstock by percentage in the final compost product,
- a statement that the compost meets federal and state health and safety regulations,
- a statement that the composting process has met time and temperature requirements,
- a copy of the producer's STA certification, and
- a copy of the lab analysis, performed by an STA-certified lab, verifying that the compost meets the requirements of Table 1.

When furnishing biosolids compost, also provide a copy of the current TCEQ compliance statement signed by the facility manager.

**Table 1
Physical Requirements for Compost**

Property	Test Method	Requirement
Particle Size	TMECC ¹ 02.02-B, "Sample Sieving for Aggregate Size Classification"	95% passing 5/8 in. 70% passing 3/8 in.
Heavy Metals Content	TMECC 04.06, "Heavy Metals and Hazardous Elements": 04.06-As, Arsenic 04.06-Cd, Cadmium 04.06-Cu, Copper 04.06-Pb, Lead 04.06-Hg, Mercury 04.06-Mo, Molybdenum 04.06-Ni, Nickel 04.06-Se, Selenium 04.06-Zn, Zinc	Pass
Soluble Salts	TMECC 04.10-A, "1:5 Slurry Method, Mass Basis"	5.0 dS/m maximum ²
pH	TMECC 04.11-A, "1:5 Slurry pH"	5.5–8.5
Maturity	TMECC 05.05-A, "Germination and Root Elongation"	> 80%
Organic Matter Content	TMECC 05.07-A, "Loss-On-Ignition Organic Matter Method"	25–65% (dry mass)
Stability	TMECC 05.08-B, "Carbon Dioxide Evolution Rate"	8 or below
Fecal Coliform	TMECC 07.01-B, "Fecal Coliforms"	Pass

1. "Test Methods for the Examination of Composting and Compost," published by the United States Department of Agriculture and the USCC.

2. A soluble salt content up to 10.0 dS/m for compost used in compost manufactured topsoil will be acceptable.

Provide a designated project stockpile of unblended compost for sampling and testing at the producer's site. The Department will take samples from each stockpile for quality assurance (QA). Make payment to the STA-certified lab chosen by the Department for the required QA testing. Submit lab invoices for passing QA tests to the Department for reimbursement.

Maintain compost in designated stockpiles at the producer's site until accepted by the Engineer. The Engineer reserves the right to sample compost at the jobsite.

- A. **Compost Manufactured Topsoil (CMT).** CMT will consist of 75% topsoil blended with 25% compost measured by volume. Use CMT that is either blended on-site (BOS), blended in-place (BIP), or pre-blended (PB), as specified on the plans. Use topsoil conforming to Article 160.2, "Materials."
- B. **Erosion Control Compost (ECC).** ECC will consist of 50% untreated wood chips blended with 50% compost measured by volume. Use wood chips less than or equal to 5 in. in length with 95% passing a 2-in. screen and less than 30% passing a 1-in. screen.
- C. **General Use Compost (GUC).** GUC will consist of 100% compost.

161.3. Construction. Prepare the types of compost for use on the project and stockpile at the jobsite.

- A. **Compost Manufactured Topsoil (CMT).** After excavation and embankment work is complete, remove and dispose of objectionable material from the topsoil before blending. Roll the CMT with a light corrugated drum.
 - 1. **Blended On-Site (BOS).** Furnish topsoil. Topsoil may be salvaged from excavation and embankment areas, in accordance with Item 160, "Topsoil." Apply CMT to the depth shown on plans or apply compost in a uniform layer and incorporate into the in place topsoil to the depth shown on plans.

2. **Blended In-Place (BIP).** Apply compost in a uniform layer and incorporate into the existing in place topsoil to the depth shown on the plans.
 3. **Pre-blended (PB).** Apply CMT in a uniform layer to the depth shown on the plans.
- B. Erosion Control Compost (ECC).** Use only on slopes 3:1 or flatter. After excavation and embankment work is complete, apply a 2-in. uniform layer, unless otherwise shown on the plans or as directed. When rolling is specified, use a light roller or other suitable equipment.
- C. General Use Compost (GUC).** Apply in a uniform layer as a top dressing on established vegetation to the depth shown on the plans. Do not bury existing vegetation. If using GUC as a backfill ingredient, in a planting soil mixture, for planting bed preparation, or as mulch, apply as shown on the plans.

161.4. Measurement. This Item will be measured by the 100-ft. station along the baseline of each roadbed, by the square yard complete in place, or by the cubic yard in vehicles at the point of delivery.

For CMT (BOS and PB only) and ECC cubic yard measurement, the quantity will be the composite material, compost and topsoil or wood chips.

161.5. 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 "Compost Manufactured Topsoil (BOS)," "Compost Manufactured Topsoil (BIP)," "Compost Manufactured Topsoil (PB)," "Compost Manufactured Topsoil (BOS or PB)," "Erosion Control Compost," and "General Use Compost" for the depth specified, except for measurement by the cubic yard. This price is full compensation for loading, hauling, stockpiling, blending, placing, rolling, sprinkling, equipment, labor, materials (including topsoil for CMT (BOS and PB only) and wood chips for ECC), tools, and incidentals. Costs associated with passing QA testing will be paid for in accordance with the requirements of Article 9.5, "Force Account," at invoice price with no add-ons.

ADDENDUM 2, ATTACHMENT "B"

ITEM 166 FERTILIZER

166.1. Description. Provide and distribute fertilizer over areas specified on the plans.

166.2. Materials. Use a complete fertilizer containing nitrogen (N), phosphoric acid (P), and potash (K) nutrients unless otherwise specified on the plans. At least 50% of the nitrogen component must be of a slow-release formulation such as urea-based and plastic resin-coated fertilizers. Ensure that fertilizer is in an acceptable condition for distribution in containers labeled with the analysis. Fertilizer is subject to testing by the Texas A&M Feed and Fertilizer Control Service in accordance with the Texas Fertilizer Law.

166.3. Construction. Deliver and apply the complete fertilizer uniformly at a rate equal to 100 lb. of nitrogen per acre or at the analysis and rate specified on the plans.

166.4. Measurement. When fertilizer is specified on the plans to be a pay item, measurement will be by the acre of surface area covered or by the ton (2,000 lb.). Measurement by the ton will use guaranteed weight of bags or containers as shown by the manufacturer or certified scales meeting the requirements of Item 520, "Weighing and Measuring Equipment," unless otherwise approved.

166.5. Payment. Unless otherwise specified on the plans, the work performed, materials furnished, equipment, labor, tools, and incidentals will not be paid for directly but will be considered subsidiary to bid items of the Contract.

When fertilizer is specified on the plans to be a pay item, 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 "Fertilizer." This price is full compensation for furnishing materials and performing operations.

ITEM 192

LANDSCAPE PLANTING

192.1. Description. Provide and install plants and related materials at designated locations. Maintain plants, related materials, and landscaped areas at the specified frequency.

192.2. Materials. Comply with the latest standards as follows, unless otherwise shown on the plans:

- "American Standard for Nursery Stock," published by the American Association of Nurserymen, Inc.
 - "Standardized Plant Names," published by the American Joint Committee on Horticultural Nomenclature.
 - Meet additional requirements for plants and related materials as shown on the plans.
- A. Plants.** Provide nursery-grown plants unless otherwise shown on the plans. Provide vigorous, healthy, well-rooted, plants with well-formed crowns, true to sizes, and of typical shape and characteristics of the species. Provide plants with nametags attached showing the genus, species, and specified variety.
- B. Rejection of Plants.** Plants with any of the following characteristics are subject to rejection:
- disease or insect infestation, including eggs and larvae;
 - dried or damaged root system or crown;
 - excessive abrasion of the bark;
 - prematurely opened or damaged buds;
 - disfiguring knots;
 - evidence of heat, freeze, or wind burn, mold, sun scald, or similar conditions;
 - damaged, pruned, crooked, or multiple leaders, unless multiple leaders are specified or are normal for the species;
 - cut limbs over 3/4 in. in diameter that have not completely callused;
 - dry, soggy, loose, cracked, broken, misshapen or undersized root balls;
 - processed balled roots (bench balled);
 - root balls encased in impervious material;
 - overgrown or root-bound plants;
 - undersized or unsound containers;
 - stock not well established in containers;
 - containers with less than 3/4 planting medium depth;
 - an abnormal balance between height and spread for the species;
 - missing or broken serialized locking tags, when specified;
 - any condition that does not conform to the plans or nursery stock standards; or
 - conditions that would prevent thriving growth or cause an unacceptable appearance.
- C. Backfill and Plant Soil Mix.** Use soil excavated from the plant pits or beds or provide a loose, friable soil mix as shown on the plans. Provide a soil mix free of reproductive parts of weeds and grasses, harmful substances, and detrimental amounts of foreign matter. Use compost in accordance with Article 161.2.C, "General Use Compost," when specified on the plans.
- D. Mulch.** Provide loose, organic mulch derived from plants unless other types are shown on the plans. Use mulch free of excessive amounts of leaves, sticks, harmful substances, and detrimental amounts of soil, or other foreign matter.
- E. Water.** Use water that is clean and free of industrial wastes and other substances harmful to the growth of vegetation.
- F. Fertilizer.** Use fertilizer conforming to Article 166.2, "Materials," unless otherwise shown on the plans.
- G. Other Materials.** Provide additional incidental materials associated with landscape planting and meet the requirements shown on the plans.

192.3. Construction. Prevent damage to vegetation, slopes, utilities, structures, and other amenities. Repair any damage within the right of way caused by the Contractor at no additional expense to the Department. Provide and

document a licensed pesticide applicator for the treatment of insects, diseases, animals, and vegetation in accordance with the TDA or the TSPCB in the appropriate use category.

- A. Plant Inspection Before Delivery.** Plants are subject to inspection at the nursery or location of collection. When directed, provide and use serialized locking tags on plants selected by the Engineer.
- B. Plant Delivery.** Notify the Engineer at least 48 hours before delivering plants to the worksite. Coordinate with the Engineer for inspection and approval of materials upon delivery. Remove rejected plants from the worksite and replace as directed.
- C. Mark Plant Locations and Bed Outlines.** Provide and install coded markings, such as wooden stakes, to mark the locations, type of plants, and the outline of planting beds. Obtain approval of the plant and bed locations before excavation begins.
- D. Plant Pit Excavation.** Excavate pits for container, balled and burlapped (B&B), and fabric bag grown stock to the depth shown on the plans or at least the depth of the root ball. Excavate pits for bare root plants equal to the depth of the root system. Excavate pits on slopes using measurements shown on the plans or at least the depth of the root ball based on the uphill side of the pit. Excavate the receiving pits for mechanically transplanted plants with the same type and size equipment used to dig the plants.

Provide a minimum horizontal dimension of 12 in. between the root ball and pit walls for the following:

- 15-gal. or larger pots,
- 14-in. or larger boxes, and
- larger than 14-in. root balls of B&B and fabric bag grown plants.

Provide a minimum horizontal dimension of 2 times the root ball diameter across the pit for the following:

- less than 15-gal. pots, and
- 14-in. or smaller root balls of B&B and fabric bag grown plants.

Provide a minimum pit diameter for bare root plants that permits the roots to spread without crowding or curving around the walls of the pit.

- E. Plant Installation.** Install plants, within 24 hr. of excavating plant pits. Scarify the walls of pits as plant installation begins. For all plants, except those mechanically collected, center plant in pit and backfill in lifts, each lift 1/3 the depth of the root ball, and fill the pit with water after each lift to remove air pockets. For mechanically collected plants, prune protruding roots from the root ball to a point even with the cutting blades. Place the plant in the pit and work sand between the pit walls and the root ball with water until the sand fills all the cavities.

Apply fertilizer according to the plans. Ensure that the top of the root ball remains at the grade shown on the plans after final settlement.

- F. Plant Basin Construction.** Construct a basin at least 8 in. deep with an inside diameter equal to the pit diameter and with a level top around the plant unless otherwise shown on the plans. Use excavated soil from the plant pits or beds, backfill material, or other approved material for the basin. Spread excess excavated materials over the right of way as directed or remove and dispose of material in accordance with local, state, and federal requirements at locations outside the right of way.
- G. Watering.** Coordinate the planting work to ensure that an irrigation system, when specified, operates properly to meet the watering requirements. Apply water to plants or planting areas at the rate and frequency specified for an irrigation system or for the application method shown on the plans. Keep the ground and backfill moist at least 12 in. around the entire root ball if a watering rate and frequency are not specified.
- H. Using Antitranspirants.** Apply antitranspirants, when shown on the plans, in accordance with the manufacturer's instructions.
- I. Pruning.** Accomplish pruning in accordance with ANSI A300 pruning standards unless otherwise shown on the plans or directed. Retain the natural shape of plants according to the species. Limit pruning to removal of dead and broken branches, and an additional amount as specified or directed to improve the appearance and health of plants.

For B&B and collected plants, prune to reduce the original crown by approximately 20% by removing interior branches, entangled limbs, and small branches unless otherwise shown on the plans. Prune to develop the central leader or leaders. Apply wound dressing on oak (*Quercus*) species within 20 min. of causing bark damage or making a pruning cut. Apply wound dressing on other plants when shown on the plans or directed. Use wound dressing in accordance with the pruning standards. Remove and dispose of pruning debris.

- J. **Plant Support Installation.** Install plant supports such as staking, guying, and bracing as shown on the plans. Support and keep plants in a vertical position or as directed.
- K. **Tree Trunk Protection.** Install tree trunk protection guards when shown on the plans in accordance with the manufacturer's instructions.
- L. **Landscape Edge Installation.** Install landscape edging when shown on the plans and in accordance with the manufacturer's instructions.
- M. **Plant Bed Preparation.** Prepare the bed and install the planting soil mix, vegetation barrier, and other materials as shown on the plans.
- N. **Mulching.** Mulch plant basins and beds to a depth of 2 in. unless otherwise shown on the plans.
- O. **Maintenance.** Begin maintenance under this Item when the installation of plants on the project is completed and approved, or as directed. Perform the maintenance work for a minimum of 90 calendar days at designated locations by following the work schedule and frequencies shown on the plans. If a work schedule and frequency are not shown on the plans, perform the minimum requirements stated below.
 - 1. **Watering.** Water in accordance with Section 192.3.G, "Watering."
 - 2. **Mowing, Trimming, and Edging.** Mow, trim, and edge the designated locations. Mow, trim, and edge every 15 days during the growing season or as directed, mowing at a 3-4 in. height. Keep cord trimmers at least 1 ft. from plants to prevent damage to the plants. Plants damaged during the maintenance work are subject to rejection and replacement according to Section 192.3.O.9, "Plant Replacement."
 - 3. **Plant Basin, Bed, and Worksite Maintenance.** Chemically control weeds and unwanted grasses in plant basins, beds, along and in structures, and around existing plants every 15 days, unless otherwise directed. Reshape plant basins and beds every 30 days to conform to the plans. Maintain mulch in accordance with Section 192.3.N, "Mulching." Ensure that herbicides do not contact desirable plants. Follow the manufacturer's instruction for handling and applying herbicides.
 - 4. **Plant Supports.** Replace, repair, and adjust supports to meet the requirements of the plans and in accordance with Section 192.3.J, "Plant Support Installation." Adjust staking and guying to prevent girdling of plant trunks. Remove or dispose of support material, as directed.
 - 5. **Pruning.** Prune as shown on the plans and in accordance with Section 192.3.I, "Pruning."
 - 6. **Insect, Disease, and Animal Inspection and Treatment.** Inspect plants and planted areas at least every 15 days. Notify the Engineer of concerns and problems and recommend corrective measures in writing for approval. Treat the plants and planted areas in accordance with TDA or TSPCB laws and regulations. Follow the manufacturer's instructions for handling and applying pesticides.
 - 7. **Litter and Debris Collection and Disposal.** Collect litter and debris within the worksite before mowing and trimming at least every 15 days. Dispose of litter and debris as directed.
 - 8. **Tree Trunk Wrap and Protection Guard Removal and Disposal.** Remove and dispose of tree trunk wrapping material and protection guards as directed.
 - 9. **Plant Replacement.** Remove and dispose of dead and damaged plants from the worksite as directed. Replace plants as originally specified within 10 days of notification. When notification is made between the starting date and day 30 of the maintenance work, plant replacement must be completed and approved before payment is approved, according to Section 192.5.B, "30-Day Payment." When notification is made between days 31 and 60 of the maintenance work, plant replacement must be completed and approved before payment is approved, according to Section 192.5.C, "60-Day Payment." When notification is made between days 61 and 90 of the maintenance work, plant replacement must be completed and approved before payment is approved, according to Section 192.5.D, "Final Payment."

192.4. Measurement. This Item will be measured by each plant. When mulch is specified as a separate pay item, it will be measured by the cubic yard or the square yard. When plant soil mix is specified as a separate pay item, it will be measured by the cubic yard. When landscape edge is specified as a separate pay item, it will be measured by the foot. When plant bed preparation is specified as a separate pay item, it will be measured by the square yard. When vegetation barrier is specified as a separate pay item, it will be measured by the square yard.

192.5. 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 "Plant Material" of the size, "Plant Material" of the size and type specified or "Plant Material" of the group specified. This price is full compensation for furnishing the plant, mulch, plant soil mix, landscape edge, plant bed preparation and vegetation barrier, unless mulch, plant soil mix, landscape edge, plant bed preparation and vegetation barrier are specified as separate items. Payment for "Plant Material" will be handled in the following manner:

- A. Initial Payment.** When the planting and installation of related materials are completed and approved, 55% of the unit price bid for each plant will be paid.
- B. 30-Day Payment.** When the first 30 days of the 90-day maintenance (see Section 192.3.O, "Maintenance") are completed and approved, an additional 15% of the total price bid for all plants will be paid, but if the maintenance is not completed and approved, that 15% will be forfeited.
- C. 60-Day Payment.** When the second 30 days of the 90-day maintenance are completed and approved, an additional 15% of the total price bid for all plants will be paid, but if the maintenance is not completed and approved, that 15% will be forfeited.
- D. Final Payment.** When the final 30 days of the 90-day maintenance are completed and approved, and after final inspection and acceptance, an additional 15% of the total price bid for all plants will be paid, but if the maintenance is not completed and approved, that 15% will be forfeited.

When mulch, plant soil mix, landscape edge, plant bed preparation, and vegetation barrier are specified as separate pay items, 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 "Mulch," "Plant Soil Mix," "Landscape Edge," "Plant Bed Preparation," and "Vegetation Barrier." Each price is full compensation for materials, equipment, labor, tools, and incidentals.

ITEM 193

LANDSCAPE ESTABLISHMENT

193.1. Description. Establish landscape plantings and maintain landscaped areas at designated locations. If used with Item 192, "Landscape Planting," begin this Item after the final payment is approved in accordance with Article 192.5.D, "Final Payment."

193.2. Materials. Unless otherwise shown on the plans, furnish the following materials:

- fertilizer in accordance with Article 166.2, "Materials";
- mulch consisting of loose organic materials such as wood chips or shredded bark that is free from harmful chemicals, soil, and other foreign matter that may promote compaction of the mulch or cause injury to the plants;
- water that is clean and free of industrial wastes and other substances harmful to the growth of vegetation;
- replacement plants as originally installed or as approved;
- pesticides conforming to the requirements of Section 193.3.A, "Plant Maintenance";
- supports of the same type as originally installed or as approved; and
- irrigation system replacement parts of the same type and manufacturer as originally installed or approved equal.

193.3. Work Methods. When "Plant Maintenance" or "Irrigation System Operation and Maintenance" are measured by the month, inspect the site at least every 2 weeks, and perform the required maintenance. Perform the following maintenance activities, and conform to requirements shown on the plans.

A. Plant Maintenance. Maintain vegetation within the site in a healthy and vigorous growing condition. Apply pesticides, when required, under the supervision of a person possessing a license in the appropriate use category issued by the Texas Department of Agriculture or the Texas Structural Pest Control Board. Provide documentation of this license, and obtain approval of the pesticides before applications. Pesticide applications must conform to label directions and all pertinent laws and regulations.

1. **Pruning.** Prune in accordance with ANSI A300 when shown on the plans. Remove dead or dying plants and dead, diseased, or damaged limbs on trees and shrubs. Remove sucker-growth on trunks of trees. Apply an approved wound dressing to all oak (*Quercus*) species within 20 min. of causing bark damage or making a pruning cut. Remove and dispose of pruning debris.
2. **Insect, Disease, and Animal Control.** Notify the Engineer in writing of problems with insects, diseases, or animals as such problems arise. Treat the plants or planted areas as directed.
3. **Fertilization.** Apply fertilizer uniformly to all plants designated to receive fertilizer.
4. **Mulching, Plant Basin, and Plant Bed Maintenance.** Physically remove or apply herbicide to weeds and grasses within plant basins and plant beds before placing additional mulch. Apply and maintain mulch at a depth of 2 in. Maintain plant basins and plant beds free of weeds and grasses, except those that have been treated with herbicides may remain in place until removal is directed. Reshape plant basins and plant beds as necessary to conform to plan details.
5. **Mowing, Trimming, and Edging.** Remove and dispose of litter within the designated areas before mowing. Mow and trim grassed areas at the designated height and frequency. Edge where required. Do not use nylon cord trimmers inside plant basins or inside beds containing plant material. Trim vegetation and remove debris from curbs, sidewalks, and other hardscape features.
6. **Staking, Guying, and Bracing of Plants.** Stake, guy, or brace plants as directed. Remove support materials when directed, and dispose of removed materials.

B. Plant Replacement. If required on the plans, remove plants selected by the Engineer and replace with plants of the original species, size, and characteristics or with approved substitutes. Replace plants that have been damaged or killed due to the actions or negligence of the Contractor at no additional cost to the Department. Unless otherwise directed, replace plants within the next scheduled work period following notification to begin replacement. Backfill in conformance with the plans or as directed.

- C. Vegetative Watering.** Apply water at the designated rate and frequency to plants or planting areas not serviced by an existing irrigation system. Apply water as directed, adjusting rate and frequency to provide adequate moisture to plant material. Use watering equipment with accurate measuring devices.
- D. Irrigation System Operation and Maintenance.** Maintain the system under the supervision of a person possessing an irrigator's license issued by the TCEQ, and provide documentation of this license. Verify and adhere to all local, state, and federal regulations. Coordinate and obtain required backflow preventer testing at no cost to the Department. Unless otherwise shown on the plans, operate the system using water provided by the Department. Ensure that all zones are functioning properly and providing adequate moisture to plant material using an approved watering schedule. When required, winterize the system to prevent freeze damage in locations where temperatures fall below 32°F. Repair the system using replacement parts of the same type and manufacturer as originally installed or an approved equal. Provide plant irrigation by an approved alternate method at no cost to the Department if the system fails due to the Contractor's actions or neglect.

193.4. Measurement. "Plant Maintenance" will be measured by the month or by the cycle. "Plant Replacement" will be measured by each plant. "Vegetative Watering" will be measured by the 1,000 gal. of water. "Irrigation System Operation and Maintenance" will be measured by the month.

193.5. 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 "Plant Maintenance," "Plant Replacement" of the size specified, "Plant Replacement" of the size and type specified, "Plant Replacement" of the group specified, "Vegetative Watering," and "Irrigation System Operation and Maintenance." This price is full compensation for furnishing and operating equipment and for litter pickup, mowing, trimming, edging, pruning, fertilizer, labor, materials, tools, and incidentals. Plant replacement needed due to Contractor negligence will be at no additional cost to the Department.

WIRELESS COMMUNICATIONS EQUIPMENT AT TRAFFIC SIGNAL

Component	Vendor	Part No.	Description	Unit	Qty.
Wireless Access Point	CISCO	AIR-LAP1522AG-AK9	802.11a, b/g Outdoor Mesh AP, FCC Cfg	EA	1
	CISCO	AIR-ANT2480V-N	2400-2483.5 MHz, 8.0 dBi Omni Ant, with N Connect	EA	3
	CISCO	AIR-CORD-R3P-40NA	Aironet 1520 Series AC Power Cord, 40 ft, N. Amer Plug	EA	1
	CISCO	AIR-ANT5180V-N	4900-5850 MHz, 8.0Dbi OMNI with N Connect	EA	1
	CISCO	AIR-ACCPMK1520	1520 Series Pole Mount Kit	EA	1
	CISCO	SMARTNET 8X5XNBD	802.11a, b/g Outdoor Mesh AP, FCC Cfg	EA	1
	GRAYBAR	VNTC 16-3-R10K-BED	27331A 01010000 BELDEN (Pwr Cable)	LF	300
	GRAYBAR	7919A 01001000	IND ETH 5E4P24 HLD (Ethernet Cable)	LF	300
Ethernet Switch	CISCO	WS-C2955S-12	2955 12 TX W/SM UPLINKS	EA	1
	CISCO	CISCO STK-RACKMNT-2955	19 IN RACK MOUNT KIT	EA	1
	CISCO	PWR-2955-AC	CISCO, AC TO 24 V DC DIN RAIL PW	EA	1
	CISCO	CON-SNTWSC2955S	SMARTNET 8X5XNBD 2955 12 TX w/Single Mode Uplinks	EA	1

BROADWAY CORRIDOR: STREET AND DRAINAGE BASE BID				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
1	COSA 100.1	MOBILIZATION	1	LS
2	COSA 100.2	INSURANCE AND BONDING	1	LS
3	COSA 101.1	PREPARING RIGHT-OF-WAY	1	LS
4	COSA 110.2.1	TRANSPORTATION TO DISPOSAL FACILITY [COSA]	1727	CY
5	COSA 110.2.2	TRANSPORTATION TO DISPOSAL FACILITY [SAWS SEWER]	1550	CY
6	COSA 110.2.3	TRANSPORTATION TO DISPOSAL FACILITY [SAWS WATER]	1256	CY
7	COSA 110.2.4	TRANSPORTATION TO DISPOSAL FACILITY [CPS GAS]	85	CY
8	COSA 110.2.5	TRANSPORTATION TO DISPOSAL FACILITY [CPS DUCT BANK]	882	CY
9	COSA 110.2.6	LANDFILL DISPOSAL [COSA]	1727	CY
10	COSA 110.2.7	LANDFILL DISPOSAL [SAWS SEWER]	1550	CY
11	COSA 110.2.8	LANDFILL DISPOSAL [SAWS WATER]	1256	CY
12	COSA 110.2.9	LANDFILL DISPOSAL [CPS GAS]	85	CY
13	COSA 110.2.10	LANDFILL DISPOSAL [CPS DUCT BANK]	882	CY
14	COSA 110.6.1	DEVELOPMENT AND IMPLEMENTATION OF A SITE SPECIFIC HEALTH AND SAFETY PLAN	1	LS
15	COSA 234.1	BASE REINFORCEMENT	22912	SY
16	COSA 308.1	DRILLED SHAFTS (24")	18	LF
17	COSA 308.1	DRILLED SHAFTS (30")	44	LF
18	COSA 308.1	DRILLED SHAFTS (36")	84	LF
19	COSA 308.1	DRILLED SHAFTS (48")	20	LF
20	COSA 509.1	METAL BEAM GUARD RAIL	71	LF
21	COSA 526.1	FIELD OFFICE	1	EA
22	COSA 615.1	TRAFFIC SIGNAL CONTROLLER ASSEMBLY (TYPE 332 CABINET)	3	EA
23	COSA 618.1	CONDUIT (2 INCH/PVC SCHEDULE 40)	242	LF
24	COSA 618.3	CONDUIT (4 INCH/PVC SCHEDULE 40)	803	LF
25	COSA 620.1	ELECTRICAL CONDUCTORS (NO. 6)(BARE)	51	LF
26	COSA 620.2	ELECTRICAL CONDUCTORS (NO. 8)(BARE)	999	LF
27	COSA 624.8	GROUND BOXES TYPE D (162922) W/ APRON	11	EA
28	COSA 628.1	ELECTRICAL SERVICES (TYPE D) (120/240V)	3	EA
29	COSA 633.1	BATTERY BACKUP SYSTEM	3	EA
30	COSA 636.1	ALUMINUM SIGNS (TYPE A)	318	SF
31	COSA 655.1	TYPE 332 CONTROLLER FOUNDATION	3	EA
32	COSA 680.1	INSTALLATION OF HIGHWAY TRAFFIC SIGNALS (SYSTEM)	3	EA
33	COSA 681.1	TEMPORARY TRAFFIC SIGNALS	3	EA
34	COSA 682.1	INSTALL VEHICLE SIGNAL SECTION WITH BACK PLATE (3 SECTIONS)	35	EA
35	COSA 682.2	INSTALL VEHICLE SIGNAL SECTION WITH BACK PLATE (4 SECTIONS)	3	EA
36	COSA 683.1	LED COUNTDOWN PEDESTRIAN SIGNAL MODULE	20	EA
37	COSA 684.1	TRAFFIC SIGNAL CABLES (TYPE A)(14 AWG)(CONDUCTOR NO. 4)	1280	LF
38	COSA 684.1	TRAFFIC SIGNAL CABLES (TYPE A)(14 AWG)(CONDUCTOR NO. 9)	3273	LF
39	COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 24')(LUM)	2	EA
40	COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 28')(LUM)	1	EA
41	COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 32')	1	EA
42	COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 36')	2	EA
43	COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 36')(LUM)	1	EA
44	COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 40')(LUM)	2	EA
45	COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 44')(LUM)	1	EA
46	COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 55')(LUM)	1	EA
47	COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (2 ARM 40-24')(LUM)	1	EA
48	COSA 687.1	PEDESTRIAN POLE ASSEMBLIES	2	EA
49	COSA 688.2	PEDESTRIAN DETECTORS (2 INCH PUSH BUTTON)	20	EA
50	COSA 691.2	ANTENNA [OMNI DIRECTIONAL]	2	EA
51	COSA 693.1	INTERNALLY LIGHTED STREET NAME SIGNS (D/8)	12	EA
52	COSA 694.1	VIVDS PROCESSOR SYSTEM	3	EA
53	COSA 694.2	VIVDS CAMERA ASSEMBLY	20	EA
54	COSA 694.4	VIVDS SET-UP SYSTEM	3	EA
55	COSA 694.5	VIVDS TEMPORARY	3	EA
56	COSA 694.6	VIVDS COMMUNICATION CABLE (COAXIAL)	1330	LF
57	COSA 695.2	EMERGENCY PREEMPTION PHASE SELECTOR (2-CHANNEL)	0	EA

BROADWAY CORRIDOR: STREET AND DRAINAGE BASE BID CONTINUED				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
58	COSA 695.3	EMERGENCY PREEMPTION DETECTOR	8	EA
59	COSA 695.4	EMERGENCY PREEMPTION DETECTOR CABLE	825	LF
60	COSA	CAT 5 ETHERNET CABLE	72	LF
61	COSA	BELDEN POWER CABLE	76	LF
62	COSA	#6 THHN/THWN	106	LF
63	TxDOT 110.2001	STREET EXCAVATION	9819	CY
64	TxDOT 110.2002	EXCAVATION (CHANNEL)	281	CY
65	TxDOT 132.2003	EMBANKMENT (FINAL)(ORD COMP)(TY B)	314	CY
66	TxDOT 162.2002	BLOCK SODDING	3074	SY
67	TxDOT 169.2002	SOIL RETENTION BLANKETS (CL2) (TY H)	39	SY
68	TxDOT 341.2011	D-GR HMA(QCQA) TY-B PG64-22	16093	TON
69	TxDOT 341.2048	D-GR HMA(QCQA) TY-C SAC-B PG70-22	4072	TON
70	TxDOT 354.2021	PLANE ASPH CONC PAV(0" TO 2")	2800	SY
71	TxDOT 400.2001	STRUCT EXCAV	132	CY
72	TxDOT 402.2001	TRENCH EXCAVATION SAFETY PROTECTION	4100	LF
73	TxDOT 403.2001	TEMPORARY SPL SHORING	4000	SF
74	TxDOT 420.2001	CL A CONC (MISC) (HEADWALL)	29	CY
75	TxDOT 420.2002	CL A CONC (MISC) (FLOOR BLOCKS)	3	CY
76	TxDOT 432.2038	RIPRAP (CONC) (CLA)	27	CY
77	TxDOT 462.2025	PRECAST REINFORCED CONCRETE CULVERT (9' x 6')	1566	LF
78	TxDOT 462.2062	PRECAST REINFORCED CONCRETE CULVERT (12' x 6')	1116	LF
79	TxDOT 464.2005	REINFORCED CONCRETE PIPE (CLASS III)(24" DIA)	976	LF
80	TxDOT 464.2007	REINFORCED CONCRETE PIPE (CLASS III)(30" DIA)	3	LF
81	TxDOT 464.2009	REINFORCED CONCRETE PIPE (CLASS III)(36" DIA)	299	LF
82	TxDOT 465.2089	MANH (COMPL) (JUNCT BOX) (TY 1)	7	EA
83	TxDOT 465.2090	MANH (COMPL) (JUNCT BOX) (TY 2)	5	EA
84	TxDOT 465.2091	SPECIAL JUNCTION BOXES (Complete) (22.5'x9' Drop Structure)	1	EA
85	TxDOT 465.2091	SPECIAL JUNCTION BOXES (Complete) (15'x6' Drop Structure)	1	EA
86	TxDOT 465.2091	SPECIAL JUNCTION BOXES (Complete) (16'x16' Drop Structure)	1	EA
87	TxDOT 465.2094	MANH (COMPL) (TY2) (PIPE RISER)	6	EA
88	TxDOT 465.2145	INLET (COMPL) (TRAFFIC) (TY X-3)	2	EA
89	TxDOT 465.2192	INLET EXT (TY I - E)	13	EA
90	TxDOT 465.2259	INLET (COMPL) (CURB) (TY I) (10')	17	EA
91	TxDOT 465.2405	INLET (COMPL) (CURB) (TY C)	3	EA
92	TxDOT 465.2474	INLET (COMPLETE) (TYPE C - E)	2	EA
93	TxDOT 465.2385	INLET (COMPL) (CURB) (SPL) (10')	1	EA
94	TxDOT 465.2385	INLET (COMPL) (CURB) (SPL) (20')	2	EA
95	TxDOT 502.2001	BARRICADES, SIGNS AND TRAFFIC HANDLING	18	MO
96	TxDOT 506.2003	ROCK FILTER DAMS (INSTALL) (TY3)	80	LF
97	TxDOT 506.2009	ROCK FILTER DAMS (REMOVE)	80	LF
98	TxDOT 506.2016	CONSTRUCTION EXITS (INSTALL) (TY1)	156	SY
99	TxDOT 506.2019	CONSTRUCTION EXITS (REMOVE)	156	SY
100	TxDOT 506.2034	TEMPORARY SEDIMENT CONTROL FENCE	1030	LF
101	TxDOT 506.2041	TEMP SDMT CONT FENCE (INLET PROTECT)	725	LF
102	TxDOT 512.2008	PORT CTB (FUR & INST) (LOW PROF) (TY 1)	12615	LF
103	TxDOT 512.2009	PORT CTB (FUR & INST) (LOW PROF) (TY 2)	740	LF
104	TxDOT 512.2044	PORT CTB (REMOVE) (LOW PROF) (TY 1)	12615	LF
105	TxDOT 512.2045	PORT CTB (REMOVE) (LOW PROF) (TY 2)	740	LF
106	TxDOT 529.2001	CONCRETE CURB TYPE I	6323	LF
107	TxDOT 529.2014	CONC CURB (TY C)	315	LF
108	TxDOT 530.2010	CONCRETE DRIVEWAY (COMMERCIAL)	661	SY
109	TxDOT 531.2005	CURB RAMPS (TY 1)	4	EA
110	TxDOT 531.2006	CURB RAMPS (TY 2)	10	EA
111	TxDOT 531.2010	CURB RAMPS (TY 7)	8	EA
112	TxDOT 531.2015	NEW P.C. CONCRETE SIDEWALKS, 4 IN. THICKNESS	2059	SY
113	TxDOT 531.2041	CURB RAMP (TYPE 10)	4	EA
114	TxDOT 531.2046	CURB RAMP (TYPE 11)	1	EA

1	1/25/2011	ADDENDUM 2	JCC
NO.	DATE	REVISION	APPROV.



4040 BROADWAY ST., STE 600
 SAN ANTONIO, TX 78249
 PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESE.COM

CITY OF SAN ANTONIO
 CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
SUMMARY OF SHEET QUANTITIES

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 13 OF 462

17Bor-der.dgn
 MicroStation V8 Users - OfficeSan Antonio
 Plotter: HP DesignJet 5000 Series
 Plot: S:\01\889_9992_A17_10_26_2011_10:56:52 AM - Projection: Antonio

17Bor-der.dgn
 MicroStation V8 Users - OfficeSan Antonio
 Plotter: PLOTTER\\SANANTONIO\HP-DesignJet-1000-1012.dwt
 Plot: 3/14/2011 9:59:57 AM
 Date: 03/14/2011 9:59:57 AM
 User: ses

BROADWAY CORRIDOR: STREET AND DRAINAGE BASE BID CONTINUED				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
115	TxDOT 550.2009	CHAIN LINK FENCE (INSTALL) (4')	60	LF
116	TxDOT 636.2001	ALUMINUM SIGNS (TY A)	111	SF
117	TxDOT 644.2001	INS SM RD SN SUP&AM TY 10BWG(1) SA(P)	39	EA
118	TxDOT 644.2004	INS SM RD SN SUP&AM TY 10BWG(1) SA(T)	2	EA
119	TxDOT 644.2056	RELOCATE SM RD SN SUP & AM TY 10BWG	2	EA
120	TxDOT 644.2060	REMOVE SM RD SN SUP & AM	26	EA
115	TxDOT 662.2001	WK ZN PAV MRK NON-REMOV (W) 4" (BRK)	7075	LF
116	TxDOT 662.2004	WK ZN PAV MRK NON-REMOV (W) 4" (SLD)	2553	LF
117	TxDOT 662.2012	WK ZN PAV MRK NON-REMOV (W) 8" (SLD)	2091	LF
118	TxDOT 662.2016	WK ZN PAV MRK NON-REMOV (W) 24" (SLD)	343	LF
119	TxDOT 662.2031	WK ZN PAV MRK NON-REMOV (Y) 4" (DOT)	125	LF
120	TxDOT 662.2032	WK ZN PAV MRK NON-REMOV (Y) 4" (SLD)	9139	LF
121	TxDOT 662.2064	WK ZN PAV MRK REMOV (W) 4" (BRK)	23303	LF
122	TxDOT 662.2065	WK ZN PAV MRK REMOV (W) 4" (DOT)	233	LF
123	TxDOT 662.2067	WK ZN PAV MRK REMOV (W) 4" (SLD)	21082	LF
124	TxDOT 662.2075	WK ZN PAV MRK REMOV (W) 8" (SLD)	4274	LF
125	TxDOT 662.2079	WK ZN PAV MRK REMOV (W) 24" (SLD)	824	LF
126	TxDOT 662.2084	WK ZN PAV MRK REMOV (W) (ARROW)	6	EA
127	TxDOT 662.2094	WK ZN PAV MRK REMOV (W) (WORD)	6	EA
128	TxDOT 662.2098	WK ZN PAV MRK REMOV (Y) 4" (DOT)	574	LF
129	TxDOT 662.2099	WK ZN PAV MRK REMOV (Y) 4" (SLD)	56444	LF
130	TxDOT 662.2106	WK ZN PAV MRK REMOV (Y) 24" (SLD)	489	LF
131	TxDOT 666.2003	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE BROKEN	7257	LF
132	TxDOT 666.2006	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE DOT	204	LF
133	TxDOT 666.2012	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE SOLID	198	LF
134	TxDOT 666.2036	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 8IN, 100 MILS, WHITE	2825	LF
135	TxDOT 666.2048	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, WHITE	1976	LF
136	TxDOT 666.2054	REFL PAV MRK TY I (W) (ARROW) (100MIL)	22	EA
137	TxDOT 666.2054A	REFL PAV MRK TY I (Y) (ARROW) (100MIL)	26	EA
138	TxDOT 666.2069A	REFL PAV MRK TY I (Y) (DBL ARROW) (100MIL)	1	EA
139	TxDOT 666.2096	REFL PAV MRK TY I (W) (WORD) (100MIL)	22	EA
140	TxDOT 666.2108	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW DOT	167	LF
141	TxDOT 666.2111	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW SOLID	7400	LF
142	TxDOT 666.2132	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, YELLOW	151	LF
143	TxDOT 666.2141	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, YELLOW, MED NOSE 100mil	2	EA
144	TxDOT 666.2142	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE BROKEN	7257	EA
145	TxDOT 666.2143	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE DOT	204	LF
146	TxDOT 666.2145	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE SOLID	198	LF
147	TxDOT 666.2153	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 8IN, 100 MILS, WHITE	2743	LF
148	TxDOT 666.2157	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, WHITE	1976	LF
149	TxDOT 666.2160	REF PAV MRK TY II (W) (ARROW)	22	EA
150	TxDOT 666.2160A	REF PAV MRK TY II (Y) (ARROW)	26	EA

BROADWAY CORRIDOR: STREET AND DRAINAGE BASE BID CONTINUED				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
151	TxDOT 666.2165A	REF PAV MRK TY II (Y) (DBL ARROW)	1	EA
152	TxDOT 666.2173	REF PAV MRK TY II (W) (WORD)	22	EA
153	TxDOT 666.2177	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW DOT	167	LF
154	TxDOT 666.2178	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW SOLID	7400	LF
155	TxDOT 666.2185	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, YELLOW	151	LF
156	TxDOT 666.2188	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, YELLOW, MED NOSE	2	EA
157	TxDOT 672.2015	REFL PAV MRK (TY II A-A)	221	EA
156	TxDOT 672.2017	REFL PAV MRKR TY II-C-R	438	EA
157	TxDOT 772.2003	POST AND CABLE FENCE(NEW INSTALLATION)	837	LF
158	TxDOT 6834.2001	PORTABLE CHANGEABLE MESSAGE SIGN	2640	DAY
159	SS911.1	VIBRATION MONITORING (STUMP GATE)	1	EA
160	SS911.2	VIBRATION MONITORING (CACTUS)	1	EA
161	SS911.3	VIBRATION MONITORING (ENTRY TOWERS)	2	EA
162	SS912	LIMESTONE BLOCK WALL	300	EA
163	TxDOT 100.XXXX	REMOVE EXISTING ENTRANCE GATE	1	EA
164	XXXXX	INSTALL NEW ENTRANCE GATE	1	EA
165	SS2441.1	IRRIGATION - NEW IRRIGATION SYSTEM (UIW)	1	EA
166	SS2441.2	IRRIGATION - NEW IRRIGATION SYSTEM (AT&T)	1	EA
167	SS2480.1	SHRUB & VINE PLANTING	5200	SF
168	SS2480.2	GROUND COVER PLANTING	2750	SF
169	SS2480.3	TREE PLANTING - 15 GALLON	25	EA
170	SS2480.4	TREE PLANTING - 2" CALIPER	3	EA
171	SS2480.5	SODDING	460	SY
172	SS2480.6	TREE PROTECTION	57	EA
173	SS2480.7	STEEL EDGING	1210	LF
174	SS2480.8	GREENSCREEN - 6' HEIGHT	116	LF
175	SS2480.9	GREENSCREEN - 4' HEIGHT	110	LF
176	SS2486.1	DECOMPOSED GRANITE PAVING	2250	SF
177	SS2486.2	RIVER ROCK PAVING	390	SF

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.
 FREASE & NICHOLS 4040 BROADWAY ST., STE 600 SAN ANTONIO, TX 78249 PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREASE.COM			
CITY OF SAN ANTONIO CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT BROADWAY CORRIDOR, PHASE IIIA SUMMARY OF SHEET QUANTITIES			
100% SUBMITTAL	PROJECT NO.:	SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC	SHEET NO.: 14 OF 462

BROADWAY CORRIDOR: DUCTBANK				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
1	CPS 101-05	CONCRETE FOR PROTECTIVE COVER OR FILL (2000 PSI PEA GRAVEL)	503	CY
2	CPS 101-06	CONTROLLED LOW STRANGTH MATERIAL (FLOWABLE FILL), ENGINEERED MIX DESIGNS	2634	CY
3	CPS 349-04	MANHOLE, PRECAST, WITH KNOCKOUTS (10x10x10)	1	EA
4	CPS 349-04	MANHOLE, PRECAST, WITH KNOCKOUTS (8x8x10)	1	EA
5	CPS 349-04	MANHOLE, PRECAST, WITH KNOCKOUTS (8x8x8)	1	EA
6	CPS 730-02	CONDUIT FITTINGS 4" CAP	66	EA
7	CPS 730-02	CONDUIT FITTINGS 2" CAP	9	EA
8	CPS 730-06	SPACERS, INTERLOCKING, CONDUIT, FOR UNDERGROUND DUCT BANKS	17025	EA
9	CPS 730-02	CONDUIT FITTINGS 2.5" 90 DEGREE ELBOW	14	EA
10	CPS 741-14	JUNCTION BOX, SINGLE PHASE, FEED-THRU, FOR 15KV AND 35 KV CABLE (TYPE J)	1	EA
11	TxDOT 402.2001	TRENCH EXCAVATION SAFETY PROTECTION	5332	LF
12	TxDOT 618.2018	CONDUIT (2 INCH/PVC SCHEDULE 40)	5256	LF
13	TxDOT 618.2020	CONDUIT (2.5 INCH/PVC SCHEDULE 40)	1919	LF
14	TxDOT 618.2024	CONDUIT (4 INCH/PVC SCHEDULE 40)	68087	LF
15	TxDOT 624.2017	GROUND BOX TY J (484836)	10	EA
16	XXXXX	STREET LIGHT FOUNDATION	10	EA

BROADWAY CORRIDOR: PARK MITIGATION				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
1	SS161	COMPOST MANUFACTURED TOPSOIL - BOS	10	CY
2	SS166	FERTILIZER	1	LS
3	SS192	LANDSCAPE PLANTING - 'DT' TREE	9	EA
4	SS192	LANDSCAPE PLANTING - 'UC-4' TREE	2	EA
5	SS192	LANDSCAPE PLANTING - 'TD-4' TREE	6	EA
6	SS192	LANDSCAPE PLANTING - 'RC' TREE	12	EA
7	SS193	VEGETATIVE WATERING	1	LS
8	SS193	PLANT MAINTENANCE, EA. PLANT	27	EA
9	TxDOT 516.1	BERMUDA SODDING - TIF 419	820	SY
10	SS2010.1	CONSTRUCTION FENCE - 6' TEMPORARY	890	LF
11	SS2030.1	TREATMENT OF EXISTING TREES	1	LS
12	SS2040.1	LANDSCAPE PROTECTION	1	LS
13	SS2050.1	LANDSCAPE MAINTENANCE	1	LS
14	SS2100.1	METAL CONSERVATION - FENCES AND GATES	1	LS
15	SS2110.1	METAL CONSERVATION - LANTERNS	1	LS
16	SS2120.1	STONE WALL CONSERVATION	1	LS
17	SS2140	FOUNDATION UNDERPINNING- WEST ENTRY TOWER	10	EA
18	SS2150.1	STUCCO REPAIR - REMOVE AND REPLACE	1	SF
19	SS2150.2	STUCCO REPAIR - FILL CRACKS	1	LF
20	SS2150.3	STUCCO REPAIR - REPLICATE MISSING CAST STONE TRIM	1	LF
21	SS2150.4	STUCCO REPAIR - REPLICATE MISSING CAST STONE ORNAMENTS	1	EA
22	SS2150.5	STUCCO REPAIR - REMOVE AND REATTACH LOOSE TRIM	1	LF
23	SS2150.6	STUCCO REPAIR - PATCH DAMAGED CAST STONE AND STUCCO	1	SF
24	SS2160.1	REALKALIZATION	1	LS
25	SS2170	ARCHITECTURAL CONSERVATION	1	LS
26	SS2174.1	SKYLIGHT RESTORATION	1	LS
27	SS2173	STEEL DOORS	2	EA
28	SS2175	THERMOPLASTIC-POLYOLEFIN ROOFING	1	LS
29	SS2280.1	CEMENT SCULPTURE (TRABAJO RUSTICO) CONSERVATION	1	LS
30	SS2300.1	ORNAMENTAL METAL FENCE - (4 FT HIGH)	72	LF
31	SS2320.1	ANTIQUITIES VICLATION SIGN	7	EA
32	SS2340.1	TEMPORARY LANDSCAPE IRRIGATION SYSTEM	1	LS
33	SS2400.1	ELECTRICAL SYSTEM	1	LS
34	SS2410.1	PLUMBING SYSTEM	1	LS

BROADWAY CORRIDOR: CPS GAS BASE BID				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
20		Install Gas Main or Casing (distance as measured along the top of trench) (2" Plastic Pipe and Tracer Wire)	1004	FT
21		Install Gas Main or Casing (distance as measured along the top of trench) (8" Plastic Pipe and Tracer Wire)	2482	FT
22		Rerun and Lower Gas Service off New Main (Main to Meter) Sizes 1" through 4" (Short Side)	2	EA
23		Rerun and Lower Gas Service off New Main (Main to Meter) Sizes 1" through 4" (Long Side)	1	EA
24		Rerun and Lower Gas Service off New Main (Main to 1 ft. inside Prop. Line) Sizes 1" through 4" (Short Side)	2	EA
25		Replace existing steel service riser on customer premises with new anodeless riser, rebuilding to standard, and tie into existing plastic service line (1" through 2" risers)	1	EA
26		Civic Service installation by directional drilling from plastic main. Install 4" plastic pipe from service tap to service riser using directional drilling (includes removal of existing service pipe sections necessary for bore). Length from entry to exit. (Drilling in dirt)	402	FT
27		Uncover and abandon active gas mains only when main is not being replaced. (Includes installation of stoppler fitting(s) on steel mains, purge and plug ends (2" through 4" steel)	2	EA
28		Uncover and kill existing service at the main. Remove service riser when no other service work is done at this location (1-1/4" through 2" service)	2	EA
29		Civic Street Restoration Adjustment, when required. To be used as directed by the CPS Representative (Flowable Fill)	320	CY
30		Civic Street Restoration Adjustment, when required. To be used as directed by the CPS Representative (Asphalt)	960	SY
31		Civic Street Restoration Adjustment, when required. To be used as directed by the CPS Representative (Concrete/Flatwork)	378	SF
32		Contractor to hire TD Williams to provide all labor and necessary fittings for the Plugging and Hot Tapping Operation on existing 16" steel gas main. Contractor to provide any additional labor necessary to complete hot tapping and plugging. (Plug 16" Stopple fitting)	1	EA

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.



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SAN ANTONIO, TX 78249
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CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
SUMMARY OF SHEET
QUANTITIES

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 15 OF 462

1780-der.dgn
 MicroStation V8 Users - OfficeSan Antonio
 Plotter: PLOT01\XRAY1005-HP-Plotter-01.dwt
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 Date: 12/15/2010 10:57:31 AM Projection: Antonio

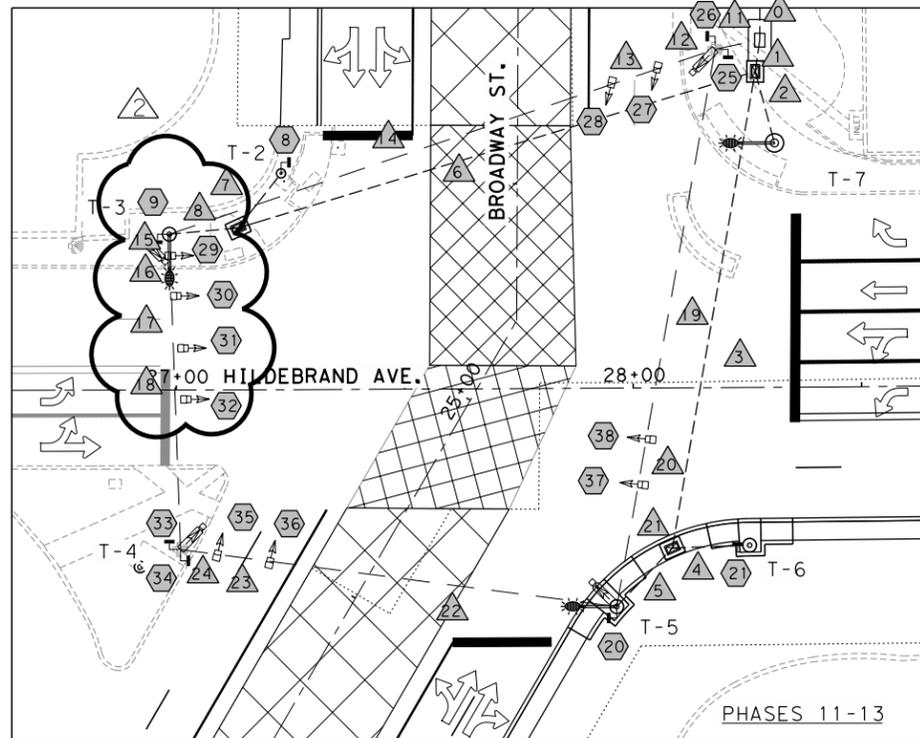
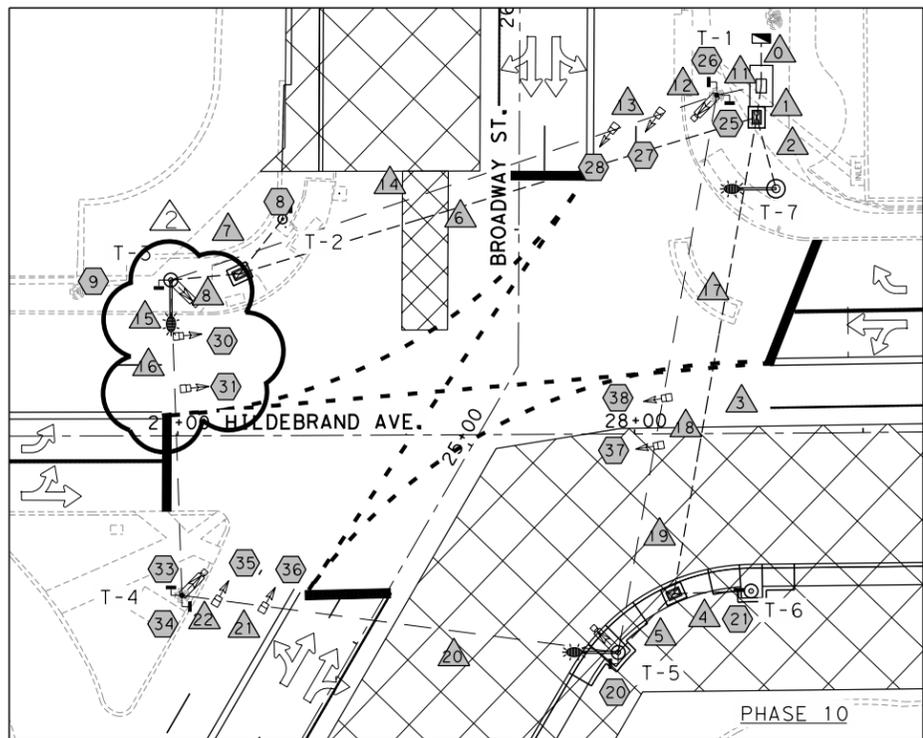
BROADWAY CORRIDOR: ALT 1 - STREET AND DRAINAGE ALT BID				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
1	COSA 100.1	MOBILIZATION	1	LS
2	COSA 100.2	INSURANCE AND BONDING	1	LS
3	COSA 101.1	PREPARING RIGHT-OF-WAY	1	LS
4	COSA 234.1	BASE REINFORCEMENT	5143	SY
5	TxDOT 110.2001	STREET EXCAVATION	1612	CY
6	TxDOT 132.2003	EMBANKMENT (FINAL)(ORD COMP)(TY B)	93	CY
7	TxDOT 162.2002	BLOCK SODDING	129	SY
8	TxDOT 341.2011	D-GR HMA(QCQA) TY-B PG64-22	3550	TON
9	TxDOT 341.2048	D-GR HMA(QCQA) TY-C SAC-B PG70-22	1157	TON
10	TxDOT 354.2021	PLANE ASPH CONC PAV(0" TO 2")	2880	SY
11	TxDOT 402.2001	TRENCH EXCAVATION SAFETY PROTECTION	900	LF
12	TxDOT 462.2025	PRECAST REINFORCED CONCRETE CULVERT (9' x 6')	40	LF
13	TxDOT 462.2062	PRECAST REINFORCED CONCRETE CULVERT (12' x 6')	503	LF
14	TxDOT 464.2005	REINFORCED CONCRETE PIPE (CLASS III)(24" DIA)	312	LF
15	TxDOT 464.2111	REINFORCED CONCRETE PIPE (CLASS III)(72" DIA)	6	LF
16	TxDOT 465.2089	MANH (COMPL) (JUNCT BOX) (TY 1)	2	EA
17	TxDOT 465.2091	SPECIAL JUNCTION BOXES (Complete) (15'x12' Drop Structure)	1	EA
18	TxDOT 465.2094	MANH (COMPL) (TY2) (PIPE RISER)	2	EA
19	TxDOT 465.2145	INLET (COMPL) (TRAFFIC) (TY X-3)	3	EA
20	TxDOT 465.2192	INLET EXT (TY I - E)	4	EA
21	TxDOT 465.2259	INLET (COMPL) (CURB) (TY I) (10')	6	EA
22	TxDOT 465.2405	INLET (COMPL) (CURB) (TY C)	2	EA
23	TxDOT 465.2474	INLET (COMPLETE) (TYPE C - E)	2	EA
24	TxDOT 465.2305	SPECIAL INLETS (COMPL) (GRATE) (27'x6')	1	EA
25	TxDOT 506.2041	TEMP SDMT CONT FENCE (INLET PROTECT)	245	LF
26	TxDOT 512.2008	PORT CTB (FUR & INST) (LOW PROF) (TY 1)	533	LF
27	TxDOT 512.2009	PORT CTB (FUR & INST) (LOW PROF) (TY 2)	20	LF
28	TxDOT 512.2044	PORT CTB (REMOVE) (LOW PROF) (TY 1)	533	LF
29	TxDOT 512.2045	PORT CTB (REMOVE) (LOW PROF) (TY 2)	20	LF
30	TxDOT 528.2004	LANDSCAPE PAVERS	48	SY
31	TxDOT 529.2001	CONCRETE CURB TYPE I	1544	LF
32	TxDOT 530.2010	CONCRETE DRIVEWAY (COMMERCIAL)	97	SY
33	TxDOT 531.2010	CURB RAMPS (TY 7)	7	EA
34	TxDOT 531.2015	NEW P.C. CONCRETE SIDEWALKS, 4 IN. THICKNESS	865	SY
35	TxDOT 636.2001	ALUMINUM SIGNS (TY A)	41	SF
36	TxDOT 644.2001	INS SM RD SN SUP&AM TY 10BWG(1) SA(P)	5	EA
37	TxDOT 644.2056	RELOCATE SM RD SN SUP & AM TY 10BWG	1	EA
38	TxDOT 644.2060	REMOVE SM RD SN SUP & AM	5	EA
39	TxDOT 662.2001	WK ZN PAV MRK NON-REMOV (W) 4" (BRK)	763	LF
40	TxDOT 662.2004	WK ZN PAV MRK NON-REMOV (W) 4" (SLD)	534	LF
41	TxDOT 662.2064	WK ZN PAV MRK REMOV (W) 4" (BRK)	1260	LF
42	TxDOT 662.2067	WK ZN PAV MRK REMOV (W) 4" (SLD)	1703	LF
43	TxDOT 662.2079	WK ZN PAV MRK REMOV (W) 24" (SLD)	81	LF
44	TxDOT 662.2099	WK ZN PAV MRK REMOV (Y) 4" (SLD)	3246	LF
45	TxDOT 666.2003	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE BROKEN	3038	LF
46	TxDOT 666.2036	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 8IN, 100 MILS, WHITE	334	LF
47	TxDOT 666.2048	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, WHITE	342	LF
48	TxDOT 666.2054	REFL PAV MRK TY I (W) (ARROW) (100MIL)	3	EA
49	TxDOT 666.2096	REFL PAV MRK TY I (W) (WORD) (100MIL)	3	EA
50	TxDOT 666.2111	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW SOLID	905	LF

BROADWAY CORRIDOR: ALT 1 - STREET AND DRAINAGE ALT BID CONTINUED				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
51	TxDOT 666.2132	REFLECTORIZED TYPE I THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, YELLOW	83	LF
52	TxDOT 666.2142	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, WHITE BROKEN	3038	EA
53	TxDOT 666.2153	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 8IN, 100 MILS, WHITE	334	LF
54	TxDOT 666.2157	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, WHITE	342	LF
55	TxDOT 666.2160	REF PAV MRK TY II (W) (ARROW)	3	EA
56	TxDOT 666.2173	REF PAV MRK TY II (W) (WORD)	3	EA
57	TxDOT 666.2178	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 4IN, 100 MILS, YELLOW SOLID	905	LF
58	TxDOT 666.2185	REFLECTORIZED TYPE II THERMO PAVEMENT MARKINGS, 24IN, 100 MILS, YELLOW	83	LF
59	TxDOT 672.2015	REFL PAV MRK (TY II A-A)	42	EA
60	TxDOT 672.2017	REFL PAV MRKR TY II-C-R	101	EA
61	TxDOT 6834.2001	PORTABLE CHANGEABLE MESSAGE SIGN	240	DAY

BROADWAY CORRIDOR: ALT 2 - PARK MITIGATION				
ITEM NO.	SPEC. NO.	DESCRIPTION	TOTAL	UNIT
1	SS2320.2	INTERPRETIVE PANEL SIGN - MIRAFLORES MASTER PLAN	1	EA
2	SS2320.3	INTERPRETIVE PANEL SIGN - SIGNIFICANT SITE FEATURE	3	EA

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.
 FREESE & NICHOLS 4040 BROADWAY ST., STE 600 SAN ANTONIO, TX 78249 PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESE.COM			
CITY OF SAN ANTONIO CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT			
BROADWAY CORRIDOR, PHASE IIIA SUMMARY OF SHEET QUANTITIES			
100% SUBMITTAL	PROJECT NO.:	SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC	SHEET NO.: 16 OF 462

MicroStation V8 Users - OfficeSan Antonio - 17Bor-der.dgn
 Plotter: PLOT01 (PLOT01) - 06/21/2011 10:58:58 AM
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 Date: 12/15/2010 11:58:58 AM

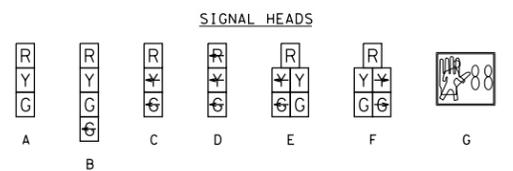
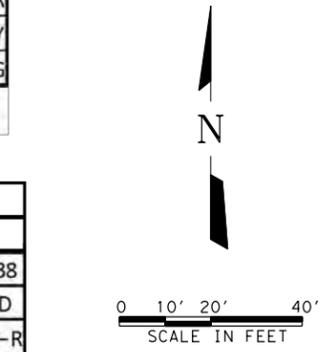


RUN NO.	CONDUIT		NUMBER OF CABLES	
	SIZE & TYPE	LENGTH	9C #14 TYA	VIVDS CABLE
0	2" CONDUIT	10	-	-
1	4" CONDUIT	7	7	-
2	2" CONDUIT	15	1	-
3	4" CONDUIT	106	2	-
4	2" CONDUIT	17	1	-
5	2" CONDUIT	18	1	-
6	4" CONDUIT	118	4	-
7	2" CONDUIT	15	2	-
8	2" CONDUIT	22	1	-
9	-	-	-	-
10	-	-	-	-
11	AERIAL	10	10	4
12	AERIAL	14	4	1
13	AERIAL	10	3	1
14	AERIAL	103	2	1
15	AERIAL	14	2	-
16	AERIAL	11	1	-
17	AERIAL	67	6	2
18	AERIAL	11	5	2
19	AERIAL	47	4	2
20	AERIAL	80	3	1
21	AERIAL	10	2	1
22	AERIAL	8	1	1

RUN NO.	CONDUIT		NUMBER OF CABLES	
	SIZE & TYPE	LENGTH	9C #14 TYA	VIVDS CABLE
0	2" CONDUIT	10	-	-
1	4" CONDUIT	7	7	-
2	2" CONDUIT	15	1	-
3	4" CONDUIT	106	2	-
4	2" CONDUIT	17	1	-
5	2" CONDUIT	18	1	-
6	4" CONDUIT	118	4	-
7	2" CONDUIT	15	2	-
8	2" CONDUIT	22	1	-
9	-	-	-	-
10	-	-	-	-
11	AERIAL	10	13	4
12	AERIAL	14	7	1
13	AERIAL	10	6	1
14	AERIAL	103	5	1
15	AERIAL	4	4	-
16	AERIAL	11	3	-
17	AERIAL	11	2	-
18	AERIAL	12	1	-
19	AERIAL	87	6	2
20	AERIAL	10	5	2
21	AERIAL	28	4	2
22	AERIAL	78	3	1
23	AERIAL	12	2	1
24	AERIAL	8	1	1

TEMPORARY TRAFFIC SIGNAL LAYOUT																																									
PHASE 10																																									
SIGNAL FACE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38			
SIGNAL TYPE	G	G	A	A	A	D	D	G	G	A	A	A	D	G	G	A	A	A	D	G	G	A	D	D	G	G	A	E	A	A	E	A	G	G	A	E	E	D			
LED SIGNAL INDICATIONS	P	P	R	R	R	←R	←R	P	P	R	R	R	←R	P	P	R	R	R	←R	P	P	R	←R	←R	P	P	R	R	R	R	R	R	P	P	R	R	R	←R			
	E	E	Y	Y	Y	←Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	←Y	←Y	E	E	Y	←Y	Y	Y	←Y	Y	Y	E	E	Y	←Y	Y	←Y	Y	←Y
	D	D	G	G	G	←G	←G	D	D	G	G	G	←G	D	D	G	G	G	←G	D	D	G	←G	←G	D	D	G	←G	G	G	←G	G	G	D	D	G	←G	G	←G	G	←G

TEMPORARY TRAFFIC SIGNAL LAYOUT																																									
PHASES 11-13																																									
SIGNAL FACE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38			
SIGNAL TYPE	G	G	A	A	A	D	D	G	G	A	A	A	D	G	G	A	A	A	D	G	G	A	D	D	G	G	A	E	A	A	E	D	G	G	A	E	E	D			
LED SIGNAL INDICATIONS	P	P	R	R	R	←R	←R	P	P	R	R	R	←R	P	P	R	R	R	←R	P	P	R	←R	←R	P	P	R	R	R	R	R	R	P	P	R	R	R	←R			
	E	E	Y	Y	Y	←Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	←Y	←Y	E	E	Y	←Y	Y	Y	←Y	Y	Y	E	E	Y	←Y	Y	←Y	Y	←Y
	D	D	G	G	G	←G	←G	D	D	G	G	G	←G	D	D	G	G	G	←G	D	D	G	←G	←G	D	D	G	←G	G	G	←G	G	←G	D	D	G	←G	G	←G	G	←G



LEGEND

- TEMP. AERIAL
- - - PROP. CONDUIT
- PROP. V. I. V. D. S.
- PROP. TRAFFIC SIGN
- ⊥ PROP. PEDESTRIAN HEAD, PUSH BUTTON ASSEMBLY
- ⊞ PROP. TRAFFIC SIGNAL HEAD
- ⊙ PROP. TRAFFIC SIGNAL POLE
- ⊞ PROP. TRAFFIC SIGNAL PULL BOX
- PROP. TRAFFIC CONTROL BOX

FREESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.

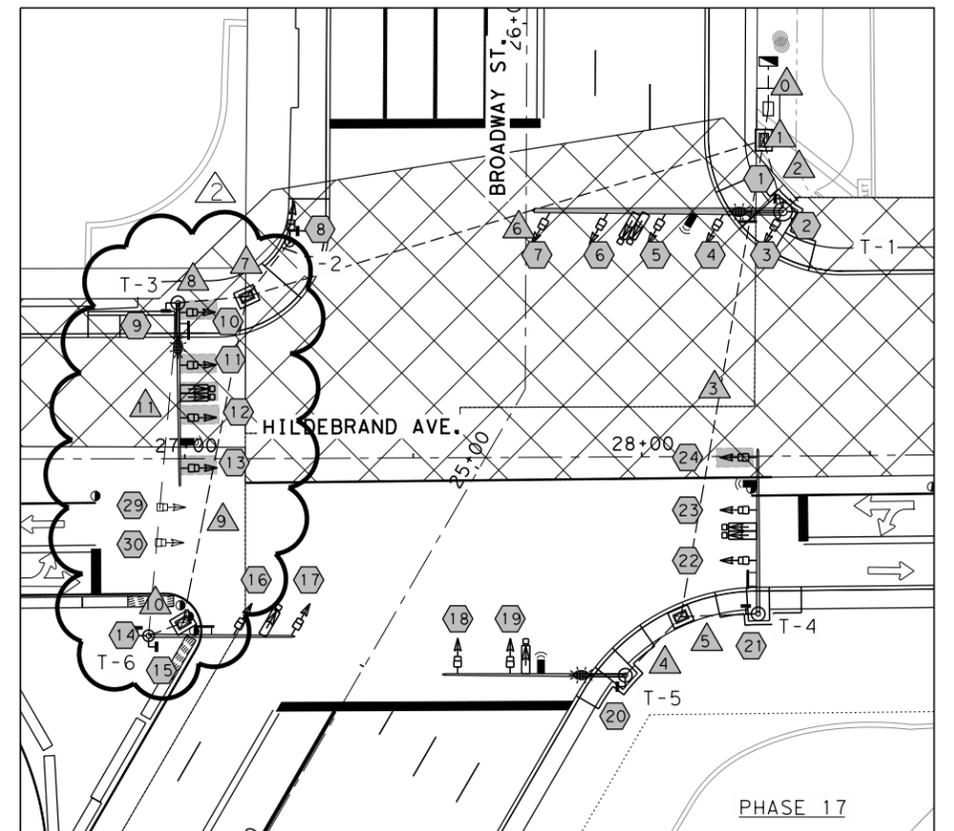
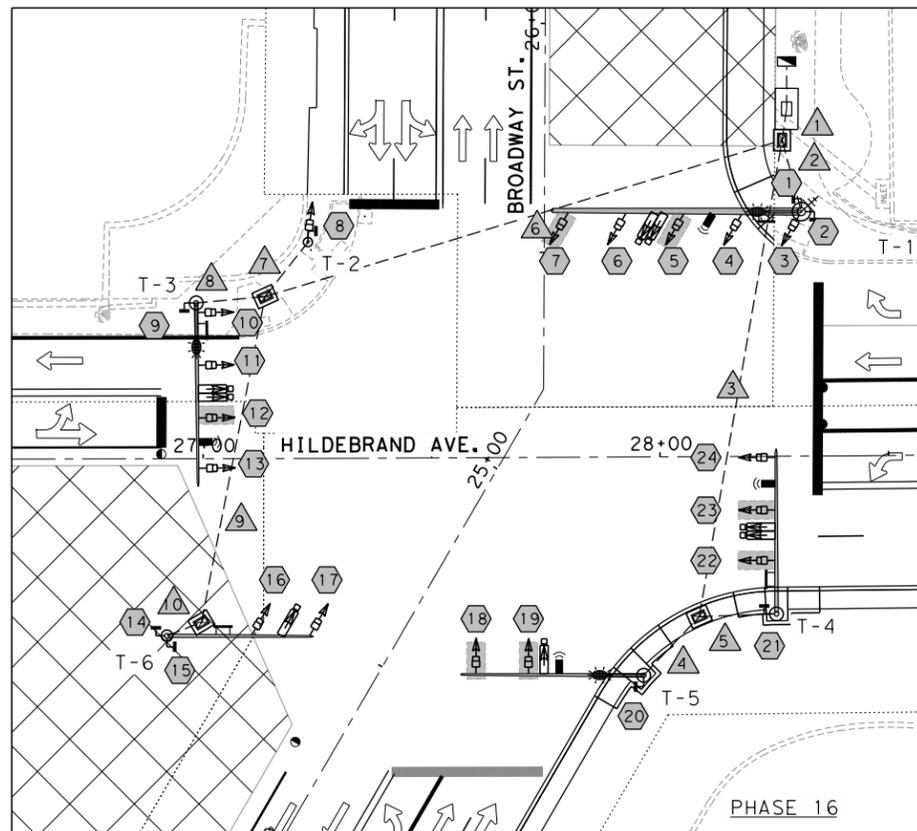
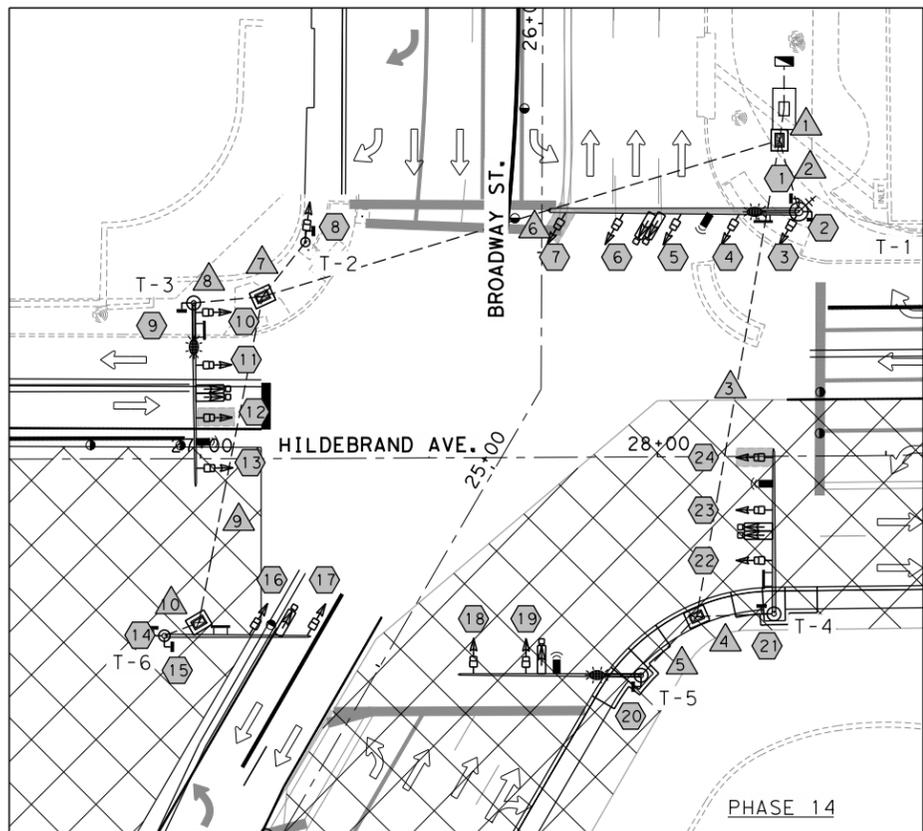
4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESE.COM

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
TEMPORARY SIGNAL LAYOUT
BROADWAY AND HILDEBRAND

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: ML	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 26 OF 462

1780user.dgn - OfficeSan Antonio
 Plotter: PLOTTER: Xerox 7500
 Plot Scale: 1/8" = 100'-0"
 Date: 01/25/2011 02:12:49 PM
 User: mjm
 File: \\f\Drawings\cv-tr+tcp-signals-01.dgn



TEMPORARY TRAFFIC SIGNAL LAYOUT																								
PHASE 14																								
SIGNAL FACE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
SIGNAL TYPE	G	G	A	A	A	D	D	G	G	A	A	A	D	G	G	A	A	A	D	G	G	A	D	D
LED SIGNAL INDICATIONS	P	P	R	R	R	←R	←R	P	P	R	R	R	←R	P	P	R	R	R	←R	P	P	R	←R	←R
	E	E	Y	Y	Y	←Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	←Y	←Y
	D	D	G	G	G	←G	←G	D	D	G	G	G	←G	D	D	G	G	G	←G	D	D	G	←G	←G

DISCONNECT, DISABLE AND COVER HEADS COMPLETELY DURING PLAN PHASE 14

TEMPORARY TRAFFIC SIGNAL LAYOUT																								
PHASE 16																								
SIGNAL FACE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
SIGNAL TYPE	G	G	A	A	A	D	D	G	G	A	A	A	D	G	G	A	A	A	D	G	G	A	D	D
LED SIGNAL INDICATIONS	P	P	R	R	R	←R	←R	P	P	R	R	R	←R	P	P	R	R	R	←R	P	P	R	←R	←R
	E	E	Y	Y	Y	←Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	←Y	←Y
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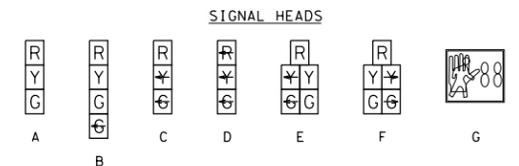
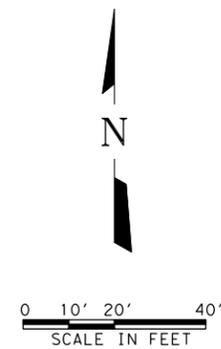
DISCONNECT, DISABLE AND COVER HEADS COMPLETELY DURING PLAN PHASE 16

TEMPORARY TRAFFIC SIGNAL LAYOUT																								
PHASE 17																								
SIGNAL FACE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
SIGNAL TYPE	G	G	A	A	A	D	D	G	G	A	A	A	D	G	G	A	A	A	D	G	G	A	D	D
LED SIGNAL INDICATIONS	P	P	R	R	R	←R	←R	P	P	R	R	R	←R	P	P	R	R	R	←R	P	P	R	←R	←R
	E	E	Y	Y	Y	←Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	Y	Y	←Y	E	E	Y	←Y	←Y
	D	D	G	G	G	←G	←G	D	D	G	G	G	←G	D	D	G	G	G	←G	D	D	G	←G	←G

DISCONNECT, DISABLE AND COVER HEADS COMPLETELY DURING PLAN PHASE 17

LEGEND

- TEMP. AERIAL
- - - PROP. CONDUIT
- ▬ PROP. V. I. V. D. S.
- PROP. TRAFFIC SIGN
- ⊣ PROP. PEDESTRIAN HEAD, PUSH BUTTON ASSEMBLY
- ⊣ PROP. TRAFFIC SIGNAL HEAD
- PROP. TRAFFIC SIGNAL POLE
- ⊞ PROP. TRAFFIC SIGNAL PULL BOX
- PROP. TRAFFIC CONTROL BOX



RUN NO.	CONDUIT SIZE & TYPE	LENGTH	NUMBER OF CABLES			
			9C #14 TY A	VIVDS CABLE	OPTICON CABLE	ETHERNET
0	2" CONDUIT	9	-	-	-	-
1	4" CONDUIT	7	7	4	4	1
2	2" CONDUIT	15	1	1	1	1
3	4" CONDUIT	106	2	2	2	-
4	2" CONDUIT	18	1	1	1	-
5	2" CONDUIT	17	1	1	1	-
6	4" CONDUIT	118	4	2	1	-
7	2" CONDUIT	15	2	-	-	-
8	2" CONDUIT	22	1	1	1	-
9	4" CONDUIT	73	1	1	-	-
10	2" CONDUIT	8	1	1	-	-

FREESSE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.

FREESSE & NICHOLS
4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESSE.COM

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
TEMPORARY SIGNAL LAYOUT
BROADWAY AND HILDEBRAND

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: ML	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 27 OF 462

MicroStation V8 Userm - OfficeSan Antonio
 Plotter: PLOT01 (HP DesignJet 2400) - 11/11/2010 10:00 AM
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 Date: 01/25/2011 05:13:53 PM User: mjm File: \\f\Drawings\cv-tr+tcp-signals-02.dgn

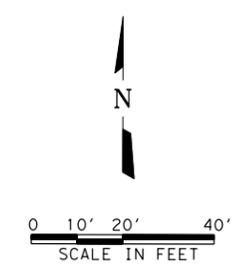
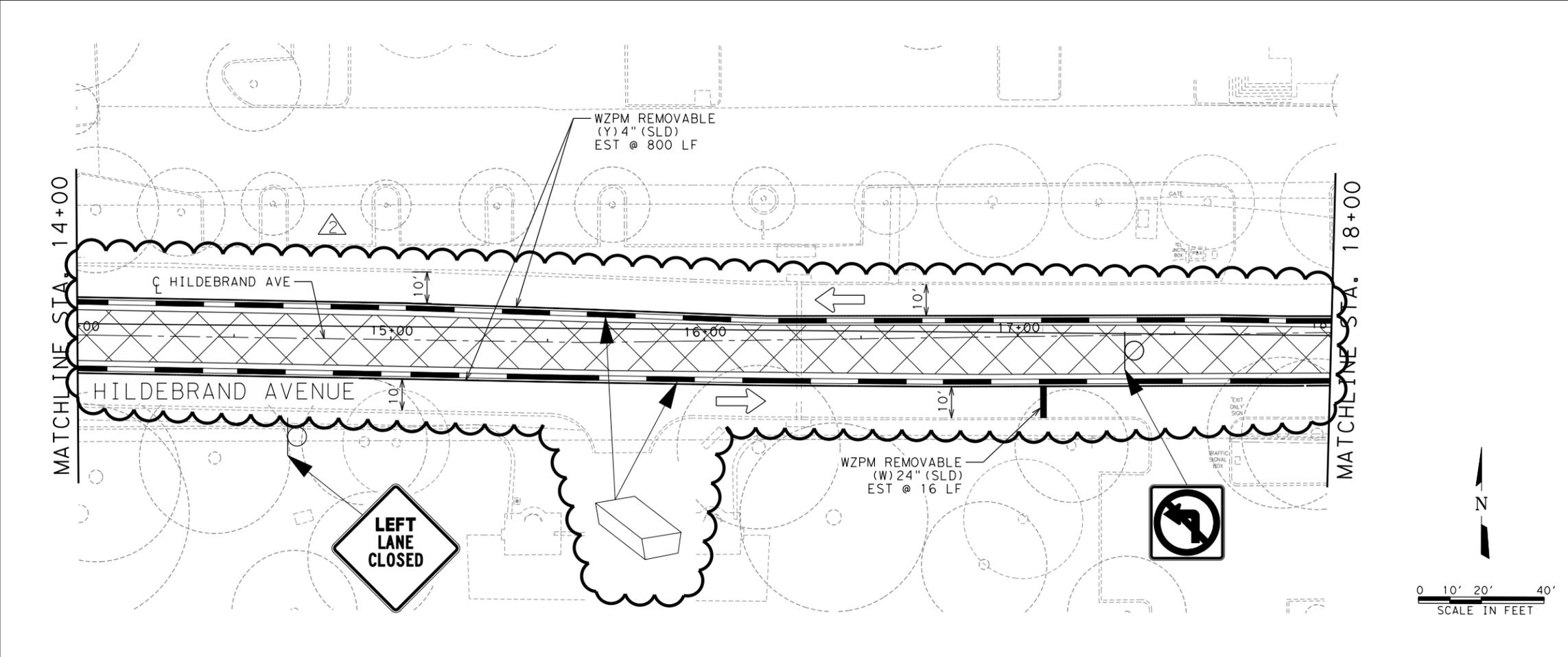
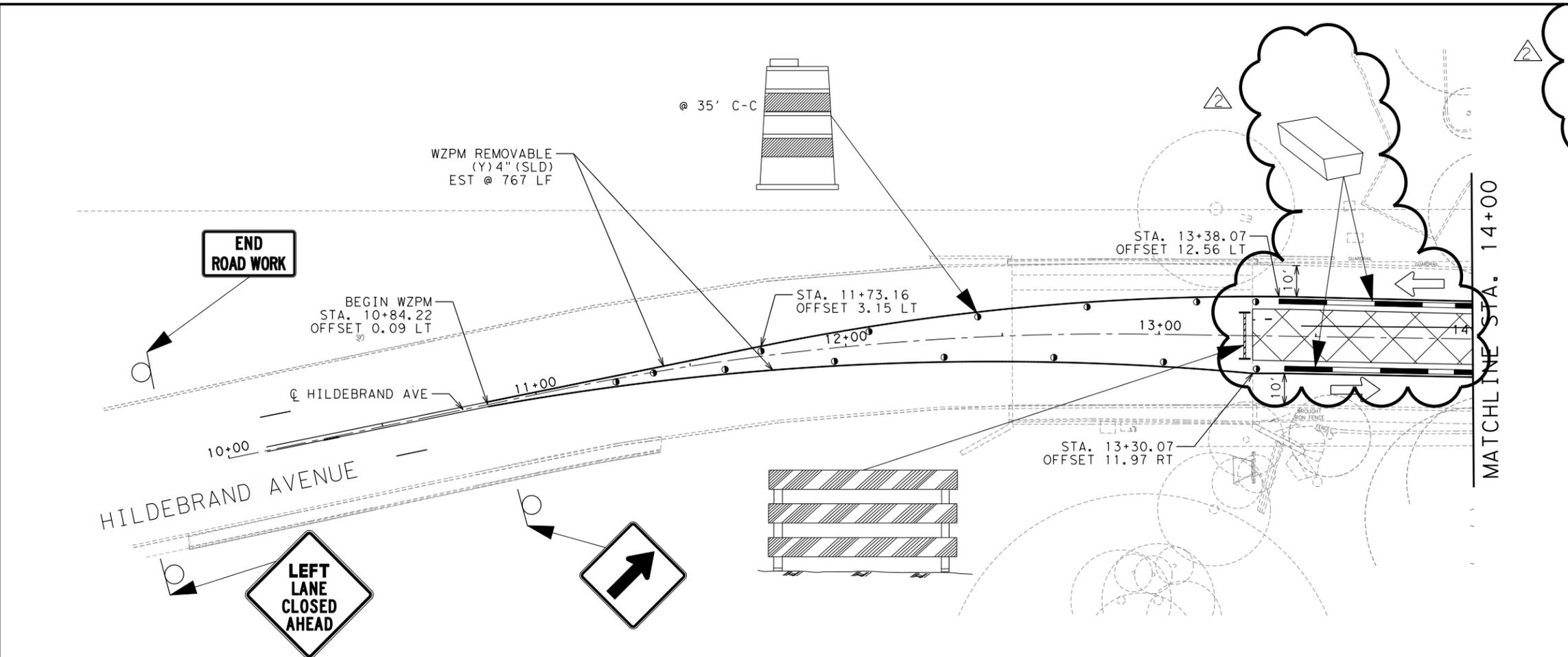
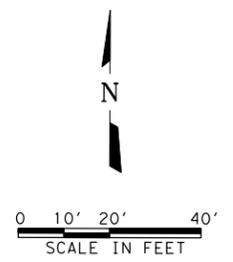
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SHEET TOTALS		
EST.	UNIT	DESCRIPTION
16	LF	WZPM REMOVABLE (W) 24" (SLD)
1,567	LF	WZPM REMOVABLE (Y) 4" (SLD)
882	LF	LOW PROFILE BARRIER TYPE 1
40	LF	LOW PROFILE BARRIER TYPE 2

LEGEND

- CONSTRUCTION THIS PHASE
- TYP III BARRICADES
- TRAFFIC DIRECTION
- PLASTIC DRUMS
- LOW PROFILE CONCRETE BARRIERS

NOTE:
1. REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO SHIFTING TRAFFIC.



FREESSE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

STATE OF TEXAS
JOHN C. COLQUHOUN
92675
LICENSED PROFESSIONAL ENGINEER

1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.

FREESSE & NICHOLS
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PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESSE.COM

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
TRAFFIC CONTROL PLAN
PHASE 3
HILDEBRAND AVENUE

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 34 OF 462

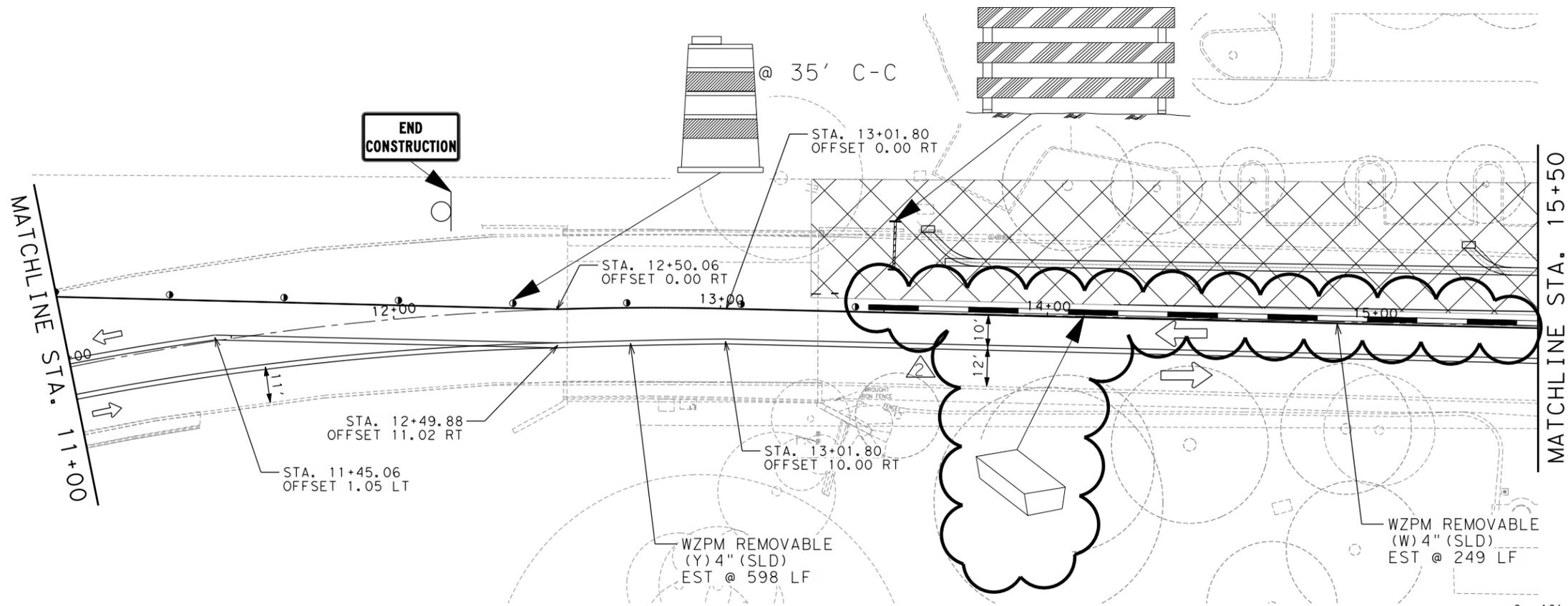
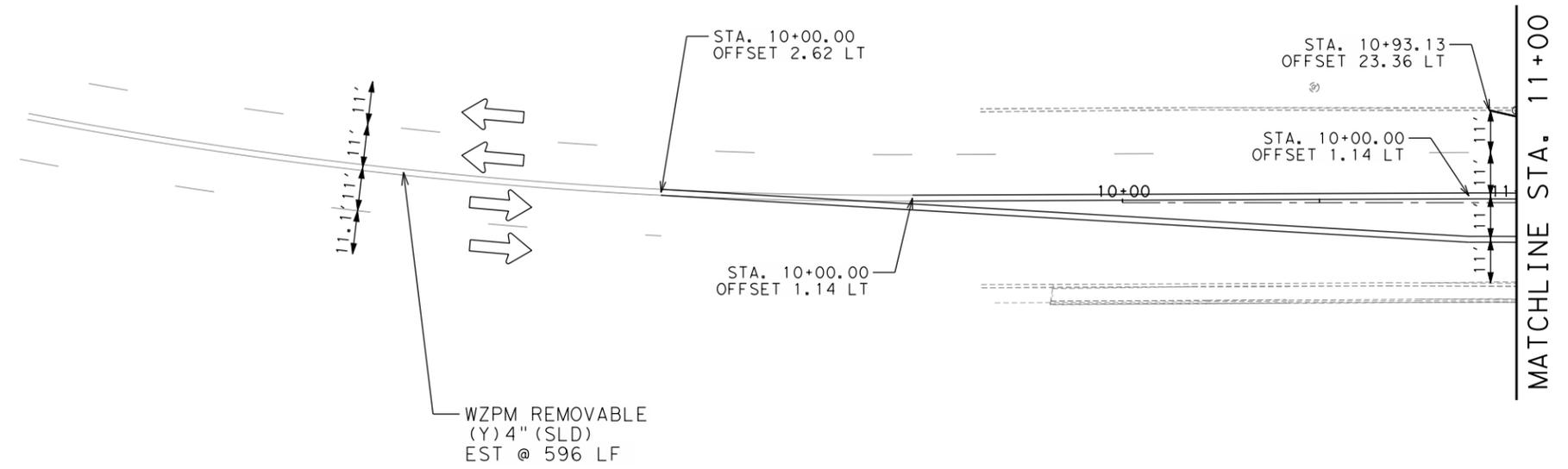
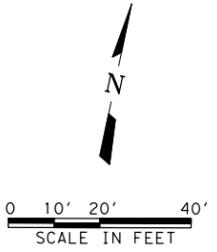
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SHEET TOTALS		
EST.	UNIT	DESCRIPTION
249	LF	WZPM REMOVABLE (W) 4" (SLD)
1,194	LF	WZPM REMOVABLE (Y) 4" (SLD)
185	LF	LOW PROFILE BARRIER TYPE 1
20	LF	LOW PROFILE BARRIER TYPE 2

LEGEND

	CONSTRUCTION THIS PHASE
	TYP III BARRICADES
	TRAFFIC DIRECTION
	PLASTIC DRUMS
	LOW PROFILE CONCRETE BARRIERS

NOTE:
1. REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO SHIFTING TRAFFIC.



FREES AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

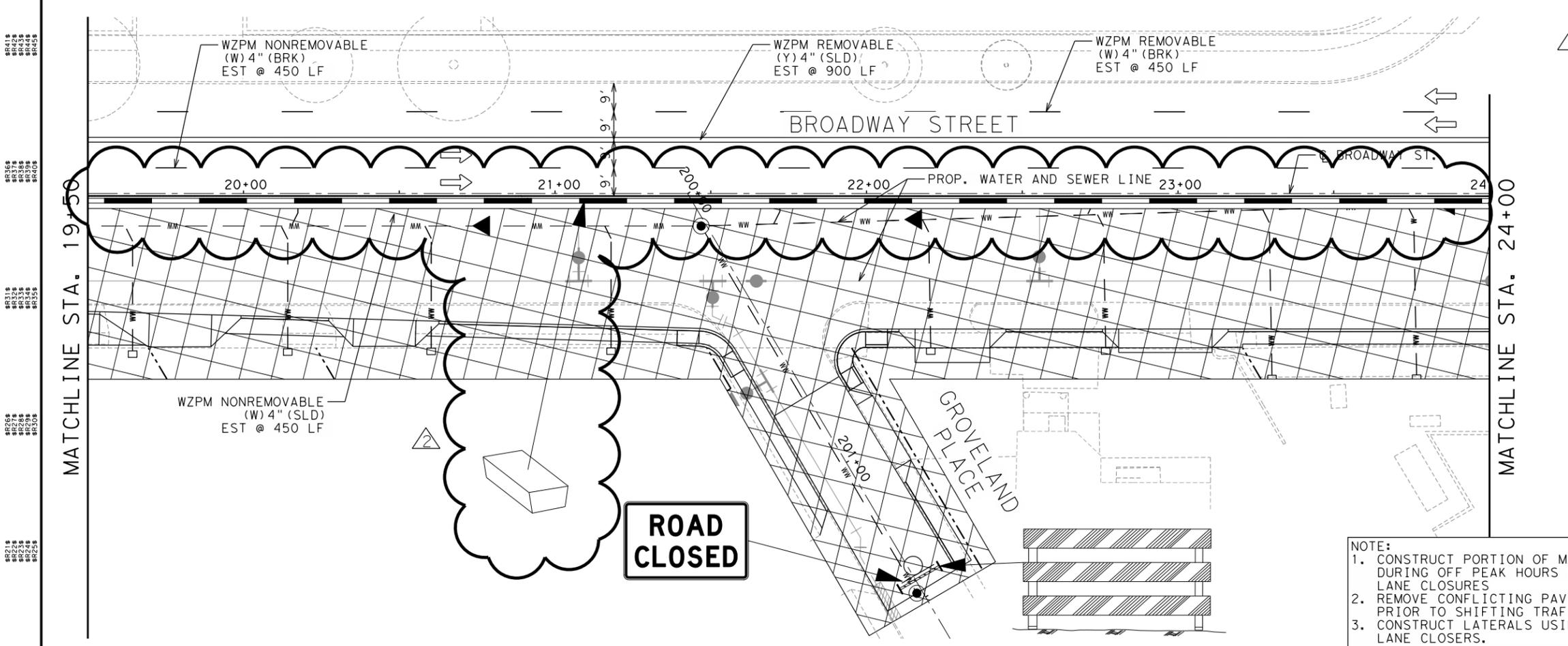
1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.

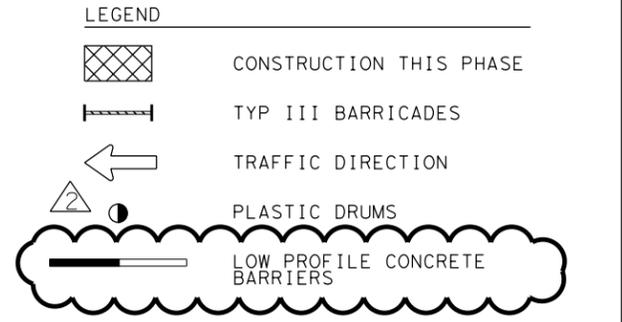
FREES AND NICHOLS
4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREES.COM

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
BROADWAY CORRIDOR, PHASE IIIA
TRAFFIC CONTROL PLAN
PHASE 4
HILDEBRAND AVENUE

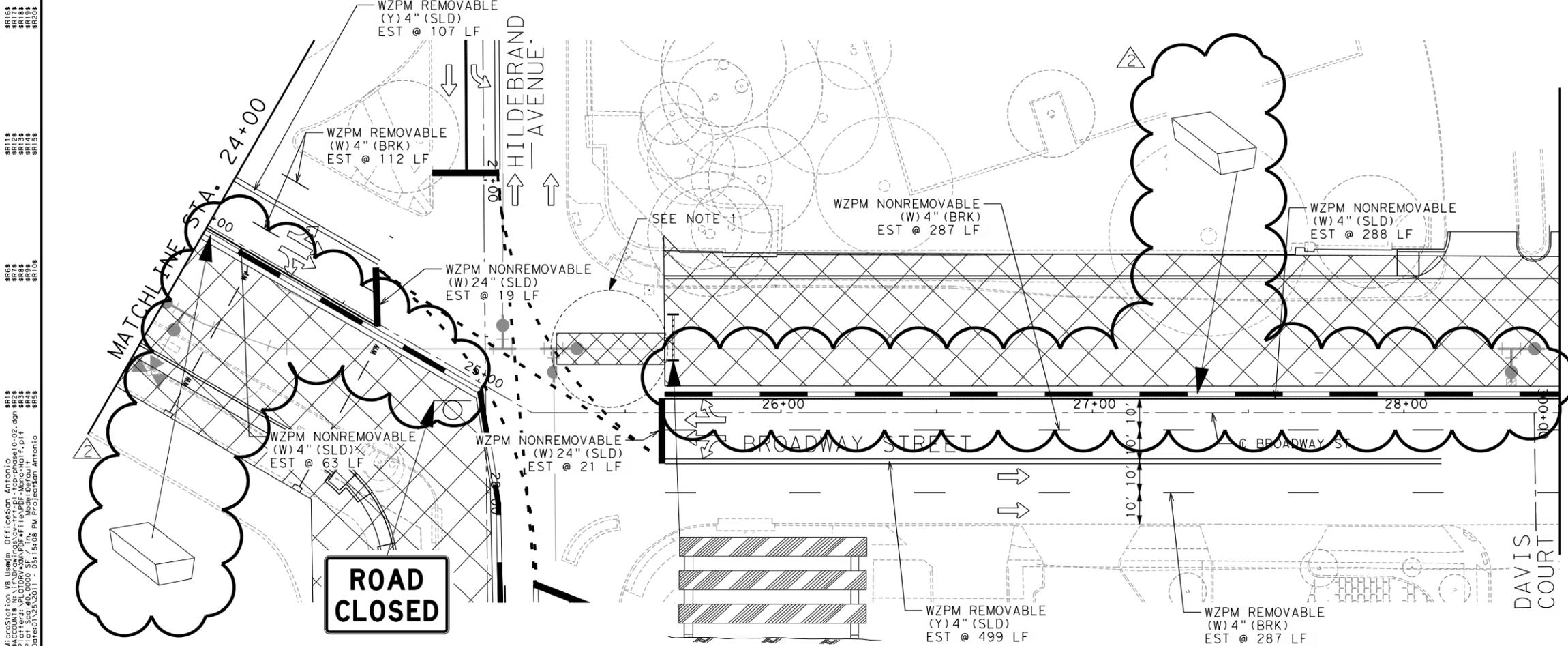
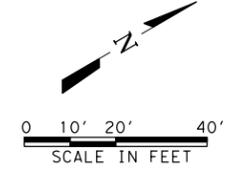
100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 37 OF 462



SHEET TOTALS		
EST.	UNIT	DESCRIPTION
795	LF	WZPM NONREMOVABLE (W) 4\" (BRK)
801	LF	WZPM NONREMOVABLE (W) 4\" (SLD)
40	LF	WZPM NONREMOVABLE (W) 24\" (SLD)
791	LF	WZPM REMOVABLE (W) 4\" (BRK)
1,506	LF	WZPM REMOVABLE (Y) 4\" (SLD)
820	LF	LOW PROFILE BARRIER TYPE 1
20	LF	LOW PROFILE BARRIER TYPE 2



NOTE:
 1. CONSTRUCT PORTION OF MAIN IN INTERSECTION DURING OFF PEAK HOURS UTILIZING TEMPORARY LANE CLOSURES
 2. REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO SHIFTING TRAFFIC.
 3. CONSTRUCT LATERALS USING TEMPORARY LANE CLOSERS.



FRESE AND NICHOLS, INC.
 TEXAS REGISTERED ENGINEERING FIRM F-2144

STATE OF TEXAS
 JOHN C. COLQUHOUN
 92675
 LICENSED PROFESSIONAL ENGINEER
 1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.

FRESE AND NICHOLS
 4040 BROADWAY ST., STE 600
 SAN ANTONIO, TX 78249
 PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FRESE.COM

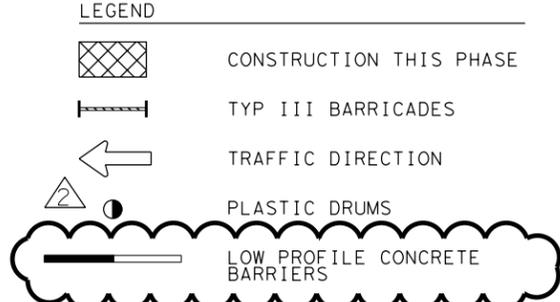
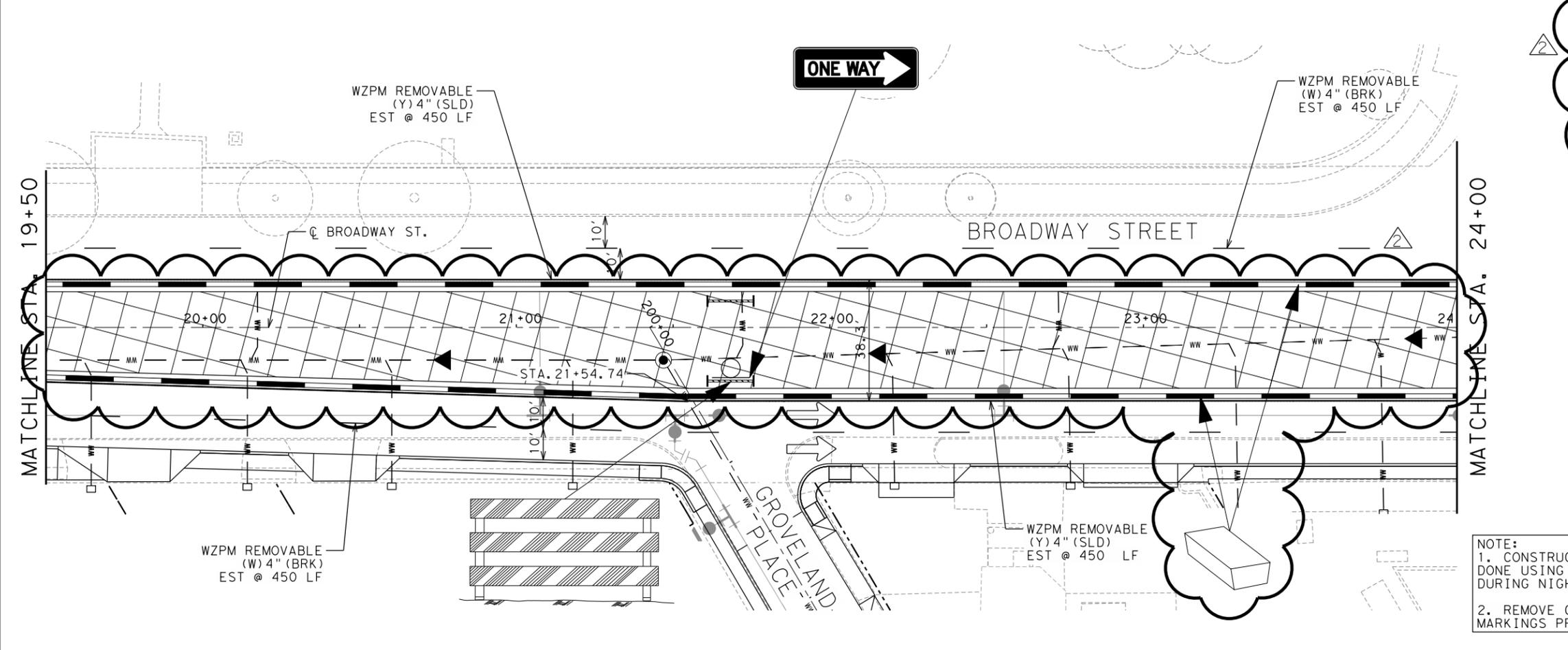
CITY OF SAN ANTONIO
 CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
 TRAFFIC CONTROL PLAN
 PHASE 10
 BROADWAY STREET

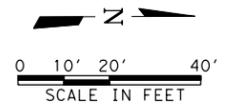
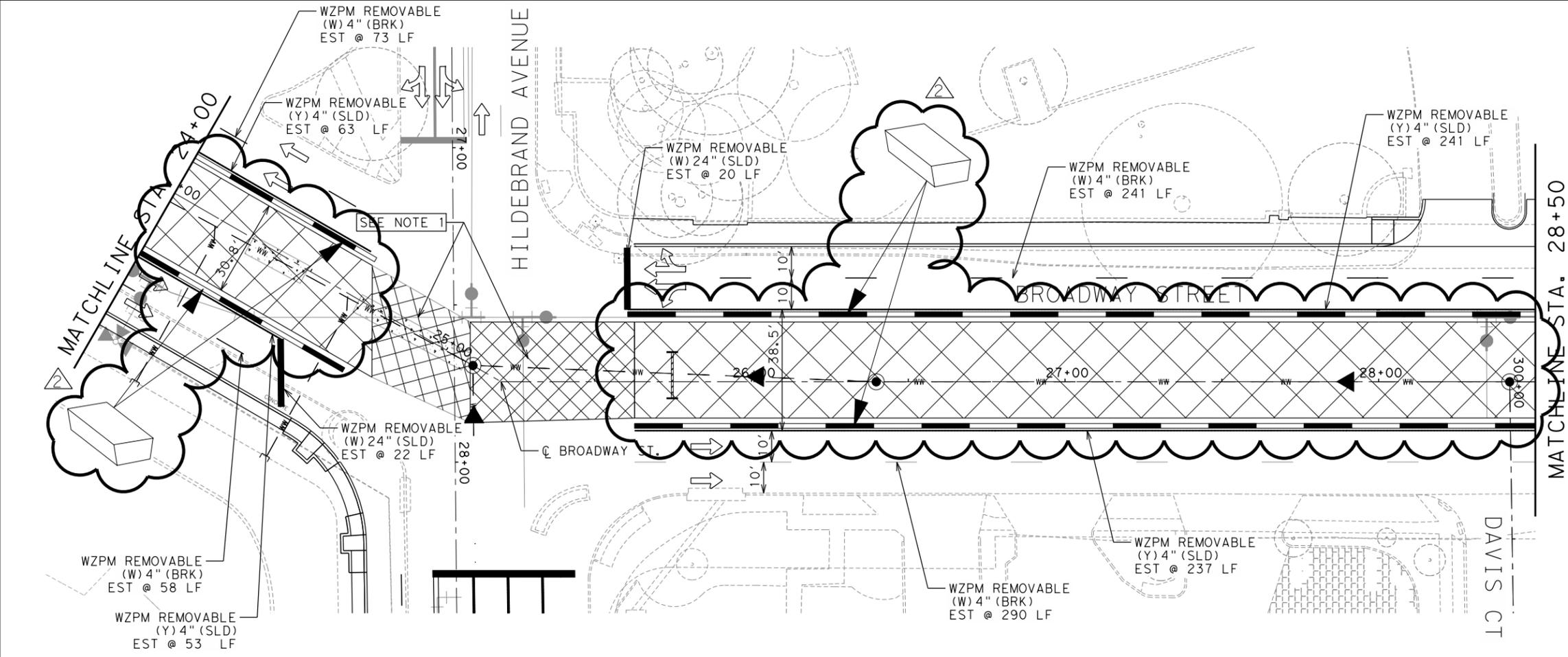
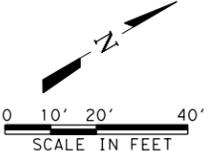
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SHEET TOTALS		
EST.	UNIT	DESCRIPTION
1,272	LF	WZPM REMOVABLE (W) 4" (BRK)
42	LF	WZPM REMOVABLE (W) 24" (SLD)
1,494	LF	WZPM REMOVABLE (Y) 4" (SLD)
1,001	LF	LOW PROFILE BARRIER TYPE 1
40	LF	LOW PROFILE BARRIER TYPE 2



NOTE:
 1. CONSTRUCTION IN INTERSECTION TO BE DONE USING PARTIAL LANE CLOSURES DURING NIGHTTIME HOURS.
 2. REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO SHIFTING TRAFFIC.



FREES AND NICHOLS, INC.
 TEXAS REGISTERED ENGINEERING FIRM F-2144

1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.

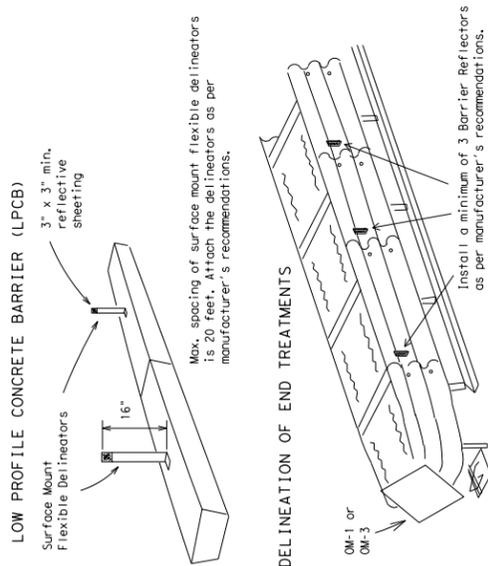
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CITY OF SAN ANTONIO
 CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
 TRAFFIC CONTROL PLAN
 PHASE 11
 BROADWAY STREET

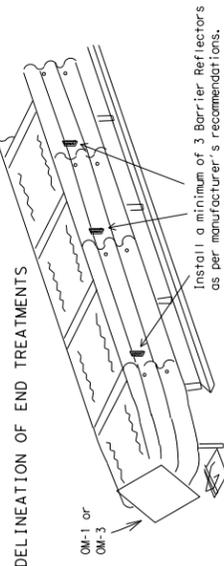
100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 84 OF 482

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS



LOW PROFILE CONCRETE BARRIER (LPCB)
Surface Mount Flexible Delineators
3" x 3" min. reflective sheeting

Max. spacing of surface mount flexible delineators is 20 feet. Attach the delineators as per manufacturer's recommendations.



DELINEATION OF END TREATMENTS

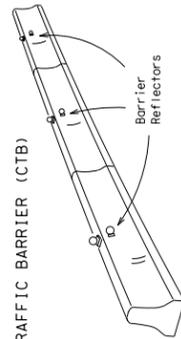
Install a minimum of 3 Barrier Reflectors as per manufacturer's recommendations.

APPROACHING TRAFFIC BOTH SIDES	OM-3
ONE SIDE	OM-1
DELINEATION	OM-1

END TREATMENTS FOR CTB'S USED IN WORK ZONES
End treatments used on CTB's in work zones shall meet crashworthy standards as defined in the National Cooperative Highway Research Report 350. Refer to the CWZTC List for approved end treatments and manufacturers.

- Barrier Reflectors shall be prequalified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors (Type C Delineators) can be found at the Material Producer List web address shown on BC(11). Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 502.

CONCRETE TRAFFIC BARRIER (CTB)



- Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
- Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (bi-directional) while the reflectors on each side shall have one yellow reflective face, as shown in the detail above.
- When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
- Barrier Reflector units shall be yellow or white in color to match the edge line being supplemented. Yellow Barrier Reflectors shall be made with Type E Fluorescent Prismatic Yellow Retroreflective Sheetting. White reflectors shall be made with Type D White Prismatic sheeting.
- Maximum spacing of Barrier Reflectors is forty (40) feet.
- Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
- Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
- Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
- Single slope barriers shall be delineated as shown on the above detail.

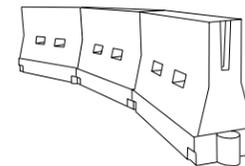
17Bar-der.dgn
MicroStation V8 Uses: OfficeSan Antonio
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OfficeSan Antonio SAT08331 Date: 01/25/2011 - 06:59:53 PM User: ses File: Y:\Drawings\cv-tr-1-det-misc01.dgn

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division
**BARRICADE AND CONSTRUCTION
BARRIER REFLECTOR
STANDARD**
12 of 27 BC(7)-07

TXDOT	STATE	FEDERAL	OTHER
REVISIONS	NO.	DATE	DESCRIPTION

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS



LONGITUDINAL CHANNELIZING DEVICES

- Longitudinal channelizing devices are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. **They are not designed to contain or redirect a vehicle on impact.**
- Longitudinal channelizing devices may be used instead of a line of cones or drums.
- Longitudinal channelizing devices shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTC List.
- Longitudinal channelizing devices should not be used to provide positive protection for obstacles, pedestrians or workers.
- Longitudinal channelizing devices shall be retroreflective, or supplemented with retroreflective delineation as required for temporary barriers on BC(7)-07.

WATER BALLASTED SYSTEMS USED AS BARRIERS

- Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate NCHRP 350 crashworthiness requirements based on roadway speed and barrier application.
- Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
- Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTC List.
- Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
- When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long cones and the top of the unit shall be not less than 32 inches in height.

GENERAL NOTES:

- Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
- Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
- Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTC List).
- The Contractor shall maintain devices in a clean condition and replace damaged, non-reflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
- Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh approximately 35 lbs.
- Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
- The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.
- Examples on this sheet are commonly used channelizing devices in work zones. For other devices, refer to the CWZTC List.

Posted Speed	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices	
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent
30	L = WS ² /60	150'	165'	180'	30'	60' - 75'
35		205'	225'	245'	35'	70' - 90'
40		265'	295'	320'	40'	80' - 100'
45		450'	495'	540'	45'	90' - 110'
50	L = WS	500'	550'	600'	50'	100' - 125'
55		550'	605'	660'	55'	110' - 140'
60		600'	660'	720'	60'	120' - 150'
65		650'	715'	780'	65'	130' - 165'
70		700'	770'	840'	70'	140' - 175'
75		750'	825'	900'	75'	150' - 185'
80		800'	880'	960'	80'	160' - 195'

**Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division
**BARRICADE AND CONSTRUCTION
CHANNELIZING DEVICES
STANDARD**
19 of 27 BC(9)-07

TXDOT	STATE	FEDERAL	OTHER
REVISIONS	NO.	DATE	DESCRIPTION

FRESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

STATE OF TEXAS
JOHN C. COLQUHOUN
92675
LICENSED PROFESSIONAL ENGINEER

1/25/2010
John C. Colquhoun

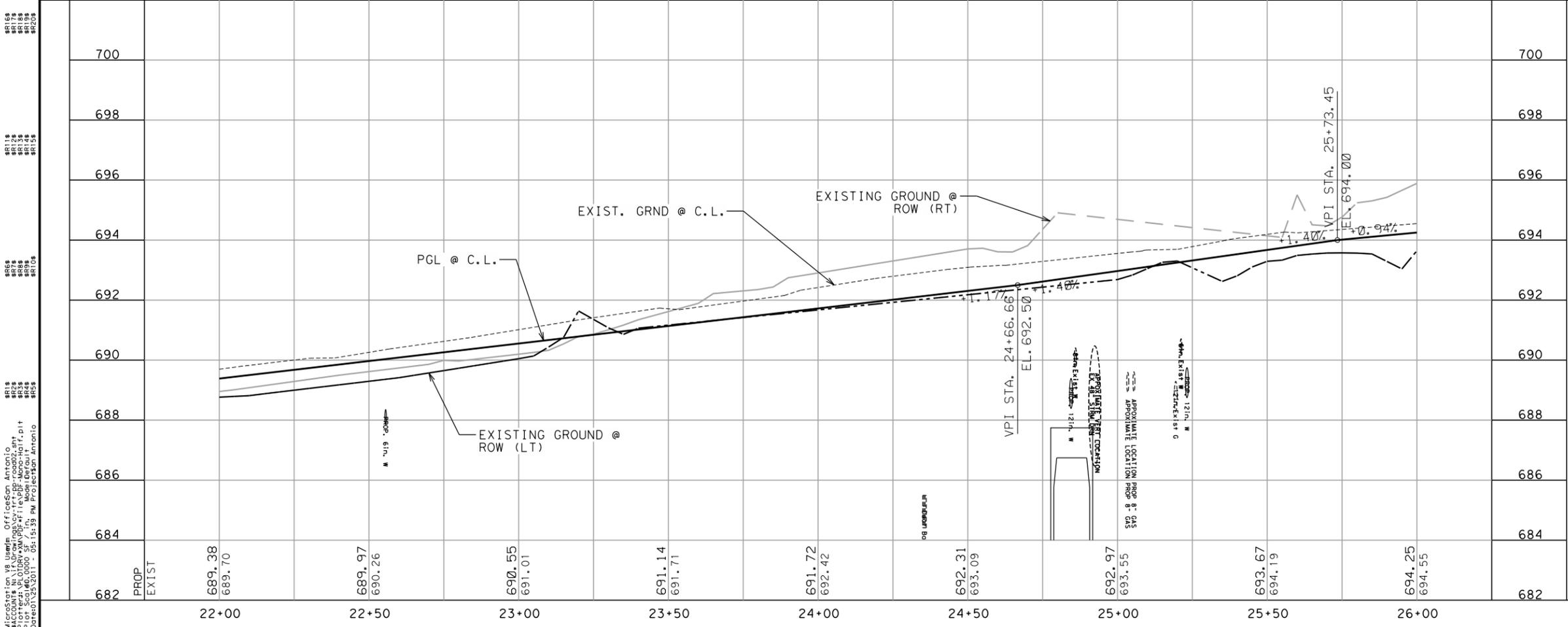
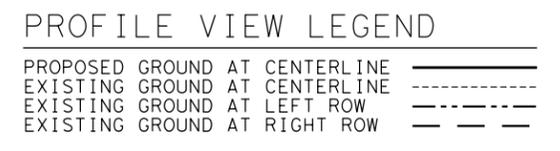
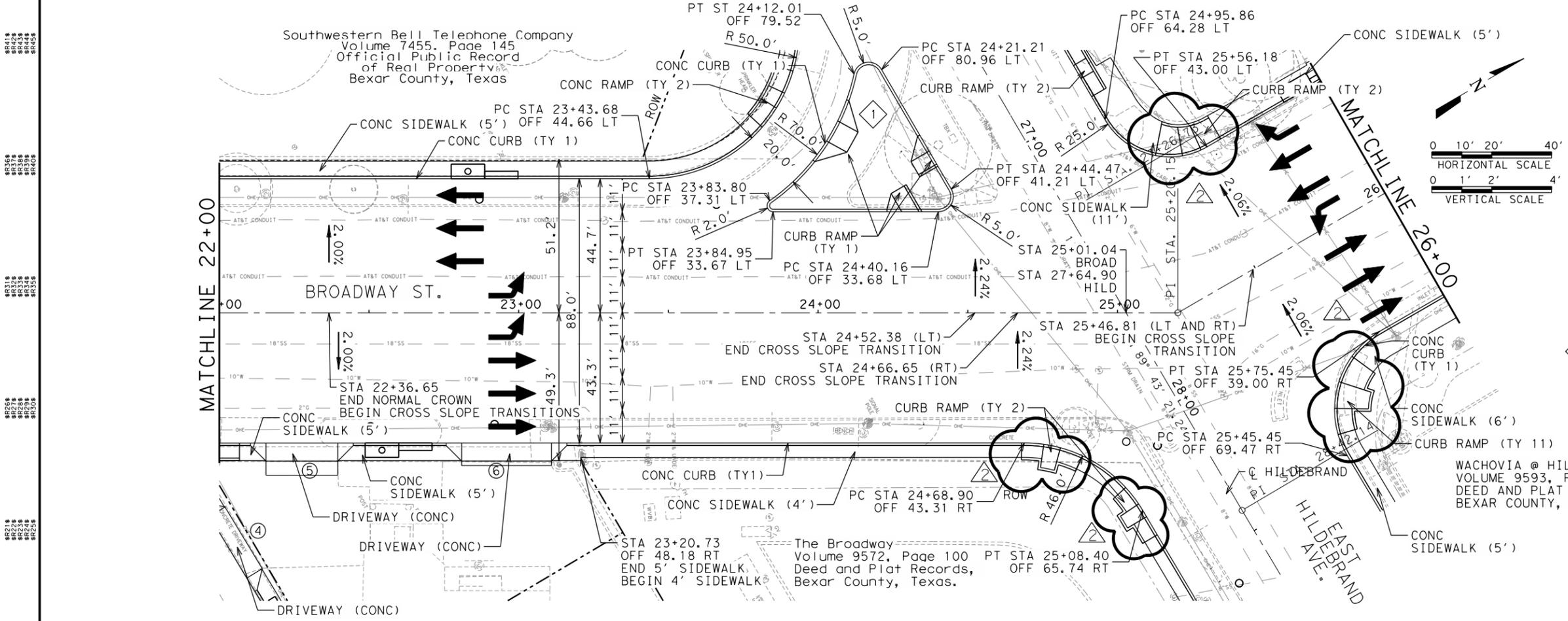
1	1/25/2011	ADD SHEET (ADD 2)	JCC
NO.	DATE	REVISION	APPROV.

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4040 BROADWAY ST., STE 600
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CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

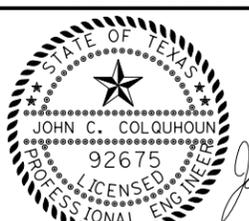
BROADWAY CORRIDOR, PHASE IIIA
**BARRICADE AND CONSTRUCTION
DETAILS**

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: SES	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 130 OF 462



SHEET TOTALS		
EST.	UNIT	DESCRIPTION
4	STA	PREPARING ROW
4,680	SY	ASPHALT PAVEMENT (3")
4,974	SY	ASPHALTIC BASE (12")
951	LF	CONC CURB (TY 1)
3163	SF	CONC SIDEWALK (4")
421	SY	NATIVE SEEDING

FREESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144



1/25/2010

John C. Colquhoun

NO.	DATE	REVISION	APPROV.
1	1/25/2011	ADDENDUM 2	J. C. C.

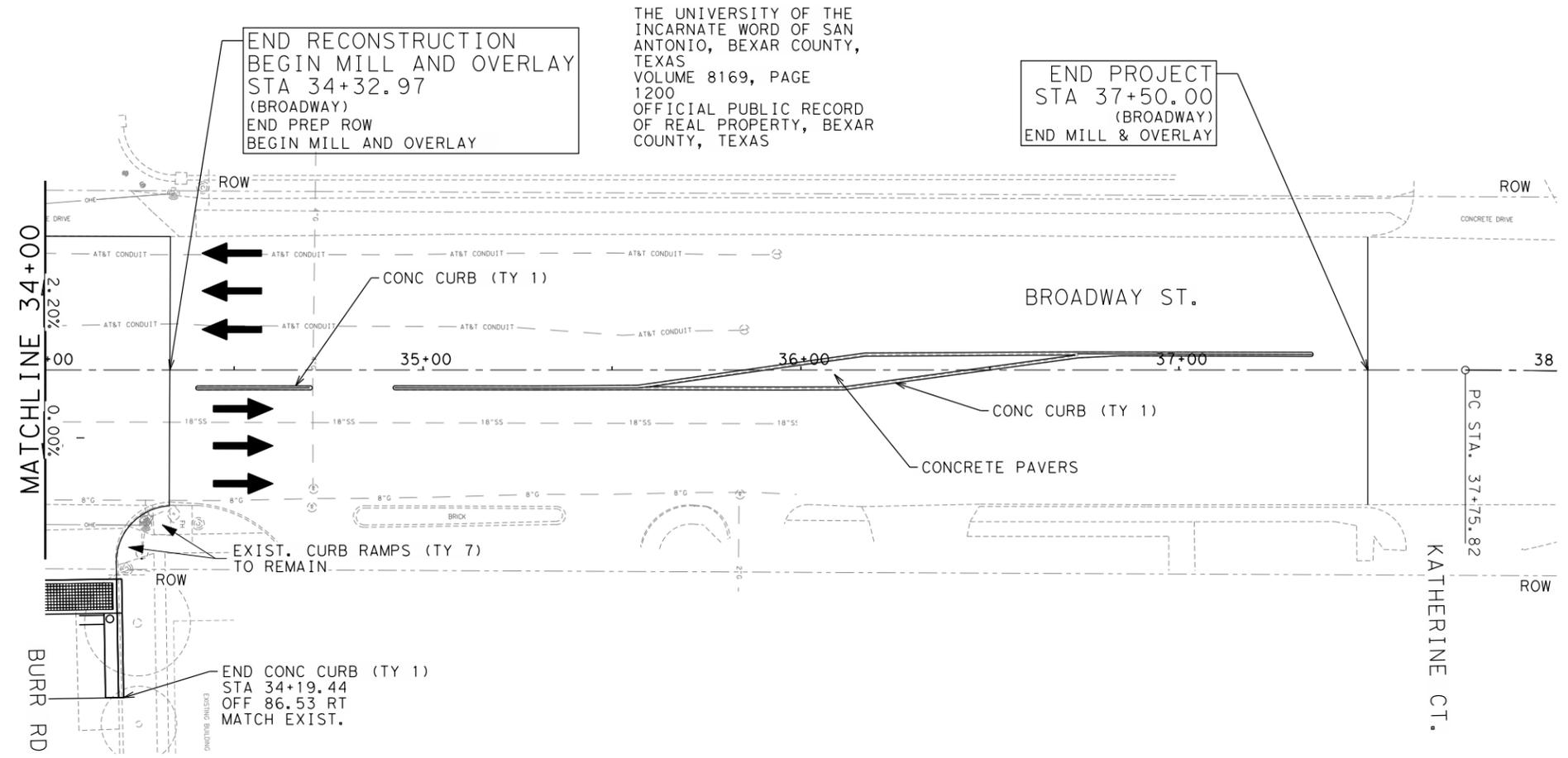
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CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
PAVEMENT PLAN AND PROFILE
STA 22+00 TO 26+00
BROADWAY STREET

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 141 OF 462

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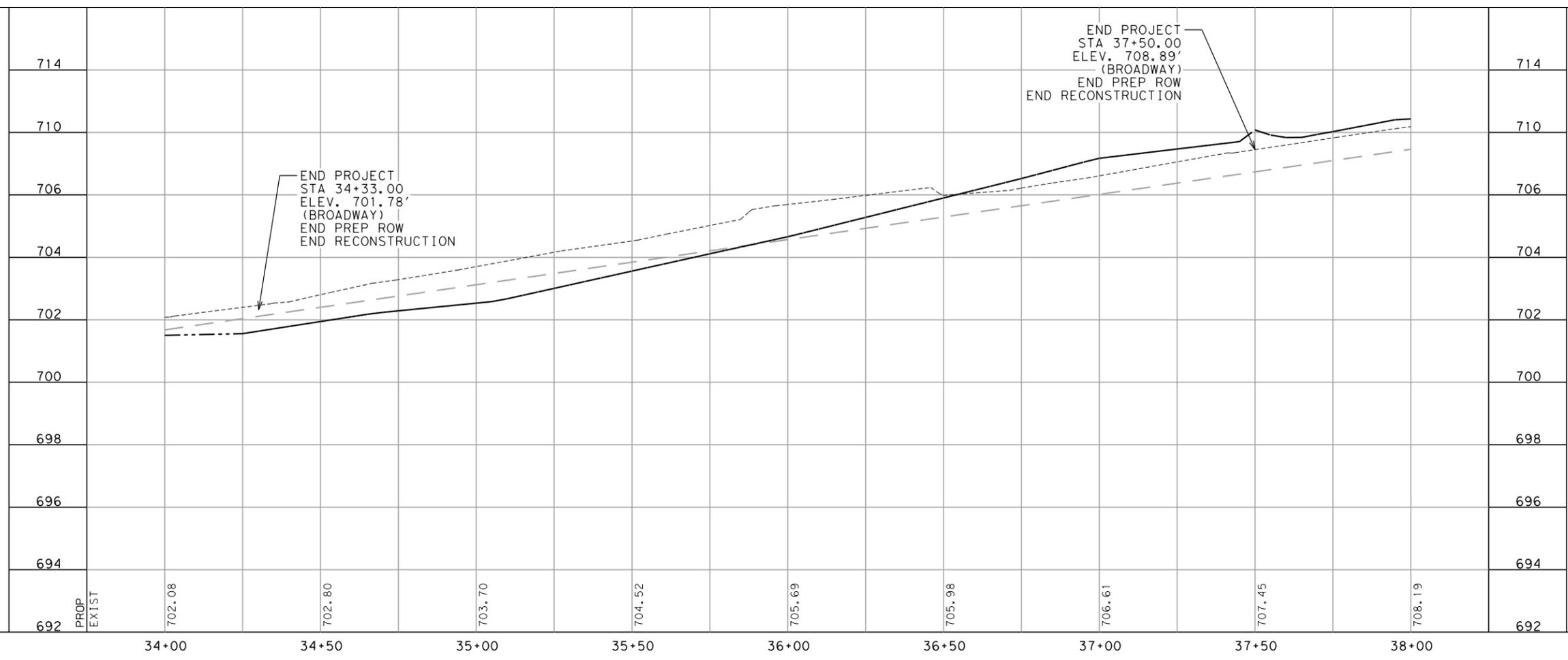
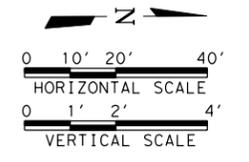


PLAN VIEW LEGEND

PROPOSED CURB	—————
EXISTING EDGE OF ROADWAY	—————
EXISTING FEATURES	—————
PROPOSED RIGHT OF WAY	-----
EXISTING RIGHT OF WAY	-----
TRAFFIC FLOW	←
DRIVEWAY NUMBER	⊕

PROFILE VIEW LEGEND

PROPOSED GROUND AT CENTERLINE	—————
EXISTING GROUND AT CENTERLINE	-----
EXISTING GROUND AT LEFT ROW	-----
EXISTING GROUND AT RIGHT ROW	-----



SHEET TOTALS

EST.	UNIT	DESCRIPTION
2880	SY	2" MILL AND OVERLAY
552	LF	CONC CURB (TY 1)
48	SY	CONCRETE PAVERS

FREESSE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

1/25/2010
John C. Colquhoun

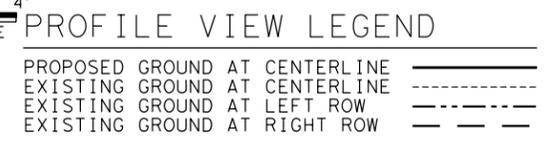
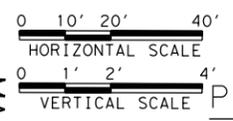
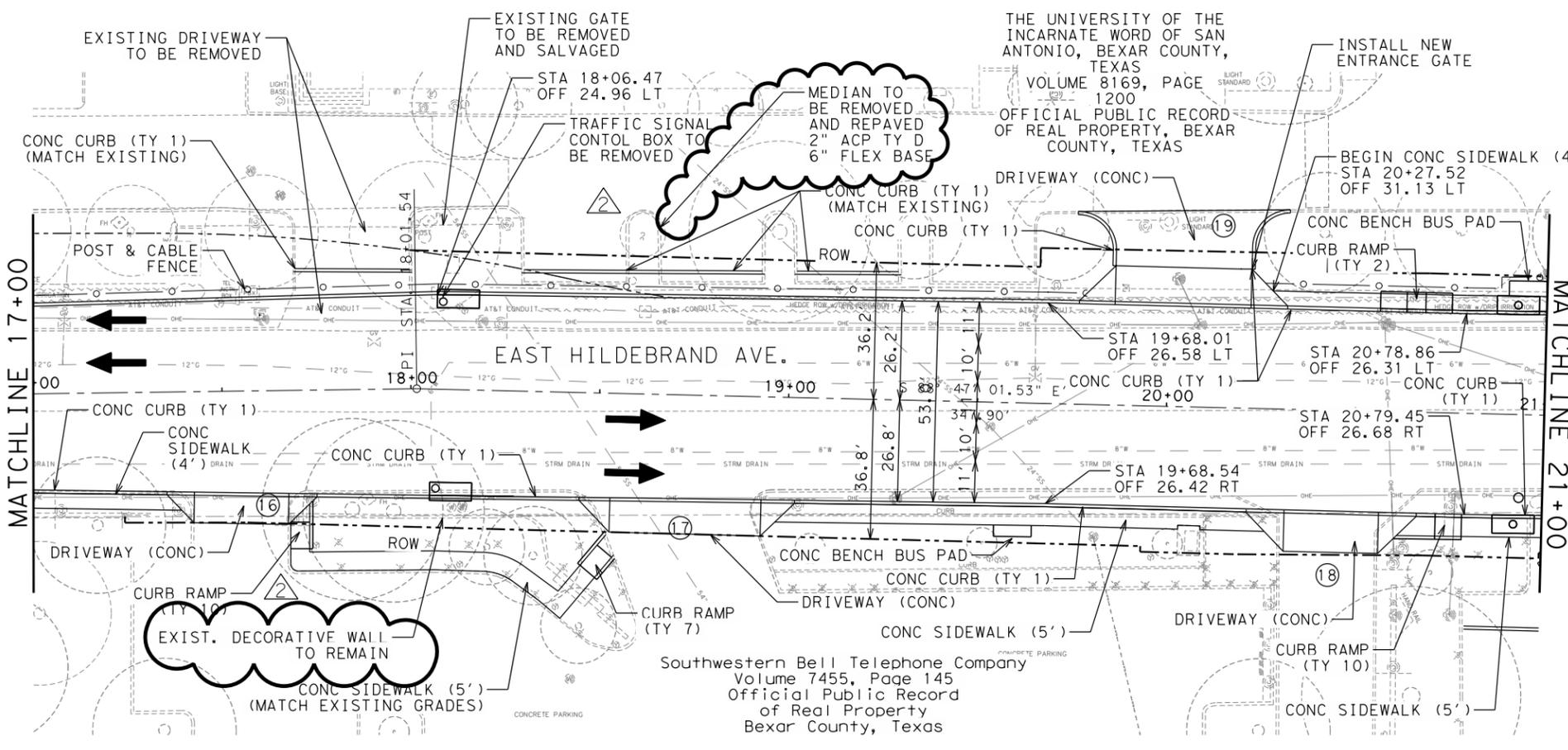
1	1/25/11	ADDENDUM 2	J. C. C.
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PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESSE.COM

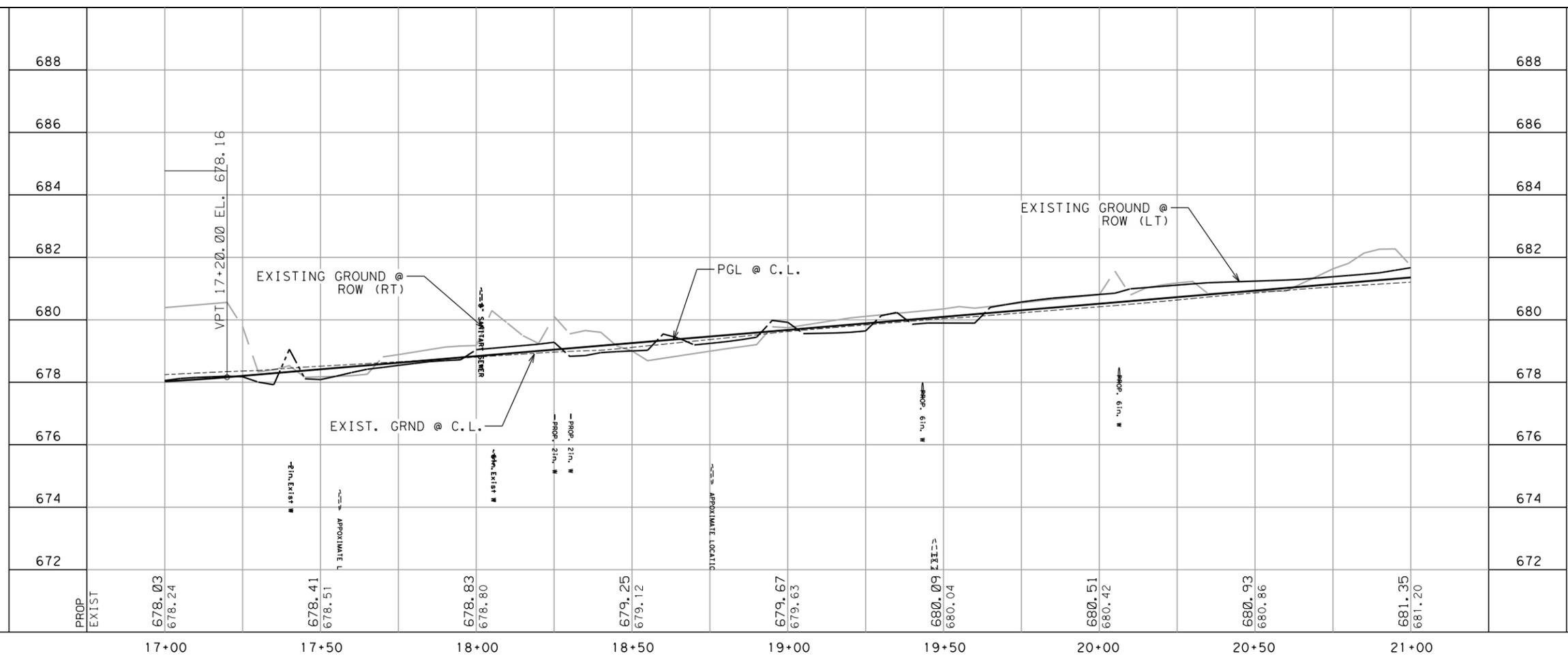
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
PAVEMENT PLAN AND PROFILE
STA 30+00 TO 34+00
BROADWAY STREET

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: SES	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO. 143 OF 462



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SHEET TOTALS

EST.	UNIT	DESCRIPTION
4	STA	PREPARING ROW
2,327	SY	ASPHALT PAVEMENT (3")
2,579	SY	ASPHALTIC BASE (12")
971	LF	CONC CURB (TY 1)
239	SY	DRIVEWAYS (CONC)
195	SY	CONC SIDEWALK (4")
567	SY	NATIVE SEEDING
292	LF	POST & CABLE FENCE

FRESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
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NO.	DATE	REVISION	APPROV.

FRESE AND NICHOLS
4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FRESE.COM

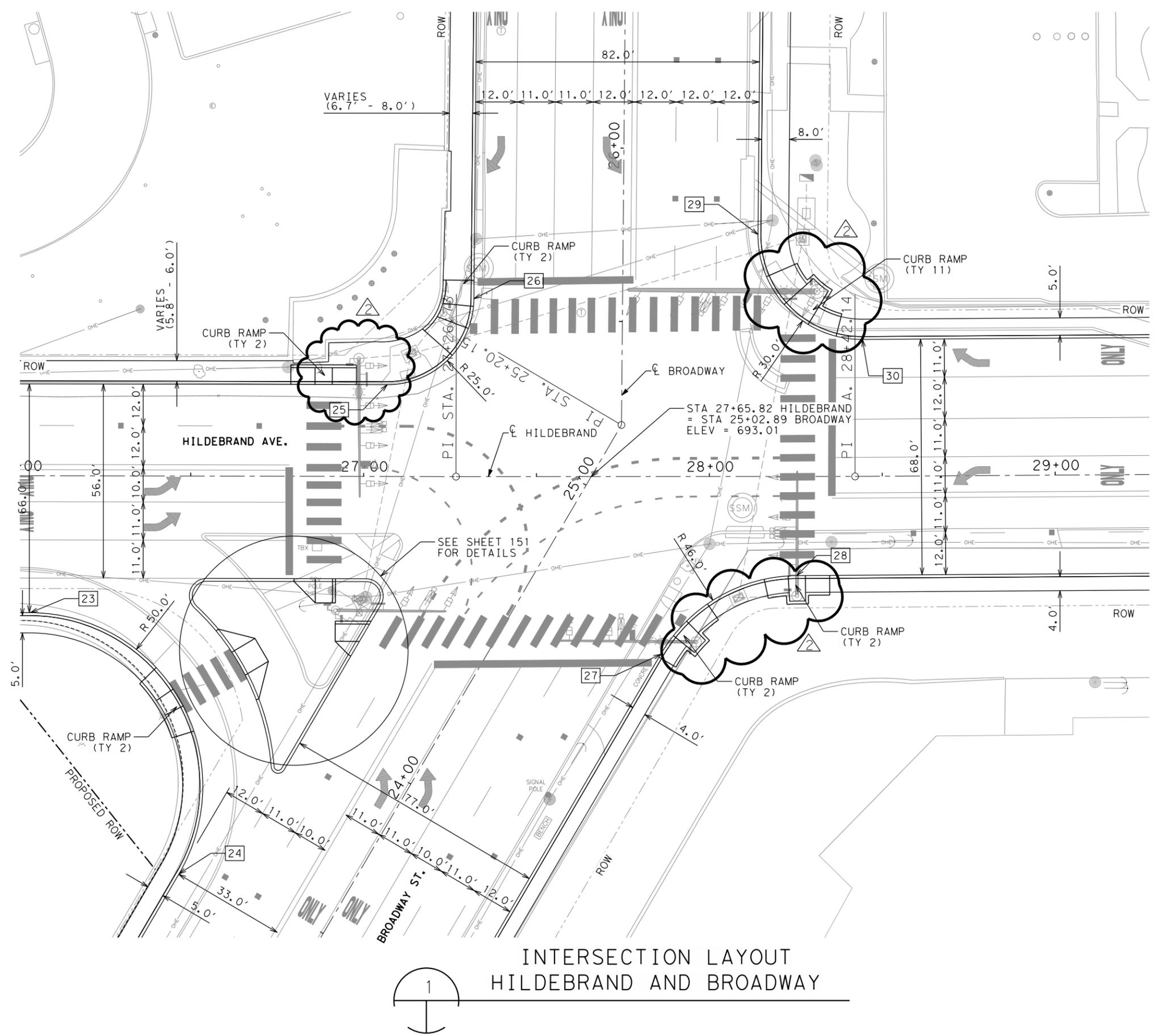
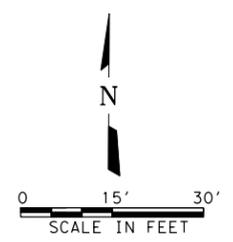
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
PAVEMENT PLAN AND PROFILE
STA 17+00 TO 21+00
EAST HILDEBRAND AVE

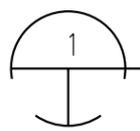
100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: SES	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 145 OF 462

PT NO.	STATION	CHAIN	OFFSET	ELEV.
23	26+03.75	HILDEBRAND	39.50 RT	688.30
24	23+43.68	BROADWAY	44.66 LT	690.11
25	27+06.79	HILDEBRAND	26.50 LT	691.89
26	27+31.92	HILDEBRAND	51.31 LT	692.87
27	27+85.90	HILDEBRAND	51.27 RT	692.71
28	28+25.26	HILDEBRAND	28.60 RT	693.94
29	25+75.45	BROADWAY	39.00 RT	694.66
30	28+44.52	HILDEBRAND	39.50 LT	695.46

- NOTES
- ALL OFFSETS ARE TO THE FACE OF CURB
 - ALL ELEVATIONS AT EDGE OF PAVEMENT AT FACE OF CURB



INTERSECTION LAYOUT
HILDEBRAND AND BROADWAY



FREESSE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.

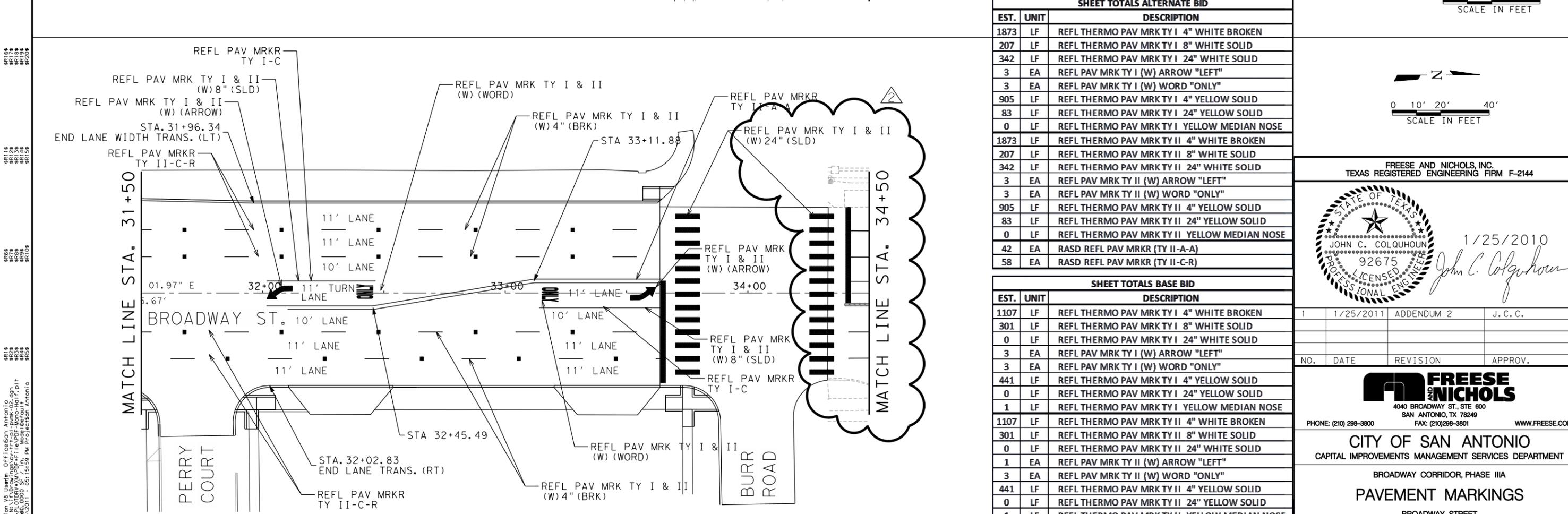
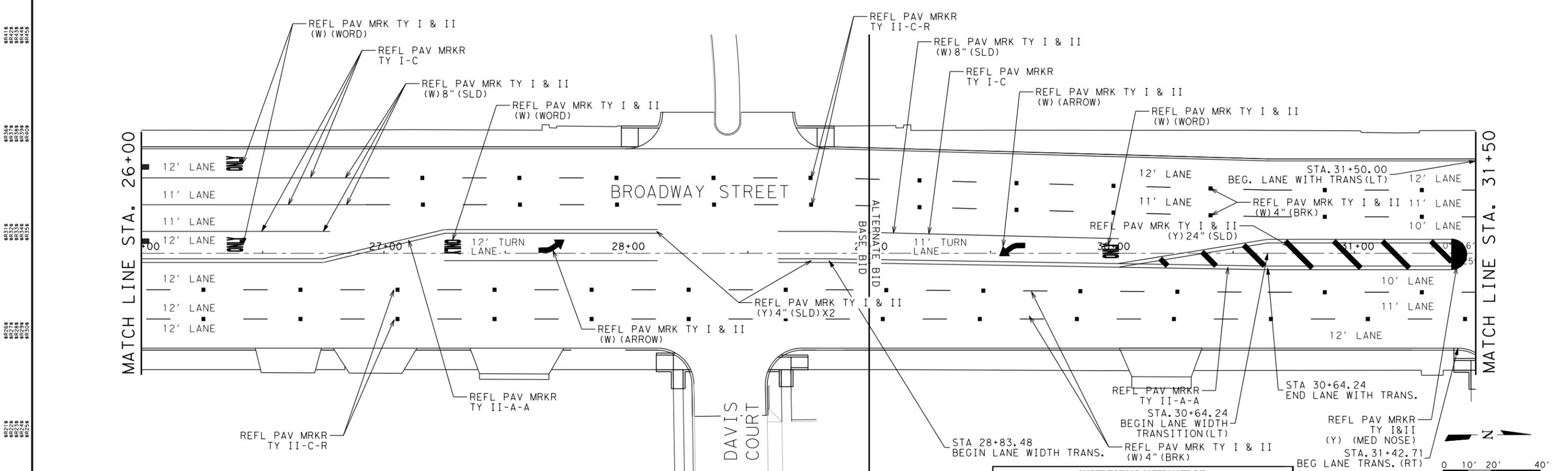
FREESSE & NICHOLS
4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESSE.COM

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
INTERSECTION LAYOUT
HILDEBRAND AND BROADWAY

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO: 150 OF 462

MicroStation vs Userin - OfficeSan Antonio
 cv-tr1-rc-intsect.dgn
 1/18/2011 10:00:00 AM
 Plot: Scale: 1/8" = 1'-0"
 Date: 01/25/2011 05:15:56 PM
 User: mjm
 File: \\f\Drawings\cv-tr1-pl-intsect-02.dgn



SHEET TOTALS ALTERNATE BID		
EST.	UNIT	DESCRIPTION
1873	LF	REFL THERMO PAV MRKR TY I 4" WHITE BROKEN
207	LF	REFL THERMO PAV MRKR TY I 8" WHITE SOLID
342	LF	REFL THERMO PAV MRKR TY I 24" WHITE SOLID
3	EA	REFL PAV MRKR TY I (W) ARROW "LEFT"
3	EA	REFL PAV MRKR TY I (W) WORD "ONLY"
905	LF	REFL THERMO PAV MRKR TY I 4" YELLOW SOLID
83	LF	REFL THERMO PAV MRKR TY I 24" YELLOW SOLID
0	LF	REFL THERMO PAV MRKR TY I YELLOW MEDIAN NOSE
1873	LF	REFL THERMO PAV MRKR TY II 4" WHITE BROKEN
207	LF	REFL THERMO PAV MRKR TY II 8" WHITE SOLID
342	LF	REFL THERMO PAV MRKR TY II 24" WHITE SOLID
3	EA	REFL PAV MRKR TY II (W) ARROW "LEFT"
3	EA	REFL PAV MRKR TY II (W) WORD "ONLY"
905	LF	REFL THERMO PAV MRKR TY II 4" YELLOW SOLID
83	LF	REFL THERMO PAV MRKR TY II 24" YELLOW SOLID
0	LF	REFL THERMO PAV MRKR TY II YELLOW MEDIAN NOSE
42	EA	RASD REFL PAV MRKR (TY II-A-A)
58	EA	RASD REFL PAV MRKR (TY II-C-R)

SHEET TOTALS BASE BID		
EST.	UNIT	DESCRIPTION
1107	LF	REFL THERMO PAV MRKR TY I 4" WHITE BROKEN
301	LF	REFL THERMO PAV MRKR TY I 8" WHITE SOLID
0	LF	REFL THERMO PAV MRKR TY I 24" WHITE SOLID
3	EA	REFL PAV MRKR TY I (W) ARROW "LEFT"
3	EA	REFL PAV MRKR TY I (W) WORD "ONLY"
441	LF	REFL THERMO PAV MRKR TY I 4" YELLOW SOLID
0	LF	REFL THERMO PAV MRKR TY I 24" YELLOW SOLID
1	LF	REFL THERMO PAV MRKR TY I YELLOW MEDIAN NOSE
1107	LF	REFL THERMO PAV MRKR TY II 4" WHITE BROKEN
301	LF	REFL THERMO PAV MRKR TY II 8" WHITE SOLID
0	LF	REFL THERMO PAV MRKR TY II 24" WHITE SOLID
1	EA	REFL PAV MRKR TY II (W) ARROW "LEFT"
3	EA	REFL PAV MRKR TY II (W) WORD "ONLY"
441	LF	REFL THERMO PAV MRKR TY II 4" YELLOW SOLID
0	LF	REFL THERMO PAV MRKR TY II 24" YELLOW SOLID
1	LF	REFL THERMO PAV MRKR TY II YELLOW MEDIAN NOSE
16	EA	RASD REFL PAV MRKR (TY II-A-A)
42	EA	RASD REFL PAV MRKR (TY II-C-R)

FREESSE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

1/25/2010
John C. Colquhoun

NO.	DATE	REVISION	APPROV.
1	1/25/2011	ADDENDUM 2	J. C. C.

4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESSE.COM

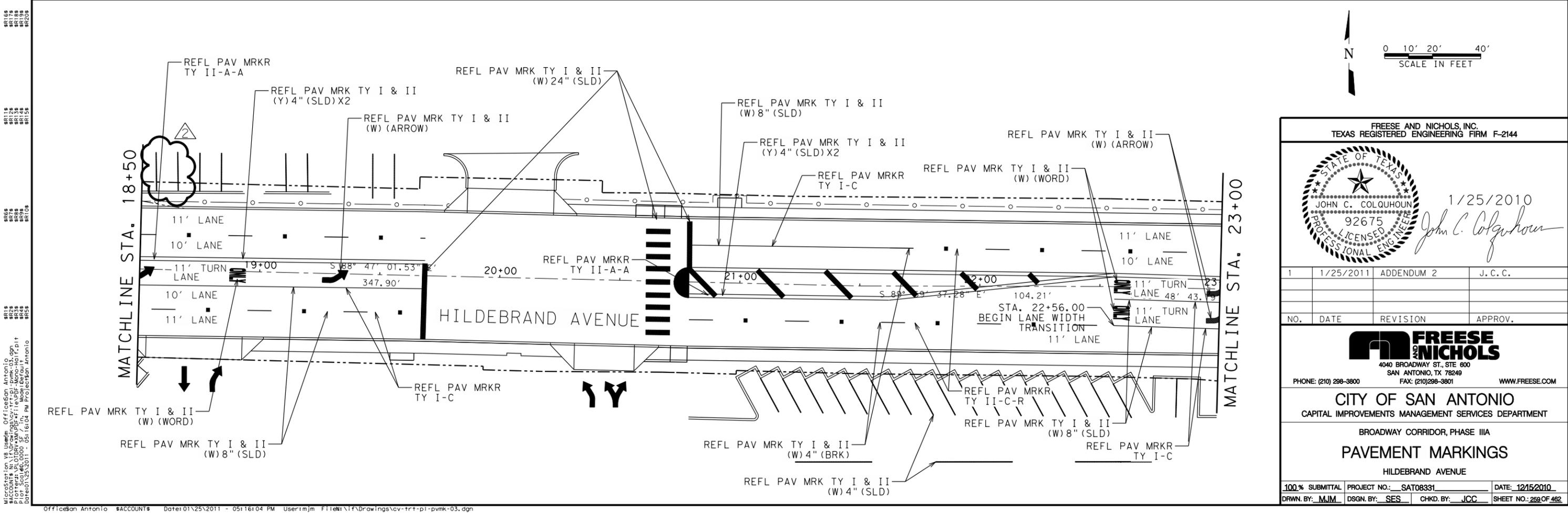
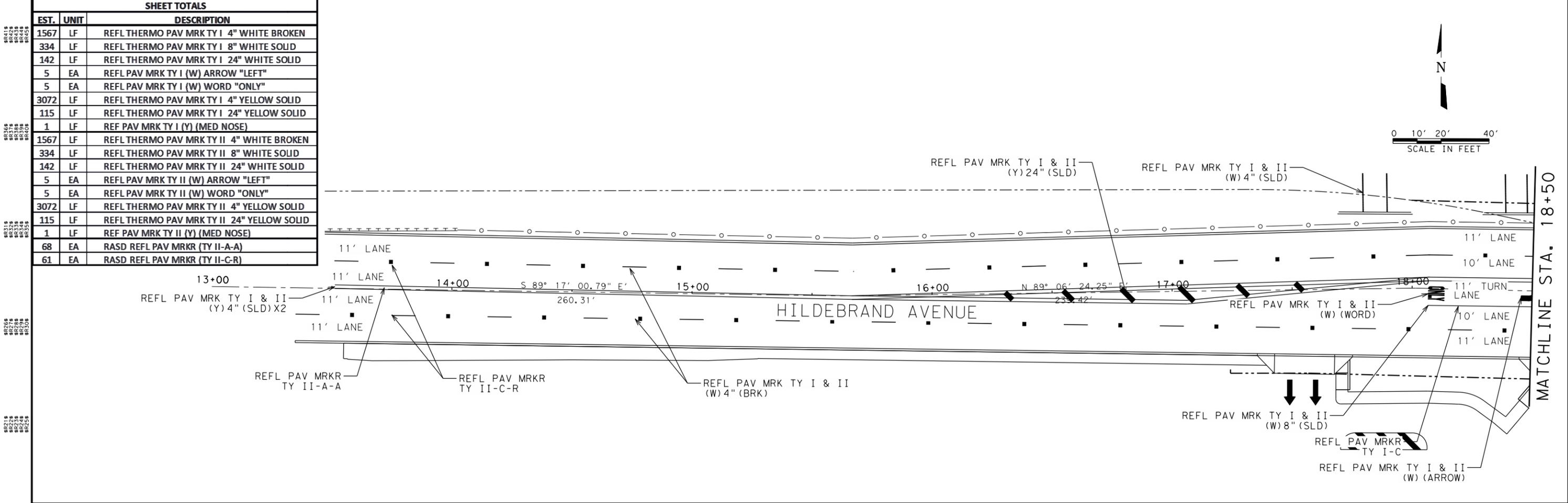
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
PAVEMENT MARKINGS
BROADWAY STREET

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 258 OF 462

MicroStation V8 Userm - OfficeSan Antonio
 Plot: S:\04\0000 SF / 15 - Mod-ENR\OUT
 2010/12/23 02:11 - 02:15:59 PM Projection: Antonio

SHEET TOTALS		
EST.	UNIT	DESCRIPTION
1567	LF	REFL THERMO PAV MRK TY I 4" WHITE BROKEN
334	LF	REFL THERMO PAV MRK TY I 8" WHITE SOLID
142	LF	REFL THERMO PAV MRK TY I 24" WHITE SOLID
5	EA	REFL PAV MRK TY I (W) ARROW "LEFT"
5	EA	REFL PAV MRK TY I (W) WORD "ONLY"
3072	LF	REFL THERMO PAV MRK TY I 4" YELLOW SOLID
115	LF	REFL THERMO PAV MRK TY I 24" YELLOW SOLID
1	LF	REF PAV MRK TY I (Y) (MED NOSE)
1567	LF	REFL THERMO PAV MRK TY II 4" WHITE BROKEN
334	LF	REFL THERMO PAV MRK TY II 8" WHITE SOLID
142	LF	REFL THERMO PAV MRK TY II 24" WHITE SOLID
5	EA	REFL PAV MRK TY II (W) ARROW "LEFT"
5	EA	REFL PAV MRK TY II (W) WORD "ONLY"
3072	LF	REFL THERMO PAV MRK TY II 4" YELLOW SOLID
115	LF	REFL THERMO PAV MRK TY II 24" YELLOW SOLID
1	LF	REF PAV MRK TY II (Y) (MED NOSE)
68	EA	RASD REFL PAV MRKR (TY II-A-A)
61	EA	RASD REFL PAV MRKR (TY II-C-R)



FREESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.

FREESE & NICHOLS
4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESE.COM

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
PAVEMENT MARKINGS
HILDEBRAND AVENUE

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/5/2010
DRWN. BY: MJM	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 259 OF 462

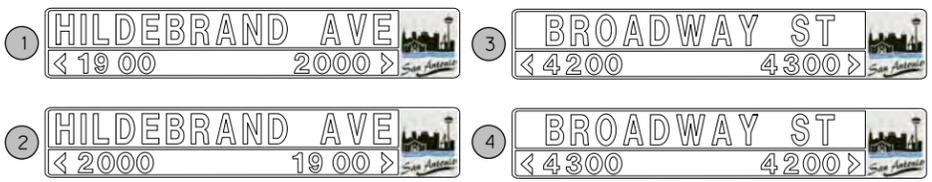
MicroStation V8 Userm - OfficeSan Antonio
Plot: S:\04\0000 SF / 174 Mod-ENR\out
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OfficeSan Antonio \$ACCOUNT# Date: 01/25/2011 - 05:16:04 PM User: mjm File: Y:\Drawings\cv-trt-pl-pvkm-03.dgn

ILSN SIGNS

LEGEND

TRAFFIC SIGNAL QUANTITIES		
ITEM	DESCRIPTION	QUANTITY
COSA 308.1	DRILLED SHAFTS (24")	6
COSA 308.1	DRILLED SHAFTS (30")	11
COSA 308.1	DRILLED SHAFTS (36")	36
COSA 308.1	DRILLED SHAFTS (48")	20
COSA 615.1	TRAFFIC SIGNAL CONTROLLER ASSEMBLY (TYPE 332 CABINET)	1
COSA 618.1	CONDUIT (2 INCH/PVC SCHEDULE 40)	102
COSA 618.3	CONDUIT (4 INCH/PVC SCHEDULE 40)	305
COSA 620.1	ELECTRICAL CONDUCTORS (NO. 6)(BARE)	10
COSA 620.2	ELECTRICAL CONDUCTORS (NO. 8)(BARE)	397
COSA 624.8	GROUND BOXES TYPE D (162922) W/ APRON	4
COSA 655.1	TYPE 332 CONTROLLER FOUNDATION	1
COSA 682.1	INSTALL VEHICLE SIGNAL SECTION WITH BACK PLATE (3 SECTIONS)	17
COSA 682.4	INSTALL PEDESTRIAN SIGNAL SECTION (12 INCH) LED (2 IND)	8
COSA 684.1	TRAFFIC SIGNAL CABLES (TYPE A)(14 AWG)(CONDUCTOR NO. 4)	503
COSA 684.1	TRAFFIC SIGNAL CABLES (TYPE A)(14 AWG)(CONDUCTOR NO. 9)	1410
COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 32")	1
COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 36")	1
COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 40")(LUM)	2
COSA 686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (1 ARM 55")(LUM)	1
COSA 687.1	PEDESTRIAN POLE ASSEMBLIES	1
COSA 688.2	PEDESTRIAN DETECTORS (2 INCH PUSH BUTTON)	8
COSA 693.1	INTERNALLY LIGHTED STREET NAME SIGNS	4
COSA 694.1	VIVDS PROCESSOR SYSTEM	1
COSA 694.2	VIVDS CAMERA ASSEMBLY	8
COSA 694.3	VIVDS CENTRAL CONTROL	1
COSA 694.4	VIVDS SET-UP SYSTEM	1
COSA 694.6	VIVDS COMMUNICATION CABLE (COAXIAL)	427
COSA 695.3	EMERGENCY PREEMPTION DETECTOR	4
COSA 695.4	EMERGENCY PREEMPTION DETECTOR CABLE	427
COSA	CAT 5 ETHERNET CABLE	24
COSA	BELDEN POWER CABLE	24
COSA	#6 THHN/THWN	20

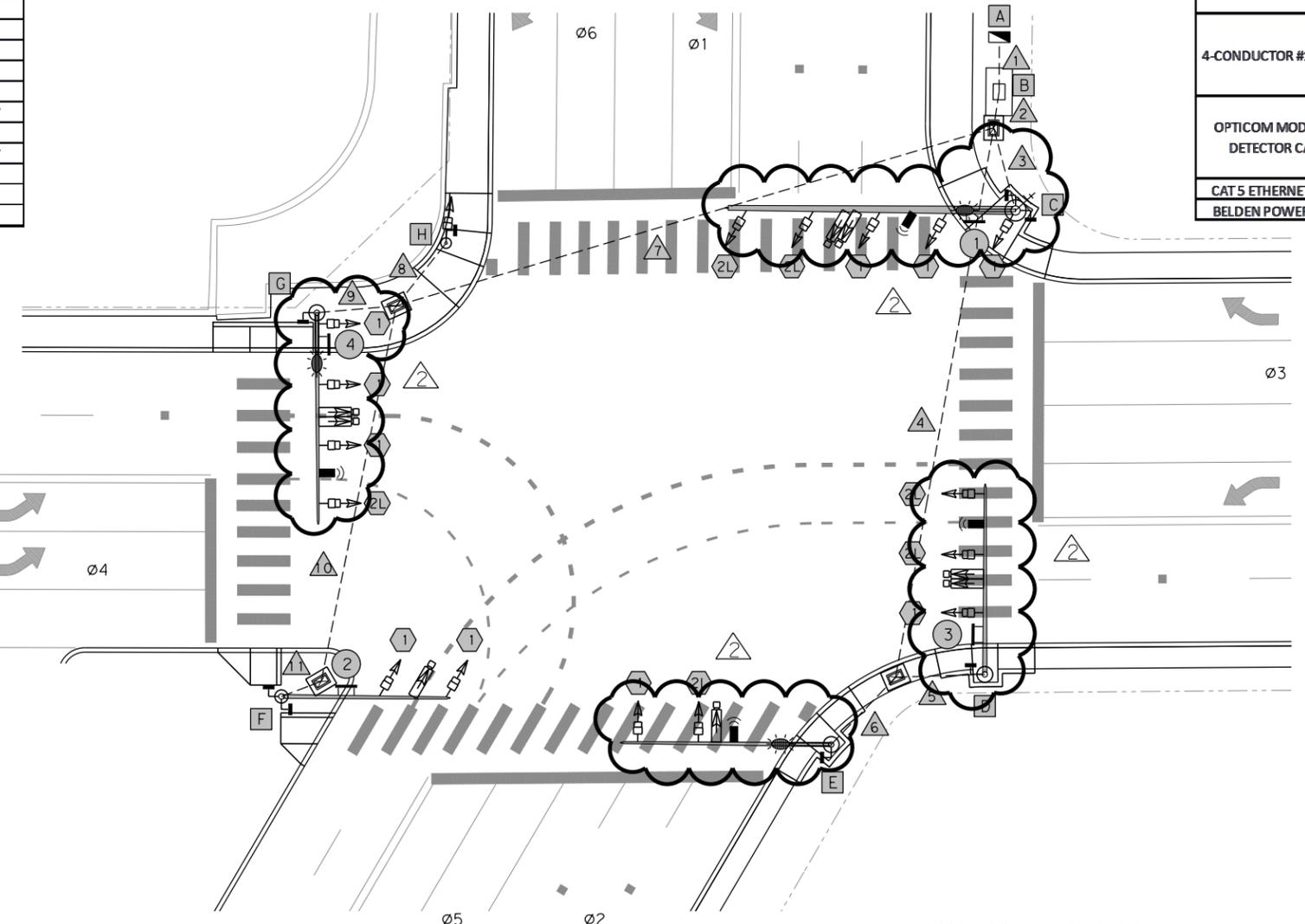


- GENERAL NOTES:
1. WIND SPEED DESIGN FOR POLES AND FOUNDATION SHALL BE A MINIMUM OF 80 MPH.
 2. THE CONTRACTOR IS TO COORDINATE THE ACTIVATION OF THE NEW CONTROLLER AND TRAFFIC SIGNALS WITH THE CITY OF SAN ANTONIO.
 3. CONTRACTOR TO INSTALL THE CONTROLLER WITH THE DEFAULT SETTINGS AND INSURE ALL EQUIPMENT IS COMPLETELY FUNCTIONAL.
 4. CONTRACTOR IS RESPONSIBLE FOR TROUBLE SHOOTING ANY OUTAGE PRIOR TO CONTACTING THE CITY OF SAN ANTONIO TRAFFIC SIGNAL DEPARTMENT.

- PROP. CONDUIT
- PROP. V. I. V. D. S.
- PROP. TRAFFIC SIGN
- PROP. PEDESTRIAN HEAD, PUSH BUTTON ASSEMBLY
- PROP. TRAFFIC SIGNAL HEAD
- PROP. TRAFFIC SIGNAL POLE
- PROP. TRAFFIC SIGNAL PULL BOX
- PROP. TRAFFIC CONTROL BOX

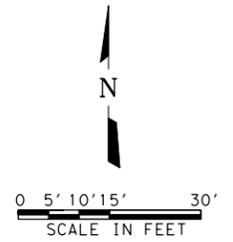
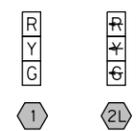
CONDUCTOR AND CONDUIT SCHEDULE		CONDUIT / SPAN RUN NUMBER											
B = BORED T = TRENCHED E = EXISTING	CONDUIT / SPAN RUN NUMBER	1	1	1	1	1	1	1	1	1	1	1	1
	NUMBER OF CONDUITS	1	1	1	1	1	1	1	1	1	1	1	1
	CONDUIT SIZE IN INCHES	2.0	4.0	2.0	4.0	2.0	2.0	4.0	2.0	4.0	2.0	4.0	2.0
	CONDUIT / SPAN LENGTH (FT)	10	7	17	106	17	18	119	16	16	73	8	
	RUN TYPE	T	T	T	T	T	T	T	T	T	T	T	T
CIRCUIT		NUMBER OF CABLES / WIRES											
#6 THHN/THWN	120 POWER HOT & COMMON	2											
BARE BOND GROUND	BARE #6	1											
	BARE #8		1	1	1	1	1	1	1	1	1	1	1
9-CONDUCTOR #14 CABLE	Ø5, Ø2 VH - POLE C	1	1										
	Ø4 VH - POLE D	1		1	1								
	Ø1, Ø6 VH - POLE E	1		1		1							
	Ø6 VH - POLE F	1						1			1	1	
9-CONDUCTOR #14 CABLE	Ø3 VH - POLE G	1						1		1			
	Ø2, Ø3 PH & PPB - POLE C	1	1										
	Ø2 PH & PPB - POLE D	1		1	1								
	Ø4 PH & PPB - POLE E	1		1		1							
	Ø4, Ø6 PH & PPB - POLE F	1						1			1	1	
TWO-IN-ONE COAXIAL & 3-CONDUCTOR #18 POWER CABLE	Ø6 PH & PPB - POLE G	1						1		1			
	Ø3 PH & PPB - POLE H	1							1	1			
	Ø2, Ø5 VIVDS - POLE C	1	1										
	Ø4 VIVDS - POLE D	1		1	1								
4-CONDUCTOR #14 CABLE	Ø1, Ø6 VIVDS - POLE E	1		1		1							
	Ø3 VIVDS - POLE G	1						1		1			
	ILSN SIGN - POLE C	1	1										
OPTICOM MODEL 138 DETECTOR CABLE	ILSN SIGN - POLE D	1		1	1						1	1	
	ILSN SIGN - POLE F	1						1					
	ILSN SIGN - POLE G	1							1		1		
CAT 5 ETHERNET CABLE	Ø2 - POLE C	1	1										
	Ø4 - POLE D	1		1	1								
	Ø6 - POLE E	1		1		1							
BELDEN POWER CABLE	Ø3 - POLE G	1						1		1			
	WIRELESS AP - POLE C	1	1										
BELDEN POWER CABLE	WIRELESS AP - POLE C	1	1										
	WIRELESS AP - POLE C	1	1										

EQUIPMENT SCHEDULE	
ID	CONSTRUCTION NOTES
A	INSTALL ELECTRICAL SERVICE AND METER
B	INSTALL TYPE 332 CABINET & 2070 CONTROLLER ASSEMBLY ON CITY TYPE CONCRETE FOUNDATION
C	INSTALL 30' HIGH, SMA-80 STEEL POLE WITH 55' MA, 20' DEEP 48-A FOUNDATION, (2) LED COUNTDOWN PEDESTRIAN HEADS, (2) PEDESTRIAN PUSH BUTTONS WITH R10-4B (L&R) SIGNS, (1) 7' ILSN MAST ARM, (2) VIVDS CAMERA ASSEMBLIES, (1) ANTENNA, (1) LUMINAIRE, AND (1) OPTICOM DETECTOR.
D	INSTALL 24' HIGH, SMA-80 STEEL POLE WITH 36' MA, 12' DEEP 36-A FOUNDATION, (1) LED COUNTDOWN PEDESTRIAN HEADS, (1) PEDESTRIAN PUSH BUTTONS WITH R10-4B (L&R) SIGNS, (1) 7' ILSN MAST ARM, (2) VIVDS CAMERA ASSEMBLIES, AND (1) OPTICOM DETECTOR.
E	INSTALL 30' HIGH, SMA-80 STEEL POLE WITH 40' MA, 12' DEEP 36-A FOUNDATION, (1) LED COUNTDOWN PEDESTRIAN HEADS, (1) PEDESTRIAN PUSH BUTTONS WITH R10-4B (L&R) SIGNS, (1) VIVDS CAMERA ASSEMBLY, (1) LUMINAIRE, AND (1) OPTICOM DETECTOR.
F	INSTALL 24' HIGH, SMA-80 STEEL POLE WITH 32' MA, 11' DEEP 30-A FOUNDATION, (2) LED COUNTDOWN PEDESTRIAN HEADS, (2) PEDESTRIAN PUSH BUTTONS WITH R10-4B (L&R) SIGNS, AND (1) VIVDS CAMERA ASSEMBLY.
G	INSTALL 30' HIGH, SMA-80 STEEL POLE WITH 40' MA, 12' DEEP 36-A FOUNDATION, (1) LED COUNTDOWN PEDESTRIAN HEADS, (1) PEDESTRIAN PUSH BUTTONS WITH R10-4B (L&R) SIGNS, (1) 7' ILSN MAST ARM, (2) VIVDS CAMERA ASSEMBLIES, (1) LUMINAIRE, AND (1) OPTICOM DETECTOR.
H	INSTALL 9' HIGH, SMA-80 STEEL POLE WITH 6' DEEP 24-A FOUNDATION, (1) LED COUNTDOWN PEDESTRIAN HEADS, AND (1) PEDESTRIAN PUSH BUTTONS WITH R10-4B (L&R) SIGN.

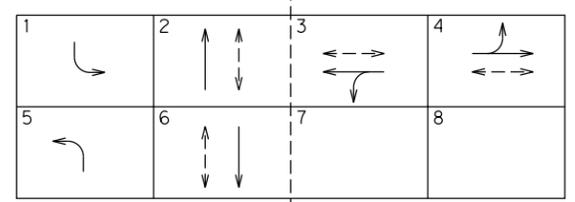


TRAFFIC SIGNALIZATION PLAN
HILDEBRAND AND BROADWAY

PROP. 12" (LED) LENS WITH BACK PLATE



PHASE DIAGRAM



FREESSE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

STATE OF TEXAS
JOHN C. COLQUHOUN
92675
LICENSED PROFESSIONAL ENGINEER

1/25/2010
John C. Colquhoun

1	1/25/2011	ADDENDUM 2	J. C. C.
NO.	DATE	REVISION	APPROV.

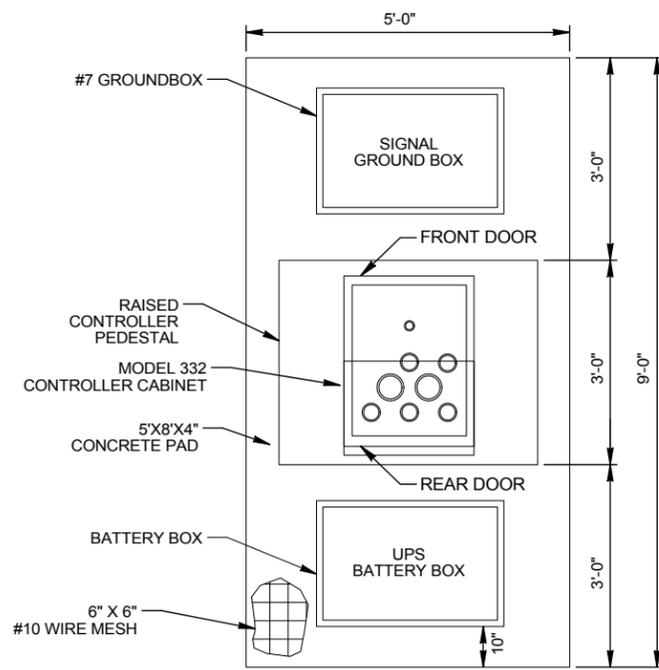
FREESSE & NICHOLS
4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESSE.COM

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
TRAFFIC SIGNAL LAYOUT
HILDEBRAND AND BROADWAY

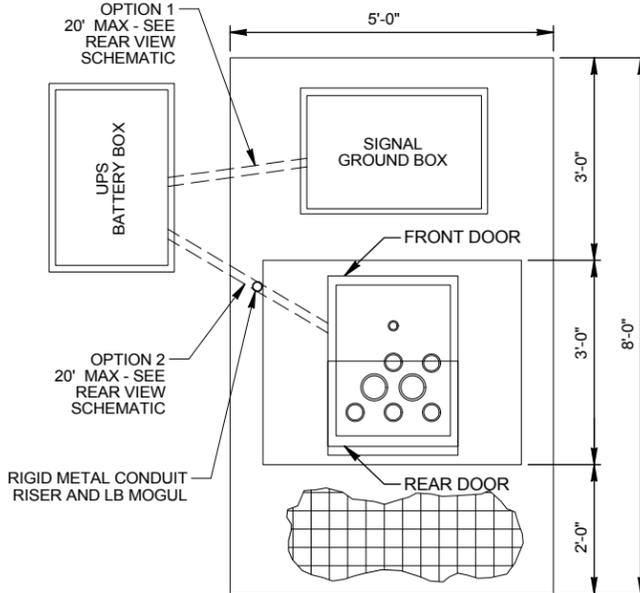
100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 12/15/2010
DRWN. BY: ML	DSGN. BY: SES	CHKD. BY: JCC
		SHEET NO.: 285 OF 482

MicroStation V8 Userm - OfficeSan Antonio
 Plotter: HP DesignJet 2400C
 Plot Scale: 1/8" = 1'-0"
 Date: 01/25/2011 09:16:07 PM
 User: mjm
 File: Y:\Drawings\cv-trt-pl-intsect-04.dgn



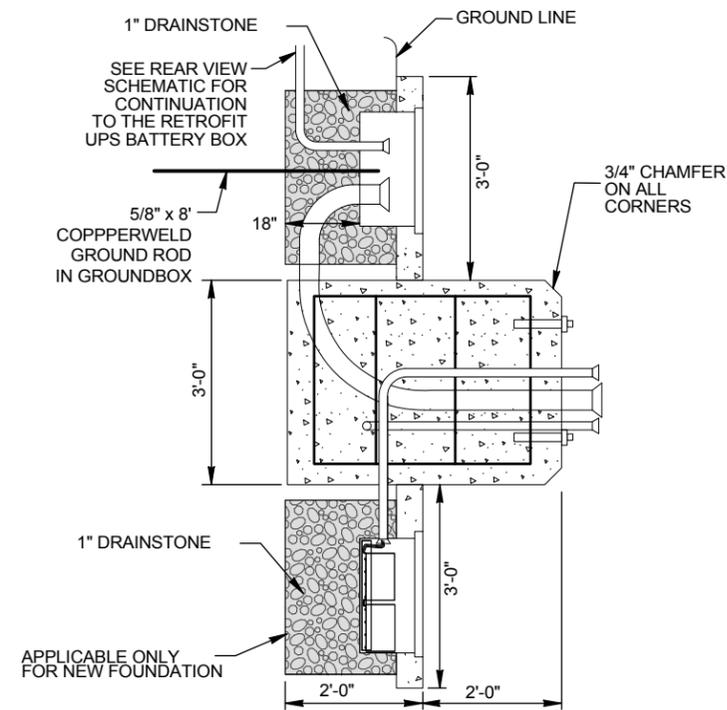
TOP VIEW

(REQUIRED FOR NEW FOUNDATION)

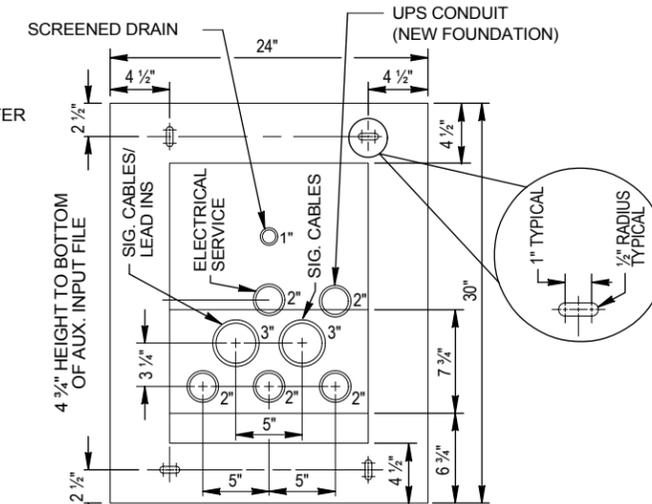


TOP VIEW

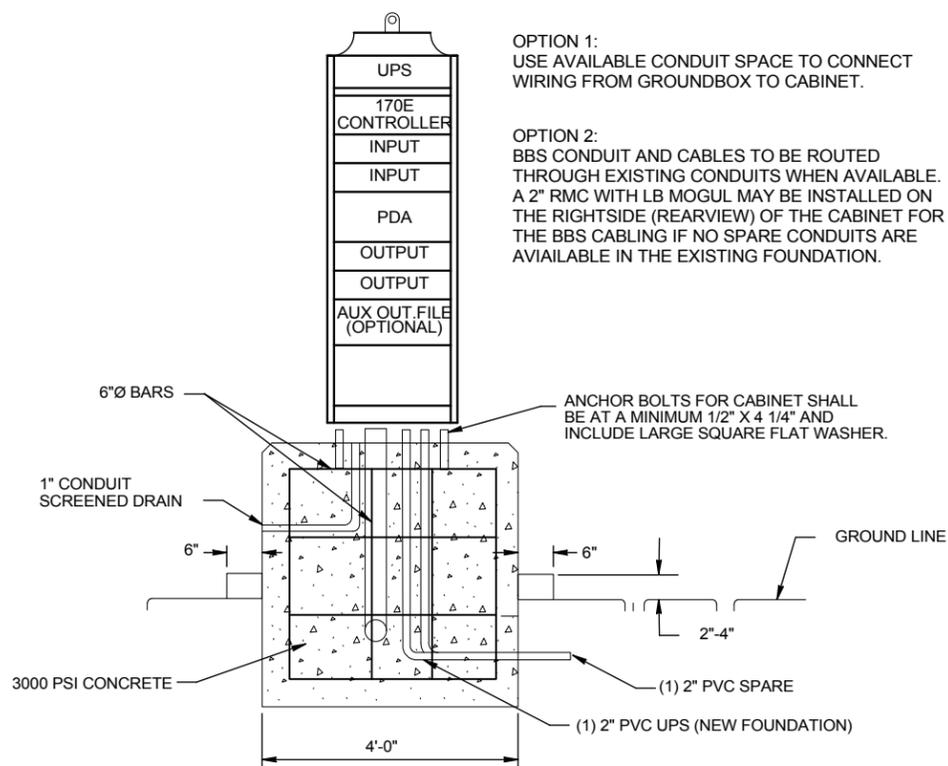
(RETROFITTED FOUNDATION)



SIDE VIEW



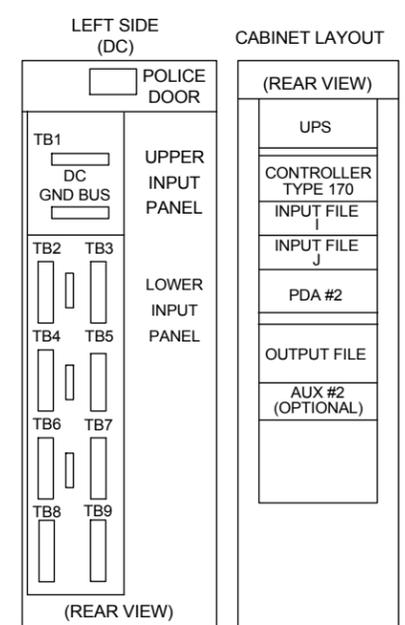
332 BASE PLATE TEMPLATE



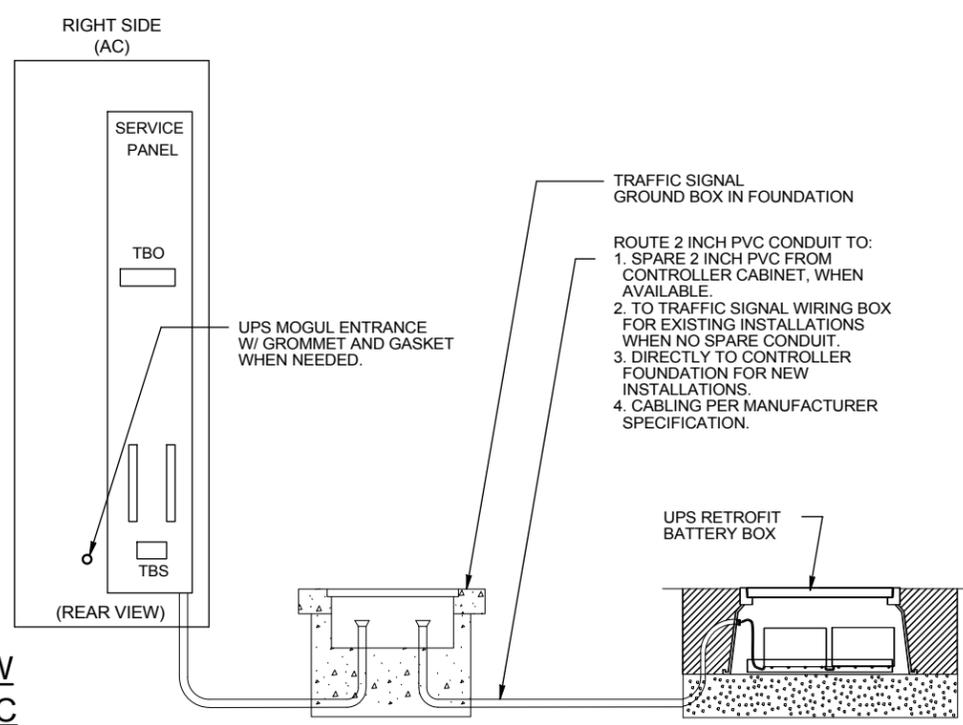
REAR VIEW

OPTION 1:
USE AVAILABLE CONDUIT SPACE TO CONNECT WIRING FROM GROUNDBOX TO CABINET.

OPTION 2:
BBS CONDUIT AND CABLES TO BE ROUTED THROUGH EXISTING CONDUITS WHEN AVAILABLE. A 2" RMC WITH LB MOGUL MAY BE INSTALLED ON THE RIGHTSIDE (REARVIEW) OF THE CABINET FOR THE BBS CABLING IF NO SPARE CONDUITS ARE AVAILABLE IN THE EXISTING FOUNDATION.



REAR VIEW SCHEMATIC



TRAFFIC SIGNAL GROUND BOX IN FOUNDATION

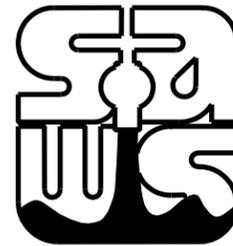
ROUTE 2 INCH PVC CONDUIT TO:
1. SPARE 2 INCH PVC FROM CONTROLLER CABINET, WHEN AVAILABLE.
2. TO TRAFFIC SIGNAL WIRING BOX FOR EXISTING INSTALLATIONS WHEN NO SPARE CONDUIT.
3. DIRECTLY TO CONTROLLER FOUNDATION FOR NEW INSTALLATIONS.
4. CABLING PER MANUFACTURER SPECIFICATION.

- NOTES:**
- CONTRACTOR TO INSTALL GROUNDBOX, CONDUIT, CONTROLLER FOUNDATION, CONCRETE SLAB AND CONDUIT FROM GROUNDBOX TO CABINET. SEE BATTERY BACKUP SYSTEM SPECIFICATION FOR ADDITIONAL WIRING DETAILS.
 - FOR NEW FOUNDATIONS A DEDICATED BBS CONDUIT FROM THE FOUNDATION TO THE BATTERY BOX SHALL BE PROVIDED BY THE CONTRACTOR.

CITY OF SAN ANTONIO TRAFFIC MANAGEMENT DIVISION DEPARTMENT OF PUBLIC WORKS				
TRAFFIC SIGNAL STANDARDS BATTERY BACKUP SYSTEM LAYOUT				
TM-BBS-08				
DRWN: MAB	APVD:	DATE: 5-27-08	294A	SHT. NO.
RVSD:	APVD:	DATE:		1 OF 1
RVSD:	APVD:	DATE:		NOT TO SCALE

INDEX OF SHEETS	
SHEET NO	DESCRIPTION
1 OF 13	COVER SHEET
2 OF 13	GENERAL NOTES
3 OF 13	OVERALL WATER PLAN
4 OF 13	BROADWAY STA 17+81.19 TO STA 22+00.00
5 OF 13	BROADWAY STA 22+00.00 TO STA 23+60.00
6 OF 13	BROADWAY STA 26+00.00 TO STA 30+00.00
7 OF 13	BROADWAY STA 30+00.00 TO END OF PROJECT
8 OF 13	HILDEBRAND AVE. STA 13+91.40 TO STA 15+00.00
9 OF 13	HILDEBRAND AVE. STA 15+00.00 TO STA 17+00.00
10 OF 13	HILDEBRAND AVE. STA 17+00.00 TO STA 21+00.00
11 OF 13	HILDEBRAND AVE. STA 21+00.00 TO STA 25+00.00
12 OF 13	HILDEBRAND AVE. STA 25+00.00 TO STA: 29+00.00
13 OF 13	HILDEBRAND AVE. STA 29+00 TO STA 31+42.84

SAN ANTONIO WATER SYSTEM



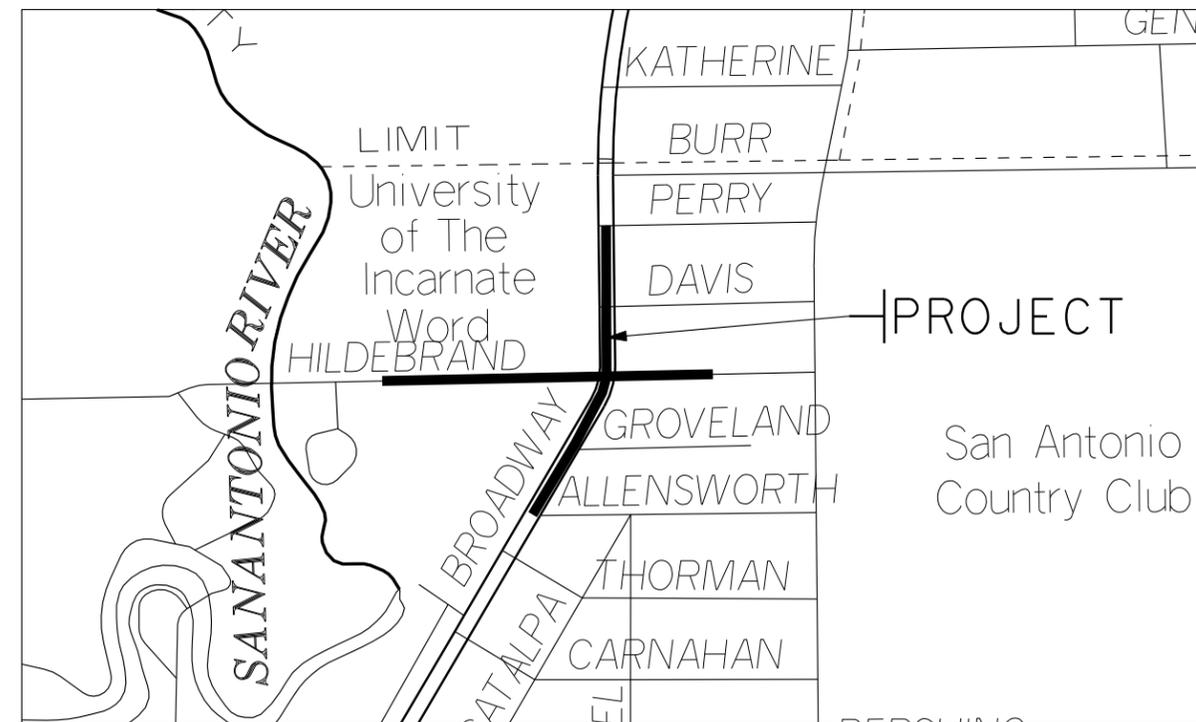
JOB NO: 08-5016

BROADWAY CORRIDOR PHASE IIIA WATER PLANS

QUANTITY ESTIMATE			
ITEM NO	DESCRIPTION	UNIT	QUANTITY
100	MOBILIZATION	LS	10%
101	PREPARING RIGHT-OF-WAY	LS	5%
511.3	REPLACING WITH HOT ASPH. CONC PVMT. (12" COMP. DEPTH)	S.Y.	1970
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	3895
814	12" DUCTILE IRON PIPE (Restrained)	LF	30
818	4" PVC WATERLINE (Restrained)	LF	35
818	6" PVC WATERLINE (Restrained)	LF	35
818	8" PVC WATERLINE (Restrained)	LF	710
818	12" PVC WATERLINE (Restrained)	LF	3005
818	20" PVC WATERLINE (Restrained)	LF	115
824	RELAY 1/2" LONG SERVICE	EA	1
824	RELAY 3/4" SHORT SERVICE	EA	3
824	RELAY 3/4" LONG SERVICE	EA	3
824	RELAY 1" SHORT SERVICE	EA	2
824	RELAY 1" LONG SERVICE	EA	4
824	RELAY 2" SHORT SERVICE	EA	2
824	RELAY 2" LONG SERVICE	EA	1
824	RELAY 4" SHORT SERVICE	EA	2
824	RELAY 6" SHORT SERVICE	EA	3
824	RELAY 8" SHORT SERVICE	EA	3
824	RELAY 8" LONG SERVICE	EA	1
824	NEW 2" LONG SERVICE	EA	1
828	4" GATE VALVE	EA	1
828	6" GATE VALVE	EA	1
828	8" GATE VALVE	EA	6
828	12" GATE VALVE	EA	7
833	EXISTING METER AND METER BOX RELOCATION	EA	17
833	METER BOX	EA	17
834	FIRE HYDRANT	EA	14
836	PIPE FITTINGS, ALL SIZES AND TYPES	TON	7
840	4" WATER TIE IN	EA	1
840	6" WATER TIE IN	EA	4
840	8" WATER TIE IN	EA	1
840	10" WATER TIE IN	EA	1
840	20" WATER TIE IN	EA	2
841	HYDROSTATIC TESTING	EA	7
844	2" BLOWOFF ASSEMBLY (PERMANENT)	EA	3
844	2" BLOWOFF ASSEMBLY (TEMPORARY)	EA	5
844	4" BLOWOFF ASSEMBLY (TEMPORARY)	EA	1
846	1" AIR RELEASE VALVE	EA	1
856.2	18" CARRIER PIPE	LF	42
856.2	24" CARRIER PIPE	LF	44
856.2	36" CARRIER PIPE	LF	30
856.3	CASING 18"	LF	42
856.3	CASING 24"	LF	44
856.3	CASING 36"	LF	30
858	CONCRETE SADDLE	CY	10
1010	FLOWABLE FILL	CY	550
3000.14	REMOVAL, TRANSPORTATION AND DISPOSAL OF AC PIPE	LS	1
3000.15	ASBESTOS ABATEMENT WORK PLANS	LS	1

SUMMARY OF QUANTITY FOR WATER PER SHEET													
ITEM NO	DESCRIPTION		SHT 4	SHT 5	SHT 6	SHT 7	SHT 8	SHT 9	SHT 10	SHT 11	SHT 12	SHT 13	TOTAL
100	MOBILIZATION	LS											10%
101	PREPARING RIGHT-OF-WAY	LS											5%
511.3	REPLACING WITH HOT ASPH. CONC PVMT. (12" COMP. DEPTH)	S.Y.											1970
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	755	200	620	525	70	560	390	255	520		3895
814	12" DUCTILE IRON PIPE (Restrained)	LF					30						30
818	4" PVC WATERLINE (Restrained)	LF	35										35
818	6" PVC WATERLINE (Restrained)	LF	35										35
818	8" PVC WATERLINE (Restrained)	LF	235		155	175					145		710
818	12" PVC WATERLINE (Restrained)	LF	370	200	465	350	40	560	390	255	375		3005
818	20" PVC WATERLINE (Restrained)	LF	115										115
824	RELAY 1/2" LONG SERVICE	EA	1										1
824	RELAY 3/4" SHORT SERVICE	EA	3										3
824	RELAY 3/4" LONG SERVICE	EA										3	3
824	RELAY 1" SHORT SERVICE	EA				1							1
824	RELAY 1" LONG SERVICE	EA			1				1		1	1	4
824	RELAY 2" SHORT SERVICE	EA		1						1			2
824	RELAY 2" LONG SERVICE	EA							1				1
824	RELAY 4" SHORT SERVICE	EA		1		1							2
824	RELAY 6" SHORT SERVICE	EA	1						2				3
824	RELAY 8" SHORT SERVICE	EA	1	1					1				3
824	RELAY 8" LONG SERVICE	EA							1				1
824	NEW 2" LONG SERVICE	EA						1					1
828	4" GATE VALVE	EA		1									1
828	6" GATE VALVE	EA	1										1
828	8" GATE VALVE	EA	2	1	1	1					1		6
828	12" GATE VALVE	EA	1		2						3		7
833	EXISTING METER AND METER BOX RELOCATION	EA	5	1	1	1	1		2	1	1	5	17
833	METER BOX	EA	5	1	1	1	1		2	1	1	5	17
834	FIRE HYDRANT	EA	3	1	2	1		1	2	2	2		14
836	PIPE FITTINGS, ALL SIZES AND TYPES	TON											7
840	4" WATER TIE IN	EA	1										1
840	6" WATER TIE IN	EA	2		1	1							4
840	8" WATER TIE IN	EA									1		1
840	10" WATER TIE IN	EA	1										1
840	20" WATER TIE IN	EA											2
841	HYDROSTATIC TESTING	EA											7
844	2" BLOWOFF ASSEMBLY (PERMANENT)	EA	1			1	1						3
844	2" BLOWOFF ASSEMBLY (TEMPORARY)	EA	2		1	1					1		5
844	4" BLOWOFF ASSEMBLY (TEMPORARY)	EA	1										1
846	1" AIR RELEASE VALVE	EA					1						1
856.2	18" CARRIER PIPE	LF	42										42
856.2	24" CARRIER PIPE	LF			44								44
856.2	36" CARRIER PIPE	LF											30
856.3	CASING 18"	LF	42										42
856.3	CASING 24"	LF			44								44
856.3	CASING 36"	LF	30										30
858	CONCRETE SADDLE	CY	1	1	1	1		1	2.5	1	1.5		10
1010	FLOWABLE FILL	CY											550
3000.14	REMOVAL, TRANSPORTATION AND DISPOSAL OF AC PIPE	LS											1
3000.15	ASBESTOS ABATEMENT WORK PLANS	LS											1

PLEASE NOTE: WATER LINE UNDER STORM SEWER AND UTILITY CROSSING SHALL BE DUCTILE IRON PIPE (12", 8", 6" ITEM 814)



LOCATION MAP
NOT TO SCALE



UNITECH CONSULTING ENGINEERS, INC.

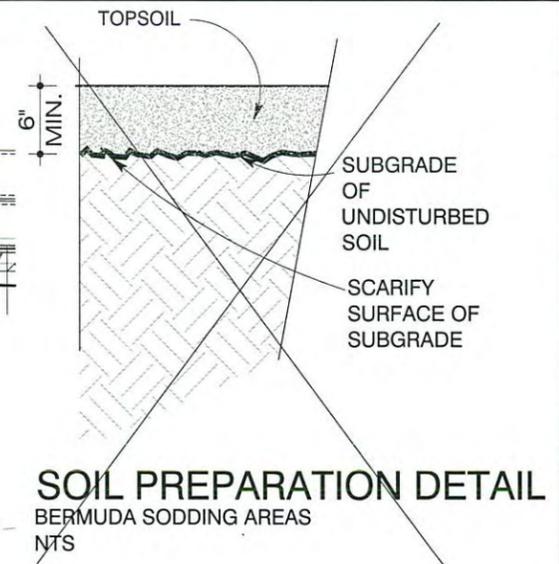
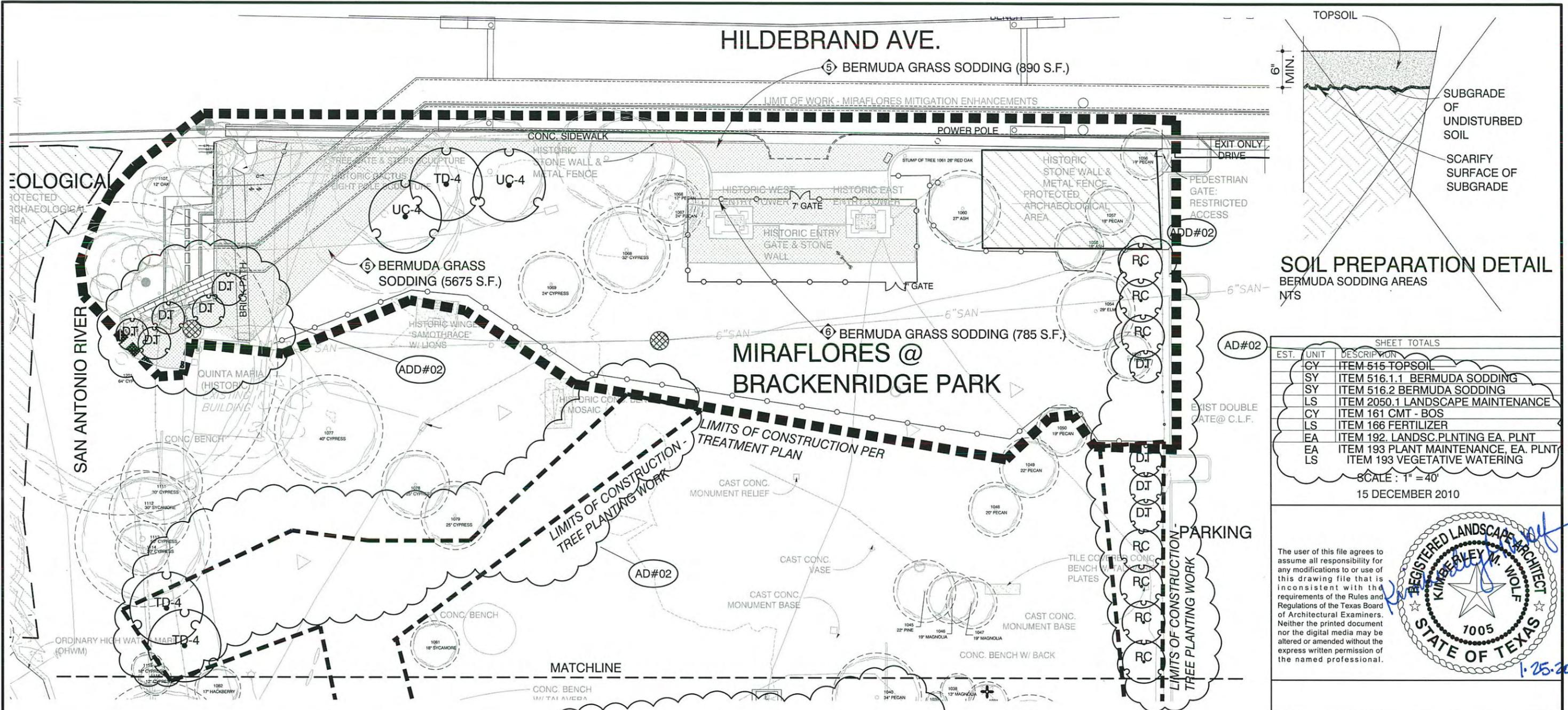
2431 E. EVANS ROAD
SAN ANTONIO, TEXAS 78259
PHONE: (210) 641-6003

FAX: (210) 641-8279

TBPE Reg. No. F-5489
WWW.UNITECH.COM

12-20-2010 (ORIGINAL)
01-26-2011 (REVISED)





SHEET TOTALS	
EST.	DESCRIPTION
CY	ITEM 515 TOPSOIL
SY	ITEM 516.1.1 BERMUDA SODDING
SY	ITEM 516.2 BERMUDA SODDING
LS	ITEM 2050.1 LANDSCAPE MAINTENANCE
CY	ITEM 161 CMT - BOS
LS	ITEM 166 FERTILIZER
EA	ITEM 192. LANDSC. PLNTING EA. PLNT
EA	ITEM 193 PLANT MAINTENANCE, EA. PLNT
LS	ITEM 193 VEGETATIVE WATERING

SCALE: 1" = 40'
15 DECEMBER 2010



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PLANTING NOTES (# Keyed on Plan)

1. PROVIDE BERMUDA SODDING ALL AREAS DISTURBED BY CONSTRUCTION.
 2. BERMUDA SODDING TO BE *Cynodon dactylon* 'TIF 419' SOLID SOD.
 3. SOD TO BE MAINTAINED FOR 12 MONTHS FOLLOWING APPROVED SUBSTANTIAL COMPLETION INSPECTION.
- 5 BERMUDA SODDING, ITEM 516.1.1 TO BE FUNDED BY BROADWAY CORRIDOR ROADWAY PROJECT.
- 6 BERMUDA SODDING, ITEM 516.1.2 TO BE FUNDED BY MIRAFLORES MITIGATION ENHANCEMENTS PROJECT. RFAGE SPRINGS.

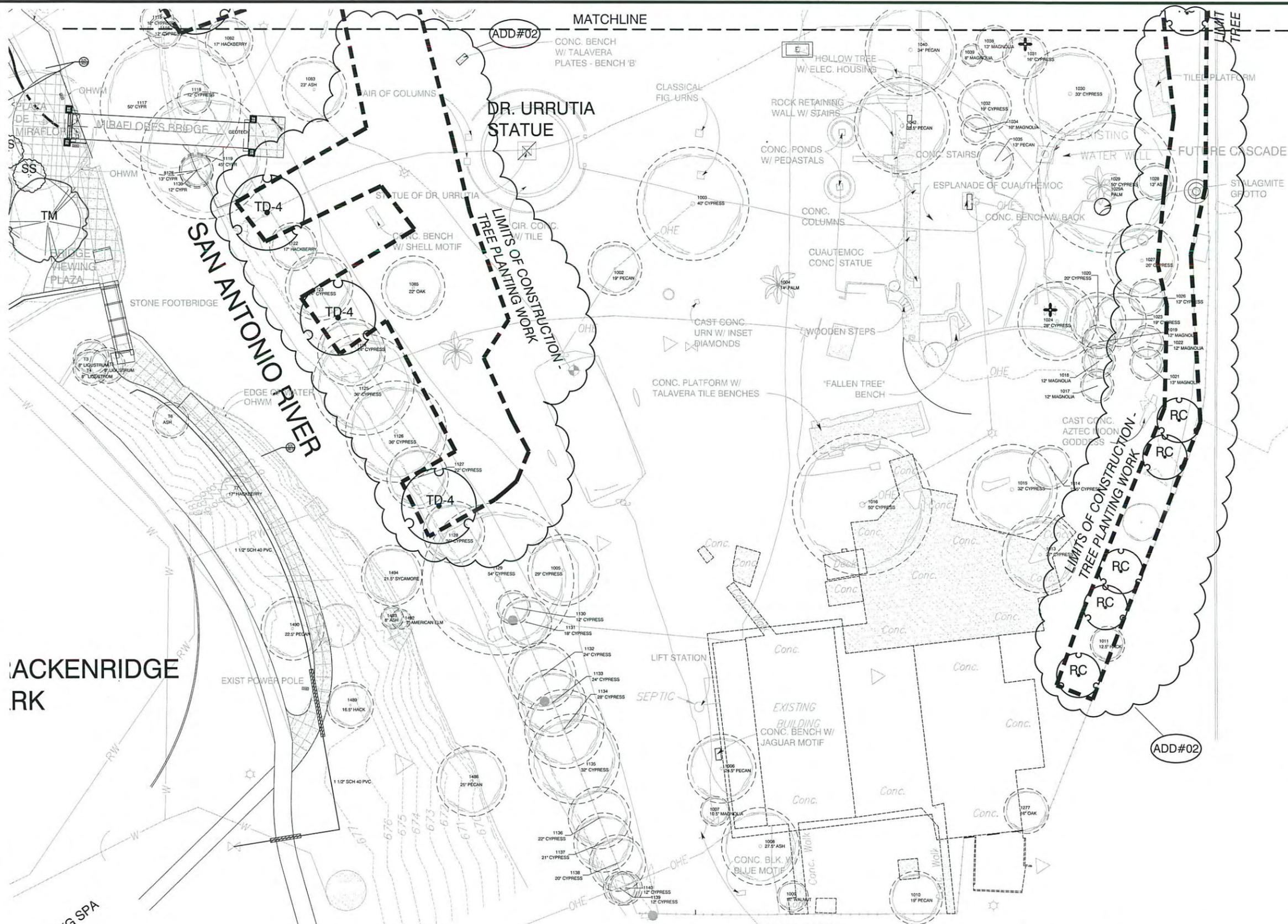
DT (*Diospyrus texana*) Texas persimmon - QUANTITY PER PLAN. 5'-6" Min. height and 5'-6" Min. Spread. Container Grown. Ref. Planting Detail Sheet.

RC (*Rhamnus caroliniana*) Carolina Buckthorn - QUANTITY PER PLAN. 5'-6" Min. height and 5'-6" Min. Spread. Container Grown. Ref. Planting Detail Sheet.

TD-4 (*Taxodium Distichum*) Bald Cypress - 4" caliper - QUANTITY PER PLAN. 16'-18' Min. height and 8'-12' Min. Spread. Container Grown. Ref. Planting Detail Sheet.

UC-4 (*Ulmus crassifolia*) Cedar elm - 4" caliper - QUANTITY PER PLAN. 16'-18' Min. height and 6'-7" Min. Spread. Container Grown. Ref. Planting Detail Sheet.

ADDENDUM 2, ATTACHMENT "E"



ACKENRIDGE
RK

KG SPA

ADDENDUM 2, ATTACHMENT "F"

DT (*Diospyrus texana*) Texas persimmon - QUANTITY PER PLAN. 5'-6" Min. height and 5'-6" Min. Spread. Container Grown. Ref. Planting Detail Sheet.

RC (*Rhamnus caroliniana*) Carolina Buckthorn - QUANTITY PER PLAN. 5'-6" Min. height and 5'-6" Min. Spread. Container Grown. Ref. Planting Detail Sheet.

TD-4 (*Taxodium Distichum*) Bald Cypress - 4" caliper - QUANTITY PER PLAN. 16'-18" Min. height and 8'-12" Min. Spread. Container Grown. Ref. Planting Detail Sheet.

UC-4 (*Ulmus crassifolia*) Cedar elm - 4" caliper - QUANTITY PER PLAN. 16'-18" Min. height and 6'-7" Min. Spread. Container Grown. Ref. Planting Detail Sheet.

NOTE: THE MIRAFLORES PROJECT SITE IS ON THE NATIONAL REGISTER OF HISTORIC PLACES. EACH GARDEN ORNAMENT/SITE FEATURE HAS BEEN DOCUMENTED AND SHOULD BE PROTECTED DURING CONSTRUCTION.

SHEET TOTALS		
EST.	UNIT	DESCRIPTION
	SY	ITEM 516.1.1 BERMUDA SODDING
	SY	ITEM 516.2 BERMUDA SODDING
	LS	ITEM 2050.1 LANDSCAPE MAINTENANCE
	CY	ITEM 161 CMT - BOS
	LS	ITEM 166 FERTILIZER
	EA	ITEM 192. LANDSC.PLNTING EA. PLNT
	EA	ITEM 193 PLANT MAINTENANCE, EA. PLNT
	LS	ITEM 193 VEGETATIVE WATERING

SCALE : 1" = 40'
15 DECEMBER 2010

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NO.	DATE	REVISION
1	01/25/2011	ADDENDUM NO. 2

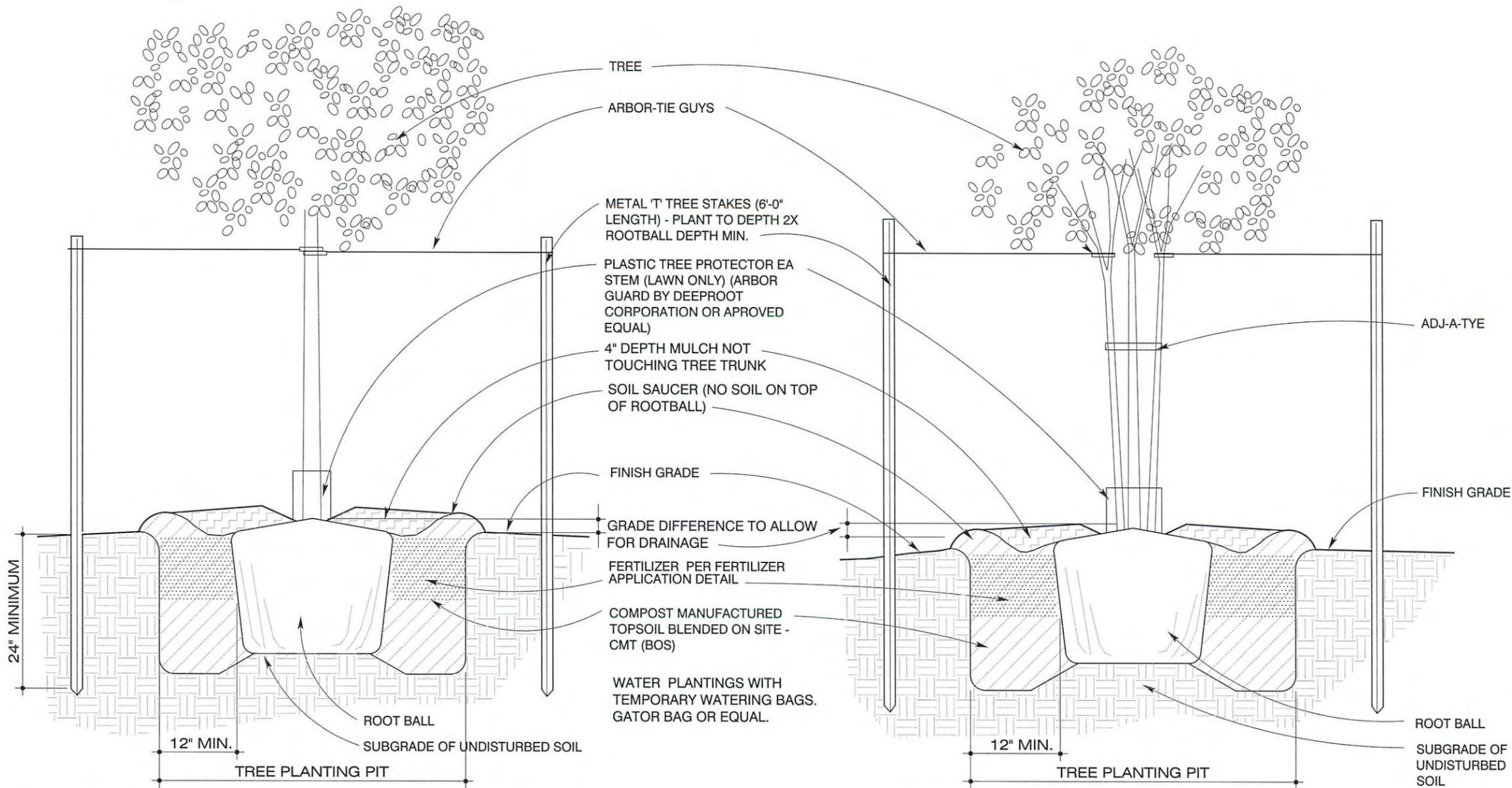
RVK REHLER, VAUGHN & KOONE, INC.
745 EAST MULBERRY AVE.
SAN ANTONIO, TX 78212
210-733-3535

FREES & NICHOLS
4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210)298-3801 WWW.FREES.COM

FREES AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
BROADWAY CORRIDOR, PHASE IIIA
MIRAFLORES PARK MITIGATION ENHANCEMENTS
PLANTING PLAN
SHEET 2 OF 2

100% SUBMITTAL	PROJECT NO.: SAT08331	DATE: 01/25/2011
DRWN. BY: 222	DSGN. BY: 222	CHKD. BY: 222
SHEET NO.: 2		OF 2



SINGLE STEM TREE

MULTI-STEM TREE

NOTE:

1. PLACE STAKES IN THE DIRECTION OF PREDOMINATE WINDS OF THE AREA.
2. TREE PLANTING PIT TO BE AT LEAST TWICE THE DIAMETER OF THE ROOT BALL
3. REMOVE BURLAP WRAP & ROPES/ CABLES FROM THE TOP OF THE ROOT BALL
4. BREAK UP SIDES AND BOTTOM OF TREE HOLE SO ROOTS CAN PENETRATE BASE MATERIAL

1 TREE PLANTING

NEW PLANTINGS
NTS

SHEET TOTALS		
EST.	UNIT	DESCRIPTION

SCALE : 1" = NOT TO SCALE
15 DECEMBER 2010

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1	01/25/2011	ADDENDUM NO. 2
NO.	DATE	REVISION

RVK REHLER, VAUGHN & KOONE, INC.
745 EAST MULBERRY AVE.
SAN ANTONIO, TX 78212
210-733-3535
architecture interior design landscape architecture

FRESE & NICHOLS
4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210)298-3801 WWW.FRESE.COM

FRESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
MIRAFLORES PARK MITIGATION ENHANCEMENTS

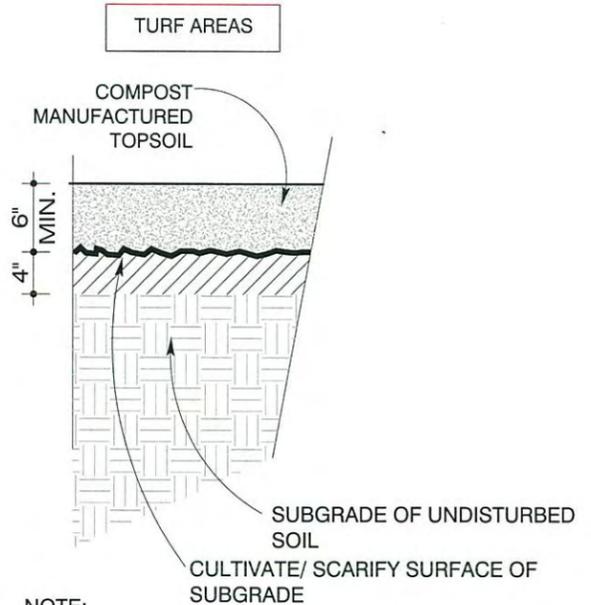
PLANTING DETAILS
SHEET 1 OF 2

ADDENDUM 2, ATTACHMENT "H"

ADD#02

NOTE: THE MIRAFLORES PROJECT SITE IS ON THE NATIONAL REGISTER OF HISTORIC PLACES. EACH GARDEN ORNAMENT/SITE FEATURE HAS BEEN DOCUMENTED AND SHOULD BE PROTECTED DURING CONSTRUCTION.

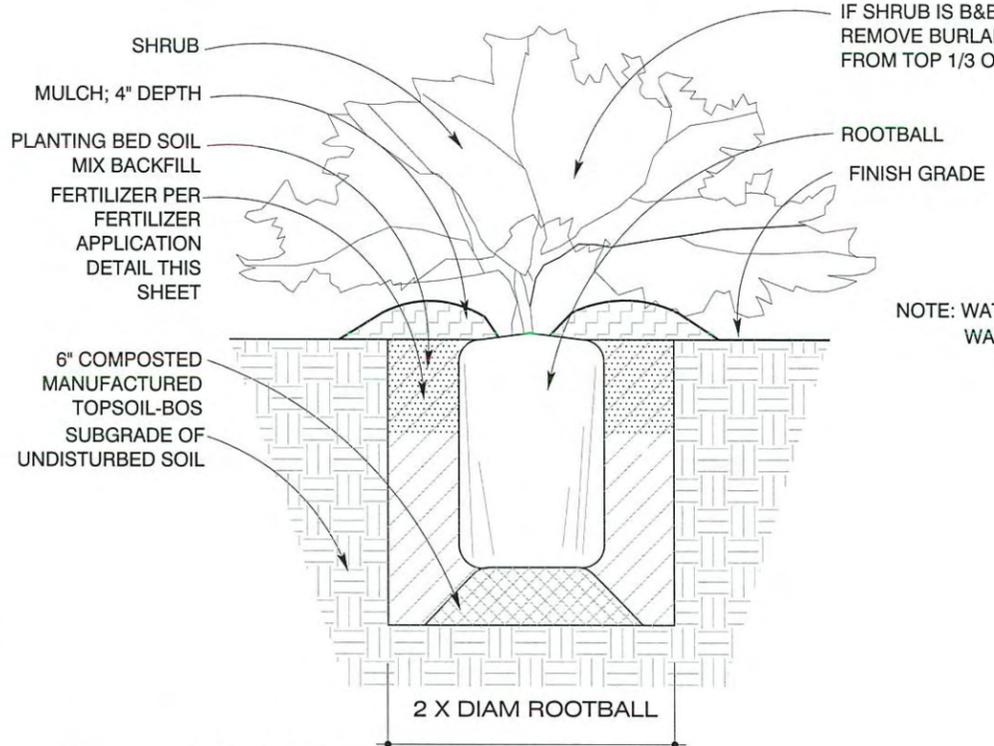
100% SUBMITTAL PROJECT NO.: SA108331 DATE: 01/25/2011
DRWN. BY: 222 DSGN. BY: 222 CHKD. BY: 222 SHEET NO.: ___ OF ___



NOTE:
 1) COMPOST MANUFACTURED TOPSOIL TO BE SCREENED & BLENDED ON-SITE (CMT-BOS).
 2) ROLL, RAKE, & DRAG PLANTING AREAS, REMOVE RIDGES, FILL DEPRESSIONS TO MEET FINISH GRADE WITH TOLERANCE OF 1/2 VARIANCE FROM PLANE AT A DISTANCE OF 20'-0".
 3.) COMPACTION @ 85% MAXIMUM DRY DENSITY.

1 SOIL PREPARATION

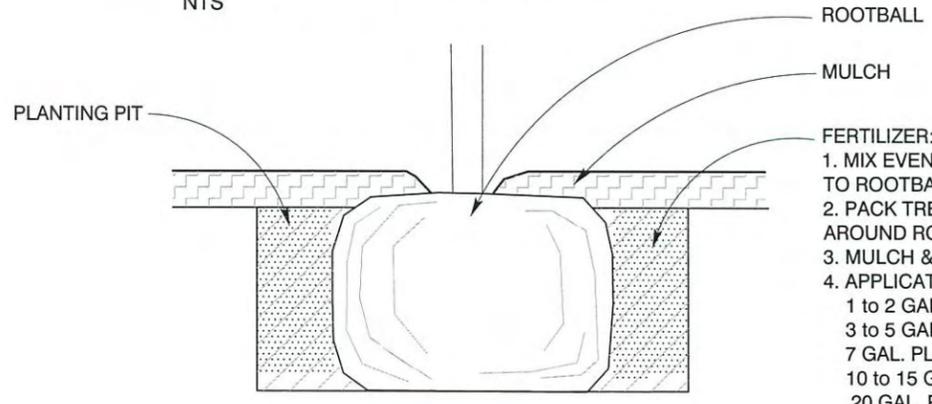
TURF SOD AND SEED NTS



NOTE: WATER MANUALLY OR BY TEMPORARY WATER BAGS - GATOR BAGS OR APPROVED EQUAL.

2 SHRUB PLANTING

NEW PLANTING - INDIVIDUAL PLANTING PIT NTS



FERTILIZER:
 1. MIX EVENLY INTO BACKFILL SOIL NEXT TO ROOTBALL
 2. PACK TREATED BACKFILL FIRMLY AROUND ROOTBALL
 3. MULCH & WATER TO SOIL SATURATION
 4. APPLICATION RATES:
 1 to 2 GAL. PLANT 1- 4 oz. Scoop
 3 to 5 GAL. PLANT 2 - 4 oz. Scoops
 7 GAL. PLANT 3 - 4 oz. Scoops
 10 to 15 GAL. PLANT 4 - 4 oz. Scoops
 20 GAL. PLANT 5 - 4 oz. Scoops
 25 GAL. PLANT 6 - 4 oz. Scoops
 LARGER SIZES For Ea. Cal. Inch use 8 Ounces

3 FERTILIZER APPLICATION:

TREES AND SHRUBS NTS

MATERIAL: MYCOR PLANT SAVER 4-7-4, www.planthealthcare.com 1-800-421-9051

SHEET TOTALS		
EST.	UNIT	DESCRIPTION

SCALE : 1" = NOT TO SCALE
 15 DECEMBER 2010

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NO.	DATE	REVISION
1	01/25/2011	ADDENDUM NO. 2

RVK REHLER, VAUGHN & KOONE, INC.
 745 EAST MULBERRY AVE.
 SAN ANTONIO, TX 78212
 210-733-3535

FREES & NICHOLS
 4040 BROADWAY ST., STE 600
 SAN ANTONIO, TX 78249
 PHONE: (210) 298-3800 FAX: (210)298-3801 WWW.FREES.COM

FREES AND NICHOLS, INC.
 TEXAS REGISTERED ENGINEERING FIRM F-2144

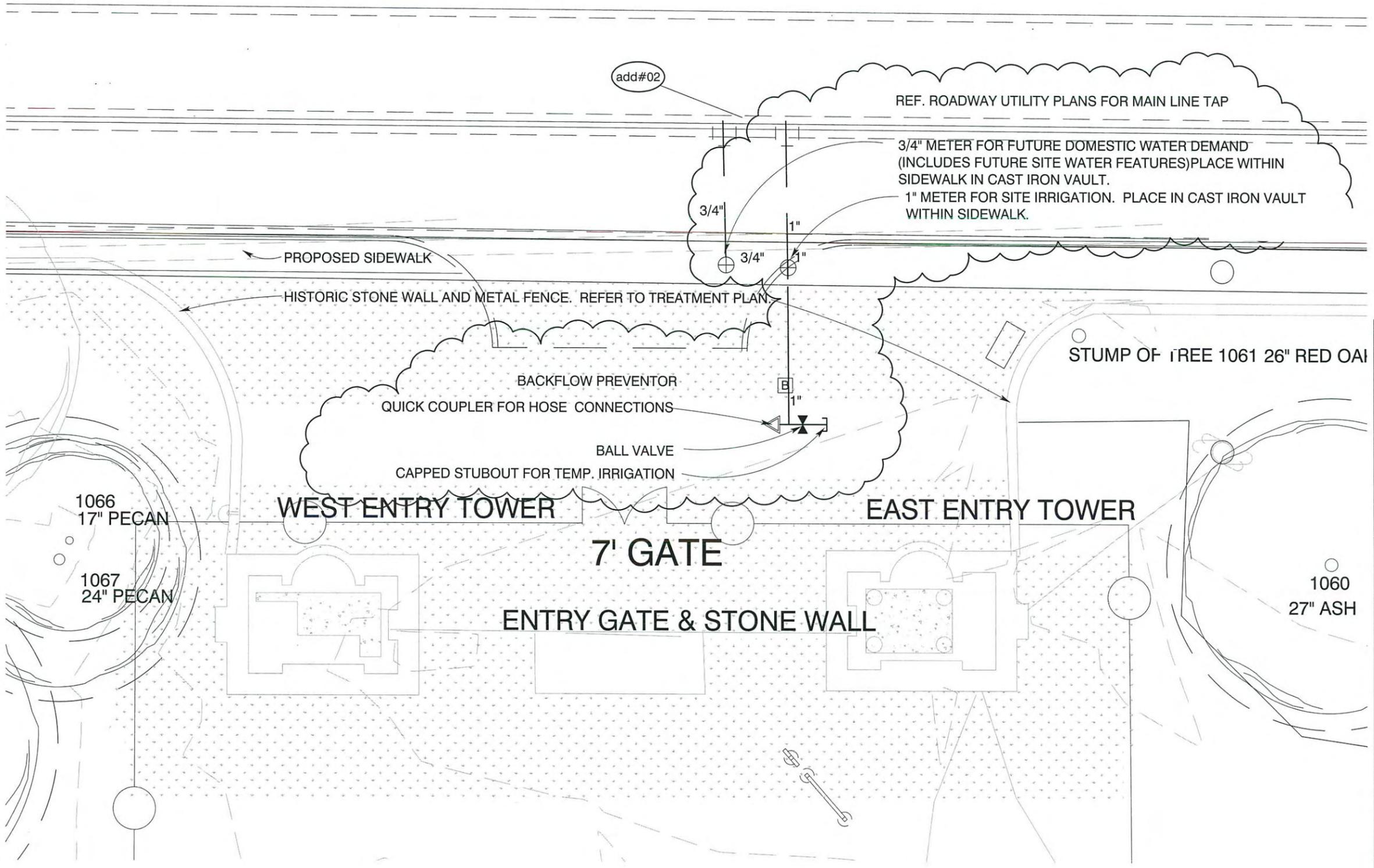
CITY OF SAN ANTONIO
 CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

BROADWAY CORRIDOR, PHASE IIIA
 MIRAFLORES PARK MITIGATION ENHANCEMENTS
 PLANTING DETAILS
 SHEET 2 OF 2

ADDENDUM 2, ATTACHMENT "I"

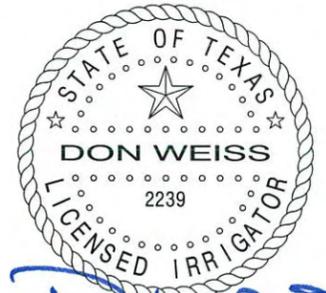
ADD#02

HILDEBRAND AVENUE



SHEET TOTALS		
EST.	UNIT	DESCRIPTION
1	L.S.	2340.1 TEMP. LANDS. IRRIG. SYSTEM

SCALE: 1" = 10'
15 DECEMBER 2010



Don Weiss
1-25-11

NO.	DATE	REVISION
1	1/25/2011	ADDENDUM NO. 2

RVK REHLER, VAUGHN & KOONE, INC.
745 EAST MULBERRY AVE.
SAN ANTONIO, TX 78212
210-733-3535



4040 BROADWAY ST., STE 600
SAN ANTONIO, TX 78249
PHONE: (210) 298-3800 FAX: (210) 298-3801 WWW.FREESE.COM

FREESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
BROADWAY CORRIDOR, PHASE IIIA
MIRAFLORES PARK MITIGATION ENHANCEMENTS
SITE IRRIGATION PLAN

ADDENDUM 2, ATTACHMENT "J"

CITY OF SAN ANTONIO

DEPARTMENT OF CAPITAL IMPROVEMENTS MANAGEMENT SERVICES

CONTRACT SERVICES DIVISION

**RECEIPT OF ADDENDUM NUMBER(S) 2 IS HEREBY ACKNOWLEDGED FOR
PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF:**

Broadway Corridor Phase IIIA

FOR WHICH BIDS WILL BE OPENED ON **February 2, 2011**

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

Company Name: _____

Address: _____

City/State/Zip Code: _____

DATE: _____

SIGNED: _____

BY: _____

Print Name

Title

NOTICE TO PLANHOLDERS:

Please insert this Addendum into your copy of the project Construction Documents.