

PLANS FOR THE CONSTRUCTION OF
WATER, SANITARY SEWER & STORM DRAIN IMPROVEMENTS
BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK
 FOR

VITRUVIAN PARK PUBLIC INFRASTRUCTURE - PHASE 1A



TOWN OF ADDISON, TEXAS

PUBLIC WORKS # 2008-009

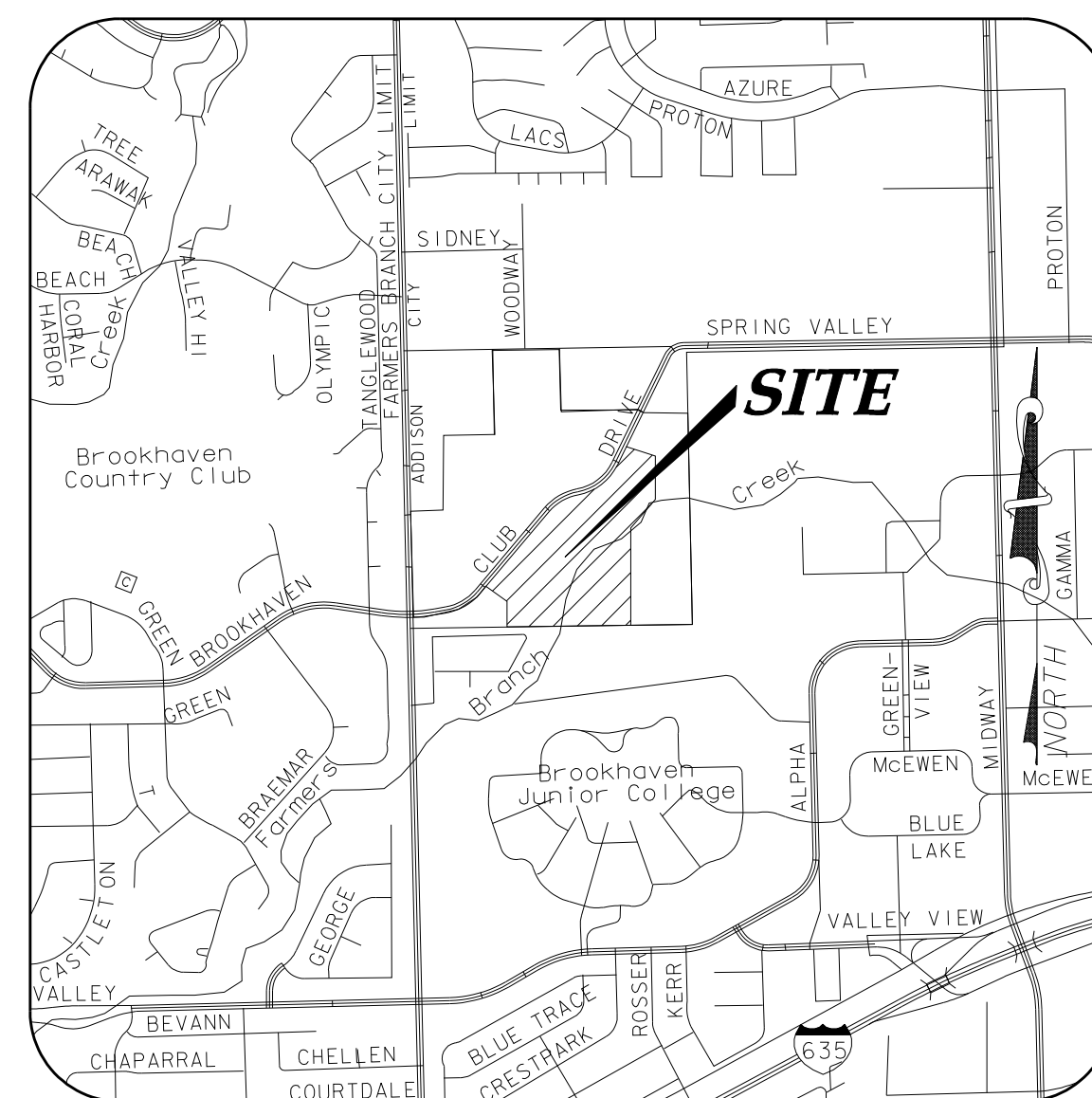
JOE CHOW
MAYOR

ROGER MELLOW
MAYOR PRO TEMPORE

DENNIS KRAFT
DEPUTY MAYOR
PRO TEMPORE

TOM BRAUN
GREGORY HIRSCH
TODD MEIER
JIMMY NIEMANN
COUNCIL MEMBERS

RON WHITEHEAD
CITY MANAGER



VICINITY MAP

NOT TO SCALE
(MAPSCO GRID 13 & 14)

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CIVIL ENGINEER:

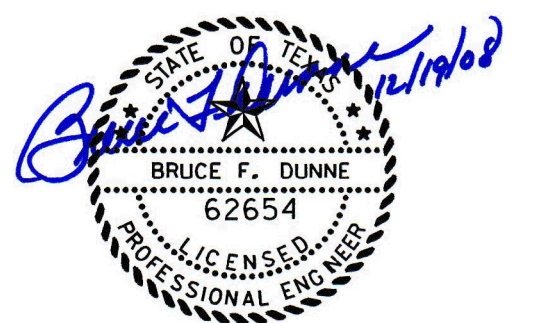
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OCTOBER 14, 2008



PROJECT 5029-01

GENERAL CONSTRUCTION NOTES

1. STANDARDS AND SPECIFICATIONS: ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT, SERVICES AND TESTING FOR ALL PUBLIC IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' ORDINANCES, REGULATIONS, REQUIREMENTS, STATUTES, SPECIFICATIONS AND DETAILS, LATEST PRINTING AND AMENDMENTS THERETO.

2. EXAMINATION OF SITE: THE CONTRACTOR ACKNOWLEDGES THAT HE HAS INVESTIGATED AND SATISFIED HIMSELF AS TO THE CONDITIONS AFFECTING THE WORK, INCLUDING BUT NOT RESTRICTED TO THOSE BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRIC POWER, ROADS AND UNCERTAINTIES OF WEATHER, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE.

3. SUBSURFACE INVESTIGATION: SUBSURFACE EXPLORATION TO ASCERTAIN THE NATURE OF SOILS, INCLUDING THE AMOUNT OF ROCK, IF ANY, IS THE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SUCH SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO DETERMINE THE NATURE OF THE MATERIAL TO BE ENCOUNTERED.

4. TOPOGRAPHIC SURVEY: TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THE PLANS IS PROVIDED FOR INFORMATIONAL PURPOSES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE INFORMATION SHOWN IS CORRECT, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY ERRORS, DISCREPANCIES OR OMISSIONS TO THE SURVEY INFORMATION PROVIDED.

5. COMPLIANCE WITH LAWS: THE CONTRACTOR SHALL FULLY COMPLY WITH ALL LOCAL, STATE AND FEDERAL LAWS, INCLUDING ALL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS CONTRACT AND THE WORK TO BE DONE THEREUNDER, WHICH EXIST OR MAY BE ENACTED LATER BY GOVERNMENTAL BODIES HAVING JURISDICTION OR AUTHORITY FOR SUCH ENACTMENT.

6. PUBLIC CONVENIENCE AND SAFETY: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK.

MATERIALS STORED ON THE WORK SITE SHALL BE SO PLACED, AND THE WORK SHALL AT ALL TIMES BE SO CONDUCTED, AS TO CAUSE NO GREATER OBSTRUCTION TO THE TRAVELING PUBLIC THAN IS CONSIDERED ACCEPTABLE BY THE GOVERNING AUTHORITIES.

THE TOWN OF ADDISON RESERVES THE RIGHT TO REMEDY ANY NEGLIGENCE ON THE PART OF THE CONTRACTOR WITH REGARDS TO THE PUBLIC CONVENIENCE AND SAFETY WHICH MAY COME TO THE TOWN OF ADDISON'S ATTENTION, AFTER 24 HOURS NOTICE IN WRITING TO THE CONTRACTOR.

7. STORM WATER POLLUTION PREVENTION PLAN (SWP3): THE CONTRACTOR SHALL COMPLY WITH THE CONDITIONS OF THE SWP3 WHILE CONDUCTING HIS ACTIVITIES ON THE PROJECT. IN ADDITION TO CONSTRUCTING THOSE ITEMS INDICATED ON THE PLAN SHEETS, COMPLIANCE WITH THE SWP3 INCLUDES CONFORMANCE TO CERTAIN PRACTICES AND PROCEDURES (IDENTIFIED IN THE SWP3) DURING PROJECT CONSTRUCTION.

8. PERMITS AND LICENSES: THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND LICENSES NECESSARY FOR THE EXECUTION OF THE WORK AND SHALL FULLY COMPLY WITH ALL THEIR TERMS AND CONDITIONS UNDER THIS CONTRACT.

9. BONDS: PERFORMANCE, PAYMENT AND MAINTENANCE BONDS WILL BE REQUIRED FROM THE CONTRACTOR FOR ALL WORK CONSIDERED TO BE "PUBLIC" IMPROVEMENTS. BONDS SHALL BE IN THE FORM AND IN THE AMOUNTS AS REQUIRED BY THE GOVERNING AUTHORITIES.

10. VENDOR'S CERTIFICATION: ALL MATERIALS USED IN CONSTRUCTION SHALL HAVE A VENDOR'S CERTIFIED TEST REPORT. TEST REPORTS SHALL BE DELIVERED TO THE ENGINEER BEFORE PERMISSION WILL BE GRANTED FOR USE OF THE MATERIAL.

11. TESTING: THE TESTING AND CONTROL OF ALL MATERIALS USED IN THE WORK SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY, EMPLOYED AND PAID DIRECTLY BY THE TOWN OF ADDISON. IN THE EVENT THE RESULTS OF INITIAL TESTING DO NOT COMPLY WITH THE PLANS AND SPECIFICATIONS, SUBSEQUENT TESTS NECESSARY TO DETERMINE THE ACCEPTABILITY OF MATERIALS OR CONSTRUCTION SHALL BE FURNISHED AND PAID BY THE CONTRACTOR AS DIRECTED BY THE TOWN OF ADDISON.

12. INSPECTION: INSPECTION OF THE PROPOSED CONSTRUCTION WILL BE PROVIDED BY AND PAID FOR BY THE TOWN OF ADDISON. THE CONTRACTOR SHALL PROVIDE ASSISTANCE BY PROVIDING EXCAVATION, TRENCH SAFETY, OR OTHER WORK NECESSARY TO FACILITATE INSPECTION ACTIVITIES, AND SHALL GIVE SUFFICIENT NOTICE WELL IN ADVANCE OF PENDING CONSTRUCTION ACTIVITIES TO THE TOWN OF ADDISON FOR SCHEDULING OF INSPECTION SERVICES.

13. SHOP DRAWINGS: THE CONTRACTOR SHALL PROVIDE, REVIEW, APPROVE AND SUBMIT ALL SHOP DRAWINGS, PRODUCT DATA AND SAMPLES REQUIRED BY THE GOVERNING AUTHORITIES AND THE PROJECT CONTRACT DOCUMENTS IN ACCORDANCE WITH ITEM 1.28 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, NORTH CENTRAL TEXAS - NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS.

14. SURVEYING: ALL SURVEYING REQUIRED FOR CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL EMPLOY A REGISTERED PROFESSIONAL LAND SURVEYOR TO PREFORM ALL SURVEY, LAYOUT AND MEASUREMENT WORK NECESSARY FOR THE COMPLETION OF THE PROJECT.

15. PROTECTION OF PROPERTY CORNERS AND BENCHMARKS: THE CONTRACTOR SHALL PROTECT ALL PROPERTY CORNER MARKERS AND BENCHMARKS, AND WHEN ANY SUCH MARKERS OR MONUMENTS ARE IN DANGER OF BEING DISTURBED, THEY SHALL BE PROPERLY REFERENCED AND IF DISTURBED SHALL BE RESET BY A REGISTERED PUBLIC SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.

16. EXISTING STRUCTURES: THE PLANS SHOW THE LOCATION OF ALL KNOWN SURFACE AND SUBSURFACE STRUCTURES, HOWEVER, THE TOWN OF ADDISON AND ENGINEER ASSUME NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL OF THESE STRUCTURES ON THE PLANS, OR TO SHOW THEM IN THEIR EXACT LOCATION.

17. PROTECTION OF EXISTING UTILITIES: AS REQUIRED BY "THE TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT", TEXAS ONE CALL SYSTEM MUST BE CONTACTED (800-245-4545) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATIONS BEING PERFORMED.

THE LOCATION AND DIMENSIONS SHOWN ON THE PLANS RELATIVE TO EXISTING UTILITIES ARE BASED ON THE BEST RECORDS AND/OR FIELD INFORMATION AVAILABLE AND ARE NOT GUARANTEED BY THE TOWN OF ADDISON OR ENGINEER TO BE ACCURATE AS TO LOCATION AND DEPTH.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL EXISTING UTILITIES, SERVICES AND STRUCTURES ENCOUNTERED, WHETHER OR NOT THEY ARE INDICATED ON THE PLANS.

18. DAMAGE TO EXISTING FACILITIES: ALL UTILITIES, PAVEMENT, SIDEWALKS, WALLS, FENCES, ETC. NOT DESIGNATED TO BE REMOVED BUT THAT ARE DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REPLACED TO A CONDITION AS GOOD AS OR BETTER THAN THE CONDITIONS PRIOR TO STARTING THE WORK, SOLELY AT THE EXPENSE OF THE CONTRACTOR.

19. FIRE AND LIFE SAFETY SYSTEMS: CONTRACTOR SHALL NOT REMOVE, DISABLE OR DISRUPT EXISTING FIRE OR LIFE SAFETY SYSTEMS WITHOUT WRITTEN PERMISSION FROM THE GOVERNING AUTHORITY.

20. TRENCH SAFETY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND MAINTAIN A Viable TRENCH SAFETY SYSTEM AT ALL TIMES DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS DIRECTED TO BECOME KNOWLEDGEABLE AND FAMILIAR WITH THE STANDARDS AS SET BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND THE STATE OF TEXAS LAW CONCERNING TRENCHING AND SHORING.

21. SAFETY RESTRICTIONS - WORK NEAR HIGH VOLTAGE LINES: THE FOLLOWING PROCEDURES WILL BE FOLLOWED REGARDING THE SUBJECT ITEM ON THIS CONTRACT:

A. A WARNING SIGN NOT LESS THAN FIVE INCHES BY SEVEN INCHES PAINTED YELLOW WITH BLACK LETTERS THAT ARE LEGIBLE AT 12 FEET SHALL BE PLACED INSIDE AND OUTSIDE VEHICLES SUCH AS CRANES, DERRICKS, POWER SHOVELS, DRILLING RIGS, PILE DRIVER, HOSTING EQUIPMENT OR SIMILAR APPARATUS.

B. EQUIPMENT THAT MAY BE OPERATED WITHIN TEN FEET OF HIGH VOLTAGE LINES SHALL HAVE AN INSULATING CAGE-TYPE OF GUARD ABOUT THE BOOM OR ARM, EXCEPT BACKHOES OR DIPPERS, AND INSULATOR LINKS ON THE LIFT HOOK CONNECTIONS.

C. WHEN NECESSARY TO WORK WITHIN SIX FEET OF HIGH VOLTAGE ELECTRIC LINES, NOTIFY THE POWER COMPANY WHO WILL ERECT TEMPORARY MECHANICAL BARRIERS, DE-ENERGIZE THE LINE OR RAISE OR LOWER THE LINE. THE WORK DONE BY THE POWER COMPANY SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

D. THE CONTRACTOR IS REQUIRED TO MAKE ARRANGEMENTS WITH THE POWER COMPANY FOR THE TEMPORARY RELOCATION OR RAISING OF HIGH VOLTAGE LINES AT THE CONTRACTOR'S SOLE COST AND EXPENSE.

E. NO PERSON SHALL WORK WITHIN SIX FEET OF A HIGH VOLTAGE LINE WITHOUT PROTECTION HAVING BEEN TAKEN AS OUTLINED IN PARAGRAPH C. ABOVE.

22. TRAFFIC CONTROL: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DEVELOP AND SUBMIT FOR APPROVAL BY THE GOVERNING AUTHORITIES, A TRAFFIC CONTROL PLAN, PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS, OUTLINING TRAFFIC MANAGEMENT PROCEDURES TO BE PROVIDED DURING CONSTRUCTION.

A. CONSTRUCTION OF SIGNING AND BARRICADES SHALL CONFORM WITH THE "2003 TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS CURRENTLY AMENDED, TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION.

B. THE CONTRACTOR SHALL BE REQUIRED TO FURNISH BARRICADES, FLARES, FLAGMEN, ETC., FOR THE PROTECTION OF THE PUBLIC, EMPLOYEES AND THE WORK.

C. THE CONTRACTOR SHALL PERFORM HIS WORK IN SUCH A MANNER AS TO CREATE A MINIMUM OF INTERRUPTION TO TRAFFIC ALONG ADJACENT ROADWAYS. TWO WAY TRAFFIC MUST BE MAINTAINED ON ALL ROADWAYS AT ALL TIMES THROUGHOUT CONSTRUCTION UNLESS WRITTEN PERMISSION IS GRANTED BY THE GOVERNING AUTHORITIES.

D. ALL SIGNAGE, MARKINGS, LIGHTING, BARRICADES, FLAGMEN AND OTHER DEVICES AND PERSONNEL REQUIRED FOR TRAFFIC CONTROL DURING CONSTRUCTION OF THE PROJECT WILL BE INCLUDED IN THE CONTRACT AMOUNT.

E. ALL TRAFFIC CONTROL DEVICES USED DURING NIGHTTIME SHALL BE REFLECTORIZED, ILLUMINATED FROM WITHIN OR EXTERNALLY ILLUMINATED.

F. THE CONTRACTOR SHALL NOT REMOVE ANY REGULATORY SIGN, INSTRUCTIONAL SIGN, WARNING SIGN, STREET NAME SIGN OR ANY SIGNAL, WHICH CURRENTLY EXISTS, WITHOUT THE CONSENT OF THE GOVERNING AUTHORITIES.

G. THE CONTRACTOR SHALL MAINTAIN AND REPLACE WHERE NECESSARY ALL SIGNS, LIGHTS, MARKINGS AND TEMPORARY PAVEMENT THROUGHOUT THE CONSTRUCTION PERIOD.

H. THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL MEASURES AT THE END OF CONSTRUCTION AND RESTORE UNIMPROVED PAVEMENT AND OTHER DISTURBED AREAS TO THEIR ORIGINAL CONDITION.

23. ACCESS TO ADJACENT PROPERTIES: ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE GOVERNING AUTHORITIES.

24. ACCESS ROUTES, STAGING AREAS AND STORAGE AREAS: ALL PRIVATE HAUL ROADS AND ACCESS ROUTES AND THE LOCATION OF ALL STAGING AREAS AND STORAGE AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE TOWN OF ADDISON.

25. PARKING OF CONSTRUCTION EQUIPMENT: AT NIGHT AND DURING ALL OTHER PERIODS OF TIME WHEN EQUIPMENT IS NOT BEING ACTIVELY USED FOR THE CONSTRUCTION WORK, THE CONTRACTOR SHALL PARK THE EQUIPMENT AT LOCATIONS, WHICH ARE APPROVED BY THE TOWN OF ADDISON.

26. WATER FOR CONSTRUCTION: THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR PURCHASING WATER FROM THE GOVERNING AUTHORITY FOR HIS USE ON THE PROJECT SITE. COSTS ASSOCIATED WITH THIS SERVICE SHALL BE INCLUDED IN THE CONTRACT AMOUNT.

27. TEMPORARY ELECTRIC AND COMMUNICATIONS FOR CONSTRUCTION: THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR INSTALLATION AND PURCHASING OF TEMPORARY ELECTRIC AND COMMUNICATIONS SERVICES FROM THE GOVERNING AUTHORITIES FOR HIS USE ON THE PROJECT SITE.

28. FENCES: ALL FENCES ENCOUNTERED AND REMOVED DURING CONSTRUCTION, EXCEPT THOSE DESIGNATED TO BE REMOVED OR RELOCATED, SHALL BE RESTORED TO THE ORIGINAL OR BETTER THAN CONDITION UPON COMPLETION OF THE PROJECT.

29. DRAINAGE CHANNELS: WHERE EXISTING DRAINAGE CHANNELS ARE TEMPORARILY DISTURBED OR BLOCKED DURING CONSTRUCTION, IT SHALL BE RESTORED TO THE ORIGINAL CONDITION, GRADE AND CROSS SECTION AFTER CONSTRUCTION IS COMPLETED.

30. COORDINATION WITH OTHERS: IN THE EVENT THAT OTHER CONTRACTORS ARE DOING WORK IN THE SAME AREA SIMULTANEOUSLY WITH THE PROJECT, THE CONTRACTOR SHALL COORDINATE HIS PROPOSED CONSTRUCTION WITH THAT OF THE OTHER CONTRACTORS.

31. CONDITION OF SITE DURING CONSTRUCTION: DURING CONSTRUCTION OF THE WORK, THE CONTRACTOR SHALL, AT ALL TIMES, KEEP THE SITE OF THE WORK AND ADJACENT PREMISES AS FREE FROM MATERIAL, DEBRIS AND RUBBISH AS IS PRACTICABLE AND SHALL REMOVE SAME FROM ANY PORTION OF THE SITE IF, IN THE OPINION OF THE TOWN OF ADDISON, SUCH MATERIAL, DEBRIS OR RUBBISH CONSTITUTES A NUISANCE OR IS OBJECTIONABLE.

32. EXISTING ROADWAYS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CLEANLINESS OF EXISTING PAVED ROADS. ALL COSTS ASSOCIATED WITH MAINTAINING THE CLEANLINESS OF EXISTING ROADS SHALL BE INCLUDED IN THE CONTRACT AMOUNT.

33. DUST CONTROL: THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO CONTROL DUST ON THE PROJECT SITE BY SPRINKLING OF WATER, OR ANY OTHER METHODS APPROVED BY THE GOVERNING AUTHORITIES, AND SHALL PROVIDE ALL EQUIPMENT AND PERSONNEL REQUIRED TO PREVENT DUST FROM BECOMING A NUISANCE TO THE ADJACENT PROPERTIES.

34. CLEAN-UP FOR FINAL ACCEPTANCE: THE CONTRACTOR SHALL MAKE A FINAL CLEAN UP OF ALL PARTS OF THE WORK BEFORE ACCEPTANCE BY THE TOWN OF ADDISON.

35. REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK: ALL WORK WHICH HAS BEEN REJECTED OR CONDEMNED SHALL BE REPAIRED, OR IF IT CANNOT BE REPAIRED SATISFACTORILY, IT SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

36. DISPOSITION AND DISPOSAL OF EXCESS AND UNSUITABLE MATERIALS: ALL MATERIALS TO BE REMOVED FROM THE SITE INCLUDING BUT NOT LIMITED TO EXCESS MATERIAL AND UNSUITABLE MATERIALS SUCH AS LARGE ROCKS, REFUSE, AND OTHER DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE PROJECT AT THE CONTRACTOR'S EXPENSE.

37. SEEDING: THE CONTRACTOR SHALL PROVIDE SEEDING, WATERING, FERTILIZING AND REQUIRED MAINTENANCE FOR THE GRASSING OF ALL UNPAVED AREAS OF DEDICATED RIGHT-OF-WAY, EASEMENTS, AND ALL OTHER DISTURBED AREAS OF CONSTRUCTION FOR THE PROJECT.

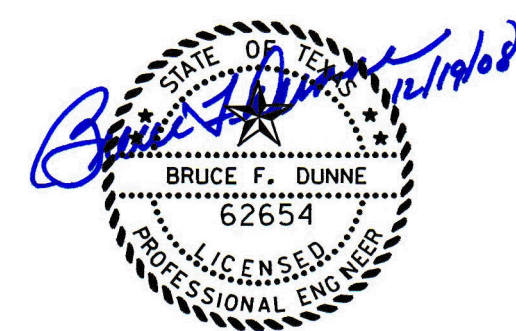
38. RECORD DRAWINGS: THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF ALL MATERIALS AND SYSTEMS COVERED BY THE PROJECT CONTRACT DOCUMENTS. THESE RECORD PRINTS WILL BE REVIEWED BY THE ENGINEER EACH MONTH PRIOR TO THE PRELIMINARY REVIEW OF CONTRACTOR'S REQUEST FOR PAYMENT.

ABBREVIATIONS

Table of abbreviations: APPROX (APPROXIMATELY), ASPH (ASPHALT), BC (BACK OF CURB), B-B (BACK TO BACK OF CURB), BM (BENCHMARK), BW (BOTTOM OF WALL), CATV (CABLE TV), CFS (CUBIC FEET PER SECOND), CI (CURB INLET), CMP (CORRUGATED METAL PIPE), CO (CLEANOUT), CONC (CONCRETE), CONST (CONSTRUCT), CL (CENTER LINE), DCO (DOUBLE CLEANOUT), DIA (DIAMETER), DIP (DUCTILE IRON PIPE), DW (DOMESTIC WATER), EL (ELEVATION), EMH (ELECTRIC MANHOLE), EP (EDGE OF PAVEMENT), EX (EXISTING), FC (FACE OF CURB), F-F (FACE TO FACE OF CURB), FFE (FINISHED FLOOR ELEVATION), FH (FIRE HYDRANT), FM (FIRE MAIN), FO (FIBER OPTICS), FP (FINISHED PAD), FPS (FEET PER SECOND), FL (FLOW LINE), FUT (FUTURE), FW (FIRE WATER), G (GAS), GI (GRATE INLET), GM (GAS METER), HOPE (HIGH DENSITY POLYETHYLENE PIPE), HOWL (HEADWALL), HMAc (HOT MIX ASPHALTIC CONCRETE), HORIZ (HORIZONTAL), HP (HIGH POINT), HVAC (HEATING, VENTILATION AND AIR CONDITIONING), IRR (IRRIGATION), JB (JUNCTION BOX), JT (JOINT), LF (LINEAR FEET), LP (LOW POINT), LH (LEFT), MH (MANHOLE), N/A (NOT APPLICABLE), NG (NATURAL GROUND (EXISTING)), PC (POINT OF CURVATURE), PCC (POINT OF COMPOUND CURVATURE), PI (POINT OF INTERSECTION), PIV (POST INDICATOR VALVE), PL (PROPERTY LINE), PP (POWER POLE), PRC (POINT OF REVERSE CURVATURE), PROP (PROPOSED), PT (POINT OF TANGENCY), PVC (POLYVINYL CHLORIDE PIPE), PVM (PAVEMENT), OCEW (ON CENTER EACH WAY), OHE (OVERHEAD ELECTRIC), R (RADIUS), RCB (REINFORCED CONCRETE BOX), RCI (RECESSED CURB INLET), RCP (REINFORCED CONCRETE PIPE), RCPC (REINFORCED CONCRETE CYLINDRICAL PIPE), REINF (REINFORCED), RL (RIDGE LINE), ROW (RIGHT OF WAY), RT (RIGHT), SF (SQUARE FEET), SD (STORM DRAIN), SO (SQUARE), SS (SANITARY SEWER), STA (STATION), SY (SQUARE YARD), T (TELEPHONE), TC (TOP OF CURB), TG (TOP OF GROUND), TMH (TELEPHONE MANHOLE), TOB (TOP OF BANK), TOS (TOE OF SLOPE), TP (TOP OF PAVEMENT), TPIPE (TOP OF PIPE), TW (TOP OF WALL), TYP (TYPICAL), UGE (UNDERGROUND ELECTRIC), VCP (VITRIFIED CLAY PIPE), W (WATER), WV (WATER VALVE).

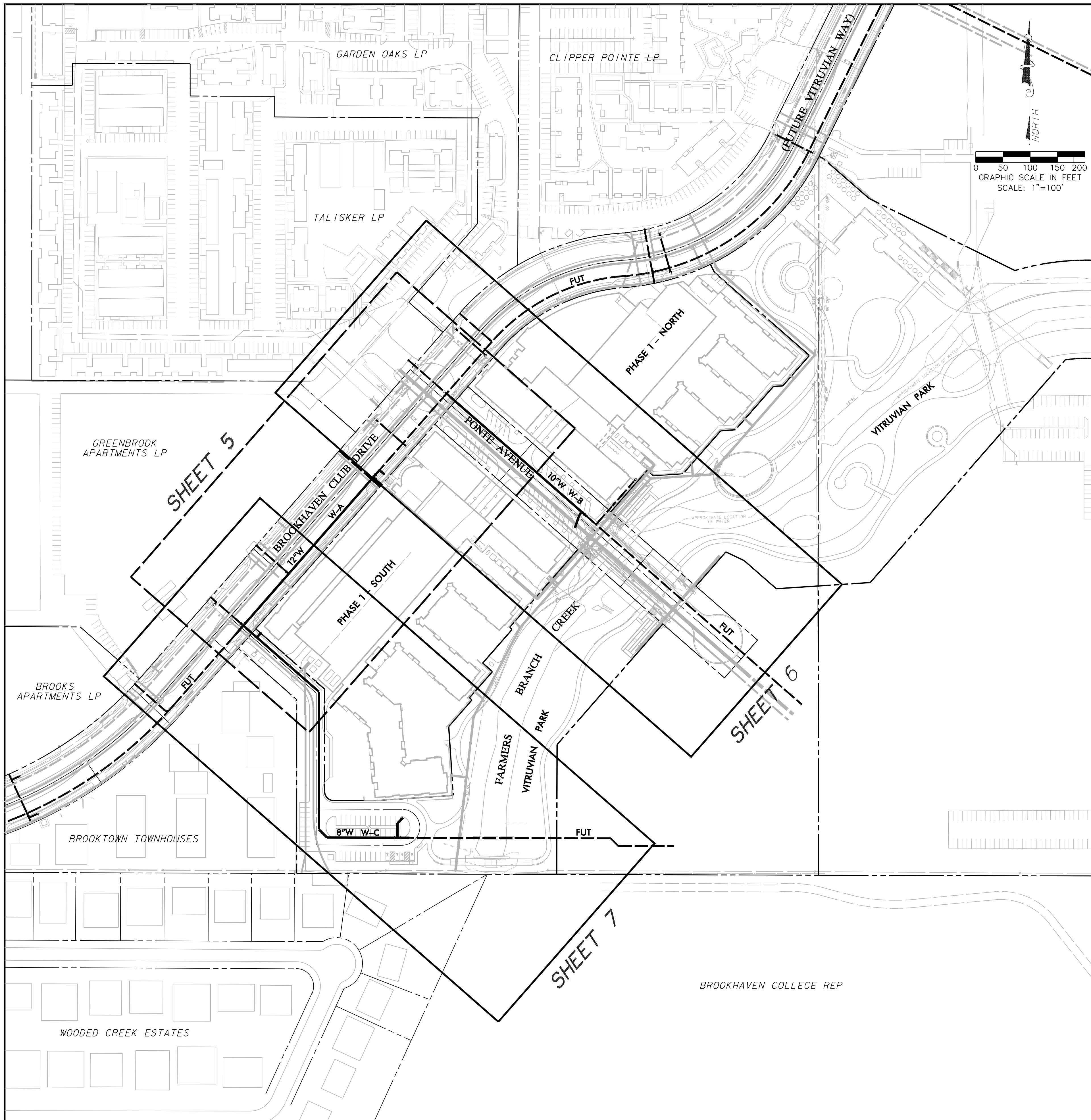
LEGEND

Legend table with columns: EXISTING, PROPOSED, FUTURE. Includes symbols for PROPERTY LINE, BUILDING, FINISH FLOOR ELEVATION, SPOT ELEVATION, CURB, ASPHALT PAVEMENT, RIDGE LINE, SWALE or VALLEY GUTTER, CONTOUR LINE, STORM DRAIN, STORM DRAIN MANHOLE, CURB INLET, RECESSED CURB INLET, GRATE INLET, WATER LINE, FIRE HYDRANT, WATER VALVE, WATER METER BOX, IRRIGATION METER, SANITARY SEWER LINE, SANITARY SEWER MANHOLE, CLEANOUT, LIGHT POLE, POWER POLE, DOWN GUY, SIGN, ACCESSIBLE PARKING, RETAINING WALL, WOOD FENCE, SCREEN WALL FENCE, CHAIN LINK FENCE, WIRE FENCE, TREE, OVERHEAD WRES, OVERHEAD ELECTRIC LINE, OVERHEAD TELEPHONE LINE, UNDERGROUND ELECTRIC LINE, UNDERGROUND TELEPHONE LINE, UNDERGROUND CABLE LINE, ELECTRIC METER, ELECTRIC TRANSFORMER, GAS METER, GAS LINE, AIR CONDITIONING UNIT.



TOWN OF ADDISON DALLAS COUNTY, TEXAS WATER, SANITARY SEWER & STORM DRAIN BROOKHAVEN CLUB DR, PONTE A VE & VITRUVIAN PARK GENERAL CONSTRUCTION NOTES, LEGEND & ABBREVIATIONS icon Consulting Engineers, Inc. 250 W. Southlake Blvd., Suite 117 Southlake, Tx 76092 (817) 552-6210 PROJECT DESIGN DRAWN DATE FILE SHEET 5029-01 JAM SAM OCT 14, 2008 PW #2008-009 3 RECORD DRAWINGS 12/19/08

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



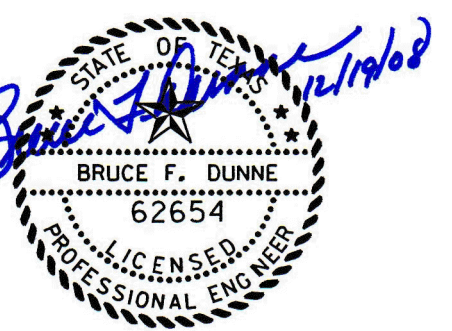
GENERAL WATER & SEWER NOTES:

- REFER TO SHEET C1.1 "GENERAL CONSTRUCTION NOTES, LEGEND AND ABBREVIATIONS" FOR THE GENERAL CONSTRUCTION NOTES FOR THIS PROJECT.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION AS PUBLISHED BY NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, AND ANY AND ALL AMENDMENTS BY THE TOWN OF ADDISON, AS WELL AS STANDARD CONSTRUCTION DETAILS OF THE TOWN OF ADDISON.
- PRIOR TO COMMENCING CONSTRUCTION, THE TOWN OF ADDISON, THE CONSULTING ENGINEERS, THE SUCCESSFUL CONTRACTOR, UTILITY COMPANIES, AND ANY OTHER AFFECTED PARTIES, SHALL CONVEENE FOR A PRE-CONSTRUCTION CONFERENCE AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT FROM THE TOWN OF ADDISON PRIOR TO WORKING WITH THE PUBLIC RIGHT-OF-WAY.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ANY PUBLIC UTILITY COMPANIES FOR LOCATION OF EXISTING FACILITIES IN OR NEAR THE WORK AREAS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
 - TOWN OF ADDISON (WATER, SEWER, SIGNALS)
 - ATMOS ENERGY (GAS)
 - ONCOR ELECTRIC DELIVERY
 - VERIZON / MCI
 - AT&T (SOUTHWESTERN BELL)
 - TIME-WARNER CABLE
- THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER (SIX SETS EACH), FOR APPROVAL OF ALL MATERIALS TO BE ADDED TO THE PUBLIC INFRASTRUCTURE, PRIOR TO INCORPORATING MATERIALS INTO THE JOB.
- THE CONTRACTOR SHALL PROVIDE AND SUBMIT TO THE TOWN OF ADDISON (SIX SETS EACH), AN APPROVED TRENCH SAFETY PLAN, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS, FOR THE INSTALLATION OF UTILITIES GREATER THAN FIVE (5) FEET IN DEPTH.
- THE CONTRACTOR SHALL PROVIDE A MAINTENANCE BOND FOR PUBLIC INFRASTRUCTURE WORK IN THE FOLLOWING AMOUNTS:
 - 100% FOR VALUATIONS LESS THAN OR EQUAL TO \$5,000.
 - \$5,000 FOR VALUATION GREATER THAN \$5,000, AND LESS THAN \$50,000.
 - 10% FOR VALUATIONS GREATER THAN \$50,000.
 BONDS SHALL BE FOR A PERIOD OF TWO YEARS BEGINNING WITH THE DATE OF FINAL ACCEPTANCE BY THE TOWN.
- THE CONTRACTOR SHALL FULLY COMPLY WITH, AND SUPPLEMENT AS NECESSARY, THE CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN WHILE CONDUCTING HIS ACTIVITIES ON THIS PROJECT.
- THE TOWN OF ADDISON PUBLIC WORKS DEPARTMENT WILL APPROVE AND/OR DETERMINE THE TRAFFIC CONTROL PLAN AND WORKING HOURS, CONTACT THE ASSISTANT CITY ENGINEER OR THE PUBLIC WORKS INSPECTOR AT (972) 450-2871.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT AND SUPPLEMENT AS NECESSARY, THE TRAFFIC CONTROL MEASURES ON THIS PROJECT, INCLUDING PROVIDING ADEQUATE FLAGMEN, SIGNAGE, STRIPING AND WARNING DEVICES, ETC. DURING CONSTRUCTION IN ACCORDANCE WITH THE "TEXAS MANUAL OF UNIFORM CONTROL DEVICES". THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORKING HOURS OR PROVIDE AN ALL-WEATHER DETOUR AROUND THE CONSTRUCTION SITE, INCLUDING PUBLIC NOTIFICATION AND SIGNING.
- TEMPORARY OR PERMANENT BARRICADES SHALL REMAIN AT ALL POINTS OF INGRESS OR EGRESS TO PREVENT PUBLIC USE UNTIL THE WORK RECEIVES FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL COVER ALL OPEN EXCAVATIONS WITH ANCHORED STEEL PLATING, DURING NON-WORKING HOURS, ALONG EXISTING ROADWAYS AND TRAFFIC AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE AT ALL TIMES DURING CONSTRUCTION, INCLUDING PROVIDING ALL TEMPORARY STRUCTURES OR IMPROVEMENTS AS NECESSARY FOR THE SAFETY OF THE PUBLIC.
- THE TOWN OF ADDISON WILL PROVIDE A GEOTECHNICAL LABORATORY TO PERFORM APPROPRIATE TESTING DURING CONSTRUCTION ACTIVITIES. ANY TEST THAT FAILS TO MEET CITY REQUIREMENTS SHALL BE RETESTED AT THE CONTRACTOR'S EXPENSE.
- ROUGH GRADING SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF WATER AND SANITARY SEWER FACILITIES.
- THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, REVENUES, TREES, SHRUBS, GAS MAINS, TELEPHONE CABLES, ELECTRIC CABLES, DRAINAGE PIPES, UTILITY SERVICES, AND ALL OTHER UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW THE GROUND, THE COST OF WHICH SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ASSURE PROPER DEPTHS ARE ACHIEVED. IN THE EVENT OF A CONFLICT BETWEEN WATER LINES AND STORM DRAIN OR SANITARY SEWER PIPING, THE CONTRACTOR SHALL ADJUST THE WATER LINE DOWNWARDS IN SUCH A MANNER SO THAT THE PIPE MANUFACTURERS' RECOMMENDATIONS ON THE PIPE DEFLECTION AND JOINT STRESS ARE NOT EXCEEDED.
- THE CONTRACTOR SHALL VERIFY THE SIZE, TYPE, ELEVATION, CONFIGURATION, AND ANGIULATION OF EXISTING WATER, SANITARY SEWER AND UTILITY LINES PRIOR TO CONSTRUCTION OF TIE-IN MATERIALS. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR REPAIRS TO EXISTING FACILITIES DAMAGED BY HIS ACTIVITIES.
- ALL WATER MAIN MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF ADDISON'S WATER SYSTEM REQUIREMENTS.
- ALL WATER MAINS TWELVE-INCH (12") DIAMETER AND SMALLER SHALL BE ANSI/AWWA C-909-98 MOLECULARLY ORIENTED PVC PRESSURE PIPE WITH CAST IRON O.D. OR WHEN PIPE PENETRATES METER VAULT WALLS IT SHALL BE DUCTILE IRON. PIPE JOINTS SHALL BE RUBBER RING AND INTEGRAL THICKENED BELL, ASSEMBLED WITH A FACTORY SUPPLIED LUBRICANT. WATER MAINS SHALL HAVE A MINIMUM CLASS RATING OF 150-PSI FOR DOMESTIC USE AND A MINIMUM CLASS RATING OF 200-PSI FOR FIRE LINE APPLICATIONS. JOINT MATERIAL FOR PVC SHALL CONFORM TO ASTM F471.
- EMBEDMENT FOR WATER AND SEWER MAINS SHALL COMPLY WITH NCTCOG CLASS "B+" EMBEDMENT OF CRUSHED STONE TO THE SPRING LINE OF THE PIPE, WITH SAND (12" MIN) OVER THE PIPE. A LAYER OF GEO-TEXTILE FABRIC SHALL BE PLACED ON TOP OF THE STONE PRIOR TO THE PLACEMENT OF THE SAND.
- THE MINIMUM COVER TO THE TOP OF THE PIPE MUST VARY WITH THE VALVE STEM. IN GENERAL, THE MINIMUM COVER BELOW THE TOP OF CURB AT STREET TO TOP OF THE PIPE SHOULD BE AS FOLLOWS:
 - LINES LARGER THAN SIXTEEN-INCH (16") SHALL HAVE A MINIMUM OF SIX FEET (6') OF COVER WHICH IS SUFFICIENT TO ALLOW WATER AND SEWER AND OTHER UTILITIES TO GO OVER THE LARGE MAIN.
 - SIXTEEN-INCH (16") MAINS SHALL HAVE A MINIMUM COVER OF FIVE FEET (5').
 - TWELVE-INCH (12") AND SMALLER MAINS SHALL HAVE A MINIMUM COVER OF FOUR FEET (4').

- THE CONTRACTOR SHALL SUPPLY AND INSTALL ANY ADDITIONAL BENDS WITH THRUST BLOCKS AND OTHER PREVENANCES REQUIRED TO ASSURE PROPER INSTALLATION OF WATER MAINS AND LATERALS. THE CONTRACTOR MAY PULL PIPE AS NEEDED AT THE BENDS WHERE THE DEFLECTION ANGLE OF THE PIPE DOES NOT MATCH THE ANGLE OF THE BEND PROVIDED THE PIPE DEFLECTION IS WITHIN TOLERABLE MANUFACTURERS LIMITS. THE COST FOR ADDITIONAL BENDS AND BLOCKING SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- ALL VALVES, DUCTILE IRON AND CAST IRON PIPE, FITTINGS AND SPECIALS SHALL BE POLYETHYLENE WRAPPED.
- HORIZONTAL BLOCKING FOR WATER LINES HAS BEEN OMITTED FOR CLARITY, HOWEVER, BLOCKING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD DETAILS.
- ALL FITTINGS SHALL BE DUCTILE IRON, FULL BODIED, MECHANICAL JOINT TYPE WITH RESTRAINED GLANDS AND HAVE A MINIMUM RATED WORKING PRESSURE OF 250 PSI. FITTINGS SHALL BE WRAPPED WITH 8-MIL POLY PRIOR TO BACKFILL.
- ALL VALVES AND FITTINGS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED. THRUST BLOCKING SHALL BE MINIMUM 3000 PSI CONCRETE AND BE ABLE TO WITHSTAND A MINIMUM 200 PSI TEST PRESSURE.
- THRUST BLOCKING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD DETAILS. DO NOT COVER BELLS OR FLANGES WITH CONCRETE. THE CONTRACTOR SHALL REMOVE EXISTING THRUST BLOCKING OR RESTRAINTS WHERE NECESSARY TO ALLOW THE WORK TO PROCEED, AND SHALL REPLACE THE THRUST BLOCKS WHERE REQUIRED. THE COST TO REMOVE, REPLACE OR PROVIDE THRUST BLOCKING SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- TRACER WIRE SHALL BE PLACED ON PIPE PRIOR TO EMBEDMENT. WIRE SHALL BE #12 PLASTIC COATED COPPER WIRE, TIED TO ALL VALVES AND FIRE HYDRANTS, AND EXTENDING TO SIX (6) INCHES ABOVE FINISHED GRADE ALONG THE OUTSIDE OF ALL VALVE STACKS AND HYDRANTS.
- FINISH BACKFILL SHALL BE NATIVE SOIL, FREE OF ALL ROCKS AND CLODS GREATER THAN THREE INCHES IN DIAMETER, COMPACTED TO 95% STANDARD PROCTOR DENSITY, IN SIX (6) INCH MAXIMUM LOOSE LIFTS, WITH ZERO TO PLUS THREE, OPTIMUM MOISTURE.
- NO PERSON SHALL OPEN, TURN OFF, INTERFERE WITH, ATTACH ANY HOSE TO, OR TAP ANY WATER MAIN BELONGING TO THE TOWN OF ADDISON UNLESS DULY AUTHORIZED TO DO SO BY THE TOWN OF ADDISON PUBLIC WORKS DEPARTMENT (972-450-2871).
- THE CONTRACTOR WILL REMOVE EXISTING WATER METERS NOT USED FOR PROPOSED DEVELOPMENT. REMOVE METERS AND METER LIDS IN A WAY AS TO NOT DAMAGE THE METER OR LID AND DELIVER SALVAGED METERS TO THE TOWN OF ADDISON. CONTRACTOR SHALL KILL EXISTING DEADHEAD SERVICE FOR REMOVED METERS AT THE MAIN LINE.
- THE CONTRACTOR SHALL REPLACE EXISTING SERVICE LINES, DESIGNATED TO REMAIN, FROM EXISTING METERS TO NEW WATER MAIN WITH NEW COPPER (TYPE K ONLY) LINES. NEW SIZES TO BE THE SAME AS EXISTING, WITH A MINIMUM OF 3/4" DIAMETER.
- ALL WASTEWATER MAIN PIPING SHALL MEET THE EXTRA STRENGTH REQUIREMENTS OF ASTM SPECIFICATION D3034 (SDR-35) FOR INSTALLATIONS LESS THAN TEN FEET DEEP. FOR INSTALLATIONS GREATER THAN TEN FEET DEEP, SDR 26 PVC SHALL BE USED. PIPE SHALL HAVE THE BELL AND SPIGOT TYPE JOINTS, CONSISTING OF INTEGRAL WALL SECTION WITH FACTORY INSTALLED COMPRESSION RUBBER RING GASKET, SECURELY LOCKED IN BELL GROOVE TO PROVIDE POSITIVE SEAL UNDER ALL INSTALLATION CONDITIONS. PIPE SHALL BE LAID WITH THE BELL END ON THE UPSTREAM SIDE.
- ALL SEWER MANHOLES WITH PRESSURE TYPE FRAME AND COVERS SHALL HAVE THE INTERIOR SURFACE COATED WITH AN EPOXY COATING (RAVEN 405 OR APPROVED EQUAL), MINIMUM 40 MILS THICKNESS, INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- ALL EXISTING AND PROPOSED IMPROVEMENTS (VALVES, MANHOLES, FIRE HYDRANTS, WATER METERS, ETC.) SHALL BE ADJUSTED TO FINAL FINISHED GRADE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL STAMP A 2-INCH "W" AND A 2-INCH "S" IN THE CURB AT THE LOCATION OF THE WATER AND SEWER SERVICE LINES RESPECTIVELY. A 2-INCH "C" SHALL MARK CONDUITS CROSSING PAVEMENT, AND A 2-INCH "V" SHALL MARK WATER VALVES, WITH THE "POINT OF THE V" TOWARD THE VALVE.
- WATERLINES SHALL BE TESTED BOTH BACTERIOLOGICALLY AND HYDROSTATICALLY. WATER MAINS SHALL BE HYDROSTATICALLY TESTED AT 150 PSI FOR FOUR (4) HOURS. FIRE LINES SHALL BE HYDROSTATICALLY TESTED AT 200 PSI FOR (2) HOURS. ALL BLEEDER LINES SHALL BE REMOVED UPON COMPLETION OF TESTING BY REMOVING THE CORPORATION STOP AND INSTALLING A BRASS PLUG. HEAVILY CHLORINATED WATER (3.5 MG/L OR GREATER FREE CHLORINE) RESULTING FROM WATER LINE STERILIZATION SHALL BE DIRECTED TO THE SANITARY SEWER AFTER THE MANDATORY CHLORINE RETENTION TIME (USUALLY 24 HOURS) UNLESS OTHERWISE NOTED.
- ALL WASTEWATER MAINS SHALL BE CAMERA INSPECTED BY THE CONTRACTOR AFTER THE INSTALLATION OF ALL UTILITIES AND PRIOR TO FINAL ACCEPTANCE OF NEW WASTEWATER FACILITIES.
- THE CONTRACTOR SHALL PROVIDE VERIFICATION OF COMPLETION AND COMPLIANCE OF ALL REQUIRED TESTS (PRESSURE, BACTERIOLOGICAL, BACKFLOW, VACUUM, MANDREL, VHS VIDEO OF SANITARY SEWER, ETC.) TO THE TOWN OF ADDISON.
- THE CONTRACTOR SHALL CALL (972) 450-2847 TO REQUEST A FINAL WALK-THROUGH INSPECTION OF THE PUBLIC INFRASTRUCTURE WORK.
- ANY ADJACENT PROPERTIES AFFECTED BY THE CONSTRUCTION SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS, OR BETTER.

BM #1 REF. ELEVATION = 559.47
 SQUARE CUT IN TOP OF CURB, SOUTH MEDIAN
 END NOSE, MARSH LANE
 112' NORTH OF BROOKHAVEN CLUB DRIVE.

BM #2 REF. ELEVATION = 547.84
 SQUARE CUT IN TOP OF CURB, NORTH MEDIAN
 END NOSE, AT INTERSECTION OF
 BROOKHAVEN CLUB DRIVE AND MARSH LANE.



WARNING
 CONTRACTOR IS TO CONTACT TEXAS ONE-CALL SYSTEM (1-800-248-4545) OR OTHER UTILITY LOCATING SERVICES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES. ICON CONSULTING ENGINEERS, INC. IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES IN THE PROJECT AREA NOR FOR DEPICTING THE EXACT LOCATIONS OF UTILITIES ON THESE DRAWINGS.

NO.	REVISION	BY	DATE

ADDISON TOWN OF ADDISON
DALLAS COUNTY, TEXAS

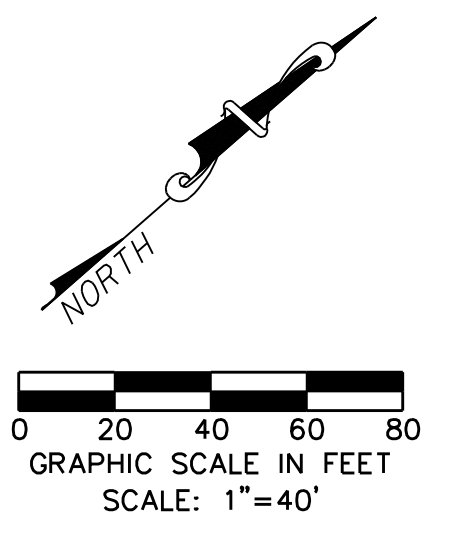
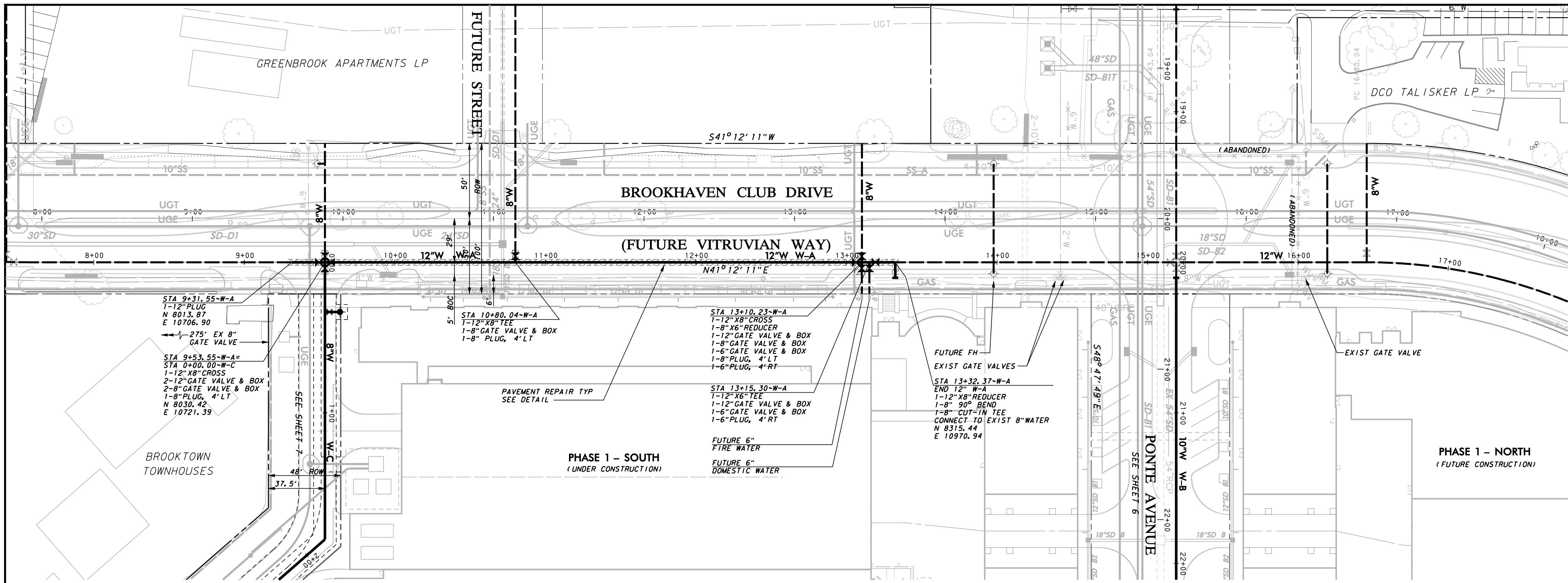
WATER, SANITARY SEWER & STORM DRAIN
BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

OVERALL WATER LAYOUT

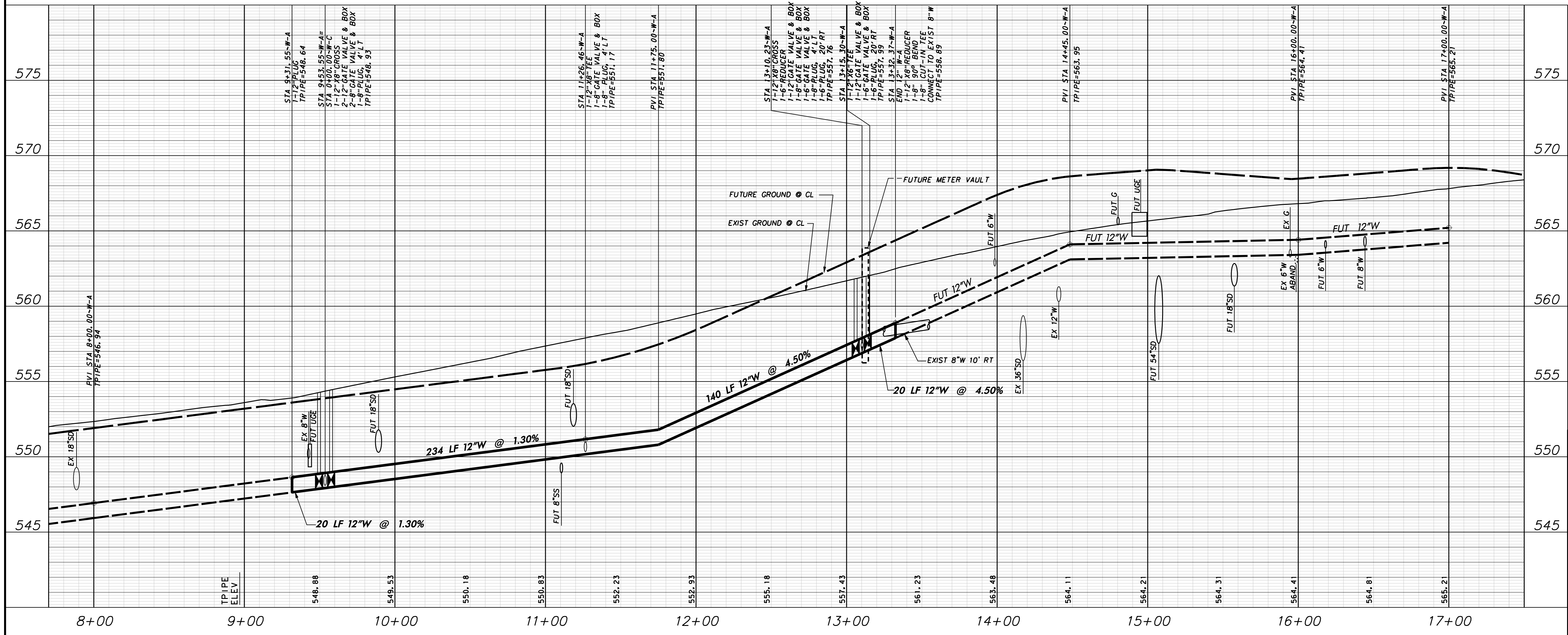
icon Consulting Engineers, Inc.		250 W. Southlake Blvd., Suite 117			
Civil Engineers - Designers - Planners		Southlake, Tx 76092 (817) 552-6210			
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
5029-01	JAM	SAM	OCT 14, 2008	PW #2008-009	4

RECORD DRAWINGS 12/19/08

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



NOTES:
1. SEE OVERALL WATER LAYOUT SHEET FOR WATER GENERAL NOTES.



WARNING
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SQUARE CUT IN TOP OF CURB, SOUTH MEDIAN END NOSE, MARSH LANE 1127' NORTH OF BROOKHAVEN CLUB DRIVE.

BM #2 REF. ELEVATION = 547.84
SQUARE CUT IN TOP OF CURB, NORTH MEDIAN END NOSE, AT INTERSECTION OF BROOKHAVEN CLUB DRIVE AND MARSH LANE.

PROFILE SCALE:
0 20 40 60 80
SCALE: 1"=40' HORIZ
0 2 4 6 8
SCALE: 1"=4' VERT

NO.	REVISION	BY	DATE

Addison! TOWN OF ADDISON
DALLAS COUNTY, TEXAS

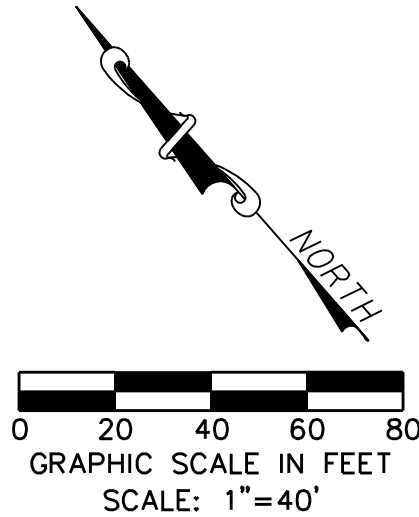
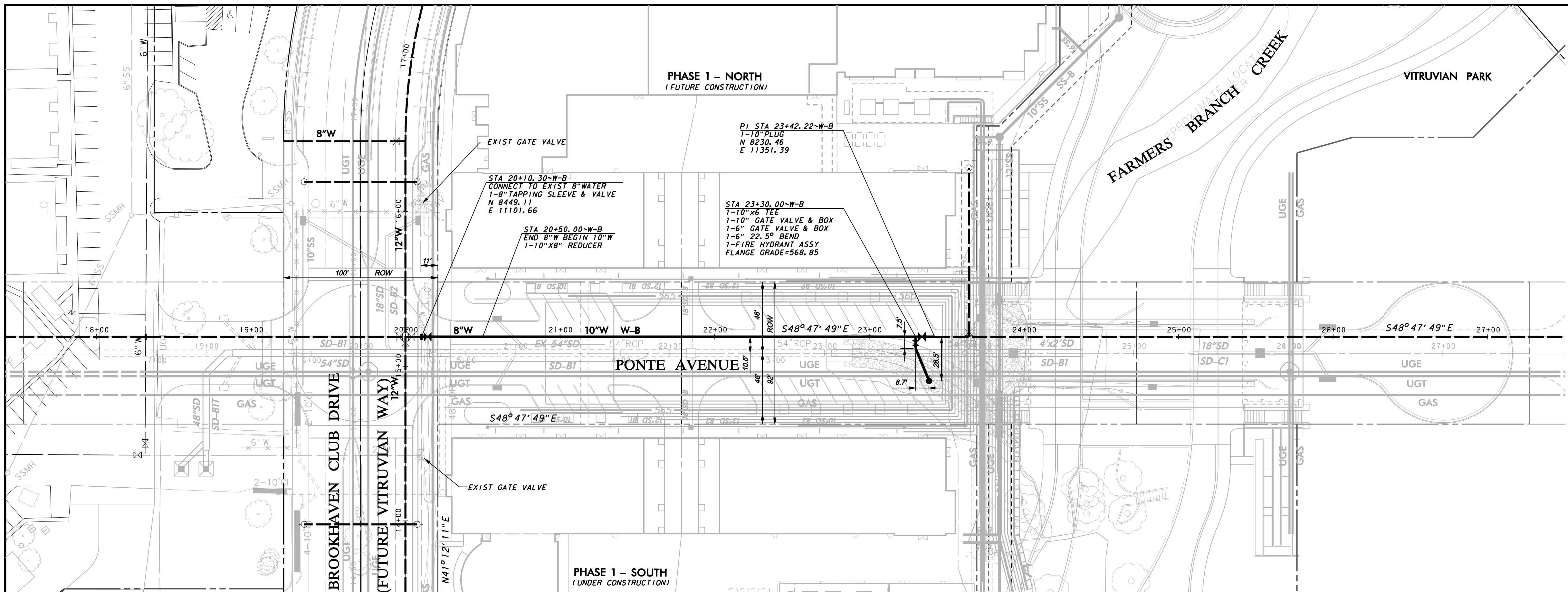
WATER, SANITARY SEWER & STORM DRAIN
BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

WATER PLAN & PROFILE ~ W-A
STA. 9+18.55 TO STA. 13+32.37

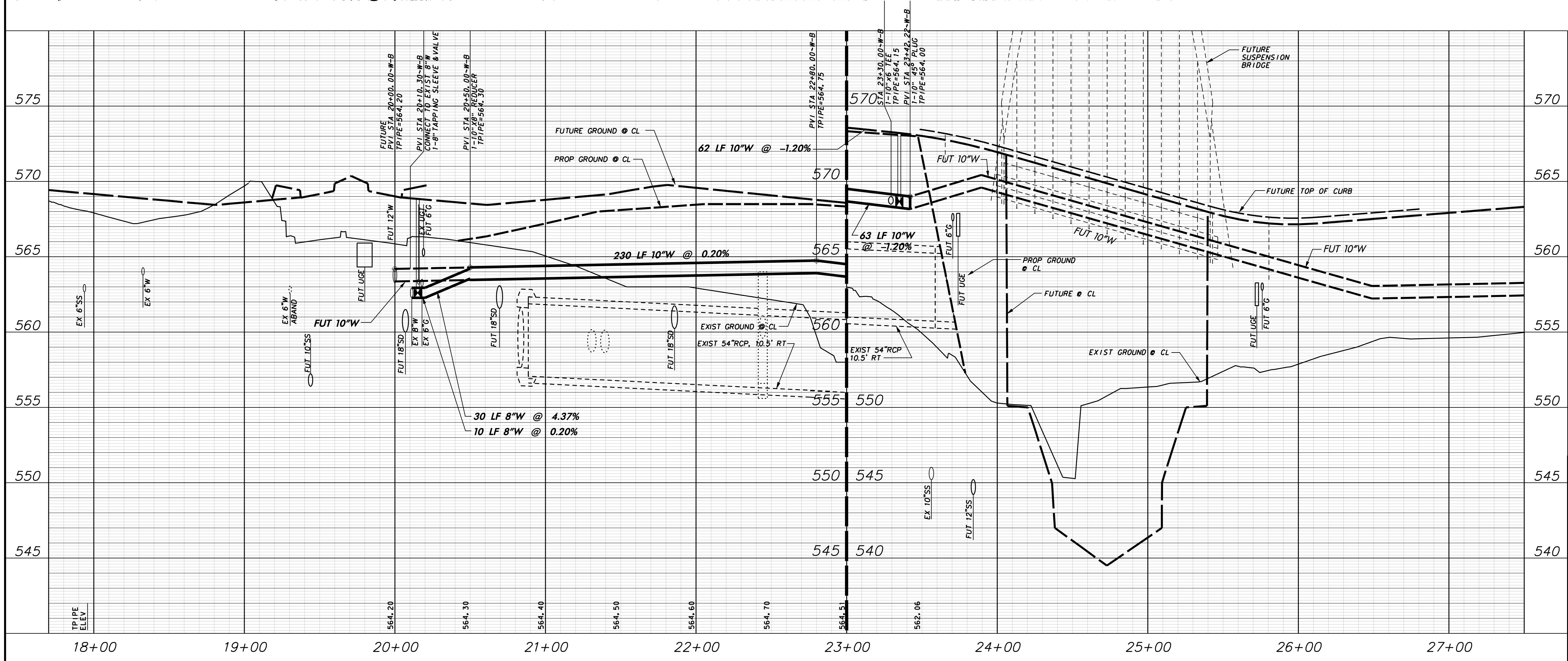
icon Consulting Engineers, Inc. 250 W. Southlake Blvd., Suite 117
Civil Engineers - Designers - Planners Southlake, Tx 76092 (817) 552-6210

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
5029-01	JAM	SAM	OCT 14, 2008	PW #2008-009	5

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



NOTES:
1. SEE OVERALL WATER LAYOUT SHEET FOR WATER GENERAL NOTES.

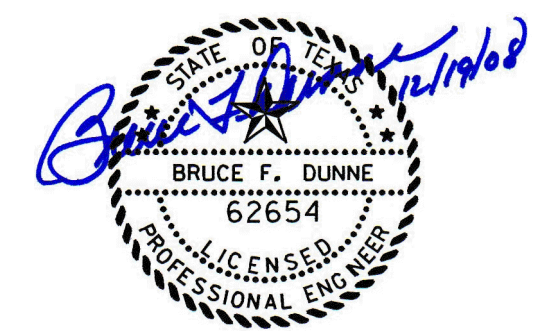
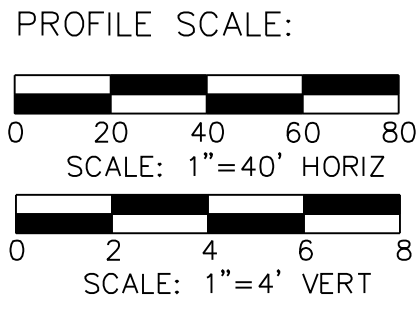


WARNING

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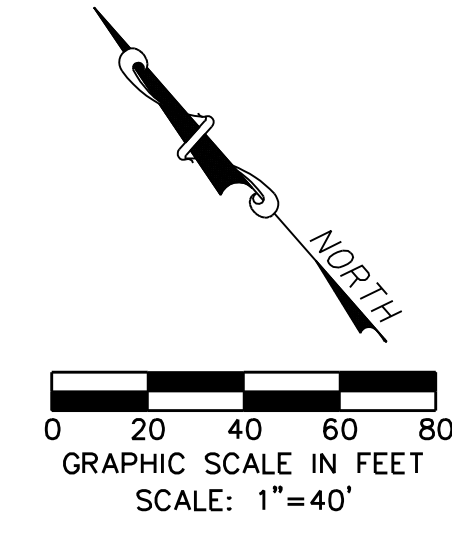
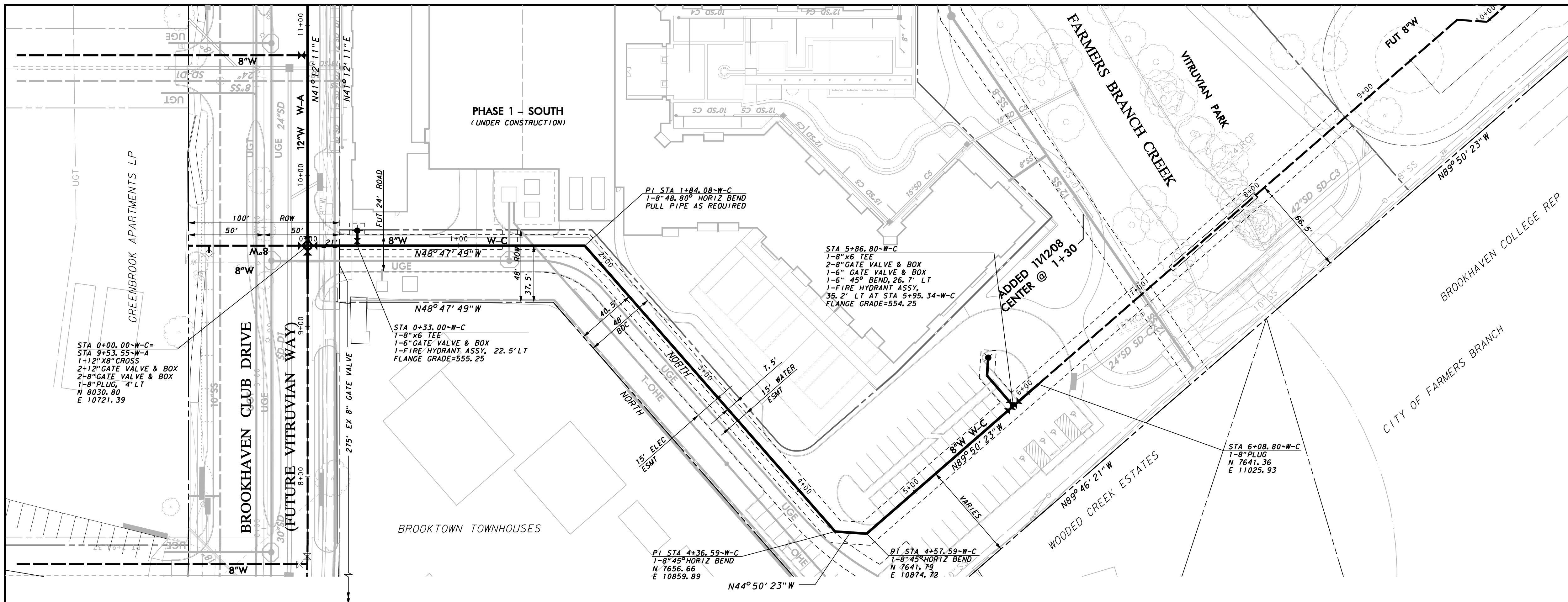
BM #1 REF. ELEVATION = 559.47
SQUARE CUT IN TOP OF CURB, SOUTH MEDIAN END NOSE, MARSH LANE 1127' NORTH OF BROOKHAVEN CLUB DRIVE.

BM #2 REF. ELEVATION = 547.84
SQUARE CUT IN TOP OF CURB, NORTH MEDIAN END NOSE, AT INTERSECTION OF BROOKHAVEN CLUB DRIVE AND MARSH LANE.

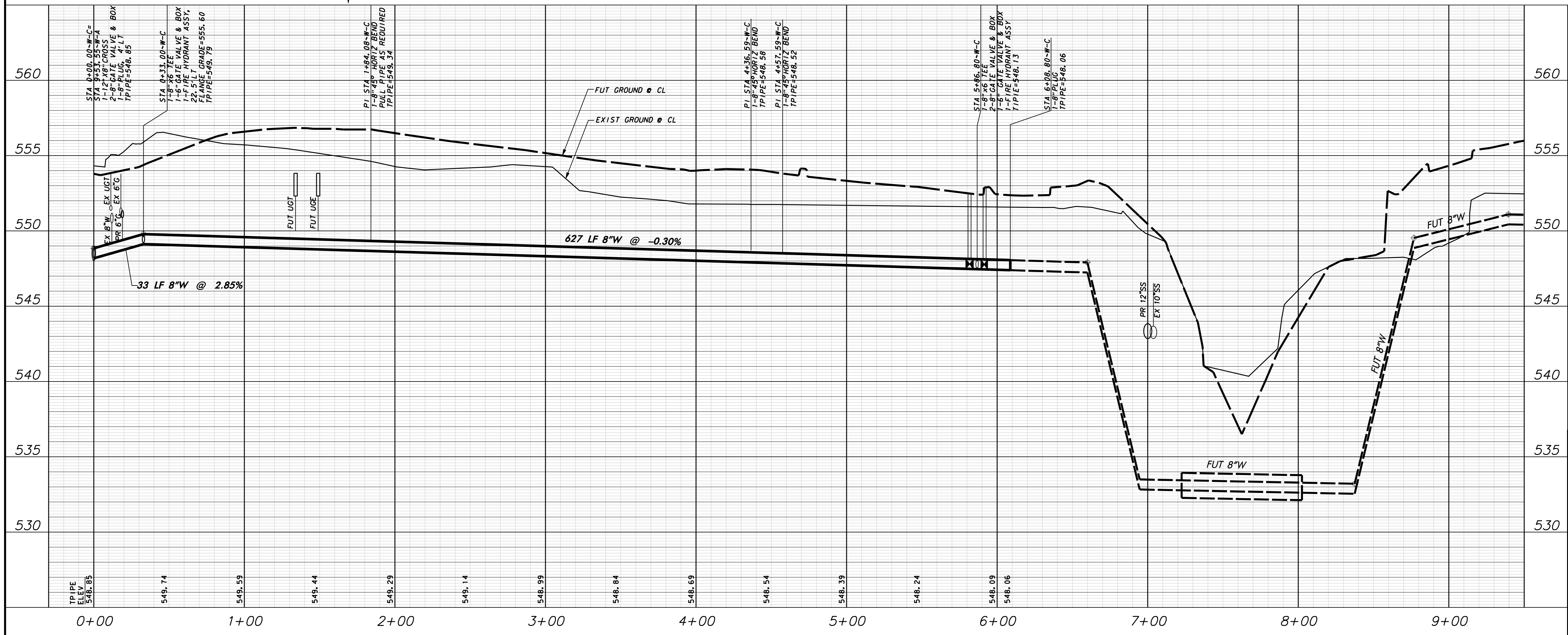


NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
WATER, SANITARY SEWER & STORM DRAIN BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK			
WATER PLAN & PROFILE ~ W-B STA. 20+50.00 TO STA. 26+25.00			
icon Consulting Engineers, Inc. Civil Engineers - Designers - Planners		250 W. Southlake Blvd., Suite 117 Southlake, Tx 76092 (817) 552-6210	
PROJECT	DESIGN	DRAWN	DATE
5029-01	JAM	SAM	OCT 14, 2008
FILE	SHEET		
PW #2008-009	6		

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



NOTES:
 1. SEE OVERALL WATER LAYOUT SHEET FOR WATER GENERAL NOTES.



WARNING

CONTRACTOR IS TO CONTACT TEXAS ONE-CALL SYSTEM (1-800-245-4545) OR OTHER UTILITY LOCATING SERVICES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES. ICON CONSULTING ENGINEERS, INC. IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES IN THE PROJECT AREA NOR FOR DEPICTING THE EXACT LOCATIONS OF UTILITIES ON THESE DRAWINGS.

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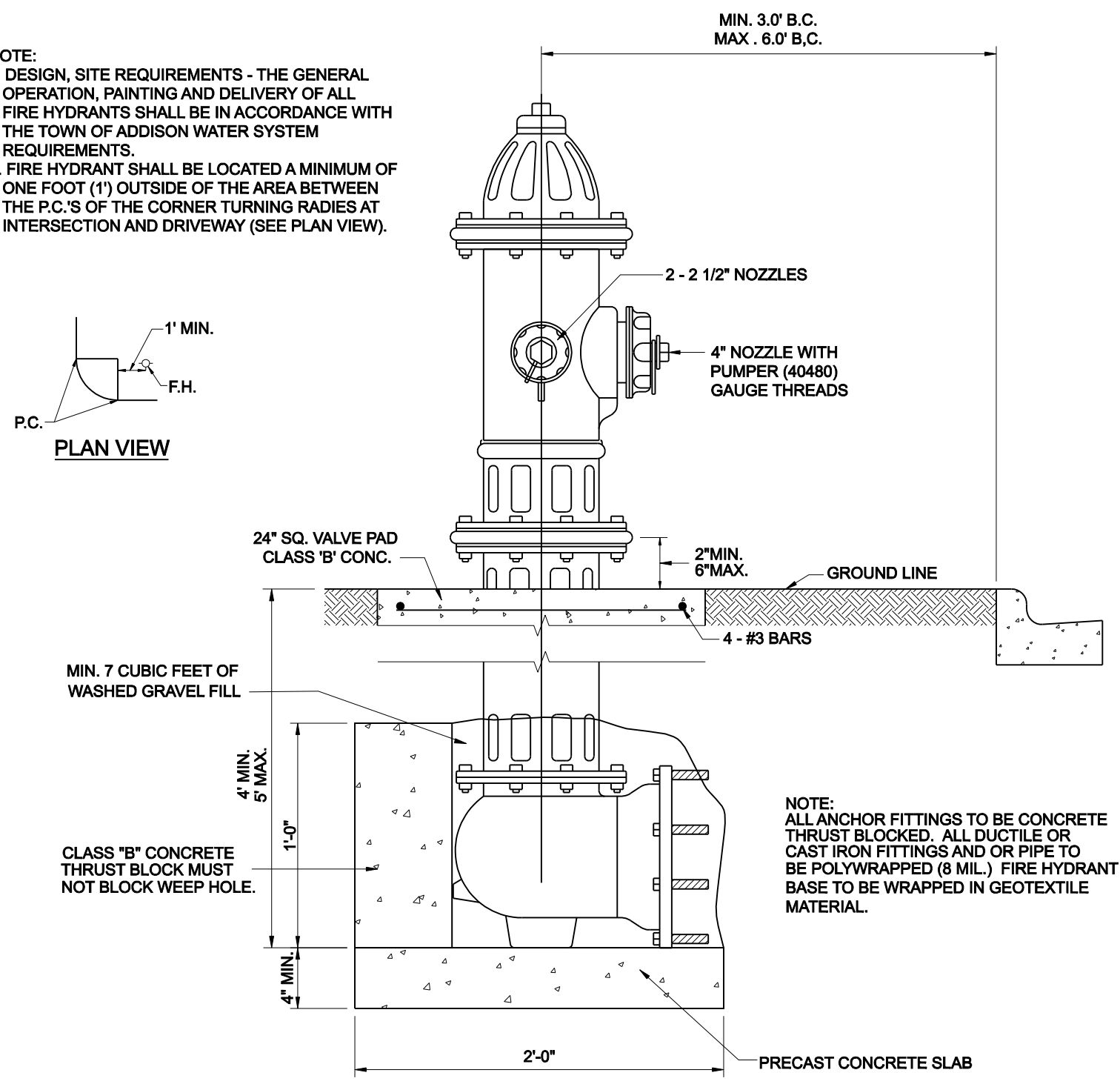
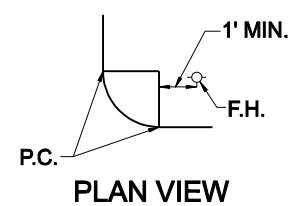
PROFILE SCALE:
 0 20 40 60 80
 SCALE: 1"=40' HORIZ

0 2 4 6 8
 SCALE: 1"=4' VERT

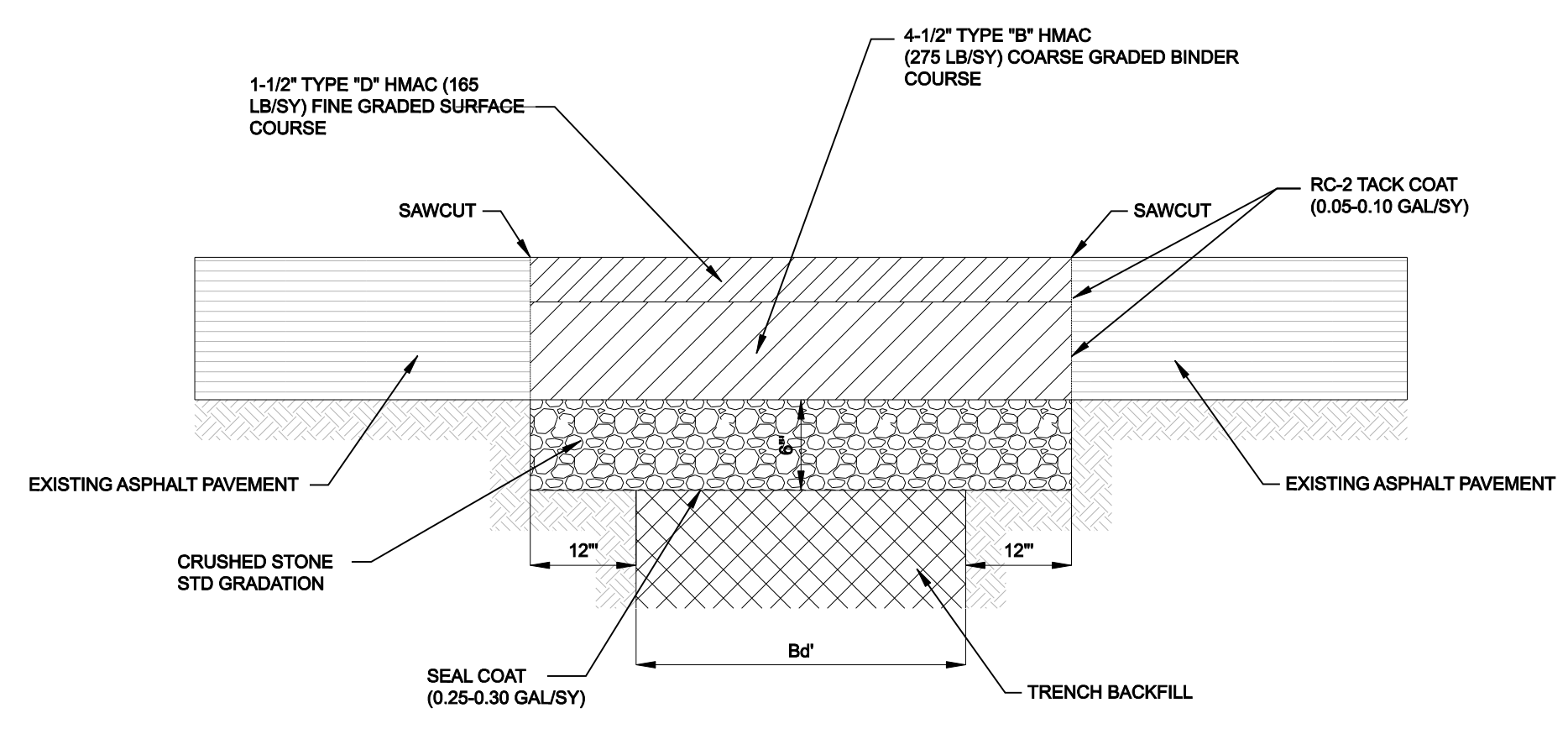
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
WATER, SANITARY SEWER & STORM DRAIN BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK			
WATER PLAN & PROFILE ~ W-C STA. 0+00.00 TO STA. 8+30.00			
icon Consulting Engineers, Inc. Civil Engineers - Designers - Planners		250 W. Southlake Blvd., Suite 117 Southlake, TX 76092 (817) 552-6210	
PROJECT	DESIGN	DRAWN	DATE
5029-01	JAM	SAM	OCT 14, 2008
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PW #2008-009	7		

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK

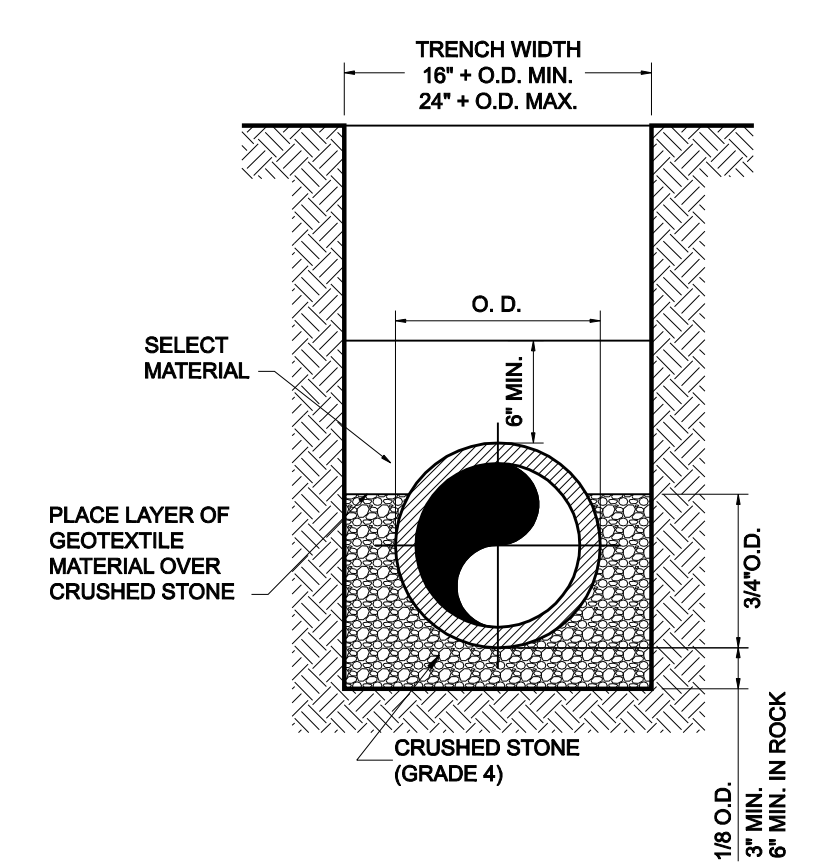
NOTE:
 1. DESIGN, SITE REQUIREMENTS - THE GENERAL OPERATION, PAINTING AND DELIVERY OF ALL FIRE HYDRANTS SHALL BE IN ACCORDANCE WITH THE TOWN OF ADDISON WATER SYSTEM REQUIREMENTS.
 2. FIRE HYDRANT SHALL BE LOCATED A MINIMUM OF ONE FOOT (1') OUTSIDE OF THE AREA BETWEEN THE P.C.'S OF THE CORNER TURNING RADIES AT INTERSECTION AND DRIVEWAY (SEE PLAN VIEW).



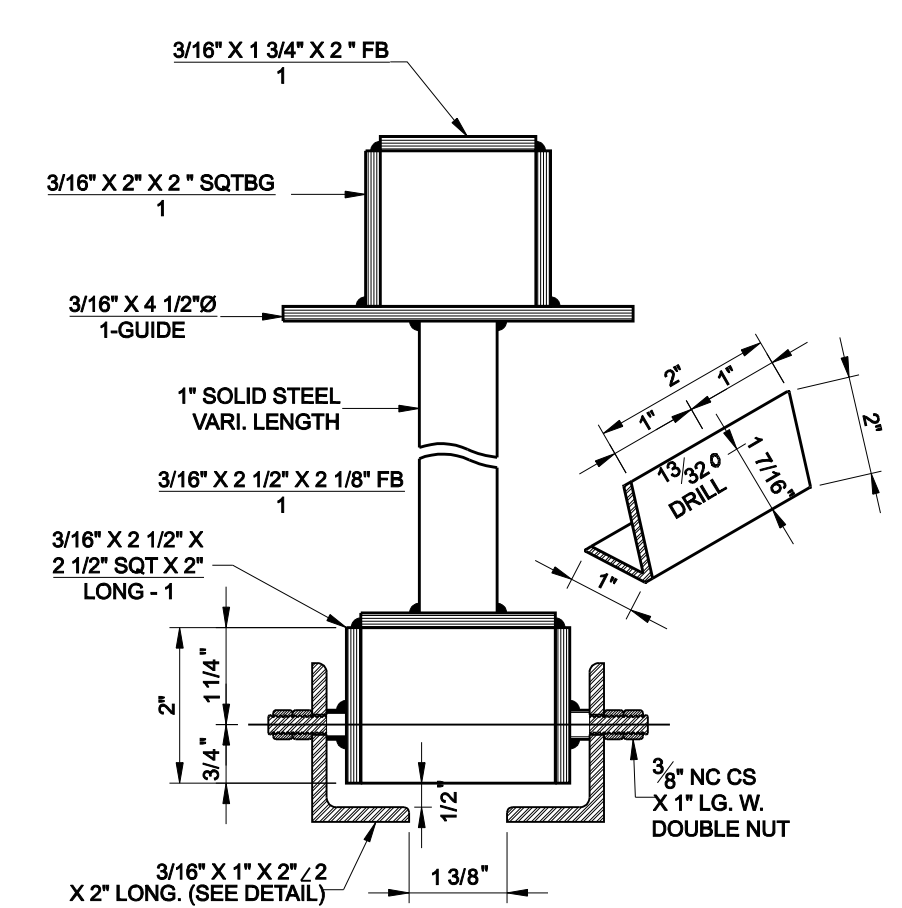
TYPICAL FIRE HYDRANT INSTALLATION



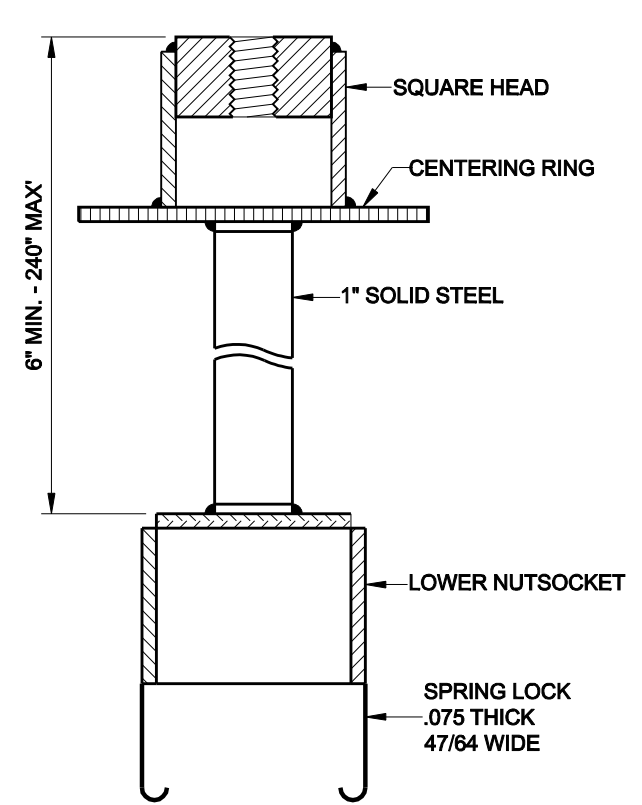
SHORT TERM ASPHALT PAVEMENT REPAIR FOR OPEN CUT TRENCHING



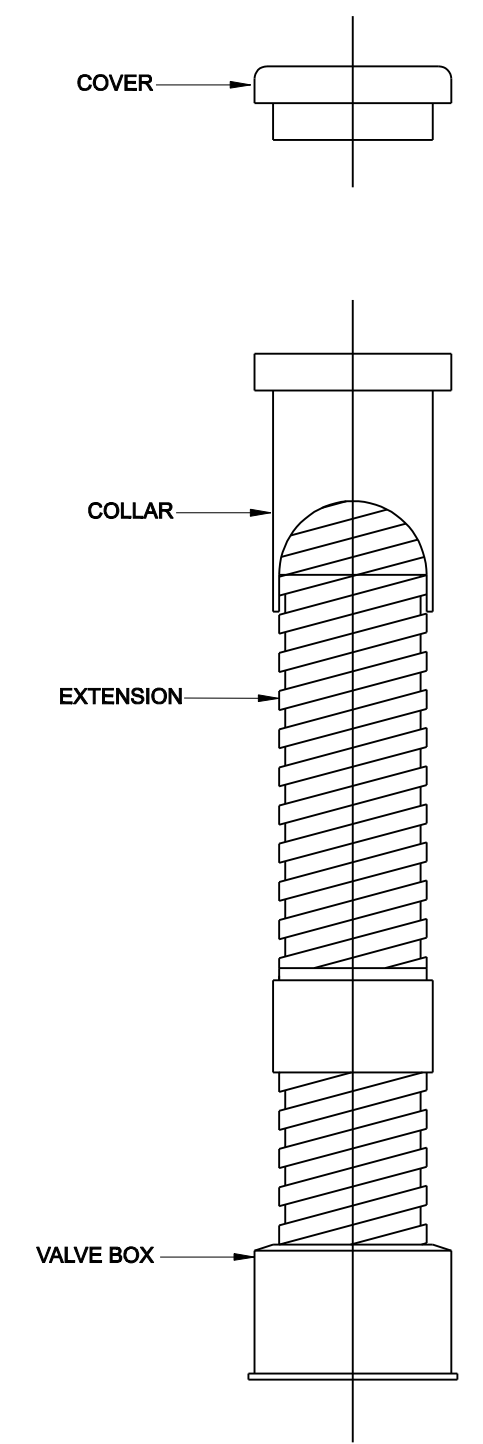
CLASS "B+" EMBEDMENT
 TYPICAL BACKFILL WATER MAIN
 P.V.C. WATER PIPE



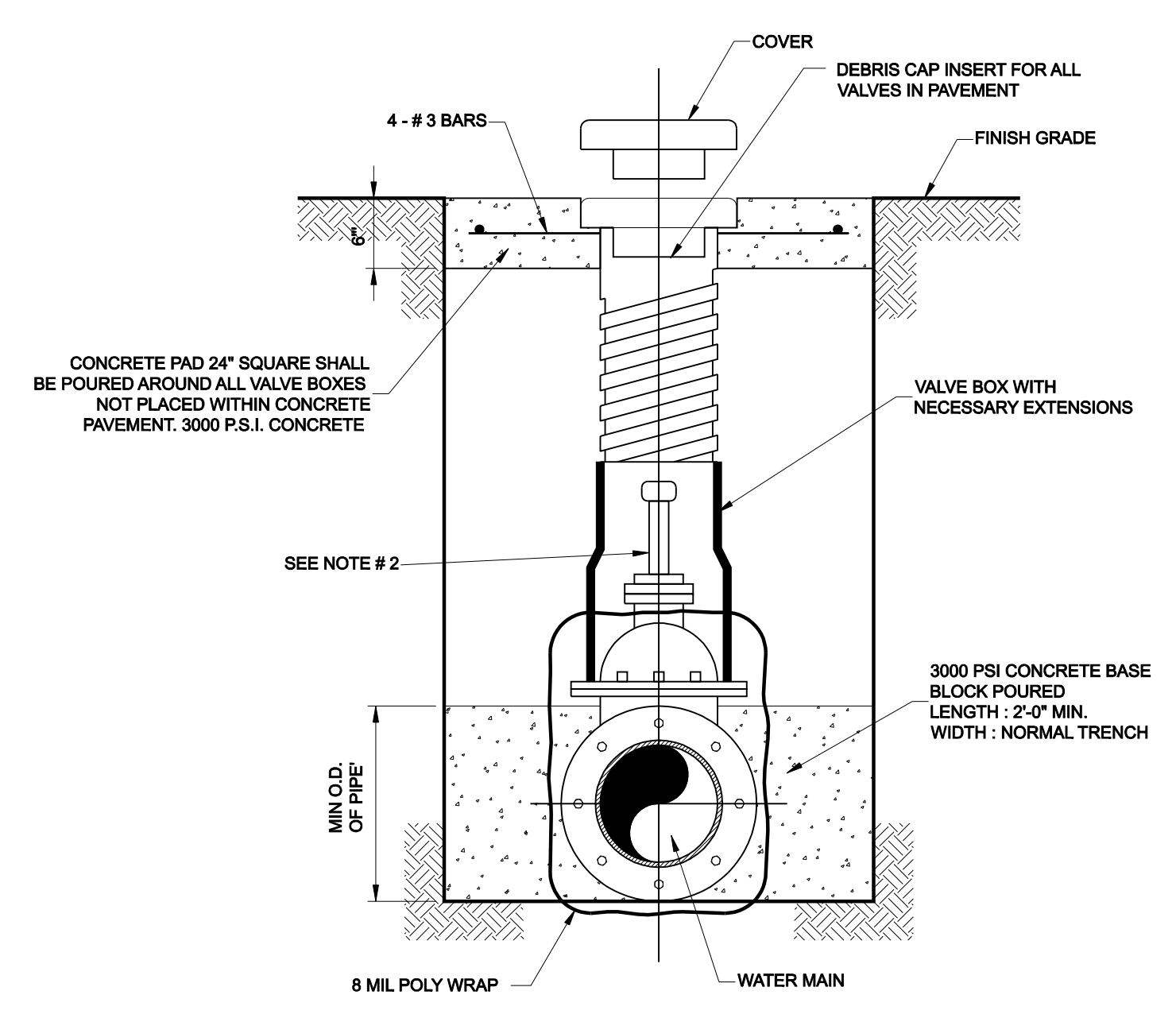
TYPE - B VALVE EXTENSION



SPRING LOCK VALVE EXTENSION

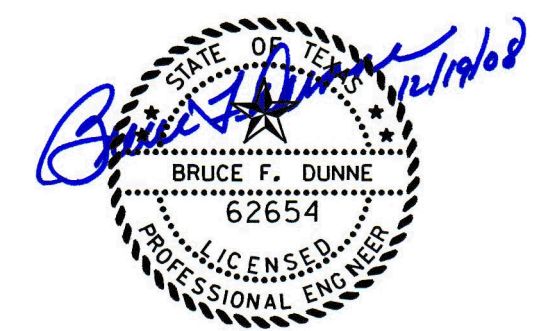


VALVE BOX WITH EXTENSION
 ALL CAST IRON FITTINGS SHALL BE DOMESTIC.



TYPICAL VALVE SETTING & BOX

NOTE:
 1. 4"-12" R.S. GATE VALVES SHALL BE IN ACCORDANCE WITH TOWN OF ADDISON WATER SYSTEM REQUIREMENTS
 2. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE THATS OPERATING NUT IS LOCATED IN EXCESS OF 5 FEET BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO INSURE THAT ITS TOP IS WITHIN 5 FEET OF VALVE BOX LID.
 3. BLUE DOT (3") ON NEAREST CURB FACE TO VALVE.
 4. ALL IRON MATERIALS SHALL BE DOMESTIC.



NO.	REVISION	BY	DATE
WATER, SANITARY SEWER & STORM DRAIN BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK			
WATER DETAILS			
icon Consulting Engineers, Inc. Civil Engineers - Designers - Planners		250 W. Southlake Blvd., Suite 117 Southlake, Tx 76092 (817) 552-6210	
PROJECT	DESIGN	DRAWN	DATE
5029-01	JAM	SAM	OCT 14, 2008
			FILE
			PW # 2008-009
			SHEET
			8

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK

I.D. (IN.)	$\Delta = 30^\circ$						$\Delta = 45^\circ$										
	G (FT.)	THRUST (TONS)	EARTH			ROCK			G (FT.)	THRUST (TONS)	EARTH			ROCK			
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	
4,6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4,6,8	1.5	3.9	2.0	1.5	0.2	1.5	1.5	0.1
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4	16,18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	8.5	5.0	3.2	5.5	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	58.5	10.0	6.0	5.3	6.5	4.5	2.6
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	8.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.6
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5

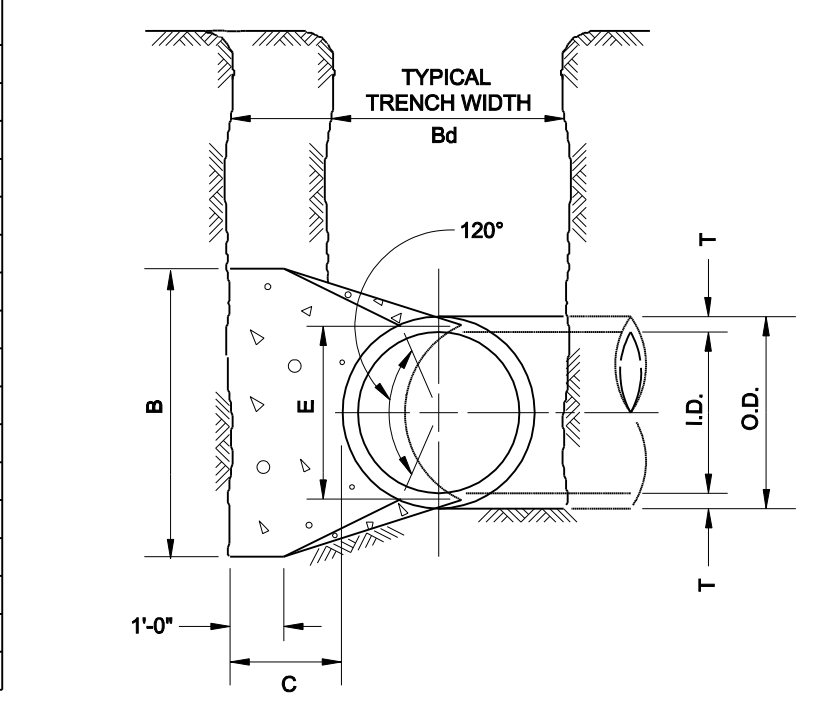
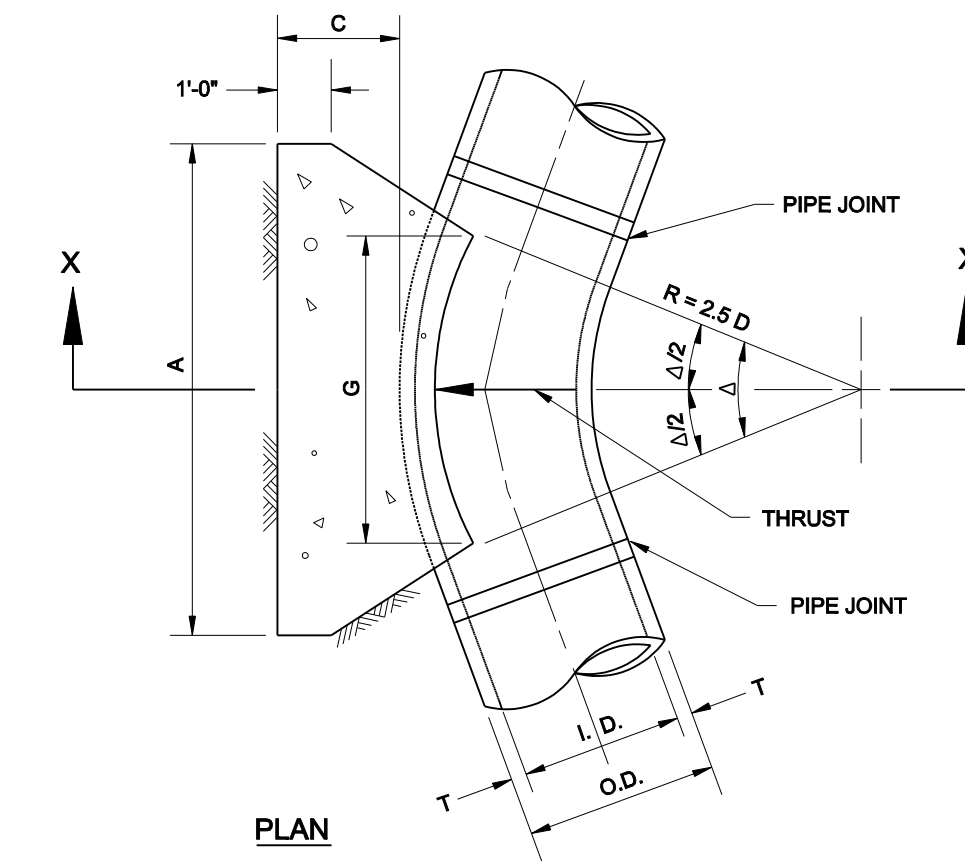
I.D. (IN.)	$\Delta = 67.50^\circ$						$\Delta = 90^\circ$										
	G (FT.)	THRUST (TONS)	EARTH			ROCK			G (FT.)	THRUST (TONS)	EARTH			ROCK			
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	
4,6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4,6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5
16,18	4.7	28.3	7.5	4.0	1.9	5.5	3.0	0.9	16,18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.6	44.4	10.0	4.5	3.1	6.0	4.0	1.5
24	6.2	50.3	11.5	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	4.0	2.1
30	7.8	58.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.7	10.0	4.0	3.3
36	9.4	84.9	14.5	6.0	8.2	9.5	4.5	3.8	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5	5.3
42	10.9	115.5	17.0	7.0	12.8	11.0	5.5	6.3	42	13.9	147.0	21.0	7.0	17.8	14.0	5.5	8.7
48	12.5	150.9	19.0	8.0	18.4	13.0	6.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0	12.4
54	14.0	191.0	21.5	9.0	26.0	15.0	6.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0	18.1
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.6	60	19.9	298.8	30.0	10.0	50.3	20.0	7.5	24.0
66	17.1	285.3	26.0	11.0	46.0	18.0	8.0	23.0	66	21.8	362.8	33.0	11.0	66.2	22.0	8.5	32.5
72	18.7	339.5	28.5	12.0	57.8	19.0	9.0	28.4	72	23.8	431.8	36.0	12.0	85.6	24.0	9.0	41.0
78	20.2	398.5	31.0	13.0	75.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0	53.2
84	21.8	462.1	33.5	14.0	94.7	22.0	10.5	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5	64.8
90	23.3	530.5	35.5	15.0	114.4	24.5	11.0	58.2	90	29.0	674.6	45.0	15.0	164.9	30.0	11.5	81.2
96	24.9	603.6	38.0	16.0	138.9	26.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199.0	32.0	12.0	95.1

TABLES OF DIMENSIONS AND QUANTITIES

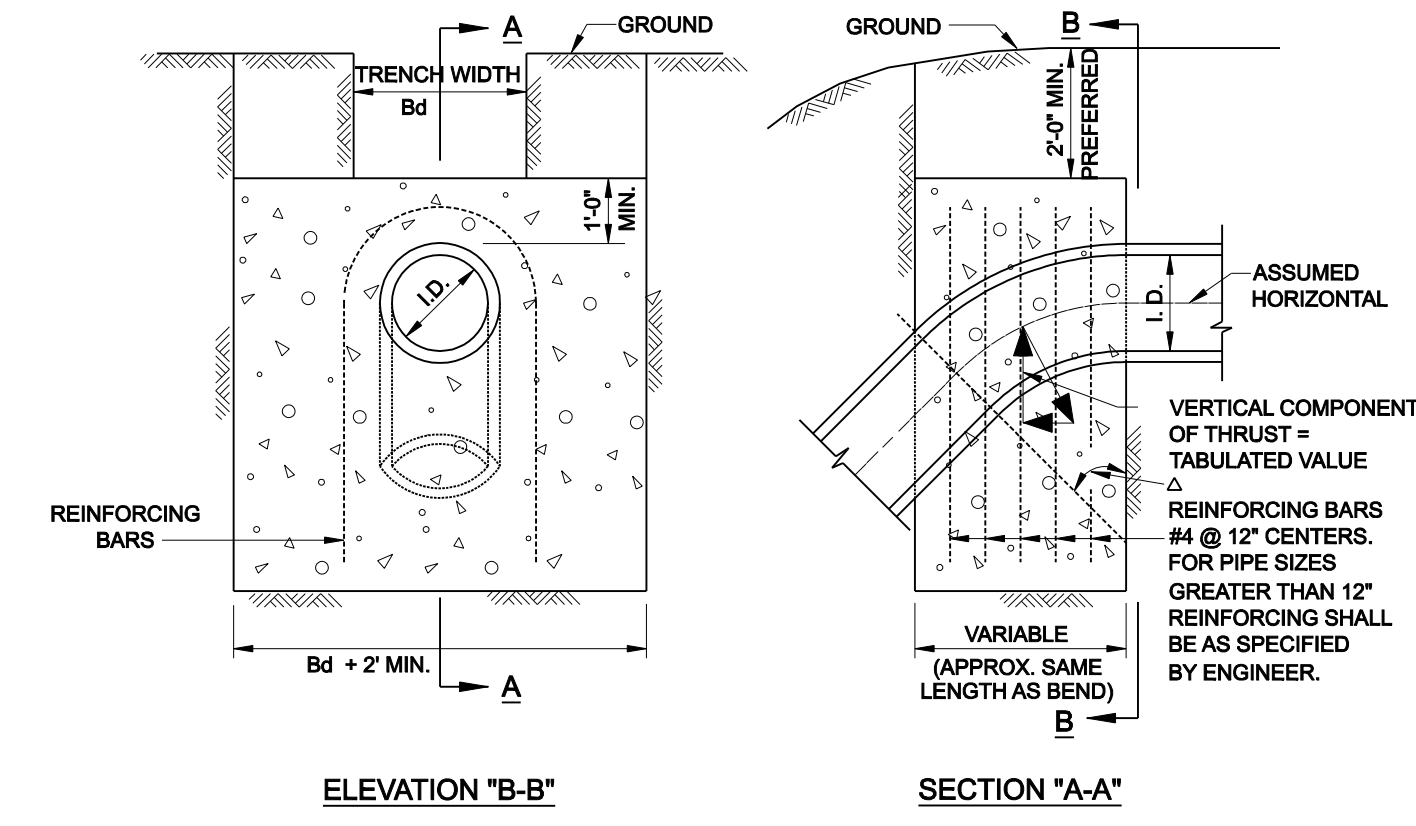
I.D. (IN.)	T (IN.)	$\Delta = 11.25^\circ$ (FT.)	$\Delta = 22.50^\circ$ (FT.)	E (FT.)
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.3
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2

I.D. (IN.)	$\Delta = 11.25^\circ$						$\Delta = 22.50^\circ$										
	G (FT.)	THRUST (TONS)	EARTH			ROCK			G (FT.)	THRUST (TONS)	EARTH			ROCK			
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1
16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.0	0.4
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.5	6.0	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.3	72	6.6	119.1	11.0	11.0	17.6	7.5	8.0	9.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8

TABLES OF DIMENSIONS AND QUANTITIES



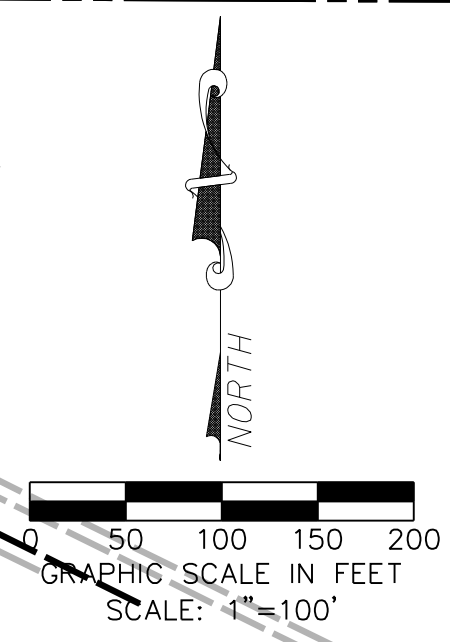
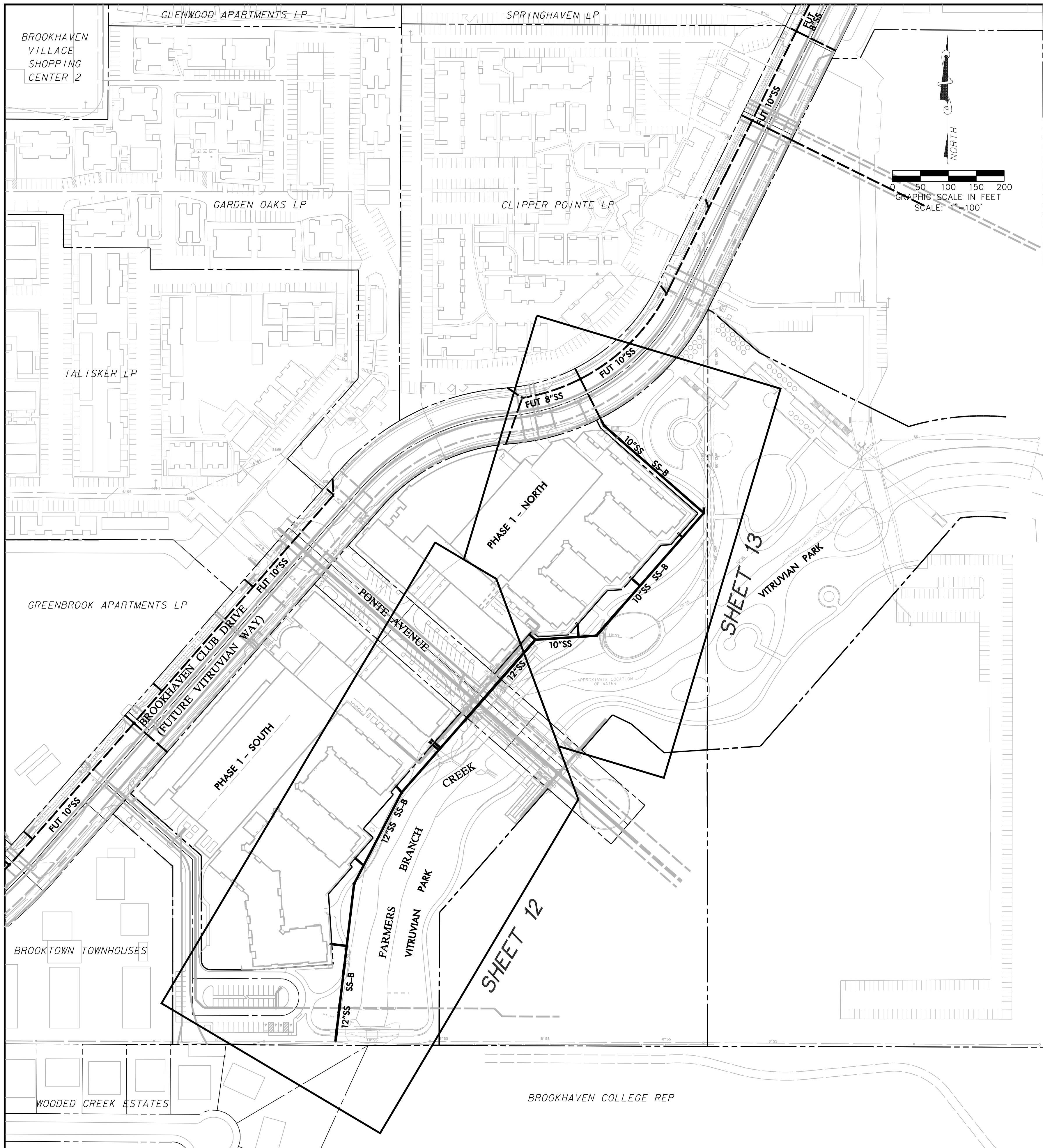
HORIZONTAL THRUST BLOCK



ELEVATION "B-B"

SECTION "A-A"

I.D. (IN.)	11.25°		22.50°		30°		45°		67.50°		90°		I.D. (IN.)
	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	
4,6,8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4,6,8
10,12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10,12
16,18	5.0	2.5	9.7	4.9	12.7	6.4	18.0	9.0	23.5	11.8	25.5	12.7	16,18
20	6.1	3.1	12.0	6.0	15.7	7.9	22.2	11.1	29.2	14.5	31.4	15.7	20
24	8.2	4.4	17.3	8.7	22.6	11.3	32.0	16.0	41.8	20.9	45.2	22.6	24
30	10.5	5.2	20.3	10.1	26.5	13.3	37.5	18.8	49.0	24.5	53.1	26.5	30
36	14.9	7.5	29.2	14.6	38.2	19.1	54.0	27.0	70.5	35.3	76.4	38.2	36
42	20.3	10.1	39.8	19.9	52.0	26.0	73.5	36.7	96.0	48.0	104.0	52.0	42
48	26.5	13.2	51.9	26.0	67.9	33.9	96.0	48.0	126.0	62.7	136.0	67.9	48
54	33.5	16.8	65.7	32.9	85.9	42.9	122.0	60.7	159.0	79.4	172.0	85.9	54
60	41.4	20.7	81.2	40.6	106.0	53.0	150.0	75.0	196.0	98.0	212.0	106.0	60
66	50.1	25.0	98.2	49.1	128.0	64.2	182.0	90.7	237.0	119.0	257.0	128.0	66
72	59.6	29.8	117.0	58.4	153.0	76.3	216.0	108.0	282.0	141.0	305.0	153.0	72
78	69.9	35.											



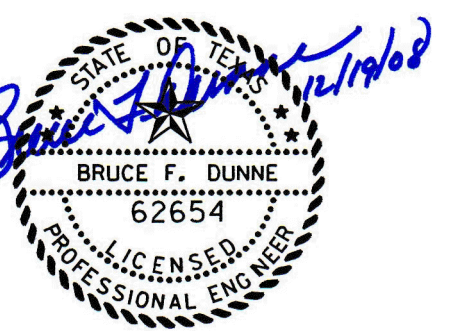
GENERAL WATER & SEWER NOTES:

- REFER TO SHEET C1.1 "GENERAL CONSTRUCTION NOTES, LEGEND AND ABBREVIATIONS" FOR THE GENERAL CONSTRUCTION NOTES FOR THIS PROJECT.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION AS PUBLISHED BY NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, AND ANY AND ALL AMENDMENTS BY THE TOWN OF ADDISON, AS WELL AS STANDARD CONSTRUCTION DETAILS OF THE TOWN OF ADDISON.
- PRIOR TO COMMENCING CONSTRUCTION, THE TOWN OF ADDISON, THE CONSULTING ENGINEERS, THE SUCCESSFUL CONTRACTOR, UTILITY COMPANIES, AND ANY OTHER AFFECTED PARTIES, SHALL CONVEENE FOR A PRE-CONSTRUCTION CONFERENCE AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT FROM THE TOWN OF ADDISON PRIOR TO WORKING WITH THE PUBLIC RIGHT-OF-WAY.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ANY PUBLIC UTILITY COMPANIES FOR LOCATION OF EXISTING FACILITIES IN OR NEAR THE WORK AREAS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
 - TOWN OF ADDISON (WATER, SEWER, SIGNALS) / ONCOR ELECTRIC DELIVERY / AT&T (SOUTHWESTERN BELL)
 - ATMOS ENERGY (GAS) / VERIZON / MCI / TIME-WARNER CABLE
- THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE ENGINEER (SIX SETS EACH), FOR APPROVAL OF ALL MATERIALS TO BE ADDED TO THE PUBLIC INFRASTRUCTURE, PRIOR TO INCORPORATING MATERIALS INTO THE JOB.
- THE CONTRACTOR SHALL PROVIDE AND SUBMIT TO THE TOWN OF ADDISON (SIX SETS EACH), AN APPROVED TRENCH SAFETY PLAN, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS, FOR THE INSTALLATION OF UTILITIES GREATER THAN FIVE (5) FEET IN DEPTH.
- THE CONTRACTOR SHALL PROVIDE A MAINTENANCE BOND FOR PUBLIC INFRASTRUCTURE WORK IN THE FOLLOWING AMOUNTS:
 - 100% FOR VALUATIONS LESS THAN OR EQUAL TO \$5,000.
 - \$5,000 FOR VALUATION GREATER THAN \$5,000, AND LESS THAN \$50,000.
 - 10% FOR VALUATIONS GREATER THAN \$50,000.
- BONDS SHALL BE FOR A PERIOD OF TWO YEARS BEGINNING WITH THE DATE OF FINAL ACCEPTANCE BY THE TOWN.
- THE CONTRACTOR SHALL FULLY COMPLY WITH, AND SUPPLEMENT AS NECESSARY, THE CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN WHILE CONDUCTING HIS ACTIVITIES ON THIS PROJECT.
- THE TOWN OF ADDISON PUBLIC WORKS DEPARTMENT WILL APPROVE AND/OR DETERMINE THE TRAFFIC CONTROL PLAN AND WORKING HOURS. CONTACT THE ASSISTANT CITY ENGINEER OR THE PUBLIC WORKS INSPECTOR AT (972) 450-2871.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT AND SUPPLEMENT AS NECESSARY, THE TRAFFIC CONTROL MEASURES ON THIS PROJECT, INCLUDING PROVIDING ADEQUATE FLAGMEN, SIGNAGE, STRIPING AND WARNING DEVICES, ETC. DURING CONSTRUCTION IN ACCORDANCE WITH THE "TEXAS MANUAL OF UNIFORM CONTROL DEVICES". THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORKING HOURS OR PROVIDE AN ALL-WEATHER DETOUR AROUND THE CONSTRUCTION SITE, INCLUDING PUBLIC NOTIFICATION AND SIGNING.
- TEMPORARY OR PERMANENT BARRICADES SHALL REMAIN AT ALL POINTS OF INGRESS OR EGRESS TO PREVENT PUBLIC USE UNTIL THE WORK RECEIVES FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL COVER ALL OPEN EXCAVATIONS WITH ANCHORED STEEL PLATING, DURING NON-WORKING HOURS, ALONG EXISTING ROADWAYS AND TRAFFIC PLAZAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE AT ALL TIMES DURING CONSTRUCTION, INCLUDING PROVIDING ALL TEMPORARY STRUCTURES OR IMPROVEMENTS AS NECESSARY FOR THE SAFETY OF THE PUBLIC.
- THE TOWN OF ADDISON WILL PROVIDE A GEOTECHNICAL LABORATORY TO PERFORM APPROPRIATE TESTING DURING CONSTRUCTION ACTIVITIES. ANY TEST THAT FAILS TO MEET CITY REQUIREMENTS SHALL BE RETESTED AT THE CONTRACTOR'S EXPENSE.
- ROUGH GRADING SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF WATER AND SANITARY SEWER FACILITIES.
- THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, FENCES, TREES, SHRUBS, GAS MAINS, TELEPHONE CABLES, ELECTRIC CABLES, DRAINAGE PIPES, UTILITY SERVICES, AND ALL OTHER UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW THE GROUND, THE COST OF WHICH SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ASSURE PROPER DEPTHS ARE ACHIEVED. IN THE EVENT OF A CONFLICT BETWEEN WATER LINES AND STORM DRAIN OR SANITARY SEWER PIPING, THE CONTRACTOR SHALL ADJUST THE WATER LINE DOWNWARDS IN SUCH A MANNER SO THAT THE PIPE MANUFACTURER'S RECOMMENDATIONS ON THE PIPE DEFLECTION AND JOINT STRESS ARE NOT EXCEEDED.
- THE CONTRACTOR SHALL VERIFY THE SIZE, TYPE, ELEVATION, CONFIGURATION, AND ANGIULATION OF EXISTING WATER, SANITARY SEWER AND UTILITY LINES PRIOR TO CONSTRUCTION OF TIE-IN MATERIALS. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR REPAIRS TO EXISTING FACILITIES DAMAGED BY HIS ACTIVITIES.
- ALL WATER MAIN MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF ADDISON'S WATER SYSTEM REQUIREMENTS.
- ALL WATER MAINS TWELVE-INCH (12") DIAMETER AND SMALLER SHALL BE ANSI/AWWA C-909-98 MOLECULARLY ORIENTED PVC PRESSURE PIPE WITH CAST IRON O.D. OR WHEN PIPE PENETRATES METER VAULT WALLS IT SHALL BE DUCTILE IRON. PIPE JOINTS SHALL BE RUBBER RING AND INTEGRAL THICKENED BELL, ASSEMBLED WITH A FACTORY SUPPLIED LUBRICANT. WATER MAINS SHALL HAVE A MINIMUM CLASS RATING OF 150-PSI FOR DOMESTIC USE AND A MINIMUM CLASS RATING OF 200-PSI FOR FIRE LINE APPLICATIONS. JOINT MATERIAL FOR PVC SHALL CONFORM TO ASTM F471.
- EMBEDMENT FOR WATER AND SEWER MAINS SHALL COMPLY WITH NCTCOG CLASS "B+" EMBEDMENT OF CRUSHED STONE TO THE SPRING LINE OF THE PIPE, WITH SAND (12" MIN.) OVER THE PIPE. A LAYER OF GEO-TEXTILE FABRIC SHALL BE PLACED ON TOP OF THE STONE PRIOR TO THE PLACEMENT OF THE SAND.
- THE MINIMUM COVER TO THE TOP OF THE PIPE MUST VARY WITH THE VALVE STEM. IN GENERAL, THE MINIMUM COVER BELOW THE TOP OF CURB AT STREET TO TOP OF THE PIPE SHOULD BE AS FOLLOWS:
 - LINES LARGER THAN SIXTEEN-INCH (16") SHALL HAVE A MINIMUM OF SIX FEET (6') OF COVER WHICH IS SUFFICIENT TO ALLOW WATER AND SEWER AND OTHER UTILITIES TO GO OVER THE LARGE MAIN.
 - SIXTEEN-INCH (16") MAINS SHALL HAVE A MINIMUM COVER OF FIVE FEET (5').
 - TWELVE-INCH (12") AND SMALLER MAINS SHALL HAVE A MINIMUM COVER OF FOUR FEET (4').

- THE CONTRACTOR SHALL SUPPLY AND INSTALL ANY ADDITIONAL BENDS WITH THRUST BLOCKING AND OTHER PRETENSURES REQUIRED TO ASSURE PROPER INSTALLATION OF WATER MAINS AND LATERALS. THE CONTRACTOR MAY PULL PIPE AS NEEDED AT THE BENDS WHERE THE DEFLECTION ANGLE OF THE PIPE DOES NOT MATCH THE ANGLE OF THE BEND PROVIDED THE PIPE DEFLECTION IS WITHIN TOLERABLE MANUFACTURERS LIMITS. THE COST FOR ADDITIONAL BENDS AND BLOCKING SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- ALL VALVES, DUCTILE IRON AND CAST IRON PIPE, FITTINGS AND SPECIALS SHALL BE POLYETHYLENE WRAPPED.
- HORIZONTAL BLOCKING FOR WATER LINES HAS BEEN OMITTED FOR CLARITY. HOWEVER, BLOCKING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD DETAILS.
- ALL FITTINGS SHALL BE DUCTILE IRON, FULL BODIED, MECHANICAL JOINT TYPE WITH RESTRAINING GLANDS AND HAVE A MINIMUM RATED WORKING PRESSURE OF 250 PSI. FITTINGS SHALL BE WRAPPED WITH 8-MIL POLY PRIOR TO BACKFILL.
- ALL VALVES AND FITTINGS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED. THRUST BLOCKING SHALL BE MINIMUM 3000 PSI CONCRETE AND BE ABLE TO WITHSTAND A MINIMUM 200 PSI TEST PRESSURE.
- THRUST BLOCKING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD DETAILS. DO NOT COVER BELLS OR FLANGES WITH CONCRETE. THE CONTRACTOR SHALL REMOVE EXISTING THRUST BLOCKING OR RESTRAINTS WHERE NECESSARY TO ALLOW THE WORK TO PROCEED, AND SHALL REPLACE THE THRUST BLOCKS WHERE REQUIRED. THE COST TO REMOVE, REPLACE OR PROVIDE THRUST BLOCKING SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- TRACER WIRE SHALL BE PLACED ON PIPE PRIOR TO EMBEDMENT. WIRE SHALL BE #12 PLASTIC COATED COPPER WIRE, TIED TO ALL VALVES AND FIRE HYDRANTS, AND EXTENDING TO SIX (6) INCHES ABOVE FINISHED GRADE ALONG THE OUTSIDE OF ALL VALVE STACKS AND HYDRANTS.
- FINISH BACKFILL SHALL BE NATIVE SOIL FREE OF ALL ROCKS AND CLODS GREATER THAN THREE INCHES IN DIAMETER, COMPACTED TO 95% STANDARD PROCTOR DENSITY, IN SIX (6) INCH MAXIMUM LOOSE LIFTS, WITH ZERO TO PLUS THREE, OPTIMUM MOISTURE.
- NO PERSON SHALL OPEN, TURN OFF, INTERFERE WITH, ATTACH ANY HOSE TO, OR TAP ANY WATER MAIN BELONGING TO THE TOWN OF ADDISON UNLESS DULY AUTHORIZED TO DO SO BY THE TOWN OF ADDISON PUBLIC WORKS DEPARTMENT (972-450-2871).
- THE CONTRACTOR WILL REMOVE EXISTING WATER METERS NOT USED FOR PROPOSED DEVELOPMENT. REMOVE METERS AND METER LIDS IN A WAY AS TO NOT DAMAGE THE METER OR LID AND DELIVER SALVAGED METERS TO THE TOWN OF ADDISON. CONTRACTOR SHALL KILL EXISTING DEADHEAD SERVICE FOR REMOVED METERS AT THE MAIN LINE.
- THE CONTRACTOR SHALL REPLACE EXISTING SERVICE LINES, DESIGNATED TO REMAIN, FROM EXISTING METERS TO NEW WATER MAIN WITH NEW COPPER (TYPE K ONLY) LINES. NEW SIZES TO BE THE SAME AS EXISTING, WITH A MINIMUM OF 3/4" DIAMETER.
- ALL WASTEWATER MAIN PIPING SHALL MEET THE EXTRA STRENGTH REQUIREMENTS OF ASTM SPECIFICATION D3034 (SDR-35) FOR INSTALLATIONS LESS THAN TEN FEET DEEP. FOR INSTALLATIONS GREATER THAN TEN FEET, SDR 26 PVC SHALL BE USED. PIPE SHALL HAVE THE BELL AND SPIGOT TYPE JOINTS, CONSISTING OF INTEGRAL WALL SECTION WITH FACTORY INSTALLED COMPRESSION RUBBER RING GASKET, SECURELY LOCKED IN BELL GROOVE TO PROVIDE POSITIVE SEAL UNDER ALL INSTALLATION CONDITIONS. PIPE SHALL BE LAID WITH THE BELL END ON THE UPSTREAM SIDE.
- ALL SEWER MANHOLES WITH PRESSURE TYPE FRAME AND COVERS SHALL HAVE THE INTERIOR SURFACE COATED WITH AN EPOXY COATING (RAVEN 405 OR APPROVED EQUAL), MINIMUM 40 MILS THICKNESS, INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- ALL EXISTING AND PROPOSED IMPROVEMENTS (VALVES, MANHOLES, FIRE HYDRANTS, WATER METERS, ETC.) SHALL BE ADJUSTED TO FINAL FINISHED GRADE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL STAMP A 2-INCH "W" AND A 2-INCH "S" IN THE CURB AT THE LOCATION OF THE WATER AND SEWER SERVICE LINES RESPECTIVELY. A 2-INCH "C" SHALL MARK CONDUITS CROSSING PAVEMENT, AND A 2-INCH "V" SHALL MARK WATER VALVES, WITH THE "POINT" OF THE "V" TOWARD THE VALVE.
- WATERLINES SHALL BE TESTED BOTH BACTERIOLOGICALLY AND HYDROSTATICALLY. WATER MAINS SHALL BE HYDROSTATICALLY TESTED AT 150 PSI FOR FOUR (4) HOURS. FIRE LINES SHALL BE HYDROSTATICALLY TESTED AT 200 PSI FOR (2) HOURS. ALL BLEEDER LINES SHALL BE REMOVED UPON COMPLETION OF TESTING BY REMOVING THE CORPORATION STOP AND INSTALLING A BRASS PLUG. HEAVILY CHLORINATED WATER (3.5 MG/L OR GREATER FREE CHLORINE) RESULTING FROM WATER LINE STERILIZATION SHALL BE DIRECTED TO THE SANITARY SEWER AFTER THE MANDATORY CHLORINE RETENTION TIME (USUALLY 24 HOURS) UNLESS OTHERWISE NOTED.
- ALL WASTEWATER MAINS SHALL BE CAMERA INSPECTED BY THE CONTRACTOR AFTER THE INSTALLATION OF ALL UTILITIES AND PRIOR TO FINAL ACCEPTANCE OF NEW WASTEWATER FACILITIES.
- THE CONTRACTOR SHALL PROVIDE VERIFICATION OF COMPLETION AND COMPLIANCE OF ALL REQUIRED TESTS (PRESSURE, BACTERIOLOGICAL, BACKFLOW, VACUUM, MANDREL, VHS VIDEO OF SANITARY SEWER, ETC.) TO THE TOWN OF ADDISON.
- THE CONTRACTOR SHALL CALL (972) 450-2847 TO REQUEST A FINAL WALK-THROUGH INSPECTION OF THE PUBLIC INFRASTRUCTURE WORK.
- ANY ADJACENT PROPERTIES AFFECTED BY THE CONSTRUCTION SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS, OR BETTER.

BM #1 REF. ELEVATION = 559.47
 SQUARE CUT IN TOP OF CURB, SOUTH MEDIAN
 END NOSE, MARSH LANE
 1127' NORTH OF BROOKHAVEN CLUB DRIVE.

BM #2 REF. ELEVATION = 547.84
 SQUARE CUT IN TOP OF CURB, NORTH MEDIAN
 END NOSE, AT INTERSECTION OF
 BROOKHAVEN CLUB DRIVE AND MARSH LANE.



WARNING

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NO.	REVISION	BY	DATE

TOWN OF ADDISON
 DALLAS COUNTY, TEXAS

WATER, SANITARY SEWER & STORM DRAIN
 BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

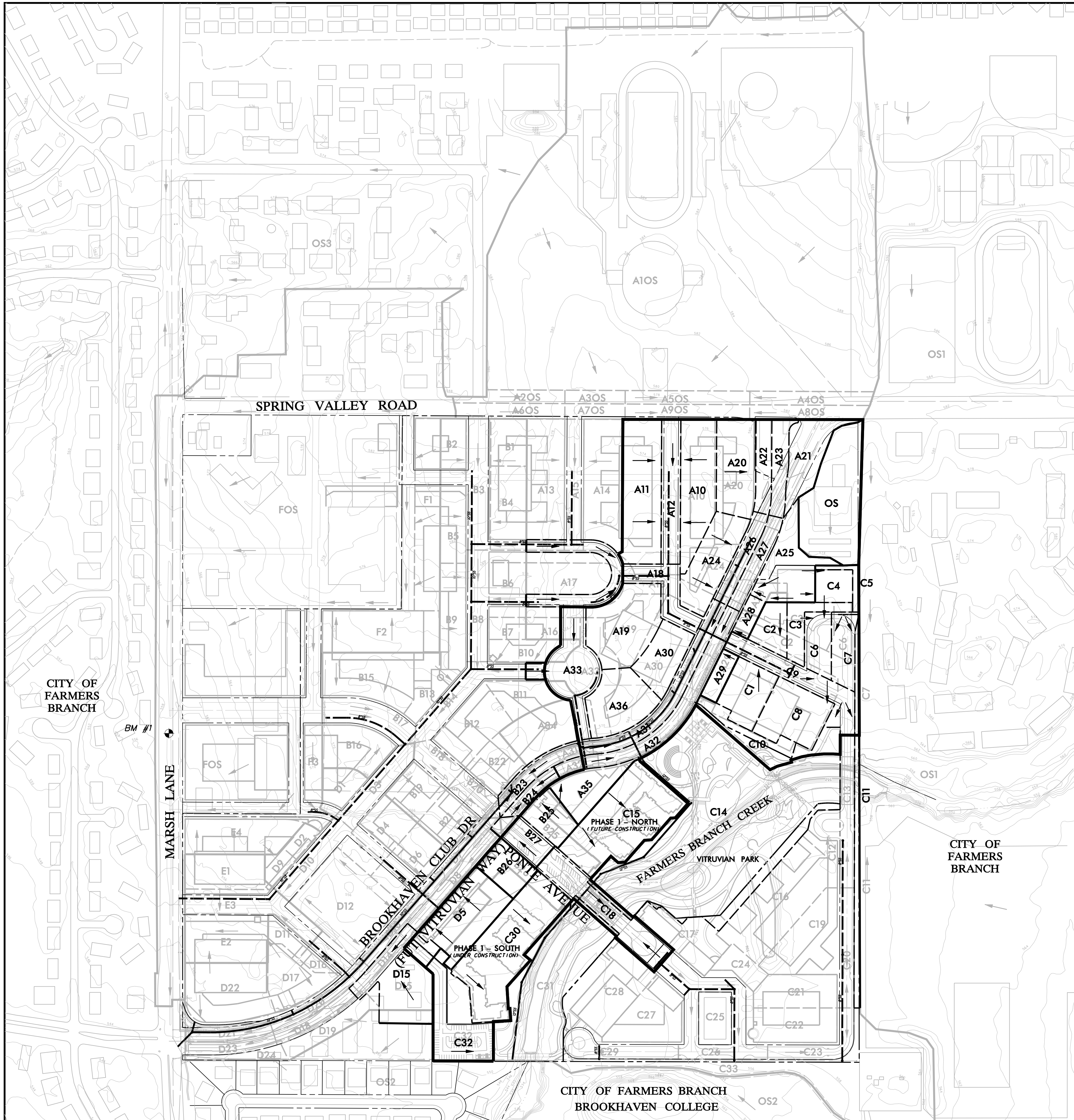
OVERALL SANITARY SEWER LAYOUT

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 Civil Engineers - Designers - Planners
 250 W. Southlake Blvd., Suite 117
 Southlake, Tx 76092 (817) 552-6210

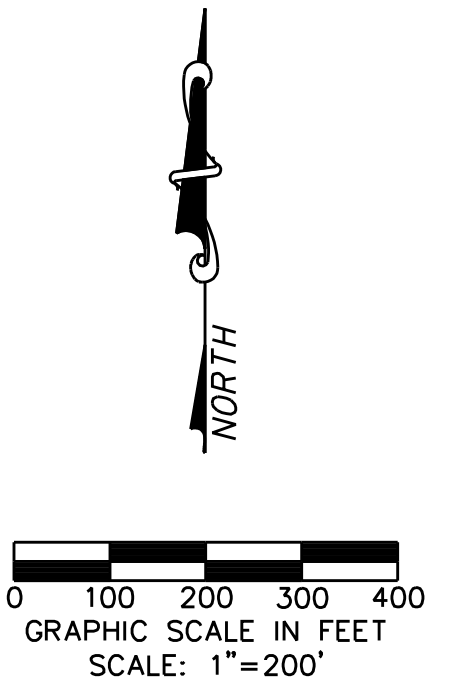
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
5029-01	JAM	SAM	OCT 14, 2008	PW #2008-009	10

RECORD DRAWINGS 12/19/08

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



SANITARY SEWER DRAINAGE AREA CALCULATIONS							
Drainage Area	Area (Acres)	Residential Units	Design Flow (Gal/Day)	Infiltration (Gal/Day)	Total Q (Gal/Day)	Acum Q (MGD)	Notes
A-10	1.40	84	37,800	910	38,710	0.0387	Future SS Line 'B-3'
A-11	1.70	102	45,900	1,105	47,005	0.0857	Future SS Line 'B-3'
A-12	0.80	48	21,600	520	22,120	0.1078	Future SS Line 'B-3'
A-18	1.50	90	40,500	975	41,475	0.1493	Future SS Line 'B-3'
A-19	1.50	90	40,500	975	41,475	0.1068	Future SS Line 'B-3'
A-20	1.10	66	29,700	715	30,415	0.0304	SS Line 'B'
A-21	0.90	54	24,300	585	24,885	0.0553	SS Line 'B'
A-22	0.40	24	10,800	260	11,060	0.0664	SS Line 'B'
A-23	0.50	30	13,500	325	13,825	0.0802	SS Line 'B'
OS	2.60	156	70,200	1,690	71,890	0.1521	SS Line 'B'
A-24	1.10	66	29,700	715	30,415	0.1825	SS Line 'B'
A-25	1.20	72	32,400	780	33,180	0.2157	SS Line 'B'
A-26	0.50	30	13,500	325	13,825	0.2295	SS Line 'B'
A-27	0.50	30	13,500	325	13,825	0.2433	SS Line 'B'
A-28	0.20	12	5,400	130	5,530	0.2489	SS Line 'B'
C-1	0.80	48	21,600	520	22,120	0.0221	Future SS Line 'B-2'
C-2	0.50	30	13,500	325	13,825	0.0359	Future SS Line 'B-2'
C-3	0.50	30	13,500	325	13,825	0.0498	Future SS Line 'B-2'
C-4	0.40	24	10,800	260	11,060	0.0608	Future SS Line 'B-2'
C-5	0.20	12	5,400	130	5,530	0.0664	Future SS Line 'B-2'
C-6	0.50	30	13,500	325	13,825	0.0802	Future SS Line 'B-2'
C-7	0.50	30	13,500	325	13,825	0.0940	Future SS Line 'B-2'
C-8	1.10	66	29,700	715	30,415	0.1244	Future SS Line 'B-2'
C-9	1.00	60	27,000	650	27,650	0.1521	Future SS Line 'B-2'
C-10	0.60	36	16,200	390	16,590	0.1687	Future SS Line 'B-2'
A-29	0.30	18	8,100	195	8,295	0.6166	SS Line 'B'
A-30	0.80	48	21,600	520	22,120	0.6387	SS Line 'B'
A-31	1.20	72	32,400	780	33,180	0.6719	SS Line 'B'
A-32	1.30	78	35,100	845	35,945	0.7078	SS Line 'B'
A-33	1.40	84	37,800	910	38,710	0.0387	SS Line 'B-1'
A-34	0.50	30	13,500	325	13,825	0.0525	SS Line 'B-1'
A-35	0.60	36	16,200	390	16,590	0.0691	SS Line 'B-1'
A-36	1.10	66	29,700	715	30,415	0.0995	SS Line 'B-1'
C-15	2.10	126	56,700	1,365	58,065	0.8654	SS Line 'B'
B-25	0.50	30	13,500	325	13,825	0.8793	SS Line 'B'
B-26	0.50	30	13,500	325	13,825	0.8931	SS Line 'B'
B-27	0.50	30	13,500	325	13,825	0.9069	SS Line 'B'
C-18	1.20	72	32,400	780	33,180	0.9401	SS Line 'B'
C-20	2.30	138	62,100	1,495	63,595	1.0037	SS Line 'B'
C-32	1.40	84	37,800	910	38,710	1.0424	SS Line 'B'
Total	37.70	2262	1,017,900	24,505	1,042,405	1.0424	To Existing 10" SS Line



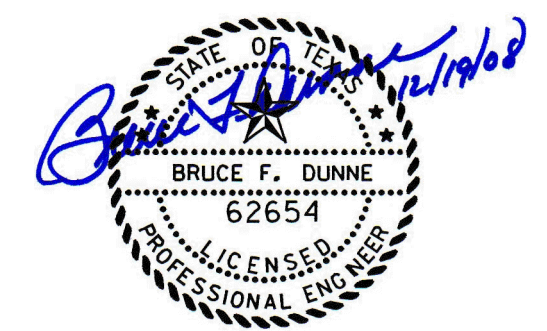
SANITARY SEWER DRAINAGE AREA

WARNING

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BM #1 REF. ELEVATION = 559.47
 SQUARE CUT IN TOP OF CURB, SOUTH MEDIAN END NOSE, MARSH LANE
 1127' NORTH OF BROOKHAVEN CLUB DRIVE.

BM #2 REF. ELEVATION = 547.84
 SQUARE CUT IN TOP OF CURB, NORTH MEDIAN END NOSE, AT INTERSECTION OF
 BROOKHAVEN CLUB DRIVE AND MARSH LANE.



NO.	REVISION	BY	DATE

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 DALLAS COUNTY, TEXAS

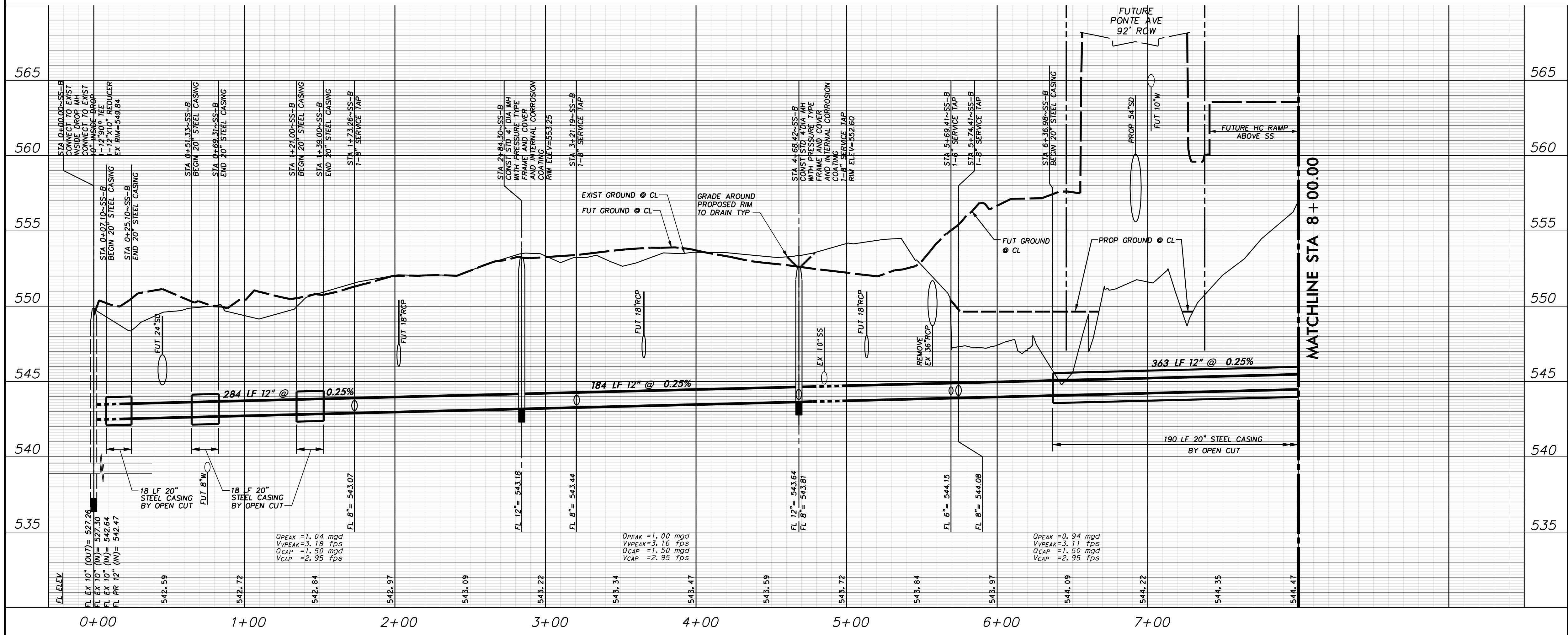
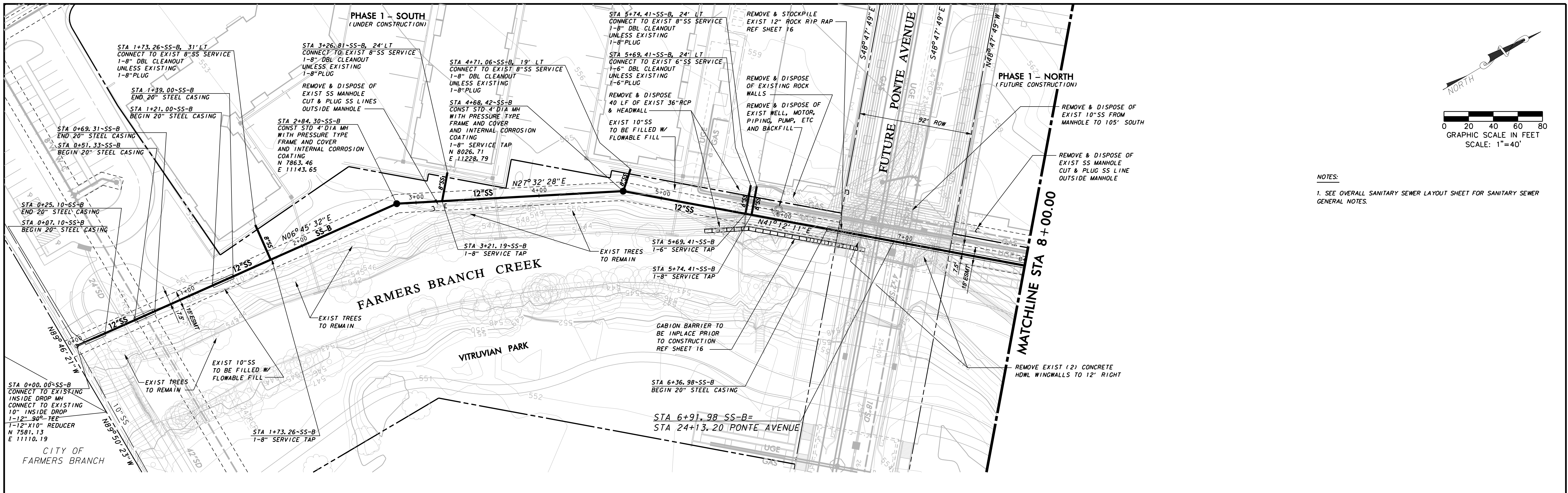
WATER, SANITARY SEWER & STORM DRAIN
 BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

SANITARY SEWER DRAINAGE AREA MAP

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PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
5029-01	JAM	SAM	OCT 14, 2008	PW #2008-009	11

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



WARNING

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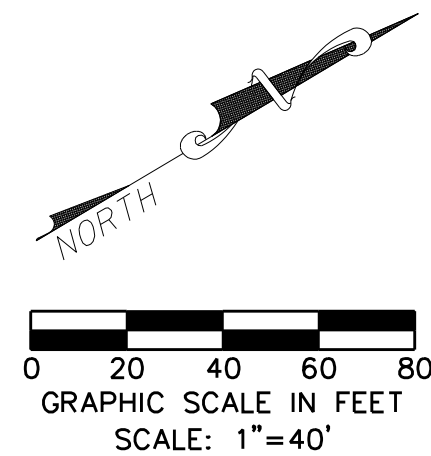
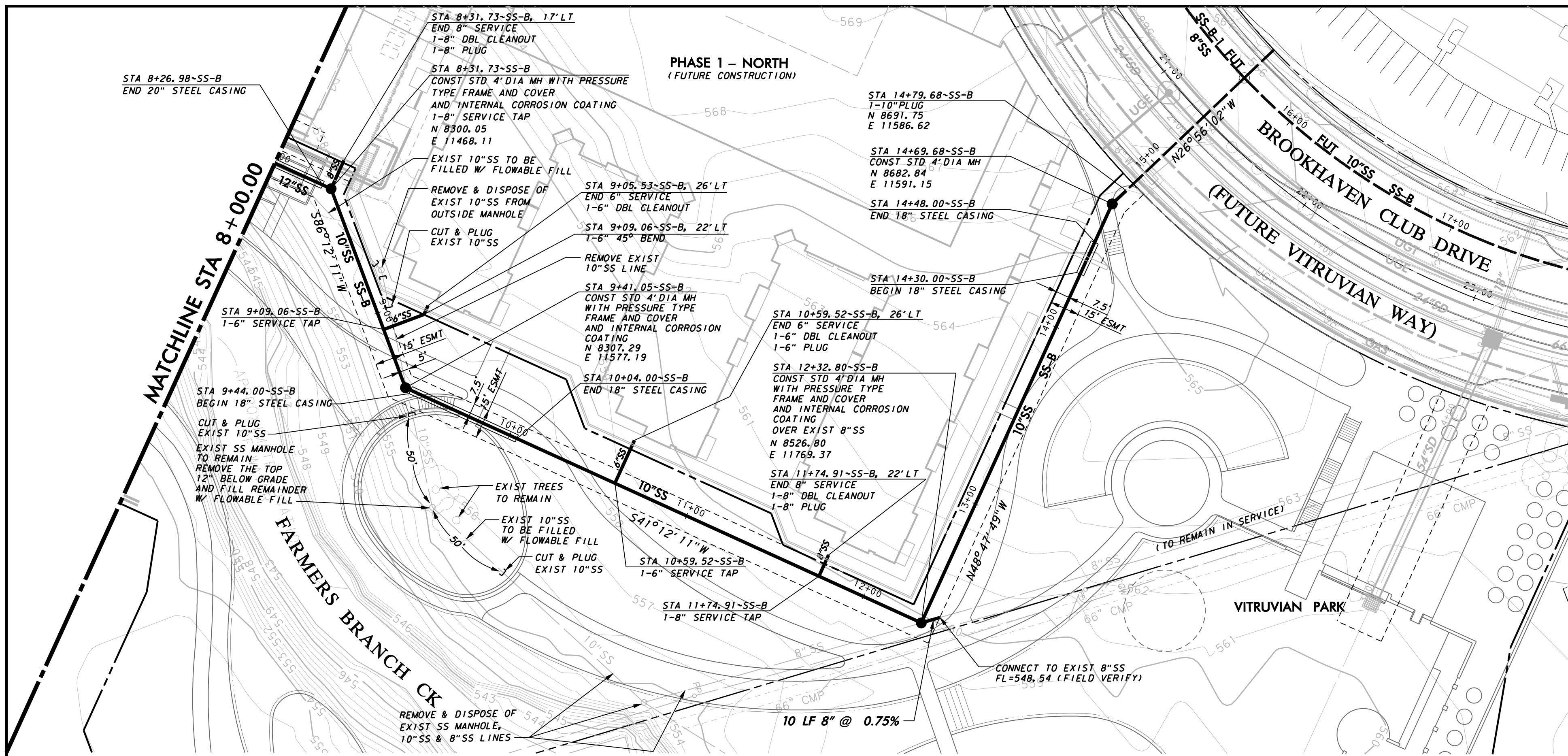
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SQUARE CUT IN TOP OF CURB, NORTH MEDIAN END NOSE, AT INTERSECTION OF BROOKHAVEN CLUB DRIVE AND MARSH LANE.

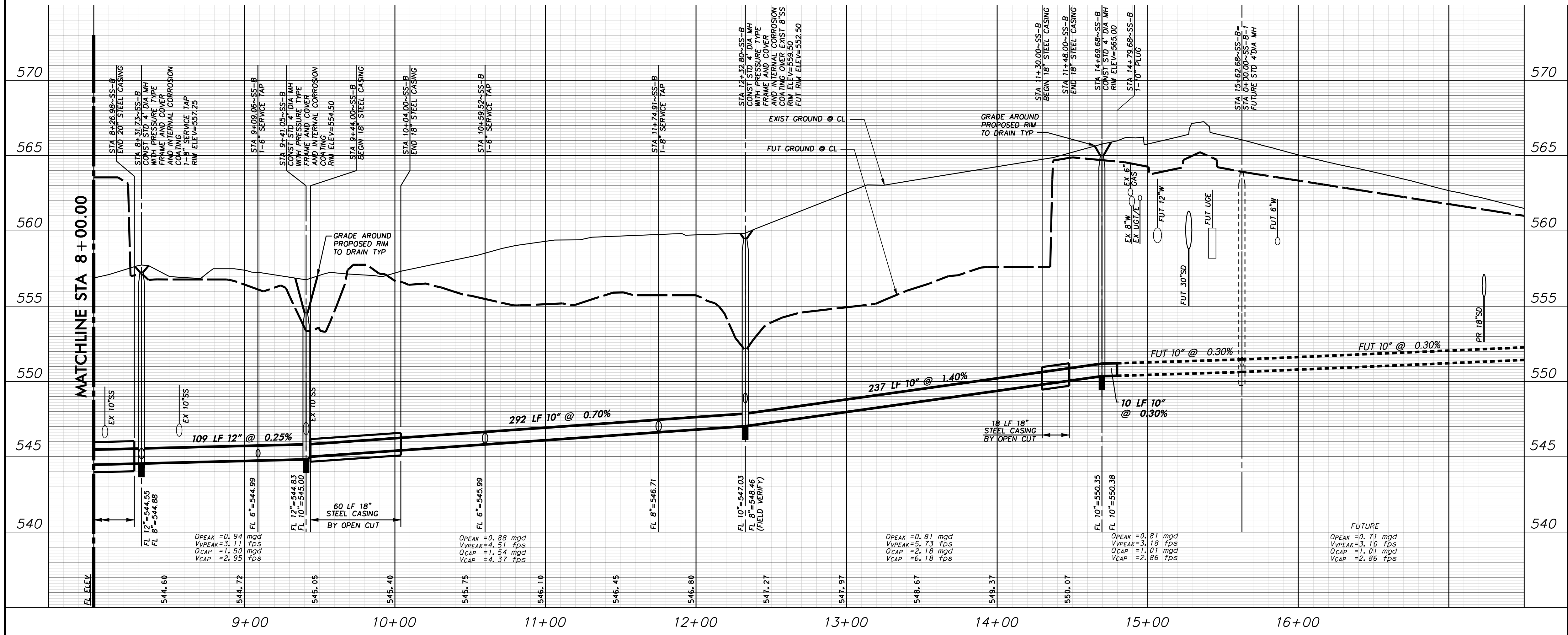
PROFILE SCALE:
0 20 40 60 80
SCALE: 1" = 40' HORIZ
0 2 4 6 8
SCALE: 1" = 4' VERT

1		ADDED STEEL CASING	11/12/08
NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS			
WATER, SANITARY SEWER & STORM DRAIN BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK			
SANITARY SEWER PLAN & PROFILE~SS-B STA. 0+00.00 TO STA. 8+00.00			
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PROJECT	DESIGN	DRAWN	DATE
5029-01	JAM	SAM	OCT 14, 2008
FILE	DATE	FILE	SHEET
PW #2008-009			12

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



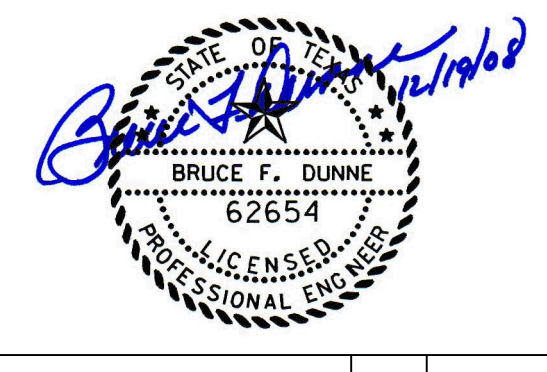
NOTES:
 1. SEE OVERALL SANITARY SEWER LAYOUT SHEET FOR SANITARY SEWER GENERAL NOTES.



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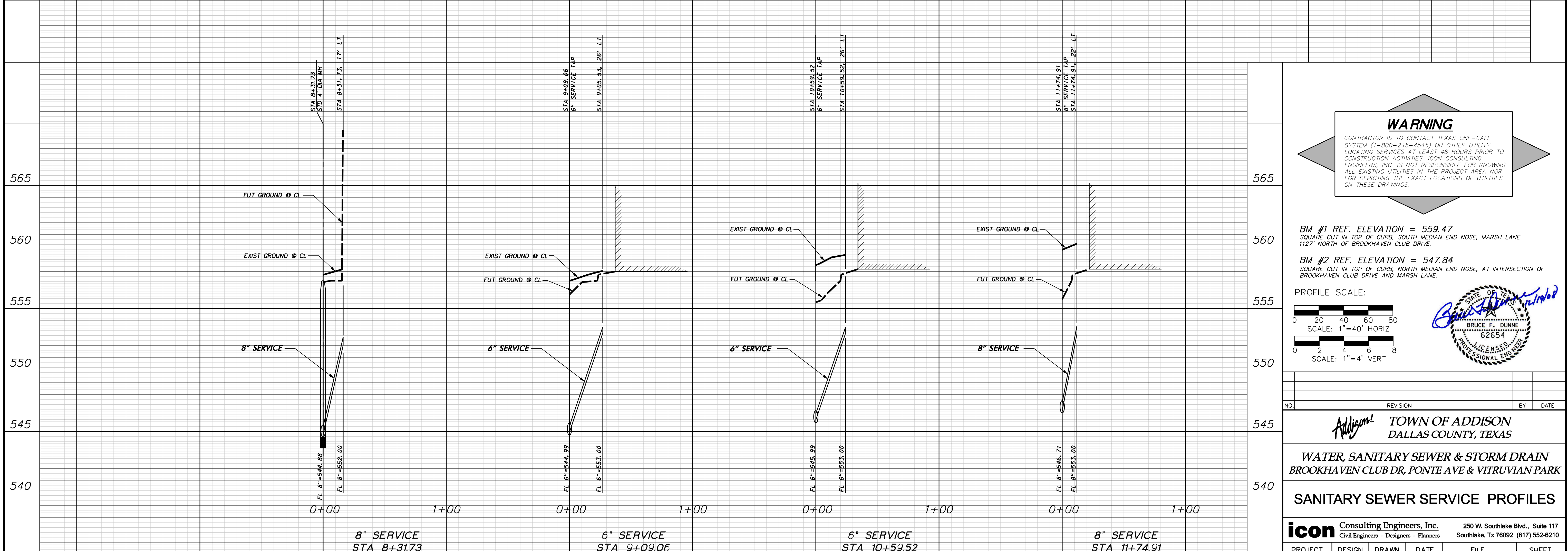
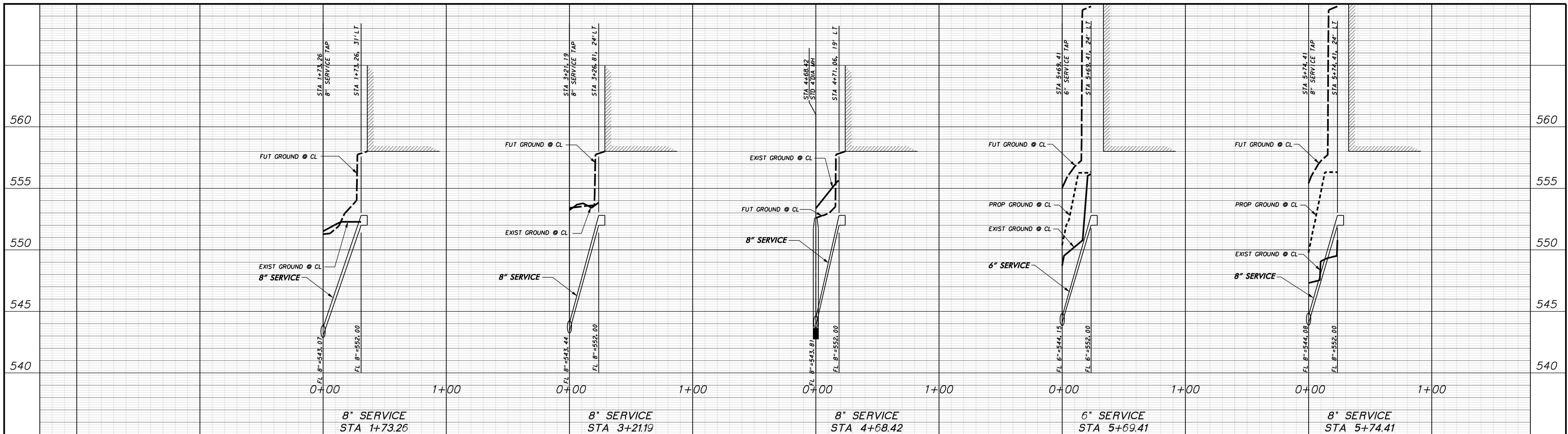
WATER, SANITARY SEWER & STORM DRAIN
 BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

SANITARY SEWER PLAN & PROFILE~SS-B
 STA. 8+00.00 TO STA. 14+61.32

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PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
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WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK

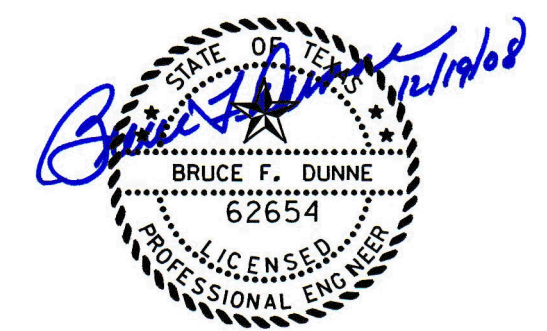
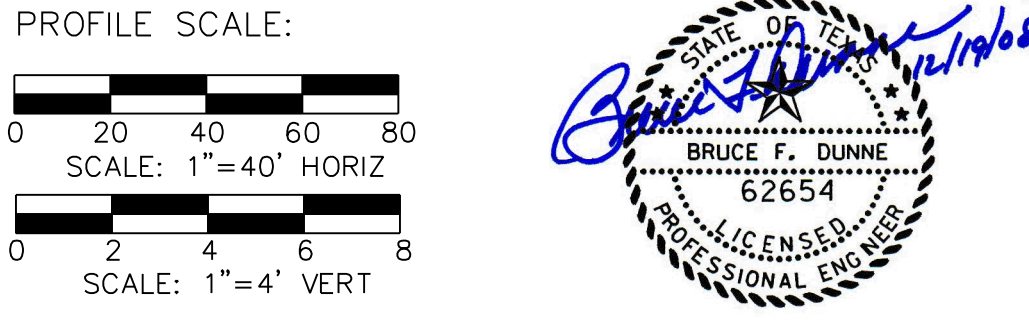


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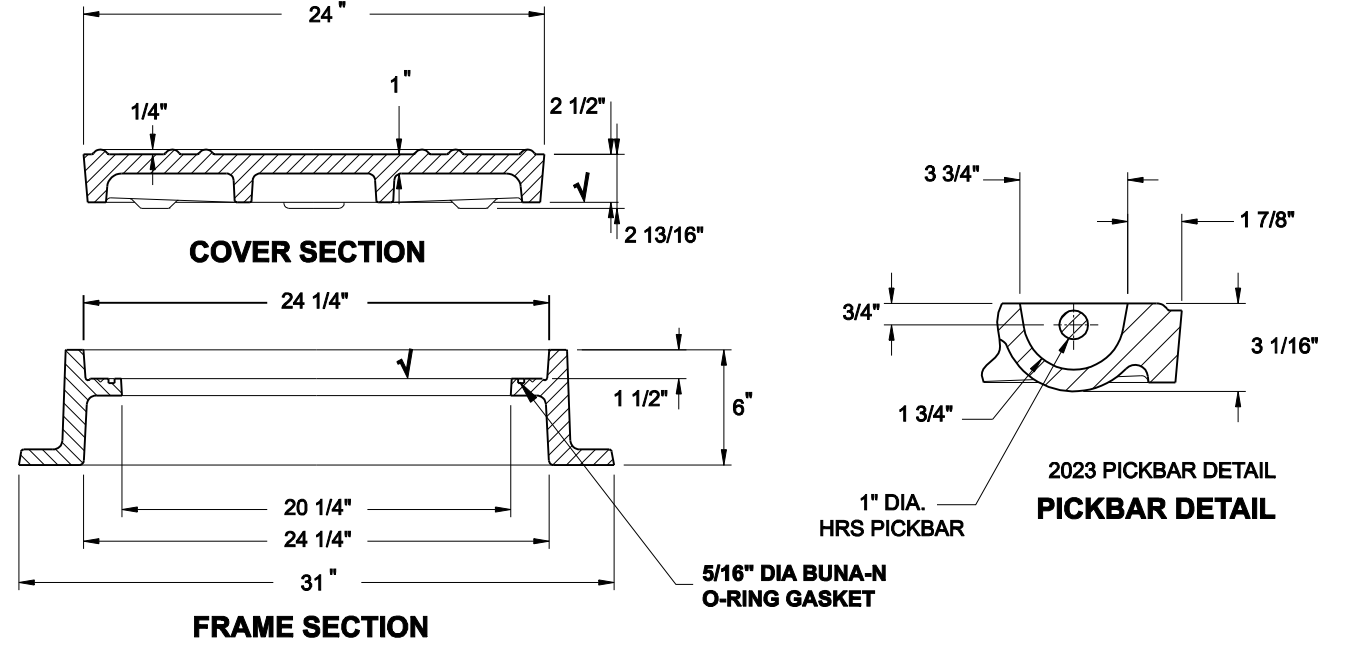
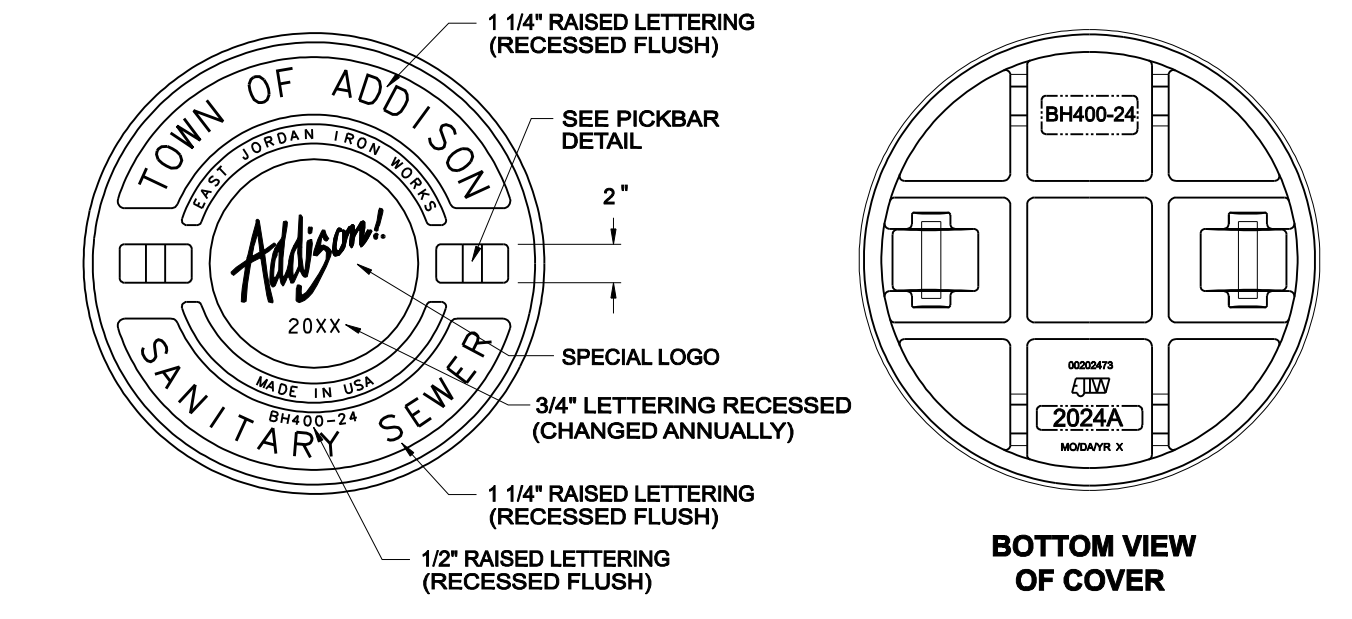
TOWN OF ADDISON
 DALLAS COUNTY, TEXAS

WATER, SANITARY SEWER & STORM DRAIN
 BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

SANITARY SEWER SERVICE PROFILES

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PW #2008-009	14		

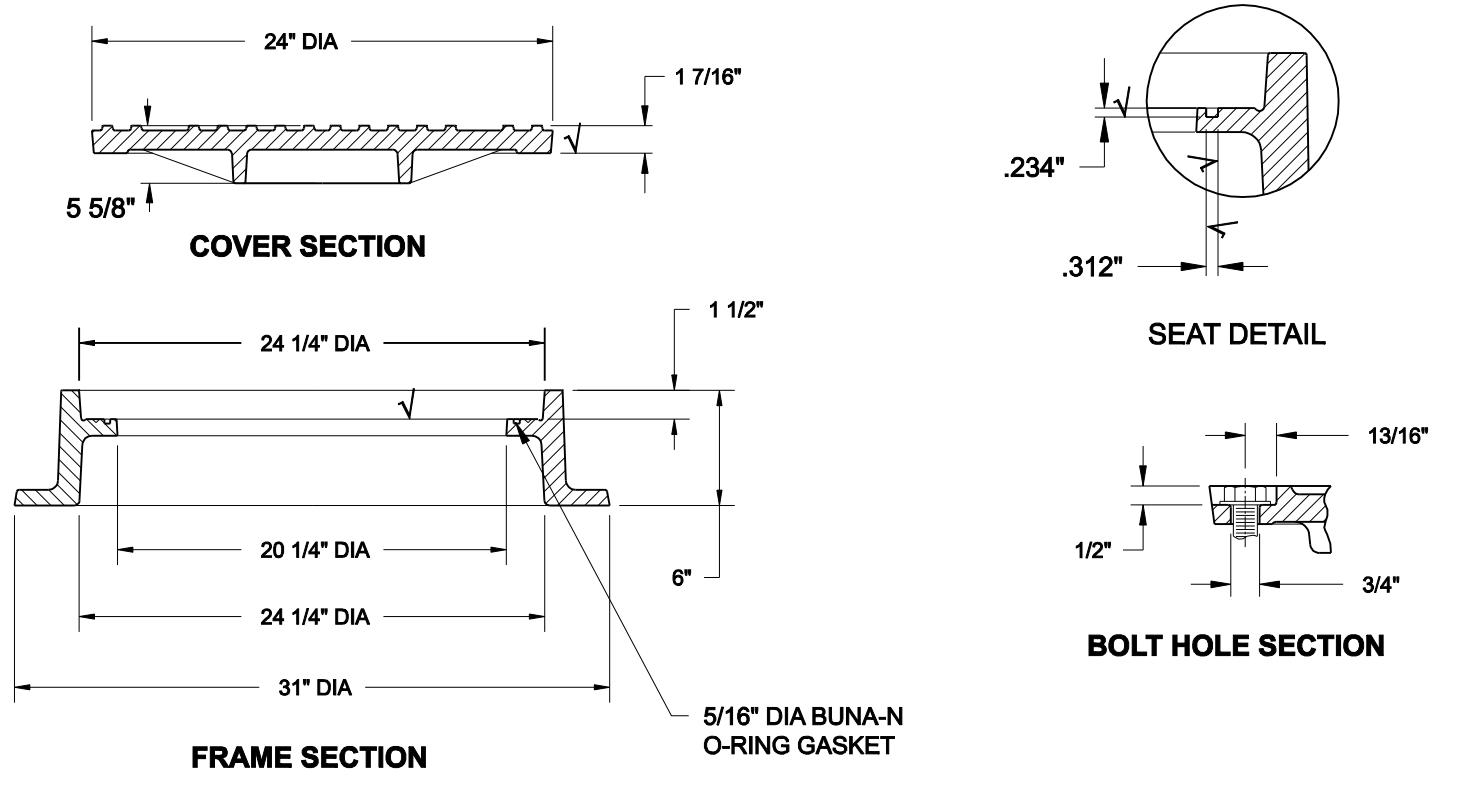
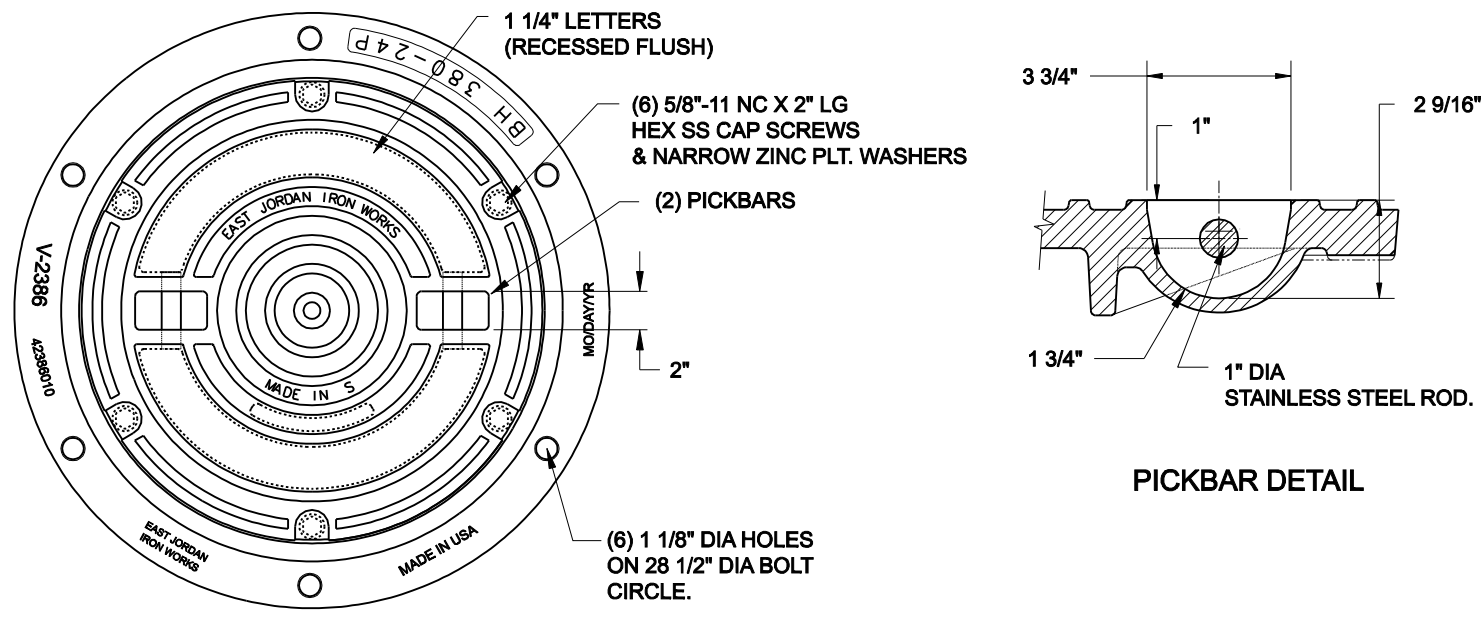
WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



LOAD RATING	COATING	ESTIMATED WEIGHT	MATERIAL SPECIFICATION
HEAVY DUTY	DIPPED	COVER: 190 LBS 86 kg	COVER - GRAY IRON ASTM A48 CL35B

√ DESIGNATES MACHINE SURFACE

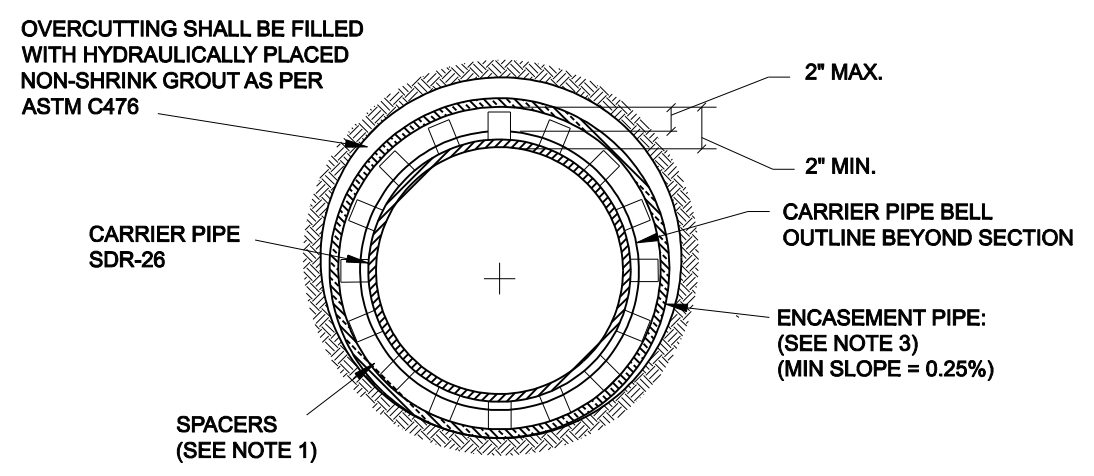
CAST IRON FRAME AND COVER



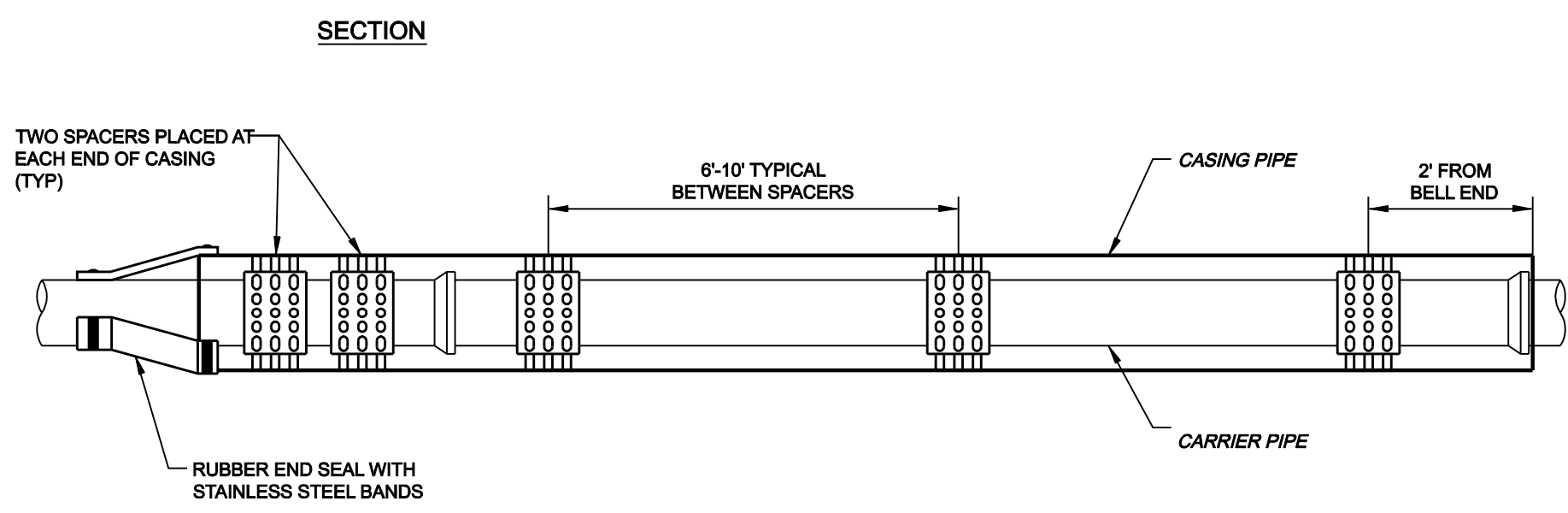
LOAD RATING	COATING	ESTIMATED WEIGHT	MATERIAL SPECIFICATION
HEAVY DUTY	UNDIPPED	COVER: 160 LBS 73kg FRAME: 210 LBS 95kg ASSY : 370 LBS 168kg	COVER - GRAY IRON ASTM A48 CL35B FRAME - GRAY IRON ASTM A48 CL35B

√ DESIGNATES MACHINE SURFACE

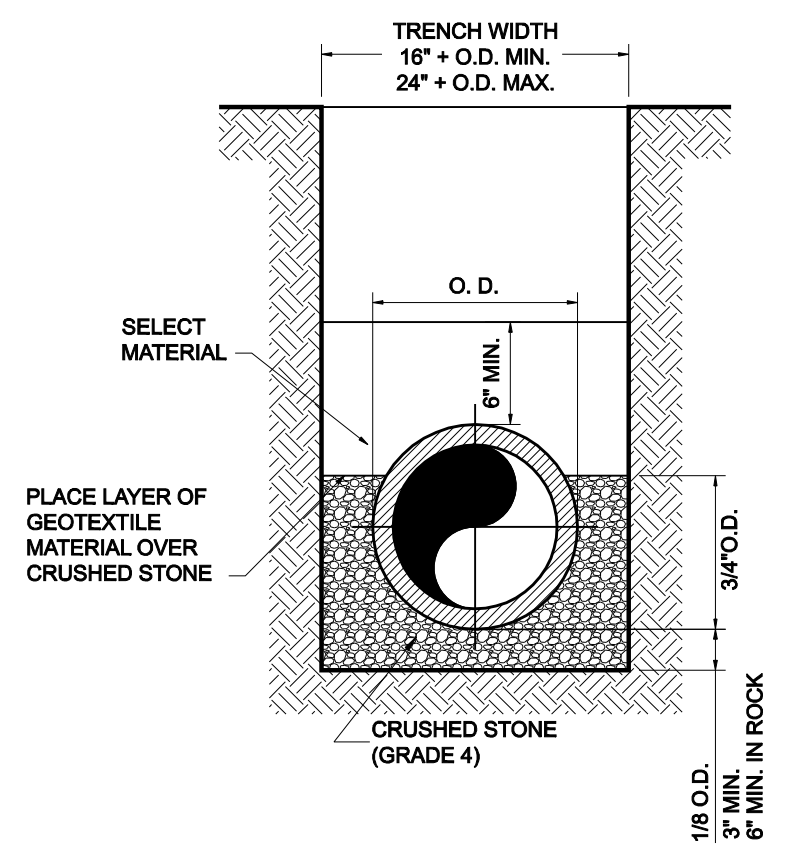
PRESSURE TYPE FRAME AND COVER



- NOTES:
- (1) HIGH DENSITY POLYETHYLENE SPACERS, RACI OR EQUAL, SHALL BE USED. WHERE NO CASING PIPE IS REQUIRED OVERCUTTING AROUND UTILITY SHALL BE FILLED WITH HYDRAULICALLY PLACED NON-SHRINK GROUT AS PER ASTM C476.
 - (2) END GROUTING FOR ALL ENCASEMENTS SHALL BE AS PER ASTM STANDARD C476 (1:7 GROUT WITH 5% TO 40% AIR ENTRAINMENT). GROUT SHALL BE PLACED BY HYDRAULIC PUMP FROM THE LOWER END OF THE ENCASEMENT PIPE, THEREBY INSURING COMPLETE FILLING OF ENCASEMENT PIPE.
 - (3) ENCASEMENT PIPE SHALL BE EITHER DUCTILE IRON PIPE OR HIGH DENSITY STEEL PIPE. ALL JOINTS TO BE WELDED 100%.



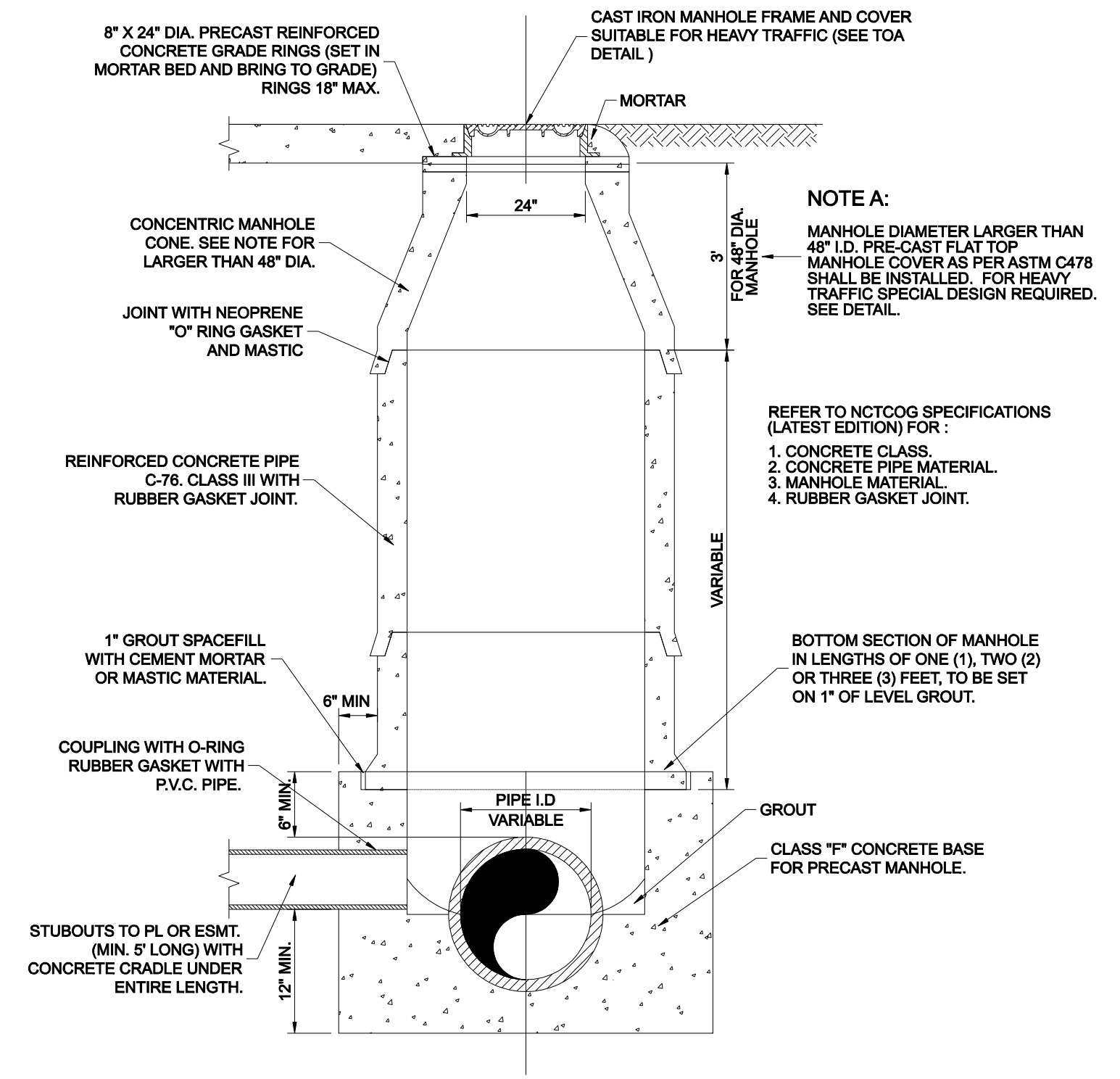
SANITARY SEWER MAIN ENCASEMENT



CRUSHED STONE SHALL BE 3/4\", PASSING # 4 SIEVE

CLASS "B+" EMBEDMENT

TYPICAL BACKFILL WATER MAIN
P.V.C. WATER PIPE



- NOTE A:
- MANHOLE DIAMETER LARGER THAN 48\"/>
- REFER TO NCTCOG SPECIFICATIONS (LATEST EDITION) FOR:
1. CONCRETE CLASS.
 2. CONCRETE PIPE MATERIAL.
 3. MANHOLE MATERIAL.
 4. RUBBER GASKET JOINT.

NOTE:
IF FALSE MANHOLE BOTTOMS ARE REQUIRED, THEY SHALL BE CONSTRUCTED, INSTALLED AND REMOVED.

ALL MANHOLES SHALL PASS VACUUM TEST AS PER NCTCOG SPECIFICATIONS



NO.	REVISION	BY	DATE

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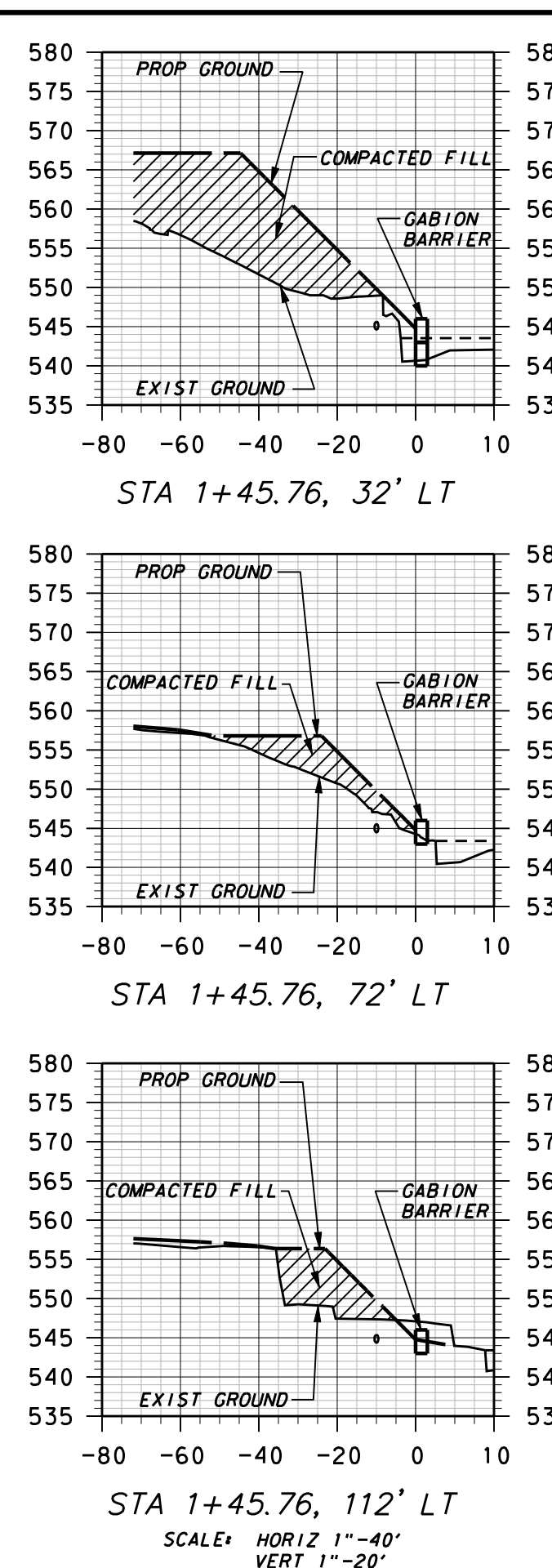
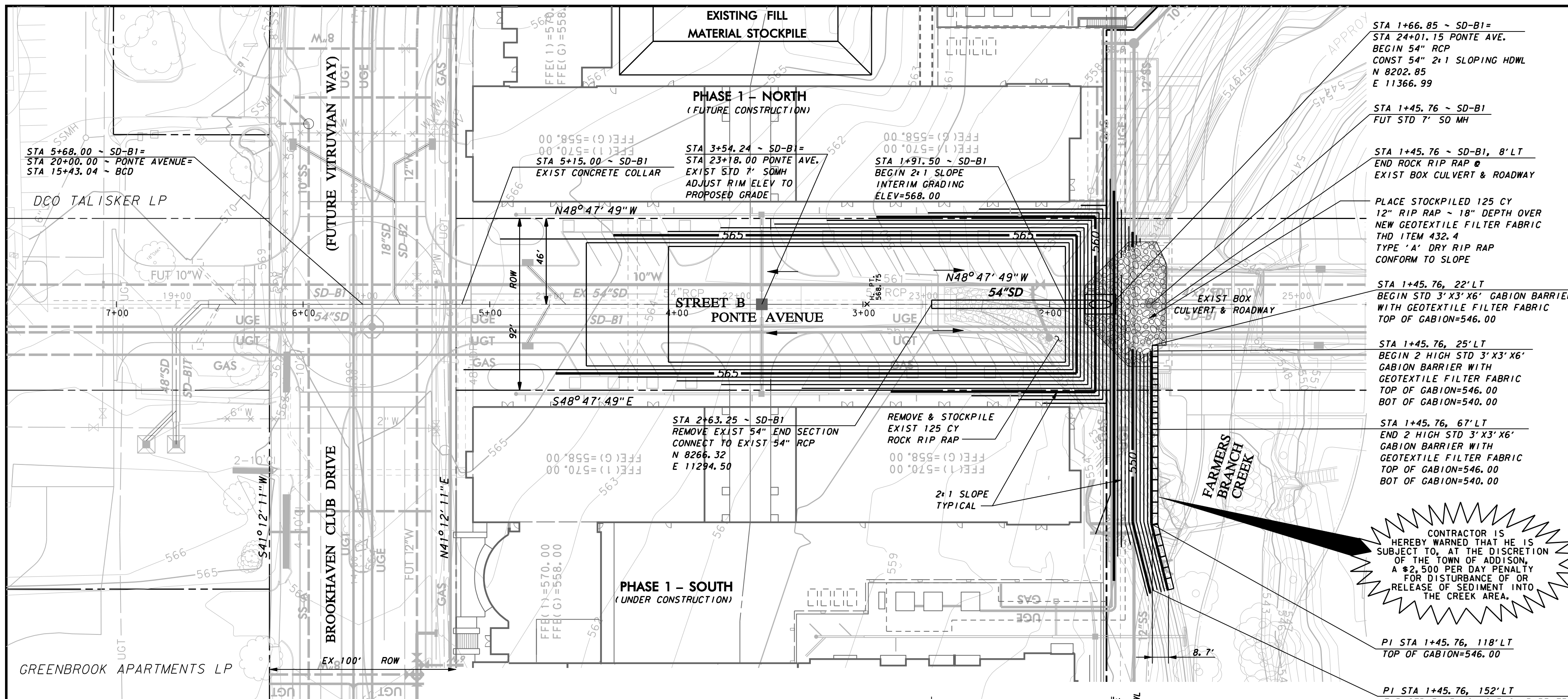
WATER, SANITARY SEWER & STORM DRAIN
BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

SANITARY SEWER DETAILS

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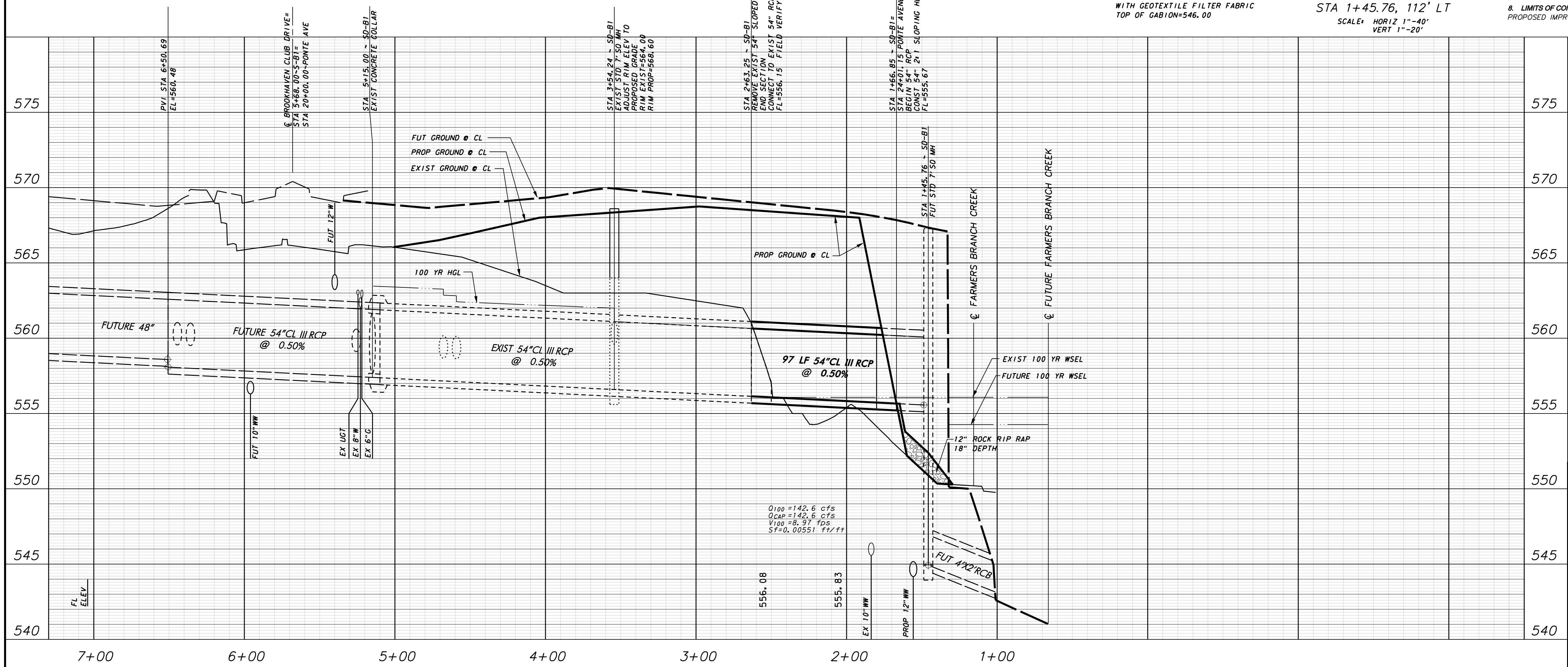
PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
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WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



- GRADING NOTES**
- GENERAL CONSTRUCTION NOTES:** REFER TO SHEET C3 "GENERAL CONSTRUCTION NOTES, LEGEND AND ABBREVIATIONS" FOR THE GENERAL CONSTRUCTION NOTES FOR THE PROJECT.
 - UNDISTURBED AREAS:** PRIOR TO GRADING, BRUSH REMOVAL, OR SITE CONSTRUCTION, THE CONTRACTOR SHALL MEET WITH THE TOWN OF ADDISON AND/OR ENGINEER AT THE SITE TO ASCERTAIN THE AREAS OF THE PROJECT SITE THAT ARE TO BE PROTECTED AND PRESERVED.
 - TESTING:** ALL EARTHWORK OPERATIONS SHALL BE OBSERVED AND TESTED ON A CONTINUING BASIS BY THE GEOTECHNICAL ENGINEER FOR CONFORMANCE WITH THE REQUIREMENTS SET FORTH IN THE GEOTECHNICAL STUDY, AND SUPPLEMENTAL MATERIAL, PREPARED BY GETEL ENGINEERING, INC., PROJECT NO. E07-312, DATED DECEMBER 3, 2007 WHICH IS MADE A PART OF THESE CONSTRUCTION DOCUMENTS.
 - STRIPPING AND DEBRIS REMOVAL:** ALL AREAS THAT ARE TO RECEIVE FILL MATERIAL SHALL BE STRIPPED OF VEGETATION, TREES, ROOTS, STUMPS, DEBRIS, AND OTHER ORGANIC MATERIAL. THE DEPTH OF STRIPPING IS ESTIMATED TO BE ON THE ORDER OF SIX (6) INCHES IN ORDER TO REMOVE THE SURFACE SOIL CONTAINING ORGANIC MATERIAL. THE ACTUAL STRIPPING DEPTH SHALL BE BASED ON FIELD OBSERVATIONS. ALL TREES, INCLUDING STUMPS AND ROOT SYSTEMS, VEGETATION, DEBRIS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OFF-SITE. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS GOVERNING SPILLAGE OF DEBRIS WHILE TRANSPORTING TO A DISPOSAL SITE. ALL COSTS ASSOCIATED WITH DISPOSAL OF MATERIAL SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
 - CONTROLLED FILL:** ALL SOILS USED FOR CONTROLLED FILL SHALL BE FREE OF ROOTS, VEGETATION, AND OTHER DELETERIOUS OR UNDESIRABLE MATTER. ROCKS LESS THAN 4 INCHES IN LARGEST DIMENSION WITHIN 15" OF PROPOSED SUBGRADE ELEVATION, LESS THAN 6 INCHES IN SIZE FROM 15" TO 36" OF PROPOSED SUBGRADE ELEVATION, LESS THAN 12 INCHES IN SIZE FROM 36" TO 72" OF PROPOSED SUBGRADE ELEVATION, AND LESS THAN 18 INCHES IN LARGEST DIMENSION FOR FILLS IN EXCESS OF 72" FROM SUBGRADE ELEVATION, WILL BE ALLOWED AS ACCEPTABLE FILL MATERIAL. ROCK FILLS SHOULD BE SUPPLEMENTED WITH A SUFFICIENT AMOUNT OF FINE MATERIAL TO PREVENT VOIDS. SOILS IMPORTED FROM OFF-SITE FOR USE AS FILL SHOULD BE APPROVED BY THE GEOTECHNICAL ENGINEER. THE FILL MATERIAL SHOULD BE PLACED IN LEVEL, UNIFORM LIFTS, WITH EACH LIFT COMPACTED TO THE MINIMUM DRY DENSITY WITHIN THE COMPACTION SOIL MOISTURE RANGES RECOMMENDED. THE LOOSE LIFT THICKNESS SHOULD NOT EXCEED 8 INCHES EACH LAYER SHOULD BE PROPERLY PLACED, MIXED, SPREAD, AND COMPACTED TO BETWEEN 95 AND 100 PERCENT OF STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D 698.
 - PROPOSED GRADES:** THE PROPOSED CONTOURS INDICATED ON THE GRADING PLAN ARE FINISHED GRADES AND ARE SHOWN AT ONE-FOOT INTERVALS. SPOT ELEVATIONS SHOWN IN PAVED AREAS ARE TOP OF PAVEMENT, UNLESS NOTED OTHERWISE.
 - EARTHWORK QUANTITIES:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATING THE EARTHWORK QUANTITIES BASED ON THE EXISTING AND PROPOSED CONTOURS SHOWN ON THESE PLANS. ALL EARTHWORK SHALL BE CONSIDERED UNCLASSIFIED EXCAVATION AND BID ON A LUMP SUM BASIS, UNLESS NOTED OTHERWISE.
 - LIMITS OF CONSTRUCTION:** NO WORK IS TO BE PERFORMED OUTSIDE OF THE IMMEDIATE AREAS OF PROPOSED IMPROVEMENTS.

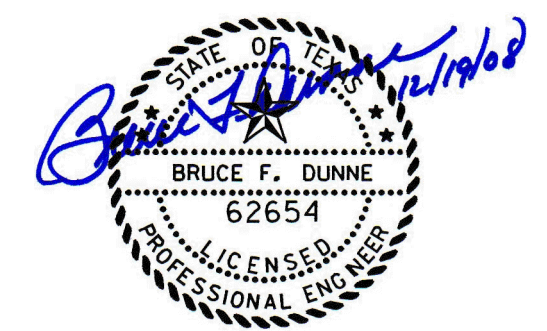
CONTRACTOR IS HEREBY WARNED THAT HE IS SUBJECT TO, AT THE DISCRETION OF THE TOWN OF ADDISON, A \$2,500 PER DAY PENALTY FOR DISTURBANCE OF OR RELEASE OF SEDIMENT INTO THE CREEK AREA.



WARNING
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BM #1 REF. ELEVATION = 559.47
SQUARE CUT IN TOP OF CURB, SOUTH MEDIAN END NOSE, MARSH LANE 1127' NORTH OF BROOKHAVEN CLUB DRIVE.

BM #2 REF. ELEVATION = 547.84
SQUARE CUT IN TOP OF CURB, NORTH MEDIAN END NOSE, AT INTERSECTION OF BROOKHAVEN CLUB DRIVE AND MARSH LANE.



NO.	REVISION	BY	DATE

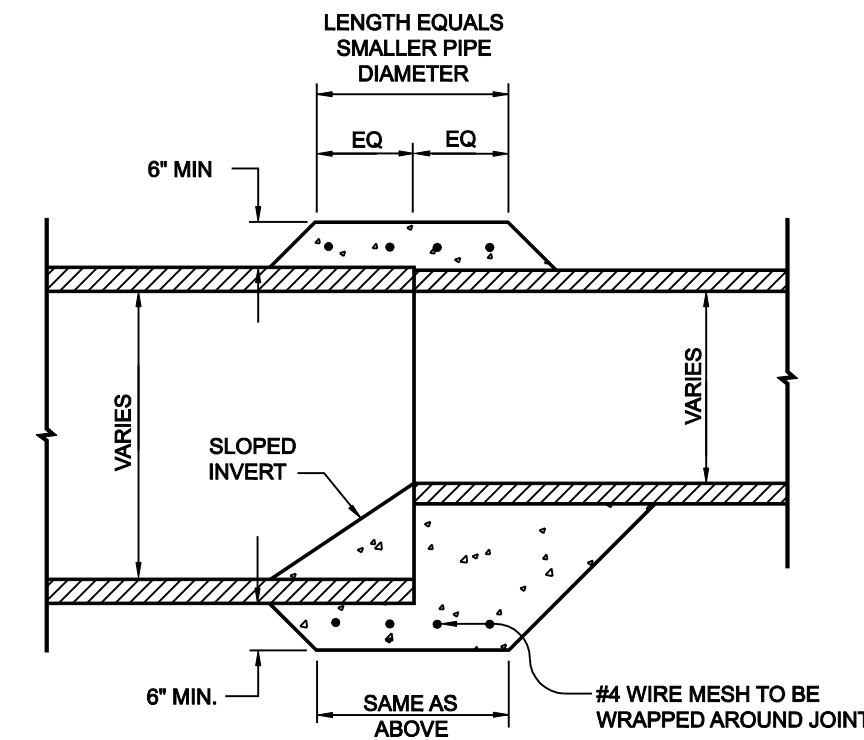
Addison! TOWN OF ADDISON
DALLAS COUNTY, TEXAS

WATER, SANITARY SEWER & STORM DRAIN
BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

STORM DRAIN PLAN & PROFILE - SD-B & INTERIM GRADING

icon Consulting Engineers, Inc. 250 W. Southlake Blvd., Suite 117
Civil Engineers - Designers - Planners Southlake, TX 76092 (817) 552-6210

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
5029-01	JAM	SAM	OCT 14, 2008	PW #2008-009	16

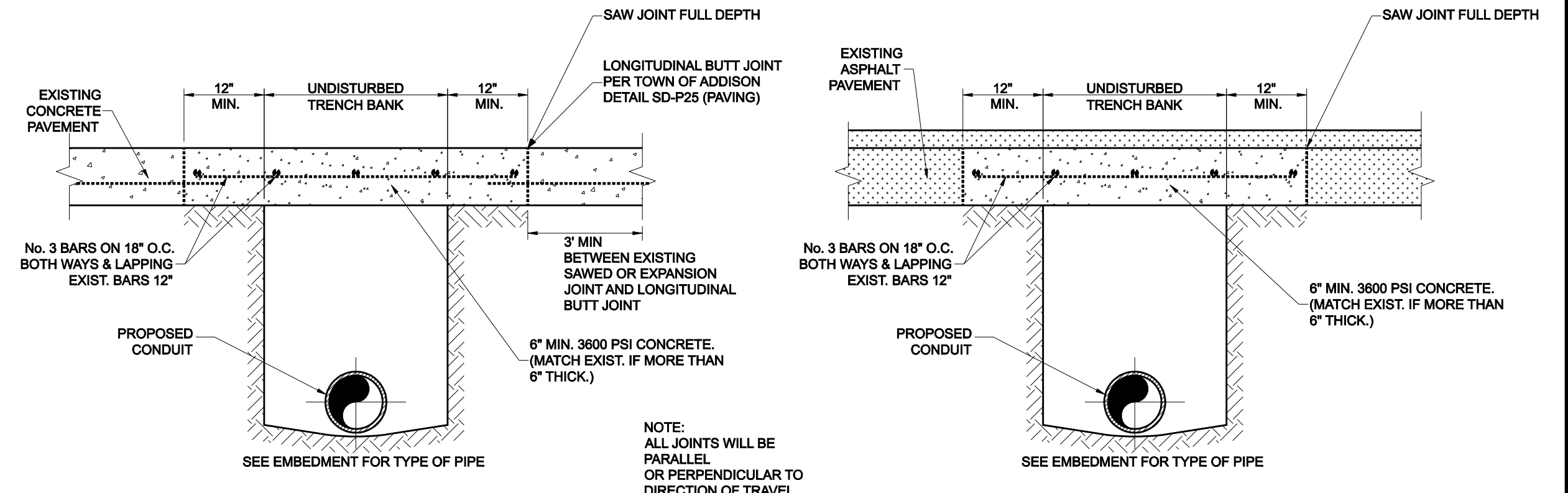


PIPE COLLAR DETAIL

- NOTES
1. THIS PROCEDURE/DETAIL WILL ONLY BE USED WHEN 1 PREFAB REDUCTION IS NOT POSSIBLE.
 2. CONCRETE FOR COLLAR WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE VARIOUS OTHER BIDS.
 3. CONCRETE SHALL BE 5 SACK 3000 PSI.

GENERAL NOTES

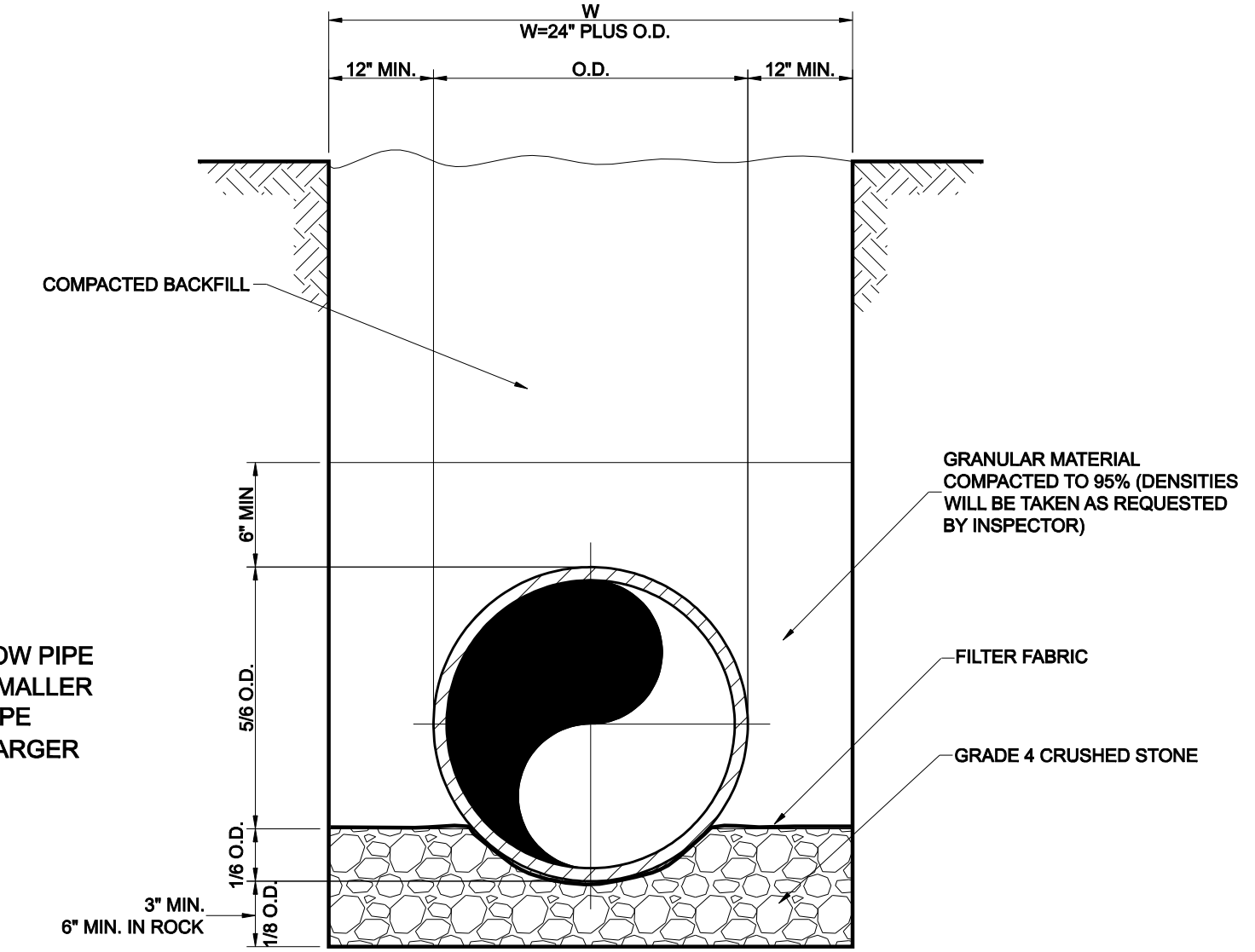
1. ALL CONCRETE DRAINAGE STRUCTURES SHALL HAVE A MINIMUM COMPRESSED STRENGTH OF 3600 P.S.I.
2. ALL CRUSHED STONE SHALL BE 3/4", PASSING #4 SIEVE.
3. ALL FIELD JOINTS WILL BE APPROVED BY THE CITY ENGINEER IF NECESSARY. FIELD JOINTS SHALL BE WIPED ON THE INSIDE AND OUTSIDE TO PROVIDE FOR SMOOTH FLOW OF WATER.
4. RAMNECK COMPOUND OR APPROVED EQUAL SHALL BE USED FOR JOINT SEALS.
5. ALL STORM SEWER PIPE SHALL BE CAMERA INSPECTED AFTER THE INSTALLATION OF ALL PAVING, UTILITIES, AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.



CONCRETE STREET OR DRIVEWAY REPAIR
N.T.S.

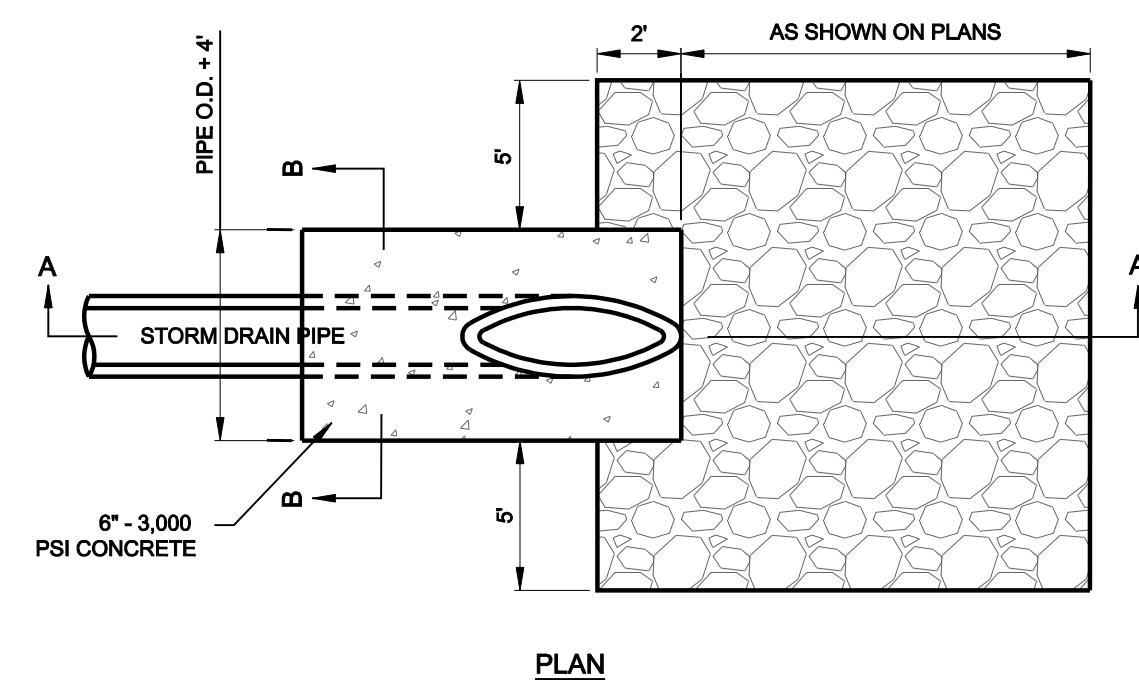
ASPHALT STREET OR DRIVEWAY REPAIR
N.T.S.

NOTE:
ALL JOINTS WILL BE PARALLEL OR PERPENDICULAR TO DIRECTION OF TRAVEL

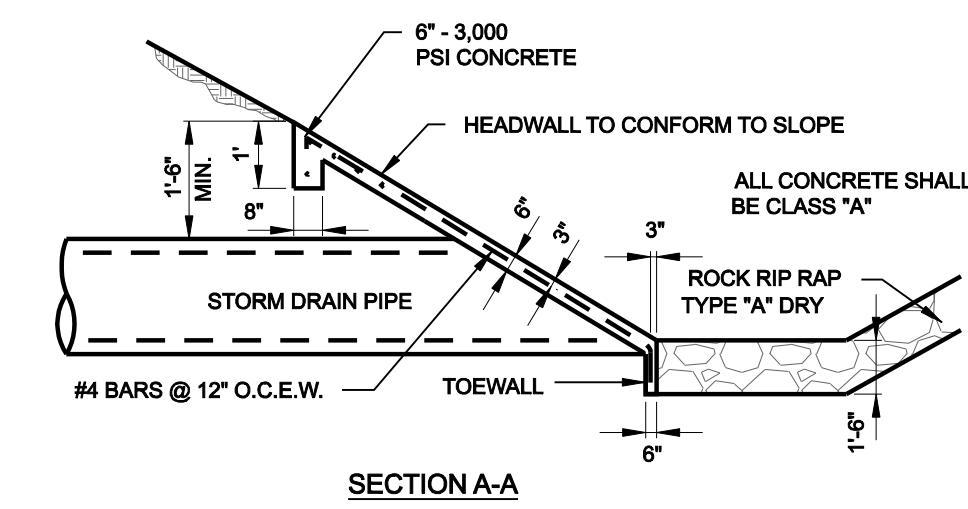


NOTE:
DEPTH OF TRENCH BELOW PIPE
3" MIN. FOR 27" PIPE & SMALLER
4" MIN. FOR 30" TO 60" PIPE
6" MIN. FOR 66" PIPE & LARGER

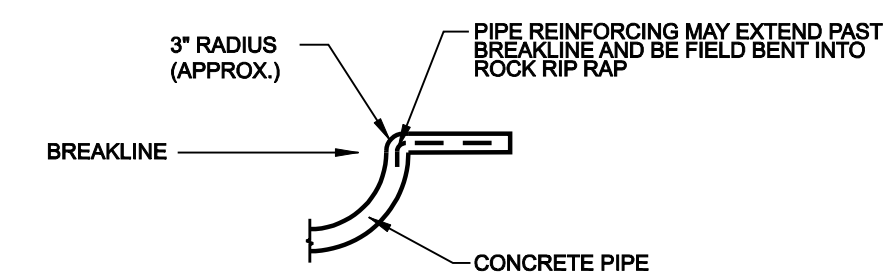
RCP STORM SEWER PIPE BEDDING



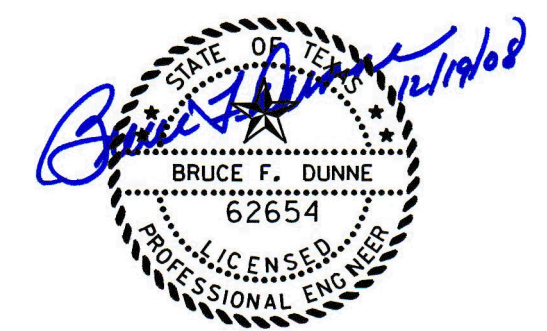
SLOPING END SECTION
N.T.S.



SECTION A-A

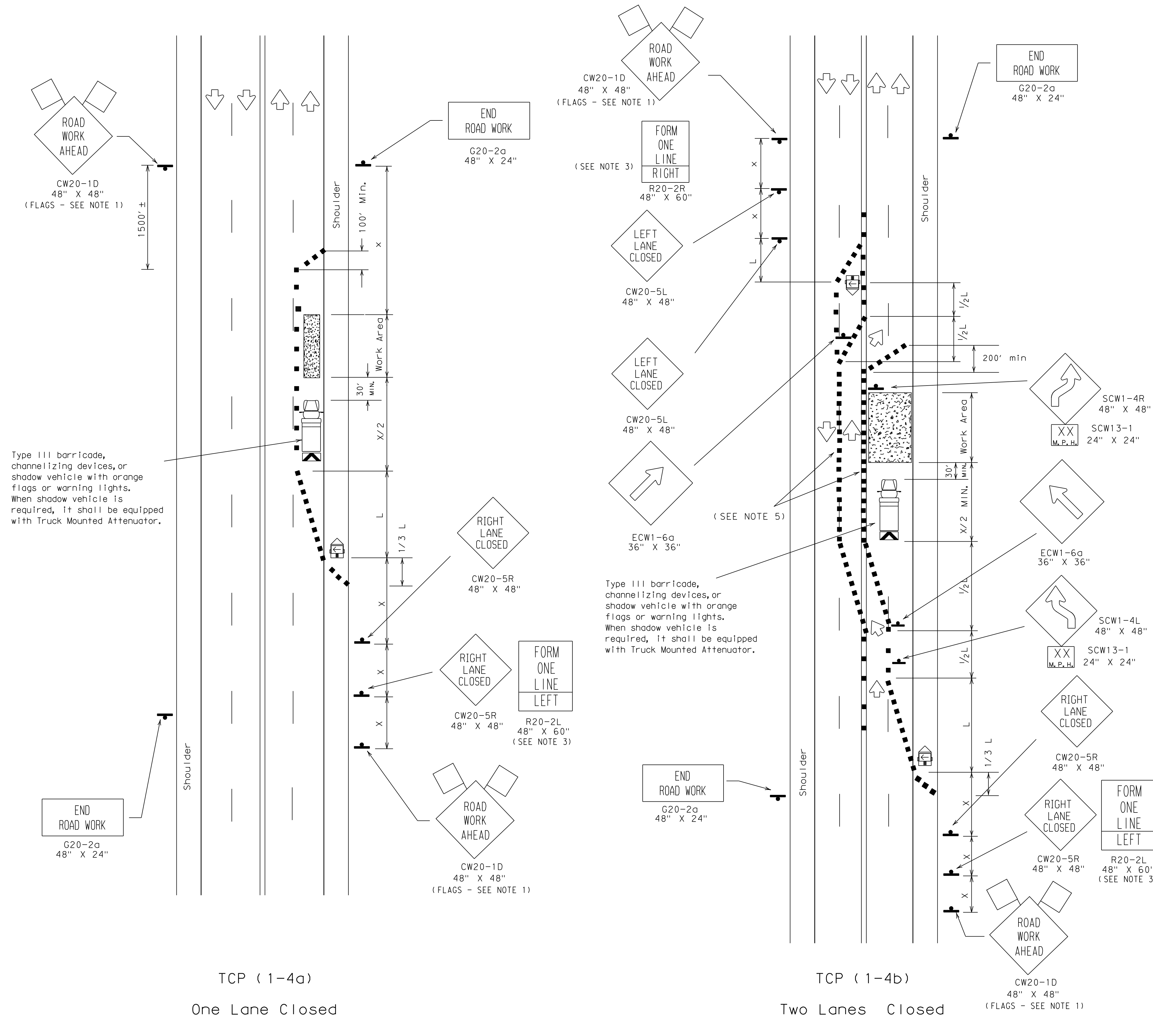


SECTION B-B



NO.	REVISION	BY	DATE
TOWN OF ADDISON DALLAS COUNTY, TEXAS WATER, SANITARY SEWER & STORM DRAIN BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK STORM DRAIN DETAILS			
icon Consulting Engineers, Inc. 250 W. Southlake Blvd., Suite 117 Civil Engineers - Designers - Planners Southlake, Tx 76092 (817) 552-6210			
PROJECT	DESIGN	DRAWN	DATE
5029-01	JAM	SAM	OCT 14, 2008
			FILE
			PW # 2008-009
			SHEET
			17

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



Type III barricade, channelizing devices, or shadow vehicle with orange flags or warning lights. When shadow vehicle is required, it shall be equipped with Truck Mounted Attenuator.

Type III barricade, channelizing devices, or shadow vehicle with orange flags or warning lights. When shadow vehicle is required, it shall be equipped with Truck Mounted Attenuator.

LEGEND

- Type III Barricade
- Channelizing Devices
- Flag
- Heavy Work Vehicle
- Truck Mounted Attenuator
- Trailer Mounted Flashing Arrow Panel
- Portable Changeable Message Sign
- Flagger
- Sign Post

Posted Speed \times	Formula	Minimum Desirable Taper Lengths $\times \times$			Suggested Maximum Spacing of Device		Minimum Sign Spacing \times Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60' - 75'	120'
35		205'	225'	245'	35'	70' - 90'	160'
40		265'	295'	320'	40'	80' - 100'	240'
45	L=WS	450'	495'	540'	45'	90' - 110'	320'
50		500'	550'	600'	50'	100' - 125'	400'
55		550'	605'	660'	55'	110' - 140'	500'
60		600'	660'	720'	60'	120' - 150'	\times 600'
65		650'	715'	780'	65'	130' - 165'	\times 700'
70		700'	770'	840'	70'	140' - 175'	\times 800'

\times Conventional Roads Only
 $\times \times$ Taper lengths have been rounded off.
 L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

TYPICAL USAGE:

	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
MOBILE	✓			
SHORT DURATION		✓		
SHORT TERM STATIONARY			✓	
INTERMEDIATE TERM STATIONARY				✓
LONG TERM STATIONARY				

- GENERAL NOTES:**
- Unless otherwise stated in the plans, flags attached to the signs are REQUIRED.
 - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans.
 - The FORM ONE LANE LEFT sign may be used following the RIGHT LANE CLOSED sign. Spacing distance between signs should be the minimum distance indicated.
 - ROAD WORK AHEAD sign may be repeated if the visibility of the work zone is less than 1500'.
 - If pavement markings are not removed and traffic is directed over a double yellow centerline, the maximum spacing of channelizing devices in a tangent section should be no greater than 10 feet.

Only pre-qualified products shall be used. A list of compliant products and their sources may be obtained by writing or faxing:

Standards Engineer
 Traffic Operations Division - TE
 Texas Department of Transportation
 125 East 11th Street
 Austin, Texas 78701-2483
 Phone (512) 416-3335
 Fax (512) 416-3161
 E-mail TRF-STANDARD@mailgw.dot.state.tx.us

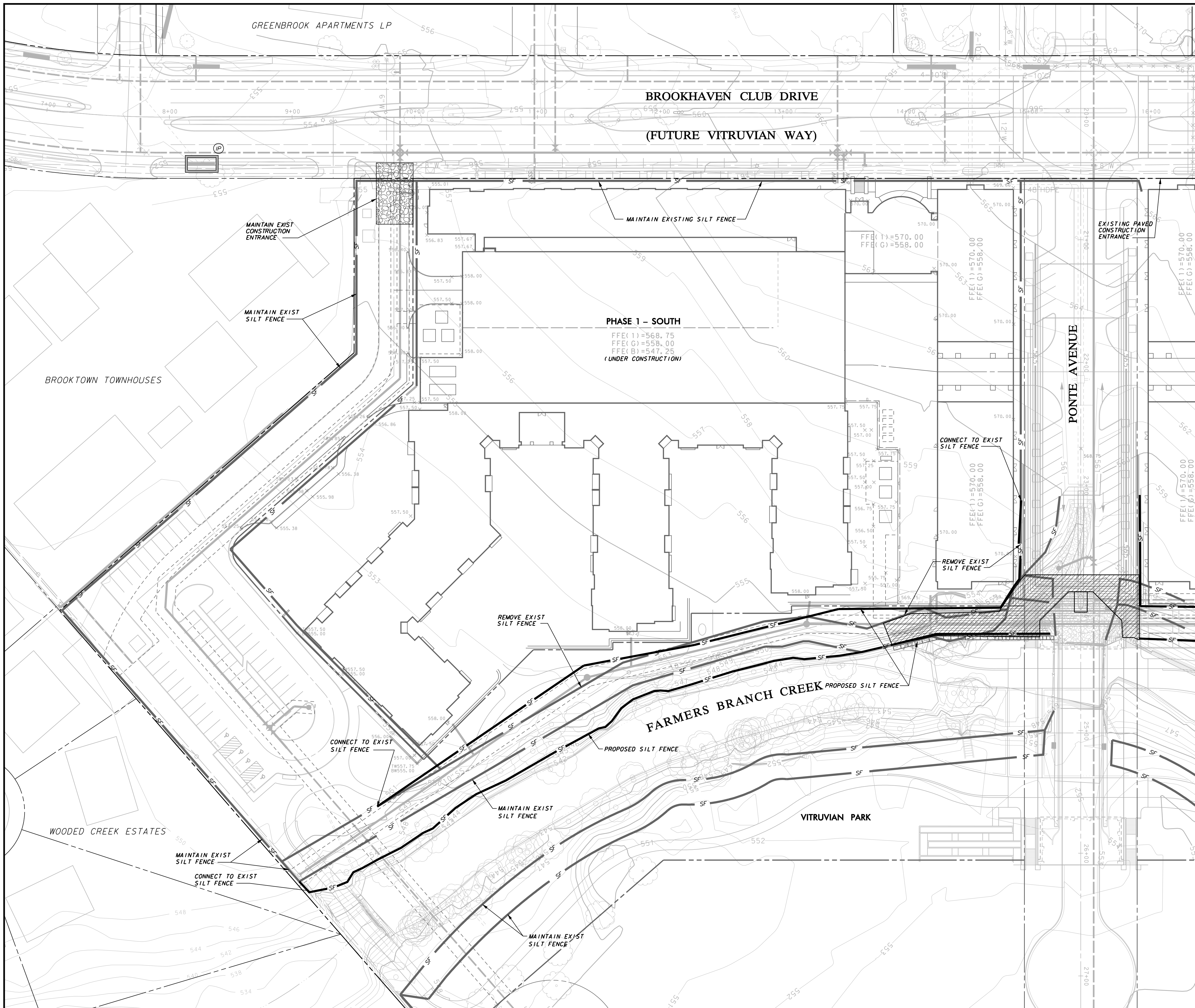
The requirement for shadow vehicles will be listed in the project GENERAL NOTES, Item 502, Barricades, Signs and Traffic Handling.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

TRAFFIC CONTROL PLAN

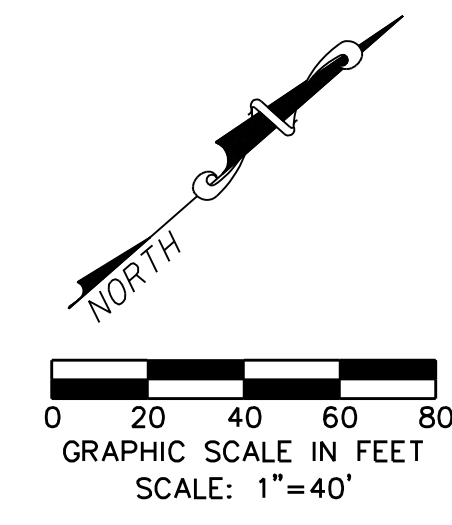
TCP (1-4)-98

© TxDOT December 1985	DN - LR	CK - MT	DN - DN	CK - MT	NEG NO. 1
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
2-94		6			18
8-95			COUNTY	CONTROL SECTION	JOB HIGHWAY
1-97					
4-98					



LEGEND

- SILT FENCE — SF —
- EXISTING SILT FENCE — SF —
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- VEGETATED BUFFER
- EROSION CONTROL BLANKET CURLEX® II OR APPROVED EO



EROSION CONTROL NOTES

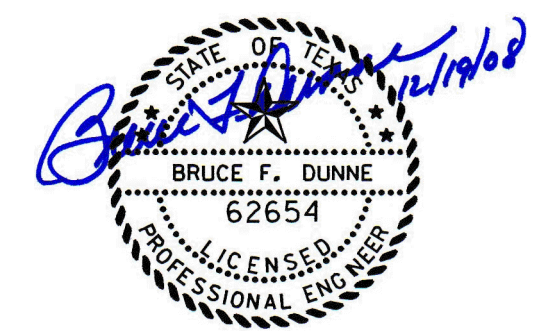
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3. **BMP INSTALLATION:** PRIOR TO COMMENCING GRADING OPERATIONS, THE CONTRACTOR SHALL INSTALL ALL SWPPP MEASURES AND DEVICES AS INDICATED ON THE EROSION & SEDIMENT CONTROL PLAN. ALL SWPPP MEASURES AND DEVICES SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS SHOWN IN THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS CONSTRUCTION "BEST MANAGEMENT PRACTICES" (BMP) MANUAL, OR AS MODIFIED BY THE CONTRACT DOCUMENTS.
4. **CLEANING, REPAIR AND MAINTENANCE:** THE CONTRACTOR SHALL REFER TO THE SWPPP FOR SEQUENCING OF CONSTRUCTION, INSTALLATION OF NEW EROSION CONTROL DEVICES AND CLEANING, REPAIR AND MAINTENANCE OF EXISTING EROSION CONTROL DEVICES. THE CONTRACTOR SHALL REVERSE, RELOCATE AND/OR ADD DEVICES TO REFLECT ACTUAL SITE CONDITIONS AND TO ACCOMMODATE LOCATIONS FOR CONSTRUCTION TRAILER AREAS, FUELING AREAS, TOILETS, TRASH RECEPTACLES AND WASHOUT AREAS. ANY ACCIDENTAL RELEASE OF SEDIMENT OR POLLUTANTS FROM THE SITE SHALL BE CLEANED BY THE CONTRACTOR.
5. **SITE ENTRY/EXIT LOCATIONS:** SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED BY THE CONTRACTOR IN A MANNER THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAYS MUST BE REMOVED IMMEDIATELY. WHEN WASHING OF VEHICLES IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE TO A PUBLIC ROADWAY, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL FINES IMPOSED FOR TRACKING ONTO PUBLIC ROADS SHALL BE PAID BY THE CONTRACTOR.
6. **PROTECTION OF ADJACENT PROPERTY:** CONTRACTOR SHALL ASSUME FULL LIABILITY FOR DAMAGE TO ADJACENT PROPERTIES AND/OR PUBLIC RIGHT-OF-WAY RESULTING FROM FAILURE TO FULLY IMPLEMENT AND EXECUTE ALL EROSION CONTROL METHODS AND PROCEDURES SHOWN AND NOTED IN THE PLANS AND SWPPP.
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NO.	REVISION	BY	DATE

Addison! TOWN OF ADDISON
 DALLAS COUNTY, TEXAS

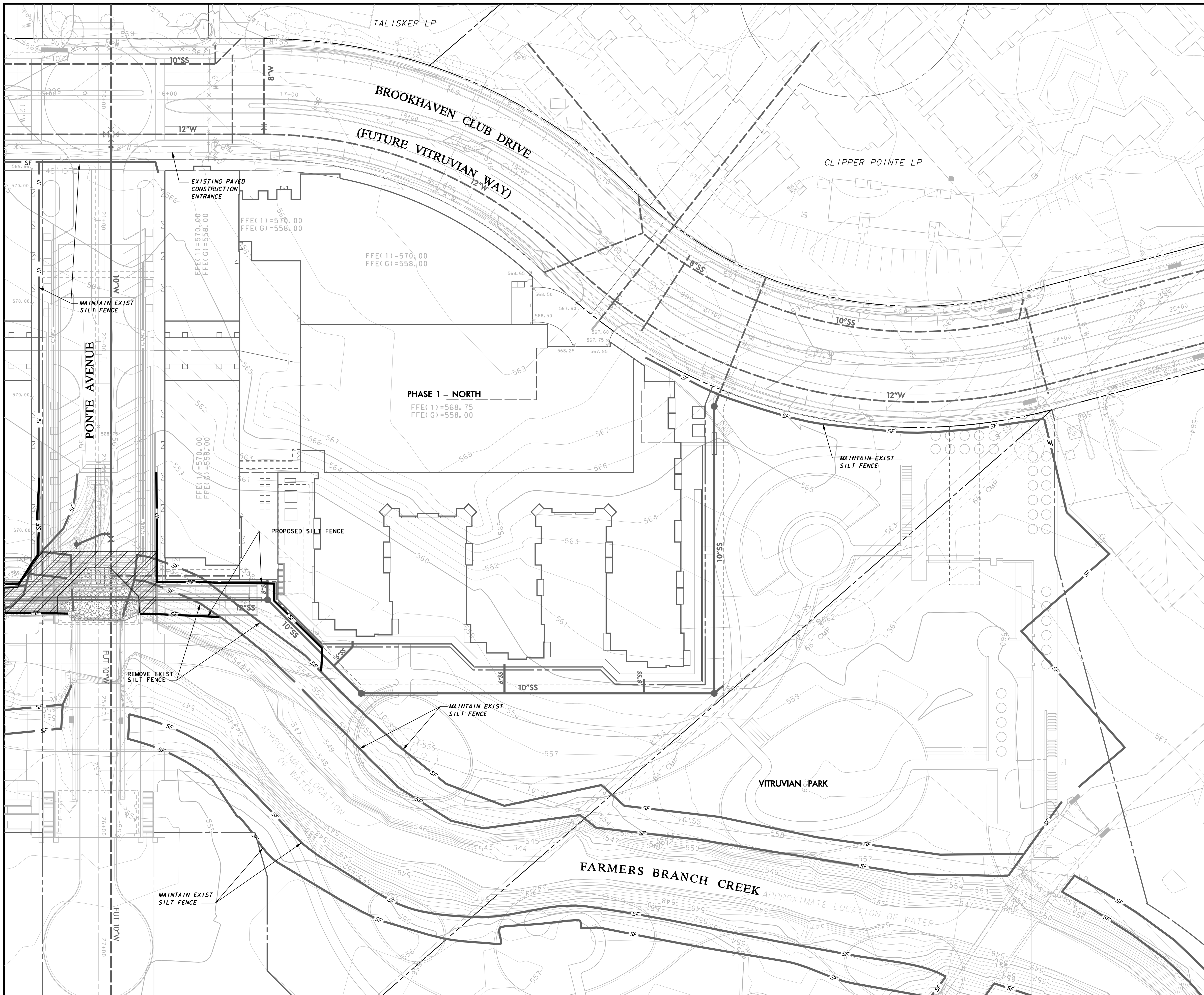
WATER, SANITARY SEWER & STORM DRAIN
 BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

**EROSION & SEDIMENT CONTROL PLAN
 WEST**

icon Consulting Engineers, Inc. 250 W. Southlake Blvd., Suite 117
 Civil Engineers - Designers - Planners Southlake, Tx 76092 (817) 552-6210

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
5029-01	JAM	SAM	OCT 14, 2008	PW #2008-009	19

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK



LEGEND

- SILT FENCE — SF —
- EXISTING SILT FENCE — SF —
- INLET PROTECTION (IP) [Symbol]
- STABILIZED CONSTRUCTION ENTRANCE (CE) [Symbol]
- VEGETATED BUFFER [Symbol]
- EROSION CONTROL BLANKET CURLEX® II OR APPROVED EO [Symbol]

EROSION CONTROL NOTES

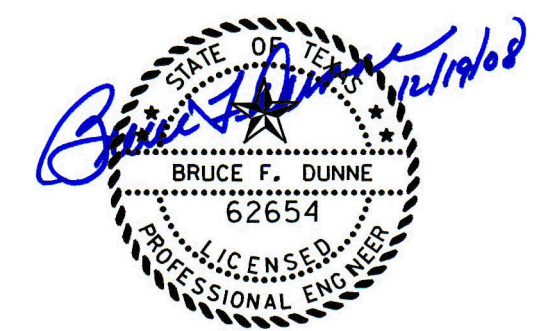
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NO.	REVISION	BY	DATE

ADDISON! TOWN OF ADDISON
 DALLAS COUNTY, TEXAS

**WATER, SANITARY SEWER & STORM DRAIN
 BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK**

**EROSION & SEDIMENT CONTROL PLAN
 EAST**

icon Consulting Engineers, Inc. 250 W. Southlake Blvd., Suite 117
 Civil Engineers - Designers - Planners Southlake, Tx 76092 (817) 552-6210

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
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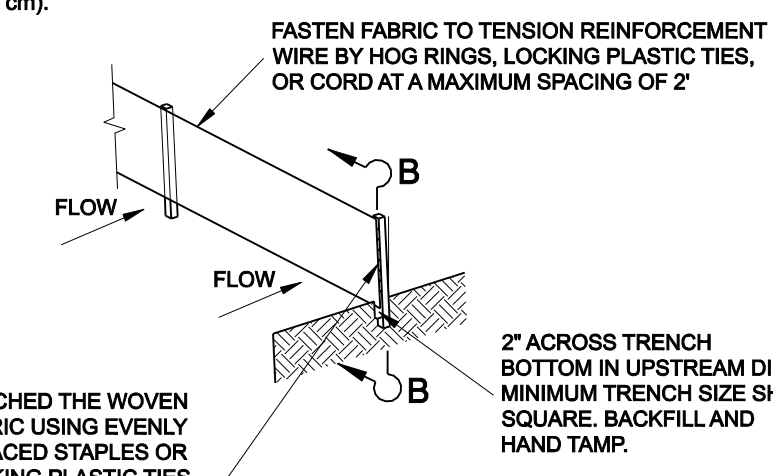
RECORD DRAWINGS 12/19/08

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK

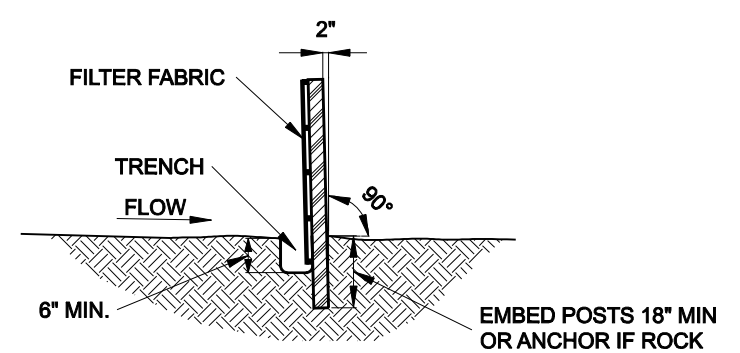
NOTES: SILT FENCE

1. Posts which support the silt fence shall be installed on a slight angle toward the anticipated runoff source. The post must be embedded a minimum of 18 inches.
2. The toe of the silt fence shall be trenched in with a spade or mechanical trencher, so that the downslope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g. pavement), weight fabric flap with washed gravel on the uphill side.
3. The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
4. Silt fence shall be securely fastened to each support post or to woven wire, which is in turn attached to the support post. There shall be a 6 inch double overlap, securely fastened where ends of fabric meet.
5. Inspection shall be made daily or after each rainfall. Repair or replacement shall be made promptly as needed.
6. Silt fence shall be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.
7. Accumulated silt shall be removed when it reached a depth of 3 inches. The silt shall be disposed of at an approved site and in such a manner as to prevent flow under fence not contribute to additional siltation.

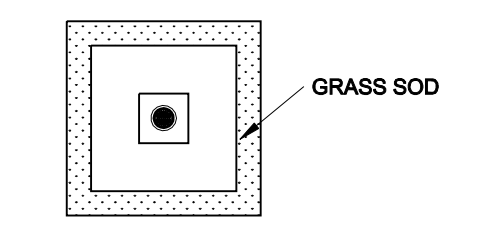
4' MIN. STEEL OR WOOD POSTS SPACED AT 5' TO 8' SOFTWOOD POSTS SHALL BE 3" MIN. IN. DIA. OR NOMINAL 2"x4" HARDWOOD POSTS SHALL HAVE A MIN. CROSS SECTION OF 1.5"x1.5" (3.8 cm x 3.8 cm).



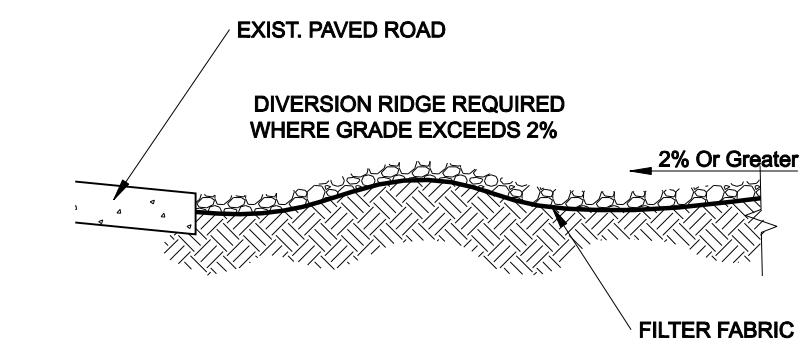
SILT FENCE



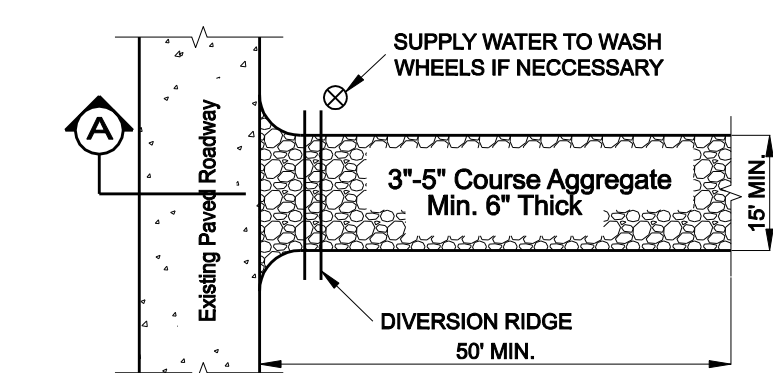
SECTION A



DROP INLET PROTECTION (TYP)

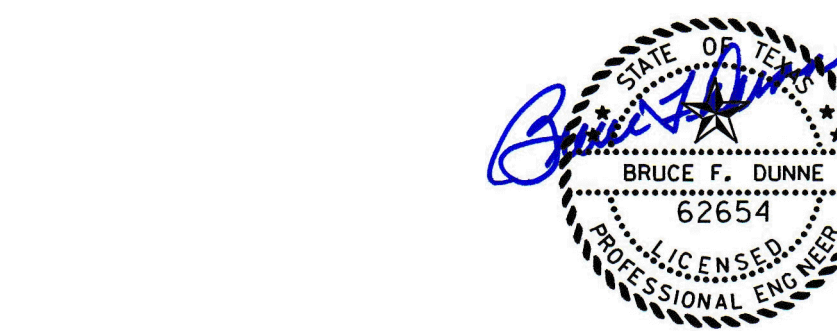


SECTION B

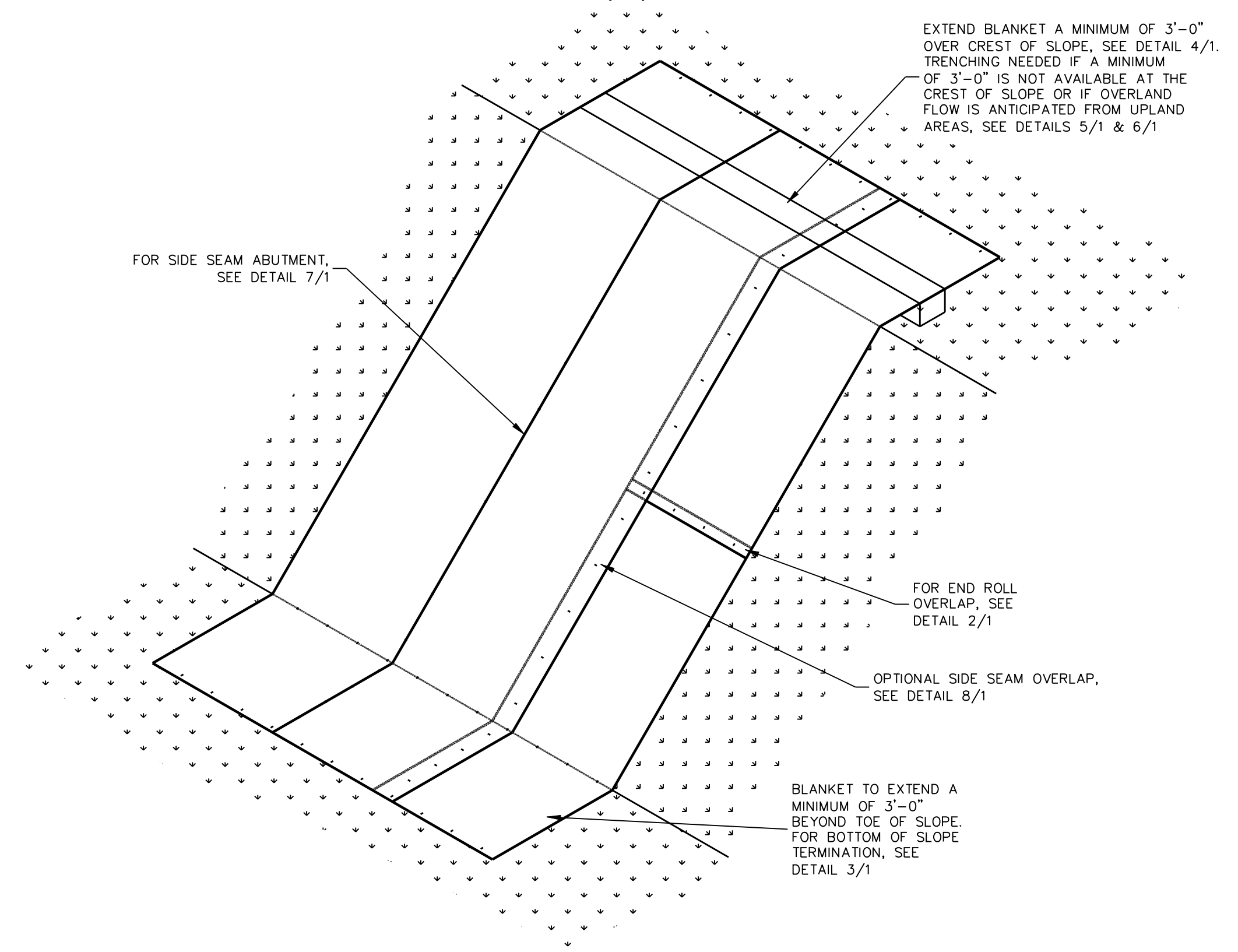
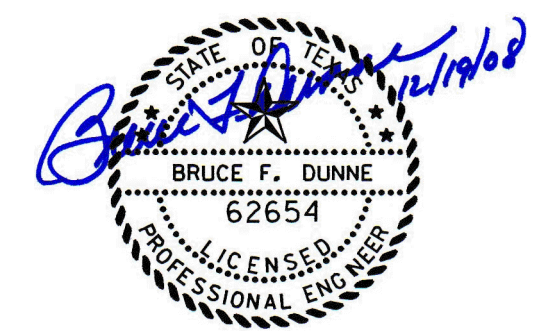


PLAN

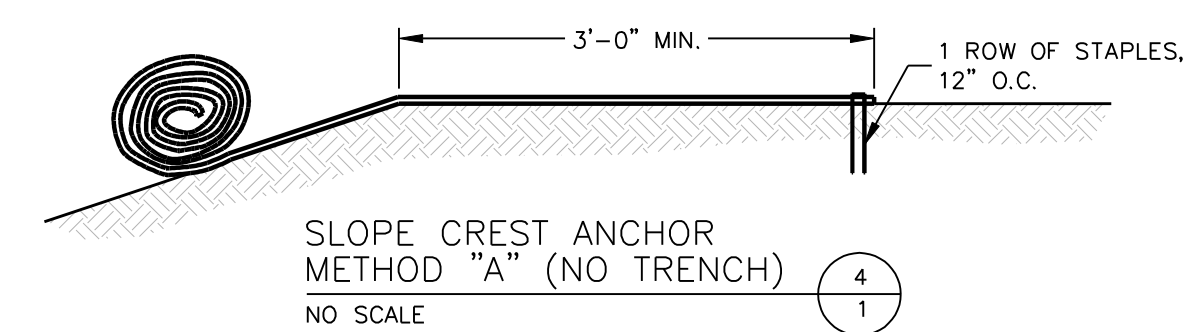
TEMPORARY STONE CONSTRUCTION ENTRANCE / EXIT



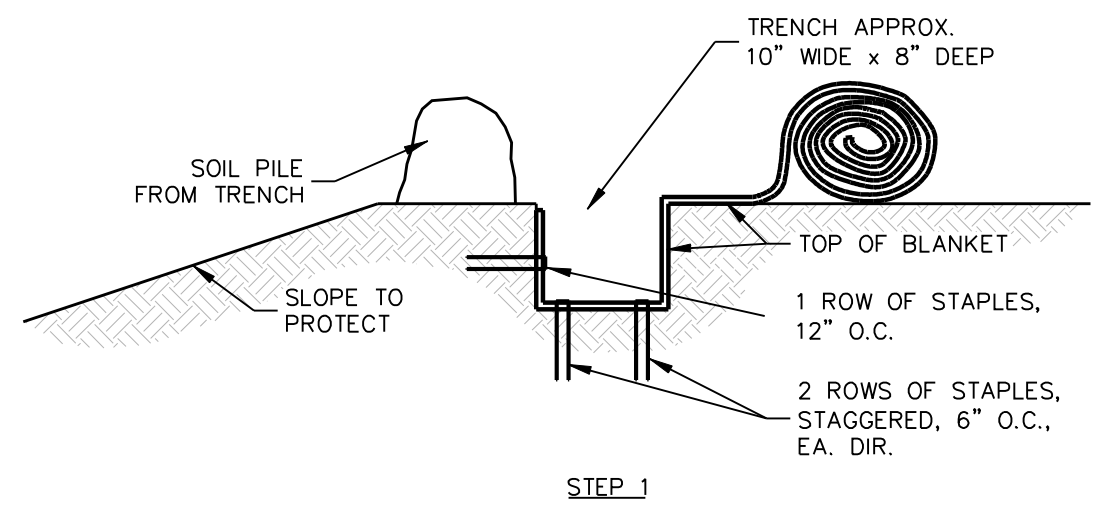
TEMPORARY STONE CONSTRUCTION ENTRANCE / EXIT



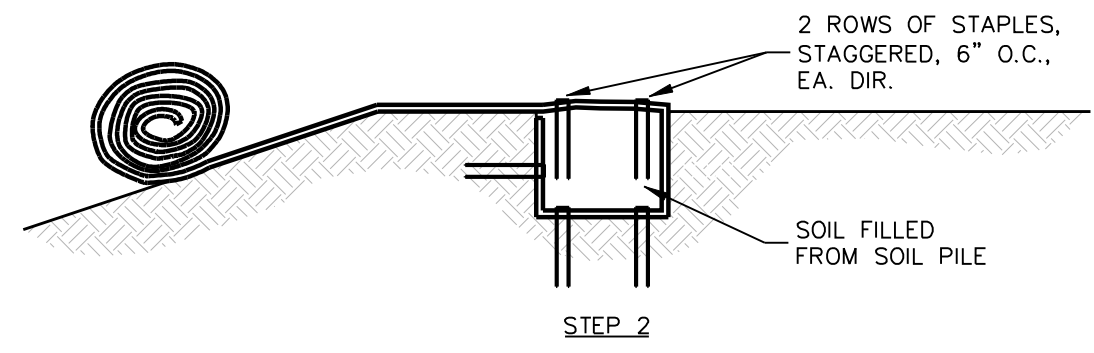
SLOPE DETAIL
NO SCALE



SLOPE CREST ANCHOR METHOD \"A\" (NO TRENCH)
NO SCALE

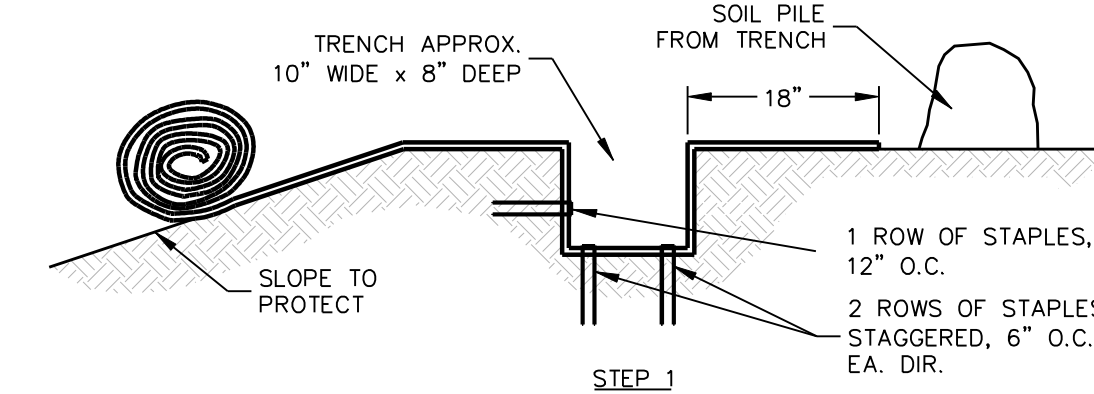


STEP 1

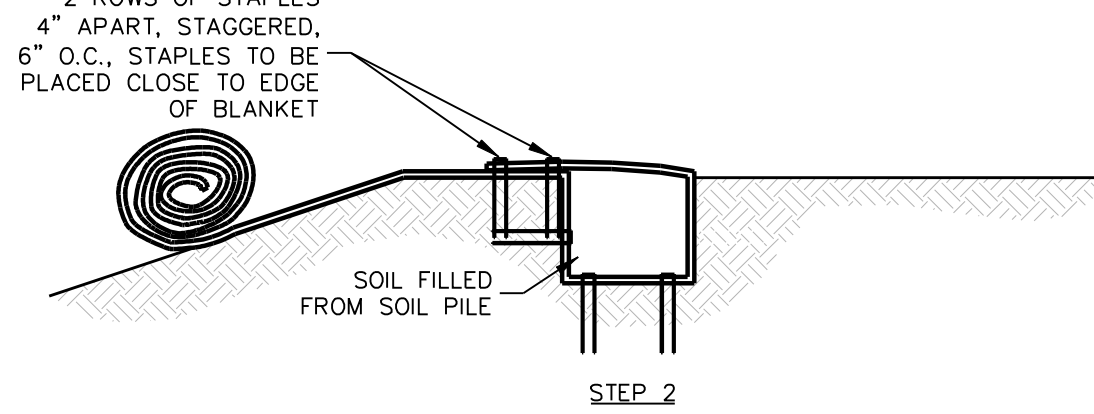


STEP 2

SLOPE TRENCHING METHOD \"B\"
NO SCALE



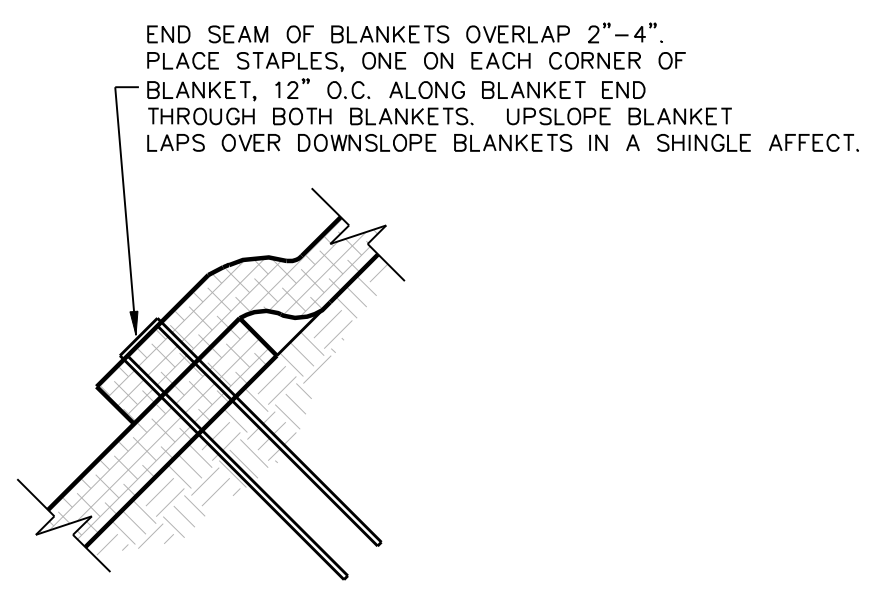
STEP 1



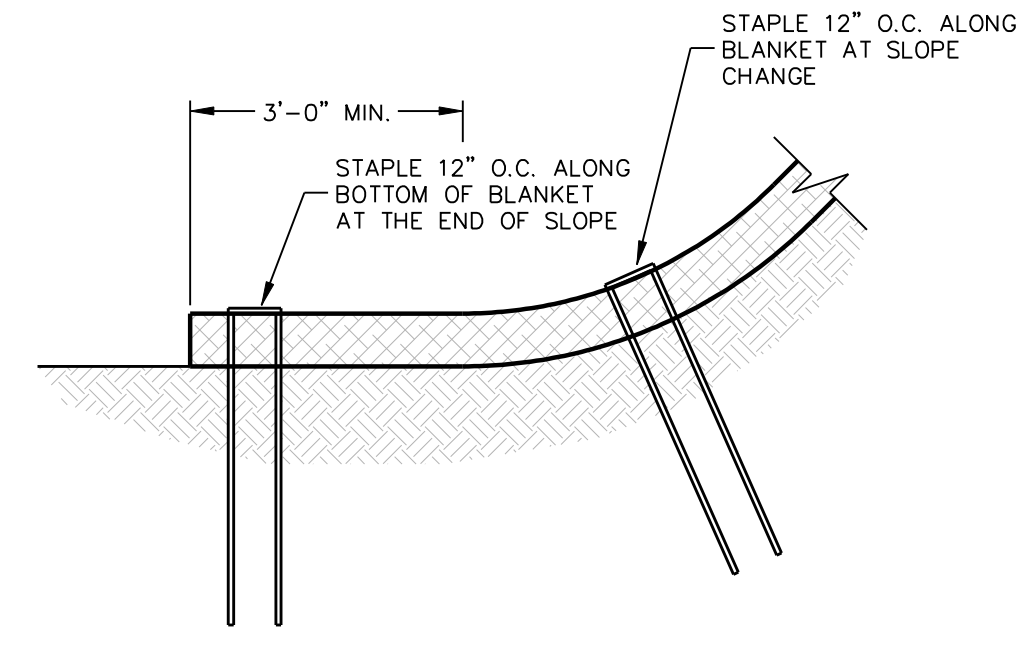
STEP 2

SLOPE TRENCHING METHOD \"C\"
NO SCALE

- NOTES:**
1. STAPLE PATTERNS ARE DEPENDENT ON SITE CONDITIONS. SEE CURLEX® STAPLE PATTERN GUIDE FOR DETAILS.
 2. E-STAPLE® MAY BE USED IN PLACE OF WIRE STAPLES.

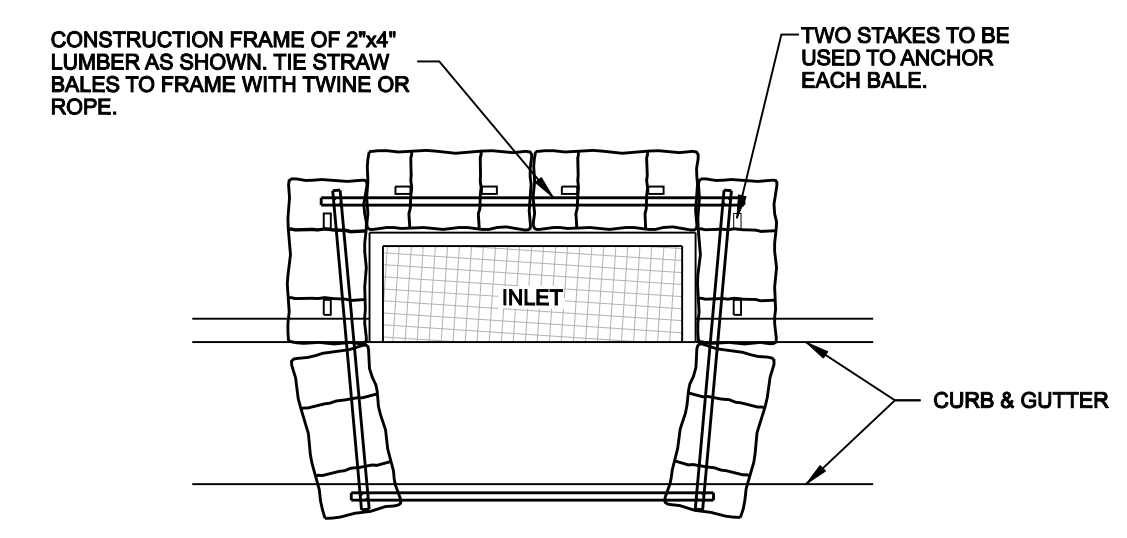


END ROLL OVERLAP
NO SCALE



BOTTOM OF SLOPE TERMINATION
NO SCALE

EROSION CONTROL BLANKET
NOT TO SCALE



CURB INLET PROTECTION
NOT TO SCALE

NO.	REVISION	BY	DATE

TOWN OF ADDISON
DALLAS COUNTY, TEXAS

WATER, SANITARY SEWER & STORM DRAIN
BROOKHAVEN CLUB DR, PONTE AVE & VITRUVIAN PARK

EROSION & SEDIMENT CONTROL DETAILS

icon Consulting Engineers, Inc.
Civil Engineers - Designers - Planners
250 W. Southlake Blvd., Suite 117
Southlake, Tx 76092 (817) 552-6210

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
5029-01	JAM	SAM	OCT 14, 2008	PW #2008-009	21

WATER, SANITARY SEWER, & STORM DRAIN IMPROVEMENTS - BROOKHAVEN CLUB DRIVE, PONTE AVENUE & VITRUVIAN PARK