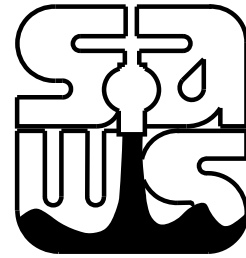


SAN ANTONIO WATER SYSTEM



2018 SMP JOB NO: 17-5116

PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS WATER PLANS

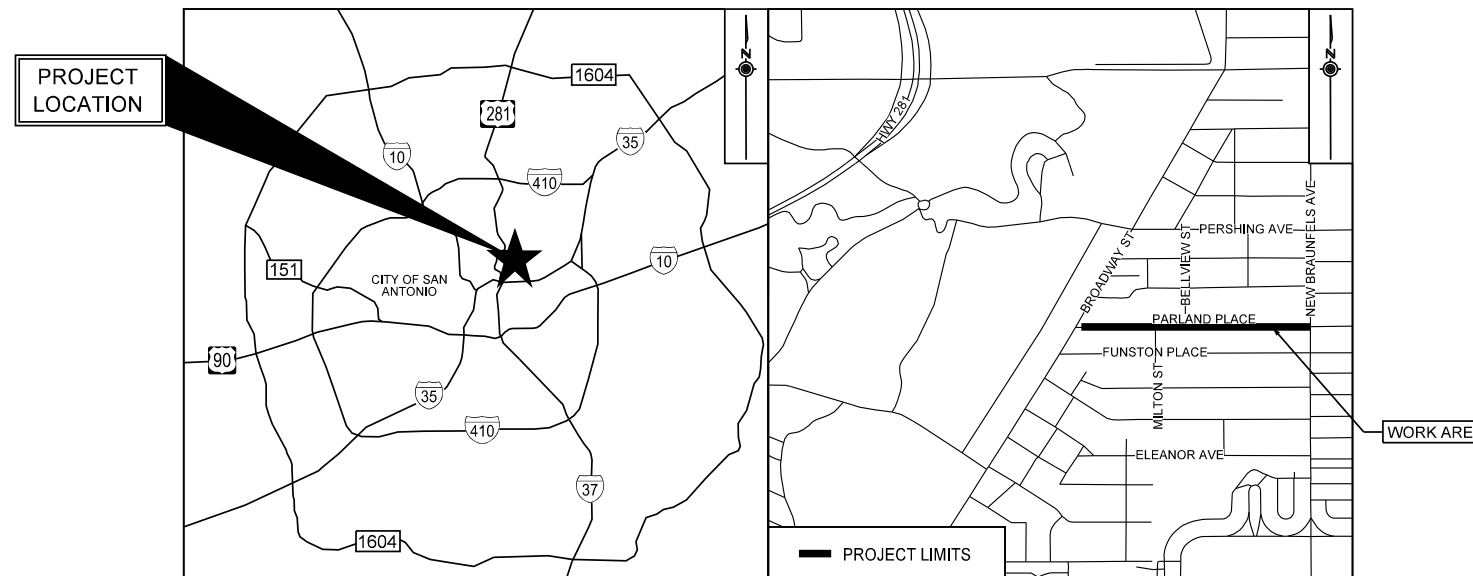


CB
12/15/17

SUBMITTAL PREPARED BY:



16170 JONES MALTSBERGER ROAD
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TBPE Firm #6535 www.kfriese.com



LOCATION MAP
NOT TO SCALE

SHEET LIST

SHT NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES AND QUANTITIES
3	PROJECT LAYOUT
4	WATER PLAN 1
5	WATER PLAN 2
6	WATER PLAN 3
7	WATER PLAN 4
8	WATER PLAN 5
9	WATER PLAN 6
10	WATER PLAN 7
11	TREE PROTECTION DETAILS

JANUARY 2018

GENERAL SECTION

- 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 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 CONSTRUCTION."
 - CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE, HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.
- THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500, AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 72 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 AT LEAST 1 WEEK 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 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:

SAN ANTONIO WATER SYSTEM:
 SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
 COSA DRAINAGE 210-207-8048
 COSA TRAFFIC SIGNAL OPERATIONS 210-207-7720
 TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGES DONE BY THE PROJECT'S CONSTRUCTION.
- ALL WORK IN TEXAS HIGHWAY DEPARTMENT AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.
- 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 IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
- 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.
- HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.
 WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.
 ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
- PRE CON SITE VIDEO: BEFORE THE START OF ANY CONSTRUCTION. THE SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO SAWS INSPECTIONS. A PRE-SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF THE EXISTING CONDITIONS (NSPI).
- POWER POLE BRACING: CONTRACTORS SHOULD BE ADVISED THAT THERE ARE EXISTING OVERHEAD UTILITY POLES ALONG THE PROJECT CORRIDOR. CONTRACTORS SHOULD FURTHER BE ADVISED THAT IF THE DISTANCE FROM THE OUTSIDE FACE OF A UTILITY TRENCH TO THE FACE OF A UTILITY POLE IS LESS THAN 5 FEET, SAID UTILITY POLE IS SUBJECT TO BRACING, BASED ON A DETERMINATION MADE BY UTILITY POLE OWNER. COSTS INCURRED BY CONTRACTOR FOR BRACING OF THESE UTILITY POLES IS SUBSIDIARY TO THAT RESPECTIVE UTILITY COMPANY'S WORK. IT IS ADVISABLE FOR THE CONTRACTOR TO REVIEW THE CONSTRUCTION DOCUMENTS, AND VISIT THE CONSTRUCTION SITE TO DETERMINE POTENTIAL IMPACTS.
- CONSTRUCTION SEQUENCING: IT IS THE CONTRACTOR SOLE RESPONSIBILITY TO SCHEDULE SEQUENCING FOR REMOVAL AND INSTALLATION OF EXISTING AND PROPOSED SAWS UTILITIES IN CONJUNCTION WITH GENERAL PROJECT CONSTRUCTION. SEQUENCE OF CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED IN ORDER TO MINIMIZE THE EXTENT AND DURATION OF DISTURBANCES.

WATER SECTION:

- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS INSPECTION AND/OR SAWS PRODUCTION GROUPS AT LEAST ONE WEEK OR MORE 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.
 SAWS PRODUCTION CONTROL CENTER 210-233-2016
- ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAYBE 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 ITEM NO. 3000, "HANDLING ASBESTOS CEMENT PIPE".
- VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)

CPS ENERGY NOTE:

- CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN PROJECT AREA.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS ENERGY OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.
- CONTRACTOR TO FIELD VERIFY THE DEPTH OF GAS MAINS BEFORE BEGINNING OF CONSTRUCTION.

AT&T NOTES:

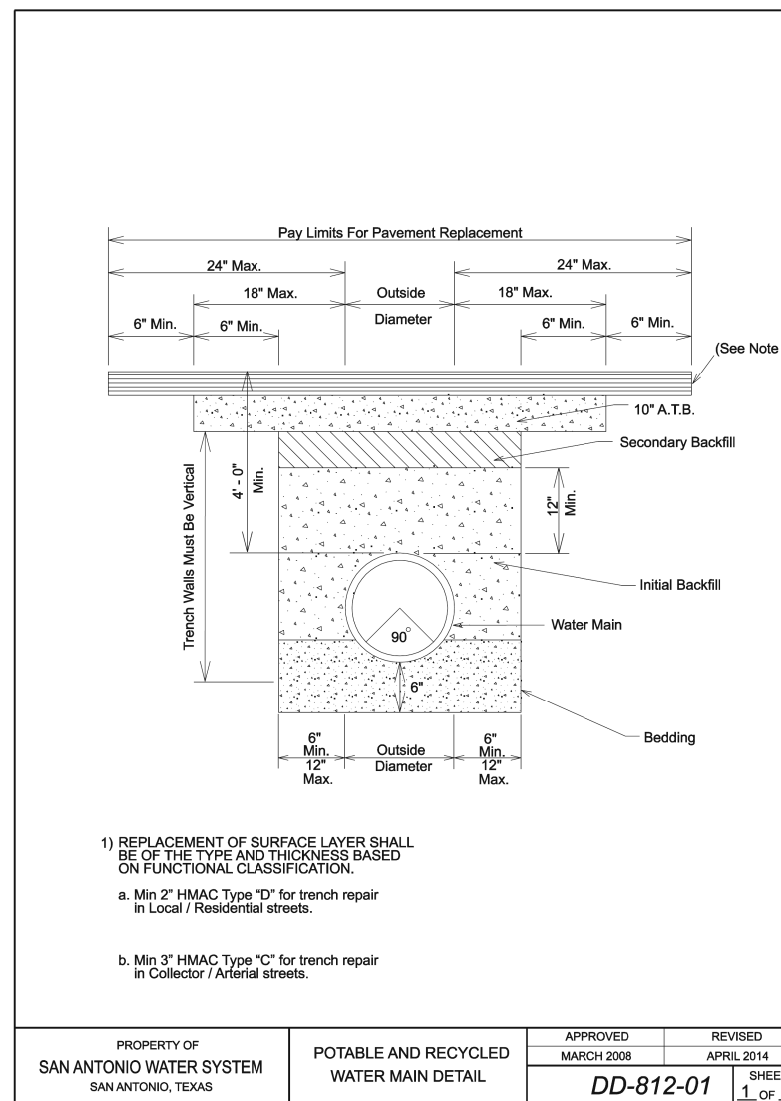
- THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE.
- THE CONTRACTOR SHOULD CALL FOR LOCATES THROUGH THE "ONE CALL" UTILITY LOCATE SERVICE (1-800-545-6005) 48 HOURS PRIOR TO CONSTRUCTION/EXCAVATION WORK, CONTRACTORS HAVE THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

NOTES:

- CONTRACTOR SHALL RESTRAIN ALL PROPOSED PIPES, VALVES AND FITTINGS AT NO ADDITIONAL COST (RL=RESTRAINT LENGTH)
- CONTRACTOR TO MAINTAIN WATER SERVICE CONNECTIONS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL ALSO MAINTAIN ACCESS TO ALL EXISTING AND PROPOSED WATER VALVES AT ALL TIMES (NSPI).
- NSPI - NOT A SEPARATE PAY ITEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING OPERATION OF ALL EXISTING UTILITIES AFFECTED BY PROPOSED CONSTRUCTION.
- TREE REMOVAL IS NOT PERMITTED ON THIS PROJECT. CONTRACTOR SHALL TAKE EXTREME CARE WHEN WORKING AROUND TREES TO PREVENT DAMAGE. PRIOR TO THE START OF WORK, CALL 207-1111 TO SCHEDULE A PRE-CONSTRUCTION FENCING INSPECTION.
- TREE PROTECTION IS NSPI.
- THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. THE CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR AS APPROVED BY THE OWNER AND CONSULTANT, AT THE SOLE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL RE-ESTABLISH ANY PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION AND ELEVATION. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VERTICAL AND HORIZONTAL CONTROL SHOWN ON THE PLANS THROUGHOUT THE PROJECT. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PUBLIC SURVEYOR IN THE STATE OF TEXAS AT NO ADDITIONAL COST TO SAWS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE AND THE SAN ANTONIO WATER SYSTEM.
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE CONSULTANT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXPECTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR CONSULTANT.

NOTE FOR THE CITY OF SAN ANTONIO FLATWORK:

ALL LIMITS FOR CURB, SIDEWALK, AND TREE PREP BEYOND WHAT IS CONSIDERED INCIDENTAL TO NORMAL UTILITY CONSTRUCTION WILL BE ADDRESSED BY THE SAWS INSPECTOR. SAWS INSPECTOR WILL ALSO DETERMINE IF ADDITIONAL COMPENSATION IS WARRANTED IF LIMITS EXCEED INCIDENTALS.



TOTAL ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
103	REMOVE CONCRETE CURB	LF	15
103	REMOVE SIDEWALKS & DRIVEWAYS	SF	90
203	TACK COAT	GAL	128.3
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	1012
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	1283
413	FLOWABLE FILL	CY	4.9
500	CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER	LF	15
502	CONCRETE SIDEWALKS & WHEELCHAIR RAMPS	SY	11.0
515	TOPSOIL	CY	1.3
516	ST. AUGUSTINE SODDING	SY	12.0
530.1	BARRICADES, SIGNS, AND TRAFFIC HANDLING (PARLAND PLACE)	EA	*0.5
535	24-INCH WIDE WHITE LINE	LF	70
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	2451
818	6" PVC WATERLINE (RESTRAINED)	LF	15
818	8" PVC WATERLINE (RESTRAINED)	LF	2436
822	SHORT YARD PIPING	LF	40
824	RELAY 3/4" LONG SERVICE	EA	26
824	RELAY 1" LONG SERVICE	EA	1
824	RELAY 1 1/2" LONG SERVICE	EA	4
824	RELAY 2" LONG SERVICE	EA	1
824	RELAY 4" LONG SERVICE	EA	1
824	RELAY 6" LONG SERVICE	LF	1
828	8" GATE VALVE	EA	6
833	EXISTING METER & NEW METER BOX RELOCATION	EA	12
833	NEW METER BOX	EA	32
834	FIRE HYDRANT	EA	3
836	PIPE FITTINGS, ALL SIZES & TYPES	TN	0.8
840	6" WATER TIE-IN	EA	2
840	8" WATER TIE-IN	EA	1
841	HYDROSTATIC TESTING	EA	1
844	2" BLOW-OFF, TEMPORARY	EA	3
858	CONCRETE ENCASEMENT, CRADLES, SADDLES AND COLLARS	CY	3.9

*ITEM SPLIT FOR WORKSITE BETWEEN WATER AND SEWER PROJECTS.

TRENCH EXCAVATION SAFETY PROTECTION

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 CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE 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, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OF 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.

ARCHAEOLOGY NOTE:

THE PRECISE LOCATION OF THE ACEQUIA DEL ALAMO IS NOT KNOWN. CONTRACTOR SHALL NOTIFY SAWS AND ENGINEER 48 HOURS PRIOR TO EXCAVATION WITHIN THE AREA BETWEEN 119 PARLAND AND 139 PARLAND TO COORDINATE PRESENCE OF OWNER'S ENGINEER/ARCHAEOLOGIST DURING EXCAVATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE TEXAS HISTORICAL COMMISSION PERMIT FOR THE CROSSING.

COSA PARKS NOTE:

NO WORK NOR EQUIPMENT OR MATERIAL STAGING SHALL EXTEND INTO COSA PARKS PROPERTY AT ANY TIME.

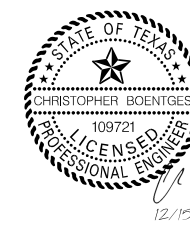
K. FRIESE + ASSOCIATES
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 TBPE Flrm #6535 www.kfriesecorp.com

No.	Revision	Drawn	Approved	Date

REVISIONS

SAWS
 PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS
 GENERAL NOTES AND QUANTITIES

DEVELOPER: _____
 CONT. _____ BUDGET PROJ. _____
 SUBMITTED _____
 APPROVED _____
 MAP No. _____ SHEET 2
 SECT. No. _____
 DR. _____ CK. _____ JOB No. 17-5116 OF 11



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	POTABLE AND RECYCLED WATER MAIN DETAIL	APPROVED MARCH 2008	REVISED APRIL 2014	SHEET 1 OF 1
		DD-812-01		

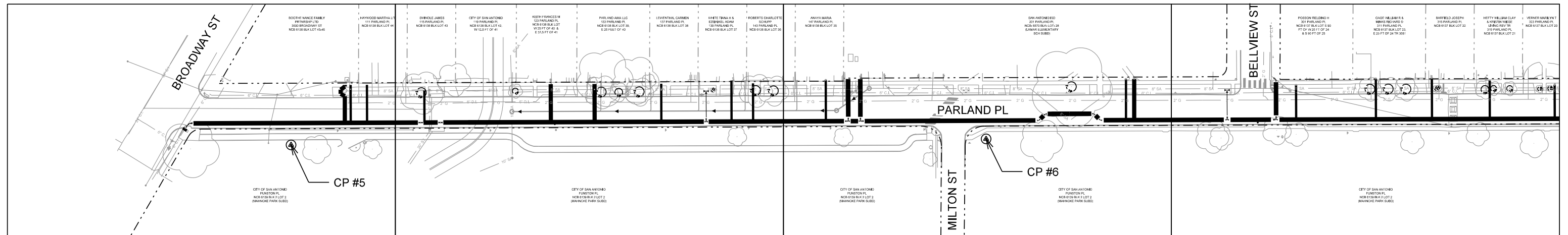
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SHEET 4 OF 11

SHEET 5 OF 11

SHEET 6 OF 11

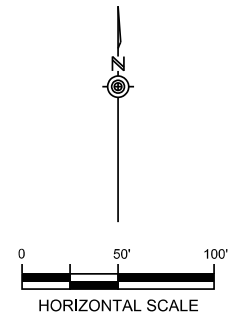
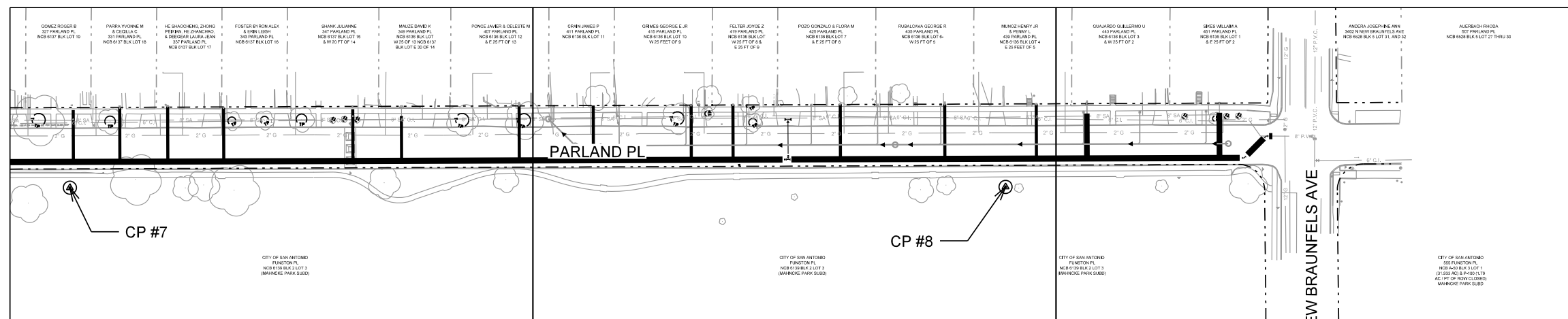
SHEET 7 OF 11



SHEET 8 OF 11

SHEET 9 OF 11

SHEET 10 OF 11



CONTROL POINTS TABLE

POINT NO.	X	Y	ELEVATION	DESCRIPTION
CP #5	2,137,746.40	13,714,559.14	669.74	1/2 IR W/ GREEN CAP GD #5005
CP #6	2,138,462.93	13,714,565.33	678.91	1/2 IR W/ GREEN CAP GD #5005
CP #7	2,139,243.62	13,714,570.97	696.80	1/2 IR W/ GREEN CAP GD #5005
CP #8	2,139,959.24	13,714,571.58	748.44	1/2 IR W/ GREEN CAP GD #5005

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

No.	Revision	Drawn	Approved	Date

REVISIONS

PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS PROJECT LAYOUT

DEVELOPER:

CONT. BUDGET PROJ.

SUBMITTED

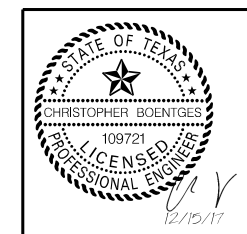
APPROVED

MAP No.

SECT. No.

DR. CK. JOB No. 17-5116 OF 11

SHEET 3 OF 11



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ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
103	REMOVE CONCRETE CURB	LF	5
103	REMOVE SIDEWALKS & DRIVEWAYS	SF	50
203	TACK COAT	GAL	11.4
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	90
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	114
500	CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER	LF	5
502	CONCRETE SIDEWALKS & WHEELCHAIR RAMPS	SY	6
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	226
818	6" PVC WATERLINE (RESTRAINED)	LF	10
818	8" PVC WATERLINE (RESTRAINED)	LF	216
824	RELAY 3/4" LONG SERVICE	EA	2
824	RELAY 2" LONG SERVICE	EA	1
828	8" GATE VALVE	EA	1
833	EXISTING METER & NEW METER BOX RELOCATION	EA	3
833	NEW METER BOX	EA	3
836	PIPE FITTINGS, ALL SIZES & TYPES	TN	0.1
840	6" WATER TIE-IN	EA	1
844	2" BLOW-OFF, TEMPORARY	EA	1

AFTER RELEASE FOR SERVICE TIE NEW 8" PVC MAIN TO EXIST 6" CI MAIN
 INSTALL:
 1-CAST COUPLING (P.V.C. TO C.I.), MJ
 1-8" GATE VALVE, MJ
 RL= 58' SEE SAWS DETAIL (DD-839-05)
 1-6" VALVE BOX
 1-8" 11.25° BEND, MJ
 1-8" 45° BEND, MJ
 1-8" x 6" REDUCER, MJ
 +/- 10 LF 6" PVC, CUT AS REQ'D
 CONTRACTOR TO PROVIDE THRUST BLOCKING AT TIE-IN TO EXIST MAIN
 N = 13,714,581.39
 E = 2,137,641.66

INSTALL FOR MACHINE CHLORINATION:
 2-1" CORP. STOP, CC x IP
 2-1/4" SOLID CAPS, THR.
 2-1" COPPER TUBING, CUT AS REQ'D
 2-1" COMP. x 1/4" COUPLING, CURB STOP
 (SEE SAWS STD DWG DD-847-01)
 N = 13,714,581.39
 E = 2,137,641.66

INSTALL:
 1-8" x 2" ECCENTRICALLY TAPPED CAP, MJ (TEMP)
 2" STD BLOWOFF (TEMP)
 SEE SAWS DETAIL (DD-844-01 SHEET 3 OF 4)
 N = 13,714,581.39
 E = 2,137,641.66

REMOVE AND REPLACE SIDEWALK AND WHEELCHAIR RAMP EST @ 50 SF

EXIST 6" CI WATER MAIN TO BE ABANDONED IN PLACE (NSPI)

CONSTRUCTION LIMITS

PROP +/- 216 LF 8" PVC C900 WATER MAIN

EXIST 6" VALVE NO. 280516 PER BLOCK MAPS (NOT FIELD LOCATED) TO BE REMOVED

T201 36" OAK

T202 24" OAK

T203 12" OAK

CITY OF SAN ANTONIO
 FUNSTON PL
 NCB 6139 BLK 2 LOT 2
 (MAHNCKE PARK SUBD)

**MAHNCKE PARK
 (COSA PARKS PROPERTY)
 (SEE PARKS NOTE)**

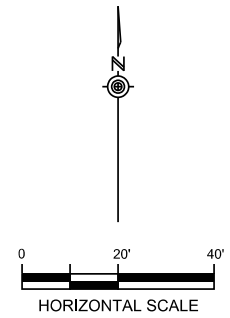
CAUTION!!!
 WATER SERVICES CROSS SEWER AND GAS!!!

CAUTION!!!
 ELECTRIC CROSSING

BOOTHE NANCE FAMILY
 PRTNRSH LP
 3500 BROADWAY ST
 NCB 6138 BLK LOT 45-46

HAYWOOD MARTHA L/T
 111 PARLAND PL
 NCB 6138 BLK LOT 44

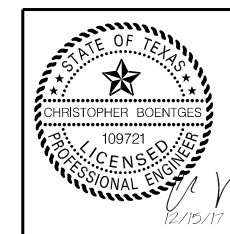
MATCH LINE A
 SEE SHEET 5 OF 11



COSA PARKS NOTE:
 NO WORK NOR EQUIPMENT OR MATERIAL STAGING SHALL EXTEND INTO COSA PARKS PROPERTY AT ANY TIME.

ROOT PROTECTION ZONE NOTE:
 THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER WITHIN 20 MINUTES, TO PREVENT OAK WILT.

TRENCH EXCAVATION SAFETY PROTECTION:
 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 CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE 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, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OF 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.



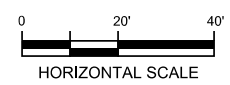
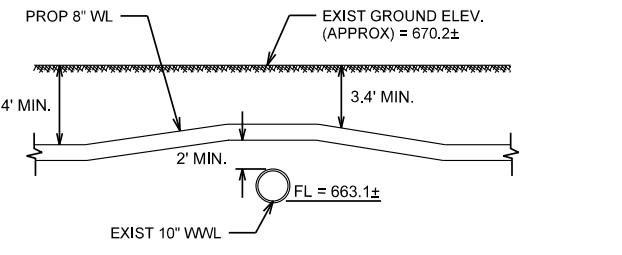
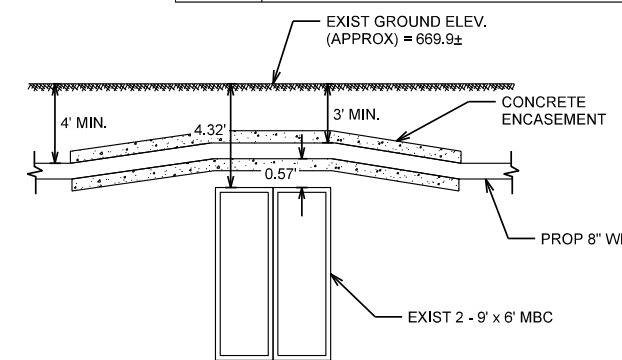
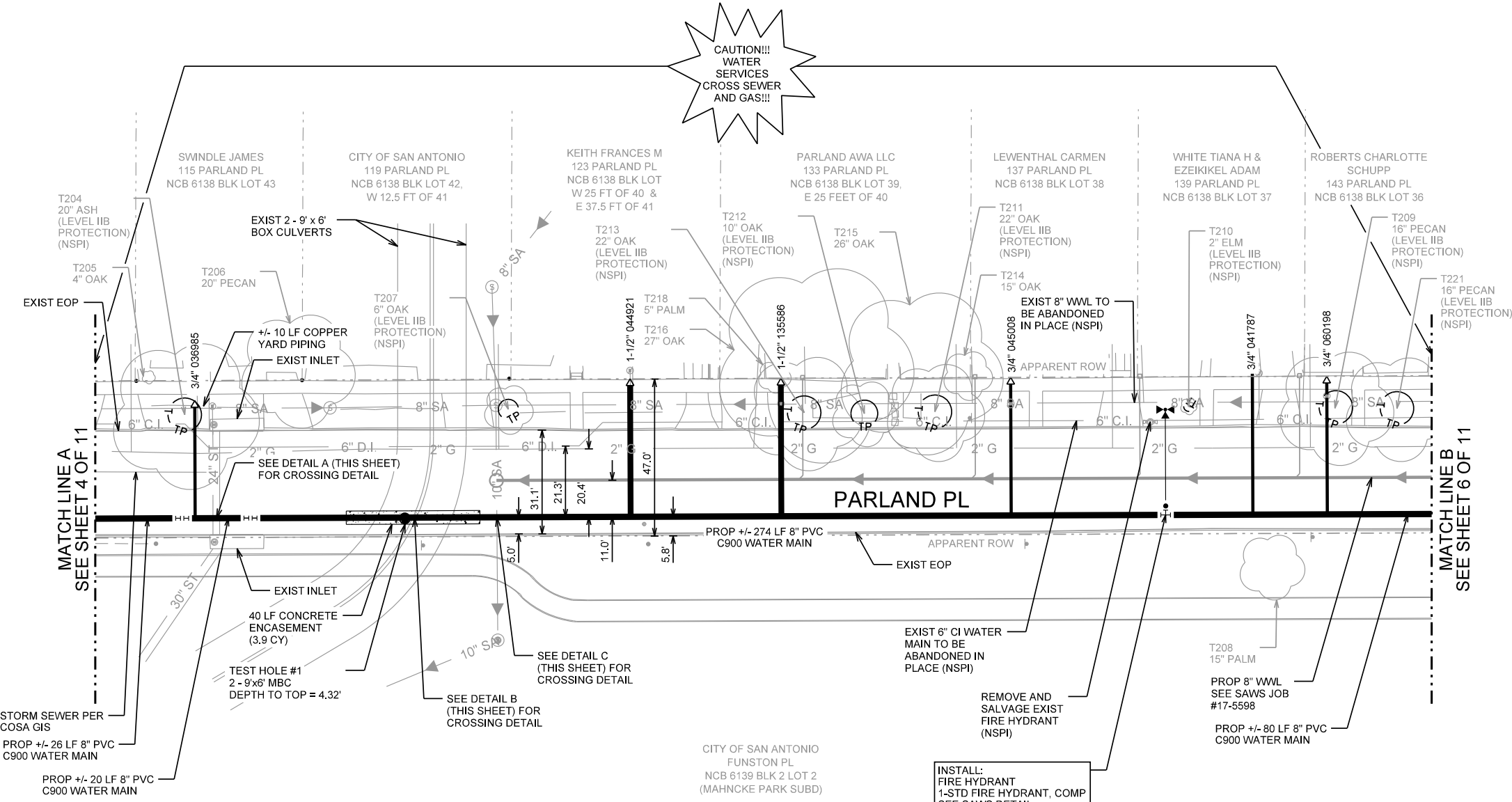
LEGEND	
PROP. WATER MAIN	—●—
EXIST. WATER MAIN	—○— 6" C.I.
GAS MAIN	— 2" G
SANITARY SEWER	— 8" SA
STORM SEWER	— 24" ST
UTILITY POLE LINE	—●—
ELECTRIC CABLE	— E —
TELEPHONE CABLE	— T —
DUAL BRANCH SERV.	—
NEW UNMETERED SERVICE:	
3/4" SINGLE	—
1" DUAL	—
SERVICE RECONNECT:	
3/4"	—
1" OR LARGER	—
SERVICE RELAY:	
3/4"	—
1" OR LARGER	—
SERVICE RELOCATE:	
3/4"	—
1" OR LARGER	—
RELOCATE METER	▷
NEW SERVICE:	
3/4"	—
1" OR LARGER	—

K. FRIESE + ASSOCIATES
 PUBLIC PROJECT ENGINEERING
 16170 JONES MALTSBERGER ROAD
 SUITE 109
 SAN ANTONIO, TEXAS 78247
 P - 210.491.2391 F - 512.338.1784
 TBPE Flrm #6535 www.kfriesee.com

No.	Revision	Drawn	Approved	Date
REVISIONS				
PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS				
WATER PLAN 1				
DEVELOPER:				
CONT.		BUDGET PROJ.		
SUBMITTED _____				
APPROVED _____				
MAP No.				SHEET
SECT. No.				4
DR.	CK.	JOB No. 17-5116 OF 11		

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ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203	TACK COAT	GAL	21.2
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	167
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	212
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	400
818	8" PVC WATERLINE (RESTRAINED)	LF	400
822	SHORT YARD PIPING	LF	10
824	RELAY 3/4" LONG SERVICE	EA	4
824	RELAY 1 1/2" LONG SERVICE	EA	2
833	EXISTING METER & NEW METER BOX RELOCATION	EA	5
833	NEW METER BOX	EA	6
834	FIRE HYDRANT	EA	1
836	PIPE FITTINGS, ALL SIZES & TYPES	TN	0.1
858	CONCRETE ENCASUREMENT, CRADLES, SADDLES AND COLLARS	CY	4



JOINT DEFLECTIONS SHALL NOT EXCEED 80% OF THE MANUFACTURER'S RECOMMENDED DEFLECTION

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**MAHNCKE PARK
(COSA PARKS PROPERTY)
(SEE PARKS NOTE)**

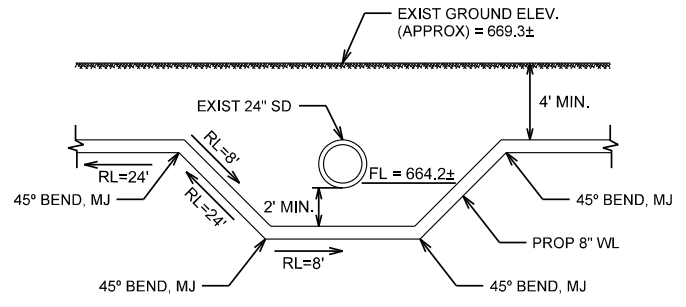
INSTALL:
FIRE HYDRANT
1-STD FIRE HYDRANT, COMP
SEE SAWS DETAIL
(DD-834-01)
1-8" x 6" ANCHOR TEE, MJ
1-6" GATE VALVE, MJ
RL = 58' SEE SAWS DETAIL
(DD-839-05)
1-6" VALVE BOX, COMPLETE
N = 13,714,583.23
E = 2,138,174.38

ARCHAEOLOGY NOTE:
THE PRECISE LOCATION OF THE ACEQUIA DEL ALAMO IS NOT KNOWN. CONTRACTOR SHALL NOTIFY SAWS AND ENGINEER 48 HOURS PRIOR TO EXCAVATION WITHIN THE AREA BETWEEN 119 PARLAND AND 139 PARLAND TO COORDINATE PRESENCE OF OWNER'S ENGINEER/ARCHAEOLOGIST DURING EXCAVATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE TEXAS HISTORICAL COMMISSION PERMIT FOR THE CROSSING.

COSA PARKS NOTE:
NO WORK NOR EQUIPMENT OR MATERIAL STAGING SHALL EXTEND INTO COSA PARKS PROPERTY AT ANY TIME.

ROOT PROTECTION ZONE NOTE:
THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER WITHIN 20 MINUTES, TO PREVENT OAK WILT.

TRENCH EXCAVATION SAFETY PROTECTION:
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 CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE 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, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OF 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.

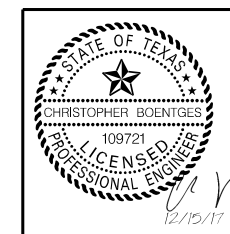


DETAIL A
SCALE: N.T.S.

LEGEND

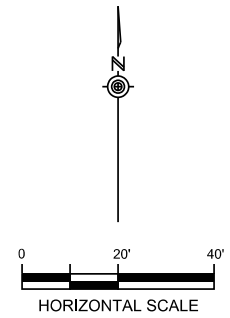
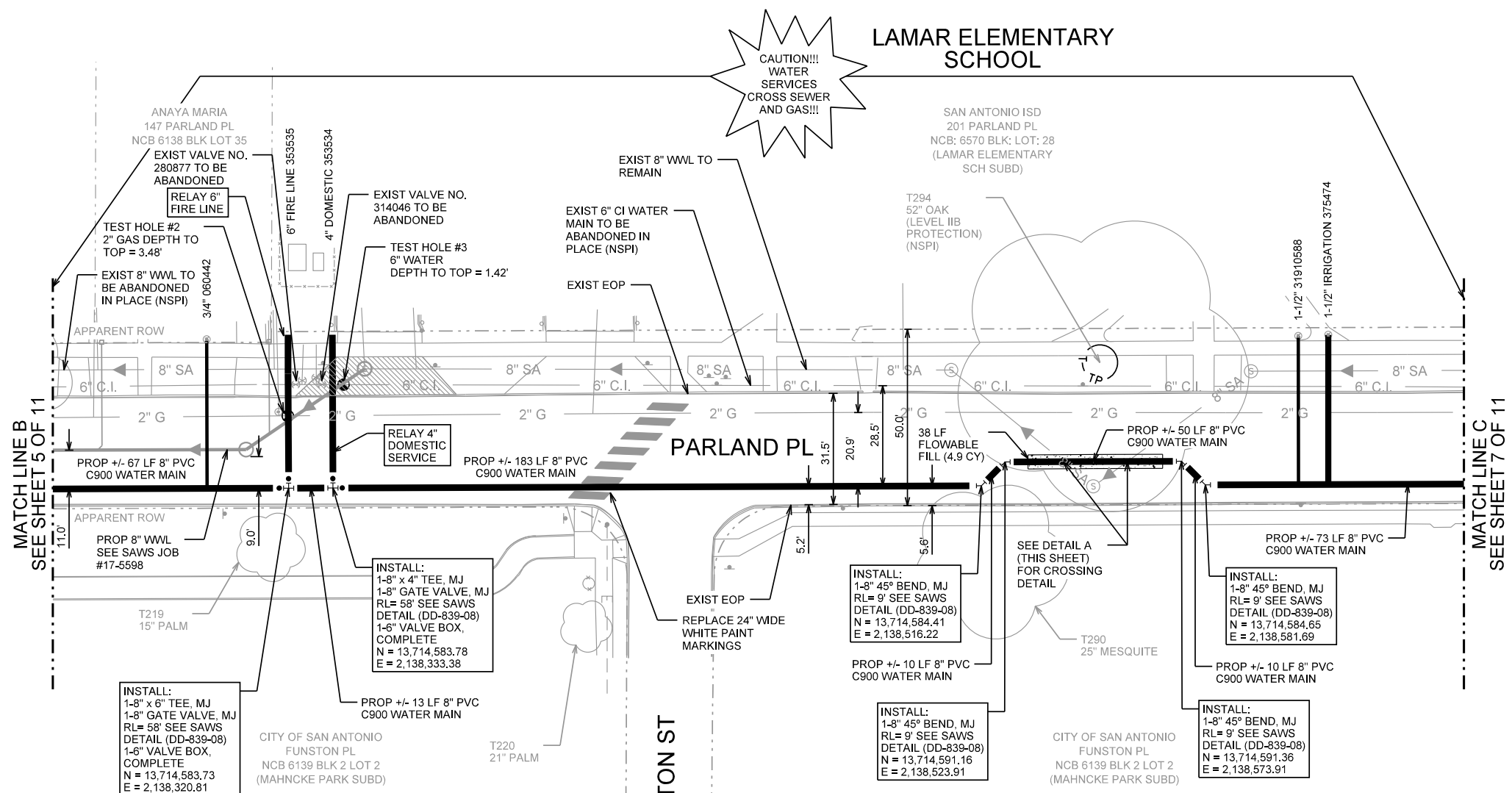
PROP. WATER MAIN	
EXIST. WATER MAIN	
GAS MAIN	
SANITARY SEWER	
STORM SEWER	
UTILITY POLE LINE	
ELECTRIC CABLE	
TELEPHONE CABLE	
DUAL BRANCH SERV.	
NEW UNMETERED SERVICE:	
3/4" SINGLE	
1" DUAL	
SERVICE RECONNECT:	
3/4"	
1" OR LARGER	
SERVICE RELAY:	
3/4"	
1" OR LARGER	
SERVICE RELOCATE:	
3/4"	
1" OR LARGER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

No.	Revision	Drawn	Approved	Date
REVISIONS				
PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS				
WATER PLAN 2				
DEVELOPER:				
CONT.		BUDGET PROJ.		
SUBMITTED				
APPROVED				
MAP No.				SHEET
SECT. No.				5
DR.	CK.	JOB No. 17-5116		OF 11



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ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203	TACK COAT	GAL	21.5
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	170
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	215
413	FLOWABLE FILL	CY	4.9
535	24-INCH WIDE WHITE LINE	LF	70
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	406
818	8" PVC WATERLINE (RESTRAINED)	LF	406
824	RELAY 3/4" LONG SERVICE	EA	1
824	RELAY 1 1/2" LONG SERVICE	EA	2
824	RELAY 4" LONG SERVICE	EA	1
824	RELAY 6" LONG SERVICE	EA	1
828	8" GATE VALVE	EA	2
833	NEW METER BOX	EA	3
836	PIPE FITTINGS, ALL SIZES & TYPES	TN	0.2



MAHNCKE PARK (COSA PARKS PROPERTY) (SEE PARKS NOTE)

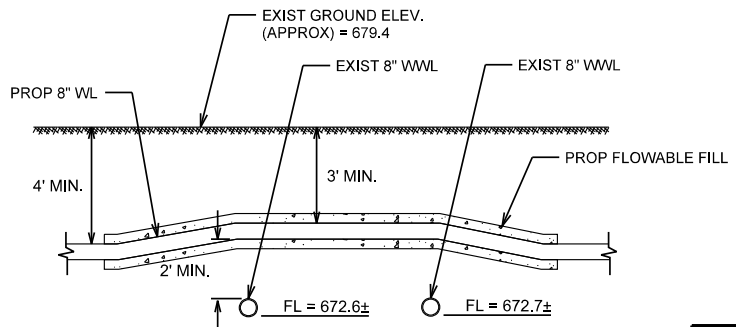
MAHNCKE PARK (COSA PARKS PROPERTY) (SEE PARKS NOTE)

LAMAR ELEMENTARY SCHOOL COORDINATION NOTE:
 CONTRACTOR TO COORDINATE WITH LAMAR ELEMENTARY SCHOOL AT LEAST 2 WEEKS PRIOR TO PERFORMING ANY SHUTDOWNS OR MAKING ANY TIE-INS THAT COULD IMPACT THE SCHOOL. ACCESS TO VALVES ON PRIVATE PROPERTY MAY BE NEEDED FOR TIE-INS. SHUTDOWN OF SERVICES TO SCHOOL SHALL ONLY BE PERFORMED WHEN SCHOOL IS NOT IN SESSION AND ONLY AFTER RECEIVING WRITTEN APPROVAL FROM THE SAWS INSPECTOR.

COSA PARKS NOTE:
 NO WORK NOR EQUIPMENT OR MATERIAL STAGING SHALL EXTEND INTO COSA PARKS PROPERTY AT ANY TIME.

ROOT PROTECTION ZONE NOTE:
 THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER WITHIN 20 MINUTES, TO PREVENT OAK WILT.

TRENCH EXCAVATION SAFETY PROTECTION:
 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 CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE 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, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OF 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.



DETAIL A
 SCALE: N.T.S.

JOINT DEFLECTIONS SHALL NOT EXCEED 80% OF THE MANUFACTURER'S RECOMMENDED DEFLECTION



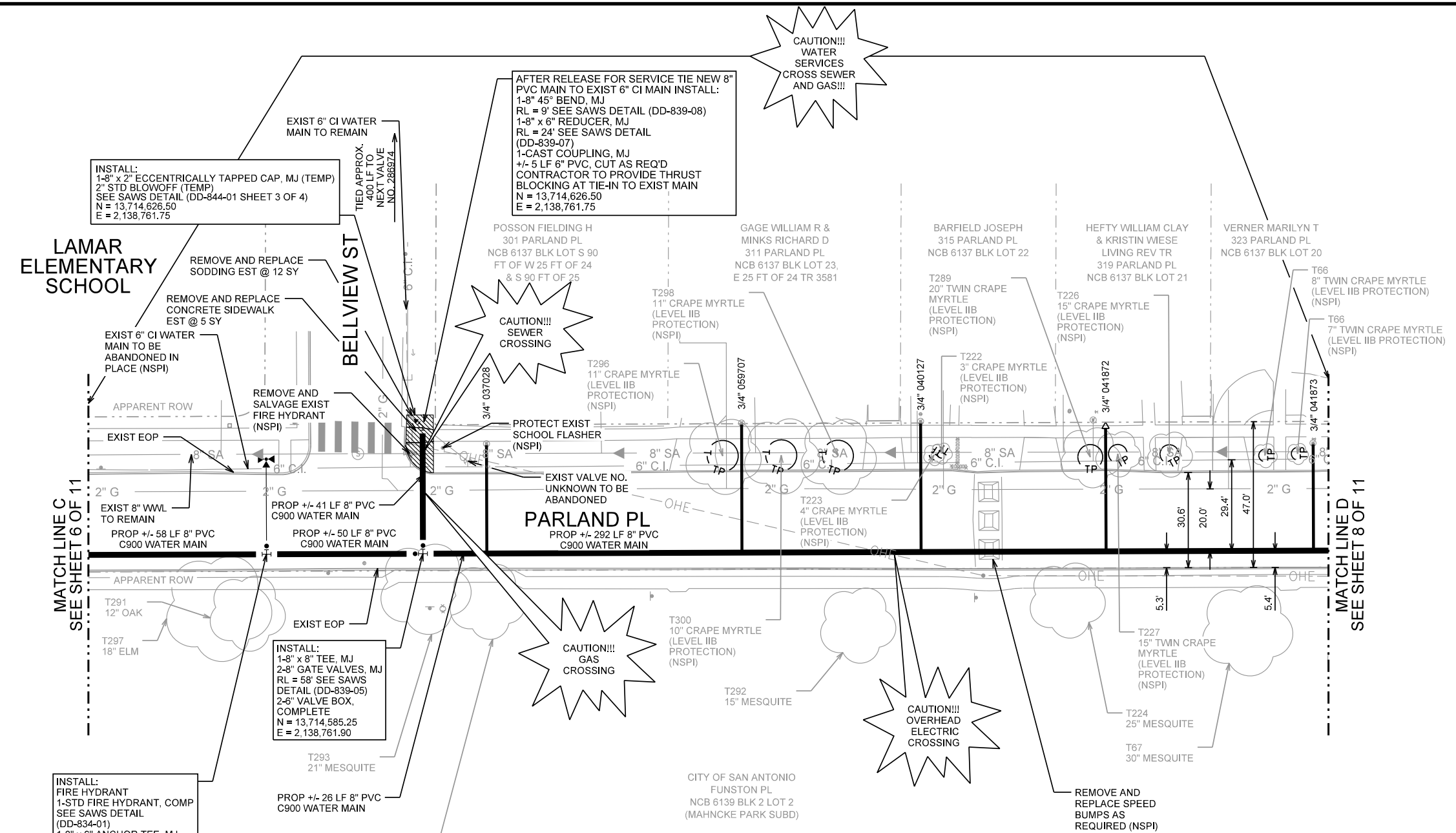
LEGEND

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	

No.	Revision	Drawn	Approved	Date
REVISIONS				
PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS				
WATER PLAN 3				
DEVELOPER:				
CONT.		BUDGET PROJ.		
SUBMITTED				
APPROVED				
MAP No.				SHEET
SECT. No.				6
DR.	CK.	JOB No. 17-5116		Of 11

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ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
103	REMOVE CONCRETE CURB	LF	10
103	REMOVE SIDEWALKS & DRIVEWAYS	SF	40
203	TACK COAT	GAL	22.6
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	178
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	226
500	CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER	LF	10
502	CONCRETE SIDEWALKS & WHEELCHAIR RAMPS	SY	5
515	TOPSOIL	CY	1.3
516	ST. AUGUSTINE SODDING	SY	12
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	446
818	6" PVC WATERLINE (RESTRAINED)	LF	5
818	8" PVC WATERLINE (RESTRAINED)	LF	441
824	RELAY 3/4" LONG SERVICE	EA	5
828	8" GATE VALVE	EA	2
833	EXISTING METER & NEW METER BOX RELOCATION	EA	1
833	NEW METER BOX	EA	5
834	FIRE HYDRANT	EA	1
836	PIPE FITTINGS, ALL SIZES & TYPES	TN	0.2
840	6" WATER TIE-IN	EA	1
844	2" BLOW-OFF, TEMPORARY	EA	1



INSTALL:
1-8" x 2" ECCENTRICALLY TAPPED CAP, MJ (TEMP)
2" STD BLOWOFF (TEMP)
SEE SAWS DETAIL (DD-844-01 SHEET 3 OF 4)
N = 13,714,626.50
E = 2,138,761.75

AFTER RELEASE FOR SERVICE TIE NEW 8" PVC MAIN TO EXIST 6" CI MAIN INSTALL:
1-8" 45° BEND, MJ
RL = 9' SEE SAWS DETAIL (DD-839-08)
1-8" x 6" REDUCER, MJ
RL = 24' SEE SAWS DETAIL (DD-839-07)
1-CAST COUPLING, MJ
+/- 5 LF 6" PVC, CUT AS REQ'D
CONTRACTOR TO PROVIDE THRUST BLOCKING AT TIE-IN TO EXIST MAIN
N = 13,714,626.50
E = 2,138,761.75

INSTALL:
1-8" x 8" TEE, MJ
2-8" GATE VALVES, MJ
RL = 58' SEE SAWS DETAIL (DD-839-05)
2-8" VALVE BOX, COMPLETE
N = 13,714,585.25
E = 2,138,761.90

INSTALL:
FIRE HYDRANT
1-STD FIRE HYDRANT, COMP
SEE SAWS DETAIL (DD-834-01)
1-8" x 6" ANCHOR TEE, MJ
1-6" GATE VALVE, MJ
1-8" GATE VALVE, MJ
RL = 58' SEE SAWS DETAIL (DD-839-05)
1-6" VALVE BOX, COMPLETE
N = 13,714,585.08
E = 2,138,711.45

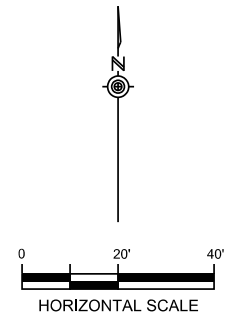
CAUTION!!!
WATER SERVICES
CROSS SEWER
AND GAS!!!

CAUTION!!!
SEWER
CROSSING

CAUTION!!!
GAS
CROSSING

CAUTION!!!
OVERHEAD
ELECTRIC
CROSSING

MAHNCKE PARK
(COSA PARKS PROPERTY)
(SEE PARKS NOTE)



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



COSA PARKS NOTE:
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ROOT PROTECTION ZONE NOTE:
THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER WITHIN 20 MINUTES, TO PREVENT OAK WILT.

TRENCH EXCAVATION SAFETY PROTECTION:
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 CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE 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, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OF 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.

K. FRIESE + ASSOCIATES
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16170 JONES MALTSBERGER ROAD
SUITE 109
SAN ANTONIO, TEXAS 78247
P - 210.491.2391 F - 512.338.1784
TBPE Firm #6535 www.kfriesecorp.com

No.	Revision	Drawn	Approved	Date

REVISIONS

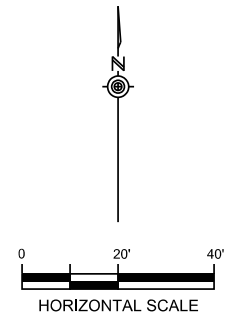
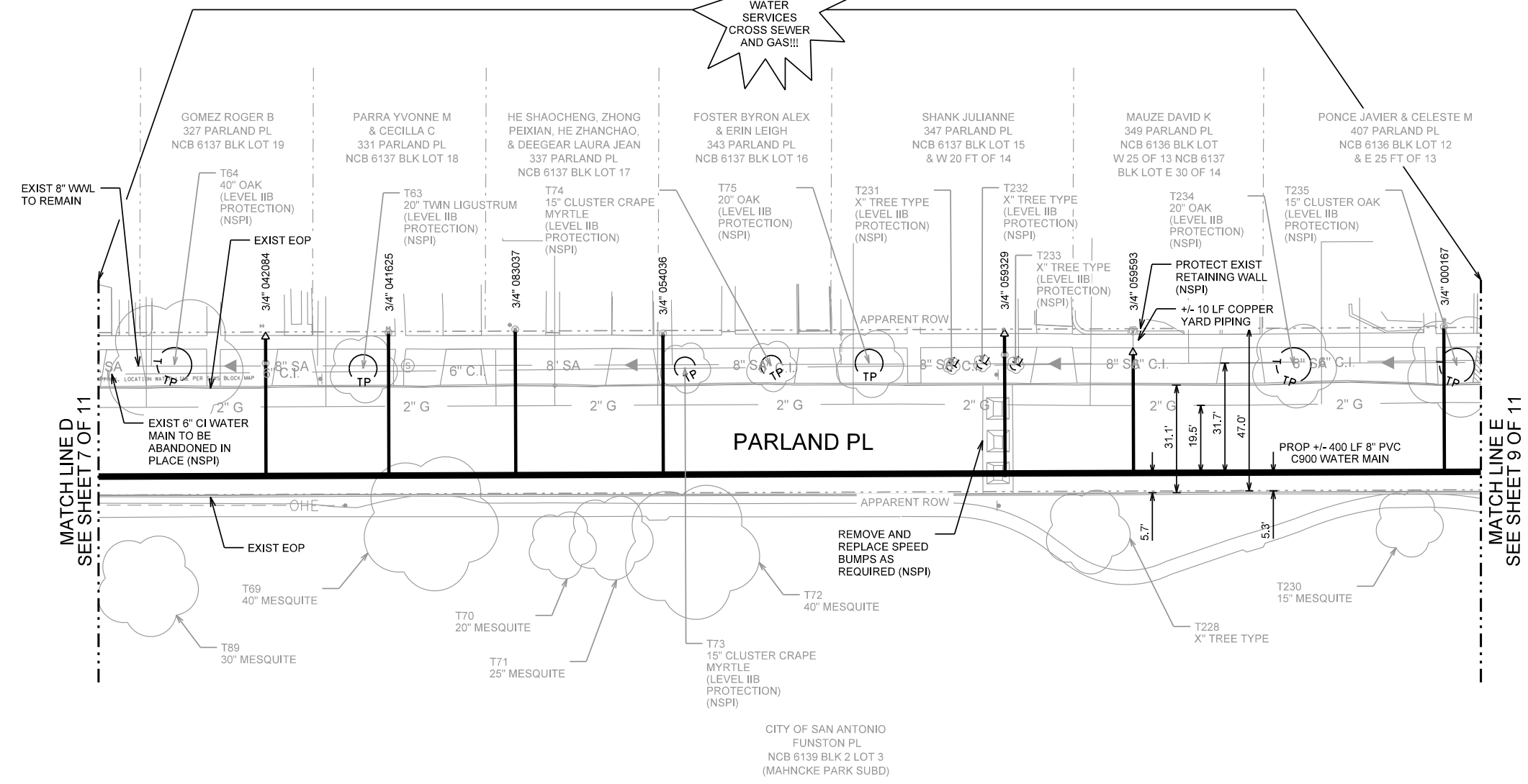
PARLAND PLACE
FROM BROADWAY TO
N. NEW BRAUNFELS
WATER PLAN 4

DEVELOPER:		BUDGET PROJ.	
SUBMITTED:		APPROVED:	
MAP No.	SECT. No.	SHEET 7	
DR.	CK.	JOB No. 17-5116 OF 11	

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ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203	TACK COAT	GAL	21.2
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	167
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	212
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	400
818	8" PVC WATERLINE (RESTRAINED)	LF	400
822	SHORT YARD PIPING	LF	10
824	RELAY 3/4" LONG SERVICE	EA	7
833	EXISTING METER & NEW METER BOX RELOCATION	EA	3
833	NEW METER BOX	EA	7

**CAUTION!!!
WATER
SERVICES
CROSS SEWER
AND GAS!!!**



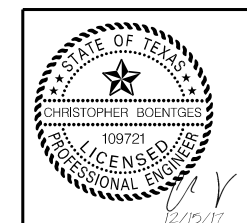
**MAHNCKE PARK
(COSA PARKS PROPERTY)
(SEE PARKS NOTE)**

CITY OF SAN ANTONIO
FUNSTON PL
NCB 6139 BLK 2 LOT 3
(MAHNCKE PARK SUBD)

COSA PARKS NOTE:
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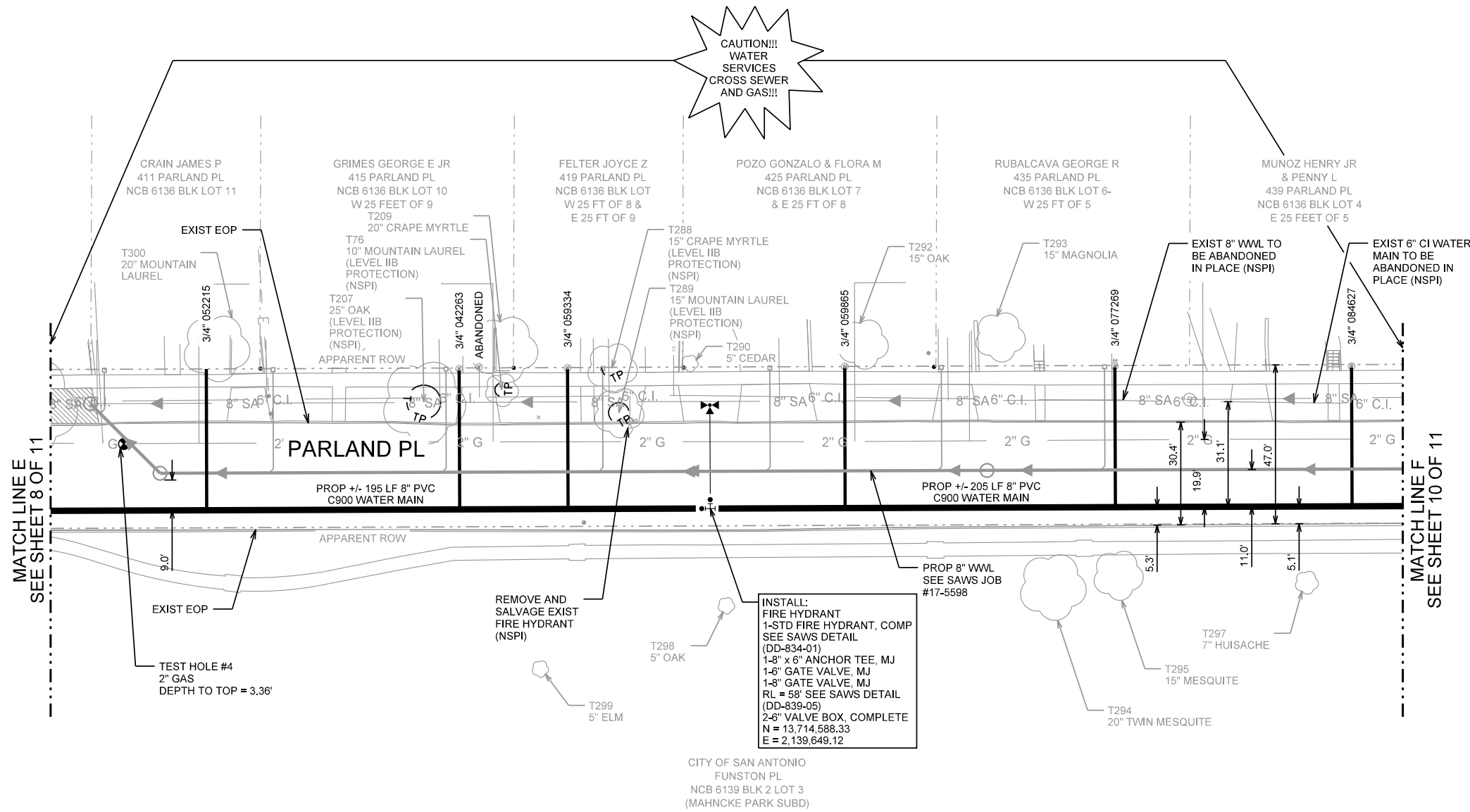


LEGEND	
PROP. WATER MAIN	
EXIST. WATER MAIN	
GAS MAIN	
SANITARY SEWER	
STORM SEWER	
UTILITY POLE LINE	
ELECTRIC CABLE	
TELEPHONE CABLE	
DUAL BRANCH SERV.	
NEW UNMETERED SERVICE:	
3/4" SINGLE	
1" DUAL	
SERVICE RECONNECT:	
3/4"	
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SERVICE RELAY:	
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SERVICE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

No.	Revision	Drawn	Approved	Date
REVISIONS				
PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS				
WATER PLAN 5				
DEVELOPER:				
CONT.		BUDGET PROJ.		
SUBMITTED				
APPROVED				
MAP No.				SHEET
SECT. No.				8
DR.	CK.	JOB No. 17-5116 OF 11		

X:\Projects\0540_SAW'S SMP Parland Place\DWG\Sheets\0540_WTR_PLAN_5.dgn modified by aifscher on 1/3/2018 - 7:59:47 AM

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203	TACK COAT	GAL	21.2
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	167
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	212
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	400
818	8" PVC WATERLINE (RESTRAINED)	LF	400
824	RELAY 3/4" LONG SERVICE	EA	6
828	8" GATE VALVE	EA	1
833	NEW METER BOX	EA	6
834	FIRE HYDRANT	EA	1
836	PIPE FITTINGS, ALL SIZES & TYPES	TN	0.1



**MAHNCKE PARK
(COSA PARKS PROPERTY)
(SEE PARKS NOTE)**

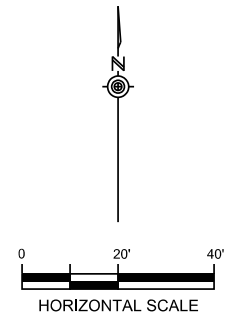
COSA PARKS NOTE:
NO WORK NOR EQUIPMENT OR MATERIAL STAGING SHALL EXTEND INTO COSA PARKS PROPERTY AT ANY TIME.

ROOT PROTECTION ZONE NOTE:
THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER WITHIN 20 MINUTES, TO PREVENT OAK WILT.

TRENCH EXCAVATION SAFETY PROTECTION:
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 CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE 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, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OF 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.

**INSTALL:
FIRE HYDRANT
1-STD FIRE HYDRANT, COMP
SEE SAWS DETAIL
(DD-834-01)
1-8" x 6" ANCHOR TEE, MJ
1-8" GATE VALVE, MJ
1-8" GATE VALVE, MJ
RL = 58' SEE SAWS DETAIL
(DD-839-05)
2-2" VALVE BOX, COMPLETE
N = 13,714,588.33
E = 2,139,649.12**

CITY OF SAN ANTONIO
FUNSTON PL
NCB 6139 BLK 2 LOT 3
(MAHNCKE PARK SUBD)



No.	Revision	Drawn	Approved	Date

REVISIONS

**PARLAND PLACE
FROM BROADWAY TO
N. NEW BRAUNFELS
WATER PLAN 6**

DEVELOPER: _____

CONT. _____ **BUDGET PROJ.**

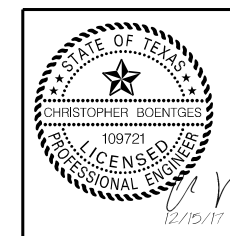
SUBMITTED _____

APPROVED _____

MAP No.	SHEET 9
SECT. No.	
DR.	CK.
JOB No. 17-5116 OF 11	

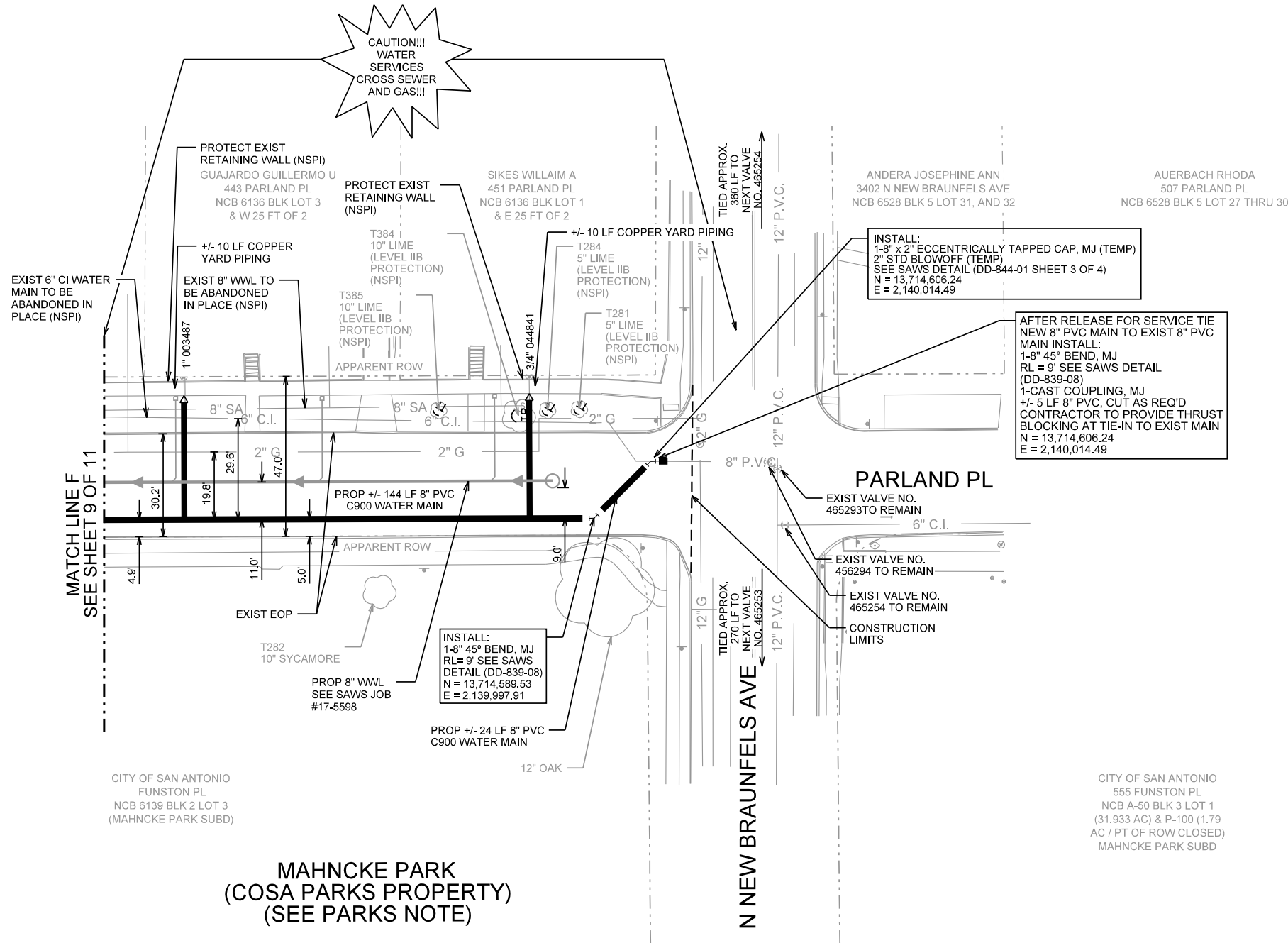
LEGEND

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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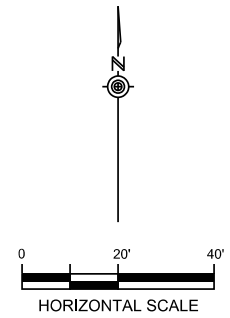
ESTIMATED QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	
203	TACK COAT	GAL	9.2	
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	73	
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	92	
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	173	
818	8" PVC WATERLINE (RESTRAINED)	LF	173	
822	SHORT YARD PIPING	LF	20	
824	RELAY 3/4" LONG SERVICE	EA	1	
824	RELAY 1" LONG SERVICE	EA	1	
833	NEW METER BOX	EA	2	
836	PIPE FITTINGS, ALL SIZES & TYPES	TN	0.1	
840	8" WATER TIE-IN	EA	1	
844	2" BLOW-OFF, TEMPORARY	EA	1	



INSTALL:
 1-8" x 2" ECCENTRICALLY TAPPED CAP, MJ (TEMP)
 2" STD BLOWOFF (TEMP)
 SEE SAWS DETAIL (DD-844-01 SHEET 3 OF 4)
 N = 13,714,606.24
 E = 2,140,014.49

AFTER RELEASE FOR SERVICE TIE
 NEW 8" PVC MAIN TO EXIST 8" PVC
 MAIN INSTALL:
 1-8" 45° BEND, MJ
 RL = 9' SEE SAWS DETAIL
 (DD-839-08)
 1-CAST COUPLING, MJ
 +/- 5 LF 8" PVC, CUT AS REQ'D
 CONTRACTOR TO PROVIDE THRUST
 BLOCKING AT TIE-IN TO EXIST MAIN
 N = 13,714,606.24
 E = 2,140,014.49

INSTALL:
 1-8" 45° BEND, MJ
 RL = 9' SEE SAWS
 DETAIL (DD-839-08)
 N = 13,714,589.53
 E = 2,139,997.91

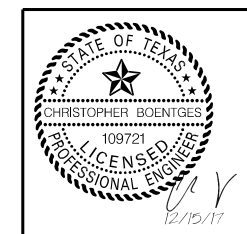


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 SUITE 109
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 TBPE Flrm #6535 www.kfriese.com

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	

No.	Revision	Drawn	Approved	Date
REVISIONS				
PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS				
WATER PLAN 7				
DEVELOPER:				
CONT.		BUDGET PROJ.		
SUBMITTED				
APPROVED				
MAP No.				SHEET
SECT. No.				10
DR.	CK.	JOB No. 17-5116 OF 11		



COSA PARKS NOTE:
 NO WORK NOR EQUIPMENT OR MATERIAL STAGING SHALL EXTEND INTO COSA PARKS PROPERTY AT ANY TIME.

ROOT PROTECTION ZONE NOTE:
 THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER WITHIN 20 MINUTES, TO PREVENT OAK WILT.

TRENCH EXCAVATION SAFETY PROTECTION:
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GENERAL NOTES

- ALL THE TREES WITH A DIAMETER GREATER THAN 3 INCHES AFFECTED BY CONSTRUCTION SHALL HAVE THE LIMBS AND ROOTS TRIMMED AND PRUNED ACCORDING TO ITEM No. 802. TREE PRUNING, SOIL AMENDING AND FERTILIZATION, UNLESS SPECIFIED TREES SHALL RECEIVE LEVEL 2 PROTECTION AS PER ITEM No. 802. TREES TO RECEIVE LEVEL 1 PROTECTION AS PER ITEM No. 802 ARE SHOWN ON TREE PROTECTION TABLE ON THIS SHEET.
- ALL TREES SHALL REMAIN UNLESS NOTED ON THE PLANS.
- NO SITE PREPARATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
- TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN THREE INCHES IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR.
- THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER, WITHIN 20 MINUTES TO PREVENT OAK WILT.
- ACCESS TO FENCED AREAS WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER OR CITY INSPECTOR.
- GRADING, IF REQUIRED, SHALL BE LIMITED TO A 3 INCH CUT OR FILL WITHIN THE FENCED ROOT ZONE AREAS.
- TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS SHALL BE REMOVED BY HAND AS DIRECTED BY THE PROJECT MANAGER OR CITY INSPECTOR.
- TREES DAMAGED OR LOST DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE ENGINEER'S SATISFACTION.
- EXPOSED ROOTS SHALL BE COVERED AT THE END OF EACH DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
- ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST PRIOR TO ITS REMOVAL.

1.3 GENERAL NOTES

TREE PROTECTION TABLE					
TREE NUMBER	TYPE	SIZE	PROTECTION	ACTION	SHEET NO.
T204	ASH	20"	LEVEL IIB	PRESERVE	5
T207	OAK	6"	LEVEL IIB	PRESERVE	5
T213	OAK	22"	LEVEL IIB	PRESERVE	5
T212	OAK	10"	LEVEL IIB	PRESERVE	5
T211	OAK	22"	LEVEL IIB	PRESERVE	5
T210	ELM	2"	LEVEL IIB	PRESERVE	5
T209	PECAN	16"	LEVEL IIB	PRESERVE	5
T221	PECAN	16"	LEVEL IIB	PRESERVE	5
T294	OAK	52"	LEVEL IIB	PRESERVE	6
T296	CRAPE MYRTLE	11"	LEVEL IIB	PRESERVE	7
T300	CRAPE MYRTLE	10"	LEVEL IIB	PRESERVE	7
T298	CRAPE MYRTLE	11"	LEVEL IIB	PRESERVE	7
T223	CRAPE MYRTLE	4"	LEVEL IIB	PRESERVE	7
T222	CRAPE MYRTLE	3"	LEVEL IIB	PRESERVE	7
T289	TWIN CRAPE MYRTLE	20"	LEVEL IIB	PRESERVE	7
T227	CRAPE MYRTLE	15"	LEVEL IIB	PRESERVE	7
T226	CRAPE MYRTLE	15"	LEVEL IIB	PRESERVE	7
T66	TWIN CRAPE MYRTLE	8"	LEVEL IIB	PRESERVE	7
T65	TWIN CRAPE MYRTLE	7"	LEVEL IIB	PRESERVE	7
T64	OAK	40"	LEVEL IIB	PRESERVE	8
T63	TWIN LIGUSTRUM	20"	LEVEL IIB	PRESERVE	8
T73	CLUSTER CRAPE MYRTLE	15"	LEVEL IIB	PRESERVE	8
T74	CLUSTER CRAPE MYRTLE	15"	LEVEL IIB	PRESERVE	8
T75	OAK	20"	LEVEL IIB	PRESERVE	8
T231	?		LEVEL IIB	PRESERVE	8
T232	?		LEVEL IIB	PRESERVE	8
T233	?		LEVEL IIB	PRESERVE	8
T234	OAK	20"	LEVEL IIB	PRESERVE	8
T235	CLUSTER OAK	15"	LEVEL IIB	PRESERVE	8
T207	OAK	25"	LEVEL IIB	PRESERVE	9
T76	MOUNTAIN LAUREL	10"	LEVEL IIB	PRESERVE	9
T288	CRAPE MYRTLE	15"	LEVEL IIB	PRESERVE	9
T289	MOUNTAIN LAUREL	15"	LEVEL IIB	PRESERVE	9
T385	LIME	10"	LEVEL IIB	PRESERVE	10
T384	LIME	10"	LEVEL IIB	PRESERVE	10
T284	LIME	5"	LEVEL IIB	PRESERVE	10
T281	LIME	5"	LEVEL IIB	PRESERVE	10

TREE INVENTORY SUMMARY	
TOTAL DIAMETER INCHES, R.O.W. & ESMNTS =	510+
TOTAL DIAMETER INCHES REMOVED =	0
TOTAL DIAMETER INCHES PRESERVED =	510+
TOTAL PERCENTAGE INCHES PRESERVED =	100%
TOTAL INCHES TO BE MITIGATED =	0

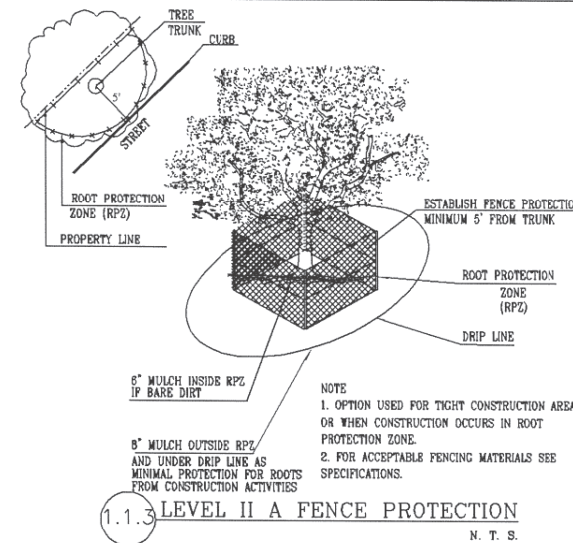
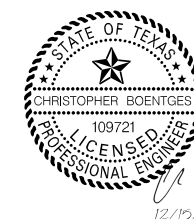
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TBPE Flrm #6535 www.kfriese.com

No.	Revision	Drawn	Approved	Date

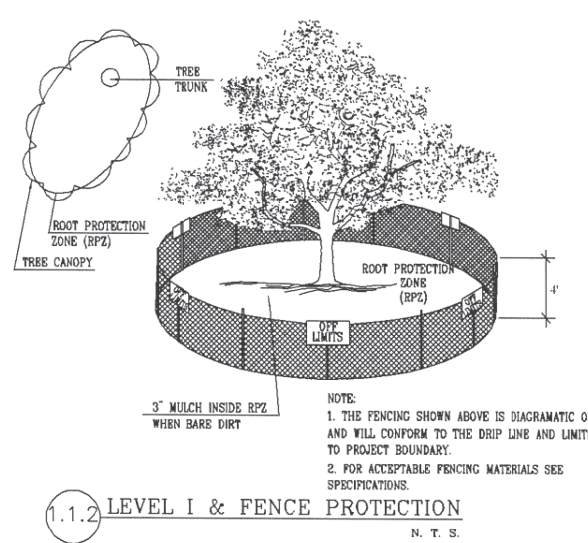
REVISIONS

PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS TREE PROTECTION DETAILS

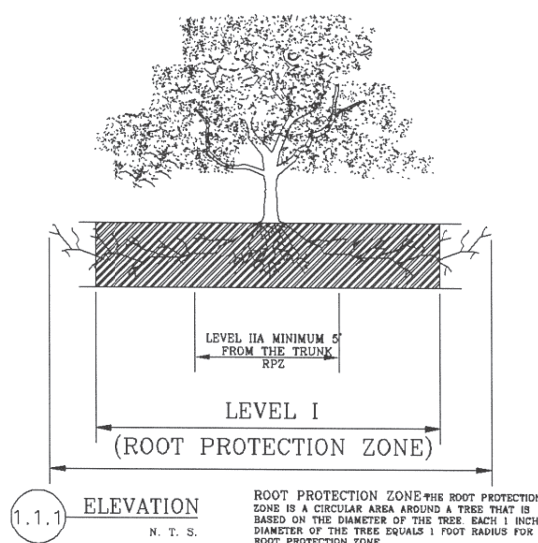
DEVELOPER: _____
 CONT. BUDGET PROJ.
 SUBMITTED _____
 APPROVED _____
 MAP No. _____ SHEET 11
 SECT. No. _____ OF 11
 DR. CK. JOB No. 17-5116



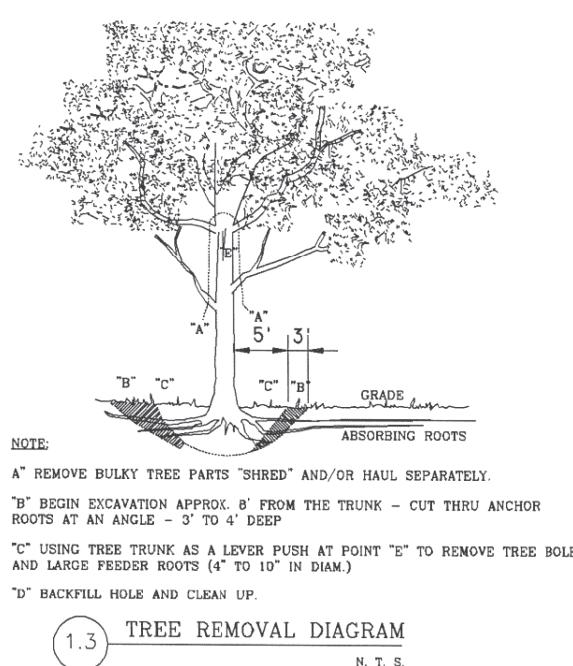
1.1.3 LEVEL II A FENCE PROTECTION
N. T. S.



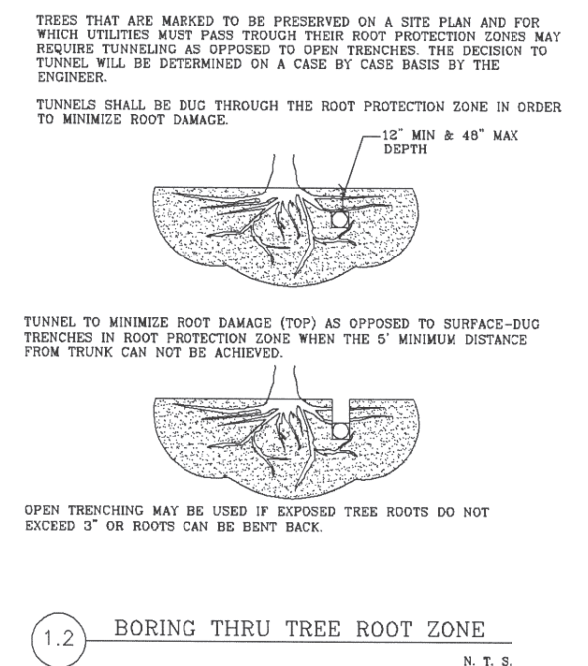
1.1.2 LEVEL I & FENCE PROTECTION
N. T. S.



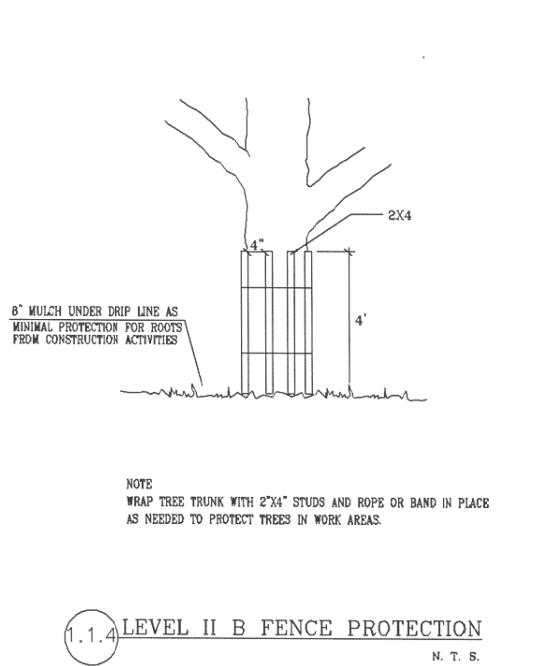
1.1.1 ELEVATION
N. T. S.



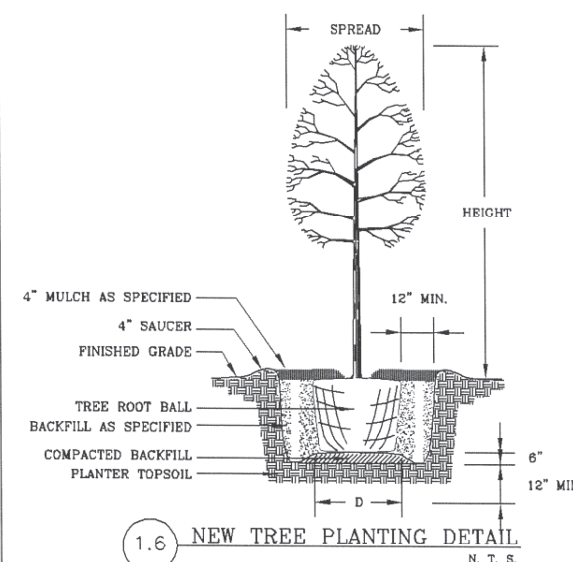
1.3 TREE REMOVAL DIAGRAM
N. T. S.



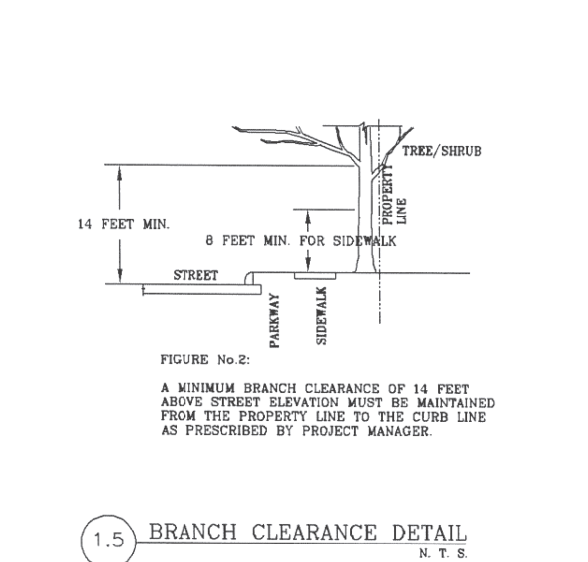
1.2 BORING THRU TREE ROOT ZONE
N. T. S.



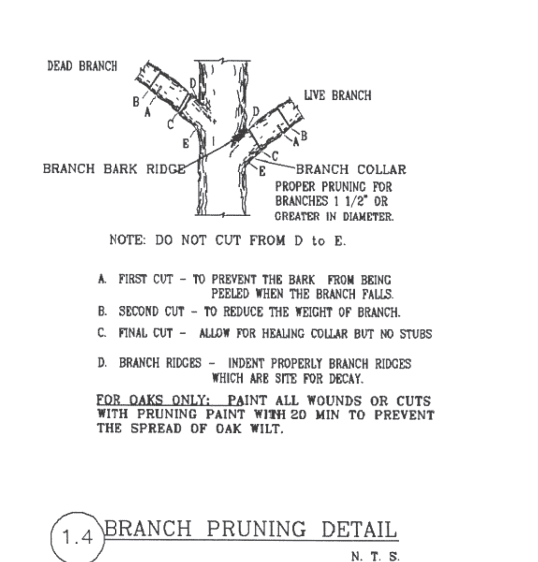
1.1.4 LEVEL II B FENCE PROTECTION
N. T. S.



1.6 NEW TREE PLANTING DETAIL
N. T. S.



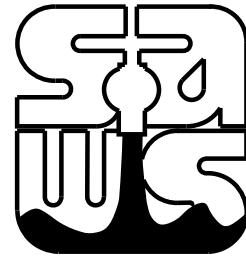
1.5 BRANCH CLEARANCE DETAIL
N. T. S.



1.4 BRANCH PRUNING DETAIL
N. T. S.

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SAN ANTONIO WATER SYSTEM



2018 SMP JOB NO: 17-5598

PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS SEWER PLANS

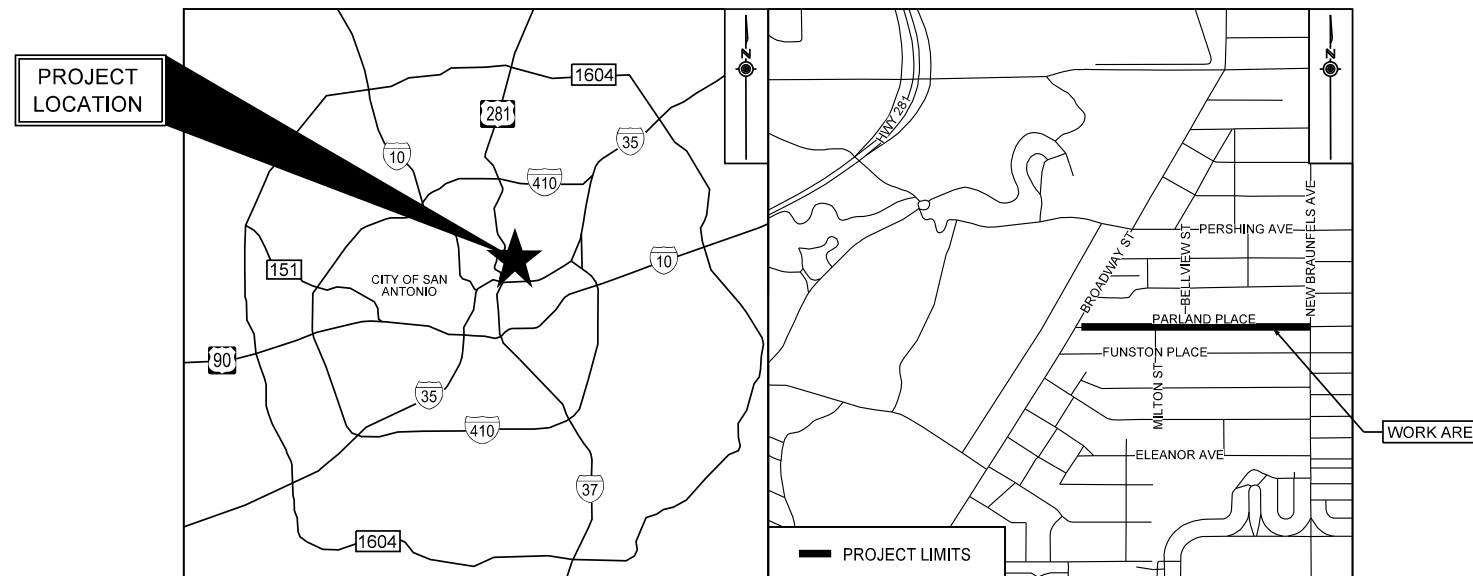


CB
12/15/17

SUBMITTAL PREPARED BY:



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TBPE Firm #6535 www.kfriese.com



LOCATION MAP
NOT TO SCALE

SHEET LIST

SHT NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES AND QUANTITIES
3	PROJECT LAYOUT
4	SANITARY SEWER PLAN AND PROFILE LINE A BEGIN TO END
5	SANITARY SEWER PLAN AND PROFILE LINE B BEGIN TO STA 4+50
6	SANITARY SEWER PLAN AND PROFILE LINE B STA 4+50 TO END
7	TREE PROTECTION DETAILS

JANUARY 2018

GENERAL SECTION

- 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 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 CONSTRUCTION."
 - CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE, HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.
- THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500, AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 72 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 AT LEAST 1 WEEK 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 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
 SAN ANTONIO WATER SYSTEM:
 SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
 COSA DRAINAGE 210-207-8048
 COSA TRAFFIC SIGNAL OPERATIONS 210-207-7720
 TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGES DONE BY THE PROJECT'S CONSTRUCTION.
- ALL WORK IN TEXAS HIGHWAY DEPARTMENT AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.
- 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 IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
- 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.
- HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.
 WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.
 ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
- PRE CON SITE VIDEO: BEFORE THE START OF ANY CONSTRUCTION. THE SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO SAWS INSPECTIONS. A PRE-SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF THE EXISTING CONDITIONS (NSPI).
- POWER POLE BRACING: CONTRACTORS SHOULD BE ADVISED THAT THERE ARE EXISTING OVERHEAD UTILITY POLES ALONG THE PROJECT CORRIDOR. CONTRACTORS SHOULD FURTHER BE ADVISED THAT IF THE DISTANCE FROM THE OUTSIDE FACE OF A UTILITY TRENCH TO THE FACE OF A UTILITY POLE IS LESS THAN 5 FEET, SAID UTILITY POLE IS SUBJECT TO BRACING, BASED ON A DETERMINATION MADE BY UTILITY POLE OWNER. COSTS INCURRED BY CONTRACTOR FOR BRACING OF THESE UTILITY POLES IS SUBSIDIARY TO THAT RESPECTIVE UTILITY COMPANY'S WORK. IT IS ADVISABLE FOR THE CONTRACTOR TO REVIEW THE CONSTRUCTION DOCUMENTS, AND VISIT THE CONSTRUCTION SITE TO DETERMINE POTENTIAL IMPACTS.
- CONSTRUCTION SEQUENCING: IT IS THE CONTRACTOR SOLE RESPONSIBILITY TO SCHEDULE SEQUENCING FOR REMOVAL AND INSTALLATION OF EXISTING AND PROPOSED SAWS UTILITIES IN CONJUNCTION WITH GENERAL PROJECT CONSTRUCTION. SEQUENCE OF CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED IN ORDER TO MINIMIZE THE EXTENT AND DURATION OF DISTURBANCES.

SEWER SECTION:

- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:
 - IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT 210-704-SAWS (210-704-7297). PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.
 - ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
 - CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
 - CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
 - CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.
 - MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISIONING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.

SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA. NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND SAWS.
- THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED, IN ACCORDANCE WITH SAWS SPECIFICATION ITEM NO. 864-S1, "BYPASS PUMPING SMALL DIAMETER SANITARY SEWERS" AND ITEM NO. 864-S2, "BYPASS PUMPING LARGE DIAMETER SANITARY SEWERS". PAYMENT FOR SUCH WORK WILL BE MADE UNDER THE BID ITEM "SANITARY SEWER (BYPASS PUMPING)"(LUMP SUM) AS PER SAWS SPECIFICATION.
- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 AND/OR SAWS PRODUCTION GROUPS AT LEAST ONE WEEK OR MORE 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.
- 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 FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS (NSPI).
- SMART MANHOLE COVERS: THE CONTRACTOR SHALL NOTIFY JUAN C. RAMIREZ AT 210-233-3558 AND SAWS EOC AT 210-704-SAWS (210-233-7297) A MINIMUM OF 72 HOURS, NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE, IN ORDER TO HAVE SAWS REMOVE THE SMART COVER. ANY DAMAGE DONE TO THE SMART COVER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.

NOTES:

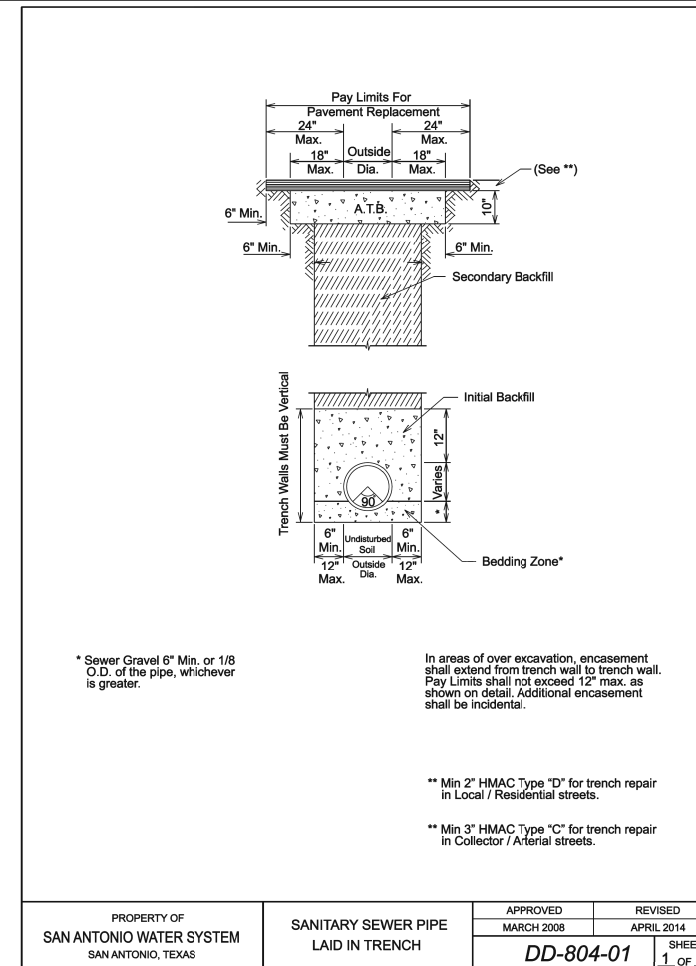
- CONTRACTOR TO VERIFY EXISTING TIE-IN ELEVATIONS BEFORE STARTING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY AND CONTACT SAWS IF THERE ARE ANY LATERALS CONNECTING TO THE MAIN NOT SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING OPERATION OF ALL EXISTING UTILITIES AFFECTED BY PROPOSED CONSTRUCTION.
- IF SANITARY SEWER LATERALS ARE WITHIN 9 FEET OF PROPOSED WATER SERVICE LINES, THE SANITARY SEWER LATERALS SHALL BE ENCASED WITH FLOWABLE FILL. THE ENCASEMENT SHALL BE 6-INCHES BELOW THE LATERAL, 6-INCHES ABOVE THE LATERAL, AND 6-INCHES ON EITHER SIDE OF THE LATERAL.
- TREE REMOVAL IS NOT PERMITTED ON THIS PROJECT. CONTRACTOR SHALL TAKE EXTREME CARE WHEN WORKING AROUND TREES TO PREVENT DAMAGE. PRIOR TO THE START OF WORK, CALL 207-1111 TO SCHEDULE A PRE-CONSTRUCTION FENCING INSPECTION.
- TREE PROTECTION IS NSPI.
- THE CONTRACTOR SHALL MAINTAIN AT LEAST TWO FEET OF VERTICAL SEPARATION DISTANCE BETWEEN ALL PROPOSED SEWER LINES (MAINS AND LATERALS) AND EXISTING GAS MAINS.
- PERCENT SLOPE OF SEWER MAIN IS CALCULATED BETWEEN TWO MANHOLES AT THE INVERT IN/OUT OF THE INSIDE OF THE MANHOLE.
- THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. THE CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR AS APPROVED BY THE OWNER AND CONSULTANT, AT THE SOLE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL RE-ESTABLISH ANY PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION AND ELEVATION. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VERTICAL AND HORIZONTAL CONTROL SHOWN ON THE PLANS THROUGHOUT THE PROJECT. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PUBLIC SURVEYOR IN THE STATE OF TEXAS AT NO ADDITIONAL COST TO SAWS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE AND THE SAN ANTONIO WATER SYSTEM.
- CONTRACTOR MAY ENCOUNTER CONCRETE ENCASEMENT IN THE IMMEDIATE VICINITY OF EXISTING MANHOLES. ANY CONCRETE REMOVAL REQUIRED FOR THE PROPER INSTALLATION OF PROPOSED SEWER MAIN AND TIE-INS SHALL BE AT NO ADDITIONAL COST TO THE OWNER. (NSPI)
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE CONSULTANT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXPECTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR CONSULTANT.

COSA PARKS NOTE:

NO WORK NOR EQUIPMENT OR MATERIAL STAGING SHALL EXTEND INTO COSA PARKS PROPERTY AT ANY TIME.

ARCHAEOLOGY NOTE:

THE PRECISE LOCATION OF THE ACEQUIA DEL ALAMO IS NOT KNOWN. CONTRACTOR SHALL NOTIFY SAWS AND ENGINEER 48 HOURS PRIOR TO EXCAVATION WITHIN THE AREA BETWEEN 119 PARLAND AND 139 PARLAND TO COORDINATE PRESENCE OF OWNER'S ENGINEER/ARCHAEOLOGIST DURING EXCAVATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE TEXAS HISTORICAL COMMISSION PERMIT FOR THE CROSSING.



TOTAL ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
103	REMOVE CONCRETE CURB	LF	70
103	REMOVE SIDEWALKS & DRIVEWAYS	SF	535
203	TACK COAT	GAL	46.6
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	369
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	466
413	FLOWABLE FILL	CY	16.5
500	CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER	LF	65
503	PORTLAND CEMENT CONCRETE DRIVEWAY - COMMERCIAL	SY	43
503	PORTLAND CEMENT CONCRETE DRIVEWAY - RESIDENTIAL	SY	18
530.1	BARRICADES, SIGNS, AND TRAFFIC HANDLING (PARLAND PLACE)	EA	*0.5
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	905
848	8" PVC GRAVITY SANITARY SEWER PIPE (DR 26-2241, 160 PSI), (6"-14' CUT)	LF	905
851	ADJUST EXISTING MANHOLE (WATERTIGHT RING AND COVER)	EA	8
852	SANITARY SEWER MANHOLE (0'-6")	EA	5
852	SANITARY SEWER MANHOLE (0'-6")(DROP)	EA	1
852	SANITARY SEWER MANHOLE (0'-6")(DOGHOUSE)	EA	1
852	EXTRA DEPTH MANHOLES (GREATER THAN 6')	VF	8
854	SANITARY SEWER LATERALS, (SDR 26, ASTM 2241, 160 PSI)	LF	441
854	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	16
860	VERTICAL STACKS	VF	1
864-S1	BYPASS PUMPING (SMALL DIAMETER SANITARY SEWERS) (PARLAND PLACE)	EA	1
866	PRE SEWER MAIN TELEVISION INSPECTION (8"-24")	LF	947
866	POST SEWER MAIN TELEVISION INSPECTION (8"-24")	LF	905
910.1	MANHOLE REHABILITATION	VF	8

*ITEM SPLIT FOR WORKSITE BETWEEN WATER AND SEWER PROJECTS.

CPS ENERGY NOTES:

- CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-545-6005, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES.
- THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN PROJECT AREA.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS ENERGY OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.

AT&T NOTES:

- THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE.
- CONTRACTOR IS TO CONTACT THE TELEPHONE COMPANY LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR IS TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

NOTE FOR THE CITY OF SAN ANTONIO FLATWORK:

ALL LIMITS FOR CURB, SIDEWALK, AND TREE PREP BEYOND WHAT IS CONSIDERED INCIDENTAL TO NORMAL UTILITY CONSTRUCTION WILL BE ADDRESSED BY THE SAWS INSPECTOR. SAWS INSPECTOR WILL ALSO DETERMINE IF ADDITIONAL COMPENSATION IS WARRANTED IF LIMITS EXCEED INCIDENTALS.

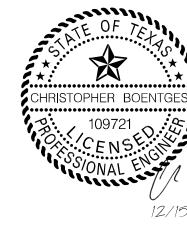
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No.	Revision	Drawn	Approved	Date
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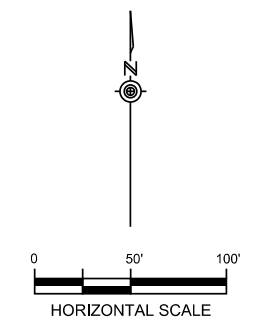
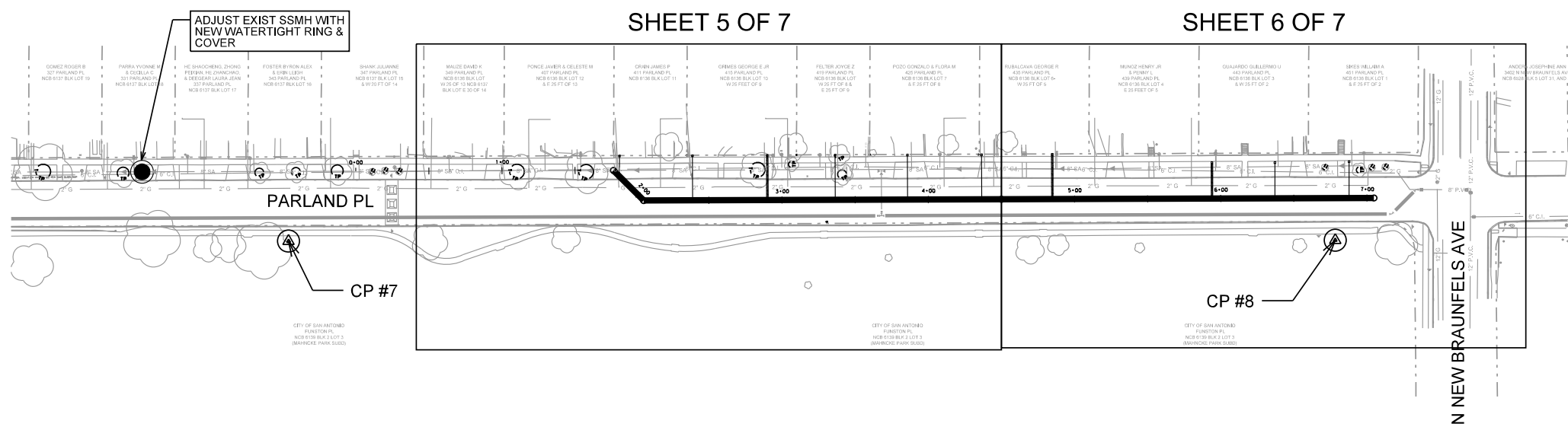
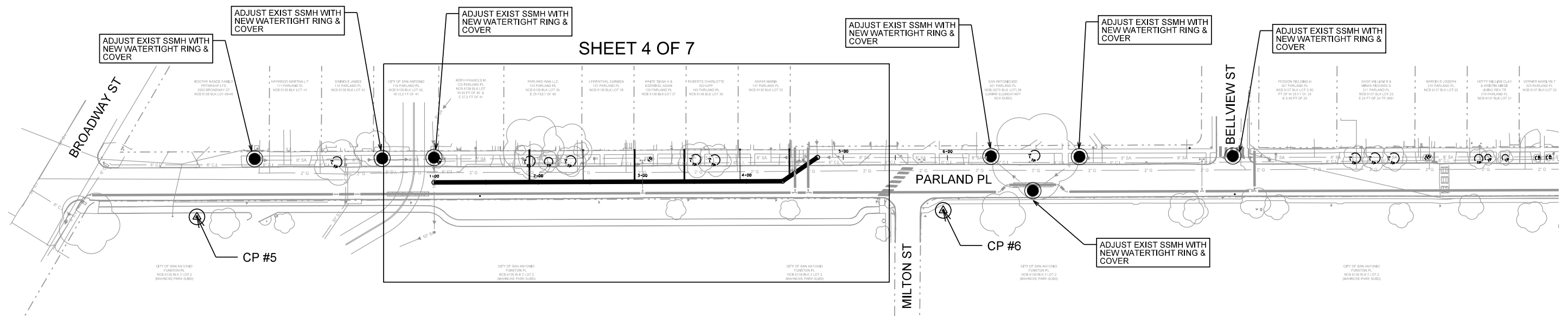
REVISIONS

PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS
GENERAL NOTES AND QUANTITIES

DEVELOPER:	
CONT.	BUDGET PROJ.
SUBMITTED _____	
APPROVED _____	
MAP No.	SHEET 2
SECT. No.	DR. CK. JOB No. 17-5598 Of 7



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CONTROL POINTS TABLE

POINT NO.	X	Y	ELEVATION	DESCRIPTION
CP #5	2,137,746.40	13,714,559.14	669.74	1/2 IR W/ GREEN CAP GD #5005
CP #6	2,138,462.93	13,714,565.33	678.91	1/2 IR W/ GREEN CAP GD #5005
CP #7	2,139,243.62	13,714,570.97	696.80	1/2 IR W/ GREEN CAP GD #5005
CP #8	2,139,959.24	13,714,571.58	748.44	1/2 IR W/ GREEN CAP GD #5005

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
851	ADJUST EXISTING MANHOLE (WATERTIGHT RING AND COVER)	EA	8

No.	Revision	Drawn	Approved	Date

REVISIONS

PARLAND PLACE
FROM BROADWAY TO
N. NEW BRAUNFELS

PROJECT LAYOUT

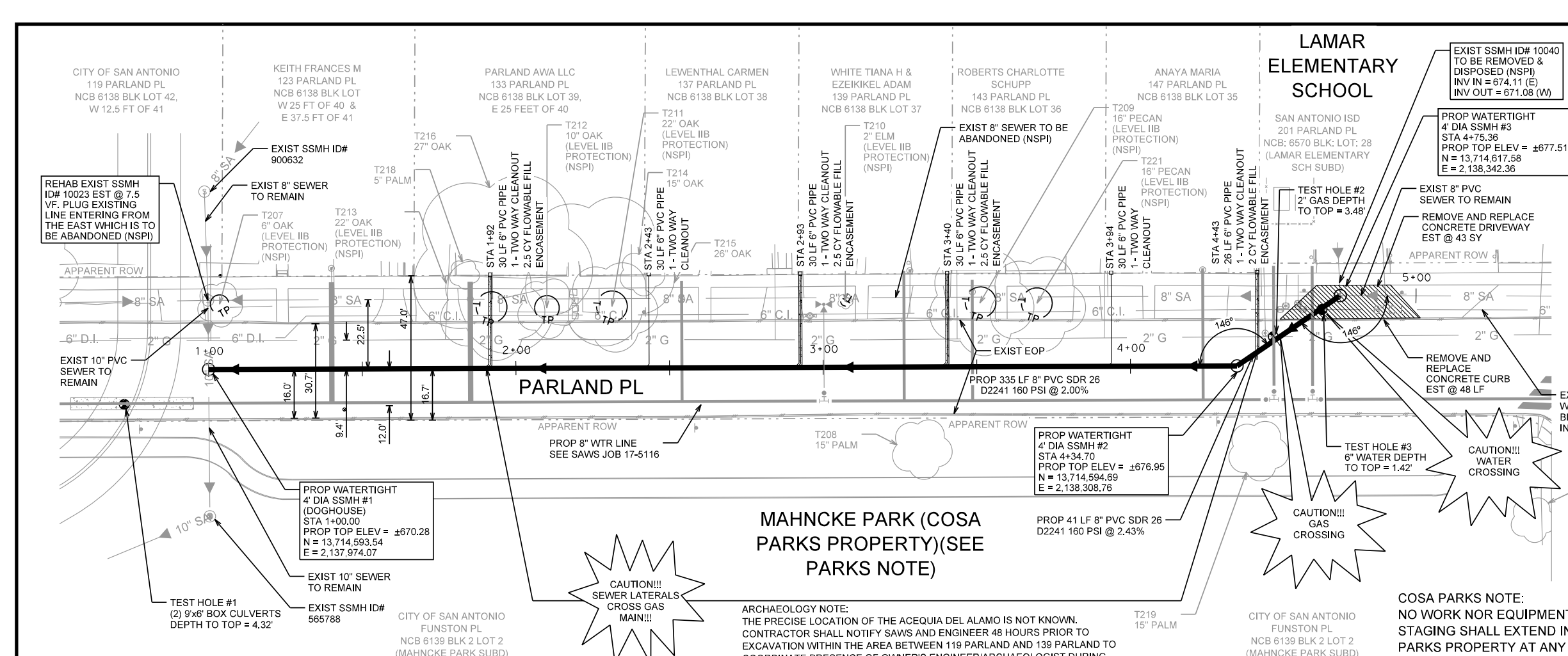
DEVELOPER: _____

CONT. _____ **BUDGET PROJ.**

SUBMITTED _____

APPROVED _____

MAP No.	SHEET 3
SECT. No.	
DR. _____	CK. _____
JOB No. 17-5598 OF 7	



ESTIMATED QUANTITIES		UNIT	QUANTITY
103	REMOVE CONCRETE CURB	LF	48
103	REMOVE SIDEWALKS & DRIVEWAYS	SF	380
203	TACK COAT	GAL	19.1
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	151
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	191
413	FLOWABLE FILL	CY	9.5
500	CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER	LF	48
503	PORTLAND CEMENT CONCRETE DRIVEWAY - COMMERCIAL	SY	43
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	376
848	8" PVC GRAVITY SANITARY SEWER PIPE (DR 26-2241, 160 PSI), (6'-14' CUT)	LF	376
852	SANITARY SEWER MANHOLE (0'-6')	EA	2
852	SANITARY SEWER MANHOLE (0'-6')(DOGHOUSE)	EA	1
852	EXTRA DEPTH MANHOLES (GREATER THAN 6')	VF	2.6
854	SANITARY SEWER LATERALS, (SDR 26, ASTM 2241, 160 PSI)	LF	176
854	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	6
866	PRE SEWER MAIN TELEVISION INSPECTION (8"-24")	LF	438
866	POST SEWER MAIN TELEVISION INSPECTION (8"-24")	LF	376
910.1	MANHOLE REHABILITATION	VF	7.5

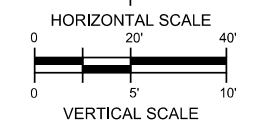
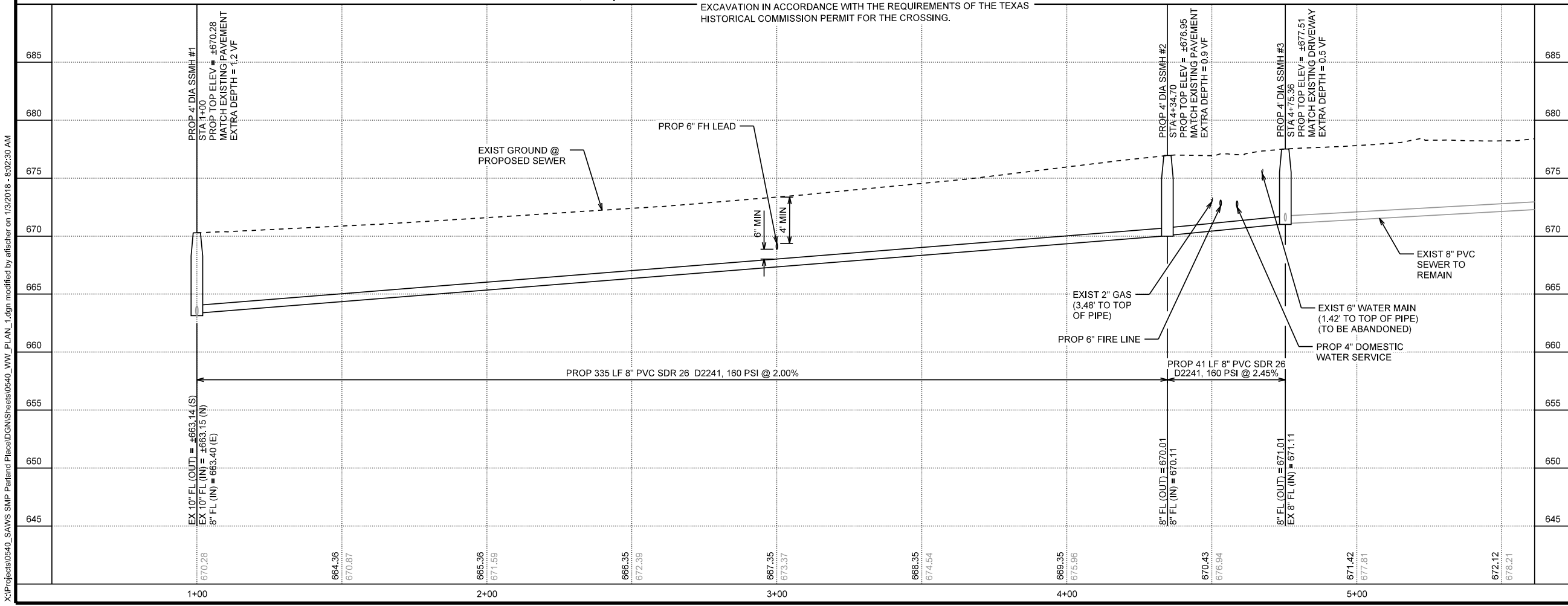
LEGEND

- PROP SANITARY SEWER LINE
- PROP MANHOLE
- PROP SEWER LATERAL & CLEANOUT
- EXIST EDGE OF PAVEMENT
- EXIST FENCE
- EXIST OVERHEAD UTILITIES
- OHE
- EXIST WATERLINE
- 6" C.I.
- 8" SA
- EXIST SANITARY SEWER LINE
- EXIST GAS LINE
- 2" G
- PROPERTY LINE
- UTILITY POLE
- EXIST TREE TO PROTECT
- EXIST TREE TO REMOVE

MAHNCKE PARK (COSA PARKS PROPERTY)(SEE PARKS NOTE)

ARCHAEOLOGY NOTE:
THE PRECISE LOCATION OF THE ACEQUIA DEL ALAMO IS NOT KNOWN. CONTRACTOR SHALL NOTIFY SAWS AND ENGINEER 48 HOURS PRIOR TO EXCAVATION WITHIN THE AREA BETWEEN 119 PARLAND AND 139 PARLAND TO COORDINATE PRESENCE OF OWNER'S ENGINEER/ARCHAEOLOGIST DURING EXCAVATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE TEXAS HISTORICAL COMMISSION PERMIT FOR THE CROSSING.

COSA PARKS NOTE:
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No.	Revision	Drawn	Approved	Date

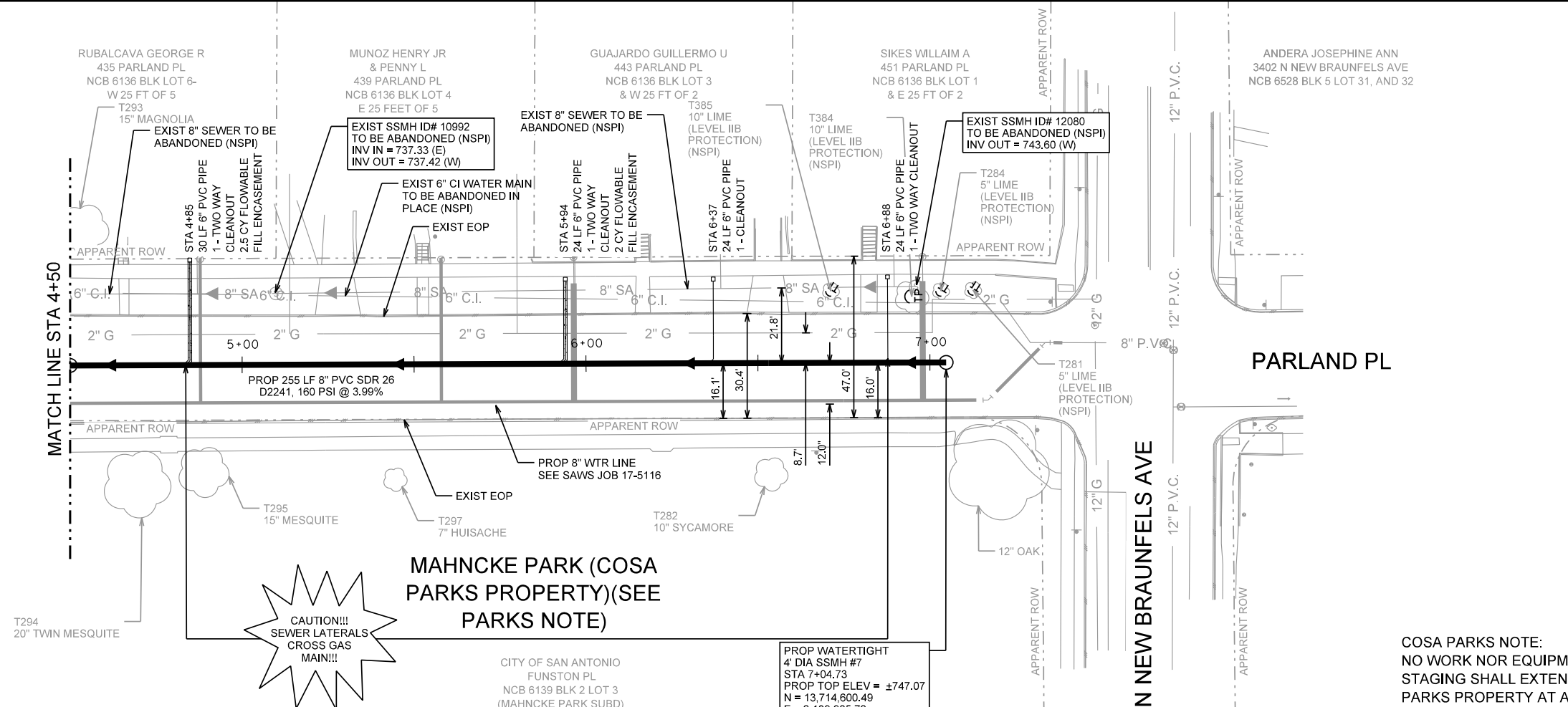
REVISIONS

PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS
SANITARY SEWER PLAN AND PROFILE LINE A BEGIN TO END

DEVELOPER:	BUDGET PROJ.
CONT.	
SUBMITTED	
APPROVED	
MAP No.	
SECT. No.	
DR.	CK.
JOB No. 17-5598	SHEET 4 OF 7

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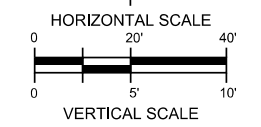
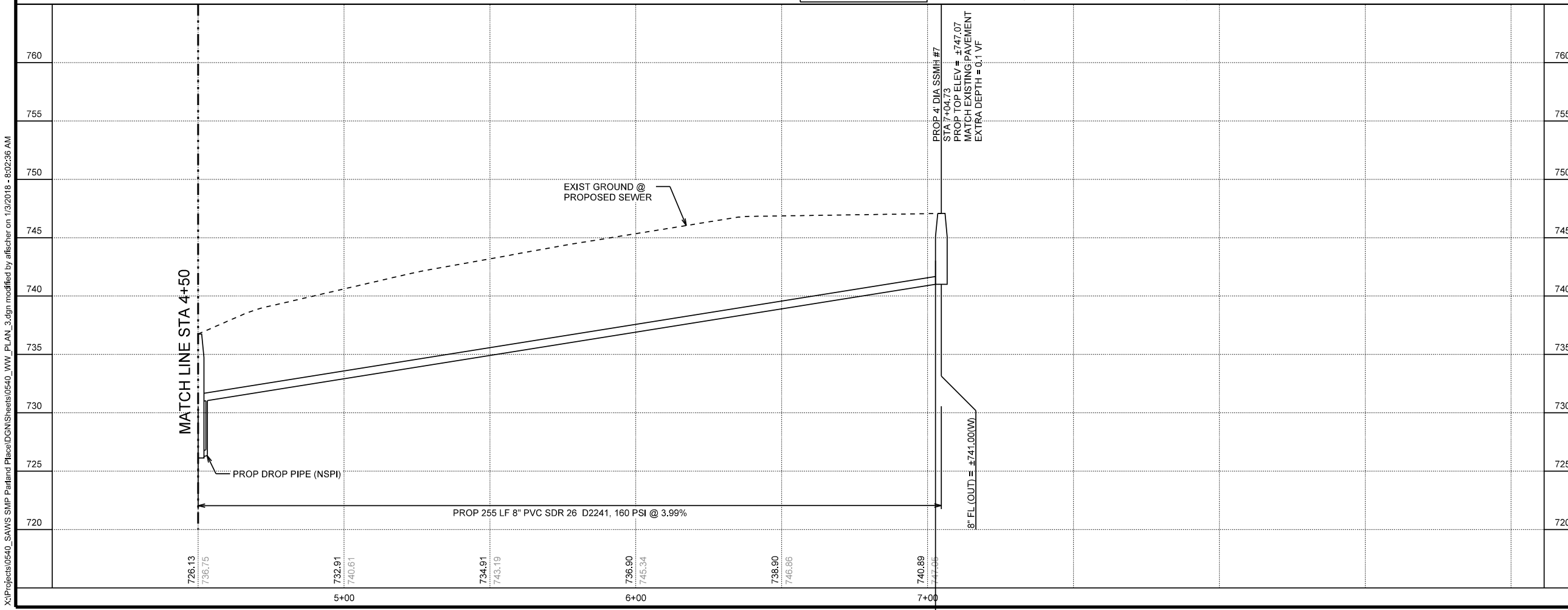
ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203	TACK COAT	GAL	13.5
205.2	HOT MIX ASPHALTIC PAVEMENT - TYPE B (10" COMPACTED DEPTH)	SY	107
205.4	HOT MIX ASPHALTIC PAVEMENT - TYPE D (2" COMPACTED DEPTH)	SY	135
413	FLOWABLE FILL	CY	4.5
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	255
848	8" PVC GRAVITY SANITARY SEWER PIPE (DR 26-2241, 160 PSI), (6'-14' CUT)	LF	255
852	SANITARY SEWER MANHOLE (0'-6')	EA	1
852	EXTRA DEPTH MANHOLES (GREATER THAN 6')	VF	0.1
854	SANITARY SEWER LATERALS, (SDR 26, ASTM 2241, 160 PSI)	LF	102
854	TWO-WAY SANITARY SEWER CLEAN-OUT	EA	4
866	PRE SEWER MAIN TELEVISION INSPECTION (8"-24")	LF	245
866	POST SEWER MAIN TELEVISION INSPECTION (8"-24")	LF	255



LEGEND

- PROP SANITARY SEWER LINE
- PROP MANHOLE
- PROP SEWER LATERAL & CLEANOUT
- EXIST EDGE OF PAVEMENT
- EXIST FENCE
- EXIST OVERHEAD UTILITIES
- 6" C.I. --- EXIST WATERLINE
- 8" SA --- EXIST SANITARY SEWER LINE
- 2" G --- EXIST GAS LINE
- PROPERTY LINE
- UTILITY POLE
- EXIST TREE TO PROTECT
- EXIST TREE TO REMOVE

COSA PARKS NOTE:
NO WORK NOR EQUIPMENT OR MATERIAL STAGING SHALL EXTEND INTO COSA PARKS PROPERTY AT ANY TIME.



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No.	Revision	Drawn	Approved	Date

REVISIONS

1. PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS SANITARY SEWER PLAN AND PROFILE LINE B STA 4+50.00 TO END

DEVELOPER:
CONT. BUDGET PROJ.

SUBMITTED _____
APPROVED _____

MAP No. _____ SHEET 6
SECT. No. _____
DR. _____ CK. _____ JOB No. 17-5598 OF 7

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GENERAL NOTES

- ALL THE TREES WITH A DIAMETER GREATER THAN 3 INCHES AFFECTED BY CONSTRUCTION SHALL HAVE THE LIMBS AND ROOTS TRIMMED AND PRUNED ACCORDING TO ITEM No. 802. TREE PRUNING, SOIL AMENDING AND FERTILIZATION, UNLESS SPECIFIED TREES SHALL RECEIVE LEVEL 2 PROTECTION AS PER ITEM No. 802. TREES TO RECEIVE LEVEL 1 PROTECTION AS PER ITEM No. 802 ARE SHOWN ON TREE PROTECTION TABLE ON THIS SHEET.
- ALL TREES SHALL REMAIN UNLESS NOTED ON THE PLANS.
- NO SITE PREPARATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
- TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN THREE INCHES IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR.
- THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK WOUNDS SHALL BE PAINTED OVER, WITHIN 20 MINUTES TO PREVENT OAK WILT.
- ACCESS TO FENCED AREAS WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER OR CITY INSPECTOR.
- GRADING, IF REQUIRED, SHALL BE LIMITED TO A 3 INCH CUT OR FILL WITHIN THE FENCED ROOT ZONE AREAS.
- TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS SHALL BE REMOVED BY HAND AS DIRECTED BY THE PROJECT MANAGER OR CITY INSPECTOR.
- TREES DAMAGED OR LOST DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE ENGINEER'S SATISFACTION.
- EXPOSED ROOTS SHALL BE COVERED AT THE END OF EACH DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
- ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST PRIOR TO ITS REMOVAL.

1.3 GENERAL NOTES

TREE PROTECTION TABLE					
TREE NUMBER	TYPE	SIZE	PROTECTION	ACTION	SHEET NO.
T207	OAK	6"	LEVEL IIB	PRESERVE	4
T213	OAK	22"	LEVEL IIB	PRESERVE	4
T212	OAK	10"	LEVEL IIB	PRESERVE	4
T211	OAK	22"	LEVEL IIB	PRESERVE	4
T210	FIM	2"	LEVEL IIB	PRESERVE	4
T209	PECAN	16"	LEVEL IIB	PRESERVE	4
T221	PECAN	16"	LEVEL IIB	PRESERVE	4
T234	OAK	20"	LEVEL IIB	PRESERVE	5
T235	CLUSTER OAK	15"	LEVEL IIB	PRESERVE	5
T207	OAK	25"	LEVEL IIB	PRESERVE	5
T76	MOUNTAIN LAUREL	10"	LEVEL IIB	PRESERVE	5
T288	CRAPE MYRTLE	15"	LEVEL IIB	PRESERVE	5
T289	MOUNTAIN LAUREL	15"	LEVEL IIB	PRESERVE	5
T385	LIME	10"	LEVEL IIB	PRESERVE	6
T384	LIME	10"	LEVEL IIB	PRESERVE	6
T284	LIME	5"	LEVEL IIB	PRESERVE	6
T281	LIME	5"	LEVEL IIB	PRESERVE	6

TREE INVENTORY SUMMARY	
TOTAL DIAMETER INCHES, R.O.W. & ESMNTS =	224
TOTAL DIAMETER INCHES REMOVED =	0
TOTAL DIAMETER INCHES PRESERVED =	224
TOTAL PERCENTAGE INCHES PRESERVED =	100%
TOTAL INCHES TO BE MITIGATED =	0



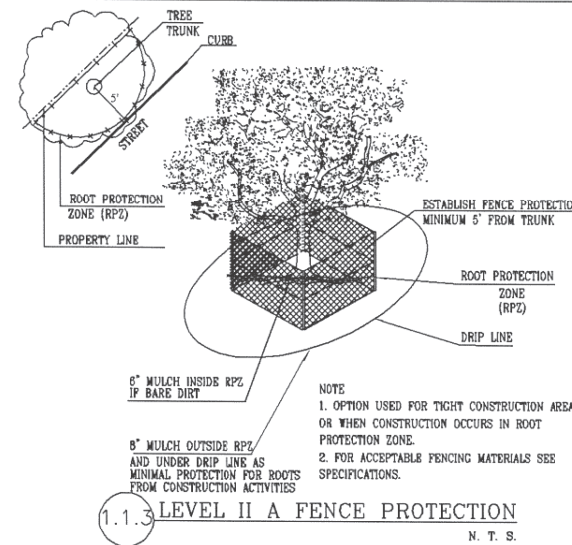
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No.	Revision	Drawn	Approved	Date

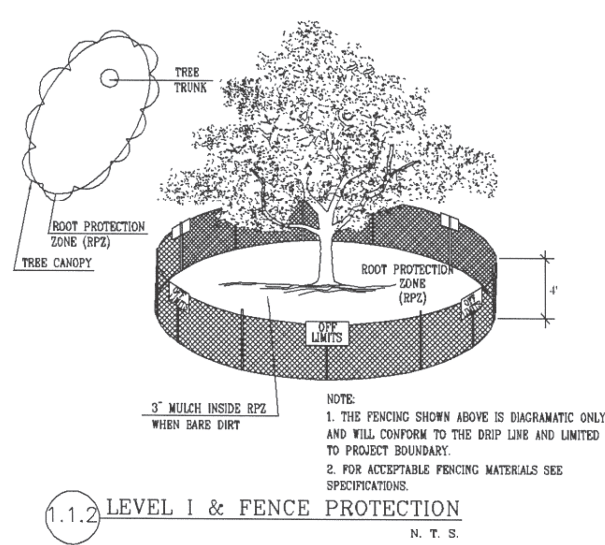
REVISIONS
PARLAND PLACE FROM BROADWAY TO N. NEW BRAUNFELS
TREE PROTECTION DETAILS

DEVELOPER: _____
CONT. BUDGET PROJ.
SUBMITTED _____
APPROVED _____
MAP No. _____ SHEET 7
SECT. No. _____
DR. CK. JOB No. 17-5598 OF 7

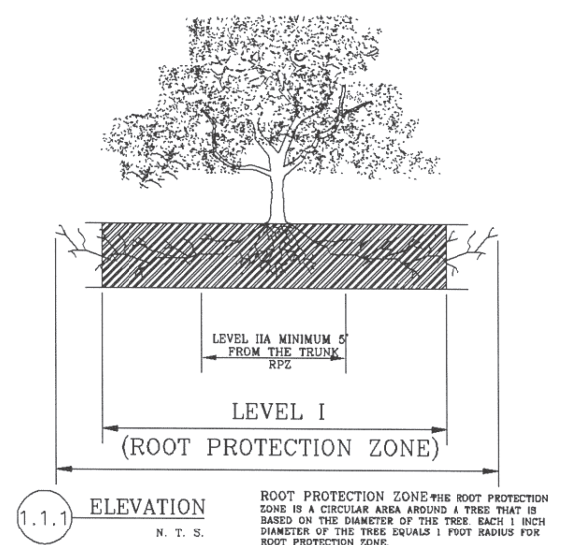
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THIS DOCUMENT IS NOT INTENDED FOR BIDDING, PERMITTING AND/OR CONSTRUCTION PURPOSES
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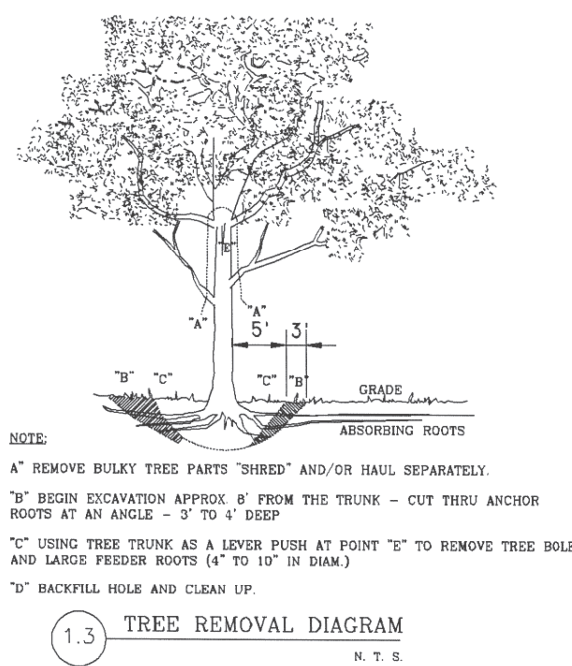
1.1.3 LEVEL II A FENCE PROTECTION
N. T. S.



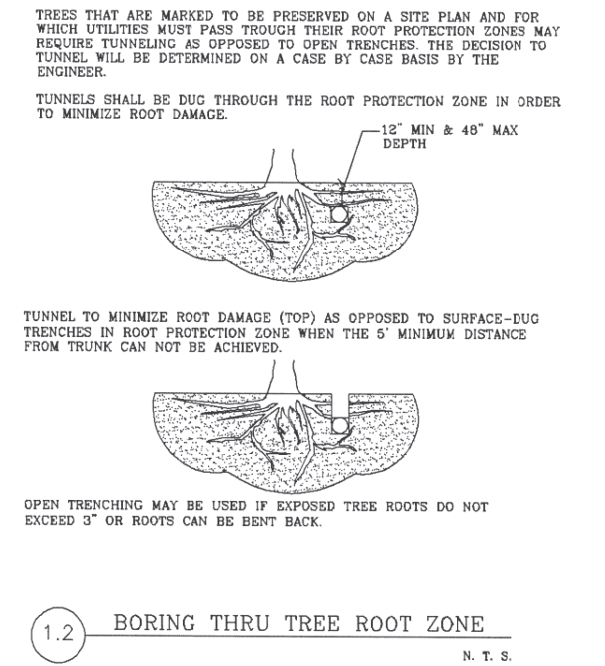
1.1.2 LEVEL I & FENCE PROTECTION
N. T. S.



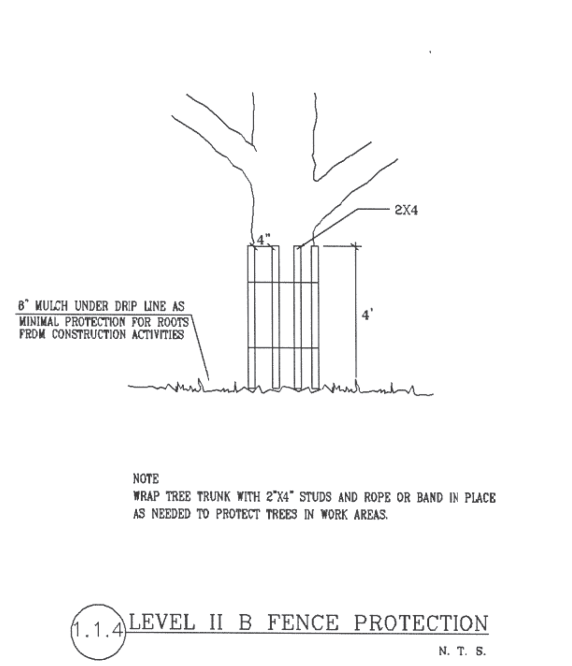
1.1.1 ELEVATION
N. T. S.



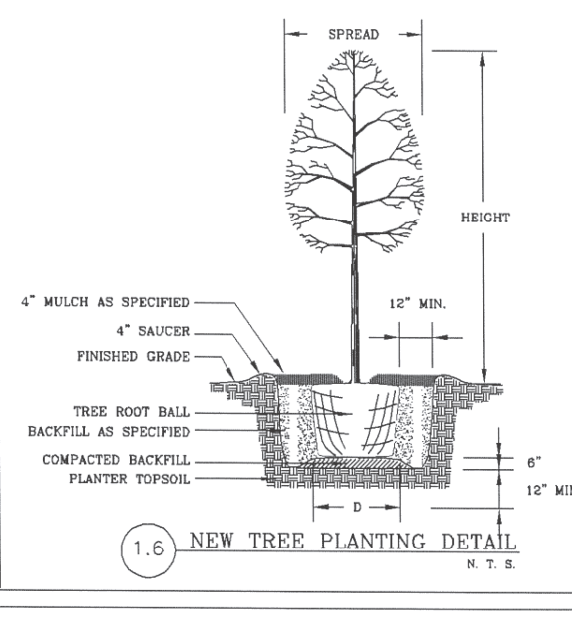
1.3 TREE REMOVAL DIAGRAM
N. T. S.



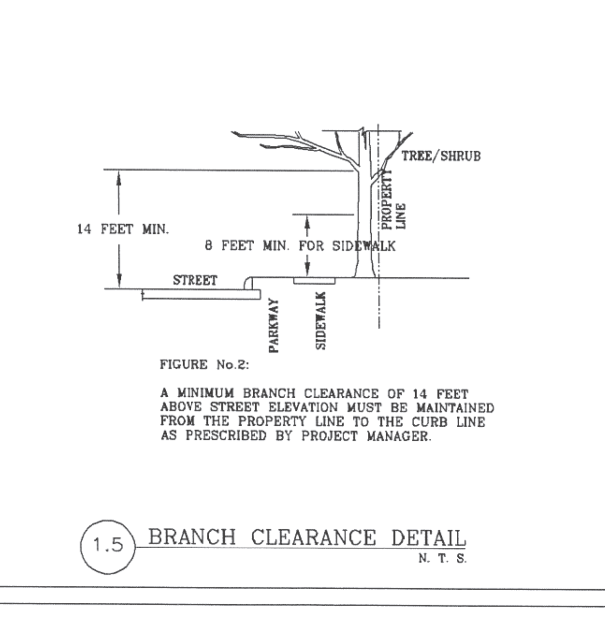
1.2 BORING THRU TREE ROOT ZONE
N. T. S.



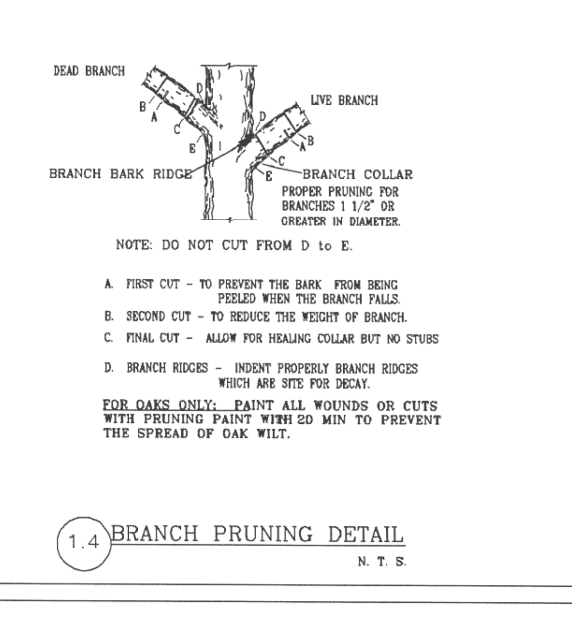
1.1.4 LEVEL II B FENCE PROTECTION
N. T. S.



1.6 NEW TREE PLANTING DETAIL
N. T. S.



1.5 BRANCH CLEARANCE DETAIL
N. T. S.



1.4 BRANCH PRUNING DETAIL
N. T. S.

X:\Projects\0540_SAWS SMP Parland Place\Drawings\0540_WW_TREE PROTECTION.dgn modified by afischer on 1/3/2018 - 8:02:38 AM