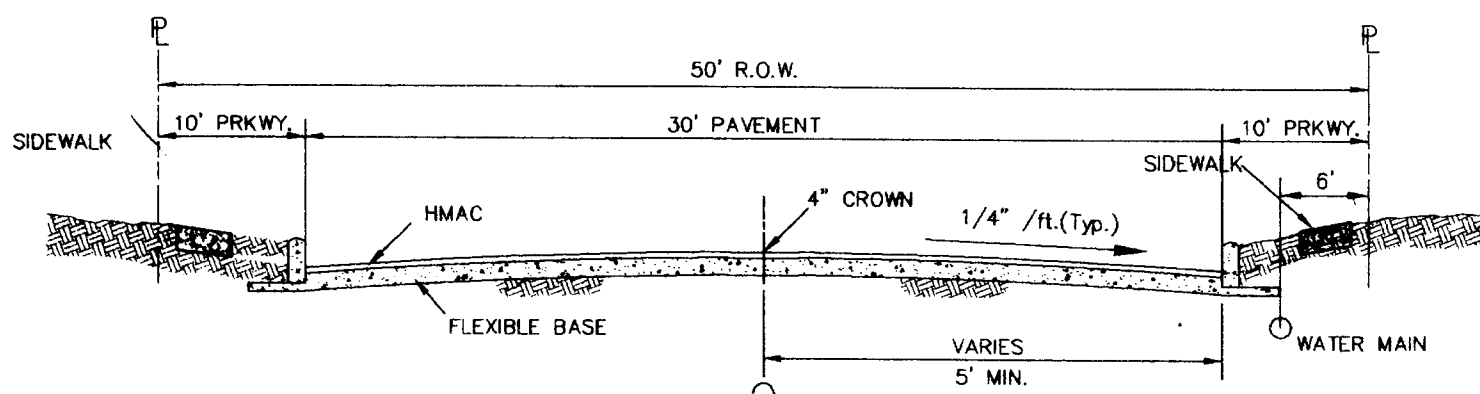
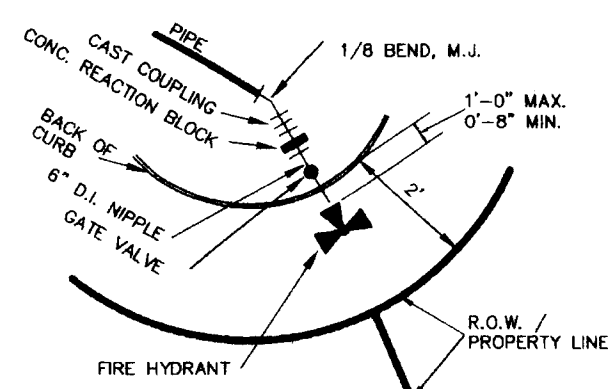


TRENCH EXCAVATION SAFETY PROTECTION

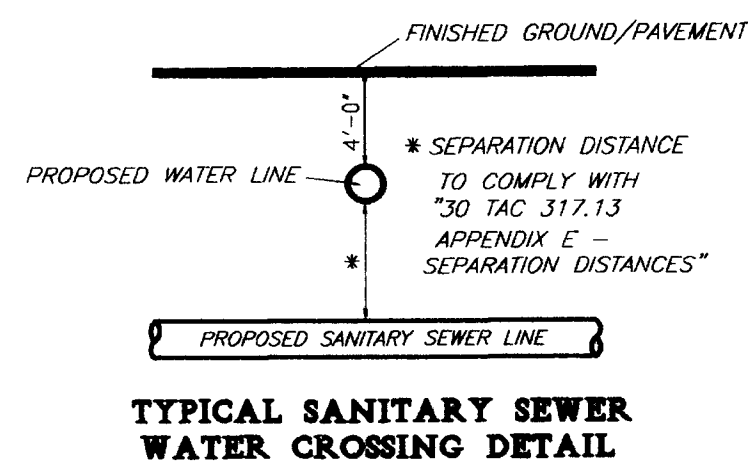
Contractor and/or Contractor's independently related employee or structural engineer/geotechnical/soil/rocks/consultant, if any, shall review these plans and any available geotechnical information and the anticipated installation site within the project work area in order to implement contractor's trench 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 or exceed OSHA standards for trench excavation. Specifications, Contractor and/or Contractor's independently related 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.



TYPICAL STREET SECTION



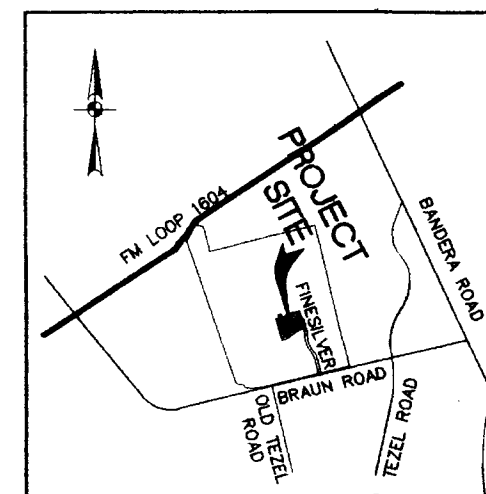
FIRE HYDRANT INSTALLATION DETAIL



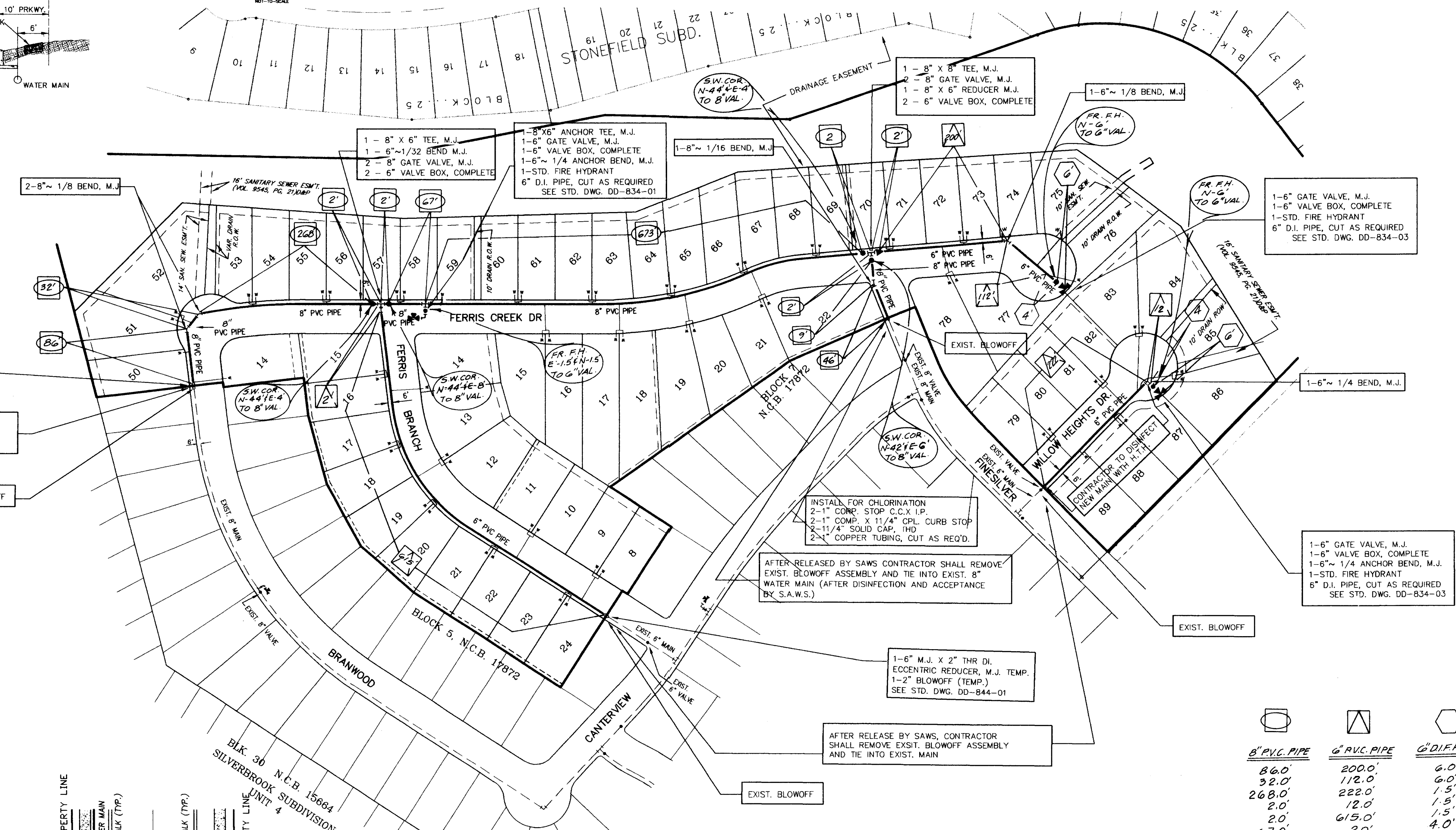
TYPICAL SANITARY SEWER WATER CROSSING DETAIL

NOTE: CONTRACTOR TO MAINTAIN 2' MINIMUM VERTICAL SEPARATION BETWEEN WATER AND SANITARY SEWER.

SCALE 1" = 100'



LOCATION MAP



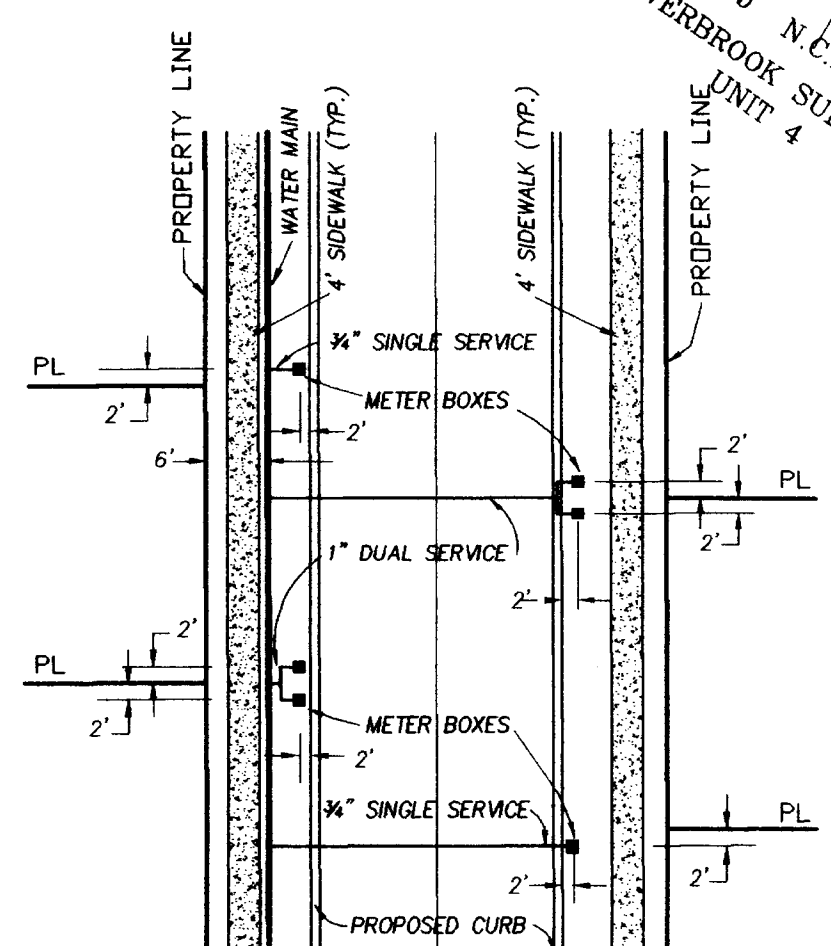
WATER GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL CONFORM TO ALL APPLICABLE SAN ANTONIO WATER SYSTEM CONSTRUCTION SPECIFICATIONS.
 - MACHINE CHLORINATION BY THE SAN ANTONIO WATER SYSTEM UNLESS OTHERWISE STATED.
 - ALL 8" AND 12" INCH PIPE SHALL BE C-900 PVC CLASS 150(P18) PRESSURE RATING OF 300 PSI.
 - ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR AS PROVIDED FOR IN THE SPECIAL CONDITIONS.
 - ALL INITIAL STAKES FOR LINES AND GRABES WILL BE ESTABLISHED BY THE ENGINEER. STAKES WILL CONSIST OF A SINGLE LINE OF OFF-SET HUBS. THERE SHOULD BE NO ADDITIONAL STAKES REQUIRED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE SITE AND VERIFY THAT ALL STAKES REQUIRED FOR HIS WORK ARE IN PLACE AT THE TIME THE CONSTRUCTION BEGINS. IF ANY STAKES ARE MISSING, THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY. AFTER CONSTRUCTION BEGINS, ALL CONSTRUCTION STAKES, MARKS, ETC. SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR AND IN CASE OF DESTRUCTION OR REMOVAL BY HIM OR HIS EMPLOYEES, SUCH STAKES, MARKS, ETC. SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
 - UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH A SIGNED SET OF PLANS WITH ALL THE FINAL MEASUREMENTS AND AS-BUILT INFORMATION FOR PREPARATION OF AS-BUILT PLANS. CONTRACTOR SHALL COORDINATE HIS AS-BUILT PLANS WITH SAN ANTONIO WATER SYSTEM INSPECTOR PRIOR TO SUBMITTAL TO ENGINEER.
 - FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE SAN ANTONIO WATER SYSTEM RELEASES THE MAIN FOR TIE-IN AND USE.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS.
- SANITARY SEWER 704-7180
SAWS WATER 704-7107 / 7109
TELEPHONE 1-800-828-5127
GAS & ELECTRIC 978-3500
PARADON CABLE 685-8781
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF EXCESS MATERIAL OFF-SITE AT HIS OWN EXPENSE.
 - WHEREVER POWER POLES COME INTO OR ARE ADJACENT TO THE PROPOSED WATER MAIN, THE CONTRACTOR SHALL REMOVE AND RELOCATE OR PROVIDE PROPER SHORING OR OTHER SUITABLE SUPPORT OF THE POWER POLES DURING CONSTRUCTION OF THE WATER MAIN. THE METHOD MUST BE APPROVED BY THE UTILITY COMPANY MAINTENANCE DEPARTMENT. COST OF REMOVAL, RELOCATION OR POWER POLE SHALL BE PAID BY THE CONTRACTOR.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION:
 - SAN ANTONIO WATER SYSTEM CONSTRUCTION INSPECTION AT 704-7112
 - SOUTHWESTERN BELL TELEPHONE COMPANY, MR. ROY CARR AT 650-8448
 - UNIT PRICE BID FOR STANDARD FIRE HYDRANT ASSEMBLY SHALL INCLUDE FIRE HYDRANT, 6" GATE VALVE AND 6" VALVE BOX COMPLETE. ANCHOR BEND AND ALL 6" DI. PIPE REQUIRED. 10" DI. PIPE REQUIRED SHALL INCLUDE ALL PIPE FROM THE TEE ON THE MAIN LINE TO THE FIRE HYDRANT.
 - WHEN WATER MAINS ARE INSTALLED IN THE VICINITY OF SEWER LINES, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION AND REGULATIONS FOR PUBLIC WATER SYSTEMS (1988 OR ANY REVISIONS THEREOF).
 - WATER METER BOXES SHALL BE INSTALLED 2 FEET FROM BACK OF CURB TO COVER OF THE METER BOX.
 - CONTRACTOR SHALL REPAIR OR REPLACE ALL BURIED CONDUITS DISCOVERED DURING CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT.
 - ALL MAINS ARE "ON-SITE."
 - DEPTH OF ALL PIPE SHALL BE A MINIMUM OF 4 FEET.
 - CONTRACTOR MUST COMPLY WITH MANUFACTURER'S INSTALLATION OF PROPER RESTRAINTS IF PROPER TIGHT BLOCKING IS NOT INSTALLED. CONTRACTOR MUST INSTALL JOINT RESTRAINTS PER MANUFACTURER'S SPECIFICATIONS.
 - DOUBLE NUT ALL RESTRAINING BOLTS
 - ANY TYPE OF JOINT RESTRAINT MUST BE BI-DIRECTIONAL.
 - NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT THE CONTRACTOR AND/OR DEVELOPER'S EXPENSE.

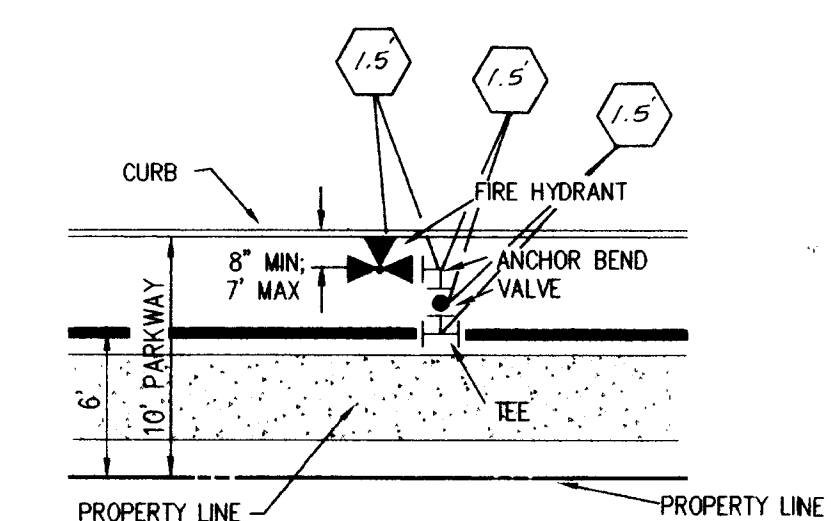
AFTER RELEASE BY SAWS, CONTRACTOR SHALL REMOVE EXIST. BLOWOFF ASSEMBLY AND TIE INTO EXIST. MAIN

AFTER RELEASE BY SAWS CONTRACTOR SHALL REMOVE EXIST. BLOWOFF ASSEMBLY AND TIE INTO EXIST. 8" WATER MAIN (AFTER DISINFECTION AND ACCEPTANCE BY S.A.W.S.)

AFTER RELEASE BY SAWS, CONTRACTOR SHALL REMOVE EXIST. BLOWOFF ASSEMBLY AND TIE INTO EXIST. MAIN



METER BOX LOCATION



FIRE HYDRANT INSTALLATION

MATERIALS

PVC PIPE	J.M.
VALVE	CLOW
FIRE HYDRANT	CLOW
FITTINGS	TRINITY

CONTRACTOR: JOHN STUART SITEWORK LTD.
INSPECTOR: DAN NEAL
COMPLETE: SEPTEMBER 27, 2001

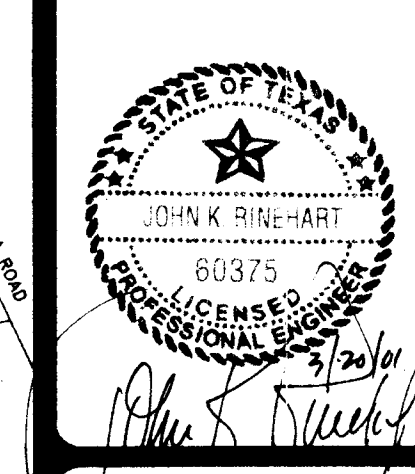
I HEREBY CERTIFY THAT THIS PLAN OF RECORD IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED UNDER MY SUPERVISION.

NOTE: INFORMATION FOR PLAN OF RECORD DRAWING WAS PROVIDED TO PAPE-DAWSON ENGINEERS BY THE CONTRACTOR.

8" PVC PIPE	6" PVC PIPE	6" D.I.F.H. PIPE
86.0'	200.0'	6.0'
32.0'	112.0'	6.0'
268.0'	222.0'	1.5'
2.0'	12.0'	1.5'
2.0'	615.0'	1.5'
67.0'	2.0'	4.0'
673.0'	1,163.0'	24.5'
2.0'		
46.0'		
1,191.0'		

S.A.W.S. JOB NO. 01-1012
GENERAL CONSTRUCTION PERMIT

REVISIONS:
03-15-01 AS PER SAWS COMMENTS



PAPE-DAWSON ENGINEERS
555 EAST RAMSEY | SAN ANTONIO TEXAS 78216
PHONE: 210.375.9000
FAX: 210.375.9010

FINESILVER UNIT - 5B
PLANNED UNIT DEVELOPMENT
WATER DISTRIBUTION SYSTEM

PLAT NO. 010035

JOB NO. 3080-30
DATE NOVEMBER, 2000
DESIGNER J.P.
CHECKED DRAWN JLC
SHEET 1 OF 1

Drawn: Mar 15, 2001, 4:00pm, User: JD, 1095
File: H:\D080_30\DESIGN\CIVIL\DWG\08030.dwg