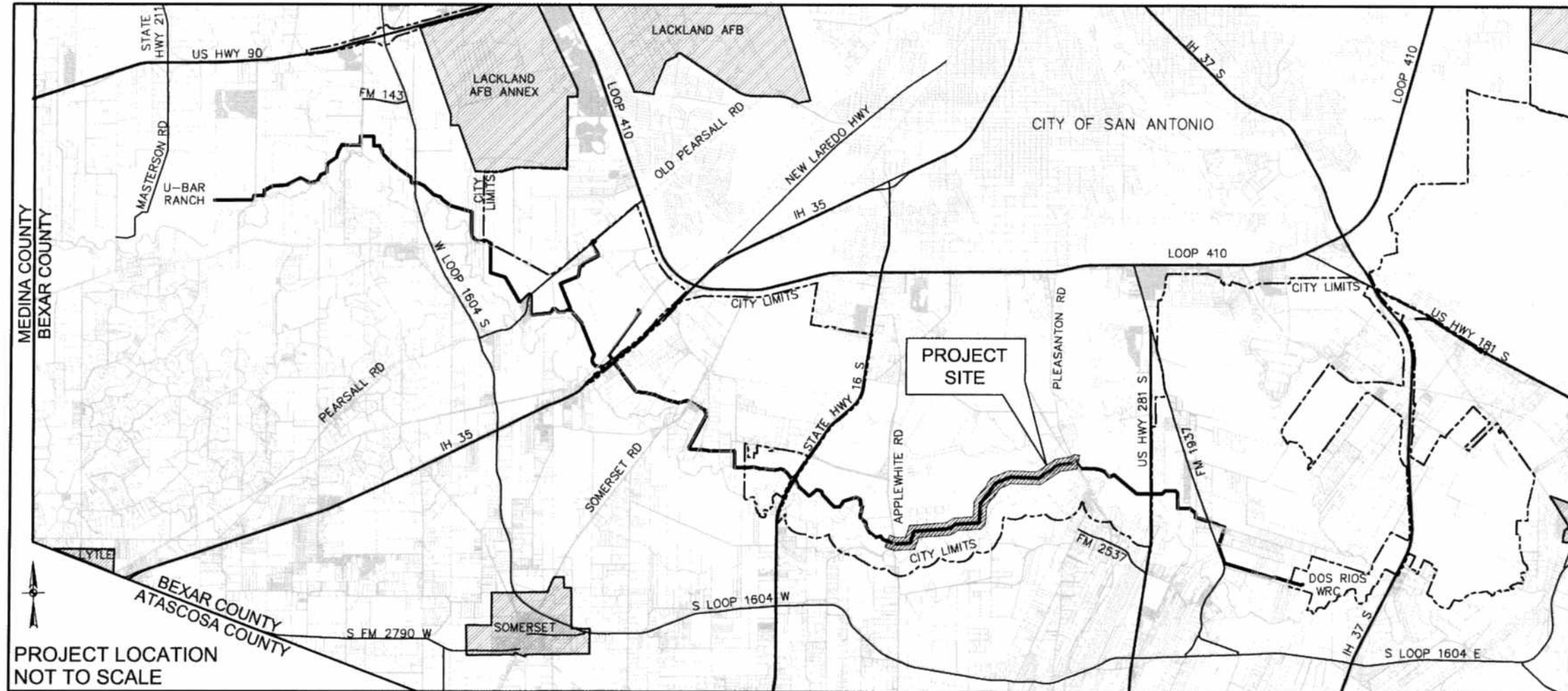
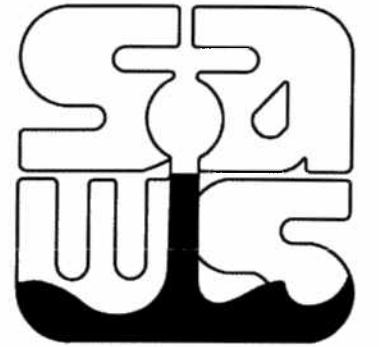


# San Antonio Water System

## Medina River Sewer Outfall SAWS Job No. 11-2503/ Bid Package 2



**PAPE-DAWSON  
ENGINEERS**

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**SEA** STRUCTURAL ENGINEERING  
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(210) 735-9202 SAN ANTONIO, TX. 78229

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FEBRUARY 2010

PD Job No. 6866-00

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|----------------|--------------|--|
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| TC-16          |              | TRAFFIC SIGN MOUNTING AND INSTALLATION DETAILS     |

**LEGEND**

(EXISTING ITEMS)

- 488 EXISTING 2' CONTOUR
- 490 EXISTING 10' CONTOUR
- EXISTING BARBED WIRE FENCE
- EXISTING CHAIN LINK FENCE
- EXISTING CONCRETE WALL/FENCE
- EXISTING FENCE POST
- PROPERTY LINE
- GAS EXISTING GAS LINE/PIPELINE
- OHE EXISTING OVERHEAD ELECTRIC
- UFO EXISTING UNDERGROUND FIBER OPTIC
- TELE EXISTING UNDERGROUND TELEPHONE
- EXISTING POWER POLE
- EXISTING DRAINAGE/UTILITY EASEMENT
- EXISTING TREE
- SS EXISTING SANITARY SEWER
- FM EXISTING FORCE MAIN
- EXISTING SEWER MANHOLE
- 8"W EXISTING 8" POTABLE WATER
- 12"W EXISTING 12" POTABLE WATER
- 16"W EXISTING 16" POTABLE WATER
- EXISTING FIRE HYDRANT
- EXISTING BENCHMARK LOCATION
- EXISTING SIGN
- EXISTING GUARDRAIL
- EXISTING RAILROAD
- EXISTING ASPHALT/ROAD

**LEGEND**

(PROPOSED ITEMS)

- 500 PROPOSED GRADING CONTOUR
- PROPOSED SEWER EASEMENT
- 125+00 PROPOSED SEWER CENTERLINE STATION
- PROPOSED SEWER CENTERLINE
- PROPOSED SEWER PIPE
- PROPOSED SEWER FLOW DIRECTION
- PROPOSED DETAIL REFERENCE (SHEET/ITEM)
- PROPOSED MANHOLE TEE BASE
- PROPOSED DROP MANHOLE LOCATION
- PROPOSED SIPHON STRUCTURE
- PROPOSED CONCRETE ENCASEMENT
- PROPOSED CONCRETE CAP
- PROPOSED CASING
- PROPOSED EROSION CONTROL MAT
- PROPOSED REMOVABLE BOLLARD

**LEGEND**

(ABBREVIATIONS)

- FRP FIBER-REINFORCED PLASTIC PIPE
- HDPE HIGH DENSITY POLYETHYLENE PIPE
- CMP CORRUGATED METAL PIPE
- RCP REINFORCED CONCRETE PIPE
- PVC POLYVINYL CHLORIDE PIPE
- MH MANHOLE
- SS SANITARY SEWER
- FM FORCE MAIN
- WL WATER LINE
- BM BENCHMARK
- ECM EROSION CONTROL MAT
- ROW RIGHT OF WAY
- DS DOWNSTREAM
- US UPSTREAM
- UPRR UNION PACIFIC RAILROAD
- OPR OFFICIAL PUBLIC RECORDS
- PL PROPERTY LINE
- CL CENTER LINE
- EXTG EXISTING
- IRR IRRIGATION
- UFO UNDERGROUND FIBER OPTIC

| APP | REVISION | NO. | DATE |
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**SAN ANTONIO WATER SYSTEM**  
 MEDINA RIVER SEWER OUTFALL PROJECT  
 SAWS JOB NO. 11-2503

**SHEET INDEX AND LEGEND**

|             |               |
|-------------|---------------|
| JOB NO.     | 6866-00       |
| DATE        | FEBRUARY 2010 |
| DESIGNER    | JO            |
| DRAWN       | BS            |
| CHECKED     | BM            |
| DRAWING No. | <b>G-01</b>   |
| SHEET No.   |               |

Plot: Feb 11, 2010, 7:35pm User: D. Garza  
 File: P:\6866\00\Design\Civil\Sewer\Bid Package 2\01686600.dwg

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GENERAL NOTES:

- 1. THESE PLANS, PREPARED BY PAPE-DAWSON ENGINEERS INC., DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR IS TO PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY HOUSE BILLS 662 AND 665 ENACTED BY THE TEXAS LEGISLATURE IN THE 70TH LEGISLATURE-REGULAR SESSION.
2. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE FOLLOWING AS APPLICABLE:
A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S DESIGN CRITERIA FOR SEWERAGE SYSTEMS (30 TAC 217).
B. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR CONSTRUCTION".
C. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
D. CURRENT TxDOT "STANDARD SPECIFICATION FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
E. CURRENT CITY OF SAN ANTONIO "RIGHT-OF-WAY ORDINANCE AND CRITERIA MANUAL".
3. CONTRACTOR SHALL GIVE NOTICES TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR TO ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS THAT CAN BE ISSUED TO CONTRACTOR SHALL BE OBTAINED AT HIS EXPENSE.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION BETWEEN HIMSELF AND OTHER CONTRACTORS AND UTILITIES IN THE VICINITY OF THIS PROJECT. THIS INCLUDES, BUT IS NOT LIMITED TO, GAS, WATER, WASTEWATER, ELECTRICAL, TELEPHONE, COMMUNICATIONS NETWORKS, CABLE TELEVISION, PETROLEUM PIPE LINES AND STREET AND DRAINAGE WORK. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT INSPECTOR WITHIN TWENTY-FOUR (24) HOURS.
5. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
SAN ANTONIO WATER SYSTEM 233-2010
COSA DRAINAGE 207-2800
COSA TRAFFIC SIGNAL OPERATIONS 207-7765
TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005
CPS ENERGY 1-800-545-6005
AT&T 1-800-545-6005
TIME WARNER CABLE 1-800-545-6005
VALERO ENERGY CO. 1-800-545-6005
BEXAR METROPOLITAN WATER DISTRICT 354-6536
6. CONTRACTOR SHALL NOTIFY CONSTRUCTION INSPECTOR AND ENVIRONMENTAL INSPECTOR AT LEAST 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY WITHIN AN EASEMENT OR STREET RIGHT-OF-WAY. THE METHOD OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S RIGHT-OF-WAY MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS.
7. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY ARBORIST AT 207-8053 FOR GUIDANCE. SAWS CONSTRUCTION INSPECTOR SHALL ALSO BE NOTIFIED.
8. 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 GAS VALVES THAT ARE IN THE PROJECT AREAS.
9. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR ACTUAL TEST HOLE LOCATIONS AND THE FINDINGS OF THE GEOTECHNICAL INVESTIGATION.
10. 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 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.
11. CONTRACTOR SHALL INCORPORATE THE USE OF A TRENCH BOX OR OTHER ACCEPTABLE SAFETY SYSTEM IN ANY TRENCH THAT EXCEEDS FIVE (5) FEET IN DEPTH.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING, STRUCTURES, AND OTHER EXISTING IMPROVEMENTS WITHIN THE LIMITS OF CONSTRUCTION.
13. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.
14. WATER JETTING THE BACKFILL WILL NOT BE PERMITTED. SANITARY SEWER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO THE S.A.W.S. STANDARD SPECIFICATIONS FOR CONSTRUCTION, ITEM NO. 550 & 804.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PROPERTY CORNER MARKERS AND STAKING. PROPERTY CORNER MARKERS OR STAKING DAMAGED BY CONSTRUCTION ACTIVITY SHALL BE REESTABLISHED BY A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF TEXAS AT CONTRACTOR'S EXPENSE.
16. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE, NEAT, AND WORKMAN-LIKE MANNER AT ALL TIMES. JOB SITE SAFETY SHALL NOT BE COMPROMISED.
17. IF A THREATENED OR ENDANGERED PLANT OR ANIMAL SPECIES IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY SAWS.
18. PAY LIMITS OF ASPHALT AND CONCRETE PAVEMENT, CONCRETE SIDEWALKS AND CONCRETE CURBS ARE INDICATED ON THE SEWER PLAN AND PROFILE SHEETS. THESE ARE THE LIMITS ANTICIPATED TO BE REQUIRED DURING DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING BID AND FACTOR IN ANY ADDITIONAL PAVEMENT, SIDEWALKS, AND CURBS. NOTED QUANTITIES ON EACH PLAN AND PROFILE SHEET ARE FROM MATCHLINE TO MATCHLINE ON EACH SHEET.
19. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS (INCLUDING FOUNDATION PADS) WITHIN THE SCOPE OF THIS PROJECT. CONTRACTOR SHALL TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.

- 20. BLASTING IS NOT ALLOWED ON THIS CONTRACT.
21. THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) AND ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF SEWER COLLECTION SYSTEMS. THE CONTRACTOR SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTED ON THE PROJECT'S PLAN AND PROFILE SHEETS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND MAINTAIN A STORMWATER POLLUTION PREVENTION PLAN AS WELL AS SECURING A TPDES GENERAL PERMIT AT NO ADDITIONAL COST TO THE OWNER.
22. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE SAN ANTONIO WATER SYSTEM.
23. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
24. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED WITH THE SAN ANTONIO WATER SYSTEM CONSTRUCTION INSPECTION DIVISION WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
25. TOPSOIL REPLACEMENT IS REQUIRED IN ALL AREAS WHERE TOPSOIL EXISTS. TOPSOIL SHALL INCLUDE THE TOP SURFACE DEPTH OF TRENCH PER SPECIFICATION SS 520 HYDROMULCH SEEDING.
26. CONTRACTOR SHALL COMPLY WITH THE GOVERNING AGENCY NPDES CONSTRUCTION REQUIREMENTS AND SHALL PROVIDE APPROPRIATE MITIGATION MEASURES OR PROTECTION AND RESTORATION AT ALL LOCATIONS AS REQUIRED BY THEIR OPERATIONS, AND AS DIRECTED BY THE ENGINEER. SPECIAL CONSTRUCTION REQUIREMENTS, TEMPORARY PROTECTIVE FENCING OR BARRICADES, SHEETING, SHORING, EROSION PROTECTION, AND SURFACE RESTORATION AT CERTAIN LOCATIONS ARE INDICATED ON THE DRAWINGS TO BRING CONTRACTOR'S ATTENTION TO SENSITIVE AREAS.

MISCELLANEOUS SAWS NOTES

- 1. ALL WORK IN TEXAS HIGHWAY DEPARTMENT AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.
2. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS AT LEAST FOUR INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND EXCEPT WHEN LOCATED IN TxDOT R.O.W. OR PAVED AREAS. IN TxDOT R.O.W. OR PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.
3. THE USE OF ASBESTOS CEMENT PIPE WILL BE PROHIBITED UNDER THIS CONTRACT. ALL DUCTILE IRON PIPE USED IN THIS SYSTEM SHALL BE CORROSION PROTECTED ON BOTH THE INTERIOR AND EXTERIOR SURFACES. ALL CORROSION PROTECTION SHALL BE APPLIED AND INSTALLED IN SUCH A MANNER AS TO MAINTAIN A CONTINUOUSLY PROTECTED SURFACE AFTER FINAL PIPE INSTALLATION.
4. SEWER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS AS APPROVED BY SAWS. MECHANICAL JOINT "BOOT TYPE" CONNECTIONS ALONE WILL NOT BE ALLOWED. "BOOT TYPE" JOINTS MAY BE USED IN CONJUNCTION WITH COMPRESSION JOINTS AS APPROVED BY SAWS. ANY CHANGES FROM THESE METHODS MUST BE APPROVED BY SAWS.
5. WHERE REQUIRED, CONCRETE ENCASEMENT SHALL BE PLACED FOR FULL WIDTH OF THE TRENCH TO A PLANE 6" ABOVE THE TOP OF THE PIPE, WITH PAY LIMITS AS SHOWN ON THE ITEM NO. DD-858-01.
6. STORMWATER PROTECTION:
A. AT A MINIMUM THESE CONTROLS SHALL CONSIST OF ROCK BERMS AND/OR SILT FENCES CONSTRUCTED PARALLEL TO AND DOWN GRADIENT FROM THE TRENCHES. THE ROCK BERM OR SILT FENCES SHALL BE INSTALLED IN A MANNER SUCH THAT ANY RAINFALL RUNOFF SHALL BE FILTERED. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
B. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION, SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL BE REMOVED WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED. ADDITIONAL PROTECTION MAY BE NECESSARY IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.
C. PLACEMENT OF SUCH CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS, BUT WILL BE VERIFIED BY THE ENGINEER/INSPECTOR IN THE FIELD PRIOR TO SEWER LINE CONSTRUCTION. THE CONTRACTOR AND CITY INSPECTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE SIGNIFICANT DISTURBANCE TO THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A SIGNIFICANT RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN APPROVED DESIGNATED SOIL DISPOSAL AREA.
7. A DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER INITIAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. SAWS ITEM NO. 849.
8. ALL MAINS MUST PASS AIR TESTING PER SAWS ITEM NO. 849 IN THE STANDARD SPECIFICATIONS PRIOR TO ACCEPTANCE BY THE SAN ANTONIO WATER SYSTEM.
9. ALL MAINS MUST COMPLY WITH SAWS ITEM NO. 868 OF SEWER MAIN CLEANING.
10. SANITARY SEWER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLES IN ACCORDANCE WITH THE SAWS STANDARD SPECIFICATIONS ITEM 849.
11. ALL WATER AND WASTEWATER INSTALLATIONS SHALL BE IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REQUIREMENTS. WHERE A MINIMUM OF NINE (9) FEET OF SEPARATION CANNOT BE MAINTAINED BETWEEN SEWER LINES AND WATER LINES/MAINS, THE INSTALLATION OF SEWER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ 30 TAC 217.13 APPENDIX E.

TxDOT NOTES

- 1. WITHIN TxDOT ROW, THE CONTRACTOR SHALL ADHERE TO THE TxDOT UTILITY PERMIT AND SPECIAL PROVISION.
2. NO BLASTING IS ALLOWED WITHIN TxDOT ROW.
3. THE CONTRACTOR IS PROHIBITED FROM PLACING FILL WITHIN THE TxDOT ROW.
4. BENCHING OF TRENCHES WITHIN TxDOT R.O.W. IS PROHIBITED.
5. UNLESS SHOWN OTHERWISE IN THE PLANS, ANY DAMAGE TO EXISTING IMPROVEMENTS WITHIN TxDOT R.O.W. CAUSED BY THE CONTRACTOR SHALL BE REPLACED TO ORIGINAL CONDITION OR BETTER (AT NO ADDITIONAL COST TO SAWS OR TxDOT) PER TxDOT SPECIFICATIONS.

SUPPLEMENTARY NOTES

- 1. PROCEDURAL INFORMATION FOR WATER WELL ABANDONMENT CAN BE FOUND AT WWW.TCEQ.STATE.TX.US - "LANDOWNER'S GUIDE TO PLUGGING ABANDONED WATER WELLS." (TEXAS GROUND PROTECTION COMMITTEE - RG-347)
2. ALL WORK IN THE 100 YEAR FLOODPLAIN SHALL BE ACCOMPLISHED UNDER AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.

- 3. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL FILL MATERIAL, WASTE MATERIAL, AND DEBRIS WITHIN THE LIMITS OF THE 100 YEAR FLOODPLAIN UPON THE COMPLETION OF WORK WITHIN THIS AREA.
4. CONTRACTOR SHALL PROTECT OR REMOVE AND REPLACE ALL TRAFFIC SIGNS.
5. CONTRACTOR SHALL PROTECT OR REMOVE AND REPLACE ALL MAILBOXES.
6. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER IN ADVANCE OF ANY WORK ON THE OWNER'S PROPERTY.
7. IF POTENTIAL HAZARDOUS MATERIALS ARE ENCOUNTERED DURING EXCAVATION, CONSTRUCTION SHOULD CEASE UNTIL THE ENGINEER IS NOTIFIED. IF AN IMMEDIATE THREAT TO WORKER SAFETY OR A RELEASE TO THE ENVIRONMENT OF UNKNOWN WASTES IS PRESENT, CALL 911.

TREE PROTECTION NOTES

- 1. CONTRACTOR SHALL PROTECT ALL TREES WHENEVER POSSIBLE. DAMAGE TO TREES SHOWN ON PLANS TO BE SAVED WILL BE MITIGATED AT THE CONTRACTOR'S EXPENSE PER MOST CURRENT CITY OF SAN ANTONIO TREE ORDINANCE.
2. THE CITY ARBORIST SHALL BE PRESENT AT THE PRE CONSTRUCTION MEETING.
3. NO CONSTRUCTION ACTIVITIES SHALL BE PERFORMED WITHIN 5' FROM THE TRUNK OF A TREE THAT IS PROTECTED. TRENCH SHORING WILL BE REQUIRED INSIDE OF A TREE'S ROOT PROTECTION ZONE. THE ROOT PROTECTION ZONE IS CALCULATED AS A RADIUS FROM THE TREE TRUNK EQUAL TO ONE FOOT PER DIAMETER INCH OF THE TREE.
4. THIS PROJECT IS SUBJECT TO REGULATIONS ESTABLISHED BY THE CITY OF SAN ANTONIO TREE ORDINANCE.

TEMPORARY LIVESTOCK CONTROL

- 1. WHEN WORKING IN AN AREA WITH LIVESTOCK, THE CONTRACTOR SHALL INSTALL AND MAINTAIN (AT CONTRACTOR'S EXPENSE) THE NECESSARY TEMPORARY FENCING TO KEEP THE LIVESTOCK FROM EXITING THE AREA. ANY ESCAPED LIVESTOCK WILL BE CAPTURED AND RETURNED TO THE AREA AT THE CONTRACTOR'S EXPENSE.

BEXAR COUNTY FLOODPLAIN CONSTRUCTION NOTES

- 1. CONTRACTOR SHALL MAINTAIN UNRESTRICTED DRAINAGE OF THE PROJECT SITE AND ADJACENT AREAS DURING CONSTRUCTION.
2. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF THE EXISTING NATURAL DRAINAGE OR PLACED WITHIN THE LIMITS OF THE EXISTING FLOODPLAIN.
3. CONSTRUCTION MATERIALS SHALL NOT BE STORED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF THE EXISTING NATURAL DRAINAGE OR PLACED WITHIN THE LIMITS OF THE EXISTING FLOODPLAIN.

EXISTING UTILITIES

- 1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTHS OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY EXISTING UTILITY DISCREPANCIES IDENTIFIED DURING UTILITY VERIFICATIONS 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. 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 SHALL CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-828-5127. CONTRACTOR SHALL PROTECT AND SUPPORT TELEPHONE COMPANY FACILITIES DURING CONSTRUCTION.
4. IF EXISTING FIBER OPTIC CONDUIT SYSTEMS ARE LOCATED DURING EXCAVATION. A FIBER-OPTIC REPRESENTATIVE IS REQUIRED TO BE ON SITE AT NO EXPENSE TO SAWS. THE CONTRACTOR MUST PROVIDE SUPPORT AND/OR PROTECTION FOR THE CONDUIT AT ALL TIMES DURING BACKFILLING, WHICH IS SUITABLE TO THE FIBER-OPTIC REPRESENTATIVE. THE FIBER-OPTIC REPRESENTATIVE MAY PLACE UNDERGROUND MARKING DEVICES AS REQUIRED. REPAIR OF ANY DAMAGES TO THE CONDUIT SYSTEM AND ASSOCIATED FACILITIES SHALL BE MADE BY THE FIBER-OPTIC COMPANY PERSONNEL. AND THE CONTRACTOR SHALL REIMBURSE THEM FOR ALL COSTS OF SUCH REPAIRS, IF REQUIRED. THE CONTRACTOR SHALL CONTACT THE FIBER-OPTIC COMPANY 48 HOURS PRIOR TO THE START OF EXCAVATION. LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE ONLY AND NOT GUARANTEED TO BE ACCURATE.

TRAFFIC CONTROL NOTES

- 1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT AND COMPLY WITH ALL TRAFFIC CONTROL REQUIREMENTS SET FORTH BY ALL REGULATING ENTITIES PRIOR TO THE START OF ANY WORK.
2. IF THE GENERAL CONTRACTOR ELECTS TO DO THEIR OWN BARRICADING, THEY MUST COMPLY WITH ALL FOREGOING REQUIREMENTS. ADDITIONALLY, A GENERAL CONTRACTOR WILL BE REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN (TCP) TO THE APPROPRIATE AGENCY (CITY OF SAN ANTONIO, BEXAR COUNTY, OR TxDOT) AT LEAST 72 HOURS IN ADVANCE (EXCLUDING WEEKENDS AND HOLIDAYS) OF STARTING WORK IN EACH CONSTRUCTION PHASE. UPON SATISFACTORY EVIDENCE OF COMPETENT BARRICADING EXPERTISE, THIS REQUIREMENT FOR A TRAFFIC CONTROL PLAN MAY BE WAIVED BY THE CITY TRAFFIC ENGINEER.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED AT THE JOBSITE.
4. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCY (CITY OF SAN ANTONIO, BEXAR COUNTY, OR TxDOT) TRAFFIC OPERATIONS SECTION PRIOR TO REMOVING ANY TRAFFIC SIGNS OR TRAFFIC SIGNALS.
5. ALL PERMANENT SIGNS OR TRAFFIC CONTROL DEVICES MISSING OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR MUST MAINTAIN ALL STREETS OPEN TO THROUGH TRAFFIC BY REPAIRING TRENCHES, POTHoles, ETC., AT NO DIRECT PAYMENT. THE CONTRACTOR SHALL PROVIDE REASONABLE ACCESS TO RESIDENCES AND ALL BUSINESSES WITHIN ALL PHASES OF WORK, AS WELL AS PROVIDING SUITABLE ACCESS TO ACCOMMODATIONS FOR SCHOOL CHILDREN, PEDESTRIANS, GARBAGE PICK-UP AND MAIL DELIVERY BY THE US POSTAL SERVICE.

Table with columns: APP, REVISION, NO, DATE

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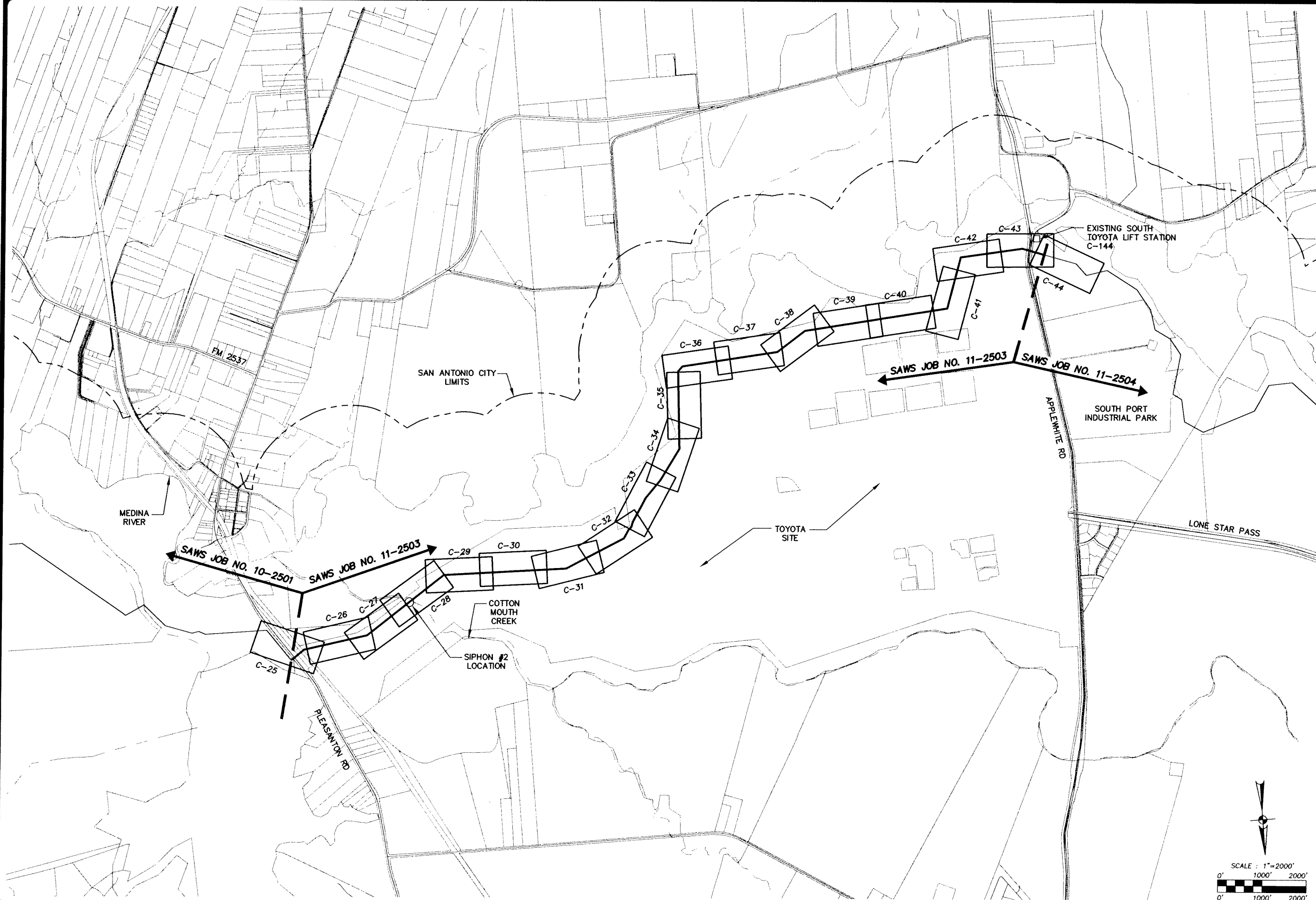
PAPE-DAWSON ENGINEERS logo and contact information: 555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.8000 | FAX: 210.375.8010

SAN ANTONIO WATER SYSTEM MEDINA RIVER SEWER OUTFALL PROJECT SAWS JOB NO. 11-2503 GENERAL NOTES logo

Job No. 6866-00, Date FEBRUARY 2010, Designer JQ, Drawn BS, Checked BM, Drawing No. G-02, Sheet No.

DATE: Feb 11, 2010, 1:35pm User: D. Garza File: P:\08166\00\Design\Civil\Sewer\_Bid\_Package\_2\0686600.dwg

Date: Feb 11, 2010, 1:40pm User: JGarza  
 File: P:\68\66700\Design\Civil\Sewer\Bid Package 2\N686600.dwg



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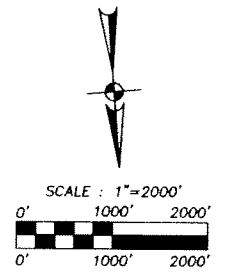
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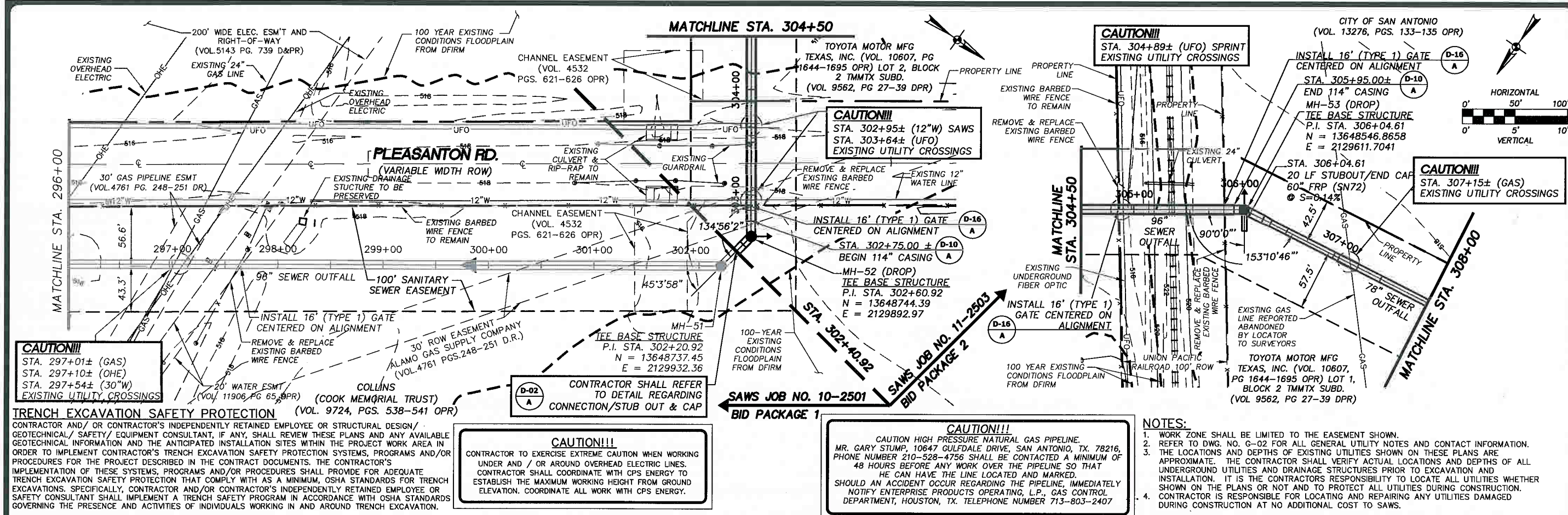
**SAN ANTONIO WATER SYSTEM**  
**MEDINA RIVER SEWER OUTFALL PROJECT**  
**SAWS JOB NO. 11-2503**

**INDEX SHEET**

|             |               |
|-------------|---------------|
| JOB NO.     | 6866-00       |
| DATE        | FEBRUARY 2010 |
| DESIGNER    | JCM           |
| DRAWN       | BAS           |
| CHECKED     | BM            |
| DRAWING No. | <b>G-03</b>   |
| SHEET No.   |               |







**CAUTION!!!**  
 STA. 297+01± (GAS)  
 STA. 297+10± (OHE)  
 STA. 297+54± (30"W)  
 EXISTING UTILITY CROSSINGS

**CAUTION!!!**  
 STA. 302+95± (12"W) SAWS  
 STA. 303+64± (UFO)  
 EXISTING UTILITY CROSSINGS

**CAUTION!!!**  
 STA. 304+89± (UFO) SPRINT  
 EXISTING UTILITY CROSSINGS

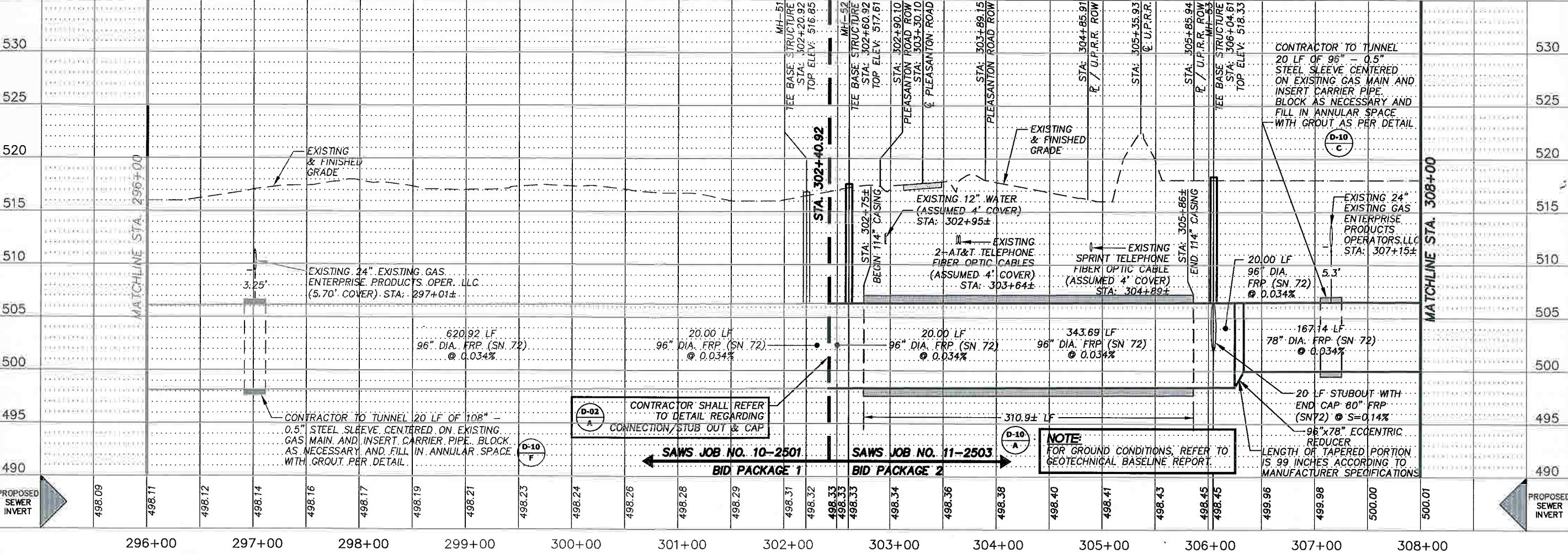
**CAUTION!!!**  
 STA. 307+15± (GAS)  
 EXISTING UTILITY CROSSINGS

**TRENCH EXCAVATION SAFETY PROTECTION**  
 (VOL. 9724, PGS. 538-541 OPR)  
 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/  
 GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE  
 GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN  
 ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR  
 PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S  
 IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE  
 TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH  
 EXCAVATIONS. SPECIFICALLY, 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.

**CAUTION!!!**  
 CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING  
 UNDER AND / OR AROUND OVERHEAD ELECTRIC LINES.  
 CONTRACTOR SHALL COORDINATE WITH CPS ENERGY TO  
 ESTABLISH THE MAXIMUM WORKING HEIGHT FROM GROUND  
 ELEVATION. COORDINATE ALL WORK WITH CPS ENERGY.

**CAUTION!!!**  
 CAUTION HIGH PRESSURE NATURAL GAS PIPELINE.  
 MR. GARY STUMP, 10647 GULFDALIE DRIVE, SAN ANTONIO, TX. 78216,  
 PHONE NUMBER 210-528-4756 SHALL BE CONTACTED A MINIMUM OF  
 48 HOURS BEFORE ANY WORK OVER THE PIPELINE SO THAT  
 HE CAN HAVE THE LINE LOCATED AND MARKED.  
 SHOULD AN ACCIDENT OCCUR REGARDING THE PIPELINE, IMMEDIATELY  
 NOTIFY ENTERPRISE PRODUCTS OPERATING, L.P., GAS CONTROL  
 DEPARTMENT, HOUSTON, TX. TELEPHONE NUMBER 713-803-2407

- NOTES:**
1. WORK ZONE SHALL BE LIMITED TO THE EASEMENT SHOWN.
  2. REFER TO DWG. NO. G-02 FOR ALL GENERAL UTILITY NOTES AND CONTACT INFORMATION.
  3. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES PRIOR TO EXCAVATION AND INSTALLATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES WHETHER SHOWN ON THE PLANS OR NOT AND TO PROTECT ALL UTILITIES DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND REPAIRING ANY UTILITIES DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO SAWS.
  - 4.



**CONTRACTOR SHALL REFER TO DETAIL REGARDING CONNECTION/STUB OUT & CAP**

**NOTE:**  
 FOR GROUND CONDITIONS, REFER TO  
 GEOTECHNICAL BASELINE REPORT.

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO WATER SYSTEM  
 MEDINA RIVER SEWER OUTFALL PROJECT  
 SAWS JOB NO. 11-2503  
 PLAN AND PROFILE SHEET  
 STA. 296+00 TO STA. 308+00

APP. \_\_\_\_\_  
 REVISION \_\_\_\_\_  
 NO. DATE \_\_\_\_\_  
 NO. DATE \_\_\_\_\_

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JOB NO. 8866-00  
 DATE FEBRUARY 2010  
 DESIGNER JGM  
 DRAWN JAG  
 CHECKED BM  
 DRAWING NO. C-25  
 SHEET NO. \_\_\_\_\_

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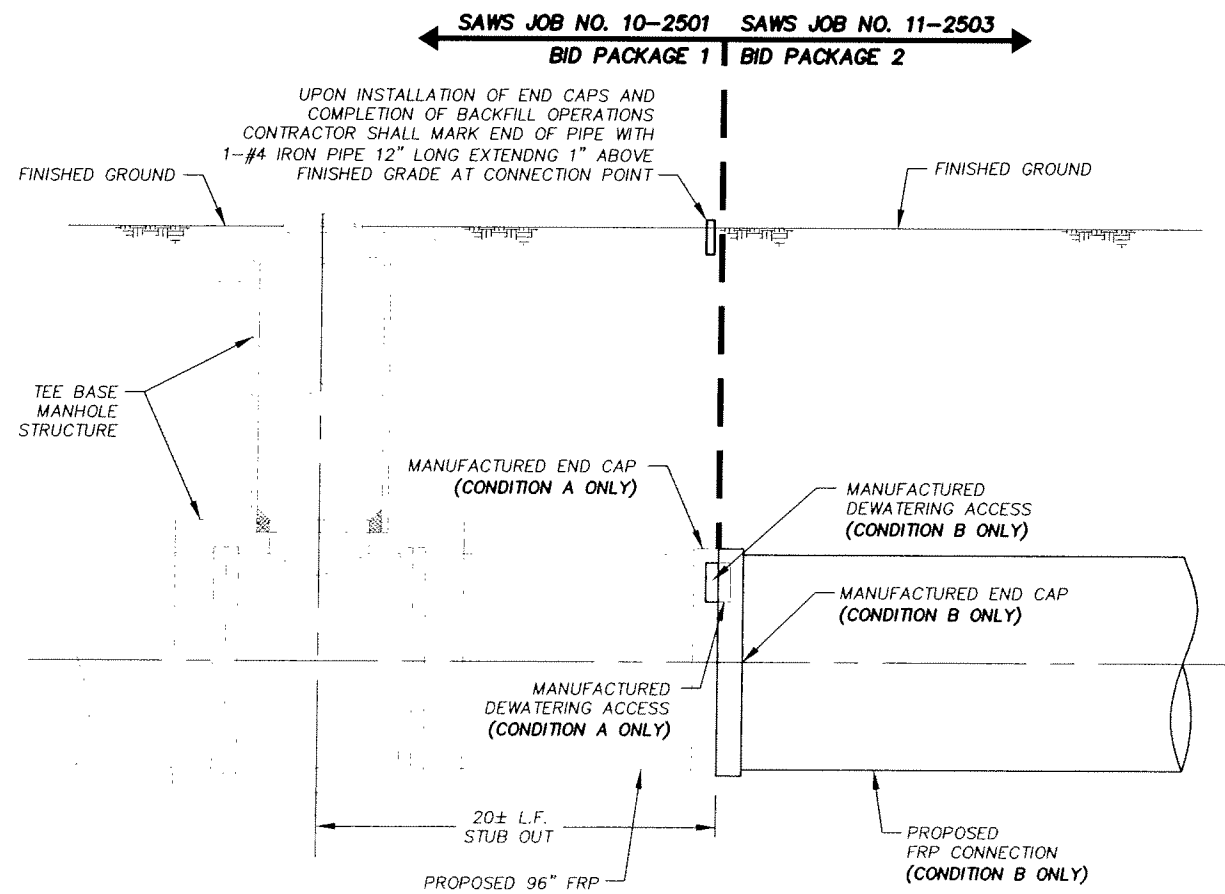
**CONNECTION NOTES:**

**CONDITION-A:**  
 BID PACKAGE 1 COMPLETED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF BID PACKAGE 2.

1. CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO COMMENCING ANY WORK ASSOCIATED WITH THE CONNECTION OF BID PACKAGE 2 TO BID PACKAGE 1.
2. CONTRACTOR SHALL LOCATE, EXPOSE, AND VERIFY BID PACKAGE 1 INVERT ELEVATION. CONTRACTOR SHALL REPORT ANY DISCREPANCIES FROM THE PLAN LOCATION OR ELEVATION IMMEDIATELY TO THE ENGINEER.
3. UPON FIELD ACCEPTANCE OF BID PACKAGE 2, CONTRACTOR SHALL DEWATER AND REMOVE BID PACKAGE 1 END CAP, AND PERFORM CONNECTION IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS.

**CONDITION-B:**  
 BID PACKAGE 1 IS NOT COMPLETED PRIOR TO COMMENCING CONSTRUCTION OF BID PACKAGE 2.

1. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO CONFIRM ALIGNMENT LOCATION AND ELEVATION PRIOR TO INSTALLATION OF BID PACKAGE 2, 96" PIPE, END CAP, AND DEWATERING ACCESS.



**BEGINNING DETAIL FOR FIBERGLASS PIPE AND CAP**  
 N.T.S.

D-02  
 A

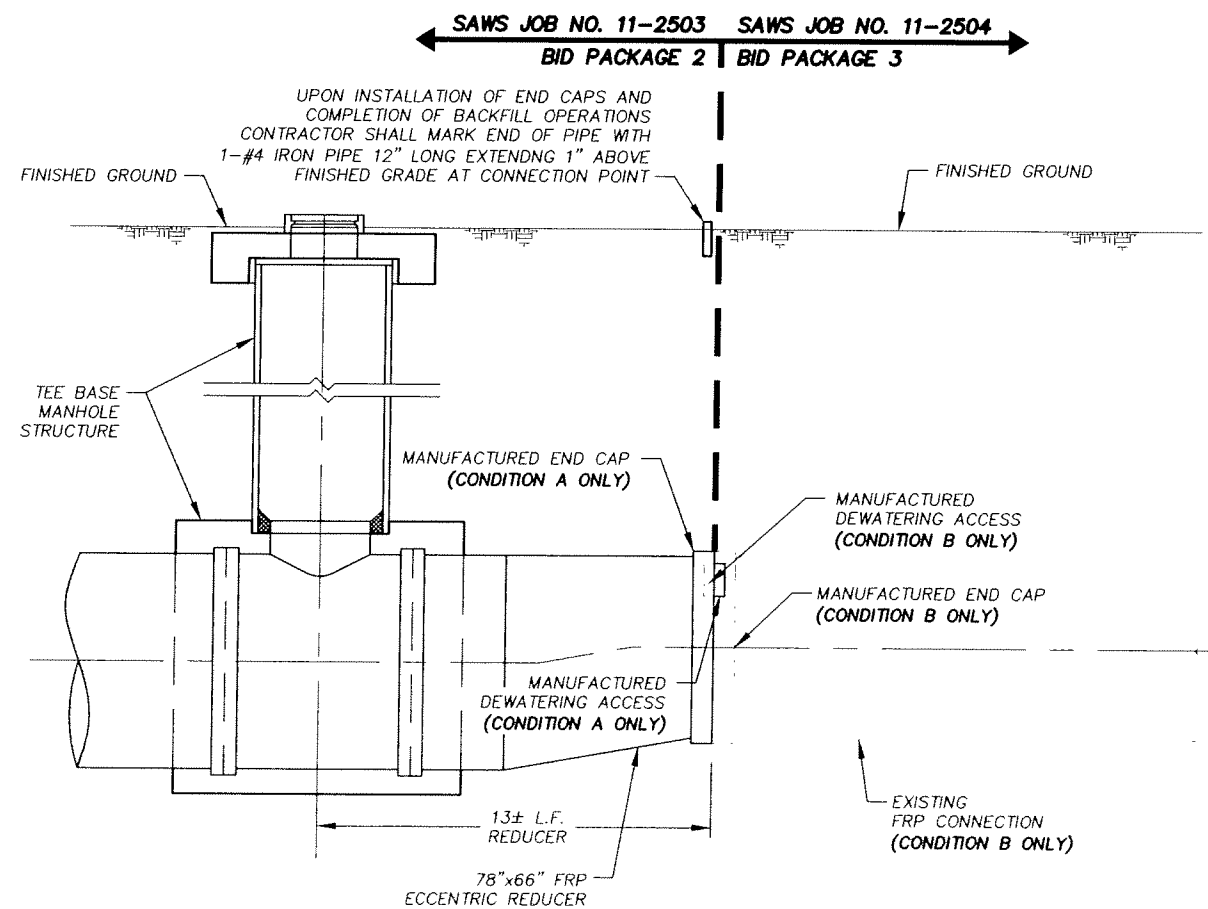
**CONNECTION NOTES:**

**CONDITION-A:**  
 BID PACKAGE 2 COMPLETED PRIOR TO COMMENCING CONSTRUCTION ASSOCIATED WITH BID PACKAGE 3.

1. CONTRACTOR SHALL INSTALL STUBOUT AND CAP WITH DEWATERING ACCESS FOR FUTURE CONNECTION OF BID PACKAGE 3.

**CONDITION-B:**  
 THE CONSTRUCTION OF BID PACKAGE 3 HAS COMMENCED PRIOR TO THE COMPLETION OF BID PACKAGE 2.

1. CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO COMMENCING ANY WORK ASSOCIATED WITH THE CONNECTION OF BID PACKAGE 2 TO BID PACKAGE 3.
2. CONTRACTOR SHALL LOCATE, EXPOSE, AND VERIFY BID PACKAGE 3 INVERT ELEVATION. CONTRACTOR SHALL REPORT ANY DISCREPANCIES FROM PLAN LOCATION OR ELEVATION IMMEDIATELY TO THE ENGINEER.
3. UPON FIELD ACCEPTANCE OF BID PACKAGE 2, CONTRACTOR SHALL REMOVE BID PACKAGE 3 END CAP, DEWATER, AND PERFORM CONNECTION IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATION.



**END DETAIL FOR FIBERGLASS REDUCER AND CAP**  
 N.T.S.

D-02  
 B

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**SAN ANTONIO WATER SYSTEM  
 MEDINA RIVER SEWER OUTFALL PROJECT  
 SAWS JOB NO. 11-2503**

**CONNECTION DETAILS**

|             |               |
|-------------|---------------|
| JOB NO.     | 6866-00       |
| DATE        | FEBRUARY 2010 |
| DESIGNER    | JGM           |
| DRAWN       | BS            |
| CHECKED     | BM            |
| DRAWING NO. | D-02          |
| SHEET NO.   |               |

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