

## **ADDENDUM NO. 2**

**PROJECT NAME: Downtown Streets – Main & Soledad**

**DATE: 7/6/2016**

## **ADDENDUM NO. 2**

This addendum should be included in and be considered part of the plans and specifications for the name of the project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum and submit with their bid.

**ID NO.: 40-00300-05-03-01**

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**The solicitation deadline has been revised to July 19, 2016 at 2:00 PM.**

**The deadline for questions has been extended until July 8, 2016 at 4:00 PM.**

Addendum No. 2 includes the following:

**a. Questions and Responses – 3 pages**

**b. Bid Forms**

- a. Form 010 – replaces the previous version of Form 010
- b. Bid Form 020 – replaces the previous version of Form 020
- c. Unit Pricing Sheet 025 – replaces the previous version of Form 025
- d. SAWS Waterworks and Sanitary Sewer Construction Special Conditions 095 – replaces the previous version of Form 095

**c. Specifications**

- a. Table of Contents – replaces the previous version of the Table of Contents from the Specifications manual
- b. List of Governing Specifications – replaces the previous version of the List of Governing Specifications from the Specifications manual
- c. Special Specification Item SP800 Project Signs – replaces the previous version of SP800 from the Specifications manual
- d. Special Specification Item SP-3 Connector Pipe Screens for Storm Sewers – is added to the Specifications manual
- e. Special Provision to Item 205 – is added to the Specifications manual

- f. Special Specification 9010 LED Pedestrian Illumination Assembly – is added to the Specifications manual
- g. Sternberg Lighting 4700 Austin Series Ornamental Poles – replaces the Sternberg Lighting 4700 Austin Series Ornamental Pole specifications from the Specifications manual
- h. Sternberg Lighting A850SR LED Old Town – replaces the Sternberg Lighting A850SR LED Old Town specifications from the Specifications manual
- i. SAWS Sewer Job No. 12-5602 List of Governing Specifications – is added to the Specifications manual
- j. Special Provision to Item 854 – is added to the Specifications manual
- k. Special Provision to Item 860 – is added to the Specifications manual
- l. Specification Section 129300 Site Furnishings – replaces the previous version of Section 12 93 00 in the Specifications manual.

**d. Plans**

- a. Estimated Quantities sheet – replaces E/Q sheet in the Plans
- b. Roadway Summary Options 1 and 2 – replaces the corresponding sheets in the Plans
- c. Removal Layout Sheets No. 99, 100, 102 and 103 – replaces the corresponding sheets in the Plans
- d. Illumination Pole Schedule – replaces the corresponding sheet in the Plans
- e. Traffic Signal Operations – 15 sheets, replaces the corresponding sheets in the Plans and adds new sheets for the additional traffic signal
- f. SAWS Water – 11 sheets, replaces the corresponding sheets in the Plans
- g. SAWS Sanitary Sewer – 11 sheets, replaces the corresponding sheets in the Plans

**e. Specification 9012 Wireless Network Lighting Control System**

**f. Time Determination Schedule – for information only**

**Note: Addenda Acknowledgement Form for Addendum 2 is attached herein. This form must be signed and submitted with the bid package.**

## QUESTIONS AND RESPONSES

1. Question: Do the Junction boxes located in the drainage plans need access holes?

Response: Yes. Note MISCELLANEOUS DRAINAGE DETAILS, SHEET 3 OF 3 specifies the exact location of the manhole for Junction Box S071. Locations of other manholes shall conform with standard detail 4'x4'x4' JUNCTION BOX STANDARDS.

2. Question: Sheet 155, along with the drainage plans of the blueprints indicate an inlet amount of 17 total, however, the bid tab indicates 19. Which amount is valid?

Response: There are seventeen locations that require inlets. One of these locations takes three modified 5-ft inlets, hence the total of nineteen units. The number of inlets is correctly shown on Sheet 15 "Storm Drain Summary" in the plans.

3. Question: With respect to the pedestrian illumination, there are pay items to complete all the work, except a pay item for the electrical service for it. The electrical service pay item located on the bid tab (total of 8), are for the traffic signals, not the pedestrian lighting. Will the city include a pay item for the electrical services in regards to the pedestrian illumination?

Response: No, the city will not include a pay item separately for the pedestrian illumination service. The electrical service for the traffic signals will also be used for the pedestrian illumination. A separate circuit is provided in each electrical service for the pedestrian illumination.

4. Question: With respect to the lighting fixtures (services), will the city pay the connection fees/any other fees to connect the lighting services to the electrical services (pay item 628 in TX DOT specs)?

Response: No, the city does not anticipate additional fees for separate lighting service connections. Item 628 "Electrical Services" is a City of San Antonio standard specification, not a TxDOT specification.

5. Question: With respect to the overhead sign panels that need to be shifted (pay item 6053), where in the plans are they located? Can you please clarify their location in the plan sheets?

Response: See Sheet 202 in the plans.

6. Question: With respect to the ROAM SYSTEM-DIVISION 16520 (pay item 9012), can you provide background on the item? Is there a system installed there already? Is this the first

project with one? Is there a list of preferred providers the city want us to use that meet this spec? If there is a list of preferred providers, can we obtain a copy from the city?

Response: The ROAM System is replaced in Addendum 2 with Synapse SimplySNAP wireless lighting control system. There is no existing system in place. This is the first project for which the City has specified the SimplySNAP system. The City does not have a list of preferred providers.

7. Question: With respect to temporary traffic signals, will temporary traffic signals be needed on the project? If yes, what does the city want?

Response: No, temporary traffic signals are not specified for the project.

8. Question: The temporary traffic signals unit in the bid tab does not conform to the spec. The bid tab lists it as a LS item, however, the spec clearly states that payment for temp traffic signals will be paid for by EACH intersection operated by one controller. Please clarify why LS if being used, what temporary traffic signals the city wants, the location of these temporary traffic signals (base bid, opt.1, opt.2) and how they will be paid for.

Response: Temporary traffic signals are not specified for the project. The item is removed from the Estimated Quantities Sheet and the Roadway Summary Sheets in Addendum 2.

9. Question: When will the roundabout for San Pedro bid?

Response: The roundabout at Main and San Pedro will bid this fall 2016. Construction is expected to be concurrent with the Main and Soledad project and coordination will be required.

10. Question: Asphalt spec 205 states that RAP can be used in mix design, will COSA contest this specification?

Response: The City currently allows up to 30% RAP for base and intermediate courses of asphalt. RAP is not allowed to be used in the final surface course.

11. Question: Does a preliminary construction schedule exist in the determination of Calendar Days established? If so, may we obtain a copy of this schedule?

Response: The Time Determination Schedule which the city used as the basis for allowable calendar days is being added to the contents of the Addendum, for information only.

12. Question: Which value for the Cementitious exterior overlay does the city want us to utilize? The quantity located on the bid tab or the quantity located on the estimated quantities sheet in the plans? The quantities differ by over 30000 SF.

Response: The quantity of 20,007 SF is correctly shown on the Estimated Quantities Sheet and Roadway Summary Sheet in the plans. The quantity shown on Form 025 in the Addendum has been corrected to agree with the plans.

13. Question: What is under existing planters that need to be removed? Do they sit on a concrete footing or is it pavers?

Response: The floor of the planters to be removed from Soledad between Commerce and Houston is a concrete slab that is also the Riverview Towers basement ceiling. The contractor is required to plug the existing irrigation system and level up the planter floor to match the surrounding sidewalk using an approved method. Payment for this work will not be made directly, but will be subsidiary to Item 101 Prep ROW. See revised Removal Layout sheets in Addendum 2.

14. Question: What type of pipe is the existing 27" Sanitary Sewer?

Response: According to SAWS block maps, the existing sewer types are follows:  
27" RCP – along Main (E. Commerce to Houston Street)  
27" RCP/CIPP – along Main (Houston Street to Travis Street)  
27" CT/CIPP – along Main (Travis Street to Pecan Street)

15. Question: How and using what criteria will the bid be awarded? Is it going to be the low number by adding both options to the base bid to see who is low overall? You could potentially have a contractor who is low number on the base bid plus both options, but not low based on how the numbers play out if you just pick one option to add to the base bid.

Response: The award recommendation will be based on the lowest total qualified bid for either Base Bid plus Option 1 (including joint bid utilities) or the lowest total qualified bid for Base Bid plus Option 2 (including joint bid utilities), depending on which Option the City chooses for the construction.

16. Question: During construction and especially if full reconstruction is chosen, compaction equipment will need to be used close to existing buildings in order to achieve optimum compaction. Will consideration be given to contractor with regards to density and compaction so buildings and basements are not damaged?

Response: Addendum 2 includes a special provision to Item 205 that addresses expectations for minimizing impacts due to vibration from compaction of asphaltic concrete pavement.

## SPECIFICATIONS

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CITY OF SAN ANTONIO, TEXAS  
 TCI DEPARTMENT  
 DOWNTOWN STREETS – MAIN AVE. & SOLEDAD PROJECT  
 GOVERNING SPECIFICATIONS

**All direct standard specifications and special specifications applicable to this project are identified as follows:**

**CITY OF SAN ANTONIO (CoSA) STANDARD SPECIFICATIONS FOR CONSTRUCTION  
 JUNE 2008 AND LATEST REVISIONS**

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
100	MOBILIZATION
101	PREPARING RIGHT-OF-WAY
103	REMOVE CONCRETE
104	STREET EXCAVATION
107	EMBANKMENT
108	LIME TREATED SUBGRADE
203	TACK COAT
205	HOT MIX ASPHALTIC CONCRETE PAVEMENT
208	SALVAGING, STOCKPILING, & RECLAIMING ASPHALT PAVING
307	CONCRETE STRUCTURES
308	DRILLED SHAFTS AND UNDER-REAMED FOUNDATIONS
315	FOG SEAL (TRMSS)
401	REINFORCED CONCRETE PIPE
403	STORM SEWER JUNCTION BOXES AND INLETS
407	CONCRETE COLLAR
410	SUBGRADE FILLER
413	FLOWABLE FILL
500	CONCRETE CURBING
502	CONCRETE SIDEWALKS (CONVENTIONALLY FORMED)
503	PORTLAND CEMENT CONC, DRIVEWAY COMMERCIAL
506	CONCRETE RETAINING WALL – COMBINATION TYPE
515	TOPSOIL
525	CONCRETE TRAFFIC BARRIER
526	FIELD OFFICE (w/ SPECIAL PROVISION June 2010)
530	BARRICADES, SIGNS AND TRAFFIC HANDLING
531	SIGNS
535	HOT APPLIED THERMOPLASTIC PAVEMENT MARKINGS
537	RAISED PAVEMENT MARKERS
540	TEMP EROSN, SED AND WATER POLLUTION PREV AND CNTRL
550	TRENCH EXCAVATION SAFETY PROTECTION
615	TRAFFIC SIGNAL CONTROLLER CABINET
618	CONDUIT
620	ELECTRICAL CONDUCTORS
621	TRAY CABLE (4 CONDR) (12AWG)
624	INSTALL GROUND BOXES,TYPE D

628	ELECTRICAL SERVICES (TYPE D) (120/240V)
633	BATTERY BACKUP SYSTEM FOR TRAFFIC SIGNAL
655	TYPE 332 CONTROLLER FOUNDATION
680	INSTALLATION OF HIGHWAY TRAFFIC SIGNALS
682	VEHICLE AND PEDESTRIAN SIGNAL HEADS
683	LED COUNTDOWN PEDESTRIAN MODULE
684	TRAFFIC SIGNAL CABLES
686	INSTALL TRAFFIC SIGNAL POLE ASSEMBLIES
687	PEDESTAL POLE ASSEMBLIES
688	PEDESTRIAN DETECTORS AND VEHICLE LOOP DETECTORS
693	INTERNALLY LIGHTED STREET NAME SIGN ASSEMBLIES
696	RADAR PRESENCE DETECTION DEVICE
700	PROJECT SCHEDULES (w/ SPECIAL PROVISION February 2010)
1000	WEB PORTAL

**CITY OF SAN ANTONIO SPECIAL SPECIFICATIONS**

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
800	PROJECT SIGNS
801	TREE PROTECTION
9010	LED PEDESTRIAN ILLUMINATION ASSEMBLY
9012	WIRELESS NETWORK LIGHTING CONTROL
SP-1	AC-300 COATING GREEN
SP-2	POLYMERIZED CEMENTITIOUS EXTERIOR OVERLAY
SP-3	CONNECTOR PIPE SCREENS FOR STORM SEWERS
12 93 00	SITE FURNISHINGS
32 14 00	INTERLOCKING PAVERS
32 93 00	LANDSCAPE PLANTING
32 93 45	TREATMENT OF EXISTING TREES
2810	LANDSCAPE IRRIGATION SYSTEMS

**TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS and BRIDGES June 1, 2004**

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
465	MANHOLES AND INLETS
481	PVC PIPE FOR DRAINS
528	LANDSCAPE PAVERS

**TxDOT SPECIAL SPECIFICATIONS**

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
6007	REMOVAL OF TRAFFIC SIGNALS AT INTERSECTION
6053	SHIFT OVERHEAD SIGN PANELS
6834	PORTABLE CHANGEABLE MESSAGE SIGNS

**SPECIAL SPECIFICATION**  
**Item SP800 Project Signs**

**Article SP800.1. Description.** Furnish, install, maintain, and remove two project information signs, one on Main Ave. and one on Soledad St.

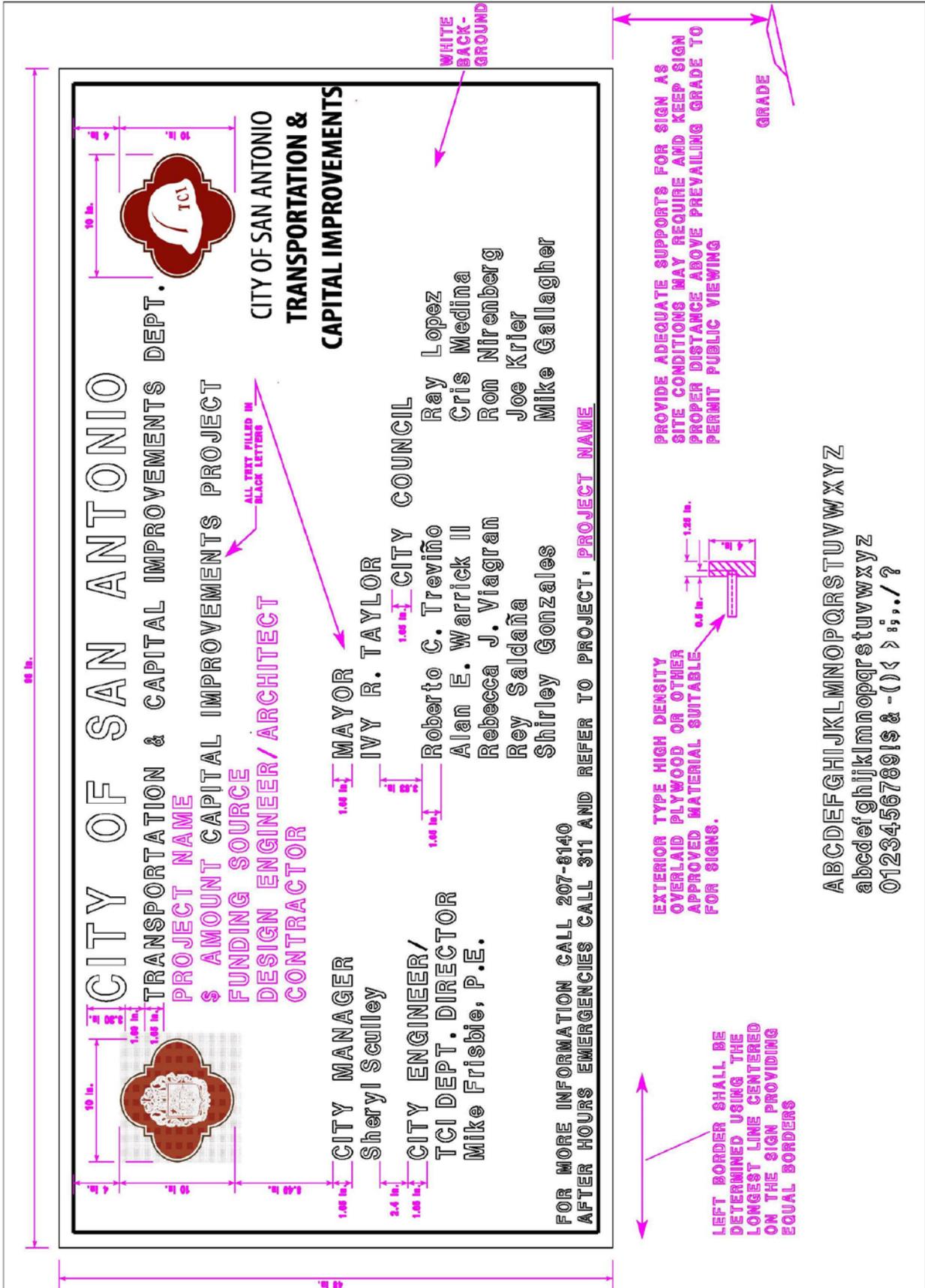
**Article SP800.2. Materials.** Furnish signs meeting the materials specifications of Item 531, the Barricade and Construction Standard details in the plans, and following the attached template of the layout, fonts, colors, size, and legend.

**Article SP800.3. Construction.** Erect signs in conformance with the requirements of the TMUTCD and the Barricade and Construction Standard Details. It is the Contractor's responsibility to see that all signs are properly installed and maintained at the job site. Erect project information signs at the locations directed by the Inspector, generally one sign facing each direction entering the project work area. Maintain the project sign so that no visual defect or graffiti is visible.

**Article SP800.4. Measurement.** Project signs will not be measured for payment.

**Article SP800.5. Payment.** The accepted quantity of signs shall not be paid for directly, but the cost for furnishing all materials, labor, tools, equipment and supplies to construct the signs, mountings, installation, maintaining the signs, and removal of signs will be subsidiary to the various items in the contract.

Bid Item: Not applicable.



## SPECIAL SPECIFICATION

### Item SP-3 Connector Pipe Screens for Storm Sewers

**Article SP3.1. Description**

Furnish and install connector pipe screen trash capture devices, complete and in place.

**Article SP3.2. Materials**

Provide StormTek Model ST-3G connector pipe screens or an approved equal. Alternative products must be acceptable to the Engineer and not deviate from the functional dimensions given. Alternative products are to be designed and sealed by a licensed professional engineer.

**Article SP3.3. Construction**

Install connector pipe screens in accordance with the manufacture's specifications.

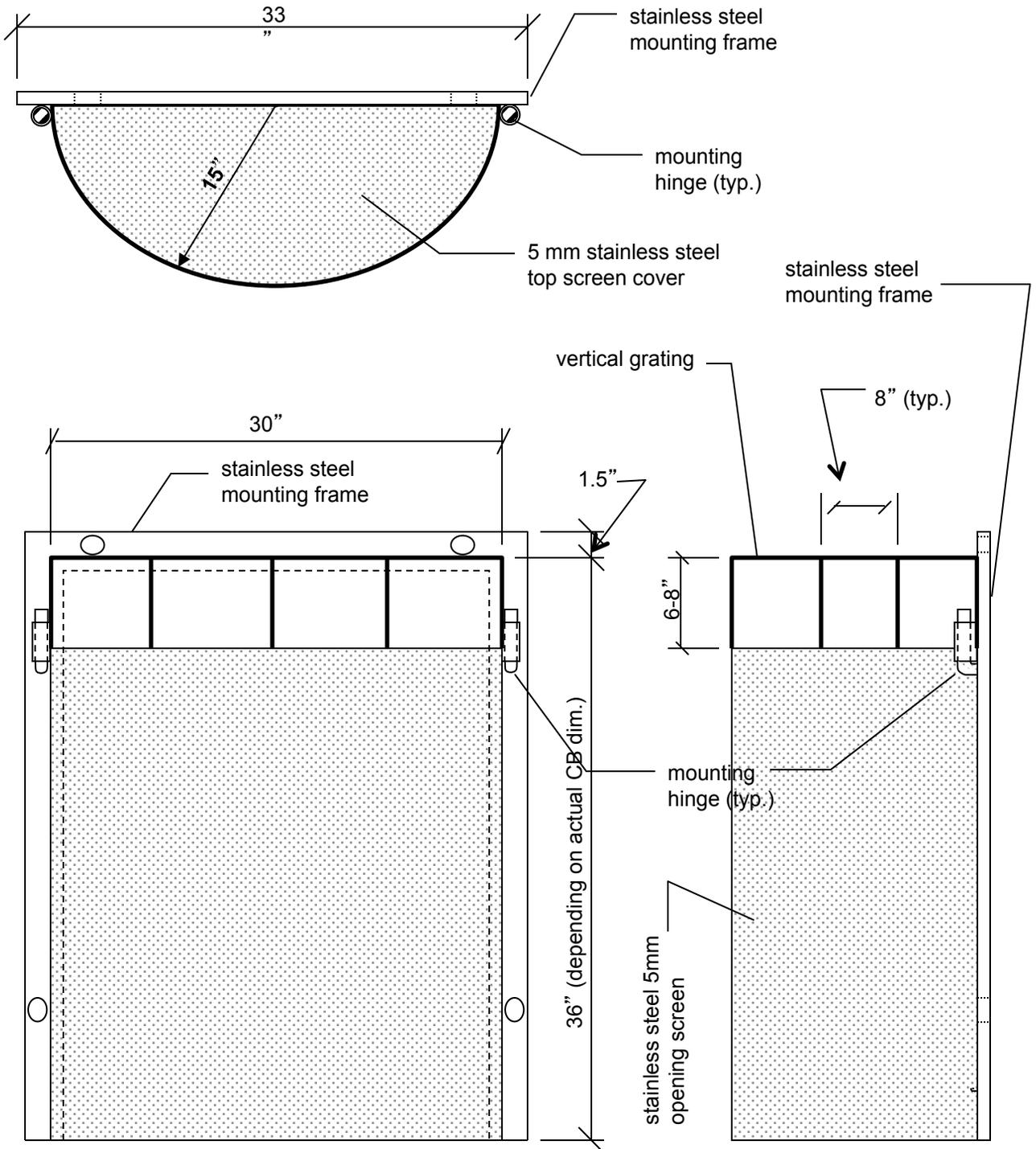
**Article SP3.4. Measurement**

Connector pipe screens will be measured by each complete pipe screen, complete and in place.

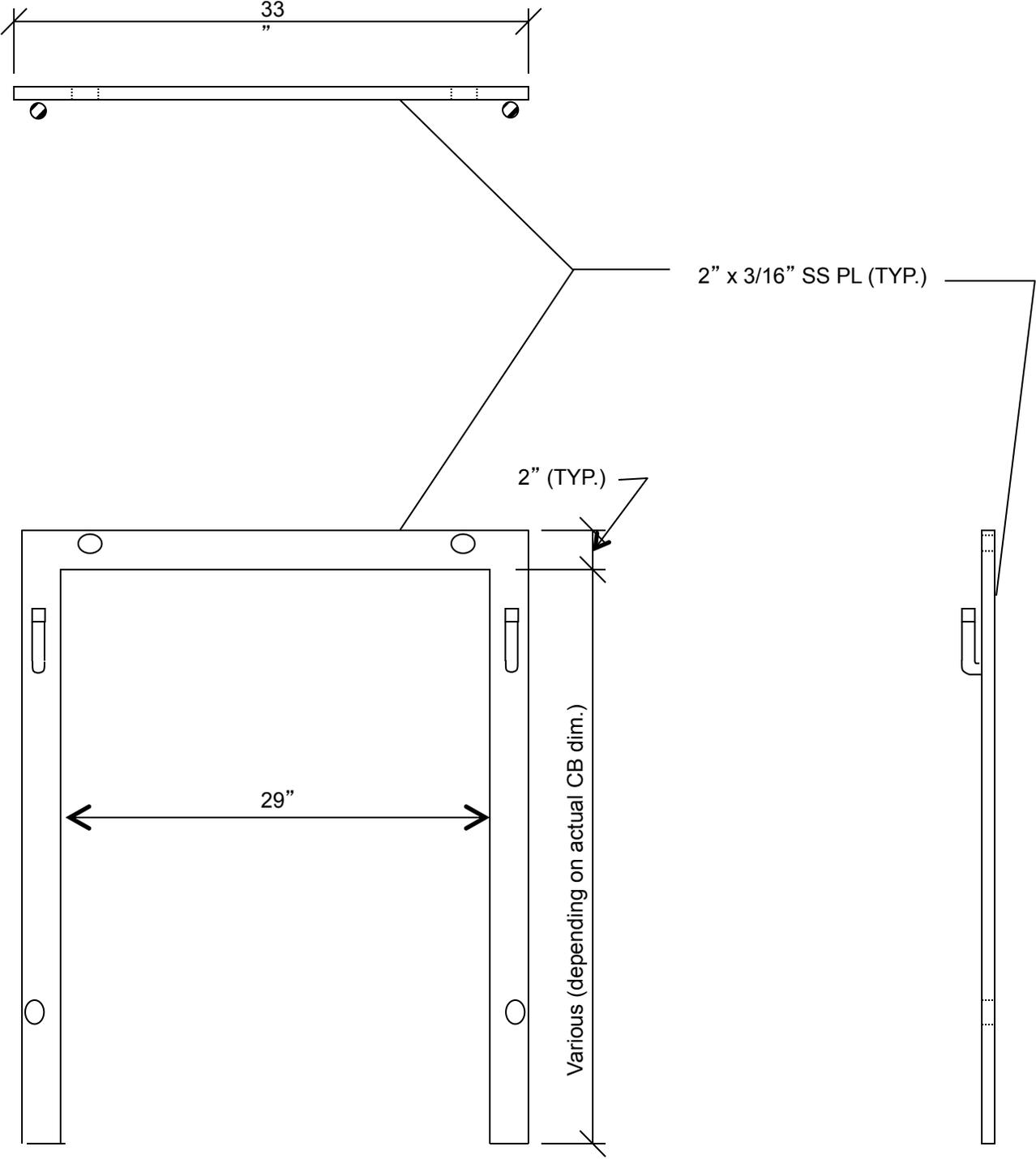
**Article SP3.5. Payment**

The unit price bid for each connector pipe screen shall be full compensation for furnishing and installing connector pipe screens and for all other materials, tools, equipment, labor, and incidentals.

# MODEL ST3G: REMOVABLE INSTALLATION WITH VERTICAL GRATING



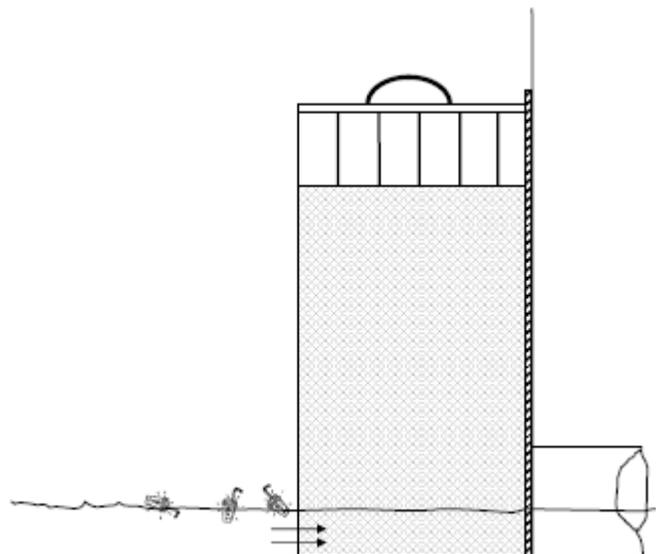
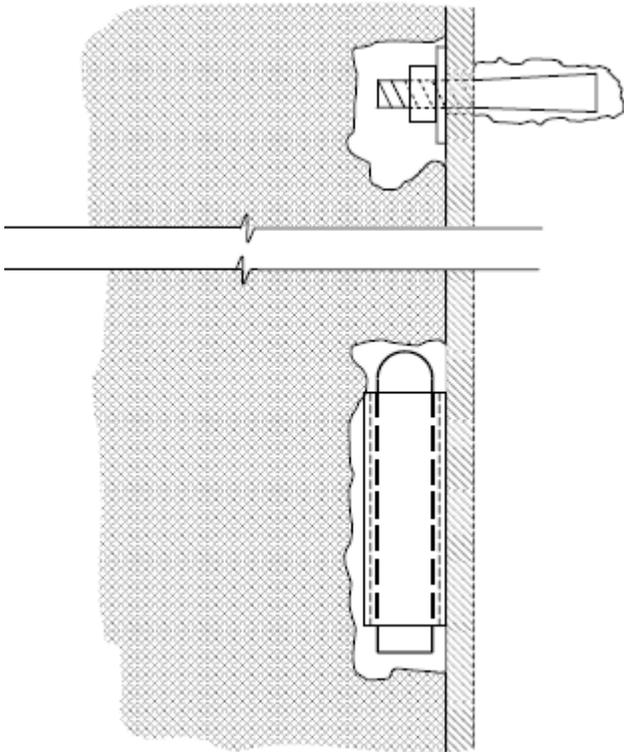
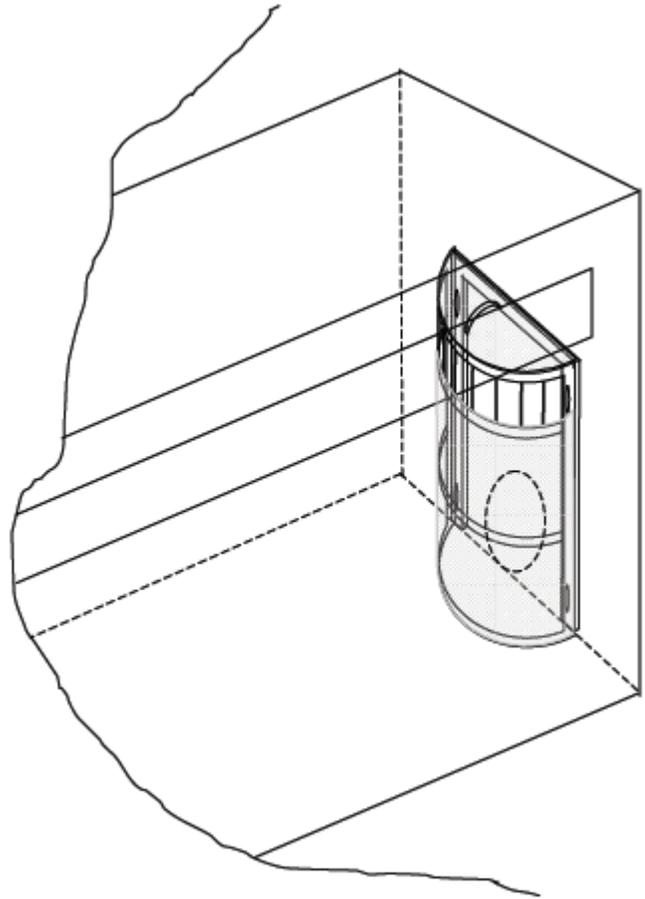
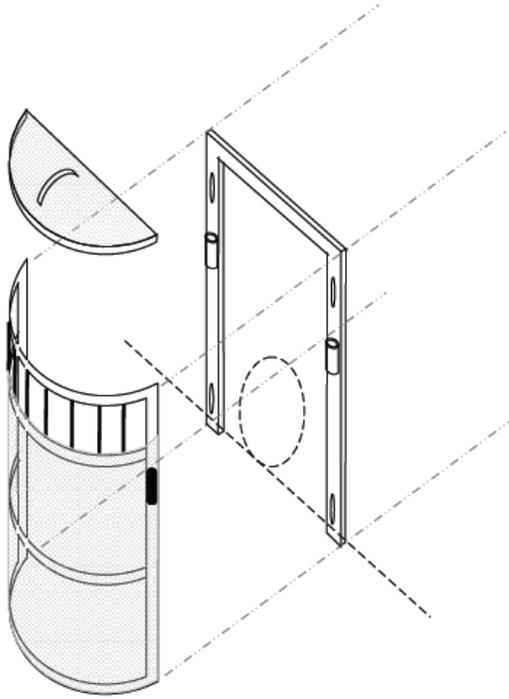
# MOUNTING FRAME



## DESCRIPTION OF DESIGN ELEMENTS

- The mounting frame can be made of coated or stainless steel. Frame members are made from 2” flat bars with a minimum thickness of 3/16 inch.
- The insert screen is made of heavy-gage sheet metal with 5 millimeter (mm) openings. Total openings constitute 50% of the screen surface. Top 4 inches of the screen is grated with bars spaced at 2 inches on center.
- Insert top cover is made of heavy-gage sheet metal screen with 5 mm openings and 1” support frames.
- Structural support members for the screen and top cover are made of coated or stainless steel. Members are made from 1” flat bars with a minimum thickness of 1/8 inch.
- Mounting frame members are welded
- Structural support frame members are welded
- Insert screens are welded onto structural support frames.
- Mounting frames are bolted onto the catch basin wall at the outlet opening. Mounting frames are to be anchored at all four corners with HILTI expansion anchors or equal.
- Inserts are installed vertically onto the mounting frame directly in front of the outlet opening.
- The insert is completely removable by lifting it off the mounting frame

# ST-3G Sample installation



**SPECIAL PROVISION**

**205 HOT MIX ASPHALTIC CONCRETE PAVEMENT**

For this project, **ITEM 205** of the **City of San Antonio Standard Specifications for Construction**, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Article are waived or changed hereby.

**205.2 MATERIALS**

The following article is added to the provisions of this section:

- I. Recycled Materials.** Do not exceed 30% fractionated RAP for base and intermediate courses of asphalt pavement. RAP is not allowed in the final surface course. Recycled asphalt shingle materials will not be permitted for use in asphalt pavement.

**205.4 CONSTRUCTION**

The following article is added to the provisions of this section:

**A. Quality Control Plan**

**5. Placement and Compaction**

- g.** Procedures to minimize environmental impacts due to vibration.  
Include a section addressing the Contractor's plan to minimize environmental impacts due to vibration. Address the roller types, roller speed, number of roller passes, rolling pattern, and vibration frequency and amplitude for vibratory rollers. Also address the lift thicknesses, mix temperature, and mix design to achieve the required density while maintaining an acceptable level of vibratory impact to the adjacent structures. The Engineer may suspend operations if the Contractor fails to comply with the QCP, or if the results are unacceptable.

## **Special Specification 9010 LED Pedestrian Illumination Assembly**

**9010.1. DESCRIPTION:** *Furnish and install LED pedestrian illumination assemblies.*

**9010.2. MATERIALS:** Furnish new materials in accordance with the following Items and with details shown on the plans:

- A. Foundations.** Item 308, “Drill Shafts and Under-Reamed Foundations,”
- B. Anchor Bolts.** TxDOT standard Specification Item 449, “ Anchor Bolts,”
- C. Conduit.** Item 618, “Conduit,”
- D. Conductors.** Item 620, “Electric Conductors,”
- E. Pedestrian Light Fixture and Finial:** Sternberg CRI at 3500K: 71-72 PT-A850SRLED-994T-6ARC35T5-MDL03-A-SRR7-TB/PGT,
- F. Fitter:** Sternberg 994T (Twist Lock Acorn - Fitter TL),
- G. Base:** Sternberg 4700 Austin Series (10"x43") (10" square lower base that transitions to an upper base - Cast Aluminum),
- H. Pole:** Sternberg 5" Outside Diameter (OD), Straight Fluted Shaft (Shall have a 3" OD Tenon - end piece) -BASE/POLE COLOR: Park Green Textured (PGT) (Standard Finish) -Overall Pole Height: 16 FT,
- I. Optional GFI:** GFI - Ground Fault Interrupter (Mount in the pole) -LIGHT FIXTURE: A850SR LED OLD TOWN (16"W x 46 5/8" ),
- J. Wireless Lighting Control System:** Synapse SimplySNAP or approved equal wireless lighting master control unit and control unit on each fixture.

**9010.3. EQUIPMENT:** Provide the machinery, tools and equipment necessary for proper prosecution of the work. All machinery, tools and equipment used shall be maintained in a satisfactory and workmanlike manner.

**9010.4. CONSTRUCTION:** Install foundations in accordance with item 308 “Drill Shafts and under Reamed Foundations”

- A. **Installation.** Install LED Pedestrian illumination assemblies as shown on the plans or as directed. LED Pedestrian pole assemblies include foundation, pole, base, anchor bolts, anchor bolt, template, shims, LED fixture and finial, fitter, optional GFI, and wireless lighting control system on each pole and master lighting control unit.

Use established industry and utility safety practices to erect assemblies near overhead or underground utilities. Consult with the appropriate utility company prior to beginning such work when installing poles and luminaires located overhead. Consult with the Engineer before beginning work.

Prevent scarring or marring of the luminaires and poles. Replace damaged components. Repair damaged powdercoated or painted areas in accordance with Item 446, "Cleaning and Painting Steel."

Fabricate and install pedestrian illumination standard components in accordance with the details, dimensions, and requirements shown on the plans. Test installed pedestrian illumination.

**9010.5. MEASUREMENT:** This Item will be measured as each LED pedestrian illumination pole assembly installed and successfully tested.

**9010.6. 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 "LED Pedestrian Illumination Assembly" of the type specified. This price is full compensation for furnishing, installing, and testing luminaires; poles, base, LED fixture and finial, fitter, drivers, anchor bolts, anchor plates, internal conductors and connections; system performance testing; and for furnishing equipment, labor, tools, and incidentals.

Drilled Shafts will be paid for under Item 308, "Drill Shafts and Under-Reamed Foundations." New conduit will be paid for under Item 618, "Conduit." New conductors, except the conductors internal to the pole, will be paid for under Item 620, "Electrical Conductors." Wireless network lighting control system will be paid for under Item 9012.

**9010.7. BID ITEM:** Item 9010 – LED Pedestrian Illumination Assembly – per each

# 4700 AUSTIN SERIES

# SPECIFICATIONS

### GENERAL

The \_\_\_ ft tall\* decorative post shall be **aluminum**, one-piece construction. The 10" square cast aluminum round fluted base shall be constructed with a \_\_\_ inch diameter aluminum shaft. **The model shall be Sternberg Lighting #4700 or #4700R** for candy cane poles. The pole shall be U.L. or E.T.L. listed in U.S. and Canada.

### CONSTRUCTION

The base shall be designed with a square lower base which transitions to an upper base having twelve flutes and be made of heavy wall, 356 alloy cast aluminum. It shall have a 1" thick floor cast as an integral part of the base. The shaft shall be externally welded circumferentially to the base.

\_\_\_ The **smooth tapered shaft** shall be made of ASTM 6063 extruded aluminum and tempered to a T6 condition.

\_\_\_ The **smooth straight shaft** shall be made of ASTM 6063 extruded aluminum and tempered to a T6 condition.

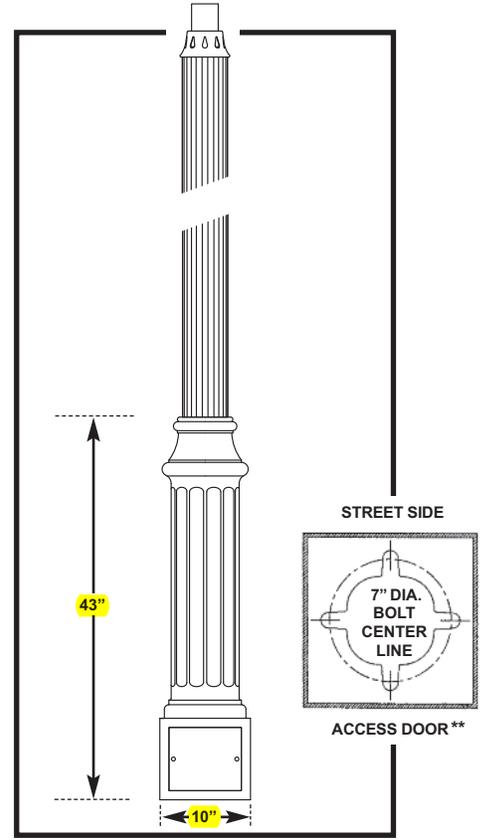
\_\_\_ The **straight fluted shaft** shall be made of ASTM 6061 extruded aluminum and tempered to a T6 condition. It shall have a decorative fluted 3" O.D. tenon.

\_\_\_ The **tapered fluted shaft** shall be made of heavy wall, 356 alloy cast aluminum.

### INSTALLATION

Four 5/8" diameter, hot-dipped galvanized "L" type anchor bolts shall be provided with the post for anchorage. A door shall be provided for wiring and anchor bolt access. It shall be secured with tamper proof, stainless steel hardware. Post will be provided with a grounding stud mounted on the base floor opposite the access door.

Indicate the type of shaft needed (above)



\*\*See installation template for exact door position. Bolt circle dimensions may change on taller poles.

Cast Aluminum-Extruded Poles			10" Diameter Base x 43" High		
4" - 3" OD 47 ___ ' T4 08' 10' 12' 14'	5" - 3" OD 47 ___ ' T5 08' 10' 12' 14' 16' 18'	4" OD 47 ___ ' FP4 08' 10' 12' 14'	<b>5" OD</b> 47 ___ ' FP5 08' 10' 12' 14' <b>16' 18'</b>	5" - 3" OD 47 ___ ' TFP5 11' 12' 14' 16'	
SMOOTH TAPERED SHAFT	SMOOTH TAPERED SHAFT	† STRAIGHT FLUTED SHAFT	† <b>STRAIGHT FLUTED SHAFT</b>	TAPERED FLUTED SHAFT	
† SMOOTH STRAIGHT SHAFT AVAILABLE SPECIFY AS: 4" OD 47 ___ ' P4	† SMOOTH STRAIGHT SHAFT AVAILABLE SPECIFY AS: 5" OD 4700 ___ ' P5				

\*For candy cane poles insert \_\_\_ AG ft (feet - above grade height). See diagram on reverse side.

† Tenon not supplied if fixture or arm slips shaft O.D.

# 4700 AUSTIN SERIES

# POSTS / OPTIONS / POST CAPS

## BUILDING A PART NUMBER

### Straight Poles

MODEL / HEIGHT / SHAFT	POST CAP CENTER	OPTIONS	FINISH
47 16 FP5*	BCC	FH	BK

### Candy Cane Poles

MODEL / HEIGHT / SHAFT	HEIGHT ABOVE GRADE	OPTIONS	FINISH
47 00 RT5*	14 AG		BK

### Part Number Selections

MODEL	HEIGHT	SHAFT†
• 47	• 08' • 10' • 11' • 12' • 14' • 16' • 18'	• T4: 4"-3" Tapered Smooth** • T5: 5"-3" Tapered Smooth • P4: 4" Straight Smooth • P5: 5" Straight Smooth • FP4: 4" Straight Fluted** • FP5: 5" Straight Fluted • TFP5: 5"-3" Tapered Fluted



TFP5-5"-3"



FP4-4"



FP5-5"



T4-4"-3"



T5-5"-3"

\*\*Maximum recommended height 14'

#### OPTIONS AVAILABLE

- GFI
- GFBB
- FH
- SBA
- DBA
- DB Direct Burial
- SBAR
- DSPA
- DHPA
- PA478
- PCD
- SH
- SB
- WHK
- HB Helix Burial

†See first page for height restriction.

\*Add 12 after shaft if optional 12" square base is required.

### Part Number Selections

MODEL	HEIGHT	SHAFT†	ABOVE GRADE
• 47	• 00	• RT4: 4"-3" Tapered Smooth • RT5: 5"-3" Tapered Smooth • RP4: 4" Straight Smooth • RP5: 5" Straight Smooth • RFP4: 4" Straight Fluted • RFP5: 5" Straight Fluted • RTFP5: 5"-3" Tapered Fluted	• 08' AG • 10' AG • 12' AG • 13' AG • 14' AG • 16' AG • 18' AG

#### STANDARD FINISHES\*

- BKT Black Textured
- WHT White Textured
- PGT Park Green Textured
- ABZT Architectural Medium Bronze Textured
- DBT Dark Bronze Textured

\*Smooth Finishes are available upon request

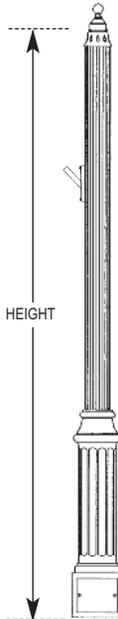
#### CUSTOM FINISHES

- OI Old Iron

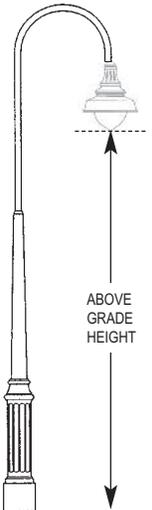
- RT Rust
- WBR Weathered Brown
- CD Cedar
- WBK Weathered Black
- TT Two Tone

#### STERNBERG SELECT FINISHES

- VG Verde Green
- SI Swedish Iron
- OWGT Old World Gray Textured



HEIGHT



ABOVE GRADE HEIGHT

## OPTIONS AVAILABLE

See Accessories Section for more options and information

	<b>GFI</b> - Ground Fault Interrupter mounts in the pole		<b>SBAR</b> -Single Banner Arm and Ring		<b>PCD</b> - Photo Control mounts on door on pole
	<b>GFBB</b> - Ground Fault Breaker <i>inside</i> base		<b>DSPA</b> -Double Stepped Planter Arms mount on either side		<b>SH</b> - Speaker Hub for mounting speaker, floodlight or signal
	<b>FH</b> - Flag Pole Holder mounts on the pole		<b>DHPA</b> - Double Hooked Planter Arms mount on either side		<b>SB</b> - Sign Bracket mounts on pole to hold signs
	<b>SBA</b> - Single Banner Arm mounts on the pole		<b>PA478</b> -Decorative Planter Arms with planter rings		<b>WHK</b> - Wreath Hook mounts on pole to hold decorations
	<b>DBA</b> - Double Banner Arms mount on same side of the pole				

## POST CENTER CAPS (If Required)

<b>BCC</b> - Ball Center Cap	<b>FCC</b> - Finial Center Cap	<b>SCC</b> - Spiked Center Cap	<b>TFCC</b> - Tall Finial Center Cap	<b>SSCC</b> - Side Spiked Center Cap
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# A850SR LED OLD TOWN SERIES

# SPECIFICATIONS

### LUMINAIRE DESIGN

- The luminaire shall be a traditional acorn style fixture provided with a decorative cast aluminum fitter, a poly-carbonate or acrylic clear textured acorn and a cast aluminum roof.
- The luminaire shall have LED light sources and roof mounted, down-lighting optics.
- The luminaire shall be 16" diameter and 40 1/2" overall height.
- The luminaire shall be U.L. or E.T.L. listed in U.S. and Canada.

### FITTER - STANDARD

- The fitter shall be heavy wall cast aluminum, 356 alloy for high tensile strength.
- It shall have an 8 1/2" inside diameter opening to attach to the 8" neck of the acorn globe.
- When ordered with a Sternberg aluminum pole, the fitter shall be welded to the pole top or tenon for safety and to ensure the fixture will be plumb, secure and level over the life of the installation.
- The fitter shall have a one-piece ring bug gasket to resist insect penetration into lamp assembly.

### STANDARD FITTER-TL FOR QUICK & TOOL-LESS REMOVAL OF ACORN

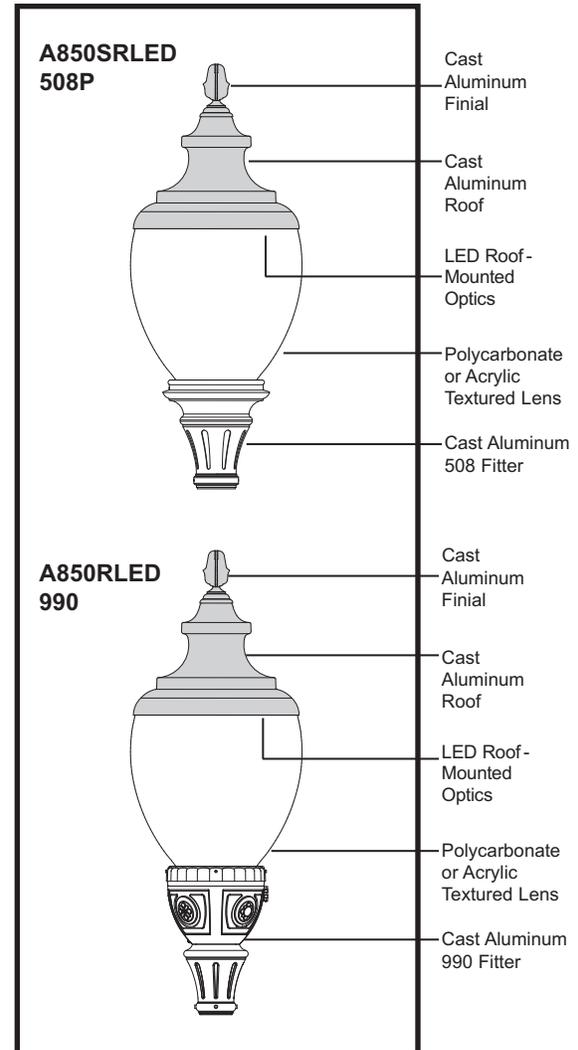
- The fitter shall be heavy wall cast aluminum, 356 or 360 alloy for high tensile strength.
- It shall have an 9 1/4" inside diameter opening to attach to the 8" neck of the acorn globe.
- When ordered with a Sternberg aluminum pole, the fitter shall be set screwed to the pole top or tenon.
- The fitter shall have an aluminum die cast twist-lock mechanism for tool-less, 1/4 turn installation and removal of acorn globe.
- The acorn is provided with a die cast mating collar which is easily removed and reused if acorn replacement is ever performed.

### 990 FITTER SERIES OPTION

- The fitter shall be heavy wall cast aluminum, 360 die cast alloy for high tensile strength.
- It shall have a 9 1/4" inside diameter opening to attach to the 8" neck of the acorn globe.
- It shall have a hinged, tool-less entry door that provides open access to all of the components.
- The 990 shall have an optional terminal block for ease of wiring, an optional Twist-Lock Photocell receptacle, an optional GFCI outlet for auxiliary power needs.
- The top mounted ballast mounting plate shall be cast aluminum and provide tool-less removal from the housing using 2 finger latches.
- When ordered with a Sternberg aluminum pole, the fitter shall be set screwed to the pole top or tenon.
- The fitter shall have a one-piece ring bug gasket to resist insect penetration into lamp assembly.
- When supplied with GFI receptical a hole will be provided for cord and plug installation with the access door closed.
- When cord and plug is not in use a filler plug will be provided and shall be tethered to the fitter for easy recovery and installation.

### 990 TL FITTER (OPTIONAL)

- The TL (Twist-Lock) fitter version of the 990 shall have an aluminum die-cast twist-lock mechanism.
- The tool-less 1/4 turn action allows for easy globe removal and replacement.
- A die-cast ring assembly is mechanically attached to the globe and is removable if the globe is broken or replaced.



**EPA = 1.21 (ft²)  
WEIGHT = 32 LBS**

**Rated IP65**



**LIST NO.  
A850SR LED  
OLD TOWN  
SERIES**

# A850SR LED OLD TOWN SERIES

# SPECIFICATIONS

**LIST NO.**  
**A850SR LED**  
**OLD TOWN**  
**SERIES**

**DRIVER**

- The LED driver shall be securely mounted inside the fitter, for optimized performance and longevity.

**LIGHT SOURCES**

- The luminaire shall use high output, high brightness LEDs.
- The LEDs shall be mounted in arrays, on printed circuit boards designed to maximize heat transfer to the heat sink surface.
- The LEDs shall be attached to the printed circuit board with not less than 90% pure silver to insure optimal electrical and thermal conductivity.
- The LEDs and printed circuit boards shall be protected from moisture and corrosion by a conformal coating of 1 to 3 mils.
- The LEDs and printed circuit board construction shall be environmentally friendly and 100% recyclable. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant.
- The LED life rating data shall be determined in accordance with IESNA LM-80.

LIGHT SOURCE	T2	T3	T3R	T5	WATTS
	SPEC LUMENS	SPEC LUMENS	SPEC LUMENS	SPEC LUMENS	
6ARC62T-MDL05	11120	11150	11175	11595	146
6ARC45T-MDL05	10400	10430	10450	10840	146
6ARC35T-MDL05	9760	9790	9805	10175	146
6ARC62T-MDL03	8270	8160	8325	8620	96
6ARC45T-MDL03	7735	7630	7790	8065	96
6ARC35T-MDL03	7260	7160	7310	7570	96
4ARC62T-MDL03	5485	5395	5060	5290	66
4ARC45T-MDL03	5130	5045	4730	4945	66
4ARC35T-MDL03	4815	4735	4440	4640	66
3ARC62T-MDL03	4225	4170	4040	4055	53
3ARC45T-MDL03	3955	3900	3780	3795	53
3ARC35T-MDL03	3710	3660	3545	3560	53
2ARC62T-MDL03	2890	2805	2670	2750	35
2ARC45T-MDL03	2705	2625	2495	2570	35
2ARC35T-MDL03	2535	2465	2345	2410	35

**OPTICS**

- The luminaire shall be provided with individual, acrylic, refractor type optics applied to each LED.
- The luminaire shall provide Type \_\_\_ (2, 3, 3R or 5) light distribution per the IESNA classifications. Testing shall be done in accordance with IESNA LM-79.

**PERFORMANCE**

- The LEDs and LED driver shall operate over a -40°C (-40°F) to +50°C (122°F) ambient air temperature range.
- The High Performance white LEDs will have a life expectancy of approximately 70,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C.
- The High Brightness, High Output LED's shall be 4500K (3500K or 6200K option) color temperature with a typical of 70 CRI.
- The luminaire shall have a minimum \_\_\_\_\_ (see table) initial delivered lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F)

## A850SR LED OLD TOWN SERIES

## SPECIFICATIONS

LIST NO.  
A850SR LED  
OLD TOWN  
SERIES**ELECTRONIC DRIVERS**

- The driver shall be U.L. Listed.
- The driver shall have overload as well as short circuit protection.
- The driver shall be a DC voltage output, constant current design, 50/60HZ.
- The driver accepts input voltage from 120-277 (MDL). Optional 347-480 (MDH).
- The driver shall have a minimum power factor of 0.90.
- The driver shall be rated at full load with THD<20%.
- The driver is dimmable using 0-10V signal.
- The luminaire shall be supplied with line-ground, line- neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines.
- The LED driver shall be supplied with a quick-disconnect electrical connector on the power supply, providing easy power connections and fixture installation.

**ACORN**

- The acorn shall be 16" diameter and 31 1/2" tall with an 8" diameter neck.
- \*The acorn LED assembly shall be retro-fitted to a \_\_\_\_\_ (competitor) fitter which accepts the standard 8" diameter acorn neck. Consult Sternberg factory.
- The acorn shall be made of \_\_\_\_\_ (vandal resistant, clear textured polycarbonate or dent resistant (DR) clear textured acrylic. For Acrylic add "A" to model number.
- The acorn shall be supplied with a cast aluminum finial and a solid, cast aluminum roof which includes optimized heat sinks to provide maximum life and performance for the LED light sources.
- The acorn shall be sealed to the cast aluminum roof to provide a moisture-free and bug-free optics chamber for the LED light sources and **Rated IP65**.
- \*The acorn shall be provided with a perforated brass decorative ring (PBDR) supplied in a \_\_\_\_\_ (polished brass or painted) finish. The 2 1/4" wide brass filigree shall allow light transfer through the decorative openings.
- \*The acorn shall be provided with a heavy cast decorative ring (CDR) which includes four (4) cast medallions finished in accent gold. The medallions can be customized with name, initials or logo. \* (OPTION)

**ARMS**

- The arms shall be cast aluminum and/or extruded aluminum.
- Arms with decorative filigree shall have meticulously detailed scroll work and gracefully curved brackets.
- **(All except BAPT and 779 arms)** The arms shall be bolted to a post mount adaptor which is welded to the pole to ensure proper alignment.
- **(Twin TA and twin 579 arms)** The arms shall be attached to a decorative center hub which will fit the center tenon of the pole (not shown).

## A850SR LED OLD TOWN SERIES

## SPECIFICATIONS

LIST NO.  
A850SR LED  
OLD TOWN  
SERIES

**PHOTOCELL OPTIONS****Electronic Button Cell Option**

- Photocells shall be electronic button type.
- On single post-top fixtures, the photocell shall be mounted in the fitter and pre-wired to the driver.
- On multiple head fixtures, photocells shall be mounted in the pole shaft, on an access plate. The photocell is not pre-wired since drivers are mounted in the fitters and packaged separately.
- The photocell is instant-on at 1.5 foot-candles and turns off 5-10 seconds at 2-3 foot-candles.
- The photocell is 120-277 volt.

**Twist-Lock Type Option**

- Photocells shall be twist-lock design, thermal-bimetallic switch type.
- **990 Fitter:** Photocells shall be mounted in the fitter on the photocell bracket and pre-wired to the driver. On multi-fixture poles the photocell shall be mounted on top of pole/arm/hangstraight. The photocell is not pre-wired on multi-fixture poles since drivers are mounted in the fitters and packaged separately.
- **Twist-Lock Roof option (SRR and SRR1):** On single-fixture poles, the photocell shall be mounted on top of roof, protected by a waterproof spinning and gasket; and pre-wired to the driver.
- Photocell time delay is 2 minutes to turn on at 1.5 foot-candles and 2 minutes to turn off at no more than 6 foot-candles.
- The photocell is 120-277 volt.

**FINISH**

- Prior to coating, the luminaire shall be chemically cleaned and etched in a 5-stage washing system which includes alkaline cleaning, rinsing, phosphoric etching, reverse-osmosis water rinsing and non-chrome sealing to ensure corrosion resistance and excellent adhesion for the finish coat.
- The finish coat shall be an electrostatically applied semi-gloss, super durable polyester powder coat, baked on at 400°F, to provide a durable, color retentive finish.
- \*The optional \_\_\_\_\_ (Verde Green or Swedish Iron) finish shall be hand-brushed using a 3-step process.

\* (OPTION)

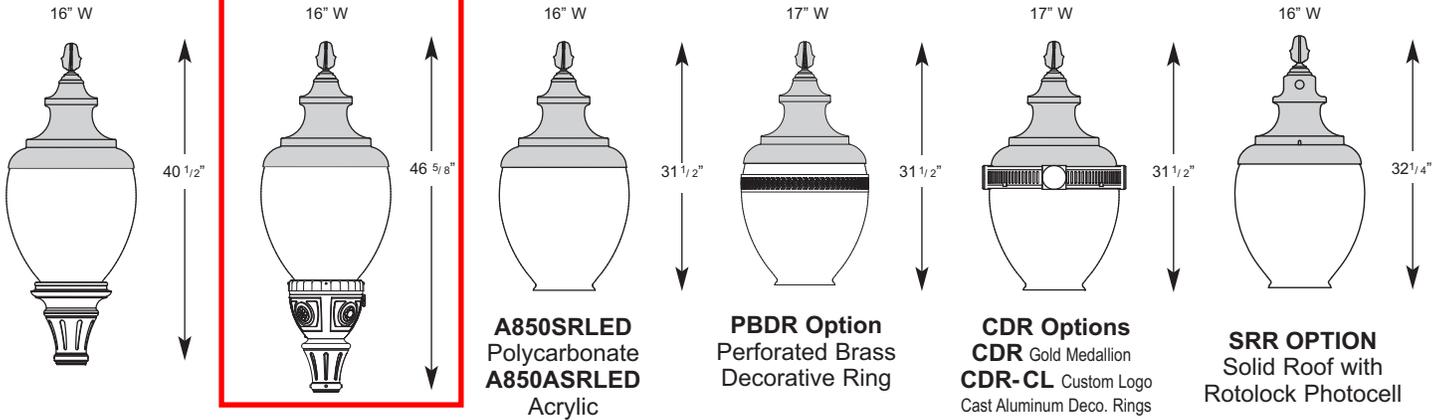
**WARRANTY**

- The **luminaire** shall be free from all defects in materials and workmanship for a period of **seven (7) years** from the date of manufacture.
- The luminaire manufacturer shall warrant the LED boards/system, during the stated warranty period, against failure defined as more than 10% simultaneous non-operating LEDs.
- The **driver** shall be warranted for **seven (7) years**.

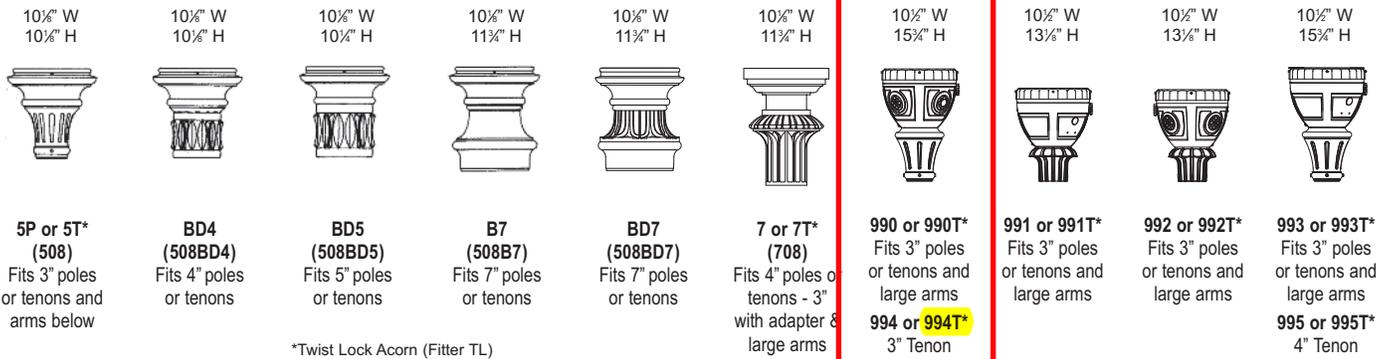
# A850SR LED OLD TOWN

# ACORNS / FITTERS / ARMS PM - WB

## ACORNS / OPTIONAL TOPS

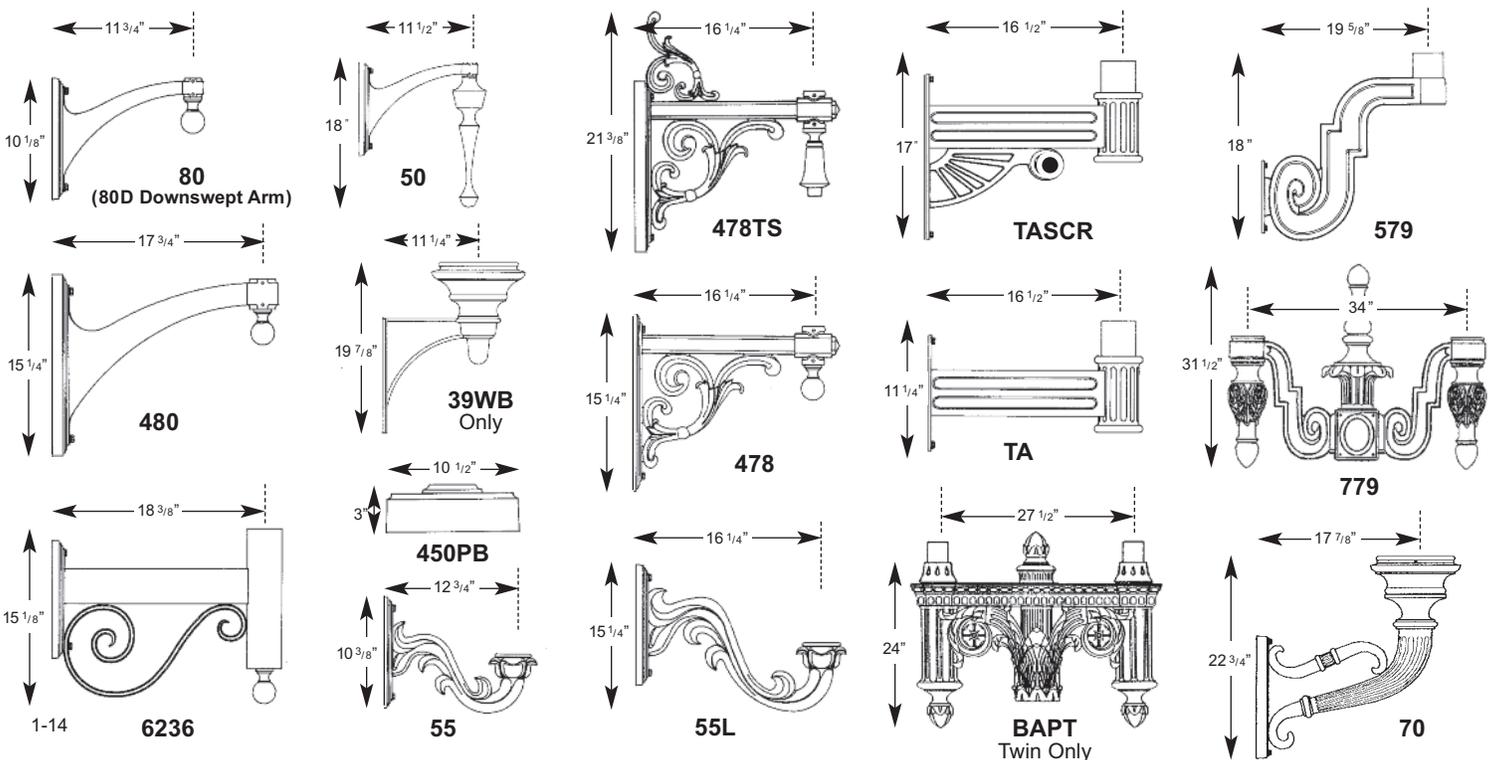


## FITTERS



## ARMS - POST MOUNT (PM) or WALL BRACKETS (WB)

See Arms Section for more information



# BUILDING A PART NUMBER

## POST & ARM FIXTURES

**CRI at 3500K: 71-72**  
**PT-A850SRLED-994T-6ARC35T5-MDL03-A-SRR7-TB/PGT**

NO. OF ARMS	ARM MOUNTED FIXTURE	CENTER POST TOP FIXTURE (PT)	POST	POST CAP	LIGHT SOURCE			DRIVER	OPTIONS	FINISH
	ACORN/FITTER/POSTARM	ACORN/FITTER	(See Post Section)		LED	COLOR	TYPE			
2	A850SRLED/5P/50PM	A850SRLED/5P PT	4212FP4		6ARC	45	T5	MDL03		BKT

## WALL FIXTURES

ACORN/FITTER/WALL BRACKET	LIGHT SOURCE			DRIVER	OPTIONS	FINISH
	LED	COLOR	TYPE			
A850SRLED/5P/50WB	4ARC	45	T3	MDL03		BKT



### PIER FIXTURES

Uses same information boxes as wall fixture

**A850SRLED/5P/450PB**

ACORN / FITTER / PIER BASE

## PART NUMBER SELECTIONS

### ACORNS

- A850SRLED
- A850ASRLED

### FITTERS

- 5P
- 5T
- 7
- 7T
- 990 or 990T
- 991 or 991T
- 992 or 992T
- 993 or 993T
- 994 or 994T
- 995 or 995T
- BD4
- BD5
- BD7
- B7

### POST ARMS

- 50PM
- 50DPM
- 478PM
- 478TSPM
- 70PM\*
- 80PM
- 80DPM
- 480PM
- 480DPM
- 55PM
- 55LPM
- 6236PM
- 579PT
- TAPT
- TASCRPT
- BAPT

### PIER BASE

- 450PB

### WALL BRACKET ARMS

- 50WB
- 50DWB
- 478WB
- 478TSWB
- 70WB\*
- 80WB
- 80DWB
- 480WB
- 480DWB
- 55WB
- 55LWB
- 6236WB
- 579WB
- TAWB
- TASCRWB
- 39WB\*

\*No fitter required

### LIGHT SOURCES\*

LED	COLOR TEMP. (K)	TYPE
6ARC	62(00)	T2
4ARC	45(00)	T3
3ARC	35(00)	T3R
2ARC		T5

\*Consult factory for other color temperatures

### STANDARD FINISHES\*\*

- BKT Black Textured
- WHT White Textured
- PGT **Park Green Textured**
- ABZT Architectural Medium Bronze Textured
- DBT Dark Bronze Textured

\*\*Smooth Finishes are available upon request

### CUSTOM FINISHES

- OI Old Iron
- RT Rust
- WBR Weathered Brown
- CD Cedar
- WBK Weathered Black
- TT Two Tone
- STERNBERG SELECT FINISHES**
- VG Verde Green
- SI Swedish Iron
- OWGT Old World Gray Textured

### DRIVER

VOLTS	TYPE	mA
120-277	MDL	03
347-480	MDH	05*

\*6ARC only

### NOTES:

- White polycarbonate acorns are available. Specify WP after acorn number.
- Consult factory for Specification Details.
- Standard is polished. If painted specify PBDR-P.
- For 990 or 990T series fitter only.

### OPTIONS

- CDR Cast Decorative Ring
- CDR-CL<sup>2</sup> Cast Decor Ring with Custom Logo
- PBDR<sup>3</sup> Perforated Brass Decorative Ring
- PEC Photocell-Electronic 120-277 Volt
- R<sup>4</sup> Receptacle Only for Twist-Lock Photo Cell
- R1<sup>4</sup> Twist-Lock Photo Cell 120-277 Volt
- SRR Solid Roof: Receptacle Only for Twist-lock Photo Cell
- SRR1 Solid Roof: Twist-lock Photo Cell 120-277 Volt
- FHD Dual Fuse & Holder
- PF per arm Pineapple Finial or Font (for TA, TASCR)
- BF per arm Ball Finial or Font (for TA, TASCR)
- G<sup>4</sup> GFI
- HSS House Side Shield
- TB Terminal Block

**Downtown Streets: Main and Soledad (Martin to Commerce) 2012-2017 COSA Bond Program  
SAWS Sewer Job No. 12-5602**

**SAN ANTONIO WATER SYSTEM**

100	MOBILIZATION
101	PREPARING RIGHT OF WAY
550	TRENCH EXCAVATION SAFETY PROTECTION
848	SANITARY SEWER PIPE (0'-10')
851	LOCATE AND ADJUST EXISTING MANHOLES
852.1	SANITARY SEWER MANHOLE (0'-6')(4' I.D.)
852.1	EXTERNAL DROP SANITARY SEWER MANHOLE (0'-6')(4' I.D.)
852.3	EXTRA DEPTH MANHOLES (> 6')(4' I.D.)
854	SANITARY SEWER LATERALS (SDR 26, 160 PSI)
854.1	SANITARY SEWER CLEAN-OUT
860	VERTICAL STACKS
864	BYPASS PUMPING
866	SEWER MAIN TELEVISION INSPECTION
900	PIPE BURSTING SANITARY SEWER PIPE
1103	POINT REPAIR SANITARY SEWER
COSA 413.1	FLOWABLE FILL
COSA 206.1	ASPHALT TREATED BASE

THE ABOVE LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER PERTINENT ITEMS, IF ANY, AND INCLUDING THE SPECIAL PROVISIONS LISTED BELOW, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.

**SPECIAL PROVISION:**

---

**SAN ANTONIO WATER SYSTEM**

854	SANITARY SEWER LATERALS
860	VERTICAL STACKS

SPECIAL PROVISIONS WILL GOVERN AND TAKE PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED HEREON WHEREVER IN CONFLICT THEREWITH.

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**SPECIAL PROVISION**

**854 SANITARY SEWER LATERALS**

For this project, Downtown St: Main & Soledad (Job #12-5602), Item 854, "Sanitary Sewer Laterals," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

**Article 854.4 is supplemented by the following:**

The lateral installation shall include reconnection of any laterals to the new Pipe Burst HDPE sewer main.

**Article 854.6 is supplemented by the following:**

No separate pay item shall be made for reconnection to the new Pipe Burst HDPE sewer main.

**SPECIAL PROVISION**

**860 VERTICAL STACKS**

For this project, Downtown St: Main & Soledad (Job #12-5602), Item 860, "Vertical Stacks," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

**Article 860.4 is supplemented by the following:**

The vertical stacks installation shall include reconnection of any vertical stacks to the new Pipe Burst HDPE sewer main.

**Article 860.6 is supplemented by the following:**

No separate pay item shall be made for reconnection to the new Pipe Burst HDPE sewer main.

**SECTION 12 93 00  
SITE FURNISHINGS**

**PART 1 – GENERAL**

1.1 DESCRIPTION:

- A. Site furnishings include bicycle racks, benches, trash receptacles, and tree grates.
- B. Extent of these items is indicated herein.
- C. Factory finishing of furnishings is specified in this section.

1.2 RELATED WORK:

- A. Painting and special coatings are specified herein.

1.3 QUALITY ASSURANCE:

- A. Provide each type of site furnishing as a complete unit produced by a single manufacturer, including necessary mounting accessories, fittings, and fastenings.

1.4 SUBMITTALS:

- A. Submit shop drawings for fabrication and erection of site furnishings. Include plans, elevations, and large scale details. Show anchorages and accessory items. Provide location template drawings for items supported or anchored to permanent construction.
- B. Submit manufacturer's specifications and installation instructions for materials required.
- C. Submit one full-size sample of each type of unit required. Approved samples may be installed on the project.
- D. Submit plan showing location of each piece of site furniture.

1.5 DELIVERY, STORAGE, AND HANDLING:

- A. Do not deliver units until construction is ready for their installation. Protect units from damage during delivery, storage, handling, and installation.

1.6 MEASUREMENT:

- A. All items will be measured per unit, complete and in place.

1.7 PAYMENT:

- A. The accepted quantity for each site amenity described in this section shall be paid directly by contractor. Payment includes furnishing all materials, labor, tools, equipment and supplies required to install all site amenities.

## **PART 2 – PRODUCTS**

### **2.1 MATERIALS:**

- A. Bench: Surface mounted, 4' long, CR-14 BACKLESS BENCH SPECIAL City Sites Series Bench with intermediate armrest, with green powder coating, Manufactured by: Victor Stanley 1-800-368-257. (or approved equal.)
- B. Trash Receptacle: Surfaced mounted, S-42 Ironsites Series, 36 gallon steel ribbed litter receptacle with green powder coating. Recycle Trash Receptacle, Surface mounted, S-42 Ironsites Series, 36 gallon steel ribbed litter receptacle, with a blue finish and recycle signage attached to Receptacle. Manufactured by: Victor Stanley 1-800-368-257. (or approved equal.)
- C. Bicycle Rack: Surface mounted, LOOP Bike Rack with ivy powder coating. Manufactured by Landscape Forms 1-800-521-2546. (or approved equal.)
- D. Tree Grate: Market Street, cast aluminum tree grate, 60 inch SQUARE Model 6064A, with a 30 inch tree opening and a Zinc Metallized Powder Coat Cardinal C241-GR07 Gray Fine Texture Semi-Gloss finish. Tree grates material shall be installed with a perimeter frame model M6000F-6 to match tree grate finishing. Manufactured by: Ironsmith 1-800-338-4766. (or approved equal.)

## **PART 3 – EXECUTION**

### **3.1 INSTALLATION:**

- A. Install site furnishings and related accessories at locations shown in accordance with the manufacturer's instructions. Provide clips, grounds, backing materials, brackets and anchors, trim, and accessories necessary for a complete installation.

### **3.2 ADJUST AND CLEAN:**

- A. Touch up marred finishes but replace units that cannot be restored to factory-finished appearance. Use only materials and procedures recommended by the manufacturer.

**END OF SECTION**

**PLANS** – replace corresponding sheets in the Plans

<b>UPDATED PLANS</b>	<b># OF PAGES</b>
Estimate and Quantity Sheets	3
Removal Layouts	4
Illumination Pole Schedule	1
Traffic Signal Operations	15
SAWS Water	11
SAWS Sanitary Sewer	11

Design: \\pc1server\ver2\datagate\Jobs\12\022\Techprod\CapImprove\Summar\es\MAS-SUM.dgn  
 100% SUBMITTAL DATE: 03/04/2016  
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Item No	Description	Unit	Quantity
100.1	MOBILIZATION	L.S.	1
100.2	INSURANCE & BOND	L.S.	1
101.1	PREPARING RIGHT-OF-WAY	L.S.	1
530.1	BARRICADES, SIGNS, & TRAFFIC HANDLING	LS	1
ROADWAY			
103.1	REMOVE CONC. CURB	LF	3790
103.3	REMOVE SIDEWALKS AND DRIVEWAYS	SF	41756
103.4	REMOVE MISC CONC	SF	10000
315	FOG SEAL (TRMSS)	SY	19101
205.4	HOT MIX ASPH PVMT TYPE C (4")	SY	9994
SP-1	AC-300 COATING GREEN	SY	1421
500.1	CONCRETE CURBING	LF	6943
502.1	CONC SIDEWALK (CONVENTIONALLY FORMED)	SY	4831
502.3	SIDEWALK DRAIN	EA	9
503.2	PORTLAND CEMENT CONC. DRIVEWAY COMMERCIAL	SY	1100
506.1	CONCRETE RETAINING WALL COMBO TYPE	CY	2
525.1	CONCRETE TRAFFIC BARRIER (PORTABLE) LOW PROFILE	LF	660
*528 2004	LANDSCAPE PAVERS	SY	659
*6006	REMOVE AND RELAY LANDSCAPE PAVERS	SY	410
SP-2	POLYMERIZED CEMENTITIOUS EXTERIOR OVERLAY	SF	20007
540.7	CONSTRUCTION PERIMETER FENCING	LF	7200
540.10	CURB INLET GRAVEL FILTERS	LF	255
6834	PORTABLE CHANGEABLE MESSAGE SIGN	DAY	36
801.2	LEVEL IIA PROTECTIVE FENCING	LF	600
801.3	LEVEL IIB PROTECTIVE FENCING	LF	70
xxx	OFF DUTY POLICE OFFICER	HR	240
DRAINAGE			
SP-3	CONNECTOR PIPE SCREENS	EA	17
307.1	CONCRETE STRUCTURES (MISC)	CY	1
307.1	CONCRETE STRUCTURES (ELEVATED SIDEWALKS)	CY	4
401.1	REINFORCED CONCRETE PIPE (CLASS III) (12" DIA)	LF	107
401.1	REINFORCED CONCRETE PIPE (CLASS III) (15" DIA)	LF	23
401.1	REINFORCED CONCRETE PIPE (CLASS III) (18" DIA)	LF	307
401	REINFORCED CONCRETE PIPE (CLASS III) (24" DIA)	LF	32
403.1	JUNCTION BOX 4'X4'X4'	EA	5
403.1	INLET TYPE I (COMPLETE) (10 FT)	EA	4
403.1	INLET TYPE I (COMPLETE) (5 FT) (MOD)	EA	5
403.1	INLET TYPE I (COMPLETE) (5 FT) (MOD2)	EA	2
407.4	CONCRETE COLLAR	CY	2.9
413.1	FLOWABLE FILL	CY	4
512.1	ADJUST EXISTING MANHOLES	EA	6
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	372
465.2143	INLET (COMPL) (TRAFFIC) (TY X-1)	EA	7
465.XXX1	INLET (COMPL) (TRAFFIC) (TY X-2)	EA	1
481 2027	PVC PIPE (SCH 80)(4 IN)	LF	8
481 2031	PVC PIPE (SCH 80)(6 IN)	LF	16
TRAFFIC			
*6053 6001	SHIFT OVERHEAD SIGN PANELS	EA	2
6834.1	PORTABLE CHANGEABLE MESSAGE SIGN	DAY	36
531.59B	RESERVED PARKING (HANDICAP)	EA	2
531.59C	PAY TO PARK	EA	17
531.59D	PARKING METER LOCATION	EA	9
531.59E	COMMERCIAL LOADING ONLY	EA	8
531.59F	PASSENGER LOADING ONLY	EA	2
531.3	R1-1 STOP (30")	EA	2
531.11	R3-5 RIGHT TURN ONLY	EA	3
531.13	R3-7 LEFT OR RIGHT MUST TURN LEFT OR RIGHT	EA	2
531.18	R5-1 DO NOT ENTER	EA	2
531.20	R6-2 ONE WAY (18X24)	EA	2
531.21	R7-1 NO PARKING ANYTIME	EA	31
531.26	R10-11 NO RIGHT TURN	EA	2
531.68	R3-17 BIKE LANE WITH M4-6 OR M7-2	EA	17
535.1	4" WIDE YELLOW LINE	LF	9955
535.2	4" WIDE WHITE LINE	LF	3371
535.4	8" WIDE WHITE LINE	LF	5920
535.5	12" WIDE WHITE LINE	LF	2905
535.7	24" WIDE WHITE LINE	LF	2885
535.8	RIGHT WHITE ARROW	EA	11
535.9	LEFT WHITE ARROW	EA	31
535.12	WORD "ONLY" OR "WAIT HERE"	EA	19
535.16	STRAIGHT WHITE ARROW BICYCLE FACILITY	EA	38
535.17	BICYCLE RIDER SYMBOL	EA	38
535.22	24" WIDE YELLOW LINE	LF	85
535.23	SOLID YELLOW MEDIAN NOSE	EA	6
535.24	HANDICAP SYMBOL	EA	2
537.6	RAISED PAVMENT MARKER (TYPE I C)	EA	35
537.8	RAISED PAVMENT MARKER (TYPE II A-A)	EA	376

PERMANENT TRAFFIC SIGNALS			
308.11	DRILL SHAFTS (24 IN)	LF	186
308.12	DRILL SHAFTS (30 IN)	LF	305.11
308.13	DRILL SHAFTS (36 IN)	LF	13.2
615.1	TRAFFIC SIGNAL CONTROLLER ASSEMBLY (TYPE 332 CABINET)	EA	1
615.4	TRAFFIC SIGNAL CONTROLLER ASSEMBLY (TYPE 336 CABINET)	EA	8
618.1	CONDUIT (PVC SCHEDULE 40) (2 IN) (TRENCH)	LF	1650
618.2	CONDUIT (PVC SCHEDULE 40) (3 IN) (TRENCH)	LF	500
618.4	CONDUIT (PVC SCHEDULE 40) (2 IN) (BORE)	LF	2700
618.5	CONDUIT (PVC SCHEDULE 40) (3 IN) (BORE)	LF	3935
620.11	ELECTRICAL CONDUCTORS (NO. 6) (BARE)	LF	125
620.12	ELECTRICAL CONDUCTORS (NO. 8) (BARE)	LF	7795
620.13	ELECTRICAL CONDUCTORS (NO. 6) (INSULATED)	LF	210
621.1	TRAY CABLE (4 COND) (12 AWG)	LF	4340
624.4	INSTALL GROUND BOXES TYPE D (162922)	EA	37
628.11	ELECTRICAL SERVICE (TYPE D) (120 / 240V)	EA	9
633.1	BATTERY BACKUP SYSTEM	EA	9
655.1	TYPE 332 CONTROLLER FOUNDATION	EA	1
655.11	TYPE 336 CONTROLLER FOUNDATION	EA	8
680.2	INSTALLATION OF HIGHWAY TRAFFIC SIGNALS (SYSTEM)	EA	9
680.21	ASTRO-BRAC MAST ARM WIND DAMPER ASSEMBLY	EA	1
682.1	VEHICLE SIGNAL SECTION WITH BACK PLATE (3 SEC)	EA	60
682.2	VEHICLE SIGNAL SECTION WITH BACK PLATE (4 SEC)	EA	6
682.4	PEDESTRIAN SIGNAL SECTION (12 IN) LED (3 IND)	EA	64
683.1	LED COUNTDOWN PEDESTRIAN MODULE	EA	64
684.11	TRAFFIC SIGNAL CABLES (TYPE A) (14 AWG) (4 CONDUCTOR)	LF	4315
684.12	TRAFFIC SIGNAL CABLES (TYPE A) (14 AWG) (9 CONDUCTOR)	LF	14125
686.1	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 ( 20FT ) LUM&ILSN	EA	3
686.11	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 ( 24FT ) ILSN	EA	2
686.12	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 ( 24FT ) LUM&ILSN	EA	9
686.13	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 ( 28FT ) LUM&ILSN	EA	4
686.14	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 ( 32 FT ) LUM&ILSN	EA	11
686.17	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 ( 44 FT ) LUM&ILSN	EA	1
687.1	PEDESTAL POLE ASSEMBLY	EA	31
688.2	PEDESTRIAN DETECTOR (2 IN PUSH BUTTON AND SIGN)	EA	64
688.3	AUDIBLE PEDESTRIAN SIGNAL UNIT	EA	64
693.11	INTERNALLY LIGHTED STREET NAME SIGNS [ILSN SIGN 6' S]	EA	4
693.12	INTERNALLY LIGHTED STREET NAME SIGNS [ILSN SIGN 8' S]	EA	25
696.2	RADAR PRESENCE DETECTION DEVICE (RPDD)	EA	30
696.4	RADAR PRESENCE DETECTION DEVICE COMMUNICATION AND POWER CABLE	LF	5335
6007.01	REMOVAL OF TRAFFIC SIGNALS AT INTERSECTION	EA	8
680.its01	802.11n, b/g/n Outdoor Mesh AP, FCC Cfg (Part#: AIR-CAP1552E-K9)	EA	8
680.its02	2400-2483.5 MHz, 4/7 dBi Omni Ant, with N Connect (Part #: AIR-ANT2547V-N)	EA	8
680.its03	Aironet 1550 Series AC Power Cord, 40 ft, N. Amer Plug (Part #: AIR-CORD-R3P-40NA)	EA	8
680.its04	1550 Series Pole Mount Kit (AIR-ACCPMK1550)	EA	8
680.its05	SMARTnet 8x5xNBD 1552E AP (Part #: CON-SNT-CAP-1552Ex)	EA	8
680.its06	27331A 01010000 BELDEN (Power Cable) (Part #: VNTC 16-3-R10K-BED)	LF	820
680.its07	IND ETH 5E4P24 HLD (Ethernet Cable) (Part #: 7919A 01001000)	LF	820
680.its08	2955 12 TX W/SM UPLINKS (Part #:WS-C2955S-12)	EA	8
680.its09	19 IN RACK MOUNT KIT (Part #: CISCO STK-RACKMNT-2955)	EA	8
680.its10	CISCO, AC TO 24 V DC DIN RAIL PW (Part #: PWR-2955-AC)	EA	8
680.its11	SMARTNET 8X5XNBD 2955 12 TX w/Single Mode Uplinks (Part #:CON-SNTWSC2955S)	EA	8
LANDSCAPE			
LS-1	TREE GRATES	EA	21
LS-2	BENCHES	EA	19
LS-3	BIKE RACKS	EA	20
LS-4	RELOCATE EXIST BIKE RACK	EA	1
LS-5	TRASH CANS	EA	7
LS-6	RECYCLE BINS	EA	4
LS-7	TREES 4" CALIPER	EA	21
LS-8	SHRUBS 1 GALLON	EA	445
LS-9	SHRUBS 5 GALLON	EA	59
LS-10	SHRUBS 30 GALLON	EA	10
LS-11	PLANTING MEDIA	CY	290
LS-12	MULCH	CY	40
LS-13	FILTER FABRIC	SF	3075
LS-14	ROOT BARRIER	LF	105
LS-15	GRAVEL LIMESTONE BASE	CY	10
2810	IRRIGATION	L.S.	1
PEDESTRIAN ILLUMINATION			
308.11	DRILL SHAFTS (24IN)	LF	186
618.2	CONDUIT (PVC SCHEDULE 40) (3 IN)	LF	2232
620.2	ELECTRIC CONDUCTORS (NO 8) BARE	LF	2232
621.14	ELECTRIC CONDUCTORS (NO 10) INSULATED	LF	4464
9010	PEDESTRIAN ILLUMINATION ASSEMBLY	EA	31
9012.1	SS450 GATEWAY CELLULAR ENABLE	EA	1
9012.2	NEMA BOX ENCLOSURE WITH DIN-RAIL MOUNTED POWER SUPPLY	EA	1
9012.3	TL5-B1 (GR1) , 5-PIN, TWIST LOCK CONTROLLER, 120-277 (GREEN)	EA	31

OPTION 1 (COMPLETE RECONSTRUCTION)			
104.1	STREET EXCAVATION	CY	6602
107.1	EMBANKMENT (FILL)	CY	44
108.1	LIME TREATED SUBGRADE (6" COMP DEPTH)	SY	10008
108.2	LIME	TON	324
203.1	TACK COAT	GAL	2487
205.2	HOT MIX ASPH PVMT TYPE B (10")	SY	13458
208.1	SALVAGING, STOCKPILING, & RECLAIMING ASPHALT PAVEMENT	SY	500

OPTION 2 (MILL AND OVERLAY)			
104.1	STREET EXCAVATION	CY	3819
107.1	EMBANKMENT (FILL)	CY	9
108.1	LIME TREATED SUBGRADE (6" COMP DEPTH)	SY	3476
108.2	LIME	TON	113
203.1	TACK COAT	GAL	1488
205.2	HOT MIX ASPH PVMT TYPE B (10")	SY	3464
208.1	SALVAGING, STOCKPILING, & RECLAIMING ASPHALT PAVEMENT	SY	6619

7/6/2016  
 FERNANDO CAMARILLO, P.E. DATE

CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	DWG	CHK
REVISIONS				

## DOWNTOWN STREETS MAIN AND SOLEDAD

### ESTIMATED QUANTITY SHEET

TPBE REG. NO. F-483  
 (210) 349-3273

DGN:				
CHK DGN:	CB			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:	CB	TEXAS	BEXAR	288 OF 416

Design File Name: \\pci-server-ver2\data\gate\Jobs\12\022\Techprod\CapImprove\Summaries\MAS-SUM.dgn  
 100% SUBMITTAL DATE: 03/04/2016  
 Plotted on: 5/31/2016 4:42:20 PM

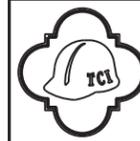
SHT NO.	103.1 REMOVE CONC. CURB	103.3 REMOVE SIDEWALKS AND DRIVEWAYS	104.1 STREET EXCAVATION	107.1 EMBANK (FINAL)	108.1 LIME TREATED SUBGRADE (6" COMP DEPTH)	108.2 LIME	203.1 TACK COAT	315 FOG SEAL (TRMSS)	205.2 HOT MIX ASPH PVMT TYPE B (10")	205.4 HOT MIX ASPH PVMT TYPE C (4")	SP-1 AC-300 COATING GREEN	500.1 CONC CURB	502.1 CONC SIDEWALK (CONVEN FORMED)	502.3 SIDEWALK DRAIN	503.2 PORTLAND CEMENT CONC. DRIVEWAY COMMERCIAL	506.1 CONC RETAIN WALL COMBO TYPE	*528 2004 LANDSCAPE PAVERS	*528 6006 REMOVE AND RELAY LANDSCAPE PAVERS	SP-2 POLYMERIZED CEMENTITIOUS EXTERIOR OVERLAY
	LF	SF	CY	CY	SY	TON	GAL	SY	SY	SY	SY	LF	SY	EA	SY	CY	SY	SY	SF
Main 1 of 4	264	3012	571	15	949	31	220	31	947	947	302	797	333	4	163				5121
Main 2 of 4	466	6564	786	6	1153	44	315		1351	1351	445	1025	626	1	100		95	225	3690
Main 3 of 4	859	9842	1239	3	2195	68	590		3364	2093	443	1141	1354		109	1	178		
Main 4 of 4	365	3780	499	2	730	23	235		1419	698	231	522	577				96		
Sol 1 of 4	329	4184	635	3	1142	40	262		1384	1240		904	390	1	205	1			5724
Sol 2 of 4	665	6786	791	6	1542	40	276		1542	1219		1120	519	1	292		94	185	3600
Sol 3 of 4	656	5839	1743	4	1144	60	466		2821	1842		1028	721	1	178		120		1872
Sol 4 of 4	186	1749	338	5	606	20	123		630	604		406	311		53		76		
INCIDENTAL WORK MAIN SOLEDAD								10665											
								8436											
	3790	41756	6602	44	10308	324	2487	19101	13458	9994	1421	6943	4831	8	1100	2	659	410	20007

SWPPP		PEDESTRIAN ILLUMINATION								TREE AND LANDSCAPE PROTECTION				TCP	
540.7 CONSTRUCT PERIMETER FENCING 144	540.10 CURB INLET GRAVEL FILTERS	CIRCUIT NO.	308.11 DRILL SHAFTS (24-IN)	618.2 CONDUIT (PVC) SCH 40 (3 IN) (TRENCH) (ROCK)	620.2 ELECTRICAL CONDUSTORS (NO 8) BARE	621.14 ELECTRICAL CONDUSTORS (NO 10) INSULATED	9010 INS VALMONT PED POST 16 FLAT FLUTED POLE	9011 INS STERNBERG LIGHT FIXTURE A850SR LED	801.2 LEVEL IIA PROTECTIVE FENCING	801.3 LEVEL IIB PROTECTIVE FENCING	525.1 CONCRETE TRAFFIC BARRIER (PORTABLE) LOW PROFILE	681.1 TEMP TRAFFIC SIGNAL			
LF	LF		LF	LF	LF	LF	EA	EA	LF	LF	LF	LS			
900	30	130	60	570	570	1140	10	10			660				
900	45	230	48	624	624	1248	8	8							
900	25	330	48	608	608	1216	8	8							
900		400	30	430	430	860	5	5							
900	50														
900															
900	105														
900															
7200	255		186	2232	2232	4464	31	31	600	70	660	1			

\* TXDOT BID ITEMS



  
 5/31/2016  
 FERNANDO CAMARILLO, P.E. DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	DWG	CHK

### DOWNTOWN STREETS MAIN AND SOLEDAD

#### OPTION 1 ROADWAY SUMMARY



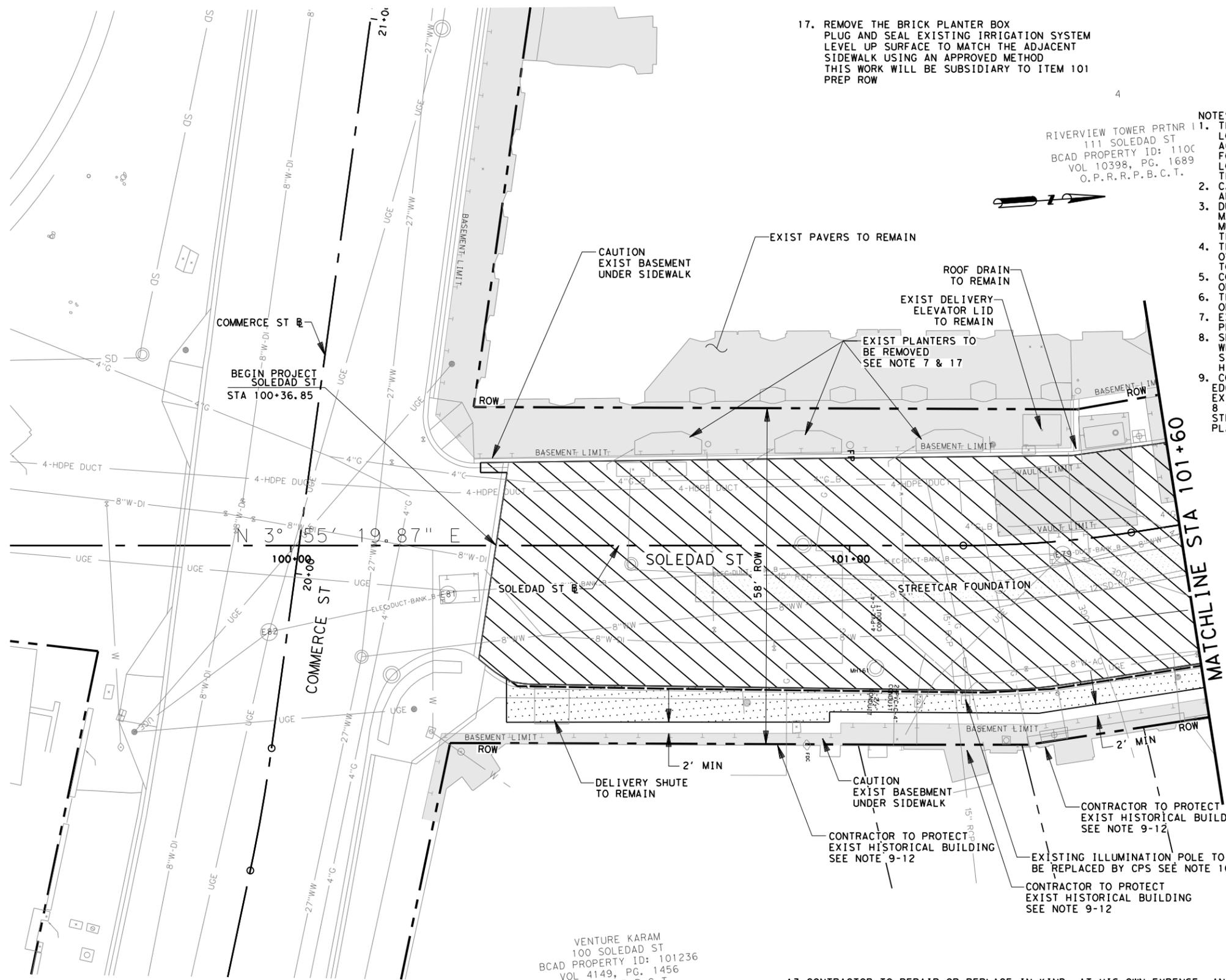
5835 CALLAGHAN RD, SUITE 200  
 SAN ANTONIO, TEXAS, 78228  
 (210) 349-3273 (210) 349-4395 (FAX) http://www.pozcam.com/

DGN:				
CHK DGN:	CB			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:	CB	TEXAS	BEXAR	13 OF 416

Addendum No. 2



Design File Name: \\pci-server-ver2\datagate\Jobs\12\022\Techprod\CapImprove\ROADWAY\MAS-RMV-SHEETS.dgn  
 100% SUBMITTAL DATE: 03/04/2016  
 Plotted on: 7/5/2016 6:14:15 PM



17. REMOVE THE BRICK PLANTER BOX  
 PLUG AND SEAL EXISTING IRRIGATION SYSTEM  
 LEVEL UP SURFACE TO MATCH THE ADJACENT  
 SIDEWALK USING AN APPROVED METHOD  
 THIS WORK WILL BE SUBSIDIARY TO ITEM 101  
 PREP ROW

RIVERVIEW TOWER PRTR 1  
 111 SOLEDAD ST  
 BCAD PROPERTY ID: 110C  
 VOL 10398, PG. 1689  
 O.P.R.P.B.C.T.

**LEGEND**

ROW	RIGHT OF WAY LINE	REMOVE CURB
---	PROPERTY LINE	
[Hatched Box]	OPTION 1-FULL DEPTH REMOVAL	OPTION 2-MILL AND OVERLAY
[Cross-hatched Box]	OPTION 1-FULL DEPTH REMOVAL	OPTION 2-FULL DEPTH REMOVAL
[Dotted Box]	SIDEWALK, CURB, OR DRIVEWAY REMOVAL	
[Grid Box]	BLOCK, OR BRICK PAVER REMOVAL	
[T-dashed Box]	EXIST BASEMENT/TUNNEL LIMITS (TO REMAIN)	

- NOTES:**
- THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OR HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AND TO AVOID DAMAGE THERETO.
  - CALL THE TEXAS ONE CALL LOCATOR 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
  - DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
  - THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRICAL FACILITIES IF ADJACENT TO WORK AREA. PART 192.181.
  - CONTRACTOR TO VERIFY LOCATION OF BASEMENTS. LIMITS SHOWN ON PLANS ARE APPROXIMATE LOCATIONS OF KNOWN BASEMENTS.
  - THERE WILL BE NO SEPARATE PAY ITEM FOR ANY SAW CUTS SHOWN ON THE PLANS OR REQUIRED BY INSPECTOR.
  - EXISTING CONCRETE SIDEWALK OVER BASEMENTS ARE TO REMAIN PROTECTED FROM DAMAGE TO SIDEWALK AND WATERPROOFING.
  - SEE SHEET 142 FOR SIDEWALK DETAILS NEAR EXISTING BASEMENTS WHEN SIDEWALK REMOVAL IS SPECIFIED, SAW CUT EXISTING SIDEWALK 8 TO 12 INCHES AWAY FROM EXISTING BUILDINGS AND HISTORIC STRUCTURE.
  - CONTRACTOR TO CONSTRUCT NEW SIDEWALK NEXT TO THE SAW-CUT EDGE WITH INSTALLATION OF EXPANSION JOINTS IN BETWEEN, OR IF EXISTING SIDEWALK IS TO BE REMOVED ENTIRELY, THE REMAINING 8 TO 12 INCHES NEXT TO THE EXISTING BUILDING OR HISTORIC STRUCTURE WILL BE REMOVED BY HAND AND AN EXPANSION JOINT PLACED BETWEEN THE HISTORIC STRUCTURE AND THE NEW SIDEWALK.

**ADDITIONAL NOTES:**

- CALLOUTS ARE TO FACE OF CURB UNLESS NOTED.
- REFER TO PLAN AND PROFILE & INTERSECTION LAYOUT SHEETS FOR ADDITIONAL INFORMATION
- CONTRACTOR IS RESPONSIBLE FOR PREVENTING DAMAGE TO EXISTING BUILDINGS AND HISTORIC STRUCTURES DURING THE ENTIRE CONSTRUCTION PROJECT, ESPECIALLY DURING REMOVAL OF EXISTING SIDEWALK, CURB, ETC. DURING THE SAW CUT AND HAND REMOVAL PROCESS, CONTRACTOR WILL EXERCISE UTMOST CAUTION AND WILL PHYSICALLY PROTECT EXISTING BUILDINGS AND HISTORIC STRUCTURE FOUNDATION, MATERIALS, ELEVATIONS, AND ENTRYWAYS.

- CONTRACTOR TO REPAIR OR REPLACE IN KIND, AT HIS OWN EXPENSE, ANY HISTORIC MATERIALS DAMAGED IN THE COURSE OF EXECUTING THE WORK; CONTRACTOR IS RESPONSIBLE FOR LOCATING REPLACEMENT SOURCE FOR HISTORIC MATERIALS DAMAGED IN THE COURSE OF WORK; TCI EMD TO BE INFORMED OF DAMAGE AND PROPOSED REPAIRS PRIOR TO EXECUTION OF REPAIR WORK.
- CONTRACTOR TO COORDINATE WITH COSA ON REMOVAL OF PARKING METERS, PARKING KIOSKS, TRASH CANS, AND BIKE RACKS
- CONTRACTOR TO COORDINATE WITH OWNERS OF NEWSSTANDS AND LARGE POTTED PLANTS PRIOR TO REMOVAL
- CONTRACTOR TO CONTACT AND COORDINATE WITH CPS FOR REMOVAL OF STREET LIGHTS. CONTACT JOHN OFFER AT 210-353-2012 OR CLAUDIA TOVAR AT 210-353-2226

VENTURE KARAM  
 100 SOLEDAD ST  
 BCAD PROPERTY ID: 101236  
 VOL 4149, PG. 1456  
 O.P.R.P.B.C.T.  
 19

STATE OF TEXAS  
**FERNANDO CAMARILLO**  
 86882  
 LICENSED PROFESSIONAL ENGINEER  
 7/5/2016  
 FERNANDO CAMARILLO, P.E. DATE

TCI CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	DWG	CHK
REVISIONS				

**DOWNTOWN STREETS MAIN AND SOLEDAD**  
 ADDENDUM NO. 2  
**SOLEDAD STREET REMOVAL & HISTORIC PRESERVATION**  
 BEGIN TO STA. 101+60

0 5 10 20  
 SCALE: 1"=20' HORIZ

1 OF 7

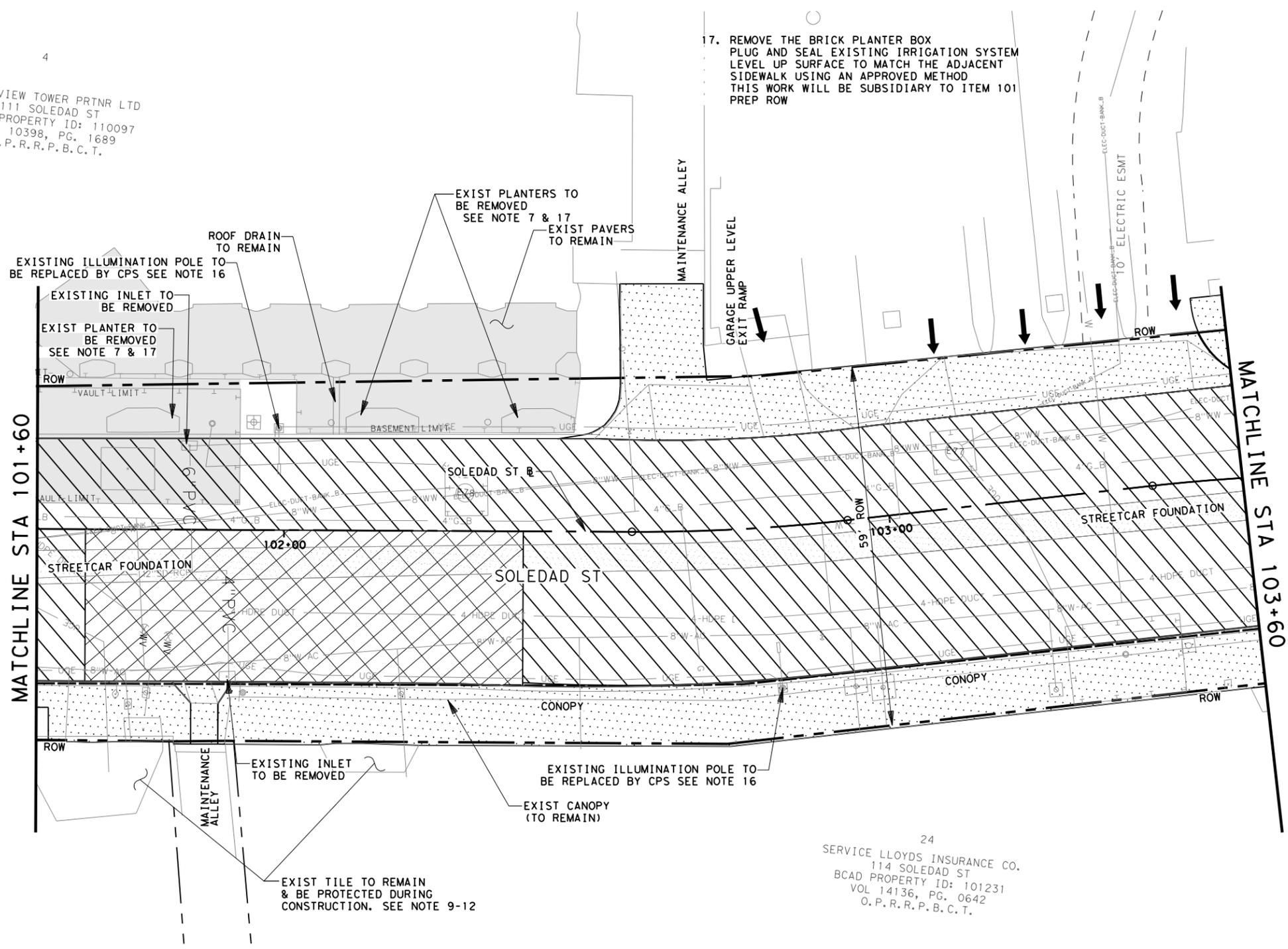
**POZNECKI CAMARILLO INC**  
 5835 CALLAGHAN RD, SUITE 200  
 SAN ANTONIO, TEXAS, 78228  
 (210) 349-3273 (210) 349-4395 (FAX) http://www.pozcam.com

TBPE REG. NO. F-483

DGN:		STATE	COUNTY	SHEET NO.
CHK DGN:	CB	TEXAS	BEXAR	99 OF 416

Design File Name: \\pcj\server\ver2\dat\agate\Jobs\12\022\Techprod\CapImprove\ROADWAY\MAS-RMV-SHEETS.dgn  
 100% SUBMITTAL DATE: 03/04/2016  
 Plotted on: 7/5/2016 6:14:20 PM

4  
 RIVERVIEW TOWER PRTR LTD  
 111 SOLEDAD ST  
 BCAD PROPERTY ID: 110097  
 VOL 10398, PG. 1689  
 O. P. R. R. P. B. C. T.



17. REMOVE THE BRICK PLANTER BOX  
 PLUG AND SEAL EXISTING IRRIGATION SYSTEM  
 LEVEL UP SURFACE TO MATCH THE ADJACENT  
 SIDEWALK USING AN APPROVED METHOD  
 THIS WORK WILL BE SUBSIDIARY TO ITEM 101  
 PREP ROW

EXISTING ILLUMINATION POLE TO  
 BE REPLACED BY CPS SEE NOTE 16  
 EXISTING INLET TO  
 BE REMOVED  
 EXIST PLANTER TO  
 BE REMOVED  
 SEE NOTE 7 & 17  
 ROOF DRAIN  
 TO REMAIN  
 EXIST PLANTERS TO  
 BE REMOVED  
 SEE NOTE 7 & 17  
 EXIST PAVERS  
 TO REMAIN

MATCHLINE STA 101+60

MATCHLINE STA 103+60

EXISTING INLET  
 TO BE REMOVED  
 EXISTING ILLUMINATION POLE TO  
 BE REPLACED BY CPS SEE NOTE 16  
 EXIST CANOPY  
 (TO REMAIN)  
 EXIST TILE TO REMAIN  
 & BE PROTECTED DURING  
 CONSTRUCTION. SEE NOTE 9-12

24  
 SERVICE LLOYDS INSURANCE CO.  
 114 SOLEDAD ST  
 BCAD PROPERTY ID: 101231  
 VOL 14136, PG. 0642  
 O. P. R. R. P. B. C. T.

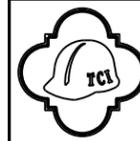
**LEGEND**

ROW - - - - - RIGHT OF WAY LINE  
 - - - - - REMOVE CURB  
 - - - - - PROPERTY LINE  
 [Hatched Box] OPTION 1-FULL DEPTH REMOVAL  
 [Cross-hatched Box] OPTION 2-MILL AND OVERLAY  
 [Diagonal Hatched Box] OPTION 1-FULL DEPTH REMOVAL  
 [Diagonal Hatched Box] OPTION 2-FULL DEPTH REMOVAL  
 [Dotted Box] SIDEWALK, CURB, OR DRIVEWAY REMOVAL  
 [Grid Box] BLOCK, OR BRICK PAVER REMOVAL  
 [Shaded Box] EXIST BASEMENT/TUNNEL LIMITS  
 (TO REMAIN)

- NOTES:**
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  - SEE SHEET 142 FOR SIDEWALK DETAILS NEAR EXISTING BASEMENTS WHEN SIDEWALK REMOVAL IS SPECIFIED, SAW CUT EXISTING SIDEWALK 8 TO 12 INCHES AWAY FROM EXISTING BUILDINGS AND HISTORIC STRUCTURE.
  - CONTRACTOR TO CONSTRUCT NEW SIDEWALK NEXT TO THE SAW-CUT EDGE WITH INSTALLATION OF EXPANSION JOINTS IN BETWEEN, OR IF EXISTING SIDEWALK IS TO BE REMOVED ENTIRELY, THE REMAINING 8 TO 12 INCHES NEXT TO THE EXISTING BUILDING OR HISTORIC STRUCTURE WILL BE REMOVED BY HAND AND AN EXPANSION JOINT PLACED BETWEEN THE HISTORIC STRUCTURE AND THE NEW SIDEWALK.



Fernando Camarillo  
 7/5/2016  
 FERNANDO CAMARILLO, P.E. DATE

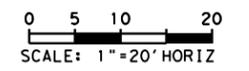


CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	DWG	CHK
REVISIONS				

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD**  
 ADDENDUM NO. 2

**SOLEDAD STREET  
 REMOVAL & HISTORIC PRESERVATION  
 STA. 101+60 TO STA. 103+60**



2 OF 7



5835 CALLAGHAN RD, SUITE 200  
 SAN ANTONIO, TEXAS, 78228  
 (210) 349-3273 (210) 349-4395 (FAX) http://www.pozcam.com/

**ADDITIONAL NOTES:**

- CALLOUTS ARE TO FACE OF CURB UNLESS NOTED.
- REFER TO PLAN AND PROFILE & INTERSECTION LAYOUT SHEETS FOR ADDITIONAL INFORMATION
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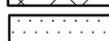
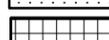
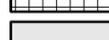
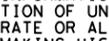
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- CONTRACTOR TO CONTACT AND COORDINATE WITH CPS FOR REMOVAL OF STREET LIGHTS. CONTACT JOHN OFFER AT 210-353-2012 OR CLAUDIA TOVAR AT 210-353-2226

DGN:				
CHK DGN:	CB			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:	CB	TEXAS	BEXAR	100 OF 416

Design File Name: \\pci-server\ver2\dat\agate\Jobs\12\022\Techprod\CapImprove\ROADWAY\MAS-RMV-SHEETS.dgn  
 100% SUBMITTAL DATE: 03/04/2016  
 Plotted on: 7/5/2016 6:14:26 PM

**LEGEND**

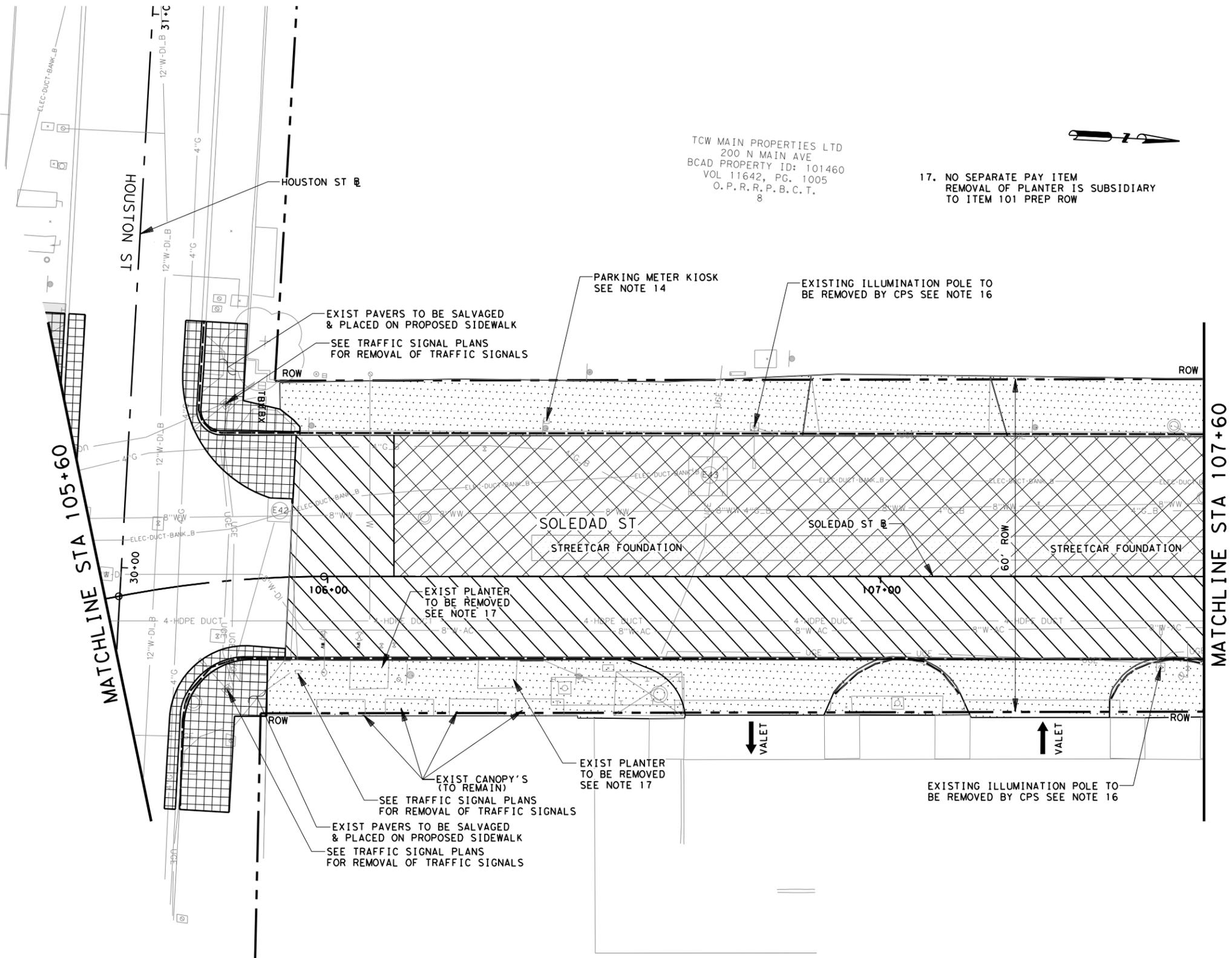
ROW --- RIGHT OF WAY LINE  
 --- REMOVE CURB  
 --- PROPERTY LINE

 OPTION 1-FULL DEPTH REMOVAL  
 OPTION 2-MILL AND OVERLAY  
 OPTION 1-FULL DEPTH REMOVAL  
 OPTION 2-FULL DEPTH REMOVAL  
 SIDEWALK, CURB, OR DRIVEWAY REMOVAL  
 BLOCK, OR BRICK PAVER REMOVAL  
 EXIST BASEMENT/TUNNEL LIMITS (TO REMAIN)

- NOTES:**
- THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OR HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AND TO AVOID DAMAGE THERE TO.
  - CALL THE TEXAS ONE CALL LOCATOR 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
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TCW MAIN PROPERTIES LTD  
 200 N MAIN AVE  
 BCAD PROPERTY ID: 101460  
 VOL 11642, PG. 1005  
 O.P.R.R.P.B.C.T.  
 8

17. NO SEPARATE PAY ITEM  
 REMOVAL OF PLANTER IS SUBSIDIARY  
 TO ITEM 101 PREP ROW



**ADDITIONAL NOTES:**

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FERNANDO CAMARILLO  
 86882  
 LICENSED PROFESSIONAL ENGINEER  
 7/5/2016  
 FERNANDO CAMARILLO, P.E. DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	DWG	CHK
REVISIONS				

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD**  
 ADDENDUM NO. 2

**SOLEDAD STREET  
 REMOVAL & HISTORIC PRESERVATION  
 STA. 105+60 TO STA. 107+60**

0 5 10 20  
 SCALE: 1" = 20' HORIZ

4 OF 7

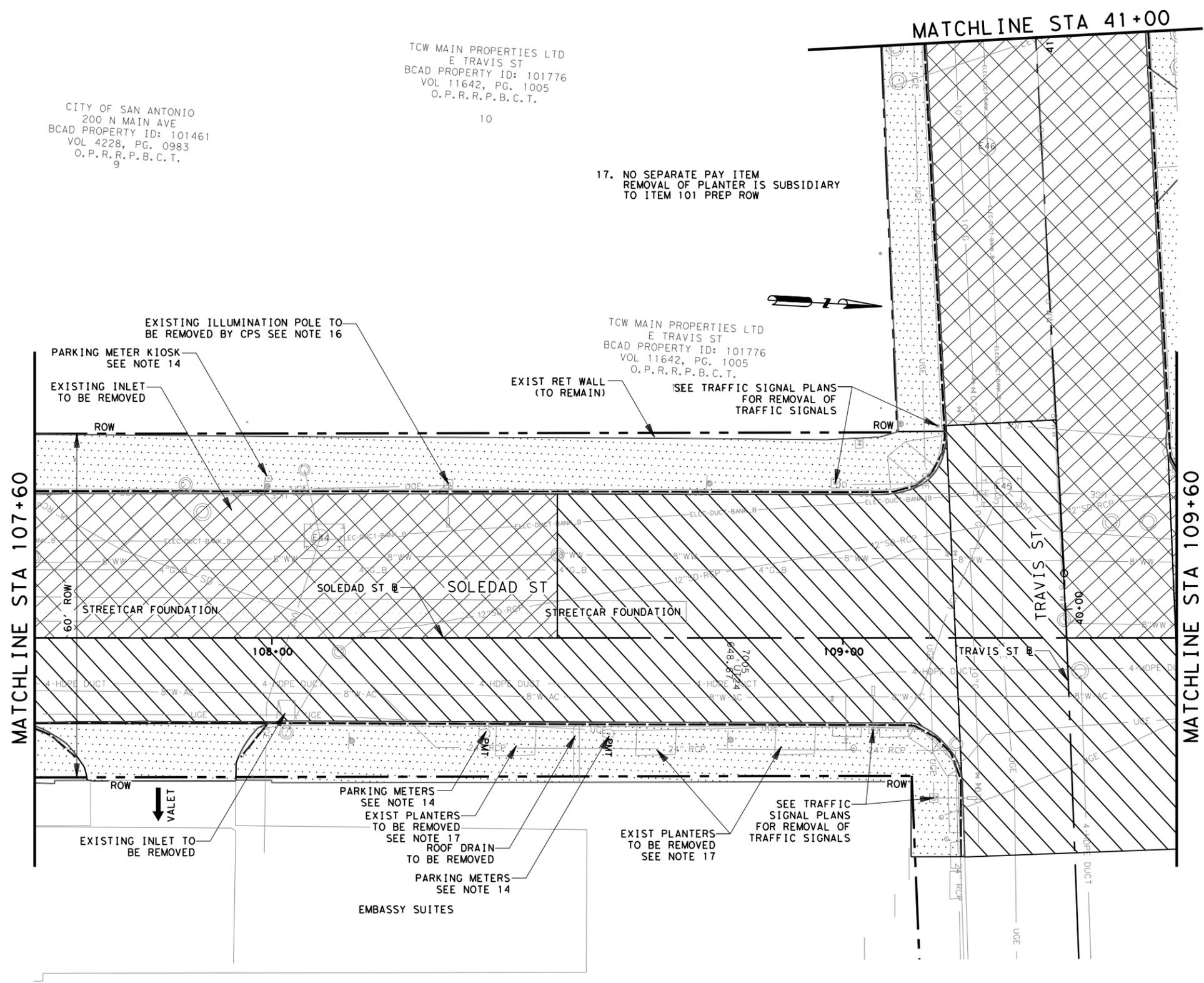


POZNECKI CAMARILLO INC  
 5835 CALLAGHAN RD, SUITE 200  
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TBPE REG. NO. F-483

DGN:				
CHK DGN:	CB			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:	CB	TEXAS	BEXAR	102 OF 416

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 100% SUBMITTAL DATE: 03/04/2016  
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**LEGEND**

ROW - - - - - RIGHT OF WAY LINE  
 - - - - - REMOVE CURB  
 - - - - - PROPERTY LINE

OPTION 1-FULL DEPTH REMOVAL  
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STATE OF TEXAS  
**FERNANDO CAMARILLO**  
 86882  
 LICENSED PROFESSIONAL ENGINEER  
 7/5/2016  
 FERNANDO CAMARILLO, P.E. DATE

TCI CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	DWG	CHK
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**DOWNTOWN STREETS MAIN AND SOLEDAD**  
 ADDENDUM NO. 2

**SOLEDAD STREET**  
 REMOVAL & HISTORIC PRESERVATION  
 STA. 107+60 TO STA. 109+60

0 5 10 20  
 SCALE: 1" = 20' HORIZ

5 OF 7

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- ADDITIONAL NOTES:**
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DGN#	CHK DGN#	STATE	COUNTY	SHEET NO.
	CB	TEXAS	BEXAR	103 OF 416

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ILLUMINATION POLE SCHEDULE

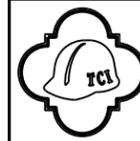
POLE NO	STATION	OFFSET	LUMINAIRE TYPE	24" DRILL SHAFT LENGTH (24-A) (FEET)
A-1	15+45.09	19.25 LT	FIXTURE TYPE A850SRLED *	6
A-2	16+07.39	26.50 LT	FIXTURE TYPE A850SRLED *	6
A-3	16+60.24	26.50 LT	FIXTURE TYPE A850SRLED *	6
A-4	17+12.67	26.50 LT	FIXTURE TYPE A850SRLED *	6
A-5	17+62.67	26.50 LT	FIXTURE TYPE A850SRLED *	6
A-6	18+12.67	26.50 LT	FIXTURE TYPE A850SRLED *	6
A-7	17+92.39	26.50 RT	FIXTURE TYPE A850SRLED *	6
A-8	17+34.87	26.5 RT	FIXTURE TYPE A850SRLED *	6
A-9	16+84.93	26.87 RT	FIXTURE TYPE A850SRLED *	6
A-10	15+89.03	31.48 RT	FIXTURE TYPE A850SRLED *	6
B-1	19+74.29	22.82 LT	FIXTURE TYPE A850SRLED *	6
B-2	21+42.84	19.92 LT	FIXTURE TYPE A850SRLED *	6
B-3	22+14.91	26.50 LT	FIXTURE TYPE A850SRLED *	6
B-4	22+03.27	26.50 RT	FIXTURE TYPE A850SRLED *	6
B-5	21+33.40	26.50 RT	FIXTURE TYPE A850SRLED *	6
B-6	20+81.50	18.50 RT	FIXTURE TYPE A850SRLED *	6
B-7	20+10.86	18.50 RT	FIXTURE TYPE A850SRLED *	6
B-8	19+49.15	18.50 RT	FIXTURE TYPE A850SRLED *	6
C-1	106+45.63	26.50 LT	FIXTURE TYPE A850SRLED *	6
C-2	107+71.53	26.50 LT	FIXTURE TYPE A850SRLED *	6
C-3	108+48.85	26.50 LT	FIXTURE TYPE A850SRLED *	6
C-4	108+94.12	18.50 RT	FIXTURE TYPE A850SRLED *	6
C-5	108+51.03	18.50 RT	FIXTURE TYPE A850SRLED *	6
C-6	108+07.96	18.50 RT	FIXTURE TYPE A850SRLED *	6
C-7	107+52.05	18.50 RT	FIXTURE TYPE A850SRLED *	6
C-8	106+17.58	18.50 RT	FIXTURE TYPE A850SRLED *	6
D-1	110+14.81	18.25 LT	FIXTURE TYPE A850SRLED *	6
D-2	110+59.53	18.35 LT	FIXTURE TYPE A850SRLED *	6
D-3	111+88.06	18.40 LT	FIXTURE TYPE A850SRLED *	6
D-4	112+61.21	18.40 LT	FIXTURE TYPE A850SRLED *	6
D-5	112+36.00	17.50 RT	FIXTURE TYPE A850SRLED *	6

\*STERNBERG PEDESTRIAN LIGHT INFORMATION IS LISTED BELOW.

LIGHT FIXTURE: CRI AT 3500K: 71-72 PT-A850SRLED-994T-6ARC35T5-MDL03-A-SRR7-TB/PGT  
 BASE: 4700 AUSTIN SERIES (10"X43") (10" SQUARE LOWER BASE THAT TRANSITIONS TO AN UPPER BASE - CAST ALUMINUM)  
 POLE: 5" OUTSIDE DIAMETER (OD), STRAIGHT FLUTED SHAFT (SHALL HAVE A 3" OD TENON - END PIECE)  
 BASE/POLE COLOR: PARK GREEN TEXTURED (PGT) (STANDARD FINISH)  
 OVERALL POLE HEIGHT: 16 FT  
 FITTER: 994T (TWIST LOCK ACORN - FITTER TL)  
 OPTION: GFI - GROUND FAULT INTERRUPTER (MOUNT IN THE POLE)  
 LIGHT FIXTURE: A850SR LED OLD TOWN (16"W X 46<sup>5</sup>/<sub>8</sub>" )



  
 7/5/2016  
 FERNANDO CAMARILLO, P.E. DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	DWG	CHK

**DOWNTOWN STREETS  
MAIN AND SOLEDAD**

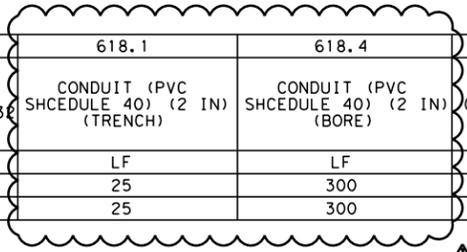
**ILLUMINATION POLE  
SCHEDULE**



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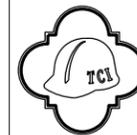
DGN:				
CHK DGN:	CB			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:	CB	TEXAS	BEXAR	288 OF 416

ITEM	308.12	615.1	618.1	618.4	620.12	621.1	628.11	633.1	655.1	680.2
INTERSECTION	DRILL SHAFTS (30 IN)	Traffic Signal Controller Assembly (Type 336 Cabinet)	CONDUIT (PVC SCHEDULE 40) (2 IN) (TRENCH)	CONDUIT (PVC SCHEDULE 40) (2 IN) (BORE)	ELECTRICAL CONDUCTORS (NO. 8) (BARE)	TRAY CABLE (4 CONDR) (12 AWG)	ELECTRICAL SERVICE (TYPE D) (120 / 240V)	BATTERY BACKUP SYSTEM	TYPE 332 CONTROLLER FOUNDATION	INSTALLATION OF HIGHWAY TRAFFIC SIGNALS (SYSTEM)
	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA
SOLEDAD ST @ COMMERCE ST	11.3	1	25	300	695	325	1	1	1	1
TOTALS	11.3	1	25	300	695	325	1	1	1	1



ITEM	682.1	684.11	684.12	686.11	693.12	696.2	696.4
INTERSECTION	VEHICLE SIGNAL SECTION WITH BACK PLATE (3 SEC)	TRAFFIC SIGNAL CABLES (TYPE A) (14 AWG) (4 CONDUCTOR)	TRAFFIC SIGNAL CABLES (TYPE A) (14 AWG) (9 CONDUCTOR)	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 (24FT) ILSN	INTERNALLY LIGHTED STREET NAME SIGNS (ILSN SIGN 8' S)	RADAR PRESENCE DETECTION DEVICE (RPDD)	RADAR PRESENCE DETECTION DEVICE COMMUNICATION AND POWER CABLE
	EA	LF	LF	EA	EA	EA	LF
SOLEDAD ST @ COMMERCE ST	2	335	405	1	1	2	810
TOTALS	2	335	405	1	1	2	810

100% SUBMITTAL



CITY OF SAN ANTONIO  
TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	DWG	CHK
1	06/29/16	ADDED CONDUIT RUN TO METER	TSA	JWC

**DOWNTOWN STREETS  
MAIN AND SOLEDAD  
FROM COMMERCE STREET TO PECAN STREET**

**TRAFFIC SIGNALS  
QUANTITY SUMMARY**

- NOTES:**
1. 680.12'S ITEMS ARE SUBSIDIARY TO ITEM 680.
  2. ITEM 680.21 IS SUBSIDIARY TO ITEM 680.
  3. QUANTITIES ARE PROVIDED FOR CONTRACTOR(S) INFORMATION ONLY. PAYMENT IS SUBSIDIARY TO RELEVANT BID ITEMS.
  4. MODEL 336 CONTROLLER FOUNDATION SHALL BE PROVIDED BY CONTRACTOR PER DETAIL IN THIS PLAN SET.
  5. PEDESTAL POLE SPECIAL FOUNDATION SHALL BE PROVIDED BY CONTRACTOR PER DETAIL IN THIS PLAN SET.
  6. REUSE EXISTING MODEL 2070 SIGNAL CONTROLLER.
  7. A NEW PEDESTRIAN CENTRAL CONTROL UNIT (CCU) WILL BE REQUIRED TO RUN SEPERATE APS'S AT COMMERCE ST AND SOLEDAD.
  8. CONTROLLER FOUNDATION SHOULD BE PERFORMED AND LOCATED OVER EXISTING PEDESTAL POLE WHERE EXISTING FOUNDATION IS LOCATED.

**ROZNECKI  
CAMARILLO INC**  
(210) 349-3273 | 5835 CALLAGHAN RD, SUITE 200 | TBPE REG. NO. F-483  
SAN ANTONIO, TEXAS, 78228 | http://www.pozcam.com/ | (210) 349-4395 (FAX)

**PAPE-DAWSON ENGINEERS**  
2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000  
FAX: 210.375.9010  
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	1

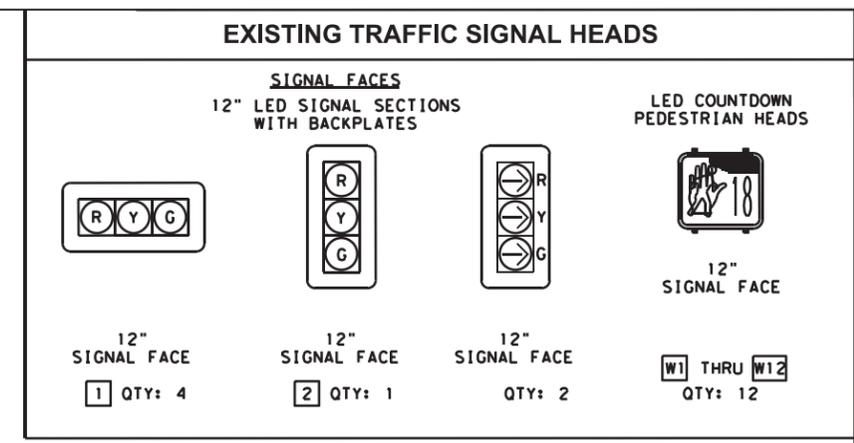
**ADDENDUM No. 2  
SHEET 1 OF 15**

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- NOTES:**
1. ALL DIMENSIONS ARE IN FEET UNLESS SPECIFIED OTHERWISE.
  2. CONTRACTOR SHALL COORDINATE ALL REMOVAL OR RELOCATION OF TRAFFIC RELATED EQUIPMENT AND SIGNS WITH COSA.
  3. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO COMMENCING EXCAVATION. ALL UTILITY LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
  4. ALL TRAFFIC SIGNAL EQUIPMENT DEEMED SALVAGEABLE BY THE CITY INSPECTOR SHALL BE DELIVERED TO THE CITY OF SAN ANTONIO TRAFFIC OPERATIONS FACILITY LOCATED AT 223 SOUTH CHERRY ST. SAN ANTONIO, TX 78203.
  5. ALL SAWCUTS SHALL BE SUBSIDIARY TO VARIOUS PERTINENT PROJECT BID ITEMS. THERE SHALL BE NO ADDITIONAL PAYMENT FOR SAWCUTS UNLESS SPECIFIED OTHERWISE IN THIS PLAN SET.
  6. ALL UTILITY VALVE AND/OR METER ADJUSTMENTS SHALL BE SUBSIDIARY TO VARIOUS PERTINENT PROJECT BID ITEMS. THERE SHALL BE NO ADDITIONAL PAYMENT FOR UTILITY VALVE AND/OR METER ADJUSTMENTS UNLESS SPECIFIED OTHERWISE IN THIS PLAN SET.
  7. SEE REMOVAL PLANS FOR ADDITIONAL REMOVAL ITEMS. ALL ITEMS NOT SPECIFICALLY CALLED OUT IN THESE PLANS TO BE REMOVED, SHALL REMAIN.
  8. CONTRACTOR SHALL COORDINATE WITH CPS ENERGY AND COSA TO RELOCATE EXISTING ILLUMINATION POLES AND TO ADJUST EXISTING GAS VALVES TO BE FLUSH WITH FINAL GRADE.
  9. CONTRACTOR SHALL COORDINATE WITH SAWS TO RELOCATE EXISTING FIRE HYDRANTS, AND ADJUST EXISTING WATER VALVES TO BE FLUSH WITH FINAL GRADE.
  10. CONTRACTOR SHALL COORDINATE WITH ALL RELEVANT TELECOMMUNICATIONS SERVICE PURVEYORS TO ADJUST EXISTING BURIED TELECOMMUNICATIONS BOXES TO BE FLUSH WITH FINAL GRADE.

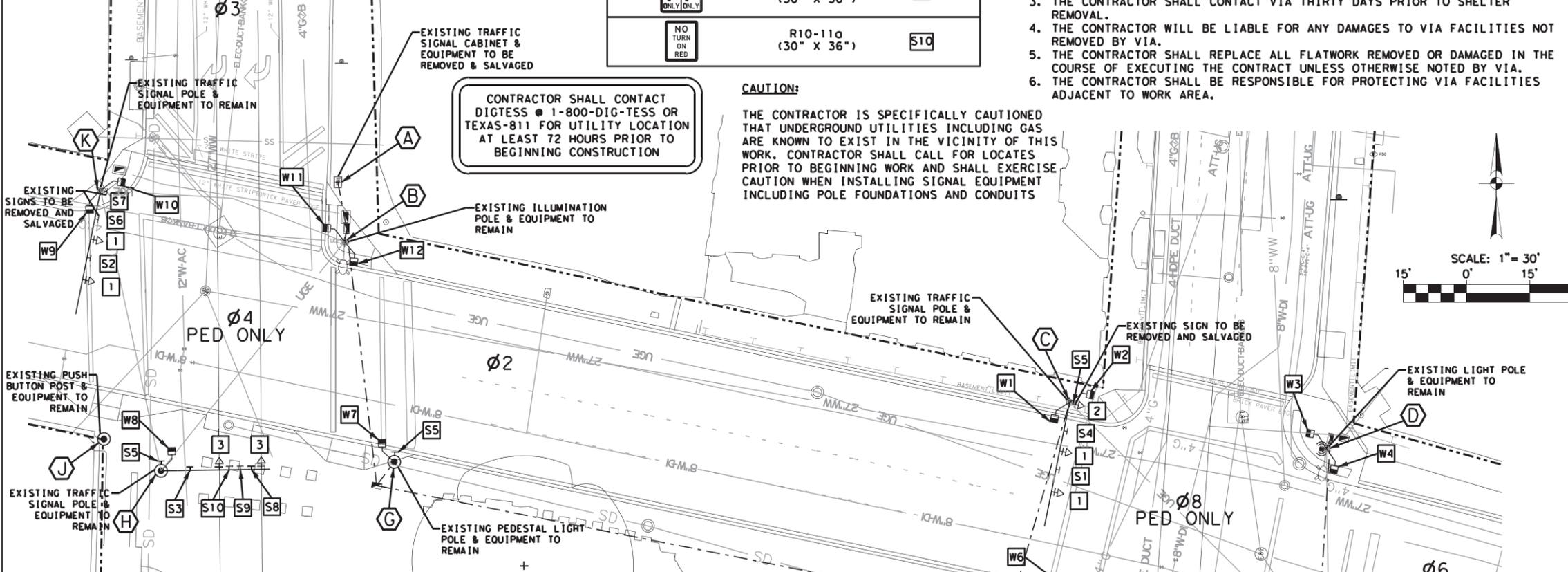
EXISTING TRAFFIC SIGNS		
	METRO STREET NAME SIGN	S1
	METRO STREET NAME SIGN	S2
	METRO STREET NAME SIGN	S3
	(48" X 36")	S4
	R6-1R (36" X 12")	S5
	R3-1 (36" X 36")	S6
	R6-1L (36" X 12")	S7
	R3-2 (36" X 36")	S8
	R3-8 (SPL) (30" X 30")	S9
	R10-11a (30" X 36")	S10



- VIA NOTES:**
1. THE CONTRACTOR SHALL NOT REMOVE ANY VIA FACILITIES.
  2. THE CONTRACTOR SHALL CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STOP POLES OR ANY OTHER VIA FACILITIES THAT MAY BE PRESENT.
  3. THE CONTRACTOR SHALL CONTACT VIA THIRTY DAYS PRIOR TO SHELTER REMOVAL.
  4. THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA.
  5. THE CONTRACTOR SHALL REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA.
  6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES ADJACENT TO WORK AREA.

**LEGEND**

SYMBOL	DESCRIPTION
	TRAFFIC FLOW
	CONTROLLER CABINET
	TRAFFIC SIGNAL POLE
	VEHICLE SIGNAL HEAD
	PEDESTRIAN SIGNAL
	LUMINAIRE
	WIRELESS ACCESS POINT
	MAST ARM MOUNTED SIGN
	POLE OR EQUIPMENT IDENTIFIER
	ILLUMINATION POLE
	TREE
	GROUND MOUNTED SIGN
	EXISTING GROUND BOX (TYPE D)
	EXISTING CONDUIT
	RIGHT-OF-WAY
	BASEMENT
	UNDERGROUND AT&T COMM
	TELEPHONE CONDUIT
	UNDERGROUND ELECTRIC
	ELECTRICAL DUCT BANK
	4" GAS LINE
	4" GAS LINE
	8" WATER LINE
	12" WATER LINE
	8" WASTEWATER LINE

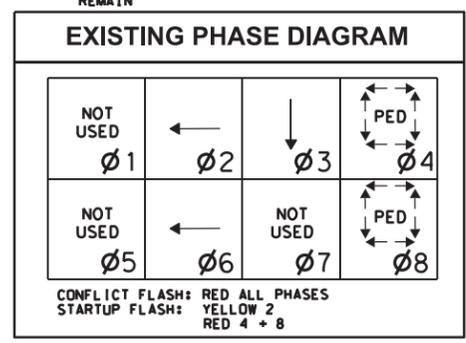


CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

**CAUTION:**  
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT UNDERGROUND UTILITIES INCLUDING GAS ARE KNOWN TO EXIST IN THE VICINITY OF THIS WORK. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO BEGINNING WORK AND SHALL EXERCISE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT INCLUDING POLE FOUNDATIONS AND CONDUITS

**EXISTING POLE & EQUIPMENT INFORMATION**

ID	DESCRIPTION/ATTACHMENTS
A	EXISTING TRAFFIC SIGNAL CONTROLLER PEDESTAL ASSEMBLY
B	EXISTING LIGHT POLE WITH LUMINAIRE, TWO SPECIAL TOURIST-ORIENTED DIRECTION SIGNS, TWO COUNTDOWN PEDESTRIAN SIGNAL HEADS AS ILLUSTRATED.
C	EXISTING SMA, 24 FT ARM, ONE LUMINAIRE, ONE METRO STREET NAME SIGN, ONE R6-1L SIGN, ONE BUS AND RIGHT-TURNS ONLY SIGN, TWO COUNTDOWN PEDESTRIAN SIGNAL HEADS, AND THREE VEHICLE SIGNAL HEADS AS ILLUSTRATED.
D	EXISTING LIGHT POLE WITH LUMINAIRE, TWO SPECIAL TOURIST-ORIENTED DIRECTION SIGNS, TWO COUNTDOWN PEDESTRIAN SIGNAL HEADS, AND WIRELESS ACCESS POINT AS ILLUSTRATED.
E	EXISTING PEDESTAL POLE WITH ONE COUNTDOWN PEDESTRIAN SIGNAL HEAD AS ILLUSTRATED.
F	EXISTING DECORATIVE LIGHT POLE WITH LUMINAIRE AND ONE COUNTDOWN PEDESTRIAN SIGNAL HEAD AS ILLUSTRATED.
G	EXISTING DECORATIVE LIGHT POLE WITH LUMINAIRE, ONE R6-1R SIGN, AND ONE COUNTDOWN PEDESTRIAN SIGNAL HEAD AS ILLUSTRATED.
H	EXISTING SMA, 24 FT ARM, ONE METRO STREET NAME SIGN, ONE R3-2 SIGN, ONE R10-11a SIGN, ONE DUAL RIGHT-TURN ONLY SIGN, ONE R6-1R SIGN, AND ONE COUNTDOWN PEDESTRIAN SIGNAL HEAD AS ILLUSTRATED.
J	EXISTING PEDESTAL POLE AS ILLUSTRATED.
K	EXISTING SMA, 24 FT ARM, ONE LUMINAIRE, ONE METRO STREET NAME SIGN, ONE R3-1 SIGN, ONE R6-1L SIGN, TWO COUNTDOWN PEDESTRIAN SIGNAL HEADS, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.



DESIGN  
JUSTIN W. CLARK, P.E. DATE

APPROVAL

GILMER D. GASTON, P.E. DATE 6/20/2016

CITY OF SAN ANTONIO  
TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	DWG	CHK

**DOWNTOWN STREETS  
MAIN AND SOLEDAD  
FROM COMMERCE STREET TO PECAN STREET**

SOLEDAD ST @ COMMERCE ST  
MAIN ST @ COMMERCE ST  
EXISTING CONDITIONS

**POZNECKI & CAMARILLO INC.**  
(210) 349-3273 5835 CALLAGHAN RD, SUITE 200 SAN ANTONIO, TEXAS, 78228 (210) 349-4395 (FAX) TBPE REG. NO. F-483 http://www.pozcam.com/

**PAPE-DAWSON ENGINEERS**  
2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000 FAX: 210.375.9010 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

DGN:	CV/TA	STATE	COUNTY	SHEET NO.
CHK DGN:	JC	TEXAS	BEXAR	2

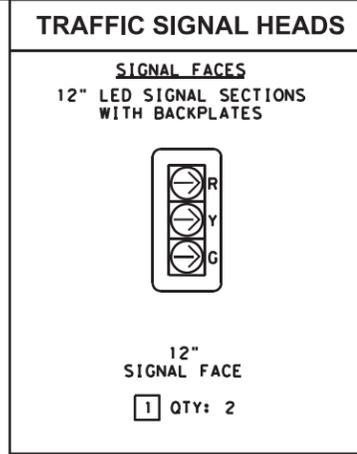
**ADDENDUM No. 2  
SHEET 2 OF 15**

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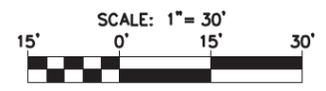
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- NOTES:**
1. ALL DIMENSIONS SHOWN ARE IN FEET UNLESS SPECIFIED OTHERWISE. (ALL EXISTING FEATURES ARE SHOWN SCREENED BACK i.e. FADED).
  2. CONTRACTOR TO POTHOLE SIGNAL POLE LOCATIONS NEAR UNDERGROUND UTILITIES PRIOR TO INSTALLING POLE FOUNDATION.
  3. BATTERY BACK UP SYSTEM (BBS) COMPLETE SHALL BE INSTALLED PER CITY OF SAN ANTONIO SPECIAL SPECIFICATION ITEM 633.
  4. LOCATION OF TRAFFIC SIGNAL POLES, CONTROLLER ASSEMBLIES, AND ELECTRICAL SERVICE SHALL BE VERIFIED AND APPROVED BY COSA PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE ADDRESS IN PERMANENT NUMBERS AND LETTERS TO THE STREET SIDE OF THE SERVICE ENCLOSURE. SAID ADDRESS SHALL ALSO BE RECORDED AND GIVEN TO THE CITY OF SAN ANTONIO INSPECTOR FOR THE CITY'S RECORDS.
  5. ALL ILSN SIGNS SHALL BE INSTALLED ON THE ILSN MAST ARM AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL PROVIDE ADEQUATE VERTICAL CLEARANCE BETWEEN ILSN AND SIGNAL HEAD ASSEMBLIES.
  6. AN ADDITIONAL 2" SCHEDULE 80 PVC SHALL BE INSTALLED AT EACH POLE FOUNDATION STUBBED OUT 2' FROM THE FACE OF THE FOUNDATION. STUB OUTS SHALL BE APPROPRIATELY CAPPED BELOW GRADE FOR FUTURE USE.
  7. SIDEWALK SHALL BE EXTENDED UP TO THE MAST ARM POLES, AS NEEDED, TO PROVIDE PEDESTRIAN ACCESS TO THE PEDESTRIAN PUSH BUTTONS.
  8. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO COMMENCING EXCAVATION. ALL UTILITY LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
  9. NEATLY CAP/COIL ALL WIRES AND CABLES IN GROUND BOX OR AT TERMINATION.
  10. CONTRACTOR SHALL PROVIDE UNIMPEDED VISIBILITY & OPERATION OF ALL SIGNS & TRAFFIC SIGNAL EQUIPMENT. CONTRACTOR SHALL RETAIN THE SERVICES OF A LICENSED ARBORIST TO PERFORM ANY NECESSARY TRIMMING OF TREES.

NEW TRAFFIC SIGNS		
	SEE ILSN DETAILS	S1
	R3-8 (SPL) (30" X 30")	S2
	R6-1R (36" X 12")	S3
	R10-11a (24" X 30")	S4



LEGEND	
SYMBOL	DESCRIPTION
-----	RIGHT-OF-WAY
-----	CONDUIT
←	TRAFFIC FLOW
□	ELECTRIC SERVICE
⊕	GROUND BOX (TYPE D)
⊙	TRAFFIC SIGNAL POLE & FOUNDATION
⊕	PEDESTAL POLE & SPECIAL FOUNDATION
⊕	CONTROLLER, SLAB, FOUNDATION & BBS
⊕	PEDESTRIAN SIGNAL
⊕	TRAFFIC SIGNAL HEAD
⊕	WIRELESS ACCESS POINT
⊕	ILSN
⊕	MAST ARM MOUNTED SIGN
⊕	CABLE/CONDUIT RUN
⊕	RADAR PRESENCE DETECTION DEVICE (RPDD)
⊕	LUMINAIRE
⊕	RADAR DETECTION ZONE
⊕	POLE OR EQUIPMENT IDENTIFIER



DESIGN

*Justin Clark*  
JUSTIN W. CLARK, P.E.  
6/20/2016 DATE

100% SUBMITTAL

APPROVAL

*Gilmer D. Gaston*  
GILMER D. GASTON, P.E.  
6/20/2016 DATE

CITY OF SAN ANTONIO  
TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	DWG	CHK
REVISIONS				

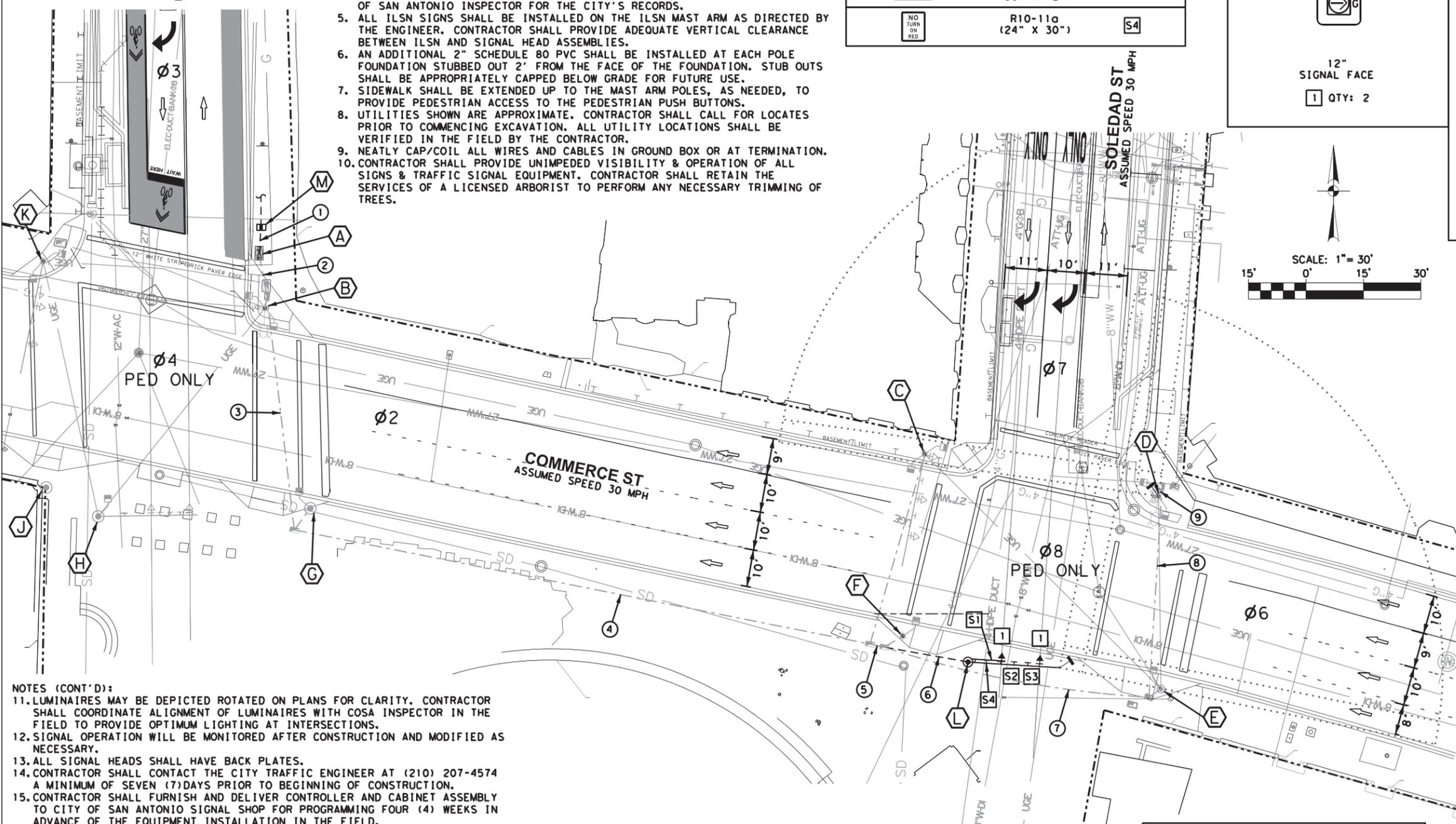
**DOWNTOWN STREETS  
MAIN AND SOLEDAD  
FROM COMMERCE STREET TO PECAN STREET**

**SOLEDAD ST @ COMMERCE ST  
TRAFFIC SIGNAL PLAN**

**POZNECKI & CAMARILLO INC.**  
(210) 349-3273 | 5835 CALLAGHAN RD, SUITE 200 | TBPE REG. NO. F-483  
SAN ANTONIO, TEXAS, 78228 | SAN ANTONIO, TEXAS, 78228 | FAX: 210.375.9010  
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TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

DGN:	CV/TA	STATE:	COUNTY:	SHEET NO.:
CHK DGN:	JC	TEXAS:	BEXAR:	3

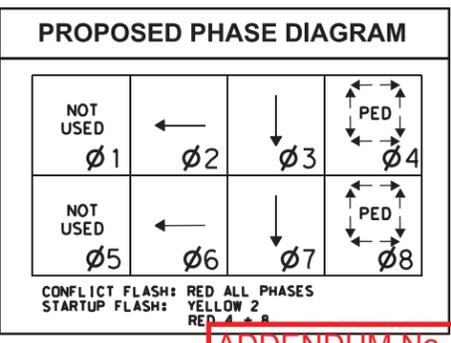


- NOTES (CONT'D):**
11. LUMINAIRES MAY BE DEPICTED ROTATED ON PLANS FOR CLARITY. CONTRACTOR SHALL COORDINATE ALIGNMENT OF LUMINAIRES WITH COSA INSPECTOR IN THE FIELD TO PROVIDE OPTIMUM LIGHTING AT INTERSECTIONS.
  12. SIGNAL OPERATION WILL BE MONITORED AFTER CONSTRUCTION AND MODIFIED AS NECESSARY.
  13. ALL SIGNAL HEADS SHALL HAVE BACK PLATES.
  14. CONTRACTOR SHALL CONTACT THE CITY TRAFFIC ENGINEER AT (210) 207-4574 A MINIMUM OF SEVEN (7) DAYS PRIOR TO BEGINNING OF CONSTRUCTION.
  15. CONTRACTOR SHALL FURNISH AND DELIVER CONTROLLER AND CABINET ASSEMBLY TO CITY OF SAN ANTONIO SIGNAL SHOP FOR PROGRAMMING FOUR (4) WEEKS IN ADVANCE OF THE EQUIPMENT INSTALLATION IN THE FIELD.
  16. CONTRACTOR SHALL FURNISH AND DELIVER THE WIRELESS COMMUNICATION EQUIPMENT TO THE CITY OF SAN ANTONIO TRAFFIC MANAGEMENT CENTER AT TRANSGUIDE FOUR (4) WEEKS IN ADVANCE FOR PROGRAMMING AND TESTING. CONTRACTOR SHALL INSTALL WIRELESS COMMUNICATION EQUIPMENT IN THE FIELD AS NOTED IN THE PLANS AND AS DIRECTED BY COSA INFORMATION TECHNOLOGY SERVICES DEPARTMENT (ITS D). FINAL LOCATION OF THE WIRELESS COMMUNICATION EQUIPMENT SHALL BE APPROVED BY ITS D BEFORE INSTALLATION. THE CONTRACTOR SHALL COORDINATE WITH ITS D TO PREPARE SIGNAL STRENGTH SURVEY AND DETERMINE LOCATION FOR BRIDGE, IF SPECIFIED, AND ACCESS POINT. ALL WIRELESS MESH COMMUNICATION EQUIPMENT AND INSTALLATION SHALL BE SUBSIDIARY TO ITEM 680.
  17. CONTRACTOR SHALL CONTACT THE CITY TRAFFIC ENGINEER AT (210) 207-4574 A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE TRAFFIC SIGNAL TURN-ON.
  18. SEE ROADWAY PLANS FOR RAMP DESIGN.
  19. ACTUAL POWER SOURCE LOCATION WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT.

CONTRACTOR SHALL CONTACT DIGTESS @ 1-800-DIG-TESS OR TEXAS-811 FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION

**CAUTION:**

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT UNDERGROUND UTILITIES INCLUDING GAS ARE KNOWN TO EXIST IN THE VICINITY OF THIS WORK. CONTRACTOR SHALL CALL FOR LOCATES PRIOR TO BEGINNING WORK AND SHALL EXERCISE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT INCLUDING POLE FOUNDATIONS AND CONDUITS



**ADDENDUM No. 2**  
**SHEET 3 OF 15**

Plotted on: 7/5/2016 11:13:38 AM

CONDUIT AND CONDUCTOR SCHEDULE											
RUN NUMBER		01	02	03	04	05	06	07	08	09	
CONDUIT SIZE IN INCHES		2	2	2	3	3	2	2	2	2	
NUMBER OF CONDUITS		2	1	1	2	2	1	1	1	1	
LENGTH OF RUN (FT)		150*	15	65	155	10	25	75	55	10	
TRENCH (T)/BORE (B)		B	E	E	E	E	T	E	E	E	
CABLE		CIRCUIT									
#6 XHHW (SOLID)		120 POWER HOT									
#6 BARE (SOLID)		120 POWER COMMON									
#8 BARE (SOLID)		BARE BOND GROUND									
#8 BARE (SOLID)		BARE BOND GROUND									
9 COND. #14 AWG TYPE "A", SOLID		SIGNALS		Ø		2		Ø		4	
4 COND. #14 AWG TYPE "A", SOLID		ILSN SIGNS		POLE		L					
POWER & DATA CABLE		RADAR PRESENCE DETECTION DEVICE (RPDD)		POLE		D		POLE		L	

AN EXTRA 2 IN CONDUIT SHALL BE STUBBED OUT & CAPPED 2 FT FROM EACH CONCRETE FOUNDATION INCLUDING CONTROLLER & EACH DRILLED SHAFT.  
 \*ACTUAL POWER SOURCE WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT. ADDITIONAL CONDUIT SHALL BE STUBBED AND CAPPED AT METER FOR FUTURE USE.

POLE SCHEDULE					
POLE		⬡	⬢		
POLE TYPE		PED	SMA-80		
POLE HEIGHT (FEET)		30	24		
MAST ARM LENGTH (FEET)		N/A	24		
ILSN		N/A	YES		
ILSN ARM LENGTH (FEET)		N/A	9		
FOUNDATION TYPE		EXIST	30-A		
FOUNDATION DEPTH (FEET)		EXIST	11.3		
CABLE		CIRCUIT		NUMBER OF CONDUCTORS	
#8 BARE (SOLID)				1	1
9 COND. #14 AWG SOLID TYPE "A"		SIGNALS		Ø	2
				Ø	4
				Ø	7
4 COND. #14 AWG		ILSN SIGNS		POLE	L
POWER & DATA CABLE		RADAR PRESENCE DETECTION DEVICE (RPDD)		POLE	D
				POLE	L

**ELECTRICAL SERVICE DATA**

Electrical Service Description (see ED (5) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
ELEC SERV TY D (120/240) 060 (NS) AL (E) PS (U)	1 1/4"	3/#6	N/A	2P/60	30	100	A (SIGNAL) B (ILSN) C (STREET LIGHTING) D (PED LIGHTING)	1P/50 1P/15 1P/15 1P/20	40 5 5 15	7.8

**POLE EQUIPMENT INFORMATION**

ID	DESCRIPTION/ATTACHMENTS	NORTHING	EASTING	FND. ELEV
A	INSTALL SAN ANTONIO STANDARD MODEL 332 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH BATTERY BACKUP SYSTEM MOUNTED ON PERFORMED BASE. REUSE EXISTING MODEL 2070 CONTROLLER.	N/A	N/A	FLUSH WITH SIDEWALK
D	INSTALL RPDD ON EXISTING LIGHT POLE WITH LUMINAIRE, TWO SPECIAL TOURIST-ORIENTED DIRECTION SIGNS, TWO COUNTDOWN PEDESTRIAN SIGNAL HEADS, AND WIRELESS ACCESS POINT AS ILLUSTRATED.	13704735.2	2130262.3	FLUSH WITH SIDEWALK
L	INSTALL 24 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE R3-8 (SPL) SIGN, ONE R6-1R SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13704692.1	2130212.6	FLUSH WITH SIDEWALK
M	ELECTRIC SERVICE #1. INSTALL CPS ENERGY FREESTANDING PEDESTAL AND METER WITH TXDOT TYPE D SERVICE	N/A	N/A	FLUSH WITH SIDEWALK

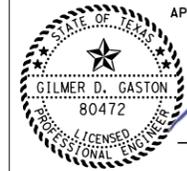
**NOTES:**

- CONTRACTOR TO REPLACE EXISTING 336 TRAFFIC SIGNAL CONTROLLER ASSEMBLY AND PEDESTAL POLE WITH 332 TRAFFIC SIGNAL CONTROLLER. EXISTING PEDESTAL POLE TO BE CUT DOWN AND PERFORMED TRAFFIC SIGNAL CONTROLLER BASE TO BE INSTALLED OVER EXISTING POLE.
- CONTRACTOR TO REUSE EXISTING MODEL 2070 CONTROLLER. A NEW PEDESTRIAN CENTRAL CONTROL UNIT (CCU) WILL BE REQUIRED TO RUN SEPERATE APS AT SOLEDAD AND COMMERCE STREET LIKE THE POLARA EZCOMM NAVIGATOR (APS) SYSTEM.

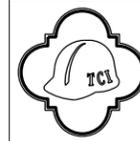


DESIGN  
 JUSTIN W. CLARK  
 118715  
 LICENSED PROFESSIONAL ENGINEER  
 Justin Clark  
 JUSTIN W. CLARK, P.E.  
 7/5/2016  
 DATE

100% SUBMITTAL



APPROVAL  
 GILMER D. GASTON  
 80472  
 LICENSED PROFESSIONAL ENGINEER  
 Gilmer D. Gaston  
 GILMER D. GASTON, P.E.  
 7/5/2016  
 DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	TSA	JWC	DWG	CHK
1	06/29/16	ADDED CONDUIT RUN TO METER				

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD  
 FROM COMMERCE STREET TO PECAN STREET**

MAIN ST @ COMMERCE ST  
 SOLEDAD ST @ COMMERCE ST  
 CONDUIT & CONDUCTOR SCHEDULE

N. T. S.

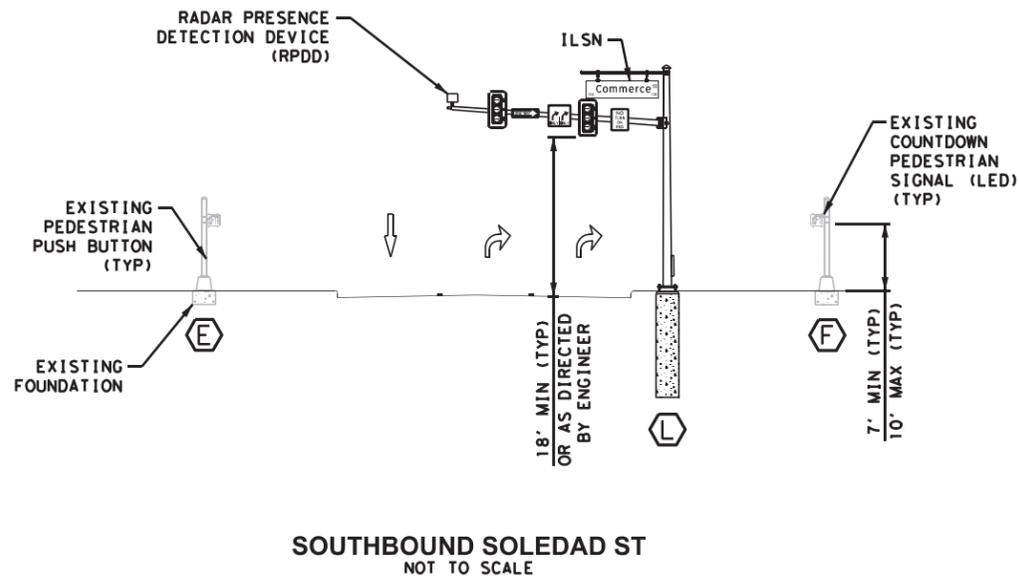
**POZNECKI & CAMARILLO INC**  
 (210) 349-3273 | 5835 CALLAGHAN RD, SUITE 200 | TBPE REG. NO. F-483  
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DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	263

**ADDENDUM No. 2  
 SHEET 4 OF 15**

Design File name: P:\8370\01\Design\City\TRAFFIC\AS-TRAF-SHEETS-CCS-01.dgn



**NOTES:**

1. ALL DIMENSIONS SHOWN ARE IN FEET UNLESS SPECIFIED OTHERWISE. (ALL EXISTING FEATURES ARE SHOWN SCREENED BACK i.e. FADED).
2. ALL ILSN SIGNS SHALL BE INSTALLED ON THE ILSN MAST ARM AS DIRECTED BY THE ENGINEER.
3. CONTRACTOR SHALL POTHOLE SIGNAL POLE LOCATIONS NEAR UNDERGROUND UTILITIES PRIOR TO INSTALLING POLE FOUNDATION.
4. MINIMUM CLEARANCE OF 40" RADIUS FROM NEUTRAL AND 10' RADIUS FROM PRIMARY OR SECONDARY SHALL BE MAINTAINED BETWEEN PROPOSED TRAFFIC SIGNAL EQUIPMENT AND EXISTING OVERHEAD ELECTRICAL LINES.
5. ALL SIGNAL HEADS SHALL HAVE BACK PLATES.
6. SEE "SINGLE MAST ARM ASSEMBLY (SMA-80)" STANDARDS FOR SIGNAL POLE AND MAST ARM DETAILS.
7. SEE "TRAFFIC SIGNAL POLE FOUNDATION (TS-FD)" STANDARDS FOR DRILLED SHAFT DETAILS.
8. SEE "MISCELLANEOUS TRAFFIC SIGNAL DETAILS (MTS)" STANDARD FOR PEDESTAL POLE DETAILS.

DESIGN

*Justin Clark*  
 JUSTIN W. CLARK, P.E. 6/20/2016  
 DATE

100% SUBMITTAL

APPROVAL

*Gilmer D. Gaston*  
 GILMER D. GASTON, P.E. 6/20/2016  
 DATE

CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	DWG	CHK

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD  
 FROM COMMERCE STREET TO PECAN STREET**

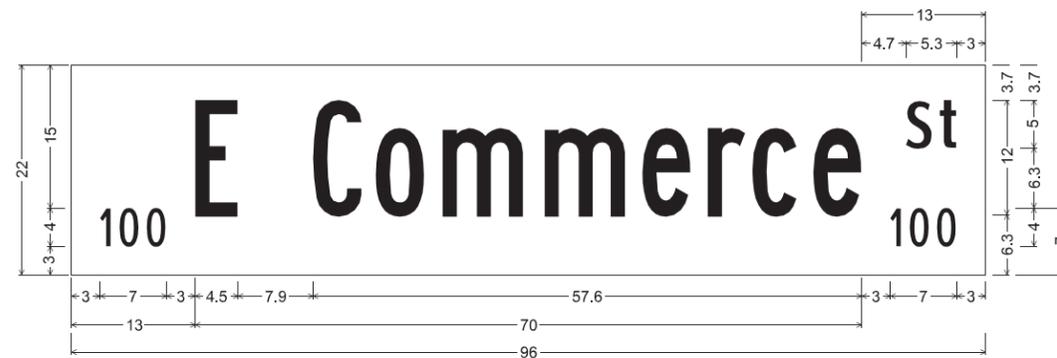
**SOLEDAD ST @ COMMERCE ST  
 TRAFFIC SIGNAL ELEVATION**

**POZNECKI & CAMARILLO INC.**  
 (210) 349-3273 5835 CALLAGHAN RD, SUITE 200 SAN ANTONIO, TEXAS, 78228  
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DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	5

**ADDENDUM No. 2  
 SHEET 5 OF 15**



No border, White on Blue;  
 [100] ClearviewHwy-1-W;  
 [E Commerce] B specified length;  
 [St] ClearviewHwy-2-W;  
 [100] ClearviewHwy-1-W;

POLE -

FRONT SIDE -

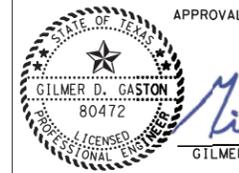
BACK SIDE -

- NOTES:**
1. ALL DIMENSIONS SHOWN ARE IN INCHES UNLESS SPECIFIED OTHERWISE.
  2. SEE "METRO INTERNALLY LIGHTED STREET NAME SIGN" STANDARD FOR DETAILS.
  3. CONTRACTOR SHALL VERIFY BLOCK NUMBERS WITH COSA PRIOR TO MANUFACTURING SIGN PLATES.
  4. ALL ILSN SIGNS SHALL BE INSTALLED ON THE ILSN MAST ARM AS DIRECTED BY THE ENGINEER.



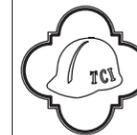
DESIGN  
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 LICENSED PROFESSIONAL ENGINEER  
 Justin Clark  
 JUSTIN W. CLARK, P.E. DATE 6/20/2016

100% SUBMITTAL



APPROVAL  
 GILMER D. GASTON  
 80472  
 LICENSED PROFESSIONAL ENGINEER  
 Gilmer D. Gaston  
 GILMER D. GASTON, P.E. DATE 6/20/2016

6/20/2016



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	DWG	CHK

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD  
 FROM COMMERCE STREET TO PECAN STREET**

**SOLEDAD ST @ COMMERCE ST  
 ILSN DETAILS**

N. T. S.

**POZNECKI  
 CAMARILLO**  
 (210) 349-3273 5835 CALLAGHAN RD, SUITE 200 SAN ANTONIO, TEXAS, 78228 (210) 349-4395 (FAX) TBPE REG. NO. F-483 http://www.pozcam.com/

**PAPE-DAWSON  
 ENGINEERS**  
 2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000 FAX: 210.375.9010 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

**ADDENDUM No. 2  
 SHEET 6 OF 15**

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	6

Design File Name: P:\83\70\01\Design\Civil\General\WAS-TRAF-SHEETS-OSUM-01.dgn 5:05:28 PM Plotted on: 6/29/2016

ITEM	308.12	308.13	615.4	618.1	618.2	618.4	618.5	620.11	620.12	620.13
INTERSECTION	DRILL SHAFTS (30 IN)	DRILL SHAFTS (36 IN)	Traffic Signal Controller Assembly (Type 336 Cabinet)	CONDUIT (PVC SCHEDULE 40) (2 IN) (TRENCH)	CONDUIT (PVC SCHEDULE 40) (3 IN) (TRENCH)	CONDUIT (PVC SCHEDULE 40) (2 IN) (BORE)	CONDUIT (PVC SCHEDULE 40) (3 IN) (BORE)	ELECTRICAL CONDUCTORS (NO. 6) (BARE)	ELECTRICAL CONDUCTORS (NO. 8) (BARE)	ELECTRICAL CONDUCTORS (NO. 6) (INSULATED)
	LF	LF	EA	LF	LF	LF	LF	LF	LF	LF
MAIN AVE @ MARTIN ST	33.9		1	175	55	300	585	20	960	35
MAIN AVE @ PECAN ST	33.9		1	210	70	300	550	15	785	25
MAIN AVE @ TRAVIS ST	45.2		1	315	55	300	585	15	1110	25
MAIN AVE @ HOUSTON ST	33.9		1	190	70	300	275	15	815	25
SOLEDAD ST @ MARTIN ST	33.9		1	155	55	300	530	15	880	25
SOLEDAD ST @ PECAN ST	33.9		1	190	70	300	510	15	905	25
SOLEDAD ST @ TRAVIS ST	33.9	13.2	1	190	55	300	400	15	730	25
SOLEDAD ST @ HOUSTON ST	45.2		1	200	70	300	500	15	915	25
TOTALS	293.8	13.2	8	1625	500	2400	3935	125	7100	210

ITEM	621.1	624.4	628.11	633.1	655.11	680.2	680.21	682.1	682.2	682.4
INTERSECTION	TRAY CABLE (4 CONDR) (12 AWG)	INSTALL GROUND BOXES TYPE D (162922)	ELECTRICAL SERVICE (TYPE D) (120 / 240V)	BATTERY BACKUP SYSTEM	Type 336 Controller Foundation	INSTALLATION OF HIGHWAY TRAFFIC SIGNALS (SYSTEM)	ASTRO-BRAC MAST ARM WIND DAMPER ASSEMBLY	VEHICLE SIGNAL SECTION WITH BACK PLATE (3 SEC)	VEHICLE SIGNAL SECTION WITH BACK PLATE (4 SEC)	PEDESTRIAN SIGNAL SECTION (12 IN) LED (3 IND)
	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
MAIN AVE @ MARTIN ST	470	5	1	1	1	1	1	6		8
MAIN AVE @ PECAN ST	385	5	1	1	1	1	1	7		8
MAIN AVE @ TRAVIS ST	685	5	1	1	1	1	1	8		8
MAIN AVE @ HOUSTON ST	610	3	1	1	1	1	1	8		8
SOLEDAD ST @ MARTIN ST	435	5	1	1	1	1	1	6	1	8
SOLEDAD ST @ PECAN ST	455	5	1	1	1	1	1	7	1	8
SOLEDAD ST @ TRAVIS ST	375	4	1	1	1	1	1	8	2	8
SOLEDAD ST @ HOUSTON ST	600	5	1	1	1	1	1	8	2	8
TOTALS	4015	37	8	8	8	8	1	58	6	64

ITEM	683.1	684.11	684.12	686.1	686.11	686.12	686.13	686.14	686.17	687.1
INTERSECTION	LED COUNTDOWN PEDESTRIAN MODULE	TRAFFIC SIGNAL CABLES (TYPE A) (14 AWG) (4 CONDUCTOR)	TRAFFIC SIGNAL CABLES (TYPE A) (14 AWG) (9 CONDUCTOR)	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 (20FT) LUM&ILSN	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 (24FT) ILSN	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 (24FT) LUM&ILSN	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 (28FT) LUM&ILSN	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 (32 FT) LUM&ILSN	INSTALL TRAFFIC SIGNAL POLE ASSEMBLY SMA-80 (44 FT) LUM&ILSN	PEDESTAL POLE ASSEMBLY
	EA	LF	LF	EA	EA	EA	EA	EA	EA	EA
MAIN AVE @ MARTIN ST	8	450	1655					3		5
MAIN AVE @ PECAN ST	8	370	1615				1	2		5
MAIN AVE @ TRAVIS ST	8	600	1680			3		1		3
MAIN AVE @ HOUSTON ST	8	585	1765	2		2				3
SOLEDAD ST @ MARTIN ST	8	420	1660			1	2			4
SOLEDAD ST @ PECAN ST	8	435	1780	1				2		5
SOLEDAD ST @ TRAVIS ST	8	520	1710		1			1	1	3
SOLEDAD ST @ HOUSTON ST	8	600	1855			2	1	1		3
TOTALS	64	3980	13720	3	1	9	4	10	1	31

ITEM	688.2	688.3	693.11	693.12	696.2	696.4	6007.01	680.its01	680.its02	680.its03
INTERSECTION	PEDESTRIAN DETECTOR (2 IN PUSH BUTTON AND SIGN)	AUDIBLE PEDESTRIAN SIGNAL UNIT	INTERNALLY LIGHTED STREET NAME SIGNS [ILSN SIGN 6' S]	INTERNALLY LIGHTED STREET NAME SIGNS [ILSN SIGN 8' S]	RADAR PRESENCE DETECTION DEVICE (RPDD)	RADAR PRESENCE DETECTION DEVICE COMMUNICATION AND POWER CABLE	REMOVAL OF TRAFFIC SIGNALS AT INTERSECTION	802.11n, b/g/n Outdoor Mesh AP, FCC Cfg (Part #: AIR-CAP1552E-K9)	2400-2483.5 MHz, 4/7 dBi Omni Ant, with N Connect (Part #: AIR-ANT2547V-N)	Aironet 1550 Series AC Power Cord, 40 ft, N. Amer Plug (Part #: AIR-CORD-R3P-40NA)
	EA	EA	EA	EA	EA	LF	EA	EA	EA	EA
MAIN AVE @ MARTIN ST	8	8		3	3	470	1	1	1	1
MAIN AVE @ PECAN ST	8	8		3	3	490	1	1	1	1
MAIN AVE @ TRAVIS ST	8	8	2	2	4	720	1	1	1	1
MAIN AVE @ HOUSTON ST	8	8		4	4	660	1	1	1	1
SOLEDAD ST @ MARTIN ST	8	8		3	3	500	1	1	1	1
SOLEDAD ST @ PECAN ST	8	8	2	1	3	495	1	1	1	1
SOLEDAD ST @ TRAVIS ST	8	8		4	4	620	1	1	1	1
SOLEDAD ST @ HOUSTON ST	8	8		4	4	570	1	1	1	1
TOTALS	64	64	4	24	28	4525	8	8	8	8

ITEM	680.its04	680.its05	680.its06	680.its07	680.its08	680.its09	680.its10	680.its11
INTERSECTION	1550 Series Pole Mount Kit (AIR-ACCPMK1550)	SMARTnet 8x5xNBD 1552E AP (Part #: CON-SNT-CAP-1552E x)	27331A 01010000 BELDEN (Power Cable) (Part #: VNTC 16-3-R10K-BED)	IND ETH 5E4P24 HLD (Ethernet Cable) (Part #: 7919A 01001000)	2955 12 TX W/SM UPLINKS (Part #: WS-C2955S-12)	19 IN RACK MOUNT KIT (Part #: CISCO STK-RACKMNT-2955)	CISCO, AC TO 24 V DC DIN RAIL PW (Part #: PWR-2955-AC)	SMARTNET 8X5XNBD 2955 12 TX w/Single Mode Uplinks (Part #: CON-SNTWSC2955S)
	EA	EA	LF	LF	EA	EA	EA	EA
MAIN AVE @ MARTIN ST	1	1	100	100	1	1	1	1
MAIN AVE @ PECAN ST	1	1	110	110	1	1	1	1
MAIN AVE @ TRAVIS ST	1	1	95	95	1	1	1	1
MAIN AVE @ HOUSTON ST	1	1	100	100	1	1	1	1
SOLEDAD ST @ MARTIN ST	1	1	100	100	1	1	1	1
SOLEDAD ST @ PECAN ST	1	1	105	105	1	1	1	1
SOLEDAD ST @ TRAVIS ST	1	1	100	100	1	1	1	1
SOLEDAD ST @ HOUSTON ST	1	1	110	110	1	1	1	1
TOTALS	8	8	820	820	8	8	8	8

**NOTES:**  
 1. 680.its ITEMS ARE SUBSIDIARY TO ITEM 680.  
 2. ITEM 680.21 IS SUBSIDIARY TO ITEM 680.  
 3. QUANTITIES ARE PROVIDED FOR CONTRACTOR(S) INFORMATION ONLY. PAYMENT IS SUBSIDIARY TO RELEVANT BID ITEMS.  
 4. MODEL 336 CONTROLLER FOUNDATION SHALL BE PROVIDED BY CONTRACTOR PER DETAIL IN THIS PLAN SET.  
 5. PEDESTAL POLE SPECIAL FOUNDATION SHALL BE PROVIDED BY CONTRACTOR PER DETAIL IN THIS PLAN SET.

100% SUBMITTAL



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	TSA	JWC
		REVISIONS	DWG	CHK

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD  
 FROM COMMERCE STREET TO PECAN STREET**

**TRAFFIC SIGNALS  
 QUANTITY SUMMARY**

N. T. S.

**POZNECKI & CAMARILLO**  
 (210) 349-3273 | 5835 CALLAGHAN RD, SUITE 200 | TBPE REG. NO. F-483  
 SAN ANTONIO, TEXAS, 78228 | (210) 349-4395 (FAX) | http://www.pozcam.com/

**PAPE-DAWSON ENGINEERS**  
 2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470 | FAX: 210.375.9010

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	16

**ADDENDUM No. 2  
 SHEET 7 OF 15**

Plotted on: 7/5/2016 11:13:35 AM

Design File Name: P:\83\701\Design\Civil\TRAFFIC\AS-TRAF-SHEETS-CCS-01.dgn

**CONDUIT AND CONDUCTOR SCHEDULE**

		01	02	03	04A	04B	05	06	07	08	09	10	11	12	13	14	15	16		
RUN NUMBER		2	2	3	3	2	2	3	3	2	3	2	2	2	2	3	2	2		
CONDUIT SIZE IN INCHES		2	2	3	3	2	2	3	3	2	3	2	2	2	2	3	2	2		
NUMBER OF CONDUITS		2	1	2	2	1	1	2	2	2	2	1	1	2	1	2	2	1		
LENGTH OF RUN (FT)		150*	15	10	15	30	10	60	75	10	60	10	10	10	10	70	10	10		
TRENCH (T)/BORE (B)		B	T	T	T	T	T	B	B	T	B	T	T	T	T	B	T	T		
CABLE	CIRCUIT	CABLES PULLED BY CPS																		
#6 XHHW (SOLID)	120 POWER HOT	1																		
	120 POWER COMMON	1																		
#6 BARE (SOLID)	BARE BOND GROUND	1																		
#8 BARE (SOLID)	BARE BOND GROUND																			
9 COND. #14 AWG TYPE "A", SOLID	SIGNALS	Ø 2																		
		Ø 6																		
		Ø 8																		
9 COND. #14 AWG TYPE "A", SOLID	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C																		
		POLE D																		
		POLE E																		
		POLE F																		
		POLE G																		
		POLE H																		
		POLE J																		
		POLE K																		
4 COND. #14 AWG TYPE "A", SOLID	ILSN SIGNS	POLE C																		
		POLE G																		
		POLE J																		
4 COND. #14 AWG TYPE "A", SOLID	LUMINAIRE	POLE C																		
		POLE G																		
		POLE J																		
POWER CABLE	COMMUNICATION CABLE	POLE C																		
ETHERNET CABLE	COMMUNICATION CABLE	POLE C																		
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C																		
		POLE H																		
		POLE J																		

AN EXTRA 2 IN CONDUIT SHALL BE STUBBED OUT & CAPPED 2 FT FROM EACH CONCRETE FOUNDATION INCLUDING CONTROLLER & EACH DRILLED SHAFT. \*ACTUAL POWER SOURCE WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT. ADDITIONAL CONDUIT SHALL BE STUBBED AND CAPPED AT METER FOR FUTURE USE.

**POLE SCHEDULE**

		C	D	E	F	G	H	J	K
POLE		SMA-80	PED	PED	PED	SMA-80	PED	SMA-80	PED
POLE TYPE		SMA-80	PED	PED	PED	SMA-80	PED	SMA-80	PED
POLE HEIGHT (FEET)		30	10	10	10	30	20	30	10
MAST ARM LENGTH		32	N/A	N/A	N/A	32	N/A	32	N/A
ILSN		YES	N/A	N/A	N/A	YES	N/A	YES	N/A
ILSN ARM LENGTH		9	N/A	N/A	N/A	9	N/A	9	N/A
FOUNDATION TYPE		30-A	SPL*	SPL*	SPL*	30-A	SPL*	30-A	SPL*
FOUNDATION DEPTH		11.3	SPL*	SPL*	SPL*	11.3	SPL*	11.3	SPL*
CABLE	CIRCUIT	NUMBER OF CONDUCTORS							
#8 BARE (SOLID)	SIGNALS	Ø 2	1	1	1	1	1	1	1
		Ø 6	2						
		Ø 8							2
9 COND. #14 AWG SOLID TYPE "A"	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1						
		POLE D		1					
		POLE E			1				
		POLE F				1			
		POLE G					1		
		POLE H						1	
		POLE J							1
		POLE K							
4 COND. #14 AWG SOLID TYPE "A"	ILSN SIGNS	POLE C	1						
		POLE G					1		
		POLE J							1
4 COND. #14 AWG TYPE "A", SOLID	LUMINAIRE	POLE C	1						
		POLE J							1
POWER CABLE	COMMUNICATION CABLE	POLE C	1						
ETHERNET CABLE	COMMUNICATION CABLE	POLE C	1						
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	1						
		POLE H						1	
		POLE J						1	

\*SEE PEDESTAL POLE SPECIAL FOUNDATION FOR DETAILS

**ELECTRICAL SERVICE DATA**

Electrical Service Description (see ED (5) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panel/bd/ Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
ELEC SERV TY D (120/240) 060 (NS) AL (E) PS (U)	1 1/4"	3/#6	N/A	2P/60	30	100	A(SIGNAL) B(ILSN) C(STREET LIGHTING) D(PED LIGHTING)	1P/50 1P/15 1P/15 1P/20	40 5 5 15	7.8

**POLE EQUIPMENT INFORMATION**

ID	DESCRIPTION/ATTACHMENTS	NORTHING	EASTING	FND. ELEV
A	ELECTRIC SERVICE #1. INSTALL CPS ENERGY FREESTANDING PEDESTAL AND METER WITH TXDOT TYPE D SERVICE	N/A	N/A	FLUSH WITH SIDEWALK
B	INSTALL SAN ANTONIO STANDARD MODEL 336 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH BATTERY BACKUP SYSTEM AND MODEL 2070 CONTROLLER GROUND MOUNTED (ON 24" X 20" BASE)	N/A	N/A	FLUSH WITH SIDEWALK
C	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE RPDD, ONE 9' ILSN MAST ARM WITH SIGN, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, ONE WIRELESS ACCESS POINT, ONE R6-1R SIGN, ONE R3-5R SIGN AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706293.0	2129920.2	FLUSH WITH SIDEWALK
D	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON, ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706302.0	2129914.2	FLUSH WITH SIDEWALK
E	INSTALL 20 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON, ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706290.0	2129981.3	FLUSH WITH SIDEWALK
F	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON, ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706298.0	2129990.4	FLUSH WITH SIDEWALK
G	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, ONE R6-1L SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706357.0	2129982.1	FLUSH WITH SIDEWALK
H	INSTALL 20 FT PEDESTAL POLE ON SPECIAL FND WITH ONE RPDD, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON, ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706348.0	2129989.5	FLUSH WITH SIDEWALK
J	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE LUMINAIRE, ONE RPDD, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706353.0	2129912.8	FLUSH WITH SIDEWALK
K	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON, ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706360.0	2129917.4	FLUSH WITH SIDEWALK

SIGNS SHALL BE ATTACHED TO POLES AND MAST ARMS AS INDICATED ON LAYOUT.

DESIGN

Justin W. Clark  
7/5/2016 DATE

100% SUBMITTAL

APPROVAL

Gilmer D. Gaston, P.E.  
7/5/2016 DATE

CITY OF SAN ANTONIO  
TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	TSA	JWC
Δ	06/29/16	ADDED CONDUIT RUN TO METER		
		REVISIONS	DWG	CHK

**DOWNTOWN STREETS  
MAIN AND SOLEDAD**  
FROM COMMERCE STREET TO PECAN STREET

N. T. S.

POZNECKI CAMARILLO ENGINEERS  
5835 CALLAGHAN RD, SUITE 200  
SAN ANTONIO, TEXAS, 78228  
PHONE: 210.375.9000 FAX: 210.375.9010  
TBPE REG. NO. F-483  
http://www.pozcam.com/

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	223

**ADDENDUM No. 2  
SHEET 8 OF 15**

Plotted on: 7/5/2016 11:13:35 AM

CONDUIT AND CONDUCTOR SCHEDULE																			
CABLE	CIRCUIT	CABLES PULLED BY CPS																	
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16		
	RUN NUMBER	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16		
	CONDUIT SIZE IN INCHES	2	2	3	3	2	2	3	3	2	2	3	2	2	3	2	2		
	NUMBER OF CONDUITS	2	1	2	2	1	1	2	2	2	2	1	2	2	1	2	2		
	LENGTH OF RUN (FT)	150*	10	10	20	30	10	60	55	15	15	10	60	15	10	75	10	10	
	TRENCH (T)/BORE (B)	B	T	T	T	T	T	B	B	T	T	T	B	T	T	B	T	T	
#6 XHHW (SOLID)	120 POWER HOT	1																	
	120 POWER COMMON	1																	
#6 BARE (SOLID)	BARE BOND GROUND	1																	
#8 BARE (SOLID)	BARE BOND GROUND		2	2	1	1	2	2	2	2	1	2	2	1	2	2	1	1	
9 COND. #14 AWG TYPE "A", SOLID	SIGNALS	Ø	2																
		Ø	4	1	1			1										1	
		Ø	6	1	1			1		1									1
9 COND. #14 AWG TYPE "A", SOLID	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C		1	1					1									
		POLE D		1	1		1												
		POLE E		1	1			1		1									
		POLE F		1	1			1				1							
		POLE G		1	1			1				1	1						
		POLE H		1	1			1				1		1					
		POLE J		1	1			1											1
		POLE K		1	1			1											
4 COND. #14 AWG TYPE "A", SOLID	ILSN SIGNS	POLE C				1				1									
		POLE E				1				1									
		POLE J				1				1									1
4 COND. #14 AWG TYPE "A", SOLID	LUMINAIRE	POLE C				1				1									
		POLE E				1				1									
		POLE J				1				1									1
POWER CABLE	COMMUNICATION CABLE	POLE C		1	1					1									
ETHERNET CABLE	COMMUNICATION CABLE	POLE C		1	1					1									
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE E		2	2			2			2								
		POLE J		1	1			1											1

AN EXTRA 2 IN CONDUIT SHALL BE STUBBED OUT & CAPPED 2 FT FROM EACH CONCRETE FOUNDATION INCLUDING CONTROLLER & EACH DRILLED SHAFT.  
 \*ACTUAL POWER SOURCE WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT. ADDITIONAL CONDUIT SHALL BE STUBBED AND CAPPED AT METER FOR FUTURE USE.

POLE SCHEDULE										
CABLE	CIRCUIT	NUMBER OF CONDUCTORS	POLE							
			C	D	E	F	G	H	J	K
	POLE TYPE		SMA-80	PED	SMA-80	PED	PED	PED	SMA-80	PED
	POLE HEIGHT (FEET)		30	10	30	10	10	10	30	10
	MAST ARM LENGTH (FEET)		32	N/A	28	N/A	N/A	N/A	32	N/A
	ILSN		YES	N/A	YES	N/A	N/A	N/A	YES	N/A
	ILSN ARM LENGTH (FEET)		9	N/A	9	N/A	N/A	N/A	9	N/A
	FOUNDATION TYPE		30-A	SPL*	30-A	SPL*	SPL*	SPL*	30-A	SPL*
	FOUNDATION DEPTH (FEET)		11.3	SPL*	11.3	SPL*	SPL*	SPL*	11.3	SPL*
#8 BARE (SOLID)			1	1	1	1	1	1	1	1
9 COND. #14 AWG SOLID TYPE "A"	SIGNALS	Ø	2							
		Ø	4	3						2
		Ø	6			2				
9 COND. #14 AWG SOLID TYPE "A"	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1							
		POLE D		1						
		POLE E			1					
		POLE F				1				
		POLE G					1			
		POLE H						1		
		POLE J							1	
		POLE K								1
4 COND. #14 AWG SOLID TYPE "A"	ILSN SIGNS	POLE C	1							
		POLE E			1					
		POLE J								1
4 COND. #14 AWG TYPE "A", SOLID	LUMINAIRE	POLE C	1							
		POLE E			1					
POWER CABLE	COMMUNICATION CABLE	POLE C	1							
ETHERNET CABLE	COMMUNICATION CABLE	POLE C	1							
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE E				2				
		POLE J								1

\* SEE PEDESTAL POLE SPECIAL FOUNDATION FOR DETAILS

DESIGN  
  
 JUSTIN W. CLARK, P.E. 7/5/2016 DATE

100% SUBMITTAL

APPROVAL  
  
 GILMER D. GASTON, P.E. 7/5/2016 DATE

7/5/2016

 CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	TSA	JWC
Δ	06/29/16	ADDED CONDUIT RUN TO METER		
		REVISIONS	DWG	CHK

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD  
 FROM COMMERCE STREET TO PECAN STREET**

N MAIN AVE @ PECAN ST  
 CONDUIT & CONDUCTOR SCHEDULE

N. T. S.

**POZNECKI  
 CAMARILLO**  
 (210) 349-3273 5835 CALLAGHAN RD, SUITE 200 SAN ANTONIO, TEXAS, 78228 (210) 349-4395 (FAX) TXBPE REG. NO. F-483 http://www.pozcam.com/

**PAPE-DAWSON  
 ENGINEERS**  
 2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000 FAX: 210.375.9010 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	228

**ADDENDUM No. 2  
 SHEET 9 OF 15**

Design File Name: P:\8373\01\Design\Civil\TRAFFIC\MAS-TRAF-SHEETS-CCS-01.dgn

**ELECTRICAL SERVICE DATA**

Electrical Service Description (see ED (5) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/ Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
ELEC SERV TY D (120/240)060(NS)AL(E)PS(U)	1 1/4"	3/#6	N/A	2P/60	30	100	A(SIGNAL) B(ILSN) C(STREET LIGHTING) D(PED LIGHTING)	1P/50 1P/15 1P/15 1P/20	40 5 5 15	7.8

**POLE EQUIPMENT INFORMATION**

ID	DESCRIPTION/ATTACHMENTS	NORTHING	EASTING	FND. ELEV
A	ELECTRIC SERVICE #2. INSTALL CPS ENERGY FREESTANDING PEDESTAL AND METER WITH TXDOT TYPE D SERVICE	N/A	N/A	FLUSH WITH SIDEWALK
B	INSTALL SAN ANTONIO STANDARD MODEL 336 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH BATTERY BACKUP SYSTEM AND MODEL 2070 CONTROLLER GROUND MOUNTED (ON 24" X 20" BASE)	N/A	N/A	FLUSH WITH SIDEWALK
C	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, ONE WIRELESS ACCESS POINT, AND THREE VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706029.7	2129995.7	FLUSH WITH SIDEWALK
D	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706022.0	2129974.1	FLUSH WITH SIDEWALK
E	INSTALL 30 FT SMA-80, 28 ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, TWO RPDD'S, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNITS AND ONE R10-4b (L&R) SIGN, ONE R6-1L SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705996.1	2129927.2	FLUSH WITH SIDEWALK
F	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706006.7	2129923.2	FLUSH WITH SIDEWALK
G	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706052.1	2129917.3	FLUSH WITH SIDEWALK
H	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706068.6	2129924.9	FLUSH WITH SIDEWALK
J	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, ONE RPDD, ONE R6-1R SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706082.5	2129988.6	FLUSH WITH SIDEWALK
K	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH ONE AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706074.0	2129995.1	FLUSH WITH SIDEWALK

SIGNS SHALL BE ATTACHED TO POLES AND MAST ARMS AS INDICATED ON LAYOUT.

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Design File Name: P:\8370\01\Design\Civil\TRAFFIC\AS-TRAF-SHEETS-CCS-01.dgn

### CONDUIT AND CONDUCTOR SCHEDULE

		01	02	03	04A	04B	05	06	07	08	09	10	11	12	13	14	15	
RUN NUMBER		2	2	3	3	2	2	3	3	2	2	3	2	3	2	2	2	
CONDUIT SIZE IN INCHES		2	1	2	2	1	1	2	2	2	2	2	1	2	2	2	1	
NUMBER OF CONDUITS		2	1	2	2	1	1	2	2	2	2	2	1	2	2	2	1	
LENGTH OF RUN (FT)		150*	10	10	15	25	10	60	70	15	15	75	10	60	10	10	10	
TRENCH (T)/BORE (B)		B	T	T	T	T	T	B	B	T	T	B	T	B	T	T	T	
CABLE	CIRCUIT																	
#6 XHHW (SOLID)	120 POWER HOT	1																
	120 POWER COMMON	1																
#6 BARE (SOLID)	BARE BOND GROUND	1																
	BARE BOND GROUND		2	2	1	1	2	2	2	2	2	1	2	2	2	1		
9 COND. #14 AWG TYPE "A", SOLID	SIGNALS	Ø 2	1	1														
		Ø 4	1	1						1							1	
		Ø 6	1	1				1			1							
		Ø 8	1	1						1				1	1			
9 COND. #14 AWG TYPE "A", SOLID	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1	1						1								
		POLE D	1	1		1												
		POLE F	1	1				1					1					
		POLE G	1	1						1				1	1			
		POLE H	1	1						1						1		
		POLE J	1	1						1								1
4 COND. #14 AWG TYPE "A", SOLID	ILSN SIGNS	POLE C			1				1									
		POLE E				1				1								
		POLE G				1				1							1	
4 COND. #14 AWG SOLID TYPE "A"	LUMINAIRE	POLE C			1				1									
		POLE E				1			1							1	1	
		POLE G				1				1								1
POWER CABLE	COMMUNICATION CABLE	POLE C	1	1					1									
ETHERNET CABLE	COMMUNICATION CABLE	POLE C	1	1					1									
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	1	1					1									
		POLE E	1	1					1							1	1	
		POLE G	1	1						1								1

CABLES PULLED BY GPS

AN EXTRA 2 IN CONDUIT SHALL BE STUBBED OUT & CAPPED 2 FT FROM EACH CONCRETE FOUNDATION INCLUDING  
 \*ACTUAL POWER SOURCE WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT. ADDITIONAL CONDUIT SHALL BE STUBBED AND CAPPED AT METER FOR FUTURE USE.

### POLE SCHEDULE

		C	D	E	F	G	H	J	
POLE		SMA-80	PED	SMA-80	PED	SMA-80	SMA-80	PED	
POLE TYPE		SMA-80	PED	SMA-80	PED	SMA-80	SMA-80	PED	
POLE HEIGHT (FEET)		30	10	30	10	30	30	10	
MAST ARM LENGTH (FEET)		24	N/A	24	N/A	32	24	N/A	
ILSN		YES	N/A	YES	N/A	YES	YES	N/A	
ILSN ARM LENGTH (FEET)		7	N/A	9	N/A	7	9	N/A	
FOUNDATION TYPE		30-A	SPL*	30-A	SPL*	30-A	30-A	SPL*	
FOUNDATION DEPTH (FEET)		11.3	SPL*	11.3	SPL*	11.3	11.3	SPL*	
CABLE	CIRCUIT	NUMBER OF CONDUCTORS							
#8 BARE (SOLID)	SIGNALS	Ø 2	1	1	1	1	1	1	
		Ø 4	2					2	
		Ø 6							
		Ø 8			2				
9 COND. #14 AWG SOLID TYPE "A"	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1						
		POLE D		1					
		POLE F				2			
		POLE G					2		
		POLE H						1	
		POLE J							1
4 COND. #14 AWG SOLID TYPE "A"	ILSN SIGNS	POLE C	1						
		POLE E			1				
		POLE G					1		
4 COND. #14 AWG SOLID TYPE "A"	LUMINAIRE	POLE C	1						
		POLE E			1				
		POLE G					1		
POWER CABLE	COMMUNICATION CABLE	POLE C	1						
ETHERNET CABLE	COMMUNICATION CABLE	POLE C	1						
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	1						
		POLE E			1				
		POLE G					1		

\* SEE PEDESTAL POLE SPECIAL FOUNDATION FOR DETAILS



DESIGN  
 JUSTIN W. CLARK  
 118715  
 LICENSED PROFESSIONAL ENGINEER  
 7/5/2016  
 JUSTIN W. CLARK, P.E. DATE

100% SUBMITTAL

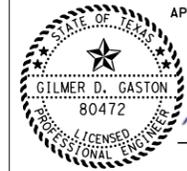
### ELECTRICAL SERVICE DATA

Electrical Service Description (see ED (5) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
ELEC SERV TY D (120/240) 060 (NS) AL (E) PS (U)	1 1/4"	3/#6	N/A	2P/60	30	100	A (SIGNAL) B (ILSN) C (STREET LIGHTING) D (PED LIGHTING)	1P/50 1P/15 1P/15 1P/20	40 5 5 15	7.8

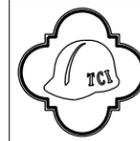
### POLE EQUIPMENT INFORMATION

ID	DESCRIPTION/ATTACHMENTS	NORTHING	EASTING	FND. ELEV
A	ELECTRIC SERVICE #3. INSTALL CPS ENERGY FREESTANDING PEDESTAL AND METER WITH TXDOT TYPE D SERVICE	N/A	N/A	FLUSH WITH SIDEWALK
B	INSTALL SAN ANTONIO STANDARD MODEL 336 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH BATTERY BACKUP SYSTEM AND MODEL 2070 CONTROLLER GROUND MOUNTED (ON 24" X 20" BASE)	N/A	N/A	FLUSH WITH SIDEWALK
C	INSTALL 30 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 7' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE WIRELESS ACCESS POINT, ONE R3-5R SIGN, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT, ONE R10-4B (L&R) SIGN AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705612.9	2130033.8	FLUSH WITH SIDEWALK
D	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4B (L&R) SIGN AS ILLUSTRATED.	13705595.1	2130028.2	FLUSH WITH SIDEWALK
E	INSTALL 30 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705582.8	2129979.4	FLUSH WITH SIDEWALK
F	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH TWO LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, TWO PEDESTRIAN PUSH BUTTONS WITH AUDIBLE PEDESTRIAN SIGNAL UNITS AND TWO R10-4B (L&R) SIGNS AS ILLUSTRATED.	13705594.8	2129978.9	FLUSH WITH SIDEWALK
G	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 7' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, TWO LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, TWO PEDESTRIAN PUSH BUTTONS WITH AUDIBLE PEDESTRIAN SIGNAL UNITS AND TWO R10-4B (L&R) SIGNS, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705660.2	2129972.3	FLUSH WITH SIDEWALK
H	INSTALL 30 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4B (L&R) SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705675.2	2130015.9	FLUSH WITH SIDEWALK
J	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4B (L&R) SIGN AS ILLUSTRATED.	13705661.2	2130027.0	FLUSH WITH SIDEWALK

SIGNS SHALL BE ATTACHED TO POLES AND MAST ARMS AS INDICATED ON LAYOUT.



APPROVAL  
 GILMER D. GASTON  
 80472  
 LICENSED PROFESSIONAL ENGINEER  
 7/5/2016  
 GILMER D. GASTON, P.E. DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	TSA	JWC
Δ	06/29/16	ADDED CONDUIT RUN TO METER		
		REVISIONS	DWG	CHK

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD**  
 FROM COMMERCE STREET TO PECAN STREET

N MAIN AVE @ TRAVIS ST  
 CONDUIT & CONDUCTOR SCHEDULE

N. T. S.

**POZNECKI & CAMARILLO INC**  
 (210) 349-3273  
 5835 CALLAGHAN RD, SUITE 200  
 SAN ANTONIO, TEXAS, 78228  
 (210) 349-4395 (FAX)  
 TBPE REG. NO. F-483  
 https://www.pozcam.com/

**PAPE-DAWSON ENGINEERS**  
 2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470  
 FAX: 210.375.9010

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	233

**ADDENDUM No. 2**  
**SHEET 10 OF 15**

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Design File Name: P:\83\701\Design\Civil\TRAFFIC\MAS-TRAF-SHEETS-CCS-01.dgn

### CONDUIT AND CONDUCTOR SCHEDULE

RUN NUMBER		01	02	03	04	05	06	07	08	09	10	11	12	13	14
CONDUIT SIZE IN INCHES		2	2	3	3	2	3	2	3	2	2	3	2	2	2
NUMBER OF CONDUITS		2	1	2	2	1	2	2	1	2	1	2	1	2	2
LENGTH OF RUN (FT)		150*	10	10	20	25	65	15	50	10	15	10	55	25	15
TRENCH (T)/BORE (B)/EXISTING (E)		B	T	T	T	T	B	T	E	T	T	T	B	T	E
CABLE	CIRCUIT	CABLES PULLED BY CPS													
#6 XHHW (SOLID)	120 POWER HOT	1													
	120 POWER COMMON	1													
#6 BARE (SOLID)	BARE BOND GROUND	1													
	BARE BOND GROUND		2	2	1	2	2	2	1	2	1	2	1	2	2
9 COND. #14 AWG TYPE "A", SOLID	SIGNALS	Ø 2	1												
		Ø 4	1	1	1							1	1		
		Ø 6	1	1					1						
		Ø 8	1	1											
9 COND. #14 AWG TYPE "A", SOLID	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1	1											
		POLE D	1	1					1						
		POLE E	1	1						1					
		POLE F	1	1								1			
		POLE G	1	1									1	1	
		POLE H	1	1											
4 COND. #14 AWG TYPE "A", SOLID	ILSN SIGNS	POLE C				1	1								
		POLE E				1	1					1			
		POLE G				1	1						1		
		POLE J				1	1							1	
4 COND. #14 AWG SOLID TYPE "A"	LUMINAIRE	POLE C				1	1								
		POLE E				1	1						1	1	
		POLE G				1	1							1	
		POLE J				1	1								
POWER CABLE	COMMUNICATION CABLE	POLE C	1	1			1								
ETHERNET CABLE		POLE C	1	1			1								
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	1	1			1								
		POLE E	1	1			1						1	1	
		POLE G	1	1			1							1	
		POLE J	1	1			1								

AN EXTRA 2 IN CONDUIT SHALL BE STUBBED OUT & CAPPED 2 FT FROM EACH CONCRETE FOUNDATION INCLUDING CONTROLLER & EACH DRILLED SHAFT.  
 \*ACTUAL POWER SOURCE WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT. ADDITIONAL CONDUIT SHALL BE STUBBED AND CAPPED AT METER FOR FUTURE USE.

### POLE SCHEDULE

POLE		C	D	E	F	G	H	J
POLE TYPE		SMA-80	PED	SMA-80	PED	SMA-80	PED	SMA-80
POLE HEIGHT (FEET)		30	10	30	10	30	10	30
MAST ARM LENGTH (FEET)		20	N/A	24	N/A	20	N/A	24
ILSN		YES	N/A	YES	N/A	YES	N/A	YES
ILSN ARM LENGTH (FEET)		9	N/A	9	N/A	9	N/A	9
FOUNDATION TYPE		30-A	SPL *	30-A	SPL *	30-A	SPL *	EXIST
FOUNDATION DEPTH (FEET)		11.3	SPL *	11.3	SPL *	11.3	SPL *	EXIST
CABLE	CIRCUIT	NUMBER OF CONDUCTORS						
#8 BARE (SOLID)	SIGNALS	Ø 2	1	1	1	1	1	1
		Ø 4			2			
		Ø 6					2	
		Ø 8	2					2
9 COND. #14 AWG SOLID TYPE "A"	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1					
		POLE D		1				
		POLE E			1			
		POLE F				1		
		POLE G					1	
		POLE H						1
4 COND. #14 AWG SOLID TYPE "A"	ILSN SIGNS	POLE C	1					
		POLE E			1			
		POLE G					1	
		POLE J						1
4 COND. #14 AWG SOLID TYPE "A"	LUMINAIRE	POLE C	1					
		POLE E			1			
		POLE G					1	
		POLE J						1
POWER CABLE	COMMUNICATION CABLE	POLE C	1					
ETHERNET CABLE		POLE C	1					
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	1					
		POLE E			1			
		POLE G					1	
		POLE J						1

\* SEE PEDESTAL POLE SPECIAL FOUNDATION FOR DETAILS

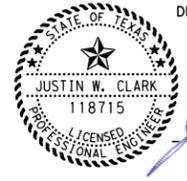
### ELECTRICAL SERVICE DATA

Electrical Service Description (see ED (5) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
ELEC SERV TY D (120/240)060(NS)AL(E)PS(U)	1 1/4"	3/#6	N/A	2P/60	30	100	A(SIGNAL) B(ILSN) C(STREET LIGHTING) D(PED LIGHTING)	1P/50 1P/15 1P/15 1P/20	40 5 5 15	7.8

### POLE EQUIPMENT INFORMATION

ID	DESCRIPTION/ATTACHMENTS	NORTHING	EASTING	FND. ELEV
A	ELECTRIC SERVICE #4. INSTALL CPS ENERGY FREESTANDING PEDESTAL AND METER WITH TXDOT TYPE D SERVICE	N/A	N/A	FLUSH WITH SIDEWALK
B	INSTALL SAN ANTONIO STANDARD MODEL 336 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH BATTERY BACKUP SYSTEM AND MODEL 2070 CONTROLLER GROUND MOUNTED (ON 24" X 20" BASE)	N/A	N/A	FLUSH WITH SIDEWALK
C	INSTALL 30 FT SMA-80, 20' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, ONE WIRELESS ACCESS POINT, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705294.5	2129982.9	FLUSH WITH SIDEWALK
D	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13705292.6	2129969.9	FLUSH WITH SIDEWALK
E	INSTALL 30 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705308.3	2130028.5	FLUSH WITH SIDEWALK
F	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13705295.6	2130041.2	FLUSH WITH SIDEWALK
G	INSTALL 30 FT SMA-80, 20' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705255.7	2130037.7	FLUSH WITH SIDEWALK
H	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13705255.9	2130027.4	FLUSH WITH SIDEWALK
J	INSTALL 30 FT SMA-80, 24' ARM ON EXISTING FOUNDATION, ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, TWO LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, TWO PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNITS AND TWO R10-4b (L&R) SIGNS, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705256.8	2129978.8	FLUSH WITH SIDEWALK

SIGNS SHALL BE ATTACHED TO POLES AND MAST ARMS AS INDICATED ON LAYOUT.



DESIGN  
 JUSTIN W. CLARK, P.E.  
 7/5/2016 DATE

100% SUBMITTAL



APPROVAL  
 GILMER D. GASTON, P.E.  
 7/5/2016 DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	TSA	JWC
06/29/16		ADDED CONDUIT RUN TO METER		

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD**  
 FROM COMMERCE STREET TO PECAN STREET

N. T. S.

**POZNECKI & CAMARILLO**  
 (210) 349-3273 | 5835 CALLAGHAN RD, SUITE 200 SAN ANTONIO, TEXAS, 78228 | (210) 349-4395 (FAX) | TBPE REG. NO. F-483 | http://www.pozcam.com/

**PAPE-DAWSON ENGINEERS**  
 2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000 | FAX: 210.375.9010 | TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	238

**ADDENDUM No. 2  
 SHEET 11 OF 15**

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Design File Name: P:\8370\01\Design\Civil\TRAFFIC\MAS-TRAF-SHEETS-CCS-01.dgn

### CONDUIT AND CONDUCTOR SCHEDULE

		01	02	03	04A	04B	05	06	07	08	09	10	11	12	13	14	15	
CONDUIT SIZE IN INCHES		2	2	3	3	2	2	3	3	2	2	2	3	2	2	3	2	
NUMBER OF CONDUITS		2	1	2	2	1	1	2	2	2	2	1	2	2	1	2	1	
LENGTH OF RUN (FT)		150*	10	10	15	25	15	60	65	10	10	10	55	10	10	60	10	
TRENCH (T)/BORE (B)		B	T	T	T	T	T	B	B	T	T	T	B	T	T	B	T	
CABLE	CIRCUIT																	
#6 XHHW (SOLID)	120 POWER HOT	1																
	120 POWER COMMON	1																
#6 BARE (SOLID)	BARE BOND GROUND	1																
	BARE BOND GROUND		2	2	1	1	2	2	2	2	1	2	2	1	2	1		
9 COND. #14 AWG TYPE "A", SOLID	SIGNALS	Ø 2	1	1														
		Ø 5	1	1														
		Ø 6	1	1														
		Ø 8	1	1														
9 COND. #14 AWG TYPE "A", SOLID	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1	1														
		POLE D	1	1														
		POLE E	1	1														
		POLE F	1	1														
		POLE G	1	1														
		POLE H	1	1														
4 COND. #14 AWG TYPE "A", SOLID	ILSN SIGNS	POLE C																
		POLE E																
		POLE G																
4 COND. #14 AWG TYPE "A", SOLID	LUMINAIRE	POLE C																
		POLE E																
		POLE G																
POWER CABLE	COMMUNICATION CABLE	POLE C	1	1														
ETHERNET CABLE	COMMUNICATION CABLE	POLE C	1	1														
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	1	1														
		POLE G	1	1														
		POLE H	1	1														

CABLES PULLED BY CPS

AN EXTRA 2 IN CONDUIT SHALL BE STUBBED OUT & CAPPED 2 FT FROM EACH CONCRETE FOUNDATION INCLUDING CONTROLLER & EACH DRILLED SHAFT.  
 \*ACTUAL POWER SOURCE WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT. ADDITIONAL CONDUIT SHALL BE STUBBED AND CAPPED AT METER FOR FUTURE USE.

### POLE SCHEDULE

		C	D	E	F	G	H	J
POLE TYPE		SMA-80	PED	SMA-80	PED	SMA-80	PED	PED
POLE HEIGHT (FEET)		30	10	30	10	30	20	10
MAST ARM LENGTH (FEET)		28	N/A	28	N/A	24	N/A	N/A
ILSN		YES	N/A	YES	N/A	YES	N/A	N/A
ILSN ARM LENGTH (FEET)		9	N/A	9	N/A	9	N/A	N/A
FOUNDATION TYPE		30-A	SPL*	30-A	SPL*	30-A	SPL*	SPL*
FOUNDATION DEPTH (FEET)		11.3	SPL*	11.3	SPL*	11.3	SPL*	SPL*
CABLE	CIRCUIT							
#8 BARE (SOLID)	SIGNALS	Ø 2	1	1	1	1	1	1
		Ø 5					2	
		Ø 6					1	
		Ø 8						
9 COND. #14 AWG SOLID TYPE "A"	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1					
		POLE D		1				
		POLE E			1			
		POLE F				1		
		POLE G					1	
		POLE H						1
4 COND. #14 AWG SOLID TYPE "A"	ILSN SIGNS	POLE C	1					
		POLE E			1			
		POLE G					1	
4 COND. #14 AWG TYPE "A", SOLID	LUMINAIRE	POLE C	1					
		POLE E			1			
		POLE G					1	
POWER CABLE	COMMUNICATION CABLE	POLE C	1					
ETHERNET CABLE	COMMUNICATION CABLE	POLE C	1					
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	1					
		POLE G					1	
		POLE H					1	

\* SEE PEDESTAL POLE SPECIAL FOUNDATION FOR DETAILS

### ELECTRICAL SERVICE DATA

Electrical Service Description (see ED (5) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/ Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
ELEC SERV TY D (120/240)060(NS)AL(E)PS(U)	1 1/4"	3/#6	N/A	2P/60	30	100	A (SIGNAL) B (ILSN) C (STREET LIGHTING) D (PED LIGHTING)	1P/50 1P/15 1P/15 1P/20	40 5 5 15	7.8

### POLE EQUIPMENT INFORMATION

ID	DESCRIPTION/ATTACHMENTS	NORTHING	EASTING	FND. ELEV
A	ELECTRIC SERVICE #5. INSTALL CPS ENERGY FREESTANDING PEDESTAL AND METER WITH TXDOT TYPE D SERVICE	N/A	N/A	FLUSH WITH SIDEWALK
B	INSTALL SAN ANTONIO STANDARD MODEL 336 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH BATTERY BACKUP SYSTEM AND MODEL 2070 CONTROLLER GROUND MOUNTED (ON 24" X 20" BASE)	N/A	N/A	FLUSH WITH SIDEWALK
C	INSTALL 30 FT SMA-80, 28' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT, ONE WIRELESS ACCESS POINT, AND ONE R10-4b (L&R) SIGN, ONE R6-1R SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706283.5	2130107.8	FLUSH WITH SIDEWALK
D	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706294.0	2130101.7	FLUSH WITH SIDEWALK
E	INSTALL 30 FT SMA-80, 28' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT, AND ONE R10-4b (L&R) SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706341.6	2130101.3	FLUSH WITH SIDEWALK
F	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706349.8	2130108.2	FLUSH WITH SIDEWALK
G	INSTALL 30 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE R10-17T SIGN, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, ONE R10-17T SIGN, ONE R6-1L SIGN, AND THREE VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706346.4	2130154.4	FLUSH WITH SIDEWALK
H	INSTALL 20 FT PEDESTAL POLE ON SPECIAL FND WITH ONE RPDD, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706337.0	2130164.8	FLUSH WITH SIDEWALK
J	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH TWO LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, TWO PEDESTRIAN PUSH BUTTONS WITH AUDIBLE PEDESTRIAN SIGNAL UNITS AND TWO R10-4b (L&R) SIGNS AS ILLUSTRATED.	13706275.0	2130158.5	FLUSH WITH SIDEWALK

SIGNS SHALL BE ATTACHED TO POLES AND MAST ARMS AS INDICATED ON LAYOUT.

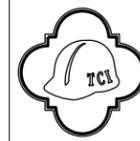


DESIGN  
 JUSTIN W. CLARK, P.E.  
 7/5/2016 DATE

100% SUBMITTAL



APPROVAL  
 GILMER D. GASTON, P.E.  
 7/5/2016 DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	TSA	JWC	DWG	CHK
1	06/29/16	ADDED CONDUIT RUN TO METER				

### DOWNTOWN STREETS MAIN AND SOLEDAD FROM COMMERCE STREET TO PECAN STREET

### SOLEDAD ST @ MARTIN ST CONDUIT & CONDUCTOR SCHEDULE

N. T. S.

**POZNECKI & CAMARILLO INC**  
 (210) 349-3273 | 5835 CALLAGHAN RD, SUITE 200 SAN ANTONIO, TEXAS, 78228 | TBPE REG. NO. F-483  
 (210) 349-4395 (FAX) | http://www.pozcam.com/

**PAPE-DAWSON ENGINEERS**  
 2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000 FAX: 210.375.9010  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	243

ADDENDUM No. 2 SHEET 12 OF 15

Plotted on: 7/5/2016 11:13:37 AM

Design File Name: P:\8370\01\Design\Civil\TRAFFIC\WAS-TRAF-SHEETS-CCS-01.dgn

### CONDUIT AND CONDUCTOR SCHEDULE

		01	02	03	04A	04B	05	06	07	08	09	10	11	12	13	14	15	16		
CONDUIT SIZE IN INCHES		2	2	3	3	2	2	3	3	2	2	3	2	2	3	2	2	2		
NUMBER OF CONDUITS		2	1	2	2	1	2	2	2	1	1	2	2	1	2	2	1	1		
LENGTH OF RUN (FT)		150*	10	10	20	30	10	55	60	10	15	60	15	15	55	10	10	10		
TRENCH (T)/BORE (B)		B	T	T	T	T	B	B	T	T	B	T	T	B	T	T	T	T		
CABLE	CIRCUIT																			
#6 XHHW (SOLID)	120 POWER HOT	1																		
	120 POWER COMMON	1																		
#6 BARE (SOLID)	BARE BOND GROUND	1																		
#8 BARE (SOLID)	BARE BOND GROUND		2	2	1	2	2	2	1	1	2	2	1	2	2	1	1			
9 COND. #14 AWG TYPE "A", SOLID	SIGNALS	Ø	1																	
		Ø	2																	
		Ø	4																	
		Ø	6																	
		Ø	1																	
9 COND. #14 AWG TYPE "A", SOLID	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C																		
		POLE D																		
		POLE E																		
		POLE F																		
		POLE G																		
		POLE H																		
		POLE J																		
		POLE K																		
		POLE D																		
		POLE F																		
4 COND. #14 AWG TYPE "A", SOLID	ILSN SIGNS	POLE D																		
		POLE F																		
4 COND. #14 AWG SOLID TYPE "A"	LUMINAIRE	POLE D																		
		POLE F																		
POWER CABLE	COMMUNICATION CABLE	POLE D																		
ETHERNET CABLE		POLE D																		
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE D																		
		POLE F																		
		POLE H																		

CABLES PULLED BY CPS

AN EXTRA 2 IN CONDUIT SHALL BE STUBBED OUT & CAPPED 2 FT FROM EACH CONCRETE FOUNDATION INCLUDING CONTROLLER & EACH DRILLED SHAFT.  
 ACTUAL POWER SOURCE WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT. ADDITIONAL CONDUIT SHALL BE STUBBED AND CAPPED AT METER FOR FUTURE USE.

### ELECTRICAL SERVICE DATA

Electrical Service Description (see ED (5) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
ELEC SERV TY D (120/240)060(NS)AL(E)PS(U)	1 1/4"	3/#6	N/A	2P/60	30	100	A(SIGNAL) B(ILSN) C(STREET LIGHTING) D(PED LIGHTING)	1P/50 1P/15 1P/15 1P/20	40 5 5 15	7.8

### POLE & EQUIPMENT INFORMATION

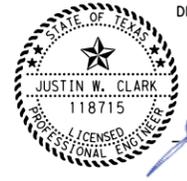
ID	DESCRIPTION/ATTACHMENTS	NORTHING	EASTING	FND. ELEV
A	ELECTRIC SERVICE #6. INSTALL CPS ENERGY FREESTANDING PEDESTAL AND METER WITH TXDOT TYPE D SERVICE	N/A	N/A	FLUSH WITH SIDEWALK
B	INSTALL SAN ANTONIO STANDARD MODEL 336 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH BATTERY BACKUP SYSTEM AND MODEL 2070 CONTROLLER GROUND MOUNTED (ON 24" X 20" BASE)	N/A	N/A	FLUSH WITH SIDEWALK
C	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706026.0	2130126.1	FLUSH WITH SIDEWALK
D	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 7' ILSN MAST ARM WITH SIGN, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, ONE R-10-17T SIGN, ONE WIRELESS ACCESS POINT, ONE R6-1L SIGN, AND THREE VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706036.2	2130116.9	FLUSH WITH SIDEWALK
E	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706090.7	2130118.6	FLUSH WITH SIDEWALK
F	INSTALL 30 FT SMA-80, 20' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 7' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, ONE R6-1R SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706103.5	2130168.7	FLUSH WITH SIDEWALK
G	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706087.2	2130181.0	FLUSH WITH SIDEWALK
H	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE RPDD, ONE 9' ILSN MAST ARM WITH SIGN, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, AND THREE VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13706046.9	2130179.1	FLUSH WITH SIDEWALK
J	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706035.5	2130170.9	FLUSH WITH SIDEWALK
K	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13706079.9	2130107.5	FLUSH WITH SIDEWALK

SIGNS SHALL BE ATTACHED TO POLES AND MAST ARMS AS INDICATED ON LAYOUT.

### POLE SCHEDULE

		C	D	E	F	G	H	J	K	
POLE		Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	
POLE TYPE		PED	SMA-80	PED	SMA-80	PED	SMA-80	PED	PED	
POLE HEIGHT (FEET)		10	30	10	30	10	30	10	10	
MAST ARM LENGTH (FEET)		N/A	32	N/A	20	N/A	32	N/A	N/A	
ILSN		N/A	YES	N/A	YES	N/A	YES	N/A	N/A	
ILSN ARM LENGTH (FEET)		N/A	7	N/A	7	N/A	9	N/A	N/A	
FOUNDATION TYPE		SPL*	30-A	SPL*	30-A	SPL*	30-A	SPL*	SPL*	
FOUNDATION DEPTH (FEET)		SPL*	11.3	SPL*	11.3	SPL*	11.3	SPL*	SPL*	
CABLE	CIRCUIT									
#8 BARE (SOLID)	SIGNALS	Ø	1							
		Ø	2							
		Ø	4							
		Ø	6							
		Ø	1							
9 COND. #14 AWG SOLID TYPE "A"	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1							
		POLE D		1						
		POLE E			1					
		POLE F				1				
		POLE G					1			
		POLE H						1		
		POLE J							1	
		POLE K								1
		POLE D								
		POLE F								
4 COND. #14 AWG SOLID TYPE "A"	ILSN SIGNS	POLE D								
		POLE H								
4 COND. #14 AWG SOLID TYPE "A"	LUMINAIRE	POLE D								
		POLE H								
POWER CABLE	COMMUNICATION CABLE	POLE D								
ETHERNET CABLE		POLE D								
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE D								
		POLE F								
		POLE H								

\* SEE PEDESTAL POLE SPECIAL FOUNDATION FOR DETAILS

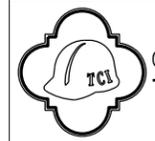


DESIGN  
 JUSTIN W. CLARK, P.E.  
 7/5/2016  
 DATE

100% SUBMITTAL



APPROVAL  
 GILMER D. GASTON, P.E.  
 7/5/2016  
 DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION	TSA	JWC
Δ	06/29/16	ADDED CONDUIT RUN TO METER		
		REVISIONS		

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD**  
 FROM COMMERCE STREET TO PECAN STREET

SOLEDAD ST @ PECAN ST  
 CONDUIT & CONDUCTOR SCHEDULE

N. T. S.

**ROZNECKI  
 CAMARILLO**

(210) 349-3273 | 5835 CALLAGHAN RD, SUITE 200 | TBPE REG. NO. F-483  
 SAN ANTONIO, TEXAS, 78228 | SAN ANTONIO, TEXAS, 78228 | FAX: 210.375.9010  
 (210) 349-4395 (FAX) | http://www.pozcam.com/

**PAPE-DAWSON  
 ENGINEERS**

2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470 | FAX: 210.375.9010

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	248

ADDENDUM No. 2  
 SHEET 13 OF 15

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### CONDUIT AND CONDUCTOR SCHEDULE

		01	02	03	04A	04B	05	06	07	08	09	10	11	12	13	
CONDUIT SIZE IN INCHES		2	2	3	3	2	3	2	3	2	2	2	3	2	2	
NUMBER OF CONDUITS		2	1	2	2	1	2	1	2	2	2	2	2	2	1	
LENGTH OF RUN (FT)		150*	10	10	15	20	70	10	60	10	25	15	50	10	10	
TRENCH (T)/BORE (B)		B	T	T	T	T	B	T	B	T	T	T	B	T	T	
CABLE	CIRCUIT															
#6 XHHW (SOLID)	120 POWER HOT	1														
	120 POWER COMMON	1														
#6 BARE (SOLID)	BARE BOND GROUND	1														
	BARE BOND GROUND		2	2	1	2	1	2	2	2	2	2	2	2	1	
9 COND. #14 AWG TYPE "A", SOLID	SIGNALS	Ø 1	1													
		Ø 2	1	1												
		Ø 4	1	1		1								1		
		Ø 5	1	1		1								1		
		Ø 6	1	1							1					
9 COND. #14 AWG TYPE "A", SOLID	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	Ø 8	1	1		1					1					
		POLE D	1	1												
		POLE F	1	1		1							1			
		POLE G	1	1		1								1		
		POLE H	1	1											1	
4 COND. #14 AWG TYPE "A", SOLID	ILSN SIGNS	POLE J	1	1											1	
		POLE C				1				1						
		POLE E				1	1					1				
		POLE F				1	1						1			
		POLE H				1									1	
4 COND. #14 AWG TYPE "A", SOLID	LUMINAIRE	POLE C				1				1						
		POLE F				1	1					1				
		POLE H				1									1	
POWER CABLE	COMMUNICATION CABLE	POLE C		1	1					1						
ETHERNET CABLE	COMMUNICATION CABLE	POLE C		1	1					1						
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C		1	1						1					
		POLE E		1	1		1				1					
		POLE F		1	1		1					1				
		POLE H		1	1						1					

CABLES PULLED BY CPS

AN EXTRA 2 IN CONDUIT SHALL BE STUBBED OUT & CAPPED 2 FT FROM EACH CONCRETE FOUNDATION INCLUDING CONTROLLER & EACH DRILLED SHAFT.  
 \*ACTUAL POWER SOURCE WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT. ADDITIONAL CONDUIT SHALL BE STUBBED AND CAPPED AT METER FOR FUTURE USE.

### POLE SCHEDULE

		C	D	E	F	G	H	J	
POLE TYPE		SMA-80	PED	SMA-80	SMA-80	PED	SMA-80	PED	
POLE HEIGHT (FEET)		30	10	24	30	10	30	10	
MAST ARM LENGTH (FEET)		32	N/A	24	44	N/A	24	N/A	
ILSN		YES	N/A	YES	YES	N/A	YES	N/A	
ILSN ARM LENGTH (FEET)		9	N/A	9	9	N/A	9	N/A	
FOUNDATION TYPE		30-A	SPL*	30-A	36-A	EXIST	30-A	SPL*	
FOUNDATION DEPTH (FEET)		11.3	SPL*	11.3	13.2	EXIST	11.3	SPL*	
CABLE	CIRCUIT	NUMBER OF CONDUCTORS							
#8 BARE (SOLID)	SIGNALS	Ø 1	1	1	1	1	1	1	1
		Ø 2				2			
		Ø 4						2	
		Ø 5				1			
		Ø 6	2						
9 COND. #14 AWG SOLID TYPE "A"	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	Ø 8			2				
		POLE D		2					
		POLE F				2			
		POLE G					2		
		POLE H						1	
9 COND. #14 AWG SOLID TYPE "A"	ILSN SIGNS	POLE J						1	
		POLE C	1						
		POLE E			1				
		POLE F				1			
		POLE H						1	
4 COND. #14 AWG TYPE "A", SOLID	LUMINAIRE	POLE C	1						
		POLE F				1			
		POLE H						1	
POWER CABLE	COMMUNICATION CABLE	POLE C	1						
ETHERNET CABLE	COMMUNICATION CABLE	POLE C	1						
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	1						
		POLE E				1			
		POLE F					1		
		POLE H					1		

\* SEE PEDESTAL POLE SPECIAL FOUNDATION FOR DETAILS

### ELECTRICAL SERVICE DATA

Electrical Service Description (see ED (5) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panel/Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
ELEC SERV TY D (120/240)060(NS)AL(E)PS(U)	1 1/4"	3/#6	N/A	2P/60	30	100	A (SIGNAL) B (ILSN) C (STREET LIGHTING) D (PED LIGHTING)	1P/50 1P/15 1P/15 1P/20	40 5 5 15	7.8

### POLE EQUIPMENT INFORMATION

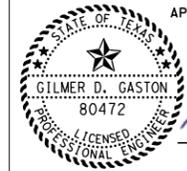
ID	DESCRIPTION/ATTACHMENTS	NORTHING	EASTING	FND. ELEV
A	ELECTRIC SERVICE #7. INSTALL CPS ENERGY FREESTANDING PEDESTAL AND METER WITH TXDOT TYPE D SERVICE	N/A	N/A	FLUSH WITH SIDEWALK
B	INSTALL SAN ANTONIO STANDARD MODEL 336 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH BATTERY BACKUP SYSTEM AND MODEL 2070 CONTROLLER GROUND MOUNTED (ON 24" X 20" BASE)	N/A	N/A	FLUSH WITH SIDEWALK
C	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE WIRELESS ACCESS POINT, ONE R10-17T SIGN, AND THREE VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705604.1	2130145.3	FLUSH WITH SIDEWALK
D	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH TWO LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, TWO PEDESTRIAN PUSH BUTTONS WITH AUDIBLE PEDESTRIAN SIGNAL UNITS AND TWO R10-4b (L&R) SIGNS AS ILLUSTRATED.	13705616.0	2130143.4	FLUSH WITH SIDEWALK
E	INSTALL 24 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705668.3	2130125.2	FLUSH WITH SIDEWALK
F	INSTALL 30 FT SMA-80, 44' ARM ON 13.2 FT DRILLED SHAFT FND (36-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, TWO LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, TWO PEDESTRIAN PUSH BUTTONS WITH AUDIBLE PEDESTRIAN SIGNAL UNITS, TWO R10-4b (L&R) SIGNS, ON R10-17T SIGN, AND THREE VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705685.9	2130137.3	FLUSH WITH SIDEWALK
G	INSTALL 10 FT PEDESTAL POLE ON EXISTING FOUNDATION WITH TWO LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, TWO PEDESTRIAN PUSH BUTTONS WITH AUDIBLE PEDESTRIAN SIGNAL UNITS AND TWO R10-4b (L&R) SIGNS AS ILLUSTRATED.	13705688.5	2130184.1	FLUSH WITH SIDEWALK
H	INSTALL 30 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT, ONE R10-4b (L&R) SIGN AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705627.3	2130204.9	FLUSH WITH SIDEWALK
J	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13705622.5	2130194.8	FLUSH WITH SIDEWALK

SIGNS SHALL BE ATTACHED TO POLES AND MAST ARMS AS INDICATED ON LAYOUT.

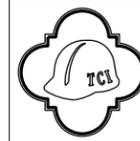


DESIGN  
 JUSTIN W. CLARK, P.E.  
 7/5/2016 DATE

100% SUBMITTAL



APPROVAL  
 GILMER D. GASTON, P.E.  
 7/5/2016 DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	TSA	JWC	DWG	CHK
1	06/29/16	ADDED CONDUIT RUN TO METER				

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD**  
 FROM COMMERCE STREET TO PECAN STREET

SOLEDAD ST @ TRAVIS ST  
 CONDUIT & CONDUCTOR SCHEDULE

N. T. S.

**POZNECKI & CAMARILLO INC**  
 (210) 349-3273 | 5835 CALLAGHAN RD, SUITE 200 SAN ANTONIO, TEXAS, 78228 | (210) 349-4395 (FAX) | TBPE REG. NO. F-483 | https://www.pozcam.com/

**PAPE-DAWSON ENGINEERS**  
 2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000 | FAX: 210.375.9010 | TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	253

**ADDENDUM No. 2  
 SHEET 14 OF 15**

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Design File Name: P:\8370\01\Design\Civil\TRAFFIC\AS-TRAF-SHEETS-CCS-01.dgn

**CONDUIT AND CONDUCTOR SCHEDULE**

		01	02	03	04A	04B	05	06	07	08	09	10	11	12	13	14	15	
CONDUIT SIZE IN INCHES		2	2	3	3	2	3	2	3	2	2	3	2	2	3	2	2	
NUMBER OF CONDUITS		2	1	2	2	1	2	2	2	1	2	2	1	2	2	1	2	
LENGTH OF RUN (FT)		150	10	10	20	30	50	15	60	10	10	60	10	15	55	10	10	
TRENCH (T)/BORE (B)		B	T	T	T	T	B	T	B	T	T	B	T	T	B	T	T	
CABLE	CIRCUIT																	
#6 XHHW (SOLID)	120 POWER HOT	1																
	120 POWER COMMON	1																
#6 BARE (SOLID)	BARE BOND GROUND	1																
	BARE BOND GROUND		2	2	1	2	2	2	1	2	2	2	1	2	2	1		
9 COND. #14 AWG TYPE "A", SOLID	SIGNALS	Ø 1	1	1														
		Ø 2	1	1		1							1	1				
		Ø 4	1	1														1
		Ø 5	1	1		1								1	1			
		Ø 6	1	1			1											
		Ø 8	1	1		1					1							
9 COND. #14 AWG TYPE "A", SOLID	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE C	1	1		1								1	1			
		POLE D	1	1		1				1								
		POLE E	1	1		1								1	1			
		POLE F	1	1		1								1	1			
		POLE G	1	1		1				1						1	1	
		POLE H	1	1						1								1
4 COND. #14 AWG TYPE "A", SOLID	ILSN SIGNS	POLE C	1	1		1											1	
		POLE E	1	1		1				1				1	1			
		POLE G	1	1		1												
		POLE J	1	1						1								
		POLE C	1	1		1												
		POLE E	1	1		1					1				1	1		
POWER CABLE ETHERNET CABLE	COMMUNICATION CABLE	POLE C	1	1		1												
		POLE E	1	1		1												
		POLE J	1	1						1								
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	2	2		2								2				
		POLE E	1	1													1	
		POLE J	1	1						1								

CABLES PULLED BY CPS

AN EXTRA 2 IN CONDUIT SHALL BE STUBBED OUT & CAPPED 2 FT FROM EACH CONCRETE FOUNDATION INCLUDING CONTROLLER & EACH DRILLED SHAFT.  
 \*ACTUAL POWER SOURCE WAS UNIDENTIFIED AT THE TIME OF PLAN PREPARATION. CONDUIT QUANTITY INCLUDES ALLOWANCE FOR 150 LF OF 2 INCH CONDUIT. ADDITIONAL CONDUIT SHALL BE STUBBED AND CAPPED AT METER FOR FUTURE USE.

**POLE SCHEDULE**

		C	D	E	F	G	H	J	
POLE		SMA-80	PED	SMA-80	PED	SMA-80	PED	SMA-80	
POLE TYPE		SMA-80	PED	SMA-80	PED	SMA-80	PED	SMA-80	
POLE HEIGHT (FEET)		30	10	30	10	30	10	30	
MAST ARM LENGTH (FEET)		24	N/A	28	N/A	32	N/A	24	
ILSN		YES	N/A	YES	N/A	YES	N/A	YES	
ILSN ARM LENGTH (FEET)		9	N/A	9	N/A	9	N/A	9	
FOUNDATION TYPE		30-A	SPL*	30-A	SPL*	30-A	SPL*	30-A	
FOUNDATION DEPTH (FEET)		11.3	SPL*	11.3	SPL*	11.3	SPL*	11.3	
CABLE	CIRCUIT								
#8 BARE (SOLID)	SIGNALS	Ø 1	1	1	1	1	1	1	
		Ø 2							
9 COND. #14 AWG SOLID TYPE "A"	SIGNALS	Ø 4				2			
		Ø 5					1	2	
		Ø 6	2						
		Ø 8			2				
		POLE C	2						
		POLE D		1					
9 COND. #14 AWG SOLID TYPE "A"	AUDIBLE PED SIGNALS & PED PUSHBUTTONS	POLE E			1				
		POLE F				1			
		POLE G					1		
		POLE H						1	
		POLE J							1
		POLE C	1						
4 COND. #14 AWG SOLID TYPE "A"	ILSN SIGNS	POLE E			1				
		POLE G					1		
		POLE J							1
4 COND. #14 AWG TYPE "A", SOLID	LUMINAIRE	POLE E	1						
		POLE G				1			
		POLE J					1		1
POWER CABLE ETHERNET CABLE	COMMUNICATION CABLE	POLE C	1						
		POLE E	1						
POWER & DATA CABLE	RADAR PRESENCE DETECTION DEVICE (RPDD)	POLE C	1						
		POLE E				2			

\*SEE PEDESTAL POLE SPECIAL FOUNDATION FOR DETAILS

**ELECTRICAL SERVICE DATA**

Electrical Service Description (see ED (5) - 14)	Service Conduit Size	Service Conductors No./Size	Safety Switch Amps	Main Ckt. Bkr. Pole/Amp	Two-Pole Contactor Amps	Panelbd/Loadcenter Amp Rating	Circuit No.	Branch Ckt. Bkr. Pole / Amps	Branch Circuit Amps	KVA Load
ELEC SERV TY D (120/240) 060 (NS) AL (E) PS (U)	1 1/4"	3/#6	N/A	2P/60	30	100	A (SIGNAL) B (ILSN) C (STREET LIGHTING) D (PED LIGHTING)	1P/50 1P/15 1P/15 1P/20	40 5 5 15	7.8

**POLE EQUIPMENT INFORMATION**

ID	DESCRIPTION/ATTACHMENTS	NORTHING	EASTING	FND. ELEV
A	ELECTRIC SERVICE #8. INSTALL CPS ENERGY FREESTANDING PEDESTAL AND METER WITH TXDOT TYPE D SERVICE	N/A	N/A	FLUSH WITH SIDEWALK
B	INSTALL SAN ANTONIO STANDARD MODEL 336 TRAFFIC SIGNAL CONTROLLER ASSEMBLY WITH BATTERY BACKUP SYSTEM AND MODEL 2070 CONTROLLER GROUND MOUNTED (ON 24" X 20" BASE)	N/A	N/A	FLUSH WITH SIDEWALK
C	INSTALL 30 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, TWO LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, TWO PEDESTRIAN PUSH BUTTONS WITH AUDIBLE PEDESTRIAN SIGNAL UNITS AND TWO R10-4b (L&R) SIGNS, ONE WIRELESS ACCESS POINT, ONE R10-17T SIGN, AND THREE VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705258.6	2130170.1	FLUSH WITH SIDEWALK
D	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13705293.1	2130153.2	FLUSH WITH SIDEWALK
E	INSTALL 30 FT SMA-80, 28' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, TWO RPDD, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705303.3	2130160.6	FLUSH WITH SIDEWALK
F	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13705304.4	2130209.1	FLUSH WITH SIDEWALK
G	INSTALL 30 FT SMA-80, 32' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, ONE R10-17T SIGN, AND THREE VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705294.1	2130227.8	FLUSH WITH SIDEWALK
H	INSTALL 10 FT PEDESTAL POLE ON SPECIAL FND WITH ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN AS ILLUSTRATED.	13705255.5	2130232.6	FLUSH WITH SIDEWALK
J	INSTALL 30 FT SMA-80, 24' ARM ON 11.3 FT DRILLED SHAFT FND (30-A), ONE 9' ILSN MAST ARM WITH SIGN, ONE RPDD, ONE LUMINAIRE, ONE LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ONE PEDESTRIAN PUSH BUTTON WITH AUDIBLE PEDESTRIAN SIGNAL UNIT AND ONE R10-4b (L&R) SIGN, AND TWO VEHICLE SIGNAL HEADS AS ILLUSTRATED.	13705249.7	2130225.4	FLUSH WITH SIDEWALK

SIGNS SHALL BE ATTACHED TO POLES AND MAST ARMS AS INDICATED ON LAYOUT.

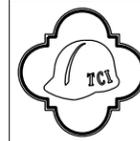


DESIGN  
 JUSTIN W. CLARK, P.E.  
 7/5/2016 DATE

100% SUBMITTAL



APPROVAL  
 GILMER D. GASTON, P.E.  
 7/5/2016 DATE



CITY OF SAN ANTONIO  
 TRANSPORTATION & CAPITAL IMPROVEMENTS

NO	DATE	DESCRIPTION REVISIONS	TSA	JWC
1	06/29/16	ADDED CONDUIT RUN TO METER		

**DOWNTOWN STREETS  
 MAIN AND SOLEDAD  
 FROM COMMERCE STREET TO PECAN STREET**

SOLEDAD ST @ HOUSTON ST  
 CONDUIT & CONDUCTOR SCHEDULE

N. T. S.

**ROZNECKI & CAMARILLO INC**  
 (210) 349-3273 | 5835 CALLAGHAN RD, SUITE 200 | SAN ANTONIO, TEXAS, 78228 | TBPE REG. NO. F-483 | http://www.pozcam.com | (210) 349-4395 (FAX)

**PAPE-DAWSON ENGINEERS**  
 2000 HW LOOP 410 | SAN ANTONIO, TEXAS 78213 | PHONE: 210.375.9000 | FAX: 210.375.9010 | TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

DGN:	CV/TA			
CHK DGN:	JC			
DWG:		STATE	COUNTY	SHEET NO.
CHK DWG:		TEXAS	BEXAR	258

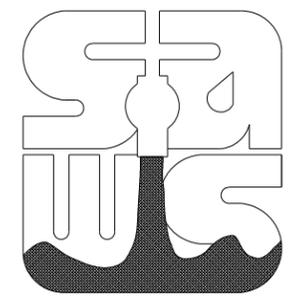
**ADDENDUM No. 2  
 SHEET 15 OF 15**

Plotted on: 6/29/2016 9:13:49 AM

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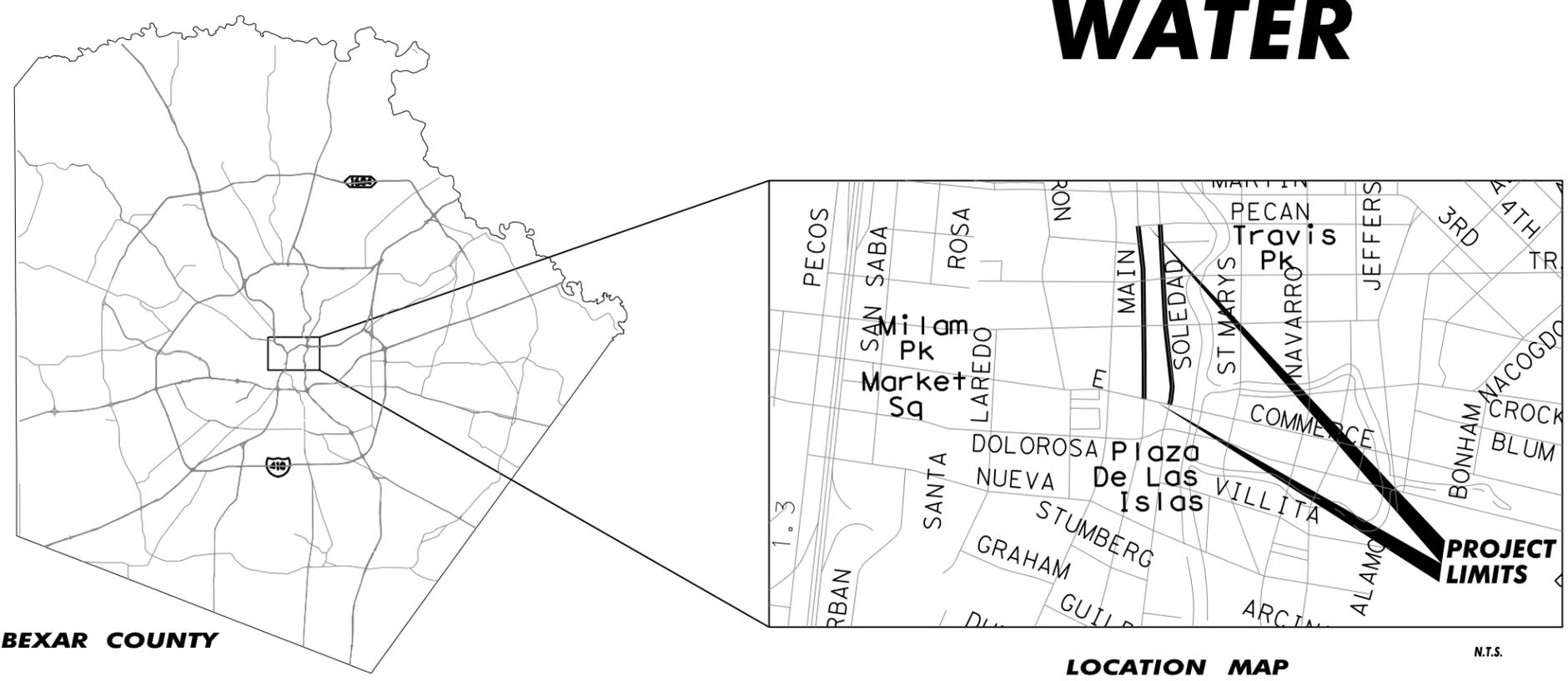
# SAN ANTONIO

## WATER SYSTEM



### JOB No. 12-5102

# DOWNTOWN STREETS: MAIN AND SOLEDAD FROM COMMERCE TO PECAN WATER



BEGIN CONSTRUCTION  
MAIN AVE & COMMERCE ST  
STA 10+33.82

END CONSTRUCTION  
MAIN AVE & PECAN ST  
STA 22+63.28

---

BEGIN CONSTRUCTION  
SOLEDAD ST & COMMERCE ST  
STA 101+15.00

END CONSTRUCTION  
SOLEDAD ST & PECAN ST  
STA 113+33.42



*Jose A. Ruiz*

JOSE A. RUIZ, P.E. DATE 6/29/2016

**ADDENDUM #2**

S.A.W.S. Water Job No. 12-5102

S.A.W.S. CONTRACT No. \_\_\_\_\_

JOB TITLE: MAIN AND SOLEDAD

# GENERAL WATER NOTES

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
  - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
  - Current Texas Department of Transportation (TXDOT) "Standard Specifications for Construction of Highways, Streets and Drainage."
  - Current San Antonio Water System "Standard Specifications for Water and Sanitary Sewer Construction."
  - Current City of San Antonio "Standard Specifications for Public Works Construction."
  - Current City of San Antonio "Utility Excavation Criteria Manual"
- The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-3500 and provide notification procedures the contractor will use to notify affected home residents and/or property owners 48 hours prior to excavation.
- Locations and depths of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor 48 hours prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
- The Contractor shall verify the exact location of underground utilities and drainage structures at least 48 hours prior to construction whether shown on plans or not. The following contact information are supplied for verification purposes:
  - SAWS Utility Locates: 233-2010
  - SAWS Production Control Center: 233-2016
  - COSA Drainage: 207-8048
  - COSA Traffic Signal Operations: 207-7720
  - Texas State Wide One Call Locator: 1-800-545-6005 or 811
- The Contractor shall comply with City of San Antonio or other governing Municipality's tree ordinances when excavating near trees.
- The Contractor shall not place any waste materials or spoils in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
- Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-3500 and/or SAWS Production groups at least two weeks in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.
- Where water lines and new sewer lines are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC 217.53(d) (Pipe Design) and 30 TAC 290.44(e) (Water Distribution).
- Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Payment for such work is to be made under Special Specification Item for Asbestos Cement Pipe.
- Any work completed without prior written authorization which is not included in these plans and specifications will not be compensated by the San Antonio Water System.
- SAWS shall machine chlorinate new water mains if the main is greater than 750 feet. contractor shall chlorinate new mains with HTH if the water main length is 750 feet or less. The length refers to the length of interconnecting mains and not necessarily the total length of the main.
- On mains being abandoned, remove valve boxes (N.S.P.I.)

## LEGEND

P	□	UTILITY PEDESTAL	—○—	TRAFFIC SIGNAL POLE
	⊙	TELEPHONE MANHOLE	⊕	ELECTRIC METER
	⊙	SANITARY SEWER MANHOLE	⊕	POWER POLE
JB	⊙	STORM SEWER JUNCTION BOX	⊕	LIGHT POLE
CO	○	CLEAN OUT	—//—	WOOD FENCE
EL.MH	⊙	ELECTRIC MANHOLE	—•—	CABLE FENCE
	⊕	GAS METER	—OHCTV—	OVERHEAD CABLE TV LINE
	⊕	WATER METER	—W—	WATER LINE
HB	□	HOSE BIBB	—UGT—	UNDERGROUND TELEPHONE
	⊕	FIRE HYDRANT	—UGE—	UNDERGROUND ELECTRIC
WV	⊕	WATER VALVE	—8"SS—	SANITARY SEWER LINE
GV	⊕	GAS VALVE	—24"ST(RCP)—	STORM SEWER LINE
PBX	□	PULL BOX	⊕	PARKING METER
	—x—	BARBED WIRE FENCE	—OHE—	OVERHEAD ELECTRIC LINE
	—◇—	CHAIN LINK FENCE	—OHT—	OVERHEAD TELEPHONE LINE

# ADDITIONAL WATER NOTES

- THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OR HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
- CALL THE TEXAS ONE CALL LOCATOR AT 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
- DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRICAL FACILITIES IF ADJACENT TO WORK AREA. PART 192.181. (NSPI)
- CONTRACTOR and/or CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT THE CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, and/or PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, THE CONTRACTOR and/or CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
- ALL EXCAVATION SHALL BE BACKFILLED AT THE END OF EACH DAY. REFER TO SAWS SPEC 804, TEMPORARY ALL WEATHER SURFACE SHALL BE USED.
- ALL EXCESS EXCAVATION MATERIAL AND/OR DEBRIS SHALL BE REMOVED OFF SITE EACH DAY. (N.S.P.I.)
- JOINT RESTRAINING TO BE USED THROUGHOUT THE PLANS EXCEPT AT TIE-INS WHERE THRUST BLOCKING MAY BE USED, AT NO ADDITIONAL COST. (RL= RESTRAIN LENGTH)
- IT IS NECESSARY TO INSTALL AND APPROVE NEW WATER MAIN BEFORE ABANDON/REMOVE EXISTING WATER MAIN.
- ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSIT PIPE AND WHICH IS KNOWN TO CONTAIN ASBESTOS CONTAINING MATERIAL (ACM), IS LOCATED WITHIN THE PROJECT LIMITS, SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCUR. PAYMENT FOR SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000 "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE."
- FOR A TREE PROTECTION TABLE SEE CITY PLAN SHEETS.
- ALL WATER VALVES TO REMAIN ACCESSIBLE DURING CONSTRUCTION.
- ALL EXISTING WATER VALVE BOXES THAT ARE LOCATED ON THE MAIN STREET SECTION WILL BE ADJUSTED TO FINISHED PAVEMENT ELVATION.
- CONTRACTOR TO PROTECT EXISTING AND NEWLY CONSTRUCTED SERVICES DURING INSTALLATION OF THE STORM SEWER SYSTEM (N.S.P.I.)
- NOTE THAT ALL STANDARD DETAILS CAN BE FOUND ON WWW.SAWS.ORG

ITEM NO.	WATER ITEM DESCRIPTION	UNIT	TOTAL									
			QTY	Sht 356	Sht 357	Sht 358	Sht 359	Sht 360	Sht 361	Sht 362	Sht 363	
100	Mobilization	LS	1	1	1	1	1	1	1	1	1	1
101	Preparing Right of Way	LS	1	1	1	1	1	1	1	1	1	1
413	Flowable Fill (Low Strength)	CY	100	35	2	5	5	5	3	10	35	
550	Trench Protection	LF	1858	259	74	178	165	276	338	391	177	
818	8" DI Waterline (Restrained)	LF	1150	0	0	0	0	266	338	369	177	
818	12" DI Waterline (Restrained)	LF	640	259	74	160	147	0	0	0	0	
824	Relay 3/4" Short Service	EA	4	1	0	1	0	2	0	0	0	
824	Relay 3/4" Long Service	EA	5	0	0	0	1	0	1	3	0	
824	Relay 1" Short Service	EA	6	0	0	2	0	1	3	0	0	
824	Relay 1" Long Service	EA	1	0	0	0	0	1	0	0	0	
824	Relay 1 1/2" Short Service	EA	2	0	0	0	0	1	1	0	0	
824	Relay 1 1/2" Long Service	EA	2	0	0	0	1	0	1	0	0	
824	Relay 2" Short Service	EA	1	0	0	0	0	1	0	0	0	
824	Relay 6" Short Service	EA	6	1	0	0	0	3	2	0	0	
824	Relay 6" Long Service	EA	3	1	0	2	0	0	0	0	0	
824	Relay 8" Short Service	EA	4	2	0	0	0	1	0	0	1	
826	Valve Box Adjustment	EA	8	0	5	3	0	0	0	0	0	
828	6" Gate Valve	EA	10	2	0	2	0	3	2	1	0	
828	8" Gate Valve	EA	20	2	0	0	0	5	5	4	4	
828	12" Gate Valve	EA	5	3	0	1	1	0	0	0	0	
834	Fire Hydrant	EA	7	1	0	0	1	1	2	1	1	
834	Relocate Adjust Fire Hydrant	EA	1	0	0	1	0	0	0	0	0	
836	Pipe Fittings, all sizes & types	TON	8.05	1.82	0.3	0.72	0.51	1.46	0.85	1.82	0.57	
840	6" Water Tie-Ins	EA	1	0	0	0	0	0	0	1	0	
840	8" Water Tie-Ins	EA	5	0	0	0	0	1	2	1	1	
840	12" Water Tie-Ins	EA	4	1	1	1	1	0	0	0	0	
841	Hydrostatic Testing	EA	4	1	0	1	0	1	1	0	0	
844	2" Blow-off, Temporary	EA	20	4	1	3	1	6	2	2	1	
856	Steel Casing Pipe 24" (Open Cut)	LF	68	0	0	18	18	10	0	22	0	
856	Carrier Pipe 8" DI	LF	32	0	0	0	0	10	0	22	0	
856	Carrier Pipe 12" DI	LF	36	0	0	18	18	0	0	0	0	
1015	Service Line Leak repair	EA	1	0	0	0	0	0	0	0	0	
1020	8" Main break/leak all types repairs	EA	1	0	0	0	0	0	0	0	0	
1020	12" Main break/leak all type repair	EA	1	0	0	0	0	0	0	0	0	
3000	AC Pipe Removal Transp and Disposal	LF	314	109	75	13	13	26	26	39	13	
<b>OPTION 2 -- Mill &amp; Overlay</b>												
206	12" Asphalt Treated Base	SY	880	135	35	0	0	150	195	250	115	



JOSE A. RUIZ, P.E. DATE 6/29/2016

No.	Revision	Drawn	Approved	Date

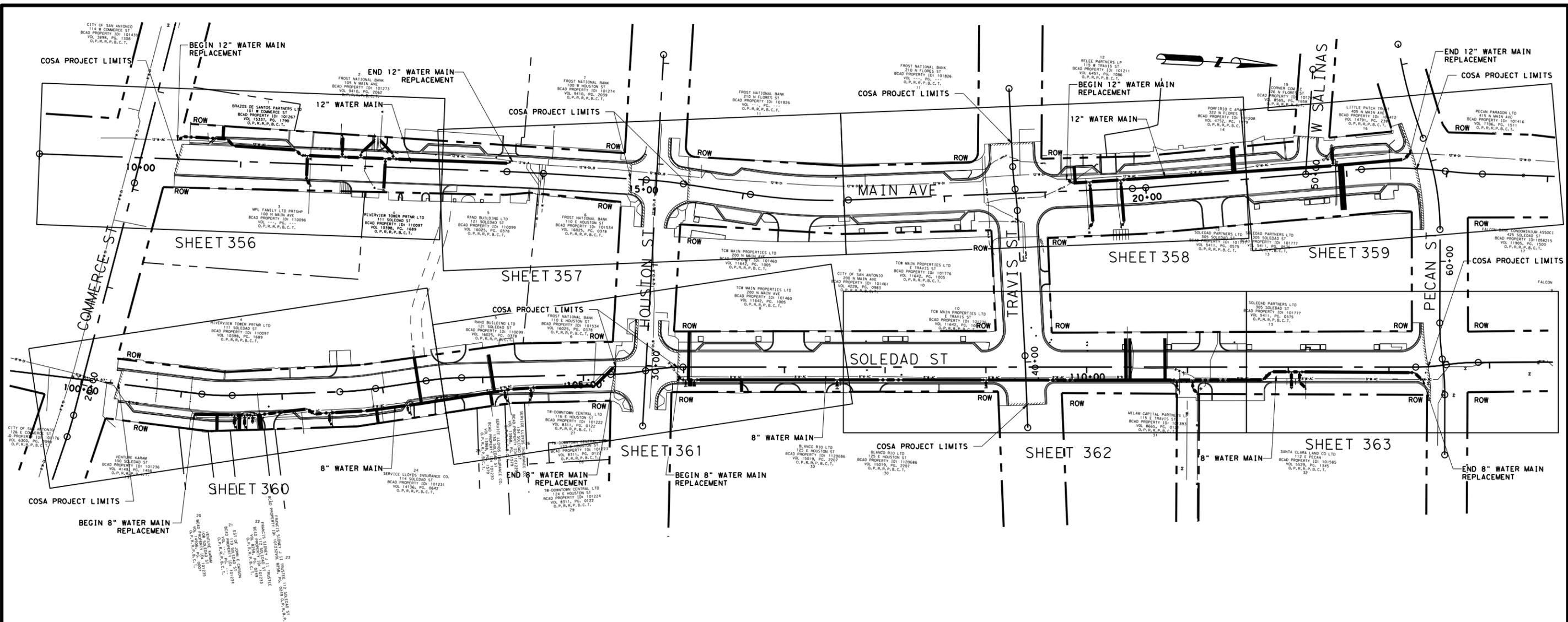
**REVISIONS**  
CITY OF SAN ANTONIO  
**MAIN AND SOLEDAD**  
GENERAL NOTES  
ADDENDUM #2

DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_  
MAP No. \_\_\_\_\_ SHEET 354  
SECT. No. \_\_\_\_\_  
DR. CC. CK. JAR JOB No. 12-5102 Of 416

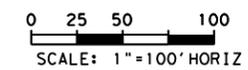
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100% SUBMITTAL  
**POZNECKI**  
**INC**  
**CAMARILLO**

5835 CALLAGHAN RD, SUITE 200  
 SAN ANTONIO, TEXAS 78228  
 (210) 348-3273 <http://www.poznecki.com/>  
 TBPE REG. NO. F-483



*Jose A. Ruiz*  
 JOSE A. RUIZ, P.E.

6/29/2016  
 DATE

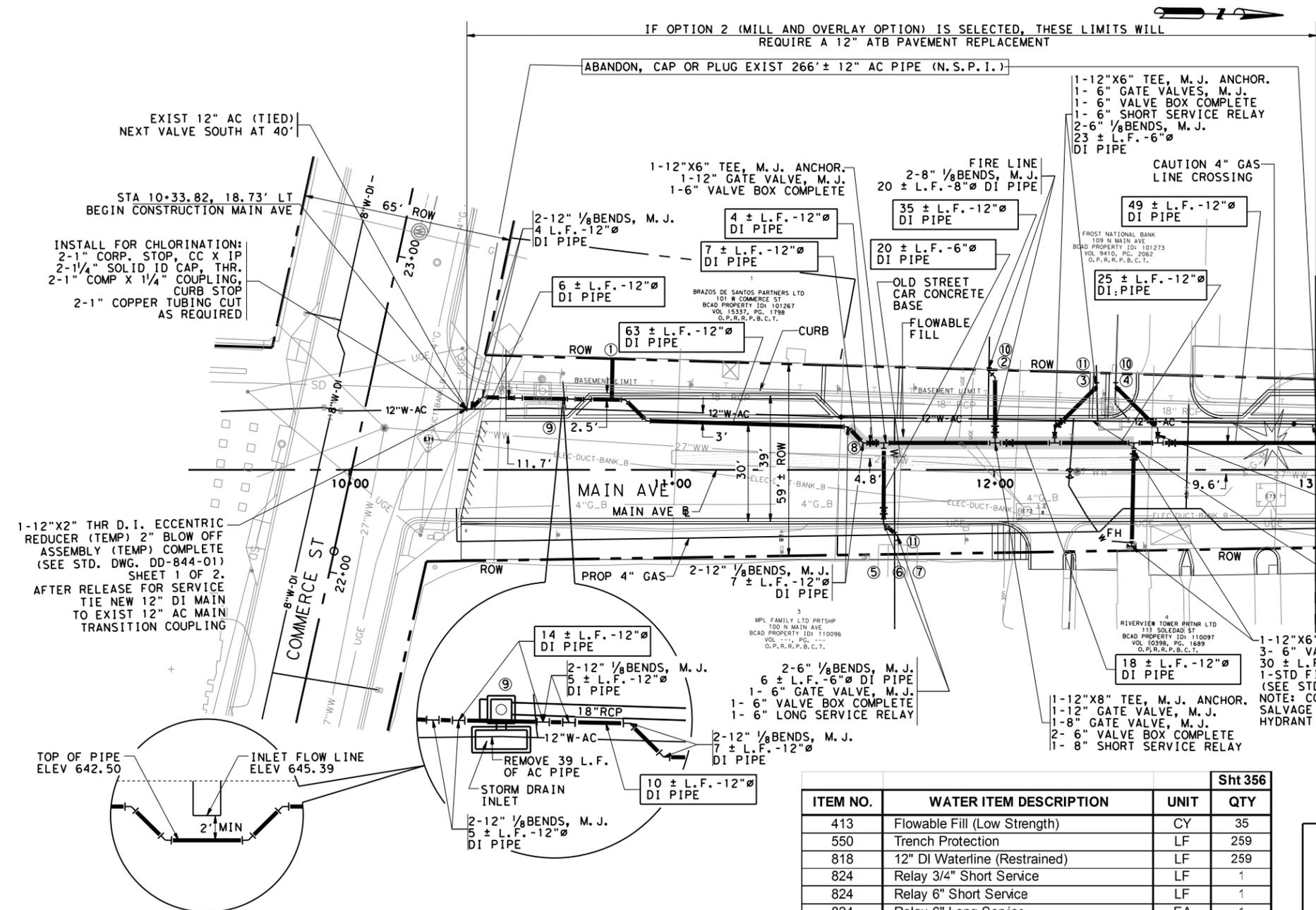
No.	Revision	Drawn	Approved	Date

**REVISIONS**  
 CITY OF SAN ANTONIO  
**MAIN AND SOLEDAD**  
**OVERALL**  
**LAYOUT SHEET**  
**ADDENDUM #2** 10F1

DEVELOPER: \_\_\_\_\_  
 CONT. BUDGET PROJ. \_\_\_\_\_  
 SUBMITTED \_\_\_\_\_  
 APPROVED \_\_\_\_\_  
 MAP No. \_\_\_\_\_ SHEET 355  
 SECT. No. \_\_\_\_\_  
 DR. CC CK. JAR JOB No. 12-5102 OF 416

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- NOTE:**
- ELEVATIONS POSTED FOR TOP OF VALVE BOXES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR THE TOP OF VALVE BOXES TO MATCH THE FINISHED GRADE FOR THE STREET IMPROVEMENTS (N.S.P.I.)
  - WATER SERVICES UNDER STREET CAR CONCRETE PAD AND UNDER UTILITIES WHERE STANDARD COMPACTION WILL NOT BE POSSIBLE ARE TO BE BACKFILLED WITH FLOWABLE FILL (ITEM 413)
  - WATER SERVICE LOCATIONS SHOWN ON PLANS ARE FROM AVAILABLE RECORDS. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND REPLACE ACCORDINGLY
  - ALL WATER SERVICES SHALL BE REPLACED WHETHER SHOWN OR NOT SHOWN, AND SHALL BE PAID FOR UNDER ITEM 824.



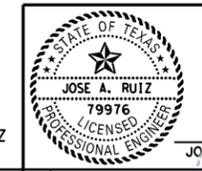
**TAP NUMBER / SIZE**

①	TAP #062134	3/4"
②	TAP #149165	8"
③	TAP #149166	6"
④	TAP UNKNOWN, PROBABLY FIRE LANE	
⑤	TAP #000616	1"
⑥	TAP #11339	1"
⑦	TAP #001632	1"
⑧	TCEQ VARIANCE #2 REQUESTED TO ALLOW LESS THAN 4' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER MAINS, WATER MAIN SHALL BE ENCASED WITH FLOWABLE FILL UP TO 12" ABOVE WATER MAIN.	
⑨	INLET FLOW LINE 645.39 PROPOSED TOP OF 12" DI WATER MAIN 642.50 OR LOWER	
⑩	1-8"x2" THR D.I. ECCENTRIC REDUCER (TEMP) 2" BLOW OFF ASSEMBLY (TEMP) COMPLETE (SEE STD. DWG. DD-844-01) SHEET 1 OF 2	
⑪	1-6"x2" THR D.I. ECCENTRIC REDUCER (TEMP) 2" BLOW OFF ASSEMBLY (TEMP) COMPLETE (SEE STD. DWG. DD-844-01) SHEET 1 OF 2	

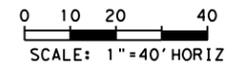
**STREET CAR CONCRETE NOTE:** EXISTING STREET CAR CONCRETE PAD IS OF HISTORICAL SIGNIFICANCE. CONTRACTOR TO COORDINATE WITH CITY'S HISTORICAL ENVIRONMENTAL DEPARTMENT BEFORE TOUCHING THE STREET CAR CONCRETE. ANY DISTURBANCE TO THE CONCRETE PAD IS TO BE AVOIDED. CONTRACTOR TO VERIFY ACTUAL SIZE AND DEPTH AND ADJUST ACCORDINGLY TO MAINTAIN PROPER DEPTH AND CLEARANCE. CONTRACTOR IS TO LAY MAINS, SERVICES, AND ANY REQUIRED CASING UNDER THE EXISTING CONCRETE PAD (NSPI). CONTRACTOR IS TO DETERMINE REQUIRED METHOD OF EXCAVATION FOR CROSSING UNDER THE EXISTING CONCRETE STREET CAR PAD AND EXISTING UTILITIES (NSPI). IF DAMAGED OR CUT, CONTRACTOR IS RESPONSIBLE FOR RESTORING TO EQUAL OR BETTER CONDITION, INCLUDING REPLACEMENT OF CONCRETE AND RAILS (NSPI). BACKFILL UNDER THE CONCRETE PAD SHALL BE ACCOMPLISHED WITH FLOWABLE FILL.



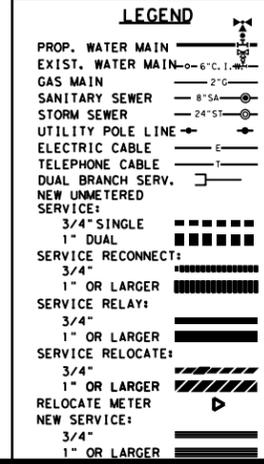
5835 CALLAGHAN RD, SUITE 200  
SAN ANTONIO, TEXAS 78228  
(210) 340-3273 <http://www.poznecki.com/>  
TBP REG. NO. F-483



JOSE A. RUIZ, P.E. DATE 6/29/2016



ITEM NO.	WATER ITEM DESCRIPTION	UNIT	QTY	Sht 356
413	Flowable Fill (Low Strength)	CY	35	
550	Trench Protection	LF	259	
818	12" DI Waterline (Restrained)	LF	259	
824	Relay 3/4" Short Service	LF	1	
824	Relay 6" Short Service	LF	1	
824	Relay 6" Long Service	EA	1	
824	Relay 8" Short Service	EA	2	
828	6" Gate Valve	EA	2	
828	8" Gate Valve	EA	2	
828	12" Gate Valve	EA	3	
834	Fire Hydrant	EA	1	
836	Pipe Fittings, all sizes & types	TON	1.82	
840	12" Water Tie-Ins	EA	1	
841	Hydrostatic Testing	EA	1	
844	2" Blow-off, Temporary	EA	4	
3000	AC Pipe Removal Transp and Disposal	LF	109	
<b>OPTION 2 -- Mill &amp; Overlay</b>				
206	12" Asphalt Treated Base	SY	135	



No.	Revision	Drawn	Approved	Date

**REVISIONS**

**CITY OF SAN ANTONIO**

**MAIN AND SOLEDAD**

**ADDENDUM #2**

DEVELOPER: \_\_\_\_\_

CONT. BUDGET PROJ. \_\_\_\_\_

SUBMITTED: \_\_\_\_\_

APPROVED: \_\_\_\_\_

MAP No. \_\_\_\_\_ SHEET 356

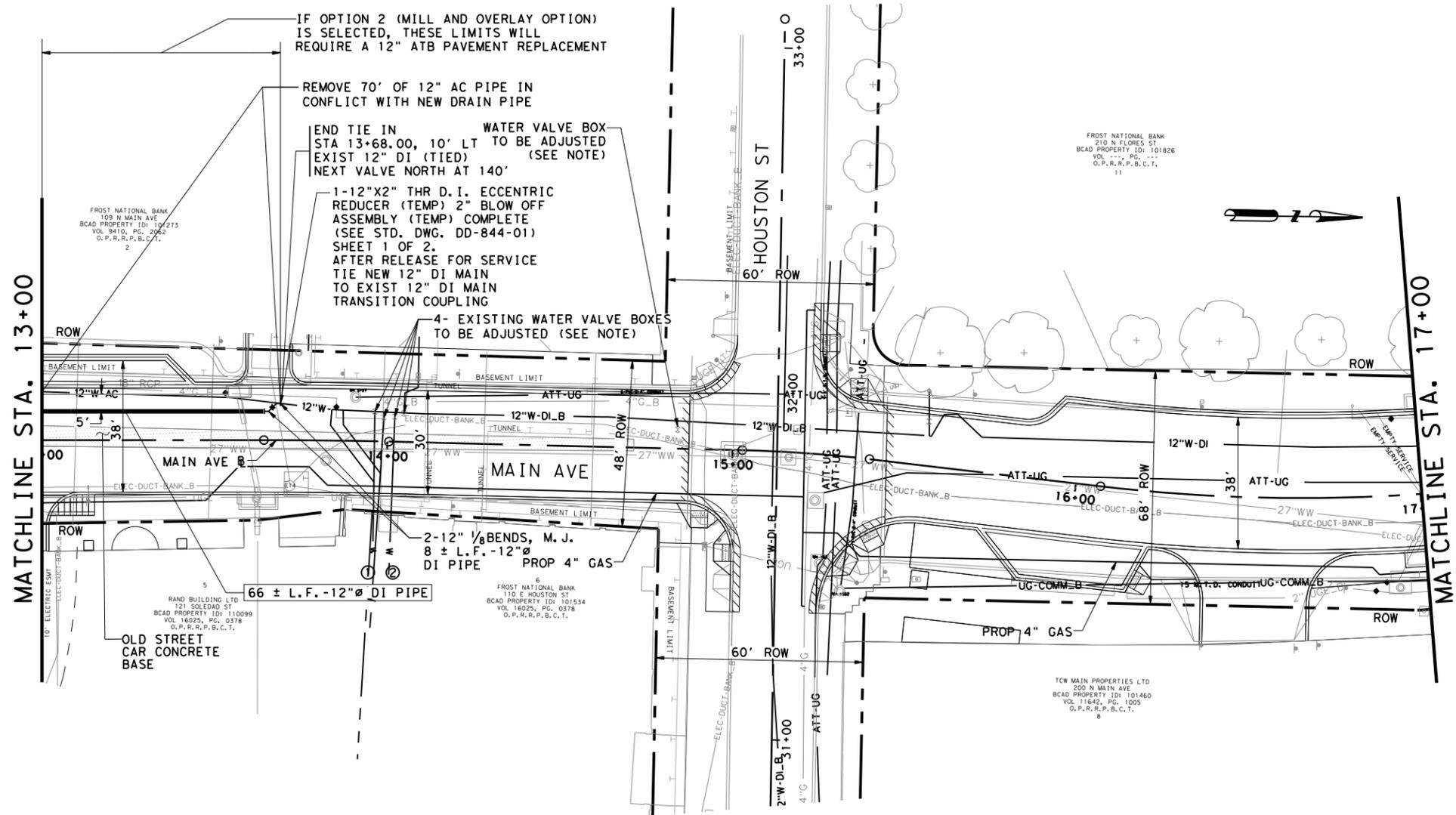
SECT. No. \_\_\_\_\_

DR. CC CK. JAR JOB No. 12-5102 OF 416

- NOTE:
1. ELEVATIONS POSTED FOR TOP OF VALVE BOXES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR THE TOP OF VALVE BOXES TO MATCH THE FINISHED GRADE FOR THE STREET IMPROVEMENTS (N.S.P. I.)
  2. WATER SERVICES UNDER STREET CAR CONCRETE PAD AND UNDER UTILITIES WHERE STANDARD COMPACTION WILL NOT BE POSSIBLE ARE TO BE BACKFILLED WITH FLOWABLE FILL (ITEM 413)
  3. WATER SERVICE LOCATIONS SHOWN ON PLANS ARE FROM AVAILABLE RECORDS. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND REPLACE ACCORDINGLY
  4. ALL WATER SERVICES SHALL BE REPLACED WHETHER SHOWN OR NOT SHOWN, AND SHALL BE PAID FOR UNDER ITEM 824.

TAP NUMBER / SIZE

①	TAP #002786	6"
②	TAP #193733	1"



STREET CAR CONCRETE NOTE: EXISTING STREET CAR CONCRETE PAD IS OF HISTORICAL SIGNIFICANCE. CONTRACTOR TO COORDINATE WITH CITY'S HISTORICAL ENVIRONMENTAL DEPARTMENT BEFORE TOUCHING THE STREET CAR CONCRETE. ANY DISTURBANCE TO THE CONCRETE PAD IS TO BE AVOIDED. CONTRACTOR TO VERIFY ACTUAL SIZE AND DEPTH AND ADJUST ACCORDINGLY TO MAINTAIN PROPER DEPTH AND CLEARANCE. CONTRACTOR IS TO LAY MAINS, SERVICES, AND ANY REQUIRED CASING UNDER THE EXISTING CONCRETE PAD (NSPI). CONTRACTOR IS TO DETERMINE REQUIRED METHOD OF EXCAVATION FOR CROSSING UNDER THE EXISTING CONCRETE STREET CAR PAD AND EXISTING UTILITIES (NSPI). IF DAMAGED OR CUT, CONTRACTOR IS RESPONSIBLE FOR RESTORING TO EQUAL OR BETTER CONDITION, INCLUDING REPLACEMENT OF CONCRETE AND RAILS (NSPI). BACKFILL UNDER THE CONCRETE PAD SHALL BE ACCOMPLISHED WITH FLOWABLE FILL.

ITEM NO.	WATER ITEM DESCRIPTION	UNIT	QTY	Sht 357
413	Flowable Fill (Low Strength)	CY	2	
550	Trench Protection	LF	74	
818	12" DI Waterline (Restrained)	LF	74	
826	Valve Box Adjustment	EA	5	
836	Pipe Fittings, all sizes & types	TON	0.3	
840	12" Water Tie-Ins	EA	1	
844	2" Blow-off, Temporary	EA	1	
3000	AC Pipe Removal Transp and Disposal	LF	75	
<b>OPTION 2 -- Mill &amp; Overlay</b>				
206	12" Asphalt Treated Base	SY	35	

**LEGEND**

0 10 20 40  
SCALE: 1" = 40' HORIZ

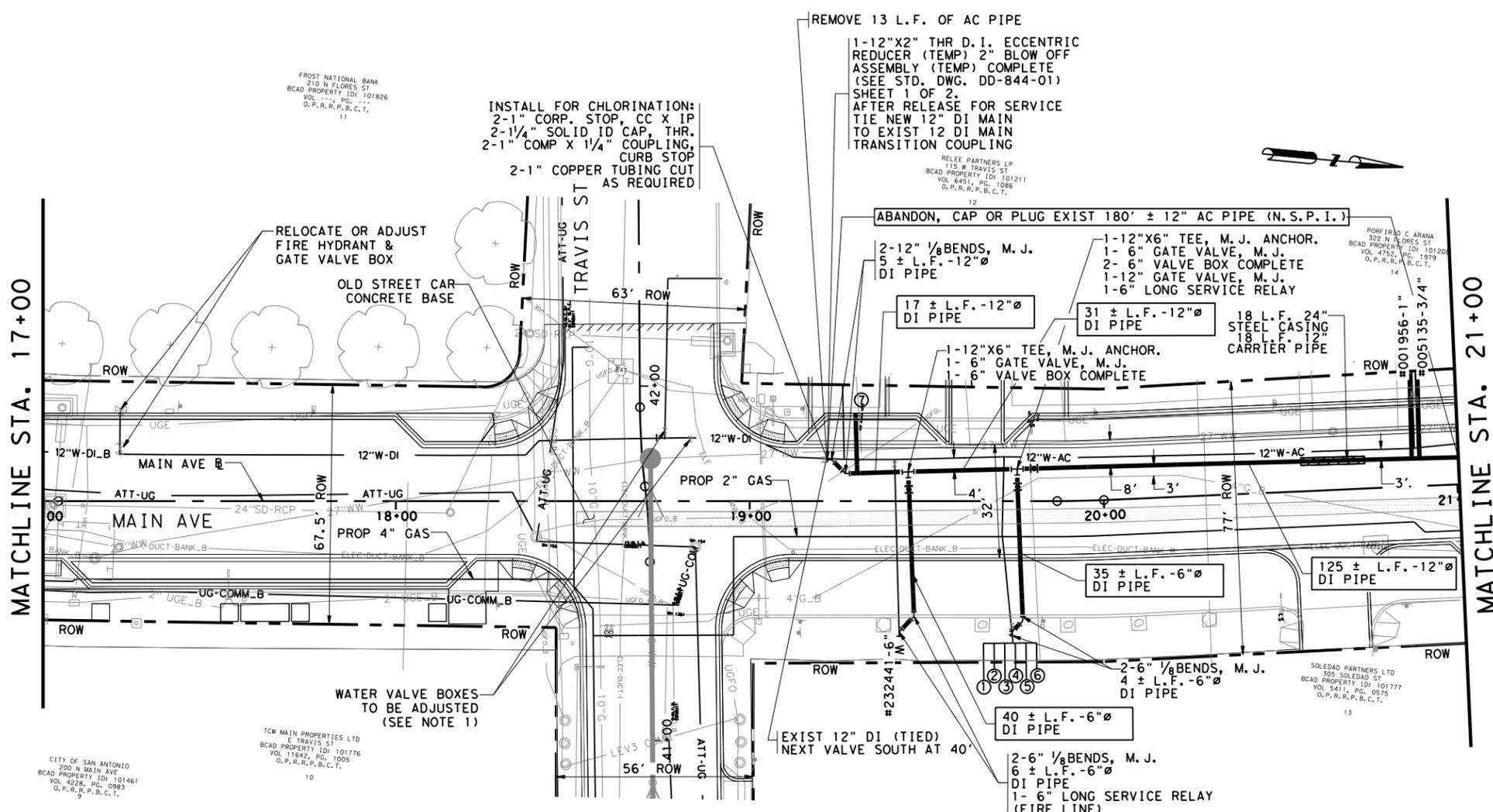
**POZNECKI & CAMARILLO INC.**  
5835 CALLAGHAN RD, SUITE 200  
SAN ANTONIO, TEXAS 78228  
(210) 346-3273 http://www.pozcam.com/

STATE OF TEXAS  
79976  
JOSE A. RUIZ  
LICENSED PROFESSIONAL ENGINEER  
6/29/2016  
JOSE A. RUIZ, P.E. DATE

No.	Revision	Drawn	Approved	Date
<b>REVISIONS</b>				
<b>CITY OF SAN ANTONIO</b>				
<b>MAIN AND SOLEDAD</b>				
<b>ADDENDUM #2</b>				
DEVELOPER:				
CONT. BUDGET PROJ.				
SUBMITTED:				
APPROVED:				
MAP No.				SHEET
SECT. No.				357
DR. CC	CK. JAR	JOB No. 12-5102		Of 416

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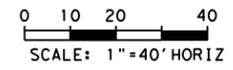


**TAP NUMBER / SIZE**

①	TAP #020364	2"
②	TAP #020365	1/2"
③	TAP #020366	1/2"
④	TAP #003765	3/4"
⑤	TAP #001414	1/2"
⑥	TAP #000580	2"
⑦	TAP #035184	1"

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550	Trench Protection	LF	178	
818	12" DI Waterline (Restrained)	LF	160	
824	Relay 3/4" Short Service	EA	1	
824	Relay 1" Short Service	EA	2	
824	Relay 6" Long Service	EA	2	
826	Valve Box Adjustment	EA	3	
828	6" Gate Valve	EA	2	
828	12" Gate Valve	EA	1	
834	Relocate Adjust Fire Hydrant	EA	1	
836	Pipe Fittings, all sizes & types	TON	0.72	
840	12" Water Tie-Ins	EA	1	
844	Hydrostatic Testing	EA	1	
844	2" Blow-off, Temporary	EA	3	
856	Steel Casing Pipe 24"	LF	18	
856	Carrier Pipe 12" DI	LF	18	
3000	AC Pipe Removal Transp. and Disposal	LF	13	



**LEGEND**

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE
- DUAL BRANCH SERV.
- NEW UNMETERED SERVICE:
- 3/4" SINGLE
- 1" DUAL
- SERVICE RECONNECT:
- 3/4"
- 1" OR LARGER
- SERVICE RELAY:
- 3/4"
- 1" OR LARGER
- SERVICE RELOCATE:
- 3/4"
- 1" OR LARGER
- RELOCATE METER
- NEW SERVICE:
- 3/4"
- 1" OR LARGER

**POZNECKI & CAMARILLO INC.**

5835 CALLAGHAN RD, SUITE 200  
 SAN ANTONIO, TEXAS 78228  
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STATE OF TEXAS  
 LICENSED PROFESSIONAL ENGINEER  
 JOSE A. RUIZ  
 79976  
 DATE: 6/29/2016

REVISIONS

No.	Revision	Drawn	Approved	Date

**CITY OF SAN ANTONIO**

**MAIN AND SOLEDAD**

**ADDENDUM #2**

DEVELOPER: \_\_\_\_\_

CONT. BUDGET PROJ. \_\_\_\_\_

SUBMITTED: \_\_\_\_\_

APPROVED: \_\_\_\_\_

MAP No. \_\_\_\_\_

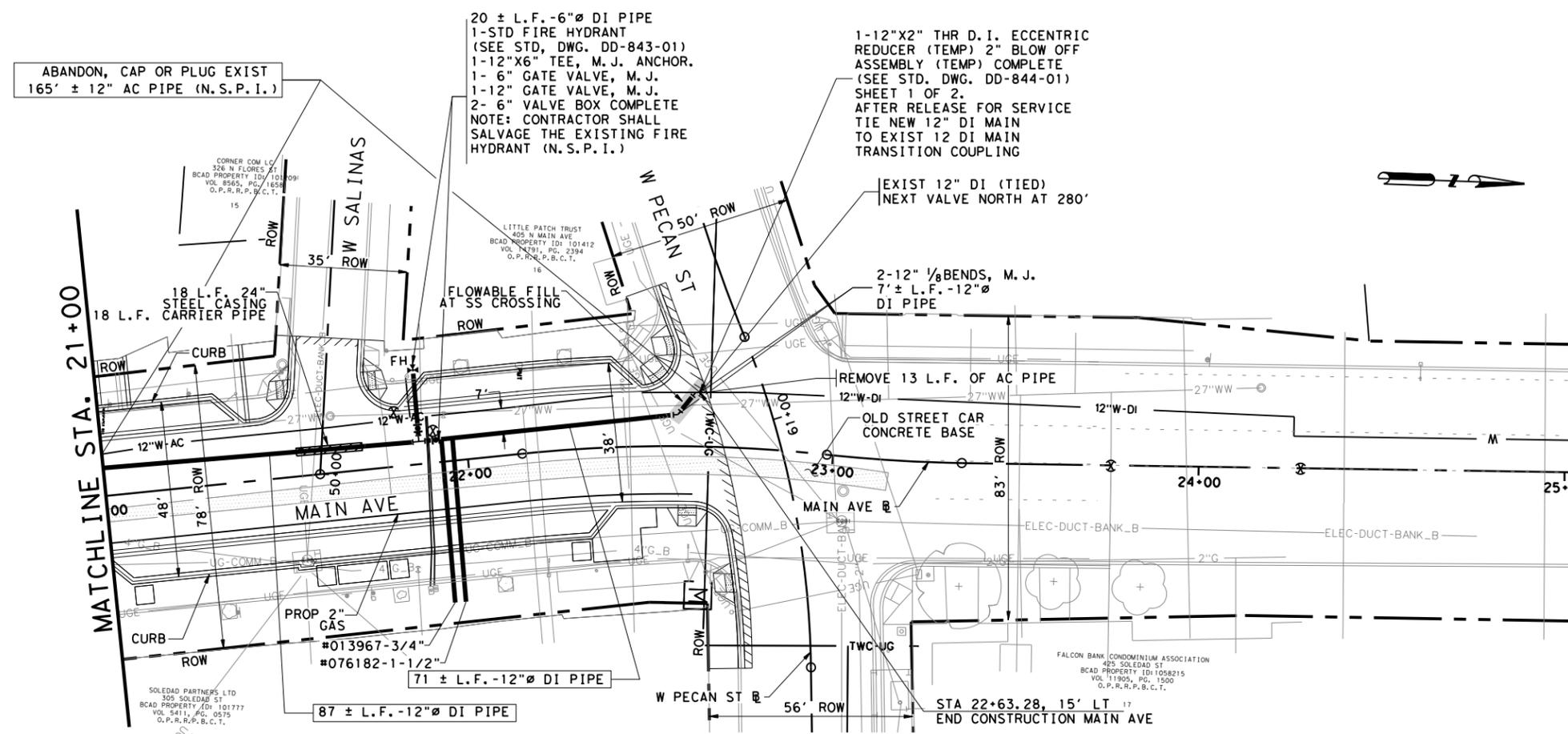
SECT. No. \_\_\_\_\_

DR. CC CK. JAR

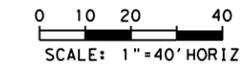
JOB No. 12-5102

SHEET 358 OF 416

- NOTE:
- ELEVATIONS POSTED FOR TOP OF VALVE BOXES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR THE TOP OF VALVE BOXES TO MATCH THE FINISHED GRADE FOR THE STREET IMPROVEMENTS (N.S.P.I.)
  - WATER SERVICES UNDER STREET CAR CONCRETE PAD AND UNDER UTILITIES WHERE STANDARD COMPACTION WILL NOT BE POSSIBLE ARE TO BE BACKFILLED WITH FLOWABLE FILL (ITEM 413)
  - WATER SERVICE LOCATIONS SHOWN ON PLANS ARE FROM AVAILABLE RECORDS. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND REPLACE ACCORDINGLY
  - ALL WATER SERVICES SHALL BE REPLACED WHETHER SHOWN OR NOT SHOWN, AND SHALL BE PAID FOR UNDER ITEM 824.



STREET CAR CONCRETE NOTE: EXISTING STREET CAR CONCRETE PAD IS OF HISTORICAL SIGNIFICANCE. CONTRACTOR TO COORDINATE WITH CITY'S HISTORICAL ENVIRONMENTAL DEPARTMENT BEFORE TOUCHING THE STREET CAR CONCRETE. ANY DISTURBANCE TO THE CONCRETE PAD IS TO BE AVOIDED. CONTRACTOR TO VERIFY ACTUAL SIZE AND DEPTH AND ADJUST ACCORDINGLY TO MAINTAIN PROPER DEPTH AND CLEARANCE. CONTRACTOR IS TO LAY MAINS, SERVICES, AND ANY REQUIRED CASING UNDER THE EXISTING CONCRETE PAD(NSPI). CONTRACTOR IS TO DETERMINE REQUIRED METHOD OF EXCAVATION FOR CROSSING UNDER THE EXISTING CONCRETE STREET CAR PAD AND EXISTING UTILITIES(NSPI). IF DAMAGED OR CUT, CONTRACTOR IS RESPONSIBLE FOR RESTORING TO EQUAL OR BETTER CONDITION, INCLUDING REPLACEMENT OF CONCRETE AND RAILS (NSPI). BACKFILL UNDER THE CONCRETE PAD SHALL BE ACCOMPLISHED WITH FLOWABLE FILL.



STATE OF TEXAS  
79976  
JOSE A. RUIZ, P.E.  
LICENSED PROFESSIONAL ENGINEER  
6/29/2016

ITEM NO.	WATER ITEM DESCRIPTION	UNIT	QTY	Sht 359
413	Flowable Fill (Low Strength)	CY	5	
550	Trench Protection	LF	165	
818	12" DI Waterline (Restrained)	LF	147	
824	Relay 3/4" Long Service	EA	1	
824	Relay 1 1/2" Long Service	EA	1	
828	12" Gate Valve	EA	1	
834	Fire Hydrant	EA	1	
836	Pipe Fittings, all sizes & types	TON	0.51	
840	12" Water Tie-Ins	EA	1	
844	2" Blow-off, Temporary	EA	1	
856	Steel Casing Pipe 24"	LF	18	
856	Carrier Pipe 12" DI	LF	18	
3000	AC Pipe Removal Transp. and Disposal	LF	13	

**LEGEND**

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE
- DUAL BRANCH SERV.
- NEW UNMETERED SERVICE:
- 3/4" SINGLE
- 1" DUAL
- SERVICE RECONNECT:
- 3/4"
- 1" OR LARGER
- SERVICE RELAY:
- 3/4"
- 1" OR LARGER
- SERVICE RELOCATE:
- 3/4"
- 1" OR LARGER
- RELOCATE METER
- NEW SERVICE:
- 3/4"
- 1" OR LARGER

**REVISIONS**

No.	Revision	Drawn	Approved	Date

**CITY OF SAN ANTONIO**

**MAIN AND SOLEDAD**

**ADDENDUM #2**

DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_

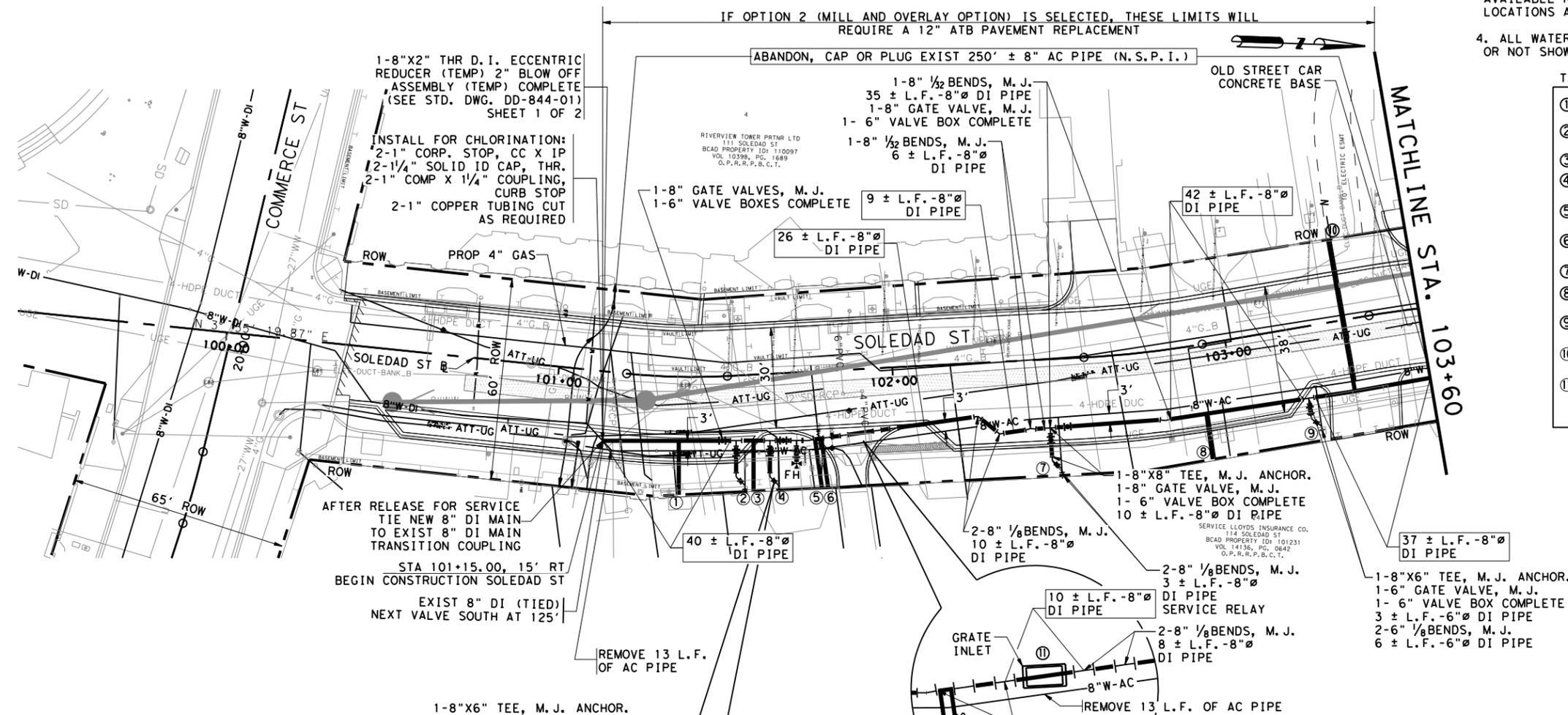
SUBMITTED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

MAP No. \_\_\_\_\_ SHEET 359  
SECT. No. \_\_\_\_\_  
DR. CC CK. JAR JOB No. 12-5102 Of 416

Plotted on: 6/29/2016 9:14:50 AM

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TAP NUMBER / SIZE

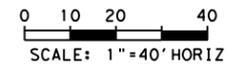
①	TAP #294759 SERVICE RELAY	1"
②	TAP #057316 SERVICE RELAY	6"
③	TAP #000390	2"
④	TAP #094995 SERVICE RELAY	6"
⑤	TAP #001824 SERVICE RELAY	3/4"
⑥	TAP #81026 SERVICE RELAY	3/4"
⑦	TAP #086983	8"
⑧	TAP #000004 SERVICE RELAY	1-1/2"
⑨	TAP #138850 SERVICE RELAY	6"
⑩	TAP #197491 SERVICE RELAY	1"
⑪	INLET FLOW LINE 645.46 PROPOSED TOP OF 8" DI WATER MAIN 642.50 OR LOWER	



5835 CALLAGHAN RD, SUITE 200  
SAN ANTONIO, TEXAS, 78228  
(210) 340-3273 http://www.poznecki.com/ TXBPE REG. NO. F-483



JOSE A. RUIZ, P.E. DATE 6/29/2016



LEGEND

PROP. WATER MAIN	—
EXIST. WATER MAIN	—
GAS MAIN	—
SANITARY SEWER	—
STORM SEWER	—
UTILITY POLE LINE	—
ELECTRIC CABLE	—
TELEPHONE CABLE	—
DUAL BRANCH SERV.	—
NEW UNMETERED SERVICE:	
3/4" SINGLE	—
1" DUAL	—
SERVICE RECONNECT:	
3/4"	—
1" OR LARGER	—
SERVICE RELAY:	
3/4"	—
1" OR LARGER	—
SERVICE RELOCATE:	
3/4"	—
1" OR LARGER	—
RELOCATE METER	—
NEW SERVICE:	
3/4"	—
1" OR LARGER	—

ITEM NO.	WATER ITEM DESCRIPTION	UNIT	QTY	Sht 360
413	Flowable Fill (Low Strength)	CY	5	
550	Trench Protection	LF	276	
818	8" DI Waterline (Restrained)	LF	266	
824	Relay 3/4" Short Service	EA	2	
824	Relay 1" Short Service	EA	1	
824	Relay 1" Long Service	EA	1	
824	Relay 1 1/2" Short Service	EA	1	
824	Relay 2" Short Service	EA	1	
824	Relay 6" Short Service	EA	3	
824	Relay 8" Short Service	EA	1	
828	6" Gate Valve	EA	3	
828	8" Gate Valve	EA	5	
834	Fire Hydrant	EA	1	
836	Pipe Fittings, all sizes & types	TON	1.46	
840	8" Water Tie-Ins	EA	1	
841	Hydrostatic Testing	EA	1	
844	2" Blow-off, Temporary	EA	6	
856	Steel Casing Pipe 24"	LF	10	
856	Carrier Pipe 8" DI	LF	10	
3000	AC Pipe Removal Transp. and Disposal	LF	26	
<b>OPTION 2 - Mill &amp; Overlay</b>				
206	12" Asphalt Treated Base	SY	150	

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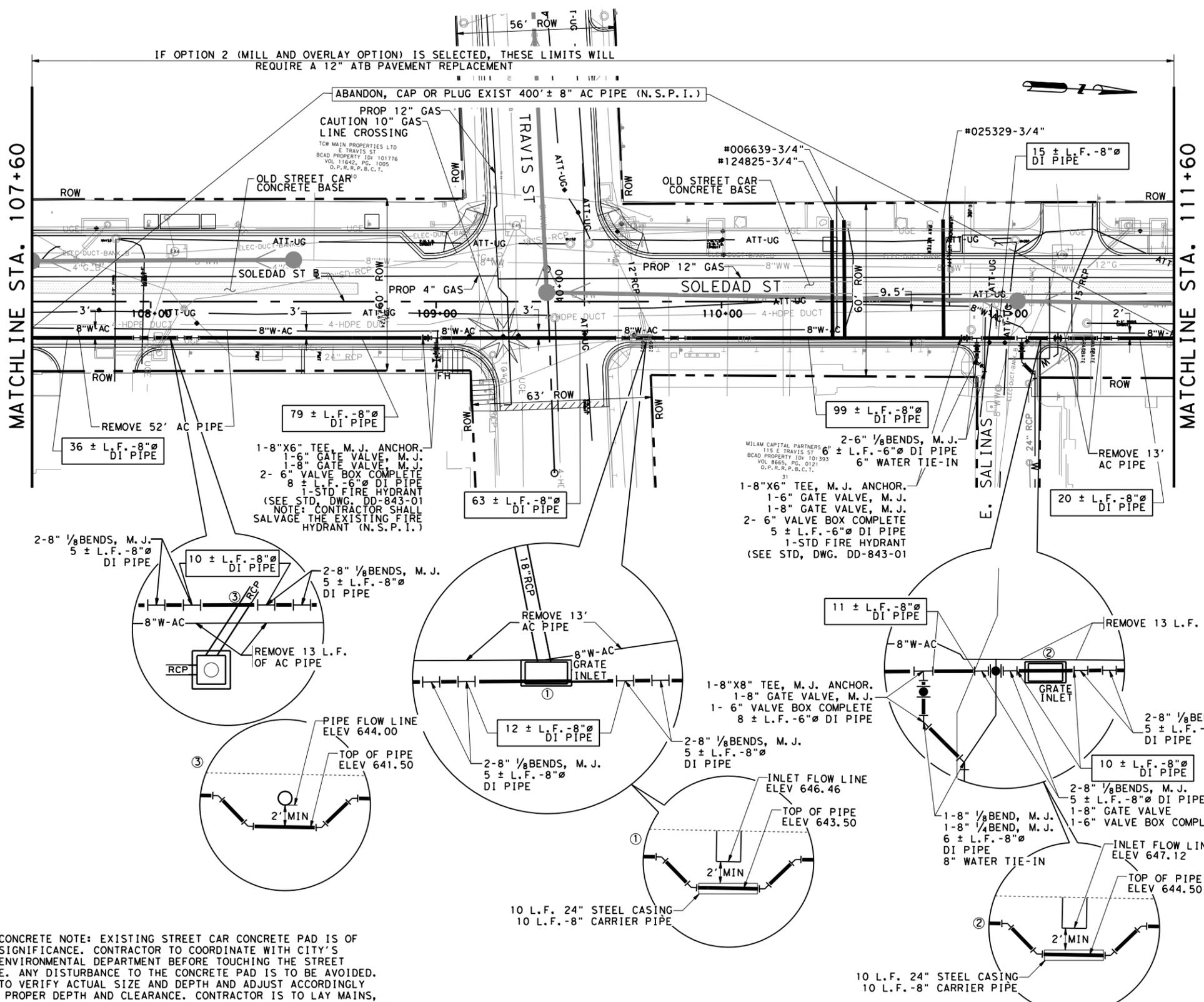
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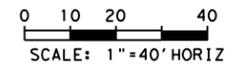
TAP NUMBER / SIZE

①	INLET FLOW LINE 646.45 PROPOSED TOP OF 8" DI WATER MAIN 643.50 OR LOWER
②	INLET FLOW LINE 647.12 PROPOSED TOP OF 8" DI WATER MAIN 644.50 OR LOWER
③	INLET FLOW LINE 644.00 PROPOSED TOP OF 8" DI WATER MAIN 641.50 OR LOWER



ITEM NO.	WATER ITEM DESCRIPTION	UNIT	QTY	Sht 362
413	Flowable Fill (Low Strength)	CY	10	
550	Trench Protection	LF	391	
818	8" DI Waterline (Restrained)	LF	369	
824	Relay 3/4" Long Service	EA	3	
828	6" Gate Valve	EA	1	
828	8" Gate Valve	EA	4	
834	Fire Hydrant	EA	1	
836	Pipe Fittings, all sizes & types	TON	1.82	
840	6" Water Tie-Ins	EA	1	
840	8" Water Tie-Ins	EA	1	
844	2" Blow-off, Temporary	EA	2	
856	Steel Casing Pipe 24"	LF	22	
856	Carrier Pipe 8" DI	LF	22	
3000	AC Pipe Removal Transp and Disposal	LF	39	
<b>OPTION 2 - Mill &amp; Overlay</b>				
206	12" Asphalt Treated Base	SY	250	

STREET CAR CONCRETE NOTE: EXISTING STREET CAR CONCRETE PAD IS OF HISTORICAL SIGNIFICANCE. CONTRACTOR TO COORDINATE WITH CITY'S HISTORICAL ENVIRONMENTAL DEPARTMENT BEFORE TOUCHING THE STREET CAR CONCRETE. ANY DISTURBANCE TO THE CONCRETE PAD IS TO BE AVOIDED. CONTRACTOR TO VERIFY ACTUAL SIZE AND DEPTH AND ADJUST ACCORDINGLY TO MAINTAIN PROPER DEPTH AND CLEARANCE. CONTRACTOR IS TO LAY MAINS, SERVICES, AND ANY REQUIRED CASING UNDER THE EXISTING CONCRETE PAD (NSPI). CONTRACTOR IS TO DETERMINE REQUIRED METHOD OF EXCAVATION FOR CROSSING UNDER THE EXISTING CONCRETE STREET CAR PAD AND EXISTING UTILITIES (NSPI). IF DAMAGED OR CUT, CONTRACTOR IS RESPONSIBLE FOR RESTORING TO EQUAL OR BETTER CONDITION, INCLUDING REPLACEMENT OF CONCRETE AND RAILS (NSPI). BACKFILL UNDER THE CONCRETE PAD SHALL BE ACCOMPLISHED WITH FLOWABLE FILL.



**LEGEND**

PROP. WATER MAIN	—
EXIST. WATER MAIN	—
GAS MAIN	—
SANITARY SEWER	—
STORM SEWER	—
UTILITY POLE LINE	—
ELECTRIC CABLE	—
TELEPHONE CABLE	—
DUAL BRANCH SERV.	—
NEW UNMETERED SERVICE:	
3/4" SINGLE	—
1" DUAL	—
SERVICE RECONNECT:	
3/4"	—
1" OR LARGER	—
SERVICE RELAY:	
3/4"	—
1" OR LARGER	—
SERVICE RELOCATE:	
3/4"	—
1" OR LARGER	—
RELOCATE METER	—
NEW SERVICE:	
3/4"	—
1" OR LARGER	—



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TBPE REG. NO. F-483



JOSE A. RUIZ, P.E. DATE 6/29/2016

No.	Revision	Drawn	Approved	Date

**REVISIONS**  
CITY OF SAN ANTONIO

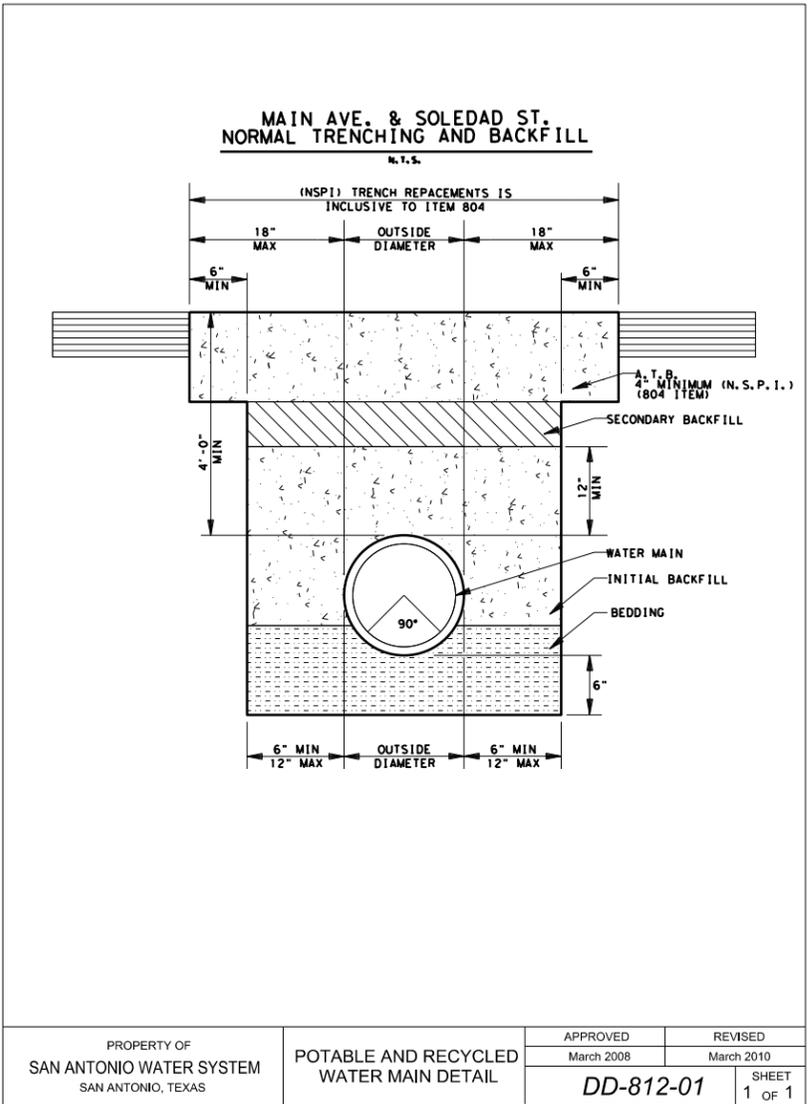
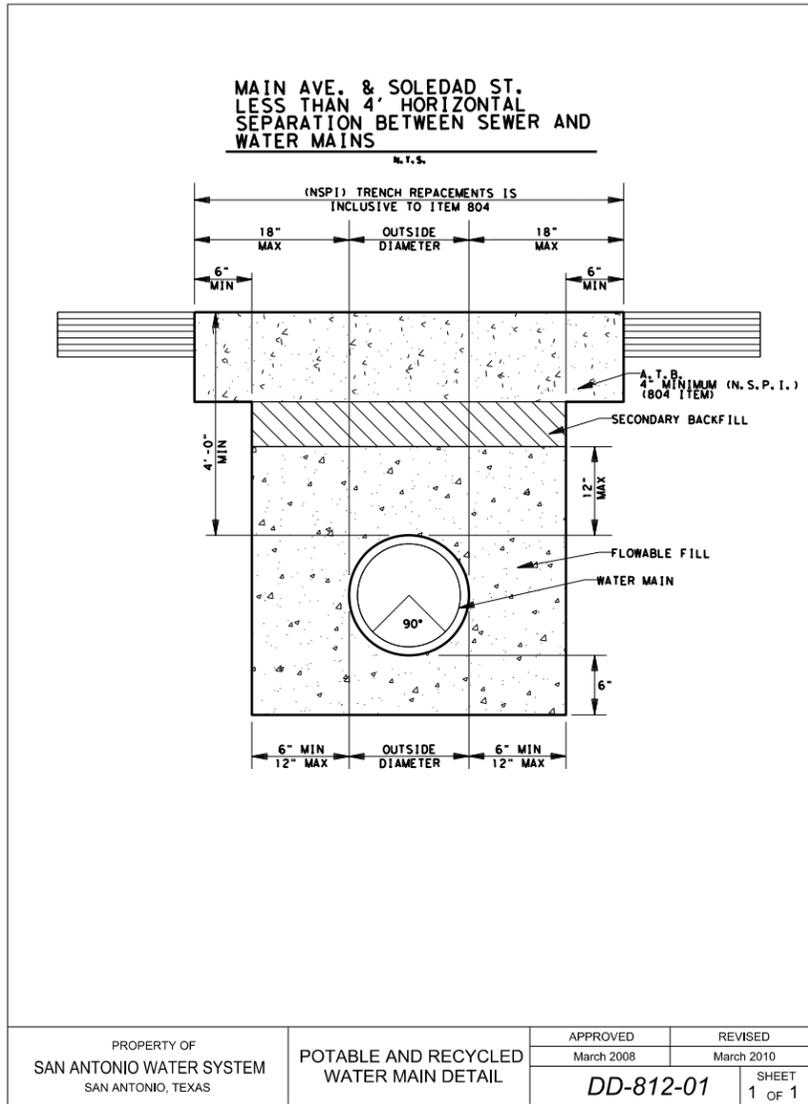
**MAIN AND SOLEDAD**  
**ADDENDUM #2**

DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_

SUBMITTED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

MAP No. \_\_\_\_\_ SHEET 362  
SECT. No. \_\_\_\_\_  
DR. CC CK. JAR JOB No. 12-5102 Of 416





5835 CALLAGHAN RD, SUITE 200  
SAN ANTONIO, TEXAS, 78228  
(210) 346-3273 <http://www.pozcam.com/>  
TBPE REG. NO. F-483



*Jose A. Ruiz*  
JOSE A. RUIZ, P.E.

5/16/2016  
DATE

No.	Revision	Drawn	Approved	Date

**REVISIONS**  
CITY OF SAN ANTONIO

**MAIN AND SOLEDAD**

WATER MAIN DETAILS

DEVELOPER: \_\_\_\_\_

CONT. BUDGET PROJ.

SUBMITTED: \_\_\_\_\_

APPROVED: \_\_\_\_\_

MAP No.	SECT. No.	DR. CC	CK. JAR	JOB No. 12-5102	SHEET 364
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Of 416

# SAN ANTONIO



5835 CALLAGHAN RD. SUITE 200  
SAN ANTONIO, TEXAS, 78228  
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T&E REG. NO. F-483

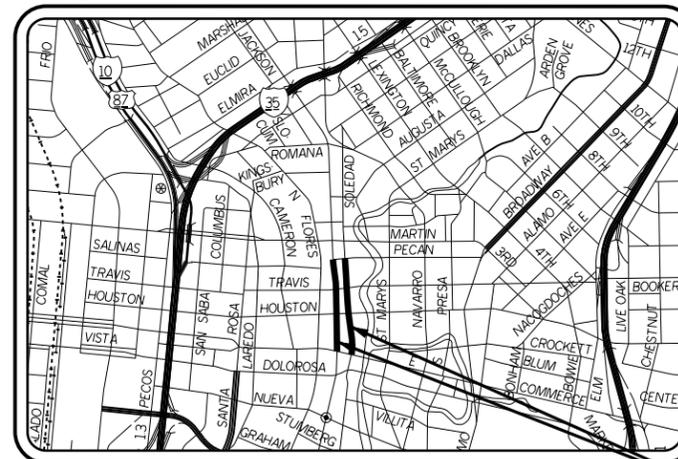


YOUNG PROFESSIONAL RESOURCES  
8209 Roughrider Drive, Suite 101  
Windcrest, TX 78239  
Tel. (210) 590-9215 Fax (210) 590-9346  
Young Professional Resources ©  
Registration No. F-8635

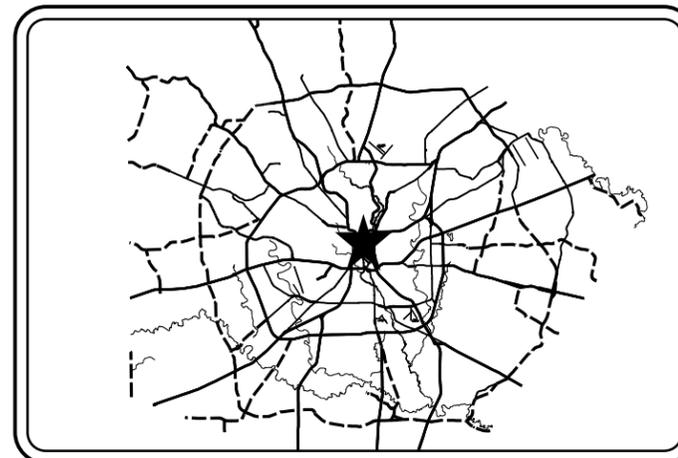
**SEWER JOB NO: 12-5602**

## DOWNTOWN STREETS: MAIN AND SOLEDAD FROM COMMERCE TO PECAN SANITARY SEWER SYSTEM UTILITY ADJUSTMENTS PLAN

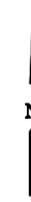
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
100	MOBILIZATION	LS	1
101	PREPARATION OF RIGHT-OF-WAY	LS	1
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	20
848	8" PVC SANITARY SEWER LINE (0'-10") (ASTM 2241 SDR 26)(CL 160)	LF	20
851	LOCATE AND ADJUST EXISTING MANHOLES	EA	2
852.1	SANITARY SEWER MANHOLE (0'-8")(4' I.D.)	EA	9
852.1	EXTERNAL DROP SANITARY SEWER MANHOLE (0'-6")(4' I.D.)	EA	2
852.3	EXTRA DEPTH MANHOLES (> 6")(4' I.D.)	VF	56
854	SANITARY SEWER LATERALS	LF	1798
854.1	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	67
860	VERTICAL STACKS	VF	482
864	BY PASS PUMPING	LS	1
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (PRE-CONSTRUCTION)	LF	1694
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (POST CONSTRUCTION)	LF	1207
900	PIPE BURSTING 8" SANITARY SEWER PIPE 0'-10'	LF	232
900	PIPE BURSTING 8" SANITARY SEWER PIPE 10'-15'	LF	955
1103	POINT REPAIR FOR 8" OR 10" (0'-10" DEPTH) INCLUDING UP TO 10 LF OF 8" OR 10" SDR26 PIPE	EA	1
1103	POINT REPAIR FOR 8" OR 10" (10'-15" DEPTH) INCLUDING UP TO 10 LF OF 8" OR 10" SDR26 PIPE	EA	1
1103	POINT REPAIR FOR 24" OR 27" (10'-15" DEPTH) INCLUDING UP TO 10 LF OF 24" OR 27" SDR26 PIPE	EA	1
1103	POINT REPAIR FOR 24" OR 27" (>15" DEPTH) INCLUDING UP TO 10 LF OF 24" OR 27" SDR26 PIPE	EA	1
COSA 413.1	FLOWABLE FILL	CY	415
ADD	ADDENDUM #2		
COSA 206.1	ASPHALT TREATED BASE (12" COMPACTED DEPTH)	SY	640



LOCATION MAP  
N75



VICINITY MAP  
N75



PROJECT LOCATION:  
MAIN AVE. AND SOLEDAD ST.  
FROM PECAN ST. TO COMMERCE ST.

SHEET INDEX

DESCRIPTION	SHEET NO.
COVER SHEET	341
SEWER GENERAL NOTES	342
OVERALL LAYOUT SHEET/MANHOLE ADJUSTMENTS	343
BYPASS LAYOUT SHEET	344
LINE A PLAN AND PROFILE SHEETS	345-346
LINE B PLAN AND PROFILE SHEETS	347
LINE C PLAN AND PROFILE SHEETS	348-349
LINE D PLAN AND PROFILE SHEETS	350-351



*L.D. Young* 7-1-16  
LEONARD DALE YOUNG, P.E. DATE

ADDENDUM #2  
SHEET 341 OF 410

GENERAL NOTES

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
  - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
  - Current Texas Department of Transportation (TXDOT) "Standard Specifications for Construction of Highways, Streets and Drainage."
  - Current San Antonio Water System "Standard Specifications for Water and Sanitary Sewer Construction."
  - Current City of San Antonio "Standard Specifications for Public Works Construction."
  - Current City of San Antonio "Utility Excavation Criteria Manual"
- The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-3500 and provide notification procedures the contractor will use to notify affected home residents and/or property owners 48 hours prior to excavation.
- The Contractor shall verify the exact location of underground utilities and drainage structures at least 48 hours prior to construction whether shown on plans or not. The following contact information are supplied for verification purposes:
 

Utility Locate:  
 SAWS Utility Locates: 233-2009  
 SAWS Production Control Center: 233-2016  
 COSA Drainage: 207-8048  
 COSA Traffic Signal Operations: 207-7720  
 Texas State Wide One Call Locator: 1-800-545-6005 or 811
- The Contractor is responsible to ensure that no overflows or spillage of sewage occurs. Should this occur, the Contractor shall:
  - Identify the source of the spill and attempt to eliminate any additional spillage. Notify SAWS Construction Inspections Division at 233-3500.
  - Contain the spill in place and prevent contamination of streams.
  - Clean up the spill and dispose of contaminated materials.
  - Disinfect the area of the spill with a mixture of HTH chlorine and water.
  - Identify and train personnel responsible for spillage prevention and control.
  - Block all drains during by-pass pumping operations.

No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the TCEQ and the SAWS.
- The Contractor shall comply with City or other governing Municipality's tree ordinances when excavating near trees.
- Service Lateral Connections:
  - The exact location and elevation of the service laterals and manholes shall be field verified by the Contractor. No separate pay item (NSPI).
  - A minimum of 3 feet of cover is to be maintained over the sanitary sewer laterals at subgrade.
  - All sewer lateral services for future connections as identified on the plans shall have a one way clean-out, capped and sealed.
  - The Contractor shall be responsible for maintaining continuous service during construction of the sewer work. (NSPI)
  - Laterals shall be constructed to serve all existing houses and platted vacant lots.
- Contractor shall coordinate with SAWS Construction Inspection Division at 233-3500 and/or SAWS Lift Stations Operations at least two weeks in advance of the shutdown of existing force mains of any size. The Contractor must also provide a sequence of work as related to the shutdown including any bypass pumping or pump and haul as required by SAWS. Pump and Haul will not be allowed over the Edwards Aquifer Recharge Zone.

- Sewer lines located within or crossing the 5-year flood plain of a drainage way will be protected from inundation and stream velocities which could cause erosion and scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill. The trench must be encased in concrete. All concrete shall have a minimum thickness of six inches.
- Where water lines and new sewer lines are installed with a separation distance of less than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC 217.53 (d) (Pipe Design) and 30 TAC 290.44(e)(Water Distribution).
- Any work completed without prior written authorization which is not included in these plans and specifications will not be compensated by the San Antonio Water System.
- The Contractor shall provide bypass pumping of sewage around each segment of pipe to be replaced, in accordance with SAWS Standard Specifications for Water and Sanitary Sewer Construction Item No. 864, "Bypass Pumping". Payment for such work will be made under the bid item "Sanitary Sewer (Bypass Pumping)" as per Standard Specifications for Water and Sanitary Sewer Construction Item No. 864, "Bypass Pumping". The Contractor shall provide in writing a sequence of bypass pumping for review and approval by the Inspections department. Refer to the construction plans for the construction phasing and diversion requirements. The Contractor shall also provide a detailed sketch showing the location of bypass pumping equipment for each line segment(s) around which flows are being bypassed, along with the specification of pumping equipment, type, size, capacity and amount of pumps required to handle the peak wet weather flow.
- See SAWS website for details, www.saws.org.
- Locations and depths of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor 48 hours prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
- Number of laterals are based on S.A.W.S. records. Some may be deleted if determined inactive. Sidewalks removed during lateral construction will be replaced in accordance with COSA.
- Use metal clean out boxes in sidewalks.
- Manholes to be accessible at all times during construction.

ADDITIONAL NOTES

- Contractor is responsible for maintaining and protecting the integrity of power poles during construction.
- Contractor shall maintain service from existing utilities at all times during construction.
- Contractor shall maintain vehicular access through all driveways for emergency vehicle access.
- Contractor shall protect and/or repair (if damaged) any existing service laterals and irrigation shown or not shown on the plans (NSPI).
- Any work required to be performed during holidays, weekends, and non-business hours will require director's approval and will be at no additional cost to SAWS.
- Vertical stacks shall be required where the top of the sewer main is at a depth of eight feet or greater from finished grade. See SAWS standard DWG DD-860-01.
- Elevations posted for the tops of manholes are for reference only. It shall be the responsibility of the contractor to make allowance and adjustments for the top of manholes to match proposed surface grade. (NSPI)
- CPS gas services located within the project area. Contractor to locate services and use extreme caution when working in the area of gas lines. Gas services are not shown on the plans.
- The Contractor shall be aware that the quantities shown may change. SAWS reserves the right to make adjustments in the field. Payment for performing the work shall be made at the established bid unit price in the contract.
- Other utility work and roadway work to take place concurrently in the area. Close coordination of schedules must occur with utility/roadway Contractors, SAWS Inspector, and COSA personnel within the project limits.
- It is the Contractor's responsibility to see that all signs and barricades are properly maintained. All locations and distances shall be decided upon in the field by the Contractor using the "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." If in the opinion of the traffic engineering representative and the Construction Inspector the barricades and signs do not conform to established standards or are incorrectly placed or insufficient quantity to protect the general public, the Construction Inspector shall have the option to stop operations until such time as the conditions are corrected.

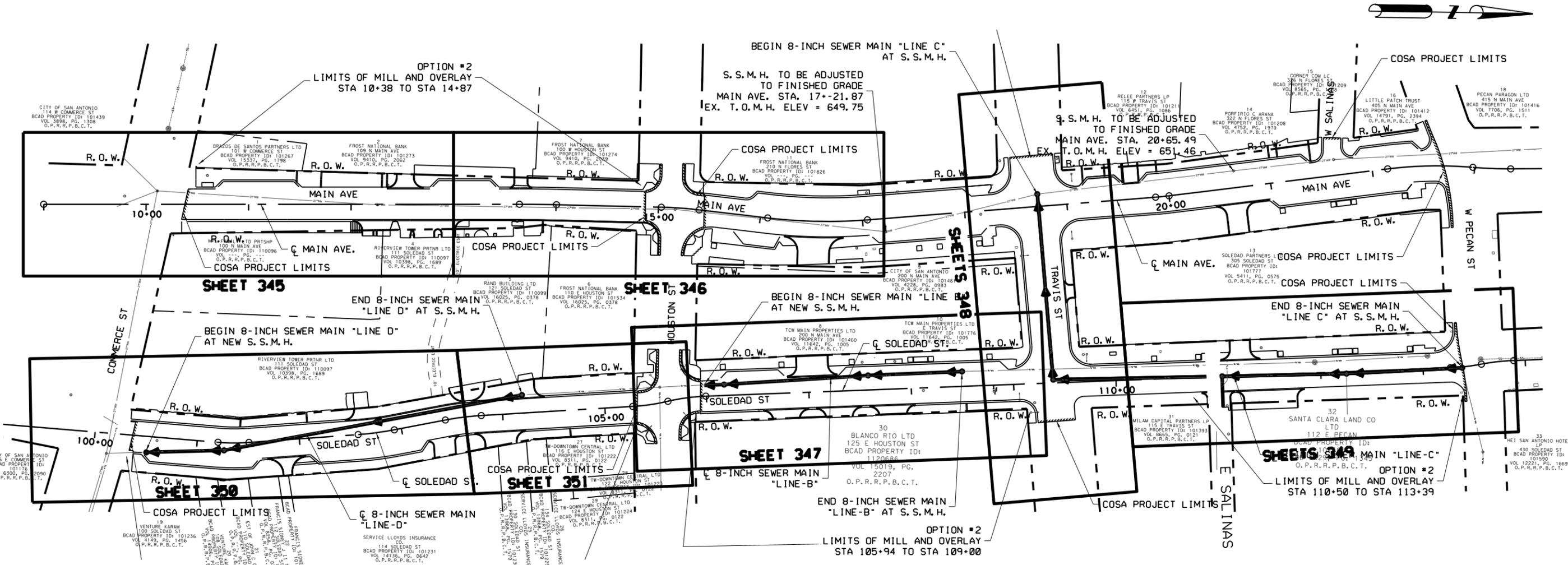
**SAWS LOCATOR NOTE:**

LOCATION AND DEPTH OF THE EXISTING WATER AND SEWER MAINS AND SERVICES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATION AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO BEGINNING CONSTRUCTION BY CALLING THE SAWS LOCATOR AT 233-2010. THE CONTRACTOR SHOULD EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING WATER AND SEWER FACILITIES AND SHOULD THEY BE DAMAGED DURING CONSTRUCTION OPERATIONS. THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE SAN ANTONIO WATER SYSTEM FOR THE TOTAL COST TO REPAIR AND REPLACE THE DAMAGED FACILITIES. NECESSARY POTHOLES TO BE PERFORMED AT CONTRACTOR'S EXPENSE.

 YOUNG PROFESSIONAL RESOURCES 8209 Roughrider Drive, Suite 101 Windcrest, TX 78239 Tel. (210) 590-8215 Fax (210) 590-8346 Young Professional Resources © Registration No. F-8635				
 BOZNECKI CAMARILLO 5835 CALLAGHAN RD., SUITE 200 SAN ANTONIO, TEXAS 78228 (210) 349-4356 (FAX)				
 LEONARD DALE YOUNG, P.E. DATE: 7-1-16				
No.	Revision	Drawn	Approved	Date
<b>REVISIONS</b>				
<b>CITY OF SAN ANTONIO</b>				
<b>MAIN AND SOLEDAD GENERAL NOTES</b>				
DEVELOPER:				
CONT.		BUDGET PROJ.		
SUBMITTED:				
APPROVED:				
MAP No.				SHEET
SECT. No.				342
DR. REM CK. LDY		JOB No. 12-5602		
				OF 410

Design File Name: \\CHRISPC\youn\*000\Documents\PROJECTS\COSA Bond - Main and Soledad\Techprod\Cap Improve\Utilities\WAS-WW-SHEETS-MISC\pattted ont: 7/1/2016 11:02:29 AM

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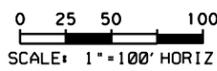
**BRICK PAVER NOTE:**  
 WORK PERFORMED WITHIN A BRICK SURFACED STREET MUST FOLLOW COSA RULES (CITY CODE, 29-21). REMOVAL AND REPLACEMENT OF BRICK REQUIRES SPECIAL TREATMENT.

ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE PROPOSED SURFACE GRADE FOR THE ROADWAY IMPROVEMENTS.

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QTY
851	LOCATE AND ADJUST EXISTING MANHOLES	EA	2

**NOTE:**  
 THE EXISTING TOP OF MANHOLE ELEVATIONS ARE SHOWN. CONTRACTOR SHALL ADJUST THE MANHOLES TO THE PROPOSED FINISHED ROADWAY ELEVATIONS AND COAT THE MANHOLES. COATING OF MANHOLES SHALL BE NSPI.

- NOTES:**
- SEE SHEET 141 OF 416 FOR EXACT LIMITS OF MILL AND OVERLAY.
  - IF OPTION 2 IS SELECTED THEN ASPHALT TREATED BASE WILL BE USED FOR MILL AND OVERLAY SECTIONS.



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 5835 CALLAGHAN RD, SUITE 200 TBP# REG. NO. F-483  
 SAN ANTONIO, TEXAS 78228 http://www.boznecki.com/ (210) 349-4356 (FAX) (210) 345-5273

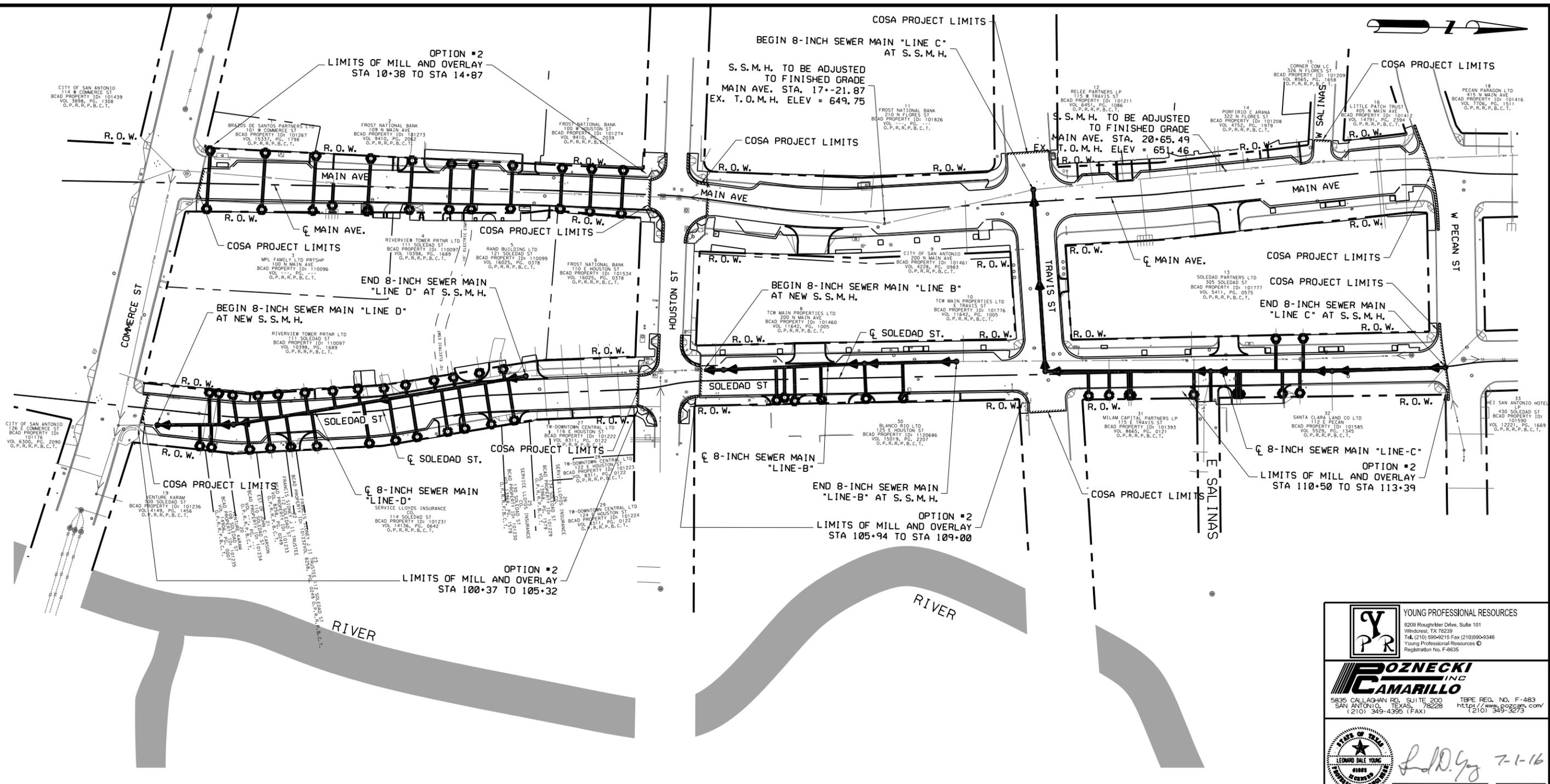
**LEONARD DALE YOUNG**  
 6889  
 LEONARD DALE YOUNG, P.E. DATE: 7-1-16

No.	Revision	Drawn	Approved	Date

**REVISIONS**  
 CITY OF SAN ANTONIO  
 MAIN AND SOLEDAD  
 OVERALL  
 LAYOUT SHT.  
 AND MH ADJUSTMENTS  
 ADDENDUM #2

DEVELOPER: \_\_\_\_\_  
 CONT. BUDGET PROJ. \_\_\_\_\_  
 SUBMITTED: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_  
 MAP No. \_\_\_\_\_ SHEET 343  
 SECT. No. \_\_\_\_\_ OF 410  
 DR. REM/CK. LDY JOB No. 12-5602

Design File Name: \\CHRIS\PC\Documents\Projects\COSA Bond - Main and Soledad\Techprod\CapImprove\Utilities\WAS-WW-SHEETS-MISC\patt1.dwg on: 7/1/2016 11:02:32 AM



**NOTES:**

1. ALL EXISTING FEATURES ARE SHOWN SCREENED BACK, I.E. FADED.
2. CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING IN THE AREA OF EXISTING UTILITIES AND SERVICE LINES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR (NSPI).
3. CONTRACTOR SHALL MAINTAIN SERVICE FROM EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION.
4. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS THROUGH ALL DRIVEWAYS FOR EMERGENCY ACCESS.
5. CONTRACTOR SHALL PROTECT AND/OD REPAIR (IF DAMAGED) ANY EXISTING SERVICE LATERALS AND IRRIGATION SHOWN OR NOT SHOWN ON THE PLANS (NSPI).
6. IF OPTION 1 IS SELECTED CONTRACTOR SHALL REFERENCE SAWS STANDARD SPECIFICATION 804 FOR TRENCH SURFACE RESTORATION REQUIREMENTS AND EXCAVATION AND BACKFILL REQUIREMENTS.
7. PUMP EQUIPMENT WILL BE LOW NOISE/SILENT OPERATION.
8. "NO OVERFLOW" WILL RUNOFF TO RIVER. CONTRACTOR TO PROVIDE A SPILL PREVENTION AND RESPONSE PLAN.
9. BYPASS PLANS ACCORDING TO STANDARD SPEC. 864 SUBMITTED 3 WEEKS PRIOR TO COMMENCING.

BYPASS FLOW DATA	
SIZE	27 INCHES
SLOPE	0.0021
FLOW	14.20 CFS
FLOW	6374.87 GPM

BYPASS FLOW DATA	
SIZE	8 INCHES
SLOPE	0.0058
FLOW	0.92 CFS
FLOW	411.70 GPM

**NOTES:**

1. SEE SHEET 141 OF 416 FOR EXACT LIMITS OF MILL AND OVERLAY.
2. IF OPTION 2 IS SELECTED THEN ASPHALT TREATED BASE WILL BE USED FOR MILL AND OVERLAY SECTIONS.



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**BOZNECKI CAMARILLO**  
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(210) 349-4356 (FAX)



*Leonard Dale Young* 7-1-16  
LEONARD DALE YOUNG, P.E.      **DATE**

No.	Revision	Drawn	Approved	Date

**REVISIONS**  
CITY OF SAN ANTONIO  
**MAIN AND SOLEDAD BYPASS LAYOUT SHT. ADDENDUM #2**

<b>DEVELOPER:</b>	
CONT.	BUDGET PROJ.
SUBMITTED _____	
APPROVED _____	
MAP No.	SHEET
SECT. No.	344
DR. REM/CK. LDY	JOB No. 12-5602
	OF 410

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL VIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT THE CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, THE CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE PROPOSED SURFACE GRADE FOR THE ROADWAY IMPROVEMENTS.

ESTIMATED QUANTITIES				
ITEM	DESCRIPTION	UNIT	QTY	
854	SANITARY SEWER LATERALS	LF	402	
854.1	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	15	
860	VERTICAL STACKS	VF	135	
COSA 413.1	FLOWABLE FILL	CY	135	
ADD	ADDENDUM #2			
COSA 206.1	ASPHALT TREATED BASE (12" COMPACTED DEPTH)	SY	160	

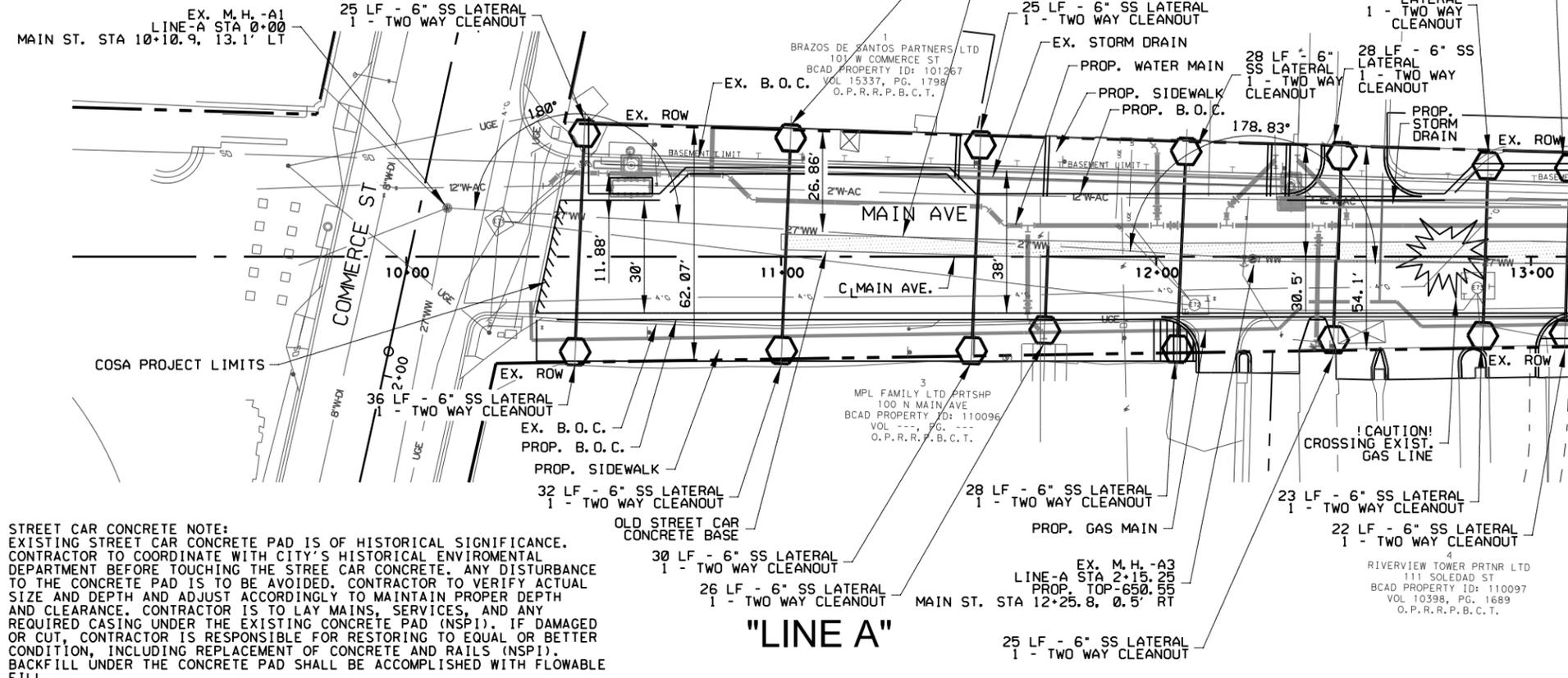
\*NOTES TO CONTRACTOR:

- LATERALS UNDER STREET CAR CONCRETE PAD AND UNDER UTILITIES WHERE STANDARD COMPACTION WILL NOT BE POSSIBLE ARE TO BE BACKFILLED WITH FLOWABLE FILL.
- ONLY LATERALS FOUND TO BE IN CONFLICT WITH PROPOSED WORK ARE TO BE REPLACED. QUANTITY SHOWN IS ONLY AN ESTIMATE AND MAY NOT BE FULLY USED.

MATCHLINE STA. 13+10.51

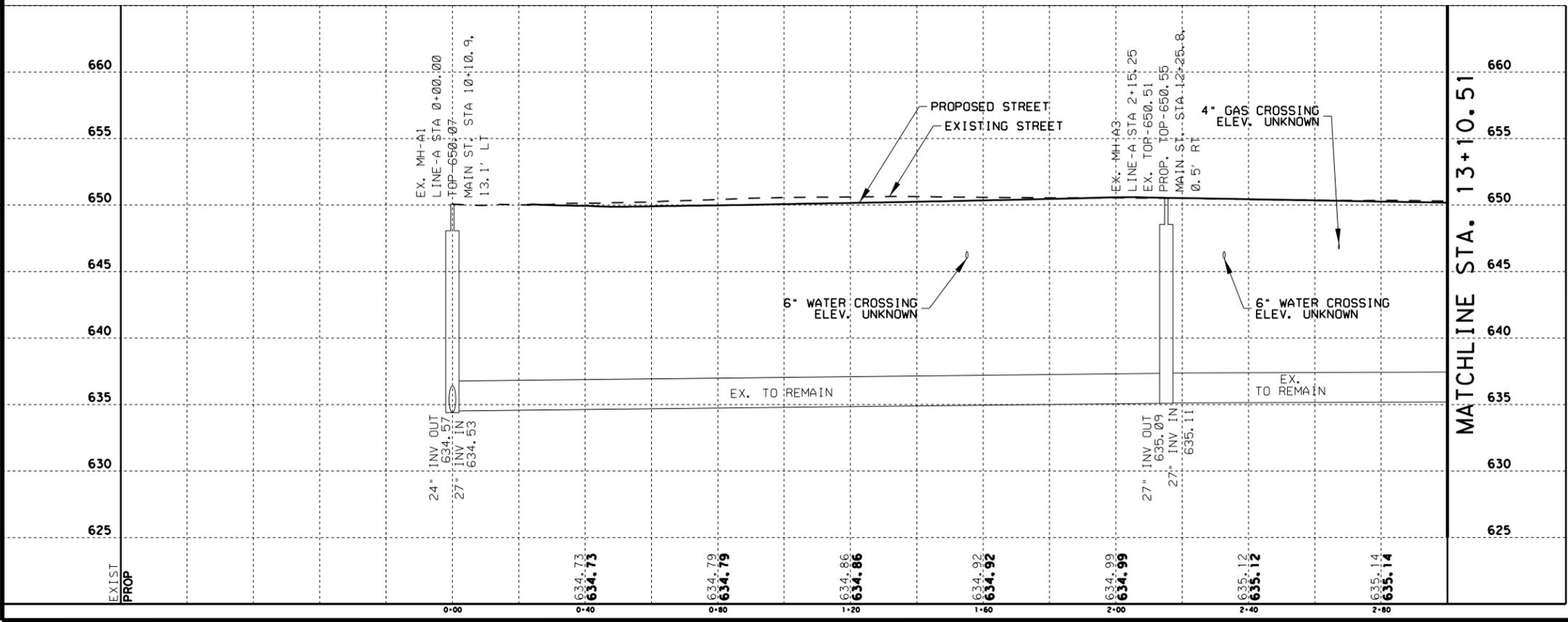
NOTES:

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- CALL THE TEXAS ONE CALL LOCATOR AT 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
- DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRICAL FACILITIES IF ADJACENT TO WORK AREA, PART 192.181.
- LATERAL LOCATIONS SHOWN ON PLANS ARE FROM AVAILABLE RECORDS. CONTRACTORS SHALL FIELD VERIFY LOCATIONS AND REPLACE ACCORDINGLY, INCLUDING VERTICAL SHAFTS.
- THE SAWS INSPECTOR SHALL INSTRUCT CONTRACTOR OF CHANGES THAT MAY BE ALLOWED IN THE EVENT OF CONFLICTS.
- ALL LATERALS SHALL BE REPLACED WHETHER SHOWN OR NOT SHOWN, AND SHALL BE PAID FOR UNDER ITEM 854.
- HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SANITARY SEWER MAINS AT TIE IN POINTS ARE APPROXIMATE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE AND NOTIFY THE ENGINEER IF CONFLICTS ARE DISCOVERED OR FOUND.
- ALL EXCAVATION SHALL BE BACKFILLED AT THE END OF EACH DAY.
- ALL EXCESS EXCAVATION MATERIAL AND/OR DEBRIS SHALL BE REMOVED AND HAULED OFF SITE EACH DAY.
- SEE "GENERAL NOTES" SHEET FOR SAWS LOCATOR NOTE.
- SEE STREET CAR CONCRETE NOTE.
- ALL PRE-TELEVISION SHALL BE COORDINATED WITH SAWS INSPECTOR WHO WILL DETERMINE WHICH SERVICE LATERALS ARE NO LONGER IN SERVICE (CAPPED OR PLUGGED).
- FOR OPEN CUT LATERALS CONTRACTOR TO HAND DIG AT GAS CROSSINGS.



**STREET CAR CONCRETE NOTE:**  
EXISTING STREET CAR CONCRETE PAD IS OF HISTORICAL SIGNIFICANCE. CONTRACTOR TO COORDINATE WITH CITY'S HISTORICAL ENVIRONMENTAL DEPARTMENT BEFORE TOUCHING THE STREET CAR CONCRETE. ANY DISTURBANCE TO THE CONCRETE PAD IS TO BE AVOIDED. CONTRACTOR TO VERIFY ACTUAL SIZE AND DEPTH AND ADJUST ACCORDINGLY TO MAINTAIN PROPER DEPTH AND CLEARANCE. CONTRACTOR IS TO LAY MAINS, SERVICES, AND ANY REQUIRED CASING UNDER THE EXISTING CONCRETE PAD (NSPI). IF DAMAGED OR CUT, CONTRACTOR IS RESPONSIBLE FOR RESTORING TO EQUAL OR BETTER CONDITION, INCLUDING REPLACEMENT OF CONCRETE AND RAILS (NSPI). BACKFILL UNDER THE CONCRETE PAD SHALL BE ACCOMPLISHED WITH FLOWABLE FILL.

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Registration No. F-8635

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TPE REG. NO. F-483  
(210) 345-5273

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**LEONARD DALE YOUNG**  
Professional Engineer  
7-1-16  
LEONARD DALE YOUNG, P.E. DATE

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No.	Revision	Drawn	Approved	Date

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**REVISIONS**

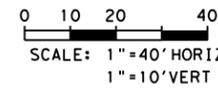
**CITY OF SAN ANTONIO  
MAIN AND SOLEDAD  
"LINE A"  
PLAN & PROFILE SHT.  
ADDENDUM #2**

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DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

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MAP No. _____	SHEET 345
SECT. No. _____	OF 410
DR. REM/CK. LDY	JOB No. 12-5602



Design File Name: \\CHRISPC\joun\*000\Documents\PROJECTS\COSA Bond - Main and Soledad\Techprod\CapImprove\Utilities\WAS-WW-SHEETS.dgn Plotted on: 7/1/2016 11:01:45 AM

**TRENCH EXCAVATION SAFETY PROTECTION**

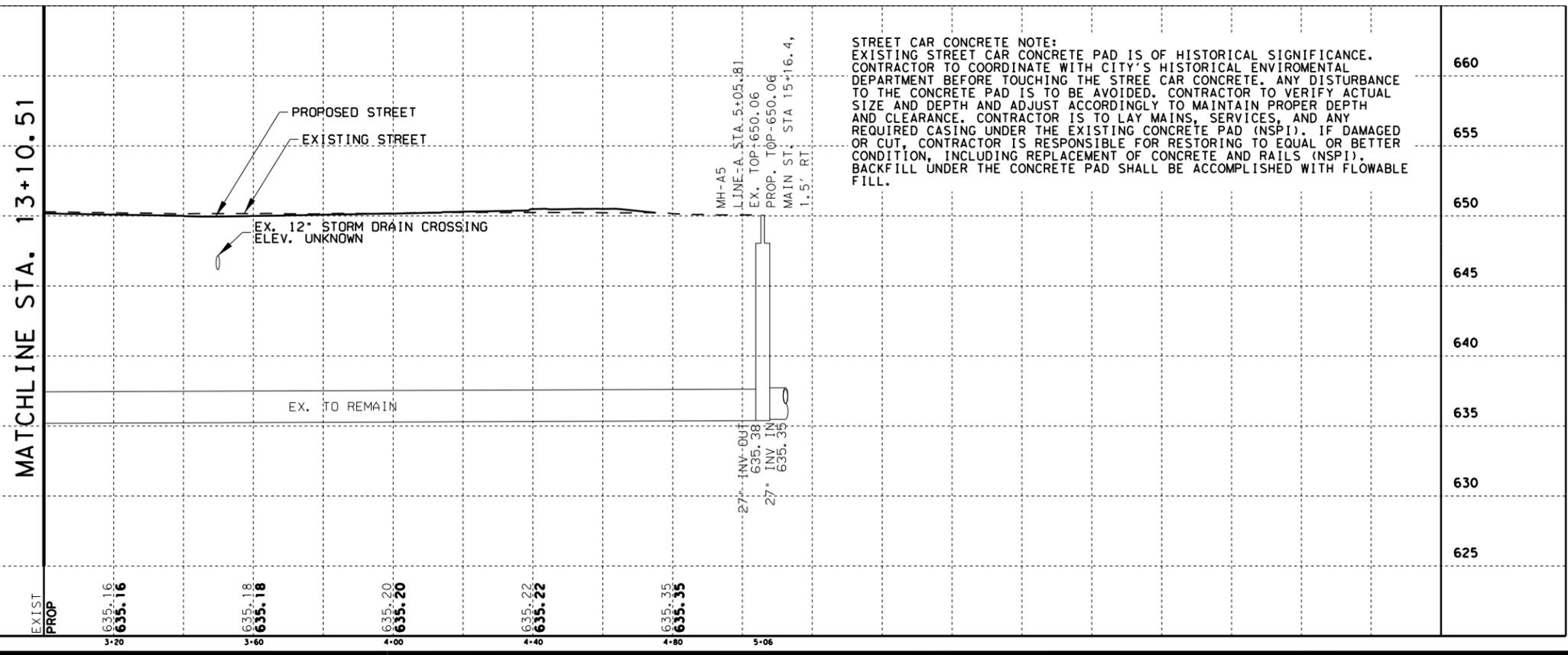
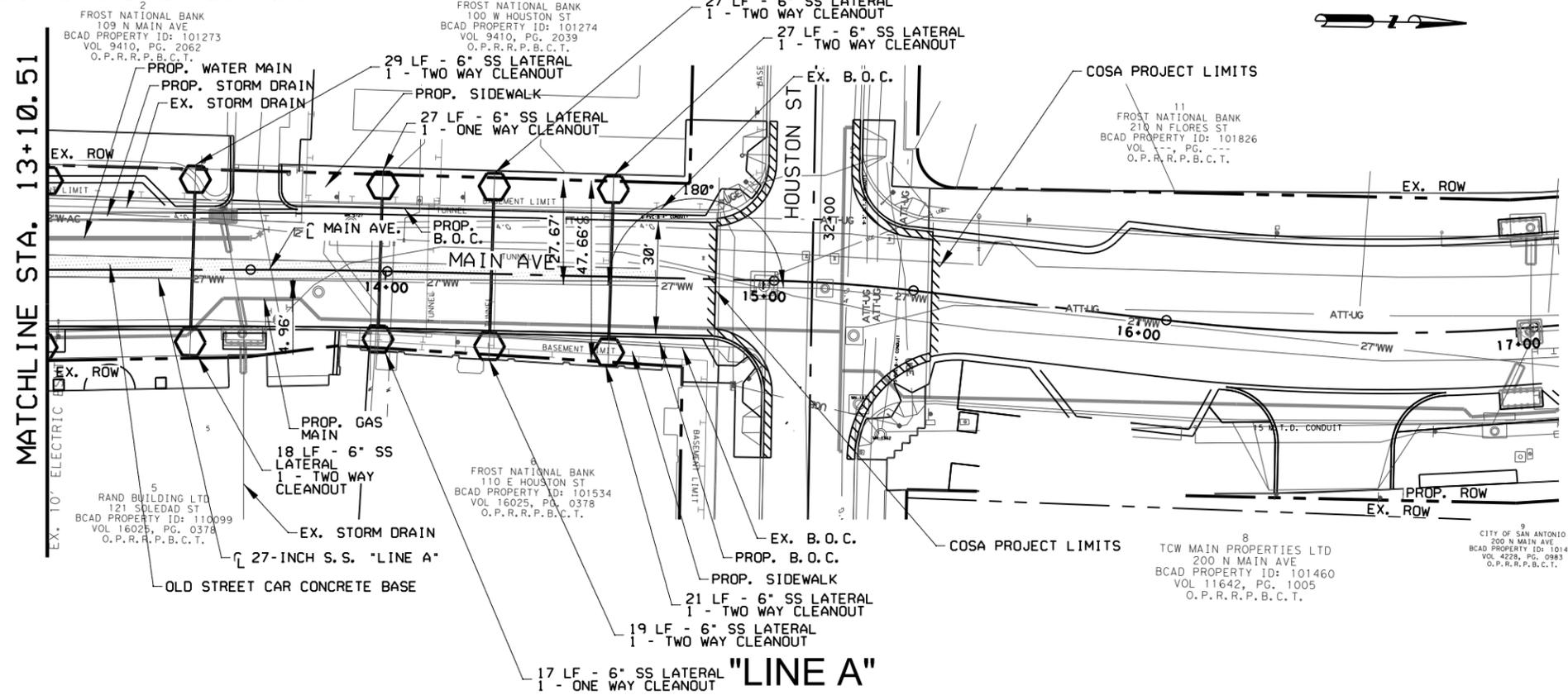
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL VIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT THE CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, THE CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE PROPOSED SURFACE GRADE FOR THE ROADWAY IMPROVEMENTS.

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QTY
854	SANITARY SEWER LATERALS	LF	185
854.1	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	8
860	VERTICAL STACKS	VF	84
COSA 413.1	FLOWABLE FILL	CY	72
ADD	ADDENDUM #2		
** COSA 206.1	ASPHALT TREATED BASE (12" COMPACTED DEPTH)	SY	85

- \*NOTES TO CONTRACTOR:**
- LATERALS UNDER STREET CAR CONCRETE PAD AND UNDER UTILITIES WHERE STANDARD COMPACTION WILL NOT BE POSSIBLE ARE TO BE BACKFILLED WITH FLOWABLE FILL.
  - LATERALS FOUND TO BE IN CONFLICT WITH PROPOSED WORK ARE TO BE REPLACED. QUANTITY SHOWN IS ONLY AN ESTIMATE AND MAY NOT BE FULLY USED.
- \*\*ONLY USE IN MILL & OVERLAY SECTIONS IF OPTION 2 IS SELECTED.**

- NOTES:**
- THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OR HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
  - CALL THE TEXAS ONE CALL LOCATOR AT 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
  - DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
  - THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRICAL FACILITIES IF ADJACENT TO WORK AREA, PART 192.181.
  - LATERAL LOCATIONS SHOWN ON PLANS ARE FROM AVAILABLE RECORDS. CONTRACTORS SHALL FIELD VERIFY LOCATIONS AND REPLACE ACCORDINGLY, INCLUDING VERTICAL SHAFTS.
  - THE SAWS INSPECTOR SHALL INSTRUCT CONTRACTOR OF CHANGES THAT MAY BE ALLOWED IN THE EVENT OF CONFLICTS.
  - ALL LATERALS SHALL BE REPLACED WHETHER SHOWN OR NOT SHOWN, AND SHALL BE PAID FOR UNDER ITEM 854.
  - HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SANITARY SEWER MAINS AT TIE IN POINTS ARE APPROXIMATE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE AND NOTIFY THE ENGINEER IF CONFLICTS ARE DISCOVERED OR FOUND.
  - ALL EXCAVATION SHALL BE BACKFILLED AT THE END OF EACH DAY.
  - ALL EXCESS EXCAVATION MATERIAL AND/OR DEBRIS SHALL BE REMOVED AND HAULED OFF SITE EACH DAY.
  - SEE "GENERAL NOTES" SHEET FOR SAWS LOCATOR NOTE.
  - SEE STREET CAR CONCRETE NOTE.
  - ALL PRE-TELEVISION SHALL BE COORDINATED WITH SAWS INSPECTOR WHO WILL DETERMINE WHICH SERVICE LATERALS ARE NO LONGER IN SERVICE (CAPPED OR PLUGGED).
  - FOR OPEN CUT LATERALS CONTRACTOR TO HAND DIG AT GAS CROSSINGS.



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---

**LEONARD DALE YOUNG**  
Professional Engineer  
7-1-16  
DATE

---

No.	Revision	Drawn	Approved	Date

---

**REVISIONS**  
CITY OF SAN ANTONIO  
MAIN AND SOLEDAD  
"LINE A"  
PLAN & PROFILE SHT.  
ADDENDUM #2

---

DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_

---

SUBMITTED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

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MAP No. _____	SHEET _____
SECT. No. _____	346
DR. REM/CK. LDY	JOB No. 12-5602
	OF 410

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL VIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT THE CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, THE CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

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ESTIMATED QUANTITIES		UNIT	QTY
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	20
848	8" PVC SANITARY SEWER LINE (0'-10") (ASTM 2241 SDR 26)(CL 160)	LF	20
852.1	SANITARY SEWER MANHOLE (0'-6") (4' I.D.)	EA	3
852.3	EXTRA DEPTH MANHOLES (> 6") (4' I.D.)	VF	4
854	SANITARY SEWER LATERALS	LF	212
854.1	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	6
860	VERTICAL STACKS	VF	12
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (PRE-CONSTRUCTION)	LF	312
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (POST CONSTRUCTION)	LF	252
900	PIPE BURSTING 8" SANITARY SEWER PIPE 0'-10"	LF	232
CO5A 413.1	FLOWABLE FILL	CY	48
ADD	ADDENDUM #2		
** CO5A 206.1	ASPHALT TREATED BASE (12" COMPACTED DEPTH)	SY	90

NOTES TO CONTRACTOR:

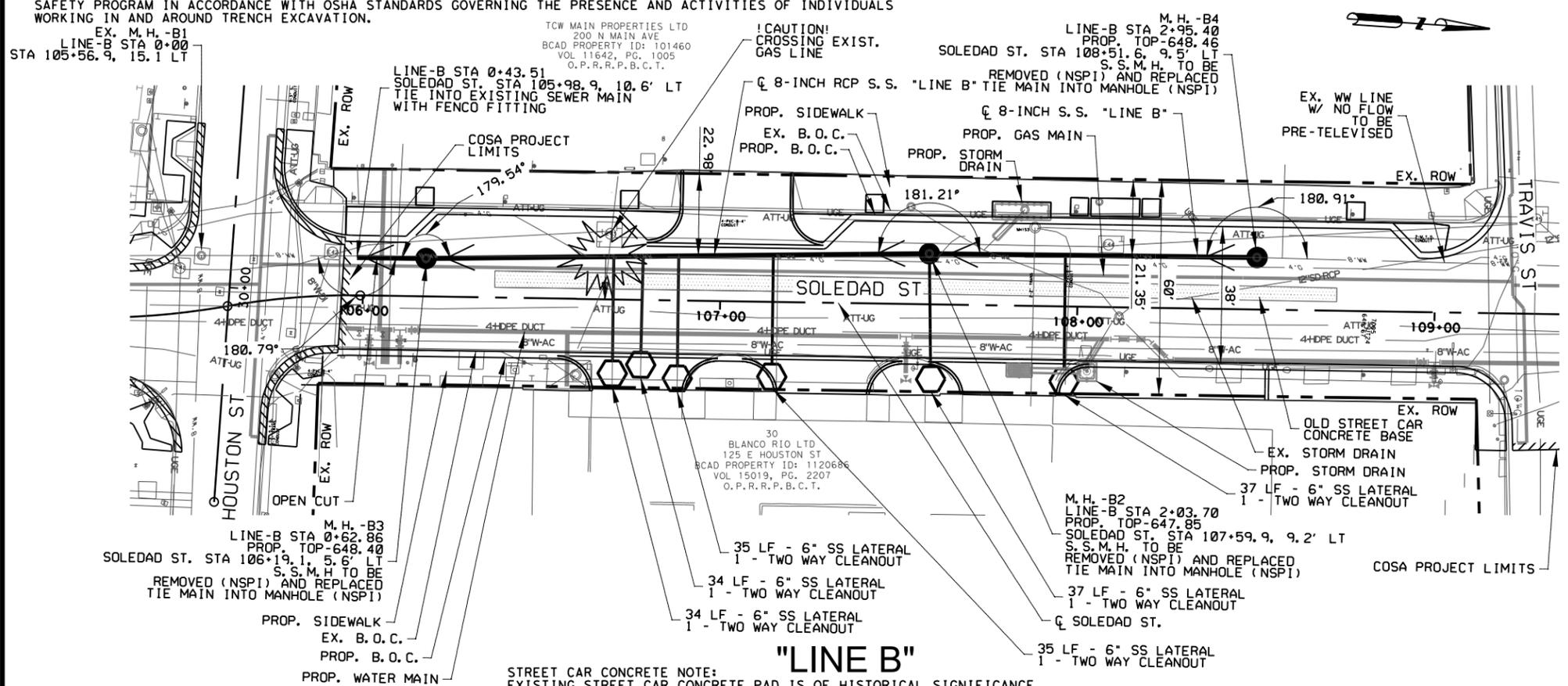
- LATERALS UNDER STREET CAR CONCRETE PAD AND UNDER UTILITIES WHERE STANDARD COMPACTION WILL NOT BE POSSIBLE ARE TO BE BACKFILLED WITH FLOWABLE FILL.

\*\* ONLY USE IN MILL & OVERLAY SECTIONS IF OPTION 2 IS SELECTED.

NOTES:

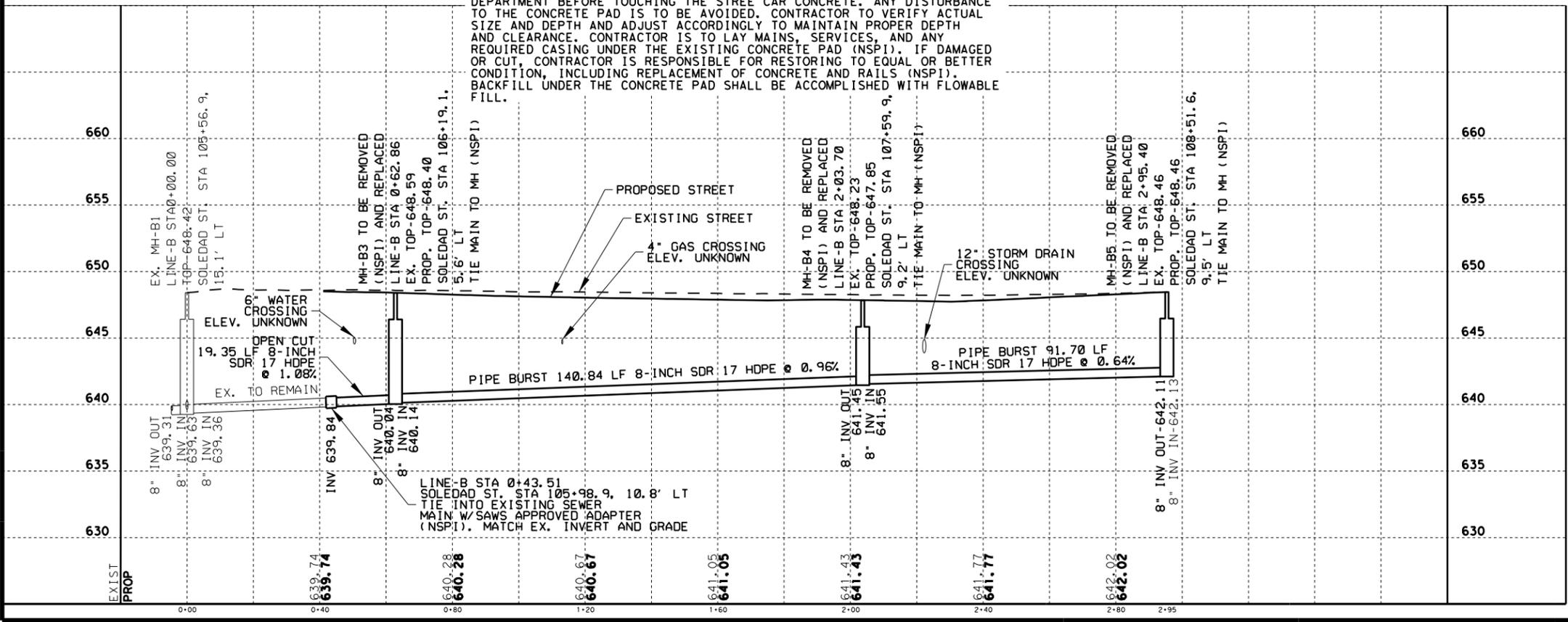
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- SEE STREET CAR CONCRETE NOTE.
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- FOR OPEN CUT LATERALS CONTRACTOR TO HAND DIG AT GAS CROSSINGS.

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**"LINE B"**

STREET CAR CONCRETE NOTE:  
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8209 Roughrider Drive, Suite 101  
Windcrest, TX 78239  
Tel. (210) 590-9215 Fax (210) 590-9346  
Young Professional Resources ©  
Registration No. F-8635

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SAN ANTONIO, TEXAS 78228 http://www.pozz.com/ (210) 349-4356 (FAX) (210) 349-5275

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**LEONARD DALE YOUNG**  
Professional Engineer  
7-1-16  
DATE

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No.	Revision	Drawn	Approved	Date

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**REVISIONS**  
CITY OF SAN ANTONIO  
MAIN AND SOLEDAD  
"LINE B"  
PLAN & PROFILE SHT.  
ADDENDUM #2

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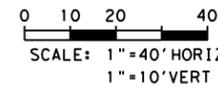
DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_

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SUBMITTED \_\_\_\_\_  
APPROVED \_\_\_\_\_

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MAP No. _____	SHEET _____
SECT. No. _____	347
DR. REM/CK. LDY	JOB No. 12-5602 OF 410



**TRENCH EXCAVATION SAFETY PROTECTION**

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL VIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT THE CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, THE CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE PROPOSED SURFACE GRADE FOR THE ROADWAY IMPROVEMENTS.

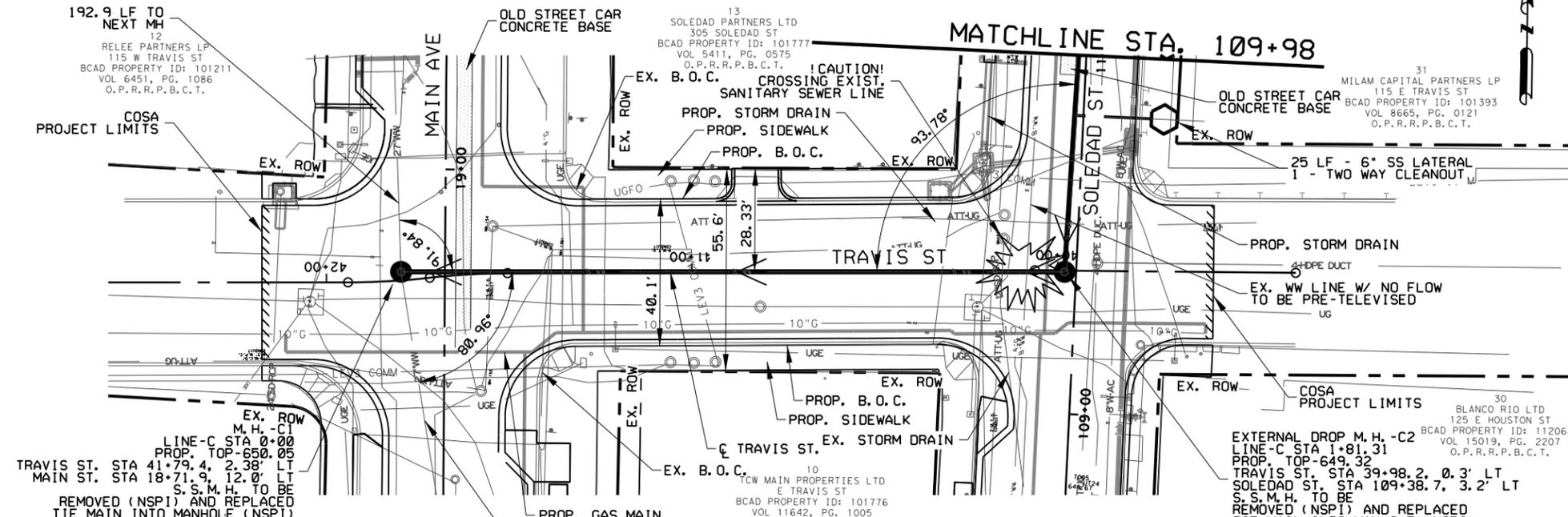
ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QTY
852.1	SANITARY SEWER MANHOLE (0'-6") (4' I.D.)	EA	2
852.3	EXTRA DEPTH MANHOLES (> 6") (4' I.D.)	VF	14
854	SANITARY SEWER LATERALS	LF	25
854.1	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	1
860	VERTICAL STACKS	VF	6
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (PRE-CONSTRUCTION)	LF	361
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (POST CONSTRUCTION)	LF	241
900	PIPE BURSTING 8" SANITARY SEWER PIPE 10'-15'	LF	241
COSA 413.1	FLOWABLE FILL	CY	8
ADD	ADDENDUM #2		
** COSA 206.1	ASPHALT TREATED BASE (12" COMPACTED DEPTH)	SY	10

**\*NOTES TO CONTRACTOR:**

1. LATERALS UNDER STREET CAR CONCRETE PAD AND UNDER UTILITIES WHERE STANDARD COMPACTION WILL NOT BE POSSIBLE ARE TO BE BACKFILLED WITH FLOWABLE FILL.
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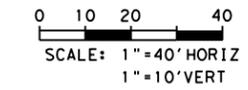
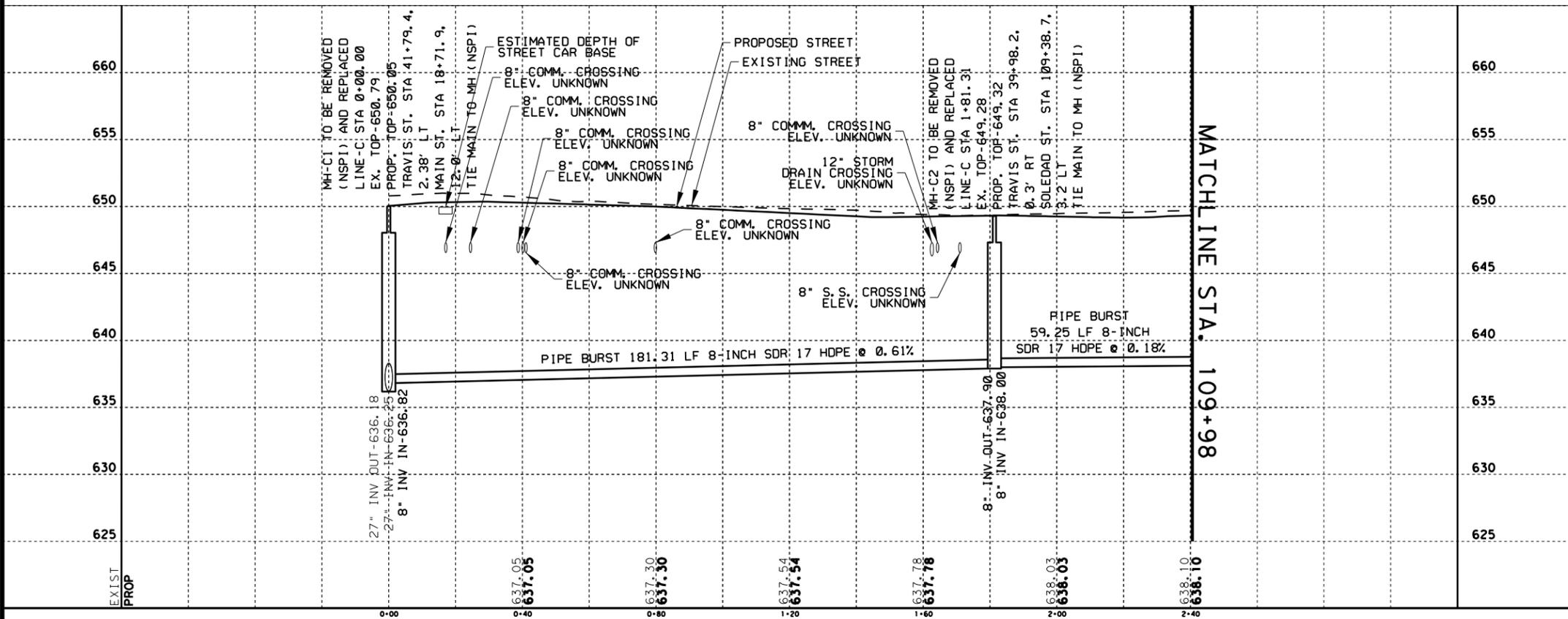
**NOTES:**

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4. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRICAL FACILITIES IF ADJACENT TO WORK AREA, PART 192.181.
5. LATERAL LOCATIONS SHOWN ON PLANS ARE FROM AVAILABLE RECORDS. CONTRACTORS SHALL FIELD VERIFY LOCATIONS AND REPLACE ACCORDINGLY, INCLUDING VERTICAL SHAFTS.
6. THE SAWS INSPECTOR SHALL INSTRUCT CONTRACTOR OF CHANGES THAT MAY BE ALLOWED IN THE EVENT OF CONFLICTS.
7. ALL LATERALS SHALL BE REPLACED WHETHER SHOWN OR NOT SHOWN, AND SHALL BE PAID FOR UNDER ITEM 854.
8. HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SANITARY SEWER MAINS AT TIE IN POINTS ARE APPROXIMATE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE AND NOTIFY THE ENGINEER IF CONFLICTS ARE DISCOVERED OR FOUND.
9. ALL EXCAVATION SHALL BE BACKFILLED AT THE END OF EACH DAY.
10. ALL EXCESS EXCAVATION MATERIAL AND/OR DEBRIS SHALL BE REMOVED AND HAULED OFF SITE EACH DAY.
11. SEE "GENERAL NOTES" SHEET FOR SAWS LOCATOR NOTE.
12. SEE STREET CAR CONCRETE NOTE.
13. ALL PRE-TELEVISION SHALL BE COORDINATED WITH SAWS INSPECTOR WHO WILL DETERMINE WHICH SERVICE LATERALS ARE NO LONGER IN SERVICE (CAPPED OR PLUGGED).
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**"LINE C"**

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**LEONARD DALE YOUNG**  
Professional Engineer  
7-1-16  
DATE

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No.	Revision	Drawn	Approved	Date

---

**REVISIONS**

**CITY OF SAN ANTONIO**  
**MAIN AND SOLEDAD**  
**"LINE C"**  
**PLAN & PROFILE SHT.**  
**ADDENDUM #2**

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DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_

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SUBMITTED \_\_\_\_\_  
APPROVED \_\_\_\_\_

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MAP No. _____	SHEET 348 OF 410
SECT. No. _____	
DR. REM/CK. LDY	JOB No. 12-5602

Design File name: \\CHRISPC\jyou\*000\Documents\PROJECTS\COSA Bond - Main and Soledad\Techprod\CapImprove\Utilities\MAS-WW-SHEETS.dgn Plotted on: 7/1/2016 11:02:05 AM

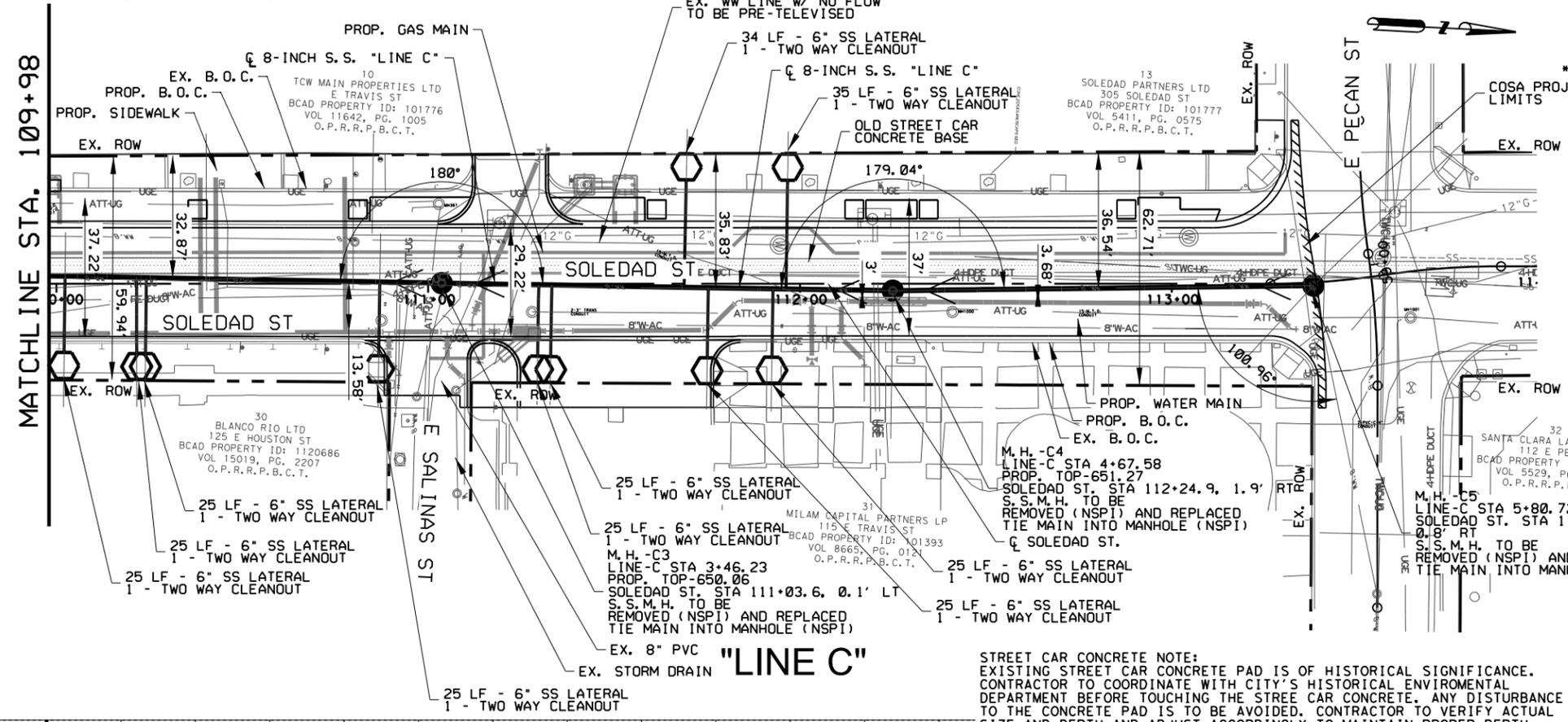
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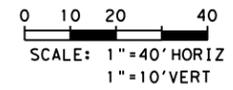
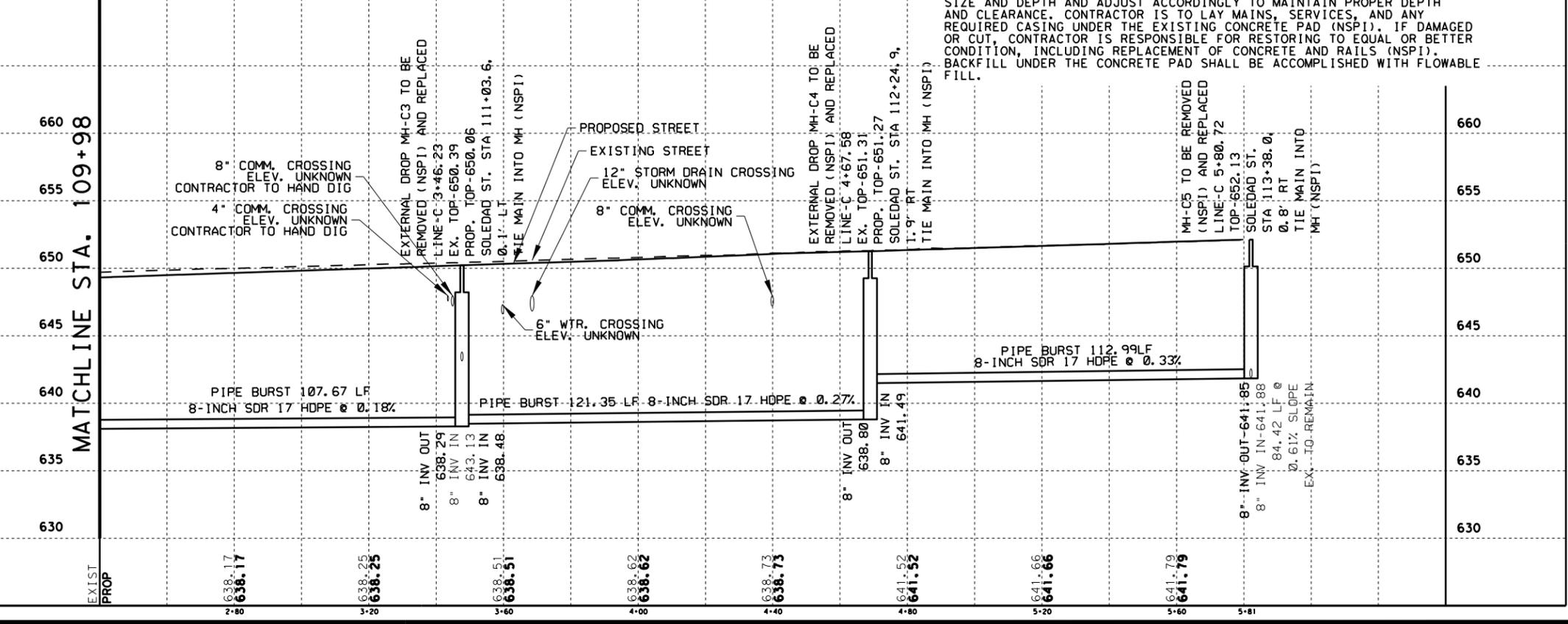
ESTIMATED QUANTITIES		UNIT	QTY
852.1	SANITARY SEWER MANHOLE (0'-6") (4' I.D.)	EA	1
852.1	EXTERNAL DROP SANITARY SEWER MANHOLE (0'-6") (4' I.D.)	EA	1
852.3	EXTRA DEPTH MANHOLES (> 6") (4' I.D.)	VF	17
854	SANITARY SEWER LATERALS	LF	269
854.1	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	10
860	VERTICAL STACKS	VF	70
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (PRE-CONSTRUCTION)	LF	649
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (POST-CONSTRUCTION)	LF	342
900	PIPE BURSTING 8" SANITARY SEWER PIPE 10'-15'	LF	342
COSA 413.1	FLOWABLE FILL	CY	40
ADD	ADDENDUM #2		
** COSA 206.1	ASPHALT TREATED BASE (12" COMPACTED DEPTH)	SY	65



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**LEONARD DALE YOUNG**  
Professional Engineer  
7-1-16  
LEONARD DALE YOUNG, P.E. DATE

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No.	Revision	Drawn	Approved	Date

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**REVISIONS**  
CITY OF SAN ANTONIO  
MAIN AND SOLEDAD  
"LINE C"  
PLAN & PROFILE SHT.  
ADDENDUM #2

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DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_  
SUBMITTED \_\_\_\_\_  
APPROVED \_\_\_\_\_

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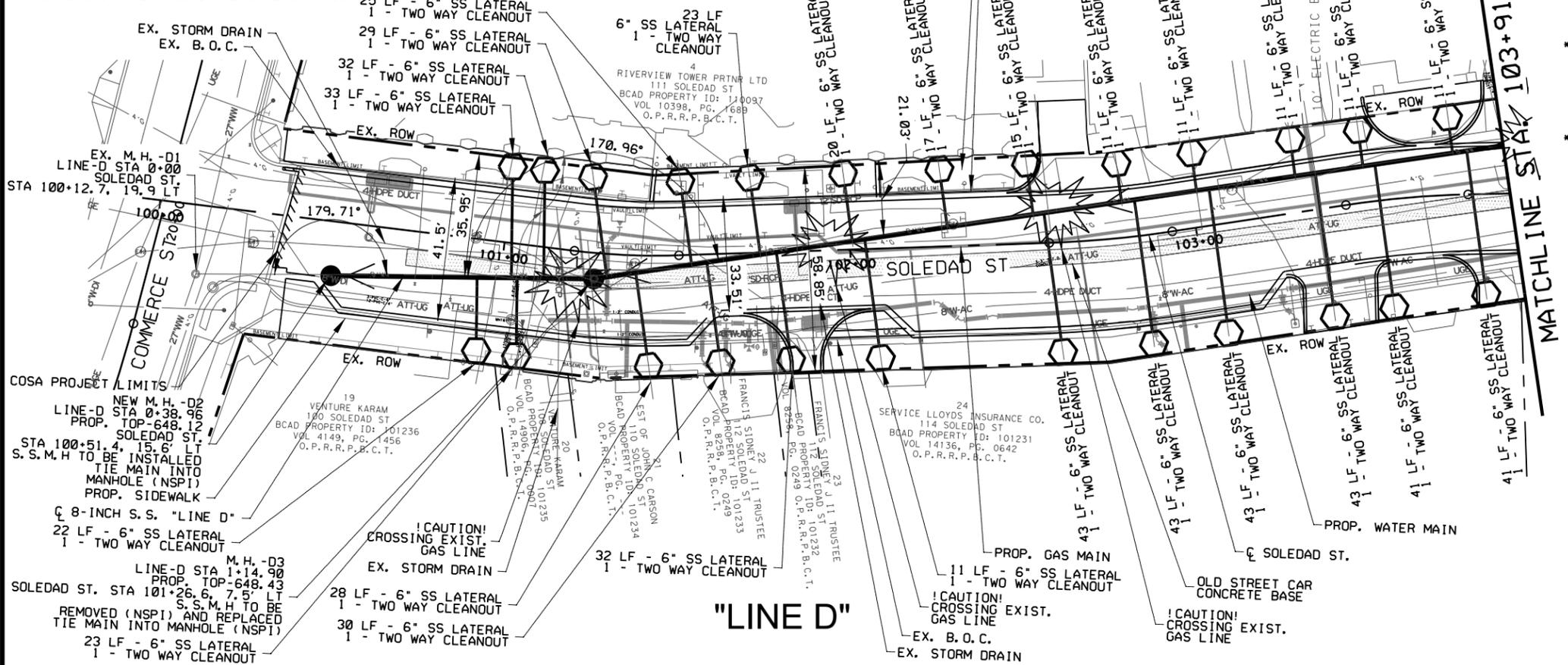
MAP No. _____	SHEET _____
SECT. No. _____	349
DR. REM/CK. LDY	JOB No. 12-5602
	OF 410

Design File name: \\CHRISPC\youn\*000\Documents\PROJECTS\COSA Bond - Main and Soledad\Techprod\CapImprove\Utilities\MAS-WW-SHEETS.dgn Plotted on: 7/1/02:10 AM

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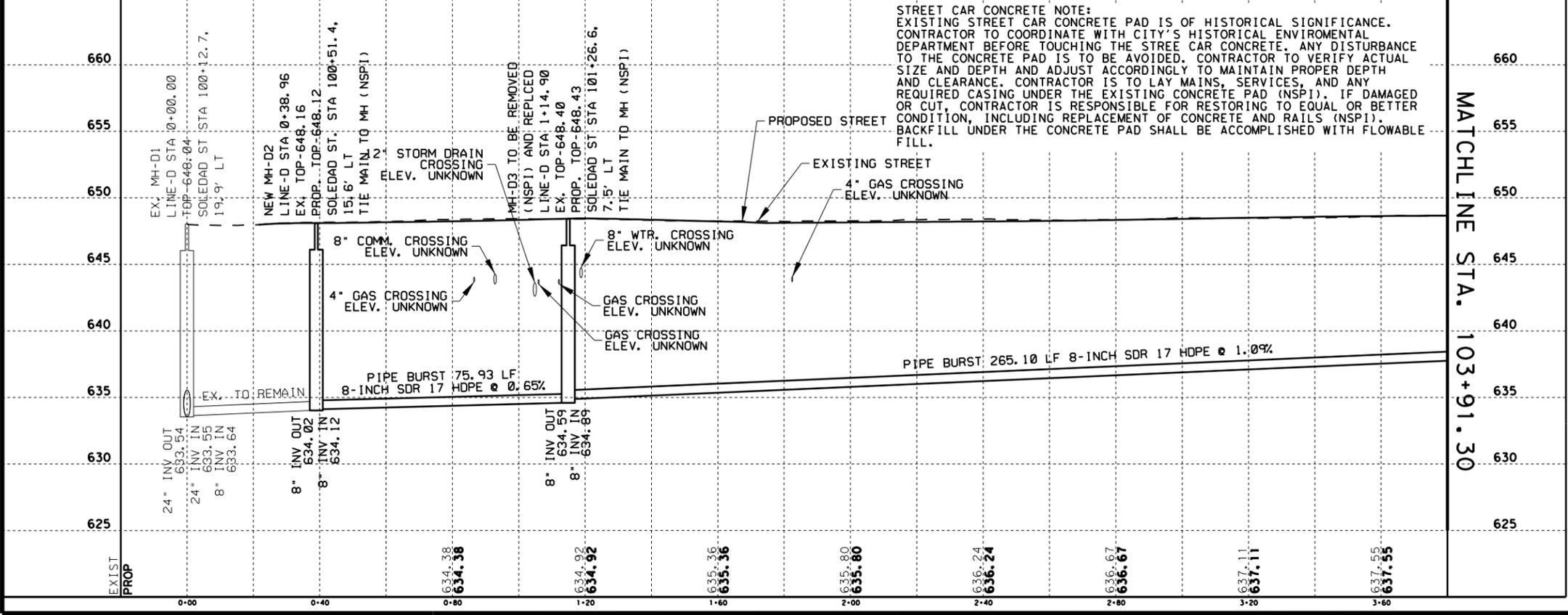
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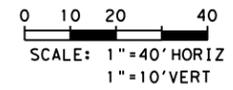
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COSA 413.1	FLOWABLE FILL	CY	104
ADD	ADDENDUM #2		
** COSA 206.1	ASPHALT TREATED BASE (12" COMPACTED DEPTH)	SY	210

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**LEONARD DALE YOUNG**  
Professional Engineer  
7-1-16  
DATE

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No.	Revision	Drawn	Approved	Date

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**REVISIONS**  
CITY OF SAN ANTONIO  
MAIN AND SOLEDAD  
"LINE D"  
PLAN & PROFILE SHT.  
ADDENDUM #2

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DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_  
SUBMITTED \_\_\_\_\_  
APPROVED \_\_\_\_\_

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MAP No. _____	SHEET 350
SECT. No. _____	OF 410
DR. REM/CK. LDY	JOB No. 12-5602

TRENCH EXCAVATION SAFETY PROTECTION

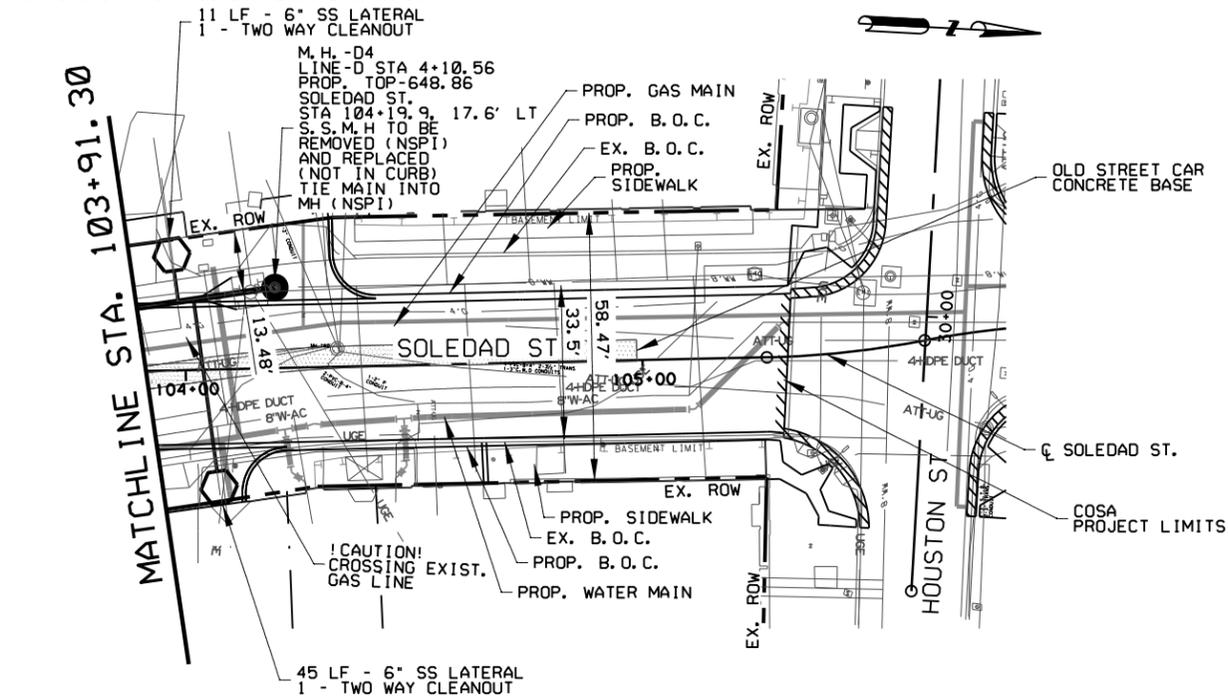
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL VIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT THE CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, THE CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE PROPOSED SURFACE GRADE FOR THE ROADWAY IMPROVEMENTS.

ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QTY
852.1	SANITARY SEWER MANHOLE (0'-6") (4' I.D.)	EA	1
852.3	EXTRA DEPTH MANHOLES (> 6") (4' I.D.)	VF	5
854	SANITARY SEWER LATERALS	LF	56
854.1	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	2
860	VERTICAL STACKS	VF	5
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (PRE-CONSTRUCTION)	LF	31
866	SEWER MAIN TELEVISION INSPECTION (8"-15") (POST CONSTRUCTION)	LF	31
900	PIPE BURSTING 8" SANITARY SEWER PIPE 10'-15'	LF	31
COSA 413.1	FLOWABLE FILL	CY	8
ADD	ADDENDUM #2		
** COSA 206.1	ASPHALT TREATED BASE (12" COMPACTED DEPTH)	SY	20

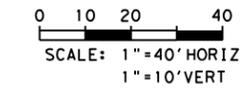
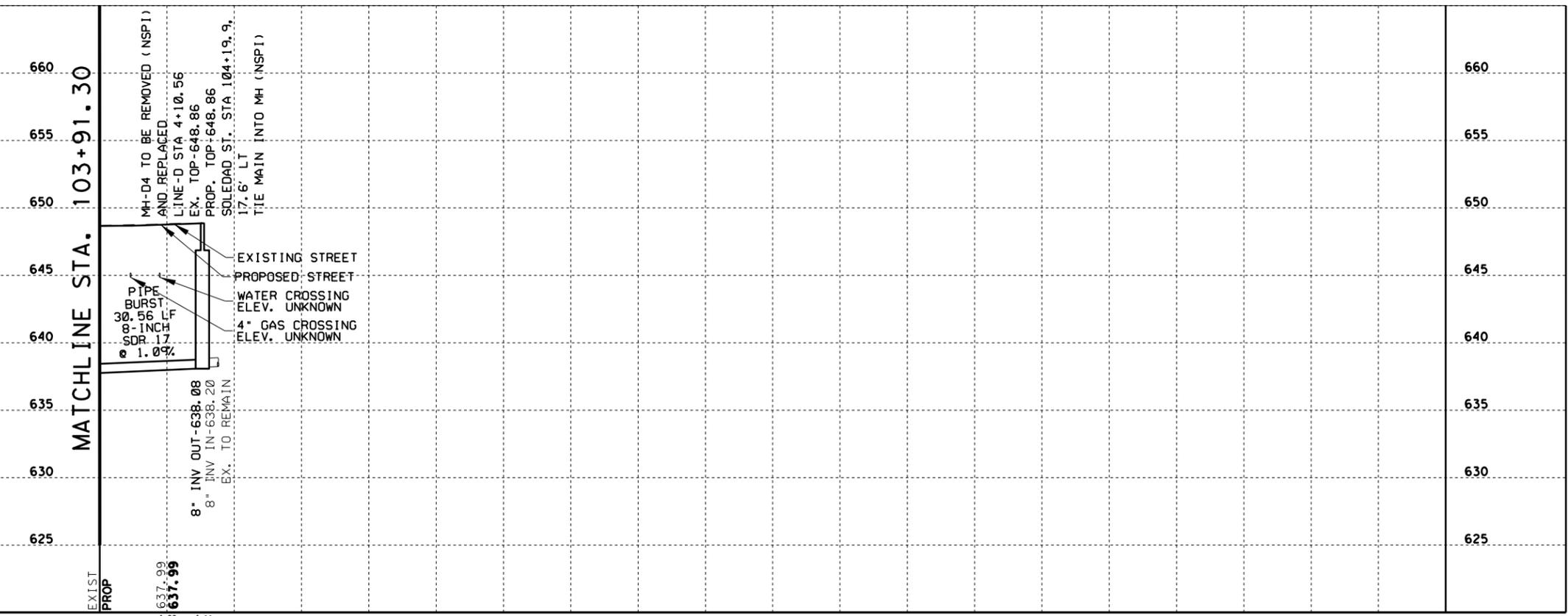
- \*NOTES TO CONTRACTOR:
- LATERALS UNDER STREET CAR CONCRETE PAD AND UNDER UTILITIES WHERE STANDARD COMPACTION WILL NOT BE POSSIBLE ARE TO BE BACKFILLED WITH FLOWABLE FILL.
  - ONLY USE IN MILL & OVERLAY SECTIONS IF OPTION 2 IS SELECTED.

- NOTES:
- THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OR HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
  - CALL THE TEXAS ONE CALL LOCATOR AT 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
  - DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
  - THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS OVERHEAD AND UNDERGROUND ELECTRICAL FACILITIES IF ADJACENT TO WORK AREA, PART 192.181.
  - LATERAL LOCATIONS SHOWN ON PLANS ARE FROM AVAILABLE RECORDS. CONTRACTORS SHALL FIELD VERIFY LOCATIONS AND REPLACE ACCORDINGLY, INCLUDING VERTICAL SHAFTS.
  - THE SAWS INSPECTOR SHALL INSTRUCT CONTRACTOR OF CHANGES THAT MAY BE ALLOWED IN THE EVENT OF CONFLICTS.
  - ALL LATERALS SHALL BE REPLACED WHETHER SHOWN OR NOT SHOWN, AND SHALL BE PAID FOR UNDER ITEM 854.
  - HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SANITARY SEWER MAINS AT TIE IN POINTS ARE APPROXIMATE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE AND NOTIFY THE ENGINEER IF CONFLICTS ARE DISCOVERED OR FOUND.
  - ALL EXCAVATION SHALL BE BACKFILLED AT THE END OF EACH DAY.
  - ALL EXCESS EXCAVATION MATERIAL AND/OR DEBRIS SHALL BE REMOVED AND HAULED OFF SITE EACH DAY.
  - SEE "GENERAL NOTES" SHEET FOR SAWS LOCATOR NOTE.
  - SEE STREET CAR CONCRETE NOTE.
  - ALL PRE-TELEVISION SHALL BE COORDINATED WITH SAWS INSPECTOR WHO WILL DETERMINE WHICH SERVICE LATERALS ARE NO LONGER IN SERVICE (CAPPED OR PLUGGED).
  - FOR OPEN CUT LATERALS CONTRACTOR TO HAND DIG AT GAS CROSSINGS.



STREET CAR CONCRETE NOTE:  
EXISTING STREET CAR CONCRETE PAD IS OF HISTORICAL SIGNIFICANCE. CONTRACTOR TO COORDINATE WITH CITY'S HISTORICAL ENVIRONMENTAL DEPARTMENT BEFORE TOUCHING THE STREET CAR CONCRETE. ANY DISTURBANCE TO THE CONCRETE PAD IS TO BE AVOIDED. CONTRACTOR TO VERIFY ACTUAL SIZE AND DEPTH AND ADJUST ACCORDINGLY TO MAINTAIN PROPER DEPTH AND CLEARANCE. CONTRACTOR IS TO LAY MAINS, SERVICES, AND ANY REQUIRED CASING UNDER THE EXISTING CONCRETE PAD (NSPI). IF DAMAGED OR CUT, CONTRACTOR IS RESPONSIBLE FOR RESTORING TO EQUAL OR BETTER CONDITION, INCLUDING REPLACEMENT OF CONCRETE AND RAILS (NSPI). BACKFILL UNDER THE CONCRETE PAD SHALL BE ACCOMPLISHED WITH FLOWABLE FILL.

"LINE D"



**Y PR** YOUNG PROFESSIONAL RESOURCES  
8209 Roughrider Drive, Suite 101  
Windcrest, TX 78239  
Tel. (210) 590-6215 Fax (210) 590-8346  
Young Professional Resources ©  
Registration No. F-8635

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**BOZNECKI CAMARILLO INC**  
5835 CALLAGHAN RD., SUITE 200 TPE REG. NO. F-483  
SAN ANTONIO, TEXAS 78228 http://www.bozcam.com/  
(210) 349-4356 (FAX) (210) 349-5273

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**LEONARD DALE YOUNG**  
Professional Engineer  
7-1-16  
LEONARD DALE YOUNG, P.E. DATE

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No.	Revision	Drawn	Approved	Date

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**REVISIONS**  
CITY OF SAN ANTONIO  
MAIN AND SOLEDAD  
"LINE D"  
PLAN & PROFILE SHT.  
ADDENDUM #2

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DEVELOPER: \_\_\_\_\_  
CONT. BUDGET PROJ. \_\_\_\_\_

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SUBMITTED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

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MAP No. _____	SHEET _____
SECT. No. _____	351
DR. REM/CK. LDY	JOB No. 12-5602 Of 410

Design File name: \\CHRISPC\jyou\000\Documents\PROJECTS\COSA Bond - Main and Soledad\Techprod\CapImprove\Utilities\WAS-WW-SHEETS.dgn Plotted on: 7/1/2016 11:02:00 AM

## Special Specification 9012 Wireless Network Lighting Control System

<b>Description</b>	<b># OF PAGES</b>
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Synapse Products Briefing	2
Product Overview	2
Quick-Install Guide	7
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## **Section 260943: Wireless Network Lighting Control Specification**

### **1 General**

#### 1.1 Summary

- A. The contractor shall install the wireless lighting control system specified in this section which shall provide time-based, sensor-based, and user-initiated lighting control.
- B. The system shall allow optional system control and monitoring from a remote off-site location via a Virtual Private Network (VPN) to the site controller.
- C. The wireless lighting control system shall be able to be accessed using any device with the Google Chrome browser.
- D. All lighting controllers shall be individually addressable and shall be networked together using wireless communication that forms a self-healing mesh network.
- E. All lighting controllers shall be capable of forming their own wireless communication route to the site controller.
- F. Any lighting controller shall be capable of defaulting to a full on state if connectivity to the site controller is lost in order to ensure environmental safety.

#### 1.2 Submittals

- A. Product Cut Sheets (general device descriptions, dimensions, wiring details, nomenclature)
- B. Other Diagrams – as needed for special operation or interaction with other system(s)
- C. Contractor Commissioning Information (instructions on documenting the location of each of the lighting controllers)
- D. Hardware and Software Operation Manuals
- E. Product Installation Guides
- F. Other operational descriptions as needed

#### 1.3 Quality Assurance

- A. The manufacturing facility where products are manufactured must be ROHS compliant.
- B. All wireless transmitting devices must be FCC compliant.
- C. All applicable products must be UL / CUL Listed or other acceptable national testing organization.

#### 1.4 Coordination

- A. The installing contractor shall be responsible for a complete and functional system in accordance with all applicable local and national codes.
- B. The selling agent shall coordinate system startup with the electrical contractor.
- C. The selling agent shall coordinate training for the end users.

#### 1.5 Warranty and Support

- A. All devices in lighting control system shall have at least a five (5) year warranty.
- B. Customer shall be provided one (1) year of software updates for the system.

### **2 Equipment**

#### 2.1 Manufacturers

- A. This specification is based on SimplySNAP Control System produced by Synapse (877-982-7888, [www.synapse-wireless.com](http://www.synapse-wireless.com)).

#### 2.2 System Requirements

- A. System shall have an architecture that includes:
  - 1. A SNAP-based wireless self-forming mesh network
  - 2. Wireless lighting control devices
  - 3. Stand-alone site controller that manages lighting control devices
- B. System shall have one or more primary “site controller” devices that are capable of communicating with connected system devices.
- C. The site controllers must have the ability to be remotely controlled via Internet using an Ethernet LAN.
- D. The site controller and wireless light controllers must be capable of communicating using a SNAP-based wireless mesh network protocol.
- E. The mesh network shall be capable of self-healing by re-routing wireless messages in the event that any one light controller ceases to function.
- F. Individual lighting controls shall continue to provide default level of lighting in the event of a system communication failure with a site controller device.
- G. All wireless communications by any device in the system (from lighting controls to site controllers) must be capable of using encryption.
- H. System shall have a browser-based software management program that enables remote system control, status monitoring, and creation of lighting control zones.

### 2.3 Equipment

#### A. Wireless Light Controller

- 1. The wireless light controller shall be suitable for control of commercial and industrial luminaries.
- 2. The wireless light controller shall be capable of controlling multiple lighting fixtures by daisy chaining fixture power and dimming wires between fixtures as long as the maximum current rating of the light controller is not exceeded.
- 3. The wireless light controller shall be capable of responding to multiple inputs (switches, sensors, etc.) as well as calendar based events and schedules.
- 4. The wireless light controller shall be capable of setting the correct dimming level through multiple control strategies based on inputs from sensors and switches and calendar events.
- 5. The wireless light controller shall have a universal power supply that operates from 110 to 277VAC plus or minus 10%.The wireless light controller shall be capable of being remotely monitored and controlled via the site controller using a standard web browser across either a LAN or WiFi connection
- 6. The wireless light controller shall be capable of responding to wireless communication messages from the site controller to set lights to specific dimming levels. The wireless light controller shall automatically recover from any power failure. Should power be interrupted and subsequently returned, the lights shall default to a user configured light level.
- 7. The lighting controller shall include an internal relay to switch power to the fixture.
- 8. The lighting controller shall be capable of 0-10V dimming.

#### B. Site Controller

1. The wireless connection from the site controller to the light controller devices shall be through a SNAP mesh network.
2. Each site controller shall be capable of supporting a network of up to 250 wireless devices.
3. All configuration information including light zones and relationships between lighting controllers and sensors shall be stored in the site controller.
4. All configuration information in the site controller shall be able to be backed up to an external device.

C. Browser-based Control and Monitoring Application

1. Control and Monitoring of the lighting solution shall be possible by any device that supports a Google Chrome web browser. The application shall allow control and monitoring of the lighting system.
2. The application shall be capable of displaying wireless light controllers and the site controller on a map.
3. The application shall be capable of backing up and restoring the system configuration including all lights that have been added to the system. The end user of the application shall be able to create and edit zones of lights.
4. Any light shall be capable of belonging to at least 8 custom zones.
5. The application shall provide alarm notifications of anomalies in the system. The alerts shall be available via software dashboard.
6. The application shall be capable of monitoring multiple locations.
7. The application shall be secured by a username and password.
8. The application shall provide scheduling capabilities, including recurring and one-time event scheduling.
9. The application shall be capable of displaying networked devices and the key device characteristics.
10. The system shall have the capability to encrypt all wireless communication.

**3 Execution**

3.1 Installation

- A. The successful bidder may schedule a pre-installation coordination meeting on site with the manufacturer's representative and owner's representative. The pre-installation coordination meeting shall review the project plans and specifications, the project submittals, installation methods, jobsite conditions, and the installation schedule. The manufacturer's representative shall provide the name and telephone number for a technical support person available to answer questions and provide additional information throughout the project.
- B. The successful bidder shall coordinate the system installation and start-up to occur in a timely manner.
- C. The successful bidder shall coordinate with the owner to secure internet access if required.
- D. Installation of the specified equipment and system components shall be in accordance with the manufacturer's instructions.

3.2 Owner Requirements

- A. Owner is to provide after-hours access to the controlled areas as needed for a timely completion of the installation.
- B. Owner's IT manager is to discuss network access options. IT manager to provide optional secured access through the network firewall to allow communication with the site controllers as needed.
- C. Owner is to provide an electronic file of a reflected ceiling plan showing the lighting fixtures in the controlled areas. As an alternate, when the owner does not have lighting drawings, owner is to provide files of the building's floor plan.
- D. Owner is to provide name of light fixture manufacturer(s) and model numbers of all fixtures.

### 3.3 System Start-up and Programming

- A. Upon completion of the installation by the installer, the system shall be started up and programmed by an authorized representative of the manufacturer.
- B. System start-up and programming shall include:
  - 1. Identifying the physical location for each wireless lighting controller.
  - 2. Identifying the lights controlled by each wireless lighting controller
  - 3. Ensuring that each device is functioning properly.
  - 4. Organizing the controlled lighting into functional groups for control and calendar scheduling. Creating and verifying automatic schedules.
- C. Initial start-up and programming is to occur on-site. Additional programming may occur on-site or remotely over the Internet if direct connection to the internet is provided by the owner.
- D. The manufacturer shall provide the owner or owner's representative documentation which includes:
  - 1. Network configuration information, including location of site controllers.
  - 2. Contact information for system support.
  - 3. Web addresses for remote access (if provided).
  - 4. Username and password for the application.

# SimplySNAP

## Wireless Lighting Control Solution



SimplySNAP is a wireless lighting control solution that enables considerable energy savings and lowers operating costs by automating, customizing, and controlling the behavior of lights.

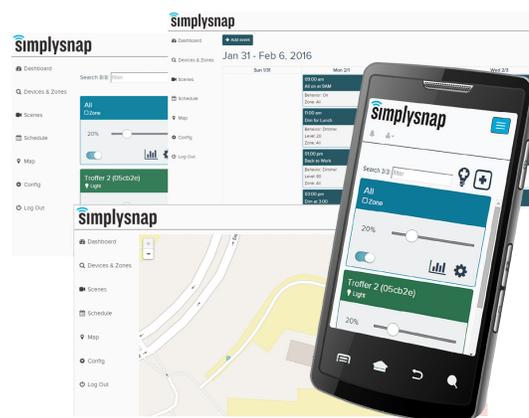
Built for easy installation and use, SimplySNAP doesn't require Internet access and can scale to hundreds of lights, all controlled by a single site controller. SimplySNAP is powered by an encrypted, self-forming, self-healing, 802.15.4 SNAP mesh network and provides a reliable and secure foundation for your lighting network.

SimplySNAP makes commissioning easy with four provisioning options. In addition to manual entry and CSV upload, the Synapse mobile commissioning application, and auto-discovery of unconfigured lights makes commissioning child's play.

Day-to-day operation is just as easy thanks to a browser-based user interface that's accessed through a mobile-friendly Wi-Fi interface. Easy access from a laptop or tablet means your system can be controlled or reconfigured whenever needed. With the optional SimplySNAP Remote Access service, your lighting network can also be managed remotely from anywhere you have an Internet connection.

The system stores power data, alarms, and critical events locally for maintenance and troubleshooting, and provides California Title 24 compliant daily schedules. Occupancy and ambient light sensor integration allows full lighting network customization under a variety of situations.

With programmable schedules and easy setup, SimplySNAP is the perfect solution for lighting control;  
**you just configure it and it runs.**



### Key Benefits:

- No Internet Required
  - Site based control
- Mobile application based commissioning and control
- Control Individual Fixtures, as well as groups of fixtures based on automated schedules or sensor events
- Secure connection to Site Controller via Wi-Fi and/or LAN
- Automatic software upgrades via encrypted over-the-air communications
- Graphing of power consumption and voltage
- Multiple Zones, Behaviors, and Events
- Data and events stored on local Site Controller
- Upgradable via USB flash drive
- Upgradable to all future SimplySNAP releases

To learn more, visit:  
[SynapseWireless.com/simplesnap](http://SynapseWireless.com/simplesnap)  
or call 877-982-7888

## Supported Wireless Controllers:

Part Number	Description
DIM10-087-00	5 - 24VDC Powered, Board Only, Dimming Outputs Only
DIM10-100-00	120-277VAC, 2 Amp Relay, Enclosed, Terminal Blocks, Dimming Outputs
DIM10-250-11	120-277VAC, 5 Amp Relay, Enclosed, Terminal Blocks, Dimming Outputs, Sensor Input, Sensor Power Supply
DIM10-280-21	120-277VAC, 5 Amp Relay, Board Only, Flying Leads, Dimming Outputs, 2 Sensor Inputs, Sensor Power Supply
LP150-001	120-277VAC, 3 Amp Relay, Enclosed, Flying Leads, Dimming Outputs
TL5-B1	120-277VAC, 5 Amp Relay, IP66 Enclosed, Power Monitoring, Integrated Photocell, NEMA Twist Lock

DIM10-087-00



DIM10-100-00



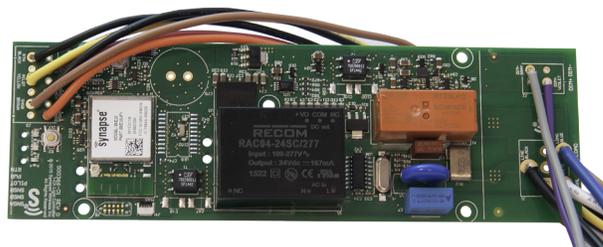
LP150-001



DIM10-250-11



DIM10-280-21



TL5-B1



SS420 Site Controller

## SimplySNAP Site Controller Options:

Part Number	Description
SS420-002	Wi-Fi enabled, metal enclosure with wall mount bracket
SS450-001	Wi-Fi enabled, Verizon Cellular, metal enclosure with wall bracket (coming soon)
SSRA-001	SimplySNAP Remote Access Service (Optional)



# SS420/SS450

## SimplySNAP On-Site Controller

Specification Data	
Job Name	
Type	
Catalog #	
Comments	

### Product Overview

The **SS420/SS450** site controller serves as the heart of your lighting solution, allowing local control without the internet using the Synapse SimplySNAP solution.

SimplySNAP is a wireless, on-site control solution for monitoring and controlling outdoor and indoor lights via a SNAP mesh network. SimplySNAP provides the flexibility to manage your lighting, your way, with system setup and configuration through a mobile-friendly Wi-Fi interface.

The system stores power data, zones, alarms, behaviors, and critical events locally for maintenance and troubleshooting; and provides municipal compliance via daily schedules, sensor controlled behaviors, and multiple dimming levels. With programmable schedules and easy setup, SimplySNAP is the perfect solution for remote sites or where internet is not desired.

**You just configure it and it runs.**

### Features

- No Internet Required
- No recurring software fee—buy once, use forever
- Multiple Zones, Behaviors, Events, and Schedules
- SimplySNAP creates a Wi-Fi connection to smart phone, tablet, or PC
- Optional SimplySNAP Remote Access (SSRA) service available
- Firmware Upgrades via USB Flash Drive
- Sunrise and Sunset Schedules driven by latitude and longitude
- Optional Cellular Connectivity (SS450)



**SimplySNAP Lighting  
On-Site Controller —  
No Internet Required**

Product #	Description
SS420-002	Wi-Fi enabled, Wall mount bracket
SS450-001	WiFi and Cellular enabled, wall mount bracket; 3 antennas

<b>Dimensions</b>	6.8" L x 4.6" W x 1.4" H (173mm L x 117mm W x 36mm H) without antennas
<b>Operating Environment</b>	-40°C to +70°C Indoor Use or Outdoor with Waterproof Enclosure
<b>Mounting</b>	DIN rail or Wall Mounted
<b>Input Power</b>	12-24V DC (Barrel and Terminal Block Connectors)
<b>Cellular</b>	Verizon 3G CDMA
<b>Wi-Fi</b>	802.11 a/b/g
<b>Radio</b>	SNAP 2.4 GHz; 802.15.4 +20 dBm Transmit Power -105 dBm Receive Sensitivity
<b>Certifications</b>	FCC
<b>Warranty</b>	5 Years
<b>Interfaces</b>	1 USB Port for Software Updates 1 Ethernet Port for Wired Access

**SS Series Lighting Gateways**

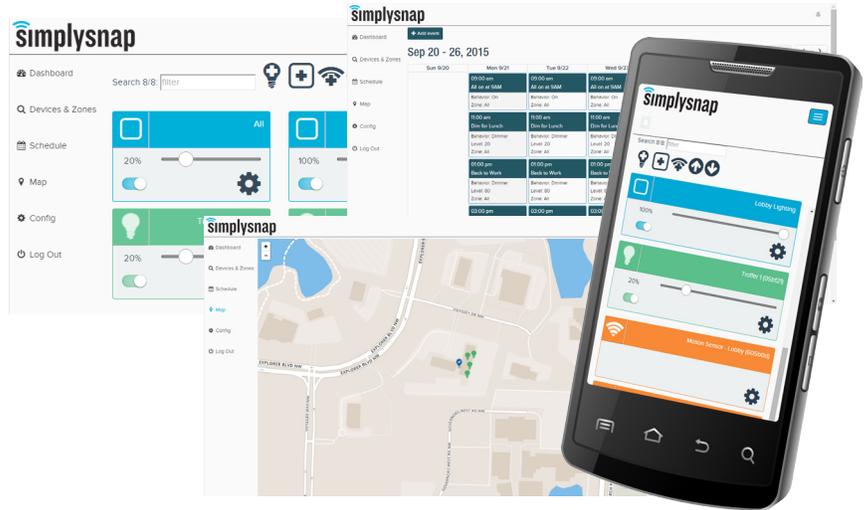
To learn more, call or visit:  
synapse-wireless.com  
(877) 982-7888

## Included with the SS420:

- 2 Antennas
- 1 Power Supply
- Mounting Template
- Terminal Block Connector  
(for alternate power connection)
- Quick Install Guide

## Included with the SS450:

- 3 Antennas
- 1 Power Supply
- Mounting Template
- Terminal Block Connector  
(for alternate power connection)
- Quick Install Guide



## Supported Wireless Controllers:

Part #	Description
DIM10-087-00	DC Power Light Controller
DIM10-100-00	120-277V, 2 Amp Relay, Terminal Blocks and Dimming
LP150-001	120-277V, 3 Amp Relay, Flying Leads, and Dimming
DIM10-250-11	120-277V, Power Monitoring, 5 Amp Relay, Cased, Sensor Input, Sensor Power Supply
TL5-B1	100-277V, 5-pin Twist-lock, Power Monitoring, 5 Amp Relay, Integrated Photocell, IP66

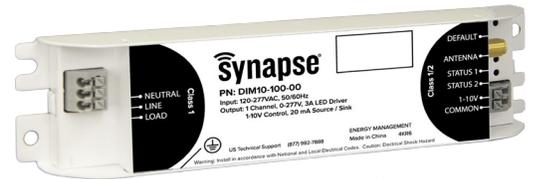
LP150-001



TL5-B1



DIM10-100-00



DIM10-087-00



DIM10-250-11



The instructions in this guide provide a basic overview for quickly getting results from a SimplySNAP lighting solution. They are intended to get you up and running quickly, and should be used for initial testing and proof of concept operations. There are several ways to commission a SimplySNAP solution, and we recommend that before you attempt a full installation, you review these options in the SimplySNAP User Guide available at:

<http://help.synapse-wireless.com/PDF/SimplySNAP/SimplySNAP-3-User-Guide.pdf>

### Installation Overview:

- Connect the site controller and turn it on
- Log in to the site controller
- Configure the controller's location and time settings
- Change the site controller's default password
- Conduct a system census to discover lights
- Configure and place lights
- Control the lights

Once these steps are complete, you'll have a good feel for how a full installation will work and behave, and a clearer picture for how you'll want the full installation to be configured.

### System Requirements

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- Synapse SimplySNAP Site Controller
- Synapse light controllers
- Laptop or tablet running the Google Chrome browser

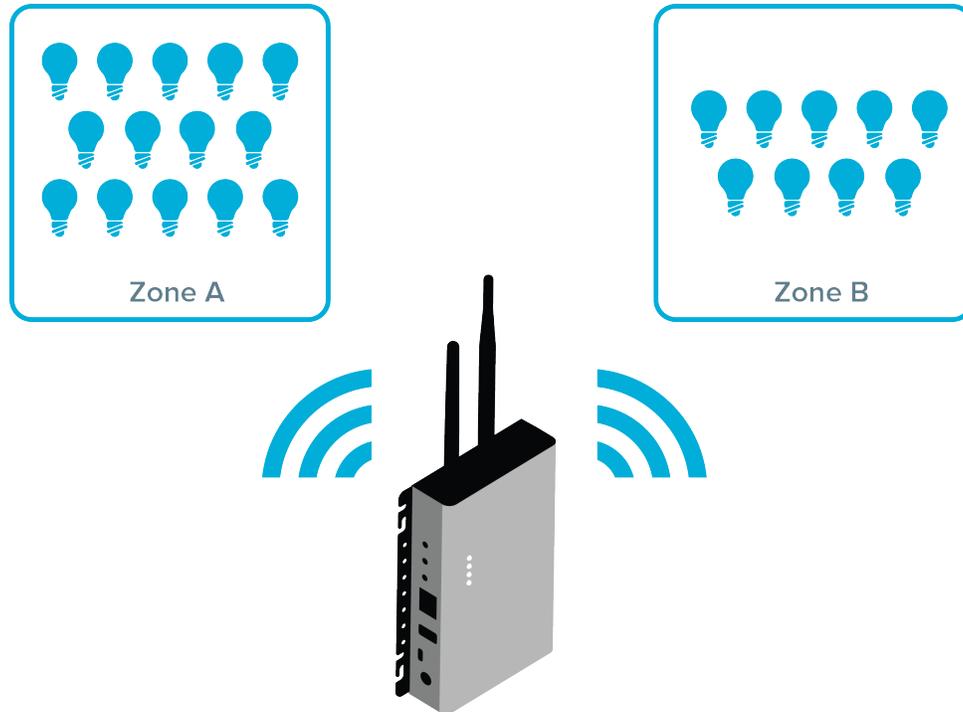
6723 Odyssey Drive // Huntsville, AL 35806

(877) 982-7888 // [Synapse-Wireless.com](http://Synapse-Wireless.com)

## Lighting System Configuration Overview

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A **SimplySNAP** lighting solution consists of a **SimplySNAP Site Controller** and some number of lights equipped with Synapse light controllers, and potentially sensors and/or switches.



The **SimplySNAP Site Controller** serves as the hub of control and communications for managing the lights that make up the lighting solution.

**NOTE:** In most of this document an SS420 site controller is used for illustration. The SS450 has an extra antenna for cellular service but is otherwise identical.

## Setting up the SimplySNAP Site Controller

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The first step in installing a **SimplySNAP** lighting solution is to connect the physical hardware of the system, followed by configuration of the system within the **SimplySNAP** user interface. These instructions assume that you have already physically installed the hardware that will make up your **SimplySNAP** lighting solution and you are now ready to connect the site controller.

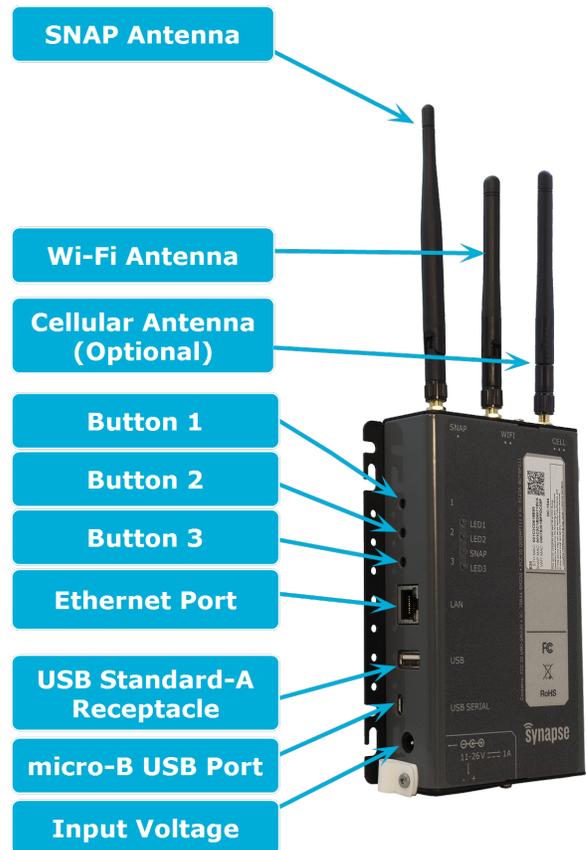
**NOTE:** For more detailed instructions, including usage and configuration information, please download the SimplySNAP User Guide from <http://help.synapse-wireless.com/PDF/SimplySNAP/SimplySNAP-3-User-Guide.pdf>, or refer to the installation guide included with each lighting controller.

### To install the SimplySNAP site controller:

1. Unpack the **SimplySNAP Site Controller**.
2. Attach the included antennas to the site controller as shown. When looking at the top of the site controller (with the mounting bracket on the back side), the longest antenna (SNAP antenna) attaches to the left-most antenna connector, and the shorter Wi-Fi antenna attaches to the middle connector. If the site controller that you're installing has cellular capability, the optional cell antenna is attached to the remaining connector.

Synapse-provided antennas will have white dots at the base of the antenna that denote the type. One dot is a SNAP antenna, two is for a Wi-Fi antenna, and three is for a cellular antenna. This notation is also reflected on the front unit label of the site controller.

3. Plug the provided power supply into the barrel connector and then into an 110VAC outlet. When the **SimplySNAP Site Controller** powers up, orange LEDs will light up for approximately 30 seconds while the site controller software starts up. Once this is complete, the orange LEDs will turn off and the site controller will be ready to use.



## Software Configuration and Logging In

The **SimplySNAP Site Controller** comes preconfigured with the **SimplySNAP** software so there is no user installation of software required.

**SimplySNAP** Version 3.X currently only supports the Google Chrome browser. Other browsers will be supported in future releases. If you don't have the Google Chrome browser installed on your device, please download and install it from this location:

<http://www.google.com/chrome>

## Accessing the Site Controller

The **SimplySNAP Site Controller** supports a LAN (Ethernet) connection, a Wi-Fi connection, and optionally, a cellular connection. The **SimplySNAP Site Controller** acts as an access point and broadcasts its Wi-Fi SSID over the air. During installation the Wi-Fi connection is used to establish communications between the controller and a browser based device such as a computer or tablet. After that, it can be accessed via Ethernet, Wi-Fi, or cell.

The SSID that is broadcast from the site controller should be visible from the network connections panel of your computer or tablet. It will appear in your network connections list as simplySnap\_XXXXXX where XXXXXX is the specific address of the site controller. This address is unique to each site controller and is the last 6 alphanumeric characters of the Ethernet MAC address.

The Wi-Fi connection to the site controller is secure. Once you select the SSID and your computer attempts to connect to the site controller, it will prompt you for a password to complete the connection.



Last six characters of Ethernet MAC address

Enter the password **synapse!wireless** to establish the connection.

When this password is entered a connection is established and will appear in your network settings similar to what is shown below. This may appear as an "Unidentified network" with no Internet access.

Next, launch the Chrome browser and enter **HTTPS://192.168.55.1** in the address bar.

Make sure it is entered exactly as shown. (This is a secure connection to a specific IP address that is the factory default within the site controller). This connection mimics a connection to an internet access point.



You will receive a warning as shown at right. Click the **Advanced** link at the bottom, then click the "Proceed to 192.165.55.1 (unsafe)" link. (This warning is displayed because the site controller is using an unsigned security certificate.)

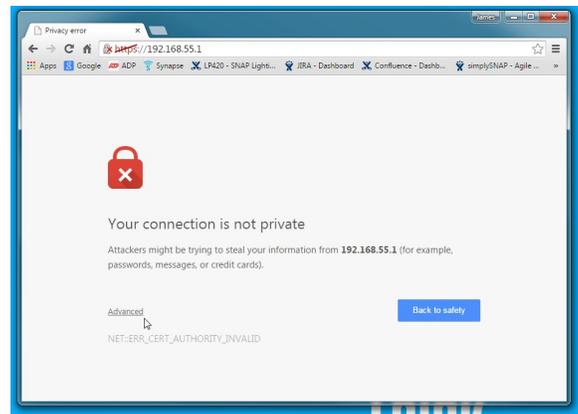
The **SimplySNAP** dashboard should now appear in your browser and present you with the login screen for the **SimplySNAP** server.

Enter the following username and password:

**Username:** snap

**Password:** qwerty

When you log in, the **SimplySNAP** dashboard will be displayed.



## The Dashboard

After successfully logging in, you will see the SimplySNAP dashboard. The dashboard provides an overview of the components that make up your SimplySNAP system.



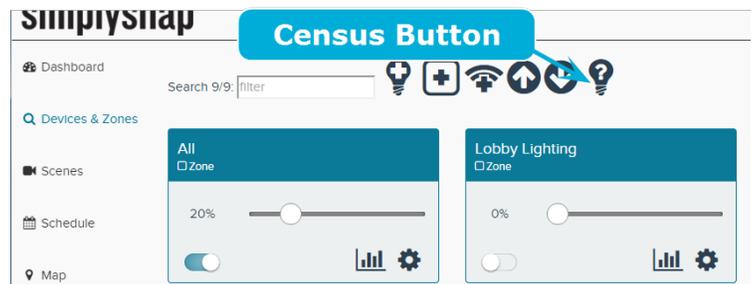
**NOTE:** For more information on the Dashboard and menu choices, please see the SimplySNAP User Guide.

## Discovering Unconfigured Devices

You'll next want to add a few devices to the system to get a feel for how it works. Again, these instructions are for getting a quick idea of how easy the system is to configure and use, and not intended to be used for a full installation. Please consult the SimplySNAP User Guide for full instructions.

**NOTE:** Before proceeding, make sure all of your lighting controllers are properly installed and power is applied.

You can click the **Unconfigured Devices** icon on the **Devices & Zones** page to perform a "census" of the unconfigured **SimplySNAP** devices on your channel and network ID. These devices will appear in a list to provide you with an easy way to configure them.



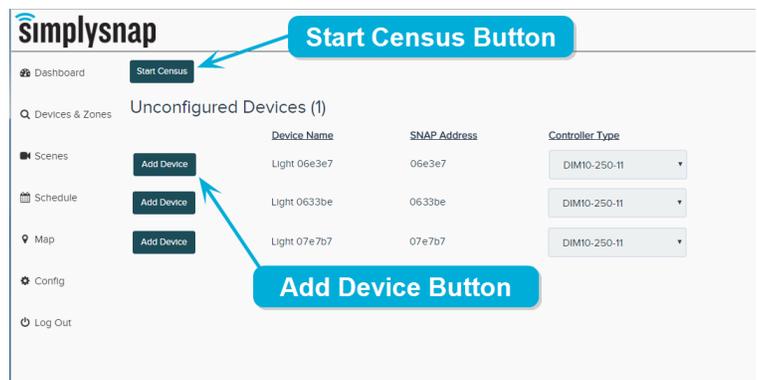
If you are adding several devices in this manner, we recommend that you perform the census two or three times to ensure that all devices were discovered.

#### To perform a census of unconfigured devices:

1. Click the **Devices & Zones** menu choice in the left menu panel, then click the **Census** icon.

2. Click the **Start Census** button at the top of the screen. SimplySNAP will begin to search for unconfigured devices in your network.

3. If unconfigured devices are discovered, you will be presented with a list of the devices. To add a device to your network, click the **Add Device** button to the left of the device you wish to add. The new device will appear in a pane on the **Devices & Zones** page.



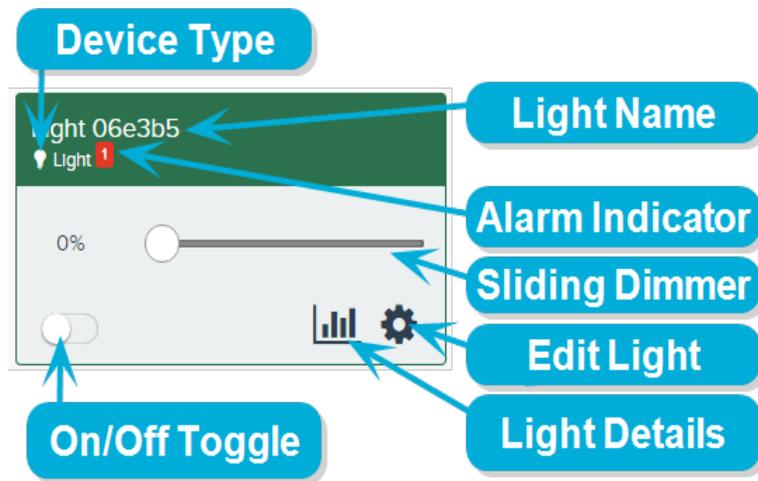
**NOTE:** If the lighting controller does not automatically identify its type as part of the census, you can manually select the proper type using the drop-down menu.

4. Once the device is loaded, you can edit it as you would any other device. For more information on editing devices, please consult the **SimplySNAP** user guide.

## Activating, Deactivating and Dimming Lights

After a light is entered into the system it can be controlled directly from the **Devices and Zones** page. Broader control can be accomplished through the use of zones, schedules, and sensors, which are explained fully in the **SimplySNAP** User Guide.

The light may be switched on and off using the toggle switch in the lower left of the light panel, while dimming can be controlled using the slider switch in the center of the panel.



## Next Steps

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You have now completed the SimplySNAP lighting solution introduction. For more detailed information, including administration and configuration of zones, sensors, and behaviors, consult the SimplySNAP user manual.



## USER GUIDE

# SimplySNAP

Version 3.2

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## Introduction

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SimplySNAP is a site-based solution for monitoring and controlling LED lights via an encrypted, self-forming, self-healing, 802.15.4 SNAP mesh network.

The network doesn't require Internet access, and allows for system setup and configuration through a mobile-friendly Wi-Fi or LAN accessible interface.

The system stores power data, alarms, and critical events locally for maintenance and troubleshooting, and provides California Title 24 compliant daily schedules for multiple dimming levels.

With programmable schedules and easy setup, SimplySNAP is the perfect solution for remote sites where Internet access is difficult; you just configure it and it runs. Easy access from a laptop or tablet means your system can be reconfigured whenever needed.

## Key Benefits

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- No Internet Required – All control can be site based
- Android HTML5 mobile application-based commissioning and control
- Each device's location can be stored and displayed on a map
- Multiple zones, scenes, sensors, events, and weekly schedule
- Data and events are stored on the local site controller

## System Requirements

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- Laptop computer, tablet, or smart phone with Google Chrome Browser version 42 or later.

## Supported Lighting Controllers

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SimplySNAP works with the following Synapse DIM series lighting controllers.

**Table 1: Lighting Controllers**

Number	Description	Features	Best For
DIM10-087-00	5-24V DC Powered Wireless 0-10V Module	Driver Powered Quick Connect Header Small Size (2.5" X 2")	Compact size for easy fixture integration
DIM10-100-00	120/277V Wireless Controller	2 Amp Relay Terminal Blocks Slim Construction Metal Case	Ideal for Indoor Linear Applications

Number	Description	Features	Best For
LP150-00	120/277V Wireless Controller, 0-10V	3 Amp Relay Flying Leads IP65 Case -40 to +60	Optimal for both Indoor Industrial and Outdoor
DIM10-250-11	120/277V Wireless Controller, 0-10V Integrated Sensor Input and Output	5 Amp Relay Terminal Blocks Rugged Metal Case Utility Grade PM	Power monitoring and integrated sensor applications
DIM10-281-21	120/277V Wireless Controller, 2, 0-10V Integrated Sensor Inputs and Outputs	5 Amp Relay Utility Grade PM	Power monitoring and integrated sensor applications
DIM10-283-20	120/277V Wireless Controller, 0-10V	External Relay Control Power Monitoring 2 Sensor Inputs Flying Leads Adaptable to 480V Board Only	Board solution for integration by fixture manufacturers
TL5-B1	120/277V Wireless Twistlock Controller, 0-10V	5 Amp Internal Relay Power Monitoring Twistlock NEMA socket compatible Internal Photocell IP66 -40C to +70C	Twistlock solution for street and parking lot lighting

## Overview of the SimplySNAP Lighting Solution

A SimplySNAP installation is typically a solution for a single facility that may or may not have access to the outside world via an Internet connection. A SimplySNAP installation usually runs autonomously on a calendar-based schedule that may be modified by routine sensor events.

A SimplySNAP installation consists of a number of lights that are controlled by Lighting Controllers such as the Synapse LP150. A Lighting Controller can switch a light off or on, or dim it to a specified level. When sensors are added to the system, lights can be triggered by a variety of events including motion, a lack of motion, light levels, and user activated switches.

## New in this release

SimplySNAP Version 3.2 adds the following new features:

- Support for the SS450 cellular gateway.

- Support for the DIM10-283-20 and TL5-B1 lighting controllers
- The ability to upload custom maps for the maps page.
- Ability to remember maps settings between page changes.
- Ability to multi-edit light positions on the map.
- From the edit light page, you can now click other lights to get info.
- Addition of 5-button switch connectivity status to system info page
- Addition of a device type listing to the system info page.
- Ability to access the alarms page by clicking the alarm indicator on a light.

## Understanding Zones, Behaviors, and Scenes

---

A SimplySNAP lighting installation controls lights through the use of Zones, Behaviors, and Scenes. Each serves a different function, and it's important to understand how they combine to provide users with maximum configuration and control.

### What is a Zone?

A zone is a user-defined logical grouping of lights that can all be controlled with a single command. Lights can belong to multiple zones, and you're free to create and group lights in zones in any way that you choose. There is one default, non-removable zone "All", which applies to every light in the system.

A zone is often named after the function of the grouping, such as "Emergency Lights", "Parking Lot", or "First Floor".

For example, imagine a lighting system within a theater. The overhead lights could all be grouped into one zone. Aisle lights could be another zone, and above door lights could be a third zone. Each of these groups of lights has a role, and that role can be defined through the use of Behaviors and then applied to each of the Zones.

**NOTE:** Switching the zone "All" to off will turn off every light, but will not set all zones to the off setting. This is by design, and is used when you want to switch off all lights, but also want to keep sensors active in case lighting is needed. To completely switch off lights and sensors, you'll need to switch off their corresponding zone.

### What is a Behavior?

When a Zone is activated, the Zone's associated Behavior is activated. A Behavior is an instruction for how the system reacts to a sensor event, or a combination of factors.

The power of a SimplySNAP lighting system is centered in automation. Rather than always having a user control lighting, you can use sensors to let your lighting system to respond changes within its environment. For example, you might use a motion sensor to control the lights in a seldom used warehouse. As someone opened the door, the

sensor would notify the SimplySNAP lighting system of movement and the system would respond by invoking a behavior to turn the lights on. When the occupant leaves, the system could gradually dim the lights to off over a specified time to ensure that no one is left in the dark.

Likewise, a SimplySNAP lighting system can respond to a lack of movement. When the motion sensors within the warehouse have not sensed movement for a user defined amount of time, the system can change the light level to something lower.

Behaviors can be triggered by manual switches, motion detectors, and photocells. For more information on Behaviors, see **Adding Sensors and Switches** on page **28**.

## What is a Scene?

A Scene is a grouping of Zones, with specified behaviors for each of those Zones. This allows you to issue commands to a number of lights where each light is at a different brightness or activation method. Depending on the needs of your installation, you might have a scene for a normal business day, an energy saver scene for evenings, or an emergency scene for disaster drills.

Within our theater example, it would have a number of Scenes available to create different atmospheres. Two Scenes within a theater might be "Pre-Movie," and "Movie."

The "Pre-Movie" scene might set the overhead lights zone to 60% brightness so patrons can find their seats, while the aisle lights and the above door lights zones are set to 80% brightness to provide extra definition. When the "Movie" scene is invoked, the overhead lights zone is reduced to off, while the aisle lights are dimmed to 10% brightness, and the above door lights are reduced to 20% brightness.

## I want to...

---

### Install

---

Install a light	See <b>Adding Lights</b> on page <b>26</b> .
Install a sensor	See <b>Adding Sensors and Switches</b> on page <b>28</b> .
Know more about the Lighting Installer app	See <b>Using the Android Lighting Installer App</b> on page <b>14</b> .
Look for unconfigured lights	See <b>Administration</b> on page <b>44</b> .

### Operate

---

Control lights with a scene	See <b>Invoking a Scene on a Preconfigured Set of Zones</b> on page <b>40</b> .
Control lights with a sensor	See <b>Adding Sensors and Switches</b> on page <b>28</b> .
Control lights with a switch	See <b>Adding Sensors and Switches</b> on page <b>28</b> .
Dim a light	See <b>Activating, Deactivating and Dimming Lights</b> on page <b>40</b> .
Turn a light off/on	See <b>Activating, Deactivating and Dimming Lights</b> on page <b>40</b> .

### Administer and Maintain

---

Back up installed lights	See <b>Importing and Exporting Light Configurations using a .CSV File</b> on page <b>54</b> .
Back up system settings	See <b>Backing up and restoring a system configuration</b> on page <b>52</b> .
Change the password	<b>Administration</b> on page <b>44</b> .
Delete a Light, Sensor or Zone	See <b>Working with Lights, Sensors, Zones, and Scenes</b> on page <b>44</b> .
Encrypt lighting communications	See <b>Administration</b> on page <b>44</b> .
Group lights into a zone	See <b>Adding Zones</b> on page <b>23</b> .
Limit user ability to change scenes	See <b>Working with Lights, Sensors, Zones, and Scenes</b> on page <b>44</b> .
Make a lot of configuration changes quickly	See <b>Importing and Exporting Light Configurations using a .CSV File</b> on page <b>54</b> .
Optimize system communications	See <b>Administration</b> on page <b>44</b> .

## Improve Lighting Efficiency

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Reduce power consumption	See <b>Making the Most of Lighting Controls</b> on page <b>56</b> .
See how much power a fixture consumes	See <b>Viewing Power Consumption of a Light</b> on page <b>41</b> .
Turn off all lights through the weekend	See <b>Use Schedules and Sensors to Dim or Deactivate Lights When They're Not in Use</b> on page <b>56</b> .

# Installation and Initial Setup

---

The instructions within this section will help you set up and configure a **SimplySNAP** lighting solution. For later maintenance tasks, individual sections later in this guide will also have the information needed to perform these edits.

## System Requirements

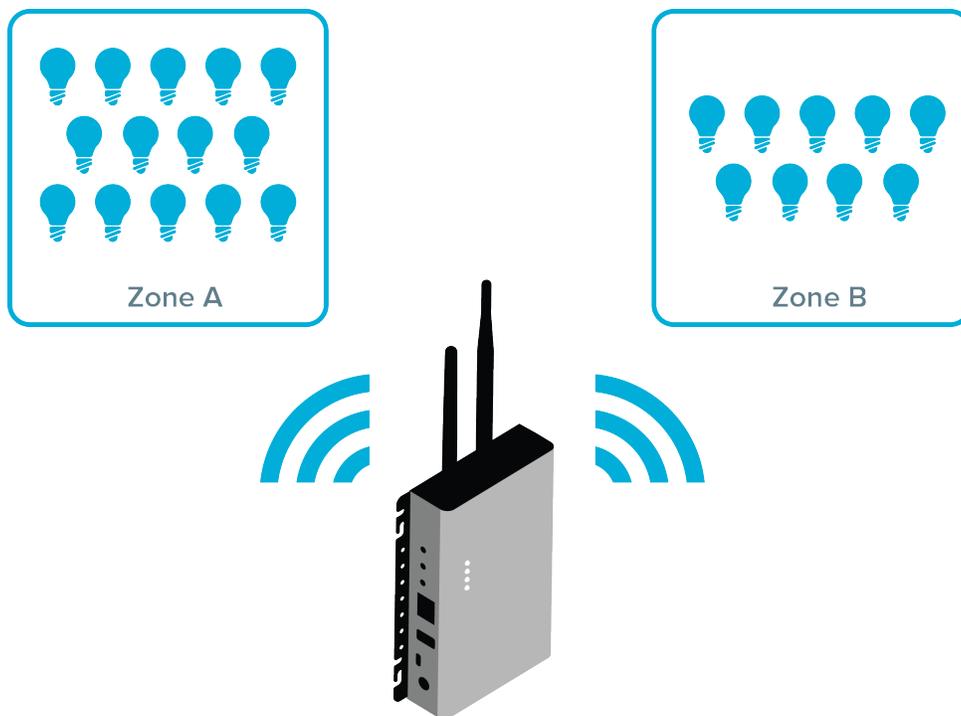
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- Synapse **SimplySNAP Site Controller**
- Synapse light controllers
- Laptop or tablet running Chrome browser
- (Optional) Sensors and switches

## Lighting System Configuration Overview

---

A **SimplySNAP** lighting solution consists of a **SimplySNAP Site Controller** and some number of lights equipped with Synapse light controllers, and potentially sensors and/or switches.



The **SimplySNAP Site Controller** serves as the hub of control and communications for managing the lights that make up the lighting solution.

**NOTE:** In most of this document an SS420 site controller is used for illustration. The SS450 has an extra antenna for cellular service but is otherwise identical.

To install your lighting solution, we'll take the following steps:

- Physically install lighting controllers and sensors

**NOTE:** This step can also be completed after setup of the site controller, but we recommend you physically install the lights first and use the Synapse Lighting Installer app while you do it.

- Setup and configure the **SimplySNAP Site Controller**
- Add Zones
- Add/Configure Lights
- Add/Configure Sensors
- Create Scenes
- Set Schedules

## Methods for New Installations

---

There are three primary ways to set up a **SimplySNAP** installation. We'll briefly outline each process below, and there detailed steps in another section to ensure the different processes don't run together.

**NOTE:** Physical installation of lights can be performed before or after commissioning, but these instructions assume that the lights are already installed and powered up. In cases where a scan of the 2D barcode or reading of a MAC address will be difficult post-installation, be sure to record the Controller Type, MAC address, and location of each **SimplySNAP** device before it's placed in a permanent home. It's also possible, and easiest, to use the **Synapse Lighting Installer** app to scan these devices and they're being physically installed.

### Use the Synapse Lighting Installer app

The easiest and fastest way to get a **SimplySNAP** installation up and running is through the use of the **Synapse Lighting Installer app**. Built for the Android platform, the **Lighting Installer app** walks you through getting a site up and running and then exports everything to the **SimplySNAP Site Controller** to ensure that you get up and running as soon as possible.

### Create and Import a .CSV file

While not as easy as the Lighting Installer app, a comma-separated value (CSV) file can be a lot easier than doing everything manually. **SimplySNAP** supports easy import of .CSV files that can be created in any spreadsheet or text

editor program. You'll enter data on each of the lights, and the bulk of the configuration will be completed with one import.

## Install hardware, then use the census button to discover unconfigured devices

As soon as a lighting controller receives power, it can be discovered by the census function. This means that an installation can be performed by discovering devices and then adding them into your installation. Each time the census runs, it will only contact lights that are in communication with a configured light controller. As controllers are added and configured, you'll need to run the census again to collect lights that are progressively further away.

## Enter everything manually

If your installation is small, or you're REALLY into lighting configuration, everything can be entered manually. This works great if you're adding new equipment to an existing installation, but we'll go ahead and caution you not to do this if you're just starting out. Another option is to install everything and click the **Census** button to create a list of devices on your network. This will provide you with a list, but no context toward where each device is physically located or what it is connected to.

## Setting up the SimplySNAP Site Controller

---

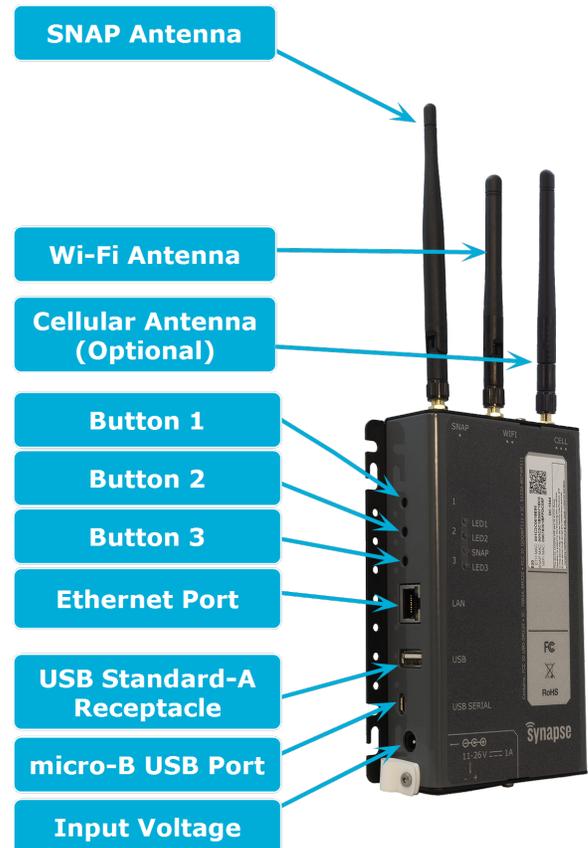
The first step in installing a **SimplySNAP** lighting solution is to connect the physical hardware of the system, followed by configuration of the system within the **SimplySNAP** user interface. These instructions assume that you have already physically installed the hardware that will make up your **SimplySNAP** lighting solution and you are now ready to connect the site controller.

## To install the SimplySNAP site controller:

1. Unpack the **SimplySNAP Site Controller**.
2. Attach the included antennas to the site controller as shown. When looking at the top of the site controller (with the mounting bracket on the back side), the longest antenna (SNAP antenna) attaches to the left-most antenna connector, and the shorter Wi-Fi antenna attaches to the middle connector. If the site controller that you're installing has cellular capability, the optional cell antenna is attached to the remaining connector.

Synapse-provided antennas will have white dots at the base of the antenna that denote the type. One dot is a SNAP antenna, two is for a Wi-Fi antenna, and three is for a cellular antenna. This notation is also reflected on the front unit label of the site controller.

3. Plug the provided power supply into the barrel connector and then into an 110VAC outlet. When the **SimplySNAP Site Controller** powers up, orange LEDs will light up for approximately 30 seconds while the site controller software starts up. Once this is complete, the orange LEDs will turn off and the site controller will be ready to use.



## Buttons on the SimplySNAP Site Controller

There are three buttons on the site controller. The button closest to the antennas, button one, clears the **SimplySNAP** database, and button two resets the username and password to the default settings. The third button is inactive and not used. (Buttons must be held down until the front panel LEDs change color before a reset will take effect.)

# Activating a Cellular Modem

---

If you plan to access an SS450 using a cellular plan, you will need to configure the cell modem for use.

## Before You Begin:

---

Install the SS450 Site Controller at the location where it will reside during normal operation, then power it to ensure your cellular provider will be able to communicate with it during the activation process.

## Setup

---

You will need to have the following information available to set up service.

Product Model Number : Synapse E20

Product Manufacturer. : Synapse

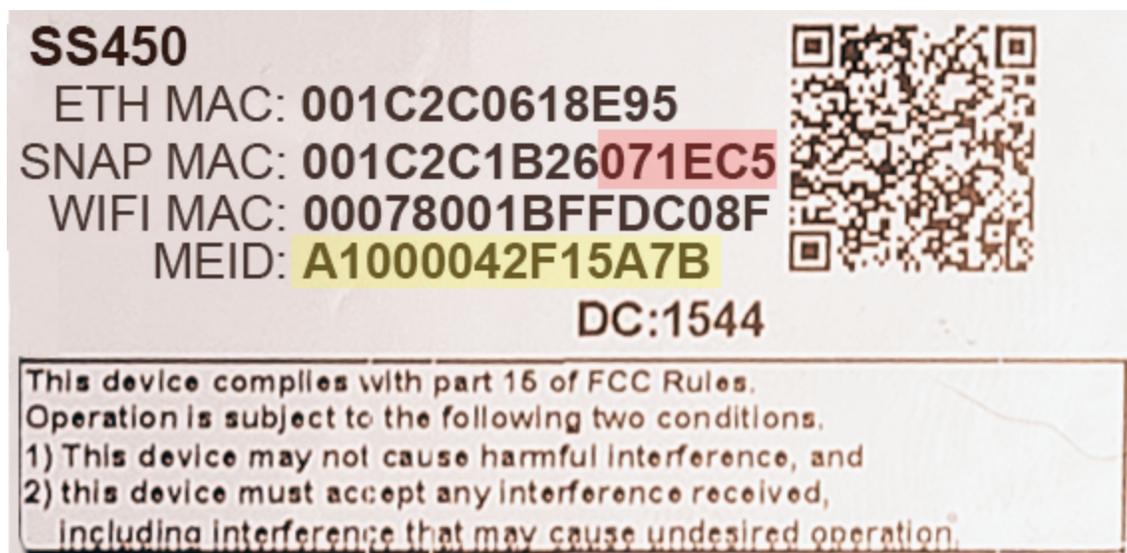
The modem MEID#: (Unique number located on the SS450 label. Highlighted in yellow below.)

Type of Modem : M2M (Note: This isn't a normal cell phone.)

You will also need to know:

- Your data plan usage requirements.
- The location (Zip Code/City/ State) where the site controller will reside
- A contact name for device issues.
- A unique device name for each SS450 being activated.

*An example would be SS450-071EC5. This uses the unique SNAP address on the unit label, (shown below highlighted in red). Using the last 6 hex numbers will ensure each unit is unique and visually traceable.*



## Modem Activation

---

Contact a Verizon agent at 1-800-837-4966 and set up a contract, or contact your corporate Verizon representative if an account already exists.

**NOTE:** The agent will ask specific questions about the type of plan that will be used. This will depend on how often you plan to access the site controller, so be sure to have all information listed above available. The agent will assign a phone number, inform you when activation will be complete, and finalize integration between the site controller and your system.

Email confirmations will be required by the designated account owner. If installation is performed away from the designated account owner, arrangements need to be considered for email confirmation and completion of the activation process.

## Software Configuration and Logging In

---

The **SimplySNAP Site Controller** comes preconfigured with the **SimplySNAP** software so there is no user installation of software required.

**SimplySNAP** Version 3.X currently only supports the Google Chrome browser. Other browsers will be supported in future releases. If you don't have the Google Chrome browser installed on your device, please download and install it from this location:

<http://www.google.com/chrome>

### Accessing the Site Controller

The **SimplySNAP Site Controller** supports a LAN (Ethernet) connection, a Wi-Fi connection, and optionally, a cellular connection. The **SimplySNAP Site Controller** acts as an access point and broadcasts its Wi-Fi SSID over the air. During installation the Wi-Fi connection is used to establish communications between the controller and a browser based device such as a computer or tablet. After that, it can be accessed via Ethernet, Wi-Fi, or cell.

The SSID that is broadcast from the site controller should be visible from the network connections panel of your computer or tablet. It will appear in your network connections list as simplySnap\_XXXXXX where XXXXXX is the specific address of the site controller. This address is unique to each site controller and is the last 6 alphanumeric characters of the Ethernet MAC address.

The Wi-Fi connection to the site controller is secure. Once you select the SSID and your computer attempts to connect to the site controller, it will prompt you for a password to complete the connection.



Last six characters of Ethernet MAC address

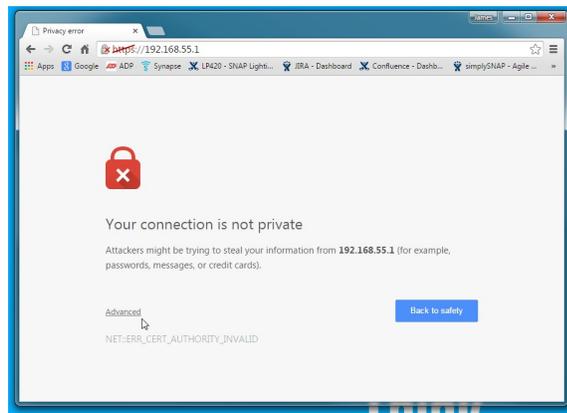
Enter the password **synapse!wireless** to establish the connection.

When this password is entered a connection is established and will appear in your network settings similar to what is shown below. This may appear as an “Unidentified network” with no Internet access.

Next, launch the Chrome browser and enter `HTTPS://192.168.55.1` in the address bar.

Make sure it is entered exactly as shown. (This is a secure connection to a specific IP address that is the factory default within the site controller). This connection mimics a connection to an internet access point.

You will receive a warning as shown at right. Click the **Advanced** link at the bottom, then click the "Proceed to 192.165.55.1 (unsafe)" link. (This warning is displayed because the site controller is using an unsigned security certificate.)



The **SimplySNAP** dashboard should now appear in your browser and present you with the login screen for the **SimplySNAP** server.

Enter the following username and password:

**Username:** snap

**Password:** qwerty

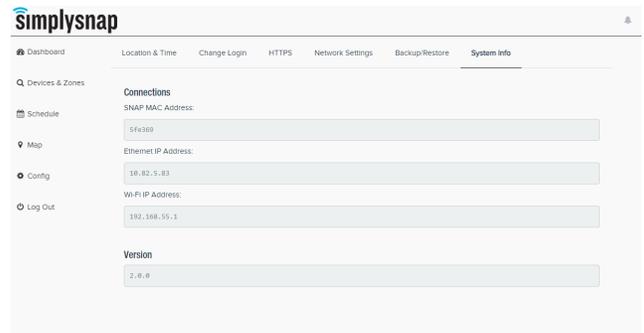
When you log in, the **SimplySNAP** dashboard will be displayed.

The **SimplySNAP site controller** may also be connected to a wired LAN network and accessed via the LAN. The LAN must be configured with a DHCP server to provide an IP address to the site controller when it is connected. To use this method of connection, you must retrieve the IP address that the DHCP server provided to the site controller.

**To retrieve a DHCP assigned IP address:**

1. Connect to the site controller via Wi-Fi as described above and log in.
2. Click the **Config** menu item in the left menu bar, then click the **System Info** tab near the top of the screen.

3. The site controller IP address is shown in the field labeled **Ethernet IP Address**. This address may be entered into a web browser's address bar and used to connect to the site controller across a wired LAN.



**NOTE:** A network administrator can configure the local network DHCP server to always provide the same IP address to the site controller and ensure connectivity can always be established via the LAN.

## Using the Android Lighting Installer App

The easiest way to get a **SimplySNAP** installation off to a good start is through the use of the **Synapse Lighting Installer app**. The lighting installer runs on the Android platform, simplifies the configuration of a **SimplySNAP** system by easily capturing essential light controller information along with the geographic location of the light. The information is collected using QR codes provided on **Synapse lighting controllers**. Geographic location is determined using the Android device GPS (if available) and this information is used to locate the light on a map of your installation.

**NOTE:** The GPS function is primarily intended for outdoor use. While it can still be used indoors, the mapping functionality will likely be limited due to lack of a GPS signal. The mapping feature requires an Internet connection during setup.

The Lighting Installer app is used in two distinct stages.

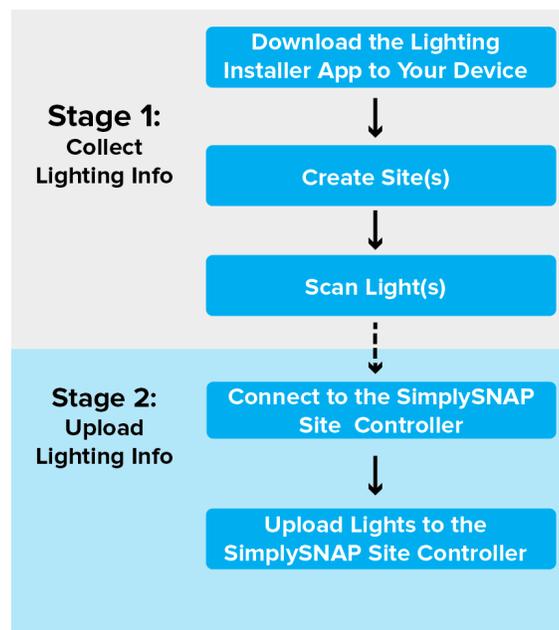
## Collecting Light Information

In the first stage sites are created, then lights are scanned and associated to a site. Once this is complete you upload the collected information to the **SimplySNAP Site Controller**.

You don't have to upload information immediately. One of the benefits of the app is ability to capture the light information before the **SimplySNAP** system is setup.

## Uploading Light Information

The second stage begins after initial setup of the **SimplySNAP Site Controller**. In this stage you upload all the light information you captured in Stage 1 and the **SimplySNAP** system will do the rest!



## Collecting Light Information Using the Lighting Installer App

When you're ready to get started, download and install the **Synapse Lighting Installer** App from the Google Play store. After you first launch the Lighting Installer app, you will need to activate it with the code provided by Synapse. When the app first launches, enter the code and continue.

The Lighting Installer app consists of three main areas, the site list, the individual site pages, and light details pages.

### Site List

The site list is the first thing you see when you open the app, and it contains a list of all of your currently active sites. From here you can rename or delete sites, and export all lights from each site.

### Individual Site Page

Each site is detailed on a page containing a list of all lights scanned into that site, as well as a map view of the site with light locations displayed. Lights that are represented with orange icons are eligible for modification and export, while lights with gray icons have already been exported and cannot be further modified.

### Light Details Page

Each light has a page that includes all vital stats, export errors, and the map location for that light. From this page you can modify light location, MAC address, and controller type. You can also choose to rename, delete or export

the light.

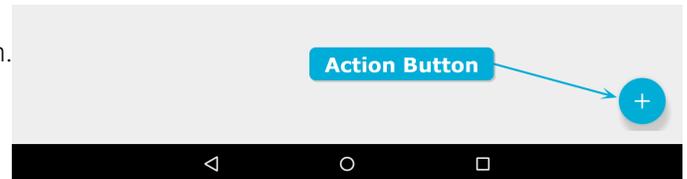
## Adding Sites

The Lighting Installer app allows you to store multiple lighting sites at once. This lets you scan and store light information at any of your project sites and then upload it at your convenience.

**NOTE:** Site information is not uploaded to the site controller. Sites are configured within their individual interfaces, and site information within the app is for local informational purposes only.

### To add a site:

1. Click the action button on the bottom right of the screen. A dialog box will appear prompting you to name and describe the site.



**NOTE:** When you open the app for the first time you will be prompted to create a new site.

2. Start by entering a name for your site. We encourage creativity, but you can name it "Site 1" or whatever, if you like.
3. While not required, you can enter a site description to help you remember the details of the site.
4. Click **Add** and your new site will be created. Once you've created a site, you can start scanning lights!

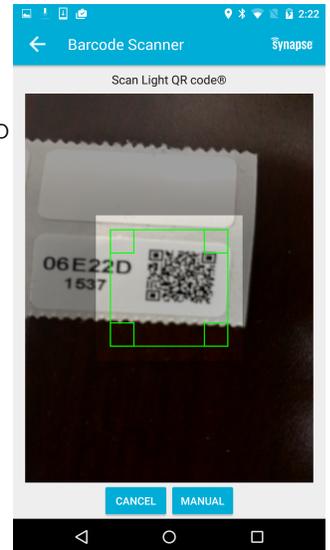
A screenshot of a dialog box titled "Add Site". It has two text input fields. The first field contains "Bay 01" and the second field contains "Eastern Parking Bay". At the bottom right of the dialog box, there are two buttons: "CANCEL" and "ADD".

## Adding Lights to a Site

Once the site is created, you can start scanning in the lights that will make up that site. This is accomplished using the camera on the Android device, and the QR codes conveniently located on each Synapse lighting controller. (If don't have a code to scan, you should skip to the Manual Add section.)

### Using the QR Code Scanner

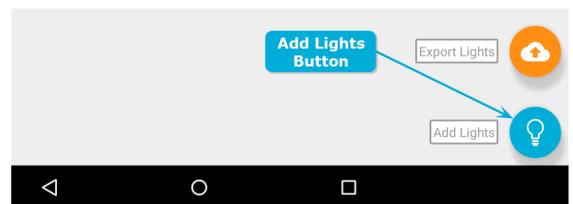
When you tap the action button the screen will change to a QR code scanner. Once the scanner is loaded, simply scan the QR code associated with the first light. You can do this by roughly aligning the white square with the QR code you wish to scan. The scanner will automatically lock on to the code and scan it, so don't worry about pushing any buttons.



**NOTE:** The speed of scanning is dependent on the quality of your mobile device's camera and the ambient lighting. If your device doesn't have auto focus, you may need to use the CSV import or manual methods for entry. See **Importing and Exporting Light Configurations using a .CSV File** on page 54. for more details.

#### To add a light:

1. Tap the site name for the site where the light is being added and the site page will open.
2. Click the action button on the bottom right of the screen.
3. Click the **Add Lights** button and the QR Code Scanner will launch.
4. Scan the QR code for the light you're installing.



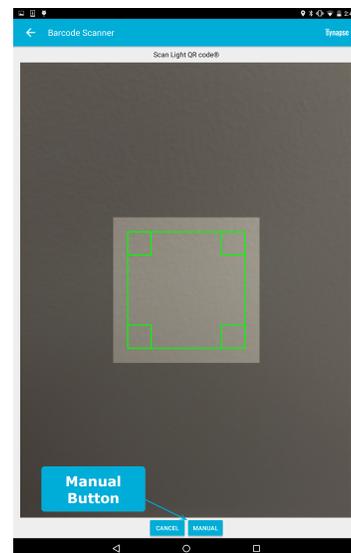
Click **Scan Next** if you need to add more lights or **Done** if you are finished.

## Manually Adding a Light Within The App

If you don't have a QR code for your lighting controller or device is having trouble scanning, you can add the light manually.

1. If you don't have a QR code, you can manually add the light by clicking the **Manual** button.
2. Select the **Controller Type**.
3. Enter the **MAC Address**.
4. Enter the **Latitude** and **Longitude** (optional).
5. Click **Scan Next** if you need to add more lights or **Done** if you are finished.

Once finished, you will be returned to the site page where you will see a new light has been placed in your light list. You can always add more lights using the trusty action button as before.



## Uploading Scanned Lights to SimplySNAP

Now you need to connect to **SimplySNAP**. First, connect the **SimplySNAP Site Controller** to power using the instructions outlined in **Installation and Initial Setup** on page 7.

Next you'll need to access the site controller using the instructions outlined in When you've connected and logged in, you'll be ready to upload the scanned lights.

There are two ways to export lights:

### Option 1

Use the action button on the bottom right of the light list.

1. Tap the **Action** button to see options for exporting lights.
2. A dialog box will appear asking you to confirm. If you are confident in your decision, click **EXPORT** and the light information will be transferred to the site controller.

After the export, you will see a dialog confirming export success or detailing any export failures. Successfully exported lights will turn gray to indicate that they have been exported. You can no longer modify that light because it's now configured from within the SimplySNAP system.

**NOTE:** In the event of an export failure, the lights that failed to export will be displayed in red on the map, and will be marked with an error icon in the light list. You can learn more about the errors by tapping on the light in the list to activate the light details page. The error message will be contained in a field at the bottom of the page and will be marked with a red error icon.

## Option 2

The second way to export lights is from the site list page. Sites with lights available for export will have an orange light bulb icon next to the name. To export lights in this fashion:

1. Tap the triple dot icon at on the far right of the site name to activate a list of actions at the bottom of the screen.
2. The first action on the list is **Export Lights**. Select that option to send your lights on their way.

## Exporting a Single Light

Sometimes you may need to export only one light at a time. Don't worry, this is pretty simple to do.

All you need to do is select the light from the light list or tap on it from the map to open the details page for that light.

### To export a single light:

1. Below the light name tap the export option to send the light to the site controller.
2. Once this happens you will see a dialog confirming that the export process is happening, followed by a confirmation of export or notification of an error.

## Renaming a Site

If you aren't happy with the name of a site, (maybe you named it "Site 1" or something non-descriptive,) it's easy enough to change it.

### To rename a site:

1. Tap the triple dot icon next to the site name.
2. Select the **Rename** option from the list of actions at the bottom of the screen.
3. Enter the new site name and description in this fields provided, and click the **OK** button to confirm the name change, or click the **Cancel** button to exit without renaming the site.

After confirming the new name you will see the change reflected in the site list.

## Deleting a Site

Sometimes things just don't work out, and it's time to say good-bye to a site.

### To delete a site:

1. Tap the triple dot icon on the right of the site name.
2. Select the **Delete Site** option from the list of actions that appear at the bottom of the screen.
3. Confirm that you really want to say goodbye to that site, just in case you change your mind. Once you say yes, the site will be gone from your life forever.

## Moving a Light

When you scan a light into the system, the app uses the built in GPS in your mobile device to automatically place the light wherever you are standing. Sometimes this might not be where the light actually needs to be located, but don't stress, we've got you covered.

### To move a light:

1. Select the light from the light list or tap on it from the map to open the details page for that light.
2. Tap the light's icon on the map. The icon will change to a movement arrow.
3. Drag the light to its new location and drop it where it needs to be and the light's location will be automatically updated.

## Renaming a Light

If you need to change a light name, select the light from the light list or tap on it from the map. This will open the details page for that light.

1. Select the **Rename** option from the list of actions at the bottom of the screen.
2. Enter the new light name and description in the fields provided, and click the **OK** button to confirm the name change, or click the **Cancel** button to exit without renaming the light.

## Site Configuration Using a CSV File

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If the Lighting Installer app isn't an option for you, the next most efficient means of site configuration is a comma separated value (CSV) file. SimplySNAP can export an existing lighting setup to .CSV, which you then edit in a spreadsheet or text editor. Once new lights are added in, you can import the .CSV file with the new lights added.

For information on creating the initial .CSV file, see **Importing and Exporting Light Configurations using a .CSV File** on page 54.

**To configure a site using a .CSV file:**

1. Click the **Export Lights** button to generate the initial .CSV file.
2. Open the .CSV file. You'll notice 12 column headings corresponding to the configuration information for lighting controllers.

Field Name	Description	Acceptable Input Values
* name	The user defined name of the light.	A string of characters
* snapaddr	The 6 or 16 digit SNAP Address for the light, in hex format. (For example, 1cd2e3 or 001c2c1b2606e458.)	Six digits
* type	The type of light controller that is being configured.	Acceptable values are:  DIM10-087-00 DIM10-087-04 DIM10-100-00 DIM10-250-11 DIM10-281-21 DIM10-283-20 LP001-001 LP002-001 LP150-00 OCF01-10T OCF01-1RT TL5-B1
description	A general description of the light.	A string of characters.

Field Name	Description	Acceptable Input Values
zones	The groups this light is included in. All lights are always included in the "All" group. Up to eight additional zones may be configured.	List Zone names separated by the   character.  For example: Zone 1 Zone 2
* power_on_level	The brightness level for the light when power is cycled, provided the light supports dimming.	A number, 1 - 100 (Default is 80)
* slot	Reserved for future use.	0
y	The geographic longitude for the light.	A single longitude entry
x	The geographic latitude for the light.	A single latitude entry
location_id	A user defined location id, such as pole number, office number, etc.	A string of characters
street_address	The street address where this light is located.	A string of characters
* antenna_compensation	Determines the power of communication signals transmitted from the Lighting Controller. (Use 'North America' if you do not know what to use.)	North America CE

\* Indicates a Required Field

**NOTE:** Field names don't necessarily correspond to what you'll see in the user interface.

3. Enter each new light as a separate row in the .CSV file. When all lights are entered, save the file, click the **Import Lights** button, and follow the on-screen instructions to upload the new lights.

## Basic Site Configuration

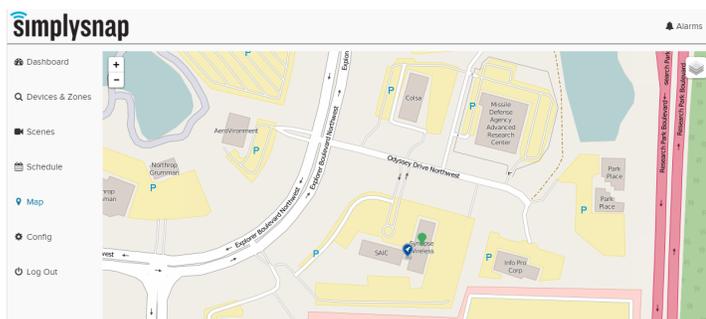
After establishing connectivity to the site controller, the following steps should be taken to initially configure the system for controlling lights.

## Configure the site controller's location and time settings:

The location of the site controller may be entered by navigating to the **Config** page, clicking the **Location & Time** tab, and entering the correct longitude and latitude. The system time and time zone may also be entered in the **Location & Time** tab.

If the site controller is connected to the internet via a LAN connection, the **Map** page will display the correct location of the site controller on a map overlay.

If the site controller will not have continuous Internet access, you should enable the offline map by clicking the **Enable** toggle under the **Offline Map** heading, and then clicking the **Update** button. This will download the map of your installation for use when Internet access is not available.



After entering this information, click **Save Changes** at the bottom of the page.

**Location & Time**    Change Login    HTTPS    Network Settings

Site Controller Location

Latitude:

Longitude:

Offline Map

Enable    Disable    Update

System Date & Time

System Date & Time: 01/29/2016 03:04 PM

System Time Zone: US/Central

New Date & Time:

New Time Zone:

Save Changes    Cancel

## Configure the Login information for the site controller:

You should next change the default username and password to a custom username and password. Click **Config** in the left menu bar, then click the **Change Login** tab. You can then change the username and password by following the on-screen instructions.

The rest of the configuration options are best performed after the site is configured.

## Configuring Zones, Sensors, Lights, and Scenes

Now that basic setup is complete, you can add lights and sensors and group them into zones and scenes.

### Adding Zones

A zone is a grouping of related devices. They provide an easy way to group lights that you want to control in a similar fashion. If you plan to use sensors to control light behavior, the sensors will issue commands to specified zones. For

example, you may want to group all security lights into a separate zone from the parking lot lights. These groupings allow behaviors to be applied across multiple lights at once.

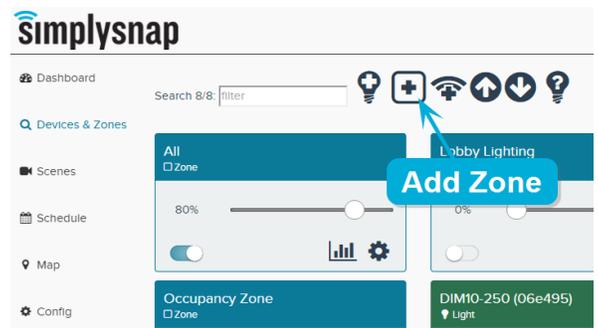
Each zone is defined by three fields:

**Table 1: SimplySNAP Zone Fields**

Name	Description
Zone Name	A descriptive name for the zone being configured.
Zone Description	A description for the zone.
Behavior	The behavior the zone will invoke when it is activated.

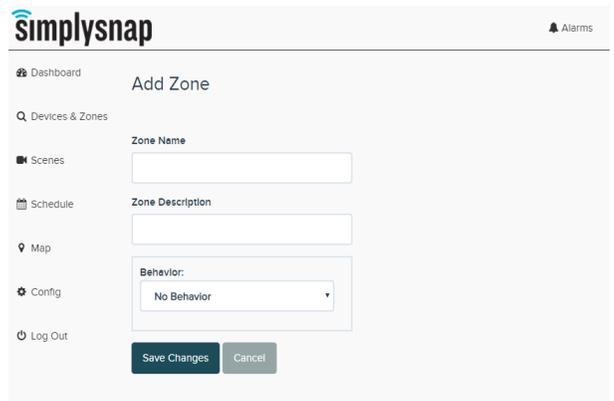
**To add a new zone:**

1. Click the **Devices & Zones** menu choice in the left menu panel, then click the **Add Zone** icon near the top of the page.



2. Enter the desired **Zone Name** and **Zone Description** in the provided fields.
3. The **behavior** field represents the state for the zone when it is invoked, and can be set to **Off**, **On**, or **Dimmer**, or to a sensor related behavior. Zones can be reconfigured once they're created, so if you're planning to use a sensor for control, just select **On** for now.

(For specific information on behaviors, see **Adding Sensors and Switches** on page 28.)



Select the desired state, and if that state is **Dimmer**, enter the light level in the **Level** field as a percentage from 0 to 100%.

- Click the **Save Changes** button to save, or the **Cancel** button to exit without saving changes. On a successful save, a blue zone panel for the newly added zone will appear in the content area of the **Devices & Zones** page.

## Information Fields for Lights and Sensors

Lights and Sensors each have configurable characteristics that define their operability within the **SimplySNAP** lighting system. Fields marked with an \* are mandatory. All other information is optional.

**Table 2: SimplySNAP Light Fields**

Name	Description
Name*	The user defined name of the light.
SNAP Address*	The 6 digit SNAP Address for the light, in hex format. (For example, 1CD2E3.)
Controller Type*	The type of light controller that is being configured.
Light Slot*	Index indicating which light on the controller this object applies to.
Light Description	A general description of the light.
Zones	The groups this light is included in. All lights are always included in the "All" group. Up to eight additional zones may be configured.
<b>Location Submenu</b>	
Latitude	The geographic latitude for the light.
Longitude	The geographic longitude for the light.
Location ID	A user defined location id, such as pole number, office number, etc.
Street Address	The street address where this light is located.
<b>Advanced</b>	
Initial Level	The brightness level for the light when power is cycled, provided the light supports dimming.
Jitter	A delay, in seconds, before this light applies a behavior. This is used in situations where you do not want the sudden electrical current draw that is associated with turning on all lights at one time, or for aesthetics (staggered on/off sequence).
Antenna Compensation	Determines the power of communication signals transmitted from the Lighting Controller. (Use 'North America' if you do not know what to use.)

Sensor Fields are much the same as Lighting fields, with only a few minor exceptions.

**Table 3: SimplySNAP Sensor Fields**

Name	Description
Name*	The user defined name of the light.
Sensor Type*	The function of the sensor. Acceptable types are Motion, Photocell, Switch (Pushbutton), and Switch (Toggle).
SNAP Address*	The 6 or 16 digit SNAP Address for the light, in hex format. (For example, 1cd2e3 or 001c2c1b2606e458.)
Controller Type*	The type of light controller that the sensor is paired with.
Sensor Slot*	Index indicating which sensor on the controller this object applies to.
Sensor Description	A general description of the sensor.
Threshold High*	The signal level that, when exceeded, will trigger an "above threshold event," such as a photocell triggering a light to turn off.
Threshold Low*	A signal level below this point will trigger a "below threshold event," such as a photocell triggering a light to turn on.
Zone	The grouping of lights this sensor will control. All lights are always included in the "All" group, and up to eight additional zones may be configured. While a light may be part of multiple zones, a sensor can only be in and control one zone.
<b>Location Submenu</b>	
Latitude	The geographic latitude for the light.
Longitude	The geographic longitude for the light.
Location ID	A user defined location id, such as pole number, office number, etc.
Street Address	The street address where this light is located.
<b>Advanced</b>	
Jitter	A delay, in seconds, before this light applies a behavior. This is used in situations where you do not want the sudden electrical current draw that is associated with turning on all lights at one time, or for aesthetics (staggered on/off sequence).
Antenna Compensation	Determines the power of communication signals transmitted from the Lighting Controller. (Use 'North America' if you do not know what to use.)

## Adding Lights

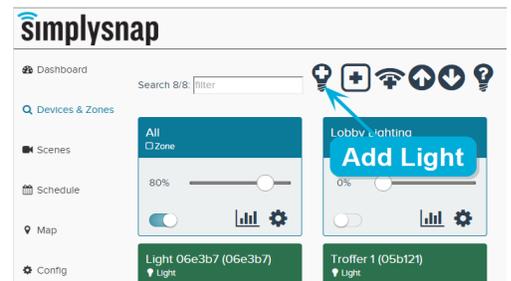
To manually add a light, access the **SimplySNAP** dashboard and then click the **Devices & Zones** menu choice in the Left Menu Bar.

**NOTE:** If you are using the Lighting Installer app, this information will be provided by the app.

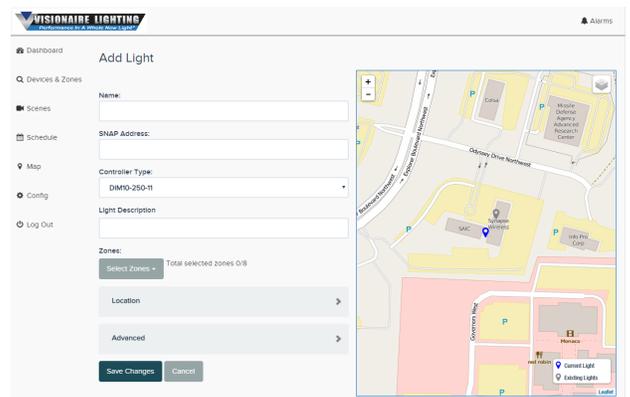
**NOTE:** If you are adding a new light or sensor to an existing **SimplySNAP** installation, you'll first need to change the installation's channel, network ID, and encryption settings back to their default values. This can be accomplished by clicking **Config** in the left menu bar, and then selecting the **Network Settings** tab. The default settings are Channel:1, Network ID: d110, and encryption and storm suppression disabled. Once the new light is added, you'll want to change the settings back to your chosen settings and off default.

### To add a new light:

1. Click the **Devices & Zones** menu choice in the left menu panel, then click the **Add Light** Icon near the top of the page.
2. Enter the desired name for the light, the **SNAP** Address for the light controller and the controller type into the provided fields. This information is required as a minimum. Other information may be entered as desired including a description, the zones the light will be included in, light location, etc. You can also position a light using the map view by clicking and dragging the light bulb icon to reposition the light. (Fields are summarized in **Information Fields for Lights and Sensors** on page 25. .)
3. Click the **Save Changes** button to save, or the **Cancel** button to exit without saving changes. On a successful save, a green light panel for the newly added light will appear in the content area of the display.



Each light is added individually by invoking this dialog to add additional lights. When all lights are entered, **SimplySNAP** will verify that your lighting controller(s) software is up-to-date, and update the controller(s) if necessary. **SimplySNAP** will then be ready to control your lighting system.



When a light is entered, it can be controlled from the **Lights and Zones** page. All lights can be controlled by clicking the **On/Off** switch on the blue "All" zone icon or dragging the slider to a specific illumination level.

Each individual light may be controlled similarly by clicking the **On/Off** switch on the green icon for each individual light or dragging the slider to create a specific brightness level for each light.

## Adding Sensors and Switches

Sensors and switches contribute to the "intelligence" of your lighting system. With sensors in place your system will be able to respond to events such as a person entering or leaving the area. Switches can act as a manual way to activate lights without needing to log in to the **SimplySNAP** interface.

To add a sensor or switch access the **SimplySNAP** dashboard and then click the **Devices & Zones** menu choice in the Left Menu Bar.

### To add a new sensor or switch:

1. Click the **Add Sensor** Icon near the top of the page.
2. Enter the desired name for the sensor or switch, the SNAP Address for the lighting controller the sensor or switch is attached to, and the controller type into the provided fields. You'll also need to select a sensor type from the Sensor Type drop-down list.
3. In the **Zone** field, enter the Zone that the sensor will affect.



**NOTE:** A zone can only have one photocell sensor.

4. Steps 2 and 3 are required as a minimum. Other information may be entered as desired including a description and location. The Threshold High and Threshold Low fields are used to fine tune the sensitivity of attached sensors, but only for cases of weak sensor response. Most sensors work fine with default settings.
5. Click the **Save Changes** button to save, or the **Cancel** button to exit without saving changes.
6. On a successful save, an orange sensor panel for the newly added sensor will appear in the content area of the dashboard.
7. At this point you'll need to configure how the sensor will control your lighting. Click the **Devices & Zones** menu choice in the left menu panel, then click the gear icon for the zone where you placed your sensor.
8. Click the Behavior drop-down and select the Behavior that corresponds to your desired control mode, then click the **Save Changes** button to save, or the **Cancel** button to exit without saving changes.

The specified behaviors are:

**Table 4: Behaviors**

Name	Activity
No Behavior	No sensor or switch based changes will be made to the zone.
On	When the On behavior is triggered, the zone is switched on with all lights at 100% brightness.
Off	When the Off behavior is triggered, all lights within the zone are turned off.
Dimmer	When the dimmer behavior is set, the lights are always on at a specified brightness level.

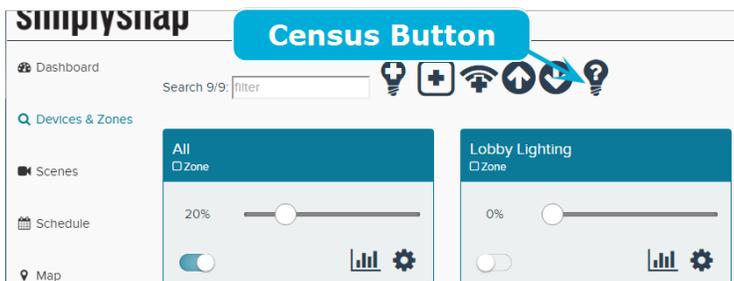
Name	Activity
Occupancy-only	In an occupancy only scenario, the lights within a defined zone are brought up to a defined brightness when an occupancy sensor detects motion. When motion is no longer detected after a user defined time, the zone is transitioned to a second brightness level and a new vacancy count is started. If no motion is detected after a second user defined time, the zone is transitioned to a 3rd state. For example, a zone might be set to bring the lights up to 80% brightness when motion is detected. They stay illuminated as long as motion is detected. When motion hasn't been detected for five minutes, the lights will dim to 40% brightness. If another five minutes passes without motion, the lights are dimmed to off.
Photocell-only	When the photocell-only behavior is selected, the lights will be transitioned to a preset brightness when night is detected by the corresponding photocell. When daylight is detected, the lights will turn off.
Switch-only	Just like the light switches you grew up with. The lights are turned on when the on button is pushed, and they're turned off when the off button is pushed.
Switch and Occupancy	This behavior is like the preceding switch, photocell and occupancy behavior, but both the switch and occupancy sensor can control the lights. This can be useful in areas that receive some natural light, but more light is needed.
Switch and Vacancy	Lights are activated via switch only. When motion is no longer detected in the area a countdown will start. When the countdown reaches zero, the lights will turn off. Further movement in the area will not trigger the lights nor reset the timer.
Switch Control with Blink Warning	This is essentially a light with a timer. When a switch is pressed, the zone will be brought up to a specified level for a user configured amount of time. When the timer expires, the lights will blink to alert occupants and then begin a user defined countdown. When the timer reaches zero without a new button push, the lights will be turned off.
Photocell and Occupancy	Lights within the Zone are switched off during the day. At night, the lights will be switched on when motion is detected. When motion is no longer detected, the lights will be transitioned as described under "Occupancy-only" control.
Photocell and Switch	This behavior is much like the switch-only behavior, but the lights can only be switched on at night.
Switch, Photocell and Occupancy	This is one of the most energy efficient settings. Lights will be switched off during the day. During the night, the lights will switch on when motion is detected, and step down like the occupancy-only scenario above when motion is no longer detected. Additionally, the lights can be manually brought up to a specified brightness level through the use of a <b>SimplySNAP</b> enabled switch.
Switch, Photocell, and Vacancy	Lights are activated via switch. When motion is no longer detected in the area a countdown will start. When the countdown reaches zero, the lights will turn off. Further movement in the area will not trigger the lights nor reset the timer. Lights will not activate if daylight conditions are in effect.

## Discovering Unconfigured Devices

**NOTE:** Before proceeding, make sure all of your lighting controllers are properly installed and power is applied.

You can click the **Unconfigured Devices** icon on the **Devices & Zones** page to perform a "census" of the unconfigured **SimplySNAP** devices on your channel and network ID. These devices will appear in a list to provide you with an easy way to configure them.

If you are adding several devices in this manner, we recommend that you perform the census two or three times to ensure that all devices were discovered.

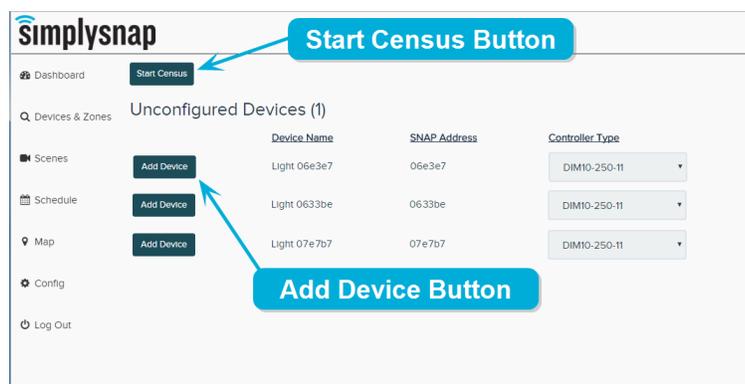


### To perform a census of unconfigured devices:

1. Click the **Devices & Zones** menu choice in the left menu panel, then click the **Census** icon.

2. Click the **Start Census** button at the top of the screen. SimplySNAP will begin to search for unconfigured devices in your network.

3. If unconfigured devices are discovered, you will be presented with a list of the devices. To add a device to your network, click the **Add Device** button to the left of the device you wish to add. The new device will appear in a pane on the **Devices & Zones** page.



**NOTE:** If the lighting controller does not automatically identify its type as part of the census, you can manually select the proper type using the drop-down menu.

4. Once the device is loaded, you can edit it as you would any other device. For more information on editing devices, see **Working with Lights, Sensors, Zones, and Scenes** on page **44**.

## Adding Scenes

A scene is a grouping of zones, with specified behaviors for each of those zones. This allows you to issue commands to a number of lights where each light is at a different brightness or activation method. For scenes to be useful, you must first group lights into zones, and the scene will issue instructions via those zones.

To add a scene access the **SimplySNAP** dashboard and then click the **Scenes** menu choice in the Left Menu Bar.

**NOTE:** A scene can control up to eight zones.

**To add a Scene:**

1. Click the **Add Scene** button at the top left of the screen.
2. Enter a **Name** and **Description** for the Scene in the fields provided.
3. Click the **Add New** icon underneath the **Zone & Behaviors** heading.
4. Click the **Select Zones** button, then click the checkbox for the zone you wish to assign a behavior to.
5. Click the **Behavior** drop-down and select the behavior that will be activated on the selected zones with the scene is invoked. This behavior is configured the same way as the individual light behaviors outlined in the Behaviors Table. (See **Adding Sensors and Switches** on page **28**. on page **1** for more information on behaviors.)
6. If you wish to have the scene affect other zones, click the **Add New** icon again, and repeat steps 4 and 5 until you've defined behaviors for each of the zones you wish to affect.
7. Click the **Create Scene** button to create the scene, or the **Cancel** button to exit without creating the scene.

# Logging In and Navigating SimplySNAP

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To access the SimplySNAP User Interface, enter the IP address for your SimplySNAP site controller into the address bar of a web browser on the same network. You will be prompted to enter a username and password for access.

## The Dashboard

---

After successfully logging in, you will see the SimplySNAP dashboard. The dashboard provides an overview of the components that make up your SimplySNAP system.

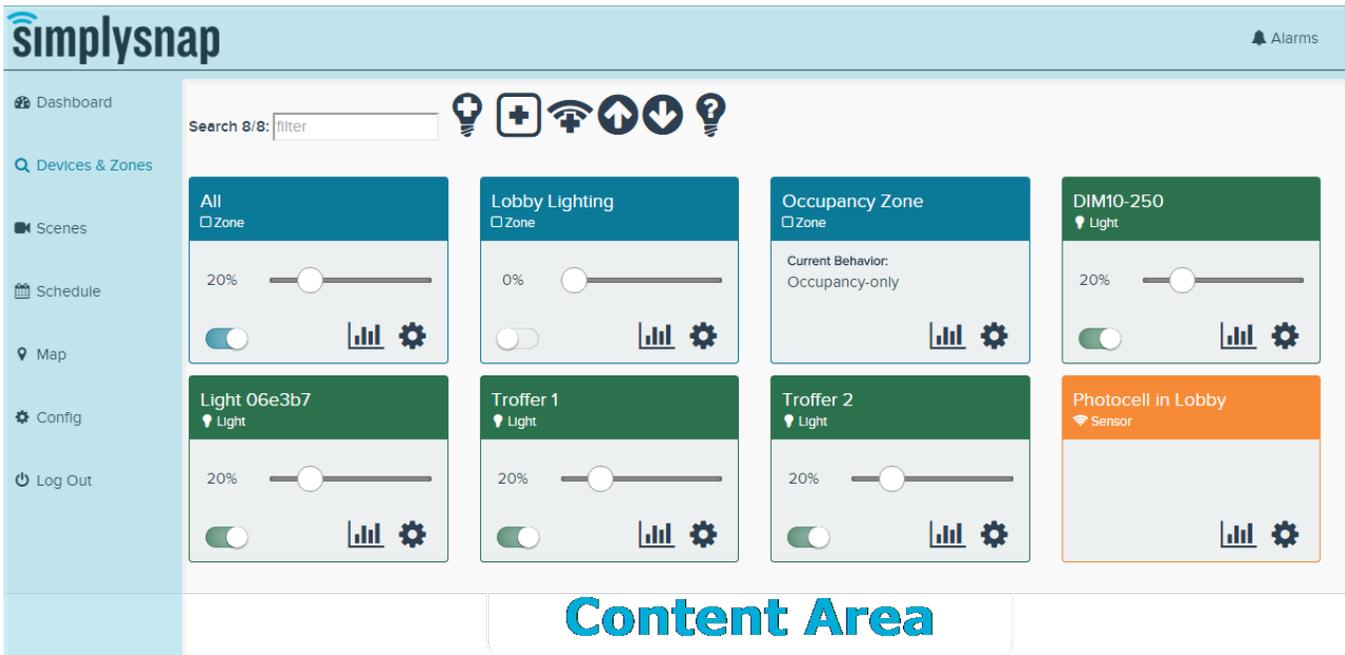


The dashboard consists of three distinct areas:

- Content Area
- Title Bar
- Left Menu Bar

## Content Area

The Content Area contains the active interface screen. The Content area changes depending on which icons and menu choices you select in the other control areas.



## Title Bar

The Title Bar is always present at the top of the screen, and displays active alarms in the upper right corner. Clicking the **Alarms** icon will load the **Alarms** page.



## The SimplySNAP Logo

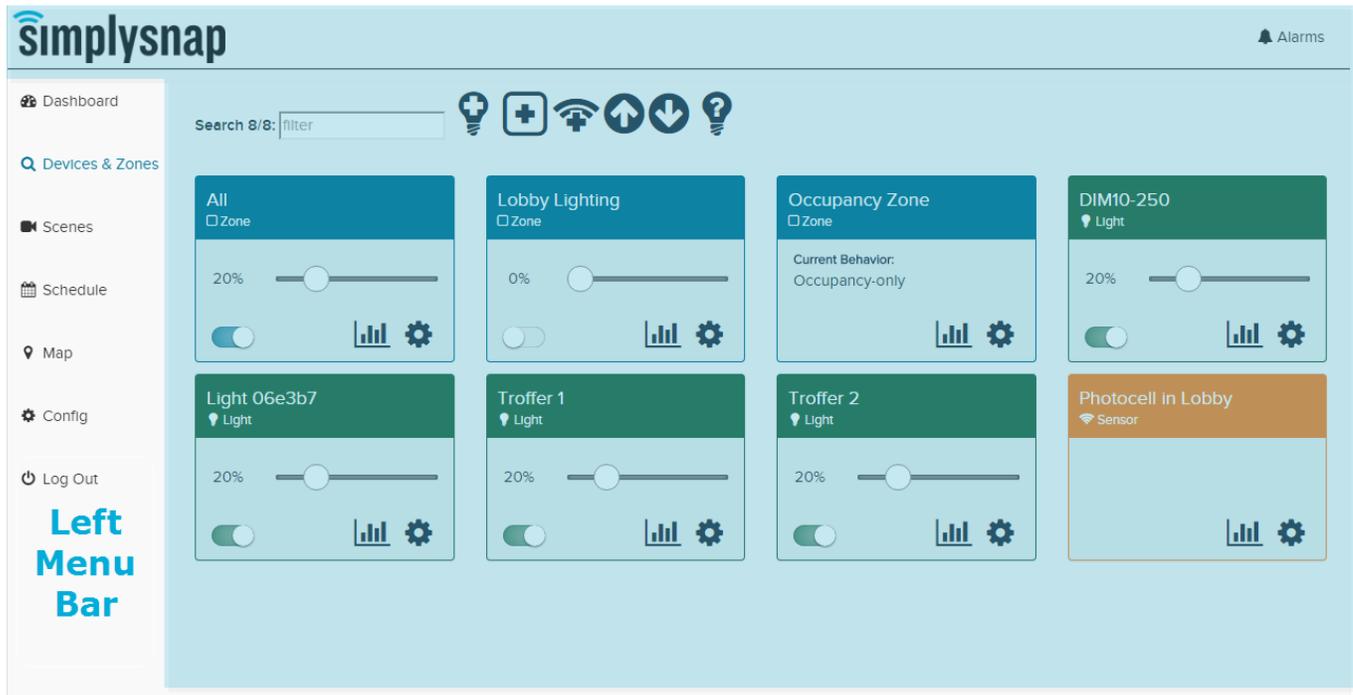
Clicking the SimplySNAP Logo will always return you to the main Dashboard screen.

## The Alarms Icon

Clicking the Alarms Icon will load the Alarms page.

## Left Menu Bar

The Left Menu Bar is the main interaction point within the SimplySNAP user interface, and it consists of six menu choices:



## Dashboard

Clicking the **Dashboard** menu choice will always return you to the main dashboard screen.

## Devices & Zones

Clicking the **Devices & Zones** menu choice loads a list of currently configured lights, sensors, switches, and zones into the Content Area. Any operations pertaining to lights and zones are performed from this menu choice, including adding, operating, and deleting lights and zones.

## Scenes

Clicking the Scenes menu choice loads a list of currently configured scenes, and provides a mechanism for creating new scenes.

## Schedule

Clicking the **Schedule** menu choice loads a calendar display of currently scheduled events into the Content Area. Any operations pertaining to schedules are performed from this menu choice.

## Map

Clicking the **Map** menu choice loads a map of the SimplySNAP installation showing the configured lights and site controller. If an Internet connection is available, a background map based on the latitude and longitude of the site controller will also be shown.

## Config

Clicking the **Config** menu choice displays general system information and allows configuration of all system settings.

## Log Out

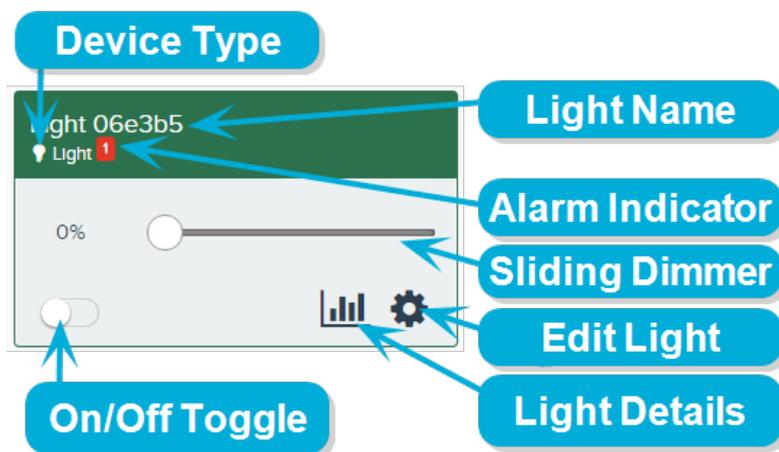
Clicking the Log Out menu choice will immediately log you out of the SimplySNAP interface and return you to the login screen.

## Panels

---

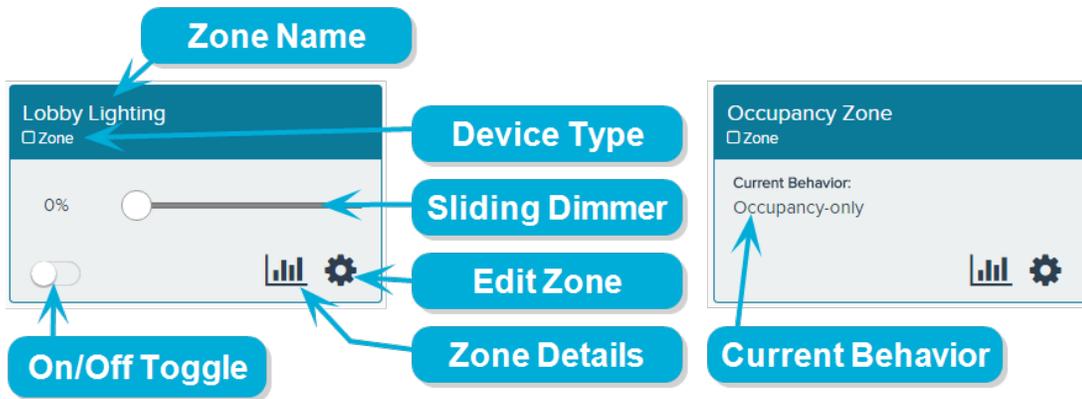
The panels in the Content Area of the Devices and Zones page denote the devices and zones currently deployed into your SimplySNAP system. The green panels with a light bulb in the upper left corner represent individual lights. The blue panels with a rounded square icon in the upper left represent a zone composed of one or more lights, and the orange panels with a wireless icon represent individual sensors.

The light panel consists of six parts:



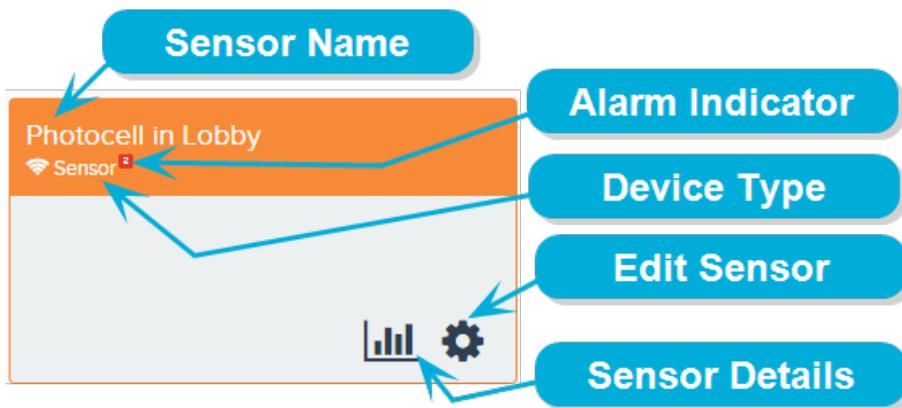
<b>Light Name (and SNAP Address)</b>	Displays the name and SNAP address of the light.
<b>Device Type</b>	An icon and descriptor for the device the panel represents.
<b>Alarm Indicator</b>	Appears when an Alarm is active on the listed light, and acts as a link to the Alarms page when an alarm is active.
<b>Sliding Dimmer</b>	Allows you to set the light to a brightness level between 0 and 100%.
<b>Edit Light</b>	Allows you to edit the configuration of the light.
<b>On/Off Toggle</b>	Allows you to turn the light on or off.
<b>Light Details</b>	Clicking this icon displays the status information for the light. This will include a graph of historical power consumption for lights equipped with power monitoring lighting controllers.

The zone panel consists of up to seven parts:



Zone Name	Displays the name of the zone.
Device Type	An icon and descriptor for the device the panel represents.
Current Behavior	If the zone does not have an on, off, or dimmer behavior configured, the currently configured behavior will be shown here.
Sliding Dimmer	If the zone has an on, off, or dimmer behavior configured, the sliding dimmer will allow you to set a light zone to a brightness level between 0 and 100 %.
Edit Zone	Allows you to edit the configuration of the zone
On/Off Toggle	If the zone has an on, off, or dimmer behavior configured, the On/Off toggle will allow you to turn all the lights in a zone on or off.
Zone Details	<p>Clicking this icon displays status information for the zone. This will include a graph of historical power consumption for all lights within the zone that are equipped with power monitoring lighting controllers.</p> <p><b>NOTE:</b> The zone power consumption shown only reflects the average power information for light controllers that support power monitoring.</p>

The Sensor Panel consists of three parts:



<b>Sensor Name</b>	Displays the name of the sensor.
<b>Alarm Indicator</b>	Appears when an Alarm is active on the listed sensor.
<b>Device Type</b>	An icon and descriptor for the device the panel represents.
<b>Edit Sensor</b>	Allows you to edit the configuration of the sensor
<b>Sensor Details</b>	Clicking this icon displays status information for the sensor.

## Operations

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SimplySNAP is typically installed in environments where it is programmed once and set to run autonomously with very little interaction. However, it does allow active control of lighting via the user interface.

### Filtering the Dashboard

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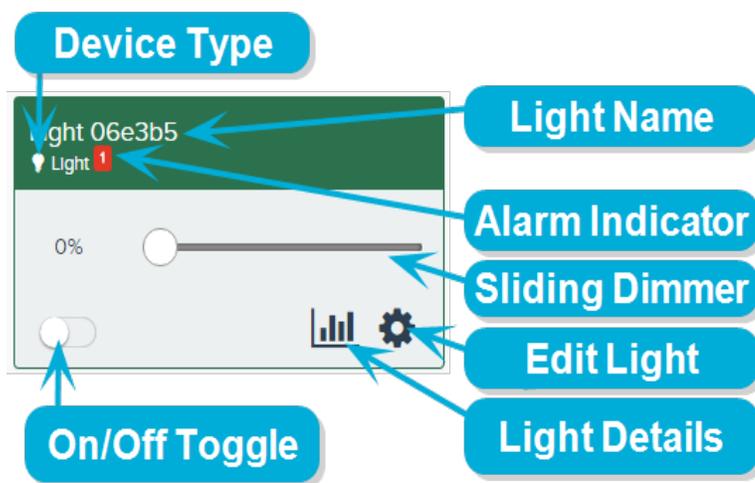
The listing of devices and zones can be filtered using the **Search** field near the top of the screen. Filtering can be by light name, SNAP address, or object type (light, zone, or sensor.)

### Activating, Deactivating and Dimming Lights

---

From time to time you may have a need to manually activate or deactivate a light. To do this, access the SimplySNAP user interface, click the **Devices & Zones** icon in the left menu panel, and locate the light panel for the light you wish to control.

The light may be switched on and off using the toggle switch in the lower left of the light panel, while dimming can be controlled using the slider switch in the center of the panel.



Likewise, an entire zone can be changed using the toggle and slider on a zone panel.

### Invoking a Scene on a Preconfigured Set of Zones

---

Scenes allow you to manually change the behavior of a number of zones with a single click. To activate a scene, click the **Scenes** menu choice in the left menu bar, then click the **Apply Scene** button next to the scene you wish to activate.

## Viewing the Status of a Light or Site Controller

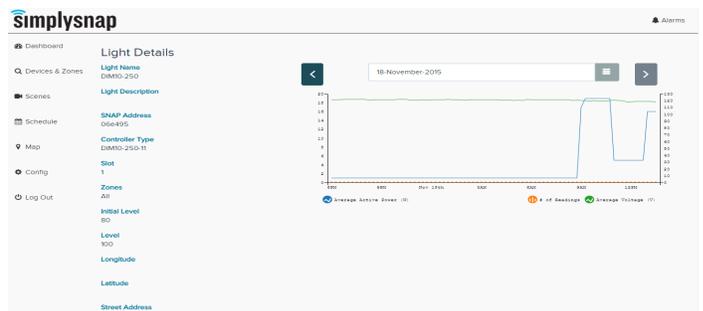
You can determine if a given light is on or off using the SimplySNAP map. To do this, access the Map content area by clicking the **Map** icon in the left menu bar. This will display a map of your SimplySNAP location along with icons for the configured lights and site controllers. Clicking the icon for a light or site controller will provide a status update for that item, including whether it is on or off.

## Viewing Details of a Light or Zone

You can view configuration information for a light or zone, by finding its corresponding panel on the dashboard and clicking the bar graph icon.

## Viewing Power Consumption of a Light

Lights equipped with power monitoring enabled controllers maintain an active record of the power consumed by lights attached to the controller. This information is presented in the **Light Details** page, which is accessed by clicking the bar graph icon on the light pane you wish to view.



## Viewing a SimplySNAP Installation in Map View

For sites with an active Internet connection, SimplySNAP provides a background map based on the latitude and longitude of the site controller. The Map view may be configured for a street map style view, or a satellite image of your SimplySNAP location. You may also choose to show lights and site controllers on the map, or eliminate one or both device types as you desire.

For installations where an active Internet connection won't be available, you can still download a map and store it on the controller and get the same effect.



The Map view can be locked and unlocked using the **Lock/Unlock** button at the top of the screen. Setting the button to the Lock state prevents users from accidentally repositioning lights during normal use. When set to the Unlock

state, you can reposition any light configured with a latitude and longitude by dragging and dropping it on the Map view.

Lights that have been added to the Map view using the **Edit Light** function can be repositioned by dragging and dropping provided the page is unlocked.

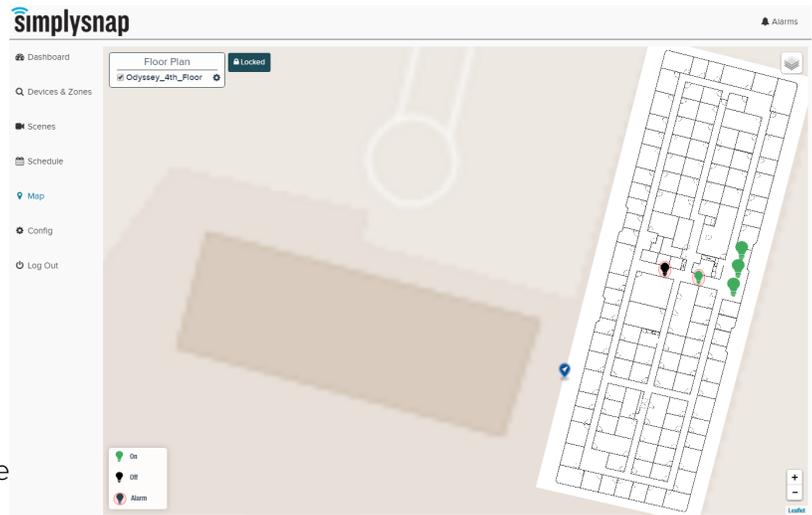
View options can be configured by clicking the **Layers** button in the upper right corner of the Map and selecting your desired level of detail. Lighting icons indicate the status of each of the lights, including which ones are on, off, or in an alarm state. You can also get details of a specific light by clicking the bar chart icon in the lower left of the light status display.

## Adding a Custom Floor Plan to the Map

If you'd like more specific detail for your maps page, you can upload a custom floor plan image in .PNG or .JPG format. This image is placed on top of the maps image to allow you to take maximum advantage of the feature.

### To upload a custom floor plan:

1. Click the **Map** icon in the left menu bar to display the currently configured map. This will be based on your latitude and longitude settings from the Site Controller Location area at Config - Location & Time.
2. Click the **Add Floor Plan** button and select the image you want to upload, then click **Open**. The image will appear superimposed on the current map image.
3. Use the red circles at the corner of your image to rotate and size it appropriately to where you want it to appear on the map, then click **Save Floor Plan**.



## Editing or Deleting a Custom Floor Plan

You can turn the custom floor plan image on and off using the check box to the left of the floor plan name. If you'd like to reposition the image within the maps view, you can accomplish it using the instructions below.

### To edit or delete a custom floor plan:

1. Click the **Map** icon in the left menu bar to display the currently configured map.
2. Click the **Gear** icon to the right of the custom floor plan image name.

3. Reposition the image as necessary, then click the **Save Floor Plan** button. You can also delete the image using the **Delete Floor Plan** button in the top right of the screen.

## Logging out of the SimplySNAP User Interface

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When you've completed your desired lighting operations, you can log out of the SimplySNAP user interface using the **Log Out** option in the lower left bottom corner of the left menu panel.

## Administration

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SimplySNAP is designed to require very little maintenance, but from time to time you may need to reconfigure the system as your needs evolve.

### Performing a Site Census

---

The **Census** button located on the **Devices & Zones** page detects unconfigured devices that share your channel and net ID, ensures all devices are updated to the latest firmware, and optimizes communication within the network, all with a single click.

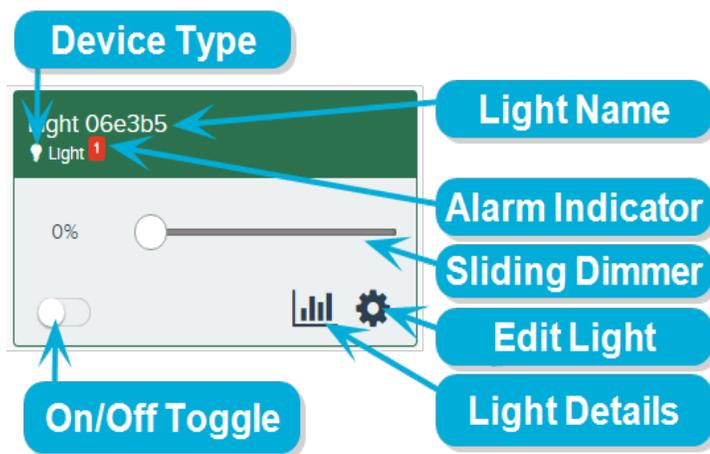
As a general practice, we recommend that you click the **Census** button at least once before logging out of SimplySNAP to help ensure everything is running at peak efficiency.

### Working with Lights, Sensors, Zones, and Scenes

---

#### Editing a Light or Sensor Setting

To edit a light or sensor, search for the corresponding panel on the SimplySNAP dashboard, and click the **Gear** icon in the lower right corner of the panel.



**NOTE:** Using the search field provides an efficient way of finding the specific light or zone of interest. Simply start typing any unique identifiers for the light or zone and the display will immediately update with the relevant results.

**NOTE:** When editing a light, it can be positioned or repositioned on the Map view by dragging and dropping it on the map view on the right of the **Edit Light** page.

## Editing Zone Settings

To edit a Zone's settings, click the **Gear** icon in the panel for the zone you wish to edit.

## Adding Lights to Zones

A light can belong to multiple zones, and will be affected by each command issued to any zone that the light is a member of. If you need to add zones to a number of lights, it may be easier to import a .CSV file. For more information on doing this, see **Backing up and restoring a system configuration** on page **52**.

### To add a light to a zone:

1. Click the **Devices & Zones** icon in the left menu bar.
2. Locate the panel for the light you wish to add to a zone, and click the **Gear** icon in the lower right of the light's panel.
3. Click inside the **Zones** field and a drop-down menu will appear with available zones to select from.
4. Select the zone to add the light to.
5. Click the **Save Changes** button at the bottom of the screen to complete the changes, or the **Cancel** button to exit without saving.

## Deleting a Light or Sensor

To delete a light or sensor, click the **Gear** icon on the light or zone you wish to delete to load the **Edit** screen. Within the **Edit** screen, click the **Delete Light** button in the upper right of the content area.

**NOTE:** An unconfigured or deleted light will still respond to **Zone - All** commands.

## Deleting a Zone

You can delete a zone by clicking the **Devices & Zones** menu choice in the left menu panel, and then clicking the **Gear** icon for the zone you wish to delete. When the **Edit Zone** window appears, click the **Delete Zone** button in the upper right of the screen and then click the **Delete Zone** confirmation button.

## Editing a Scene

To edit a scene, click the **Scenes** menu choice in the left menu bar, then click the **Gear** icon next to the scene you wish to edit.

## Deleting a Scene

To delete a scene, click the **Scenes** menu choice in the left menu bar, click the **Gear** icon next to the scene you wish to delete, then click the **Delete Scene** button.

**NOTE:** Making changes to several lights at once can cause certain lights to be unresponsive during the update. This is a short term situation that doesn't last long. An animated icon will be displayed on the **Devices & Zones** page during the update process.

## Limiting User Ability to Add, Edit, and Delete Scenes

In situations where multiple people are using the scenes functionality, you can limit their menu choices by clicking the **padlock** icon in the upper right corner of the **Scenes** window. This will place SimplySNAP into Operational mode and remove the **Apply Scene**, **Add Scene**, and **Edit Scene** choices until the padlock icon is clicked again.

## Scheduled Events

Scheduled events provide a great deal of flexibility to your lighting operations. The schedule is defined through events, which are scheduled instructions for activating a behavior at a specified time, within a specified zone. Events can be configured for any time of the day on any day or days of the week.

Scheduled events are performed from the **Schedule** content area which is accessed by clicking the **Schedule** icon in the left menu bar.

	Sun 4/3	Mon 4/4	Tue 4/5	Wed 4/6	Thu 4/7	Fri 4/8	Sat 4/9
09:00 am	All on at 9AM						
Behavior	On	On	On	On	On	On	
Zone	All	All	All	All	All	All	
11:00 am	Dim for Lunch						
Behavior	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	
Level	20	20	20	20	20	20	
Zone	All	All	All	All	All	All	
01:00 pm	Back to Work						
Behavior	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	
Level	80	80	80	80	80	80	
Zone	All	All	All	All	All	All	
03:00 pm	Dim at 3:00	Off at 4 on Friday					
Behavior	Dimmer	Dimmer	Dimmer	Dimmer	Dimmer	Off	
Level	40	40	40	40	40		
Zone	All	All	All	All	All	All	
05:00 pm	All Off at 5PM						
Behavior	Off	Off	Off	Off	Off		
Zone	All	All	All	All	All		

## Adding an Event

Events are scheduled times for lights or zones to be switched on, off, or dimmed.

### To add an Event:

1. Click the **Schedule** icon in the left menu bar. This will present a calendar showing currently scheduled events.

2. Click the **Add Event** button to load the **Add Event** window.
3. Enter a name for the event in the provided field.
4. Select the **Event Zone** for this event. This is the zone that will be affected at the event time.
5. Enter the time you want the event to trigger. This can be a specific time that is entered using the **Start Time** clock, or a less specific time such as dawn, noon, or dusk, entered using the **Event Time** drop-down. Note that if you're using a less specific time you'll be given the option to input a positive or negative offset in minutes. This will allow you to schedule events for times like "Five minutes before sunset" or "Eight minutes after noon."

If you are scheduling an offset, events happening before the selected event time are entered as a negative number, while times after the selected event are entered as a positive number.

**NOTE:** We recommend that you schedule more time sensitive events to occur at least 3 minutes before the desired time to allow adequate time for changes to propagate through the SimplySNAP system.

6. Use the day of the week buttons to select the days on which this event will trigger.
7. Use the **behavior** drop-down to select the behavior that will trigger when the event occurs.
8. Click the **Create** button to create the event, or click the **Cancel** button to close the **Add Event** window without saving the event.

## Editing an Event

You can edit any event in the Schedule view by clicking the event you wish to edit, making the desired changes, and clicking the **Save Changes** button to confirm the changes or **Cancel** to exit without making a change.

## Deleting an Event

To delete a scheduled event, access the Schedule view using the **Schedule** icon in the left menu panel, and click the scheduled event you wish to delete. You will be prompted for if you wish to **Delete** the event or **Cancel** the delete action.

## Event Overrides

If you're adding or changing an event, and the new event occurs simultaneously with a previously scheduled event, the new event will appear greyed out in the calendar with an (Overridden) label next to the time of the event. This will persist until edits are made to get the two events out of conflict.

## Alarms

The SimplySNAP site controller initiates a polling cycle of all lighting in the system once every 15 minutes. This polling cycle verifies that all light controllers are responding to wireless communications. Any anomalies found are reported as alarms.



Alarms indicate an unexpected behavior from the SimplySNAP lighting system, and consist of four types.

**Table 1: Alarm Types**

Name	Description
Info	Messages that provide general information not affecting performance.
Warning	Information about anomalies detected within the system.
Error	Information that may affect performance of individual lights or zones.
Critical	Information that will affect performance of the lighting solution.

A list of Alarms can be accessed by clicking the **Alarms** icon in the Title Bar at the top right of the user interface. Alarms can be filtered using the fields provided in the top right of the **Alarms** content area.

The alarms list can also be accessed by clicking the alarm warning that appears at the top right of the affected light or sensor panel.

### Clearing Alarms

User clearable alarms will have a check box in the actions column. Clicking the check box will remove the alarm.

### Retry Communication

If an alarm is generated during the polling cycle due to an inability to configure a light controller, a **Retry** button is provided to immediately initiate a "retry" of communication to the light controller that is in an alarmed state. This provides a means to immediately retry the communication instead of waiting 15 minutes for the next polling cycle.

## Viewing System Information

---

The System Info tab provides the network and version details for your SimplySNAP installation including connection addresses, device type, software version, and the status of connected 5 button switches.

The System Info tab is accessed by clicking the Config menu item in the left menu bar, then clicking the System Info tab at the top of the screen.

### To check your SimplySNAP version information:

1. From the SimplySNAP dashboard, click **Config** in the left menu bar.
2. Click the **System Info** tab near the top of the screen.
3. Your SimplySNAP version information will be displayed under Versions on the lower portion of the screen.

## System Configuration

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The **Config** screen features six tabs where all configuration for your SimplySNAP installation is performed.

### Location & Time

---

The **Location & Time** tab is used for setting the geographic location of your SimplySNAP installation, and setting the System Date & Time.

#### Site Controller Location

The location of your SimplySNAP installation determines the proper sunrise and sunset times for automated systems, determines if and when daylight savings time is applied to the system, and helps provide accurate positioning on map views. To enter the location for your site controller, type the latitude and longitude for your installation into the provided fields, then click **Save Changes** to save your changes and exit, or **Cancel** to exit without saving.

If the site controller is connected to the internet via a LAN connection, the **Map** page will display the correct location of the site controller on a map overlay.

If the site controller will not have continuous Internet access, you should enable the offline map by clicking the **Enable** toggle under the **Offline Map** heading, and then clicking the **Update** button. This will download the map of your installation for use when Internet access is not available.

#### System Date & Time

Currently the SimplySNAP site controller does not connect to a network time source, since many installations do not have constant network access.

### To set or update the system date, time, and time zone:

1. Click the **Config** menu choice in the left menu bar, and then select the **Location & Time** tab at the top of the screen.
2. The current system date and time is displayed under the **System Date & Time** heading. You can manually enter a new date by clicking within the **New Date & Time** field, or you can click the black triangle on the right side of the **New Date & Time** field to select the current date from a pop-up calendar.
3. Select your time zone from the **New Time Zone** drop down field.
4. Click **Save Changes** to save your changes and exit, or **Cancel** to exit without saving.

## Updating for Daylight Savings Time

The SimplySNAP site controller automatically updates for daylight savings time (DST) depending on the configured site controller location. You won't need to adjust for DST unless you are in a region that does not observe DST and you want your SimplySNAP installation to observe DST anyway. If this is the case, you will need to manually adjust the clock.

## Change Login

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The **Change Login** tab allows you to change the default username and password for your SimplySNAP installation.

### To change the username:

By default, the username for a SimplySNAP installation is snap. You can change the default username at any time by entering the current and new usernames in the provided fields and then clicking the **Change Username** button.

### To change the password:

To change the password for your SimplySNAP installation, enter the current password in the field provided, followed by the new password in the **New Password** and **Repeat New Password** fields. The new password must be at least six characters in length, and it cannot be the current password.

**NOTE:** If you forget the username or password for your SimplySNAP site, you can reset both by holding down the middle button on the **SimplySNAP Site Controller**.

## HTTPS and Installing a Signed Security Certificate

---

SimplySNAP is accessed through a secure web browser session, which means the browser expects to receive a digital certificate that ensures the connection is with the correct service. If this certificate is not present, the browser

site controller is not private, and attackers might be attempting to steal your information.

Generating and assigning a trusted certificate will remove this message and help ensure that your connection is what you expect it to be. These certificates are issued by certificate authorities such as Comodo and Symantec, and are typically issued for Internet facing applications. If your SimplySNAP installation is behind your firewall, the certificate is not necessary except to remove the browser warning. If you obtain a certificate from a certificate authority, you can upload it to the SimplySNAP site controller via the HTTPS tab.

#### To assign a trusted certificate to your SimplySNAP installation:

1. Access the **HTTPS** screen by clicking **Config** in the left menu bar, and then clicking the **HTTPS** tab.
2. Click the **Cert file** button and browse to and select the cert file you received from the certificate authority, then click the **Open** button.
3. Click the **Key file** button and browse to and select the key file you received from the certificate authority, then click the **Open** button.
4. Click the **Submit** button to complete the submission.
5. Click the **Generate New Certificate** button to generate your new security certificate.

## Network Settings and Encryption

---

For cases where multiple SimplySNAP installations exist in a small area, it is highly recommended that you change the transmit channel used to issue commands to your SimplySNAP lighting. You can change the Channel and Network ID for your installation by entering the new information in the provided fields and clicking the **Save Changes** button. When the **Save Changes** button is clicked, all components in your installation will be updated to the new information over the next several minutes.

**NOTE:** The factory default channel (1) and Net ID (d110) should not be used for installations. Valid channels range from 1 - 13, and Network IDs can be any 4 digit combination of numbers and the letters a - f. (Excluding 0000 and ffff.)

**NOTE:** By default, encryption and storm suppression are off.

Synapse also recommends that you enable encryption and suppress storms within your SimplySNAP installation. Encryption of network traffic is enabled by clicking the **Encryption** toggle. This will encrypt all data transmitted over the air and significantly reduce the possibility of outside interference.

**NOTE:** If any configured light within your installation is not in communications with the site controller the system will not change channels or encrypt. This is to ensure that all lights are reconfigured, or none of them. If you've entered a "fake light" or sensor, you'll need to delete it before initiating a change.

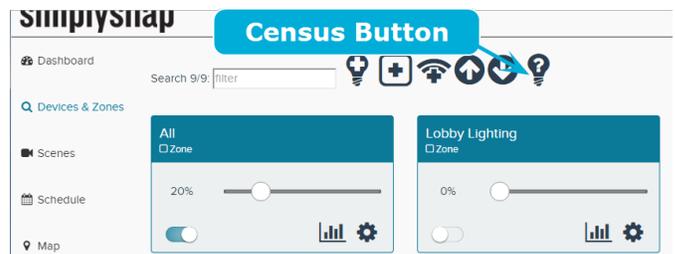
## Enabling Storm Suppression

Particularly large lighting installations can generate a lot of network traffic, and in some rare occasions this can have a negative impact on system response times. If you encounter a situation where lights aren't responding to commands, enabling **Storm Suppression** may help. It can be enabled via the **Storm Suppression** toggle switch within the **Config - Network Settings** tab.

## Optimizing Communications

The Census function polls all devices within your installation and ensures efficient configuration while also searching for unconfigured devices on your network.

To perform a census of devices, click the **Census** button on the **Devices & Zones** page.



## Viewing System Information

The System Info tab provides the network and version details for your SimplySNAP installation including connection addresses, device type, software version, and the status of connected 5 button switches.

The System Info tab is accessed by clicking the Config menu item in the left menu bar, then clicking the System Info tab at the top of the screen.

### To check your SimplySNAP version information:

1. From the SimplySNAP dashboard, click **Config** in the left menu bar.
2. Click the **System Info** tab near the top of the screen.
3. Your SimplySNAP version information will be displayed under Versions on the lower portion of the screen.

## Backing up and restoring a system configuration

Once you've configured your SimplySNAP installation to your liking, Synapse recommends that you backup the configuration as soon as possible to allow for later restoration should the need arise.

The system configuration backup is a backup of site controller specific information, and is not the same as backing up configured lights, sensors and zones. That is accomplished via .CSV file as described in **Importing and Exporting Light Configurations using a .CSV File** on page 54. .

**To backup a SimplySNAP installation:**

1. Access the **Backup/Restore** screen by clicking **Config** in the left menu bar, and then clicking the **Backup/Restore** tab.
2. Click the **Save Backup** button near the top of the screen. This will write all system settings to an sqlite file and transfer the file to your downloads directory of the device running your web browser.

**To restore a SimplySNAP installation:**

1. Access the **Backup/Restore screen** by clicking **Config** in the left menu bar, and then clicking the **Backup/Restore** tab.
2. Click the **Restore from Backup** button near the center of the screen. A warning message will appear and give you the option of continuing with the restoration, or canceling the operation. Select **Restore** if you wish to continue with the restoration.
3. Browse to and select the SimplySNAP backup file you wish to restore, then click the **Open** button. This will restore your system settings from the backup.

## Updating the SimplySNAP Site Controller

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The SimplySNAP hardware and application are continually evolving. From time to time Synapse will make new versions available. When this occurs, you'll want to update your site controller to take advantage of the newest functionality.

## To update the SimplySNAP site controller:

1. Verify you have a current backup of your system. See **Backing up and restoring a system configuration** on page **52**. for more information on backing up the system.
2. Obtain the new SimplySNAP USB update drive from Synapse.
3. Plug the USB drive into the USB port on the site controller. This will begin the update process, which may take several minutes.
4. If the lights on the site controller flash green, the update was successful. If the lights flash red, contact Synapse Customer Support for possible solutions.
5. After the lights flash green, unplug the USB drive and power cycle the controller.

**NOTE:** During an update, the lighting controllers will blink their corresponding lights when each individual update is completed.

## If you are Updating a SimplySNAP 2.0 Installation

SimplySNAP 3.X adds a new feature to the application.

The **Census** button detects unconfigured devices that share your channel and net ID, ensures all devices are updated to the latest firmware, and optimizes communication within the network, all with a single click.

If you've just updated to **SimplySNAP 3.X**, we recommend that you log in and click the **Census** button located on the

**Devices & Zones** page. This will perform the above checks and ensure that your **SimplySNAP** installation is running at peak efficiency.



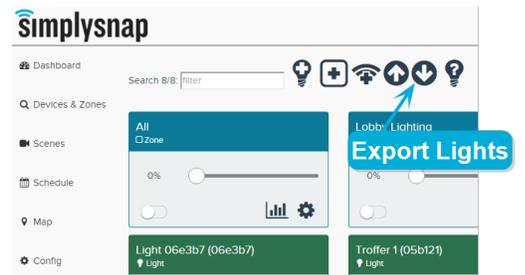
## Importing and Exporting Light Configurations using a .CSV File

When you've configured all of your lighting, you should immediately back up the light configurations to a .CSV file should you ever need to restore them. The ability to import and export .CSV files can also be helpful when you need to make a large number of changes to the lighting configuration.

## To export a lighting configuration to a .CSV file:

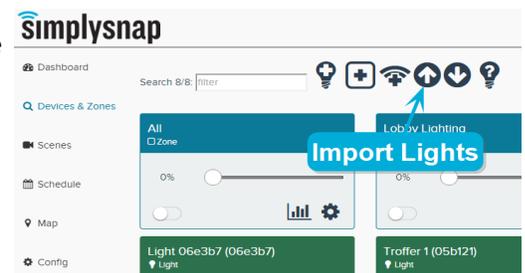
1. Log in to the SimplySNAP web interface, and click the **Devices & Zones** menu choice in the left menu panel.
2. Click the **Export Lights** icon at the top of the screen, then click the **Export Lights** button. A .CSV file of your lighting configuration will be saved to your downloads folder.

In the event you need to make a large number of changes to your lighting configuration, it may be easier to export the configuration, alter the .CSV file in a text editor or spreadsheet, and then import the altered .CSV file to record the changes.



## To import a lighting configuration .CSV file:

1. Log in to the SimplySNAP web interface, and click the **Devices & Zones** menu choice in the left menu panel.
2. Click the **Import Lights** icon at the top of the screen, then click the **Import Lights** button.
3. Browse to and select the altered .CSV file, then click **Open**.



## Making the Most of Lighting Controls

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The savings that can be realized by a switch from traditional lighting sources to LEDs are so impressive that it's easy to be satisfied with just that. However, the most energy efficient lighting solutions are the ones that are only on when they're needed.

SimplySNAP provides a number of efficiency options that aren't possible with traditional photocell and motion switches that only provide on and off settings. The next portion of this document is dedicated to optimizations and "best practices" that will help you take full advantage of your lighting control system.

### Dim Lights below 80% brightness

---

Modern LEDs are very bright and efficient, and it's easy to accidentally have more light than an area actually needs. In SimplySNAP you can set the initial level for a light to be less than 100% power. By default, SimplySNAP dims lights to 80% power, which can provide impressive savings with no loss of available lighting. Moving the default setting below 80% can save even more power.

For more on setting initial levels, see **Editing a Light or Sensor Setting** on page **44**. The initial level setting is in the Advanced section near the bottom of the page.

### Use Jitter to Eliminate Power Surges

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When a traditional lighting system is switched on, every light on the circuit gets power at the same time. Each time this happens there is a surge in power usage that can affect your power bill.

The Jitter setting provides a means for phasing in lights over a number of seconds to help eliminate these expensive surges. Jitter is a delay setting, expressed in seconds, that powers lights in a random pattern over a number of seconds to limit the effects of power surges.

To implement Jitter in your SimplySNAP installation, see **Editing a Light or Sensor Setting** on page **44**.

If you want to implement Jitter in a large number of lights it may be easiest to make the changes using a .CSV file. See **Importing and Exporting Light Configurations using a .CSV File** on page **54**. for an easy way to change a lot of lights at the same time.

### Use Schedules and Sensors to Dim or Deactivate Lights When They're Not in Use

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The scheduling function in SimplySNAP allows you to set schedules that dim or deactivate lights during a building's off hours. This can be really helpful until circumstance dictates that someone be in that area during a non-standard time.

Sensors can support a lighting solution by temporarily activating lights when motion is detected, and then dimming them back to off when motion is no longer detected.

To learn more about schedules, see **Scheduled Events** on page **46**.

To learn more about adding sensors, see **Adding Sensors and Switches** on page **28**.

## Disclaimers

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Activity ID	Description	Orig Dur	Early Start	Early Finish	2016				2017				2018															
					JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
<b>CONTR TIME</b>																												
100	Contract Time for Completion	396 *	01AUG16	03SEP17	Contract Time for Completion																							
101	Joint Bid Utility Phase SAWS (Main Ave)	47 *	01AUG16	16SEP16	Joint Bid Utility Phase SAWS (Main Ave)																							
102	Joint Bid Utility Phase SAWS (Soledad)	121 *	16JAN17	16MAY17	Joint Bid Utility Phase SAWS (Soledad)																							
103	Joint Bid Utility Phase CPS Gas (Main Ave)	16 *	11AUG16	26AUG16	Joint Bid Utility Phase CPS Gas (Main Ave)																							
106	Joint Bid Utility Phase CPS Gas (Soledad)	20 *	26JAN17	14FEB17	Joint Bid Utility Phase CPS Gas (Soledad)																							
110	Street and Storm Drain Construction	370 *	27AUG16	03SEP17	Street and Storm Drain Construction																							
<b>PHASE 1</b>																												
150	Begin Time Charges	0	01AUG16		Begin Time Charges																							
160	Set barricades, advance warning signs (Main Ave)	2	01AUG16	02AUG16	Set barricades, advance warning signs (Main Ave)																							
170	Install SW3P measures	1	01AUG16	01AUG16	Install SW3P measures																							
230	SAWS sanitary sewer Line A laterals	8	02AUG16	10AUG16	SAWS sanitary sewer Line A laterals																							
300	CPS joint bid gas construction Phase 1	3	11AUG16	15AUG16	CPS joint bid gas construction Phase 1																							
320	CPS joint bid gas construction Phase 2	4	16AUG16	19AUG16	CPS joint bid gas construction Phase 2																							
330	CPS joint bid gas construction Phase 3	5	20AUG16	26AUG16	CPS joint bid gas construction Phase 3																							
370	Archeological monitoring of excavations	25 *	02AUG16	26AUG16	Archeological monitoring of excavations																							
<b>PHASE 2-1</b>																												
2010	Adjust barricades, Install SW3P measures	1	27AUG16	27AUG16	Adjust barricades, Install SW3P measures																							
2012	Channelize traffic - one NB lane on MAIN	2	29AUG16	30AUG16	Channelize traffic - one NB lane on MAIN																							
2014	SAWS joint bid water relocations/replacements	12	31AUG16	16SEP16	SAWS joint bid water relocations/replacements																							
2016	Storm drains and inlets	8	05SEP16	16SEP16	Storm drains and inlets																							
2018	Main Street Excavation	8	17SEP16	26SEP16	Main Street Excavation																							
2020	Lime Treated Subgrade	5	27SEP16	05OCT16	Lime Treated Subgrade																							
2022	ACP Ty B Base (2 lifts)	6	06OCT16	13OCT16	ACP Ty B Base (2 lifts)																							
2024	Construct west Curb on Main	4	14OCT16	18OCT16	Construct west Curb on Main																							
2034	ACP Ty C 2" course	2	19OCT16	21OCT16	ACP Ty C 2" course																							
2210	Archeological monitoring of excavations	27 *	31AUG16	26SEP16	Archeological monitoring of excavations																							
<b>PHASE 2-2</b>																												
2510	Install Pedestrian Route signage and devices	1	22OCT16	22OCT16	Install Pedestrian Route signage and devices																							
2600	Sidewalks and Streetscape on MAIN	10	24OCT16	04NOV16	Sidewalks and Streetscape on MAIN																							
2700	Driveways west side of Main	10	24OCT16	04NOV16	Driveways west side of Main																							
2810	Archeological monitoring of excavations	12 *	24OCT16	04NOV16	Archeological monitoring of excavations																							
<b>PHASE 3-1</b>																												
3010	Adjust barricades, Install SW3P measures	1	05NOV16	05NOV16	Adjust barricades, Install SW3P measures																							
3050	Shift traffic - one SB lane on MAIN	2	07NOV16	08NOV16	Shift traffic - one SB lane on MAIN																							

Start date	01AUG16	<b>City of San Antonio Bond Project Downtown Streets - Main &amp; Soledad</b>	Six-Day Work with Average Weather Days Consecutive Lane Closures on Main and Soledad  Contract Time for Completion is based on Calendar Days	 Early bar  Progress bar  Critical bar  Summary bar  Start milestone point  Finish milestone point
Finish date	03SEP17			
Data date	01AUG16			
Run date	03JUN16			
Page number	1A			
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RECEIPT OF ADDENDUM NUMBER 2 IS HEREBY ACKNOWLEDGED FOR PLANS AND

SPECIFICATIONS FOR CONSTRUCTION OF  
**Downtown Streets – Main & Soledad #40-00300-05-03-01**

FOR WHICH BIDS WILL BE OPENED ON **TUESDAY, JULY 19, 2016 AT 2:00 P.M.**

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

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name/Title