

TRAILS OF BRIGGS RANCH UNIT-3A

(PLANNED UNIT DEVELOPMENT)

STREET, DRAINAGE, WATER, & SANITARY

SEWER IMPROVEMENTS

SHEET INDEX

MATERIALS:

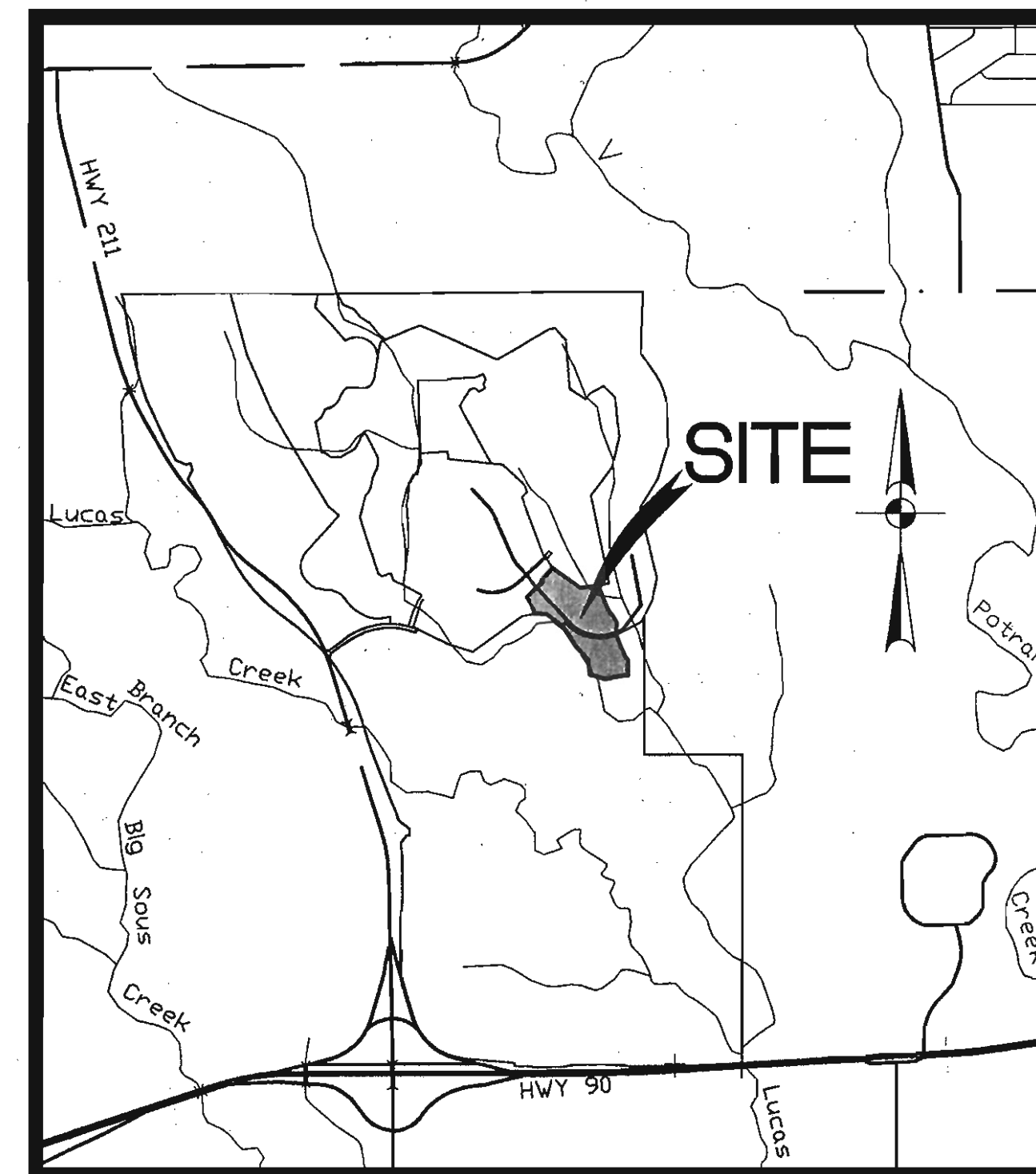
P.V.C. Pipe: JM

Manholes: Charlotte

Contractor: Central Backhoe

SAWS Inspector: Fred Schwartz

Completion Date: October 31, 2008



LOCATION MAP

N.T.S.

OLMOS CREEK PROPERTIES, INC.
13777 BRIGGS RANCH
SAN ANTONIO, TEXAS 78245

AUGUST, 2006

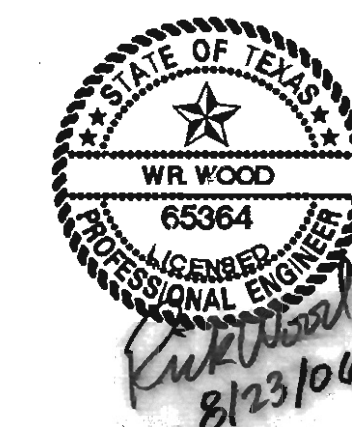
PAPE-DAWSON ENGINEERS

555 EAST RAMSEY | SAN ANTONIO TEXAS 78216 | PHONE: 210.375.9000
FAX: 210.375.9010

Description	Sheet No.
COVER SHEET	C0.0
MASTER DRAINAGE PLAN	C1.0
DRAIN "A" STA 1+00.00 - END PLAN & PROFILE	C1.1
DRAIN "B" STA 1+00.00 - END & DRAIN "C" 1+00.00 - END PLAN & PROFILE	C1.2
ROUNDUP PASS (STA 27+99.67 - STA 38+00.00) PLAN & PROFILE	C2.0
ROUNDUP PASS (STA 38+00.00 - END) PLAN & PROFILE	C2.1
BRAZOS BEND (STA 1+00.00 - 14+00.00) PLAN & PROFILE	C2.2
BRAZOS BEND (STA 14+00.00-END) & PRESCOTT LANE (STA 1+00.00-STA 4+50.0) PLAN & PROFILE	C2.3
LATTIGO BEND (STA 4+50.00-END) PLAN & PROFILE	C2.4
ALLEY "A" (SAT 1+00.00 - END) & ALLEY "B" (STA 1+00.00 - END) PLAN & PROFILE	C2.5
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C.O.S.A. TRAFFIC SIGNAL DETAILS	C3.2
STREET & DRAIN DETAILS	C4.0
C.O.S.A. WHEELCHAIR RAMP DETAILS	C4.1
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SANITARY SEWER OVERALL	C5.2
SANITARY SEWER OVERALL	C5.3
SANITARY SEWER NOTES	C5.4
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SANITARY SEWER LINE "A" STA 1+00.00-14+50.00 PLAN & PROFILE	C5.6
SANITARY SEWER LINE "A" STA 14+50.00-STA 28+50.00 PLAN & PROFILE	C5.7
SANITARY SEWER LINE "A" STA 28+50.00 - STA 42+50.00 PLAN & PROFILE	C5.8
SANITARY SEWER LINE "A" STA 42+50.00 - STA 56+50.00 PLAN & PROFILE	C5.9
SANITARY SEWER LINE "A" STA 56+50.00 - STA 70+50.00 PLAN & PROFILE	C5.10
SANITARY SEWER LINE "A" STA 70+50.00 - END & LINE "C" STA 1+00.00 - END PLAN & PROFILE	C5.11
SANITARY SEWER LINE "B" STA 1+02.91 - END PLAN & PROFILE	C5.12
SANITARY SEWER LINE "D" STA 0+97.34 - STA 11+00.00 PLAN & PROFILE	C5.13
SANITARY SEWER LINE "D" STA 11+00.00 - END & LINE "E" STA 1+0.00 - END PLAN & PROFILE	C5.14
WATER DISTRIBUTION SYSTEM	C6.0
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OVERALL UTILITY PLAN	C7.0

Developer's Name: BRIGGS RANCH LTD.		
Address: 13777 BRIGGS RANCH RD		
City: SAN ANTONIO	State: TEXAS	ZIP: 78245
Phone: (210) 677-0810	FAX: (210) 677-0150	
SAWS Block Map: 184-876	Total EDU's: 23	Total Acreage: 37.77
Total Linear Footage of Pipe: 7094 LF - 18" 500 35, 2284 LF - 6" 500 35, 1931 LF - 6" 500 35		
Number of Lots: 76	SAWS JOB NO.: 06-1777	Plot No.: 960720
Number of Manholes: 44		

GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

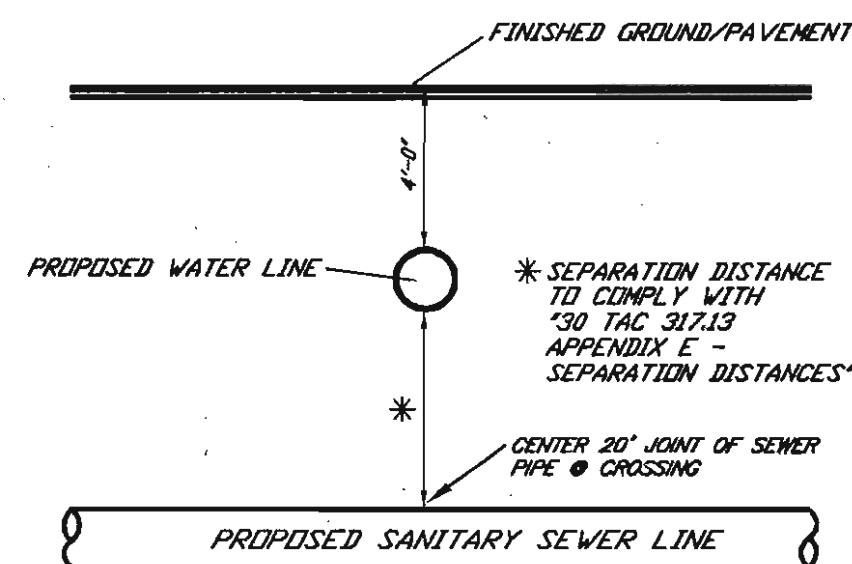


SHEET C0.0
JOB NO. 5066-24

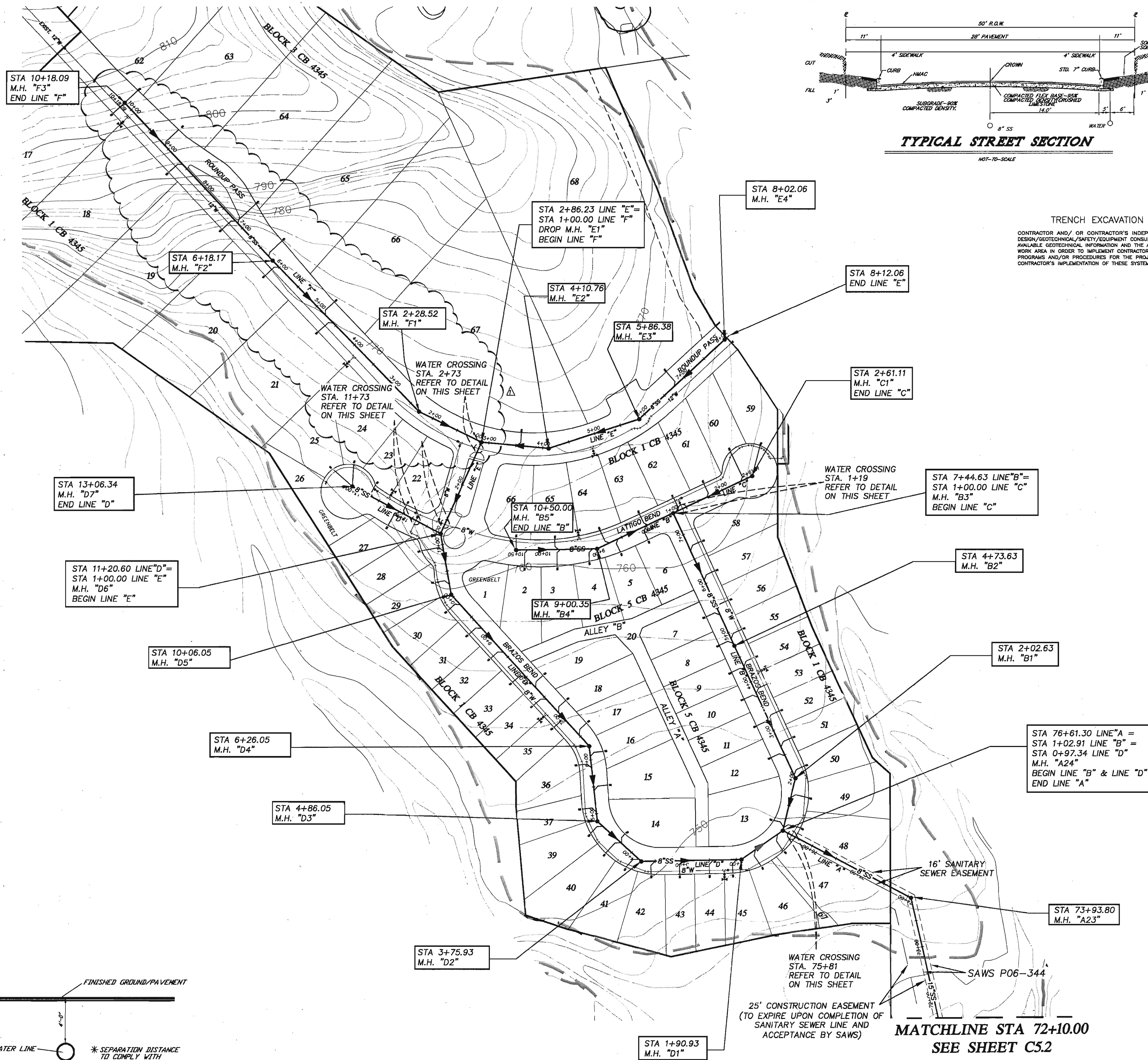
AS-BUILT/PLAN OF RECORD: OCTOBER 31, 2008

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File: P:\30\65\24\Design\Civil\SS060624.dwg

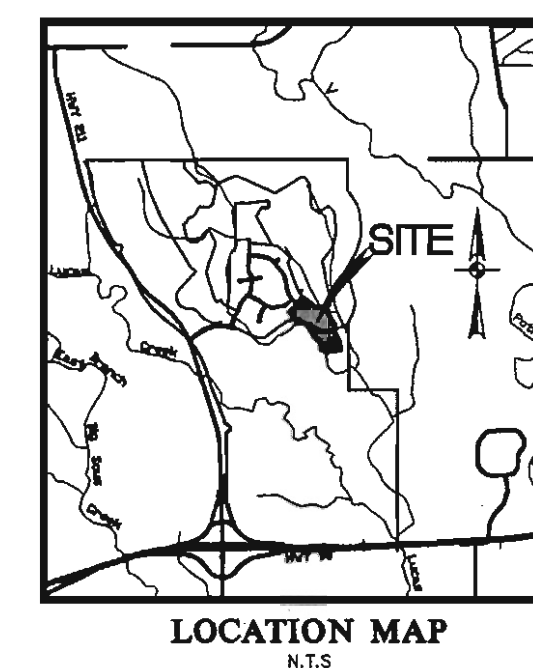
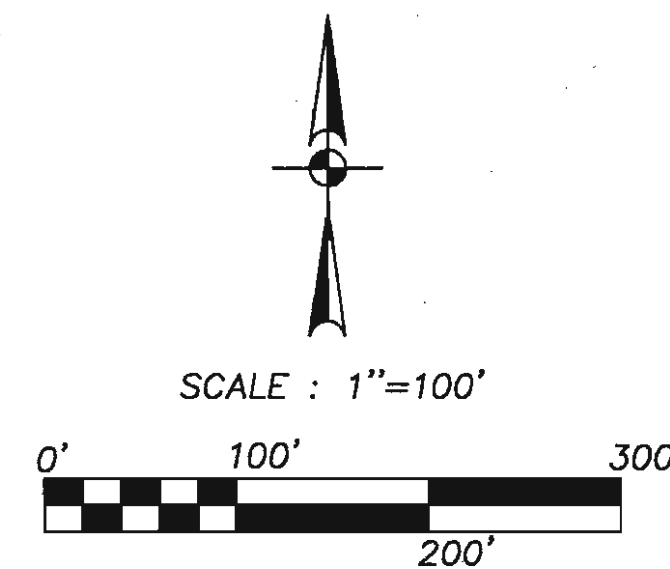
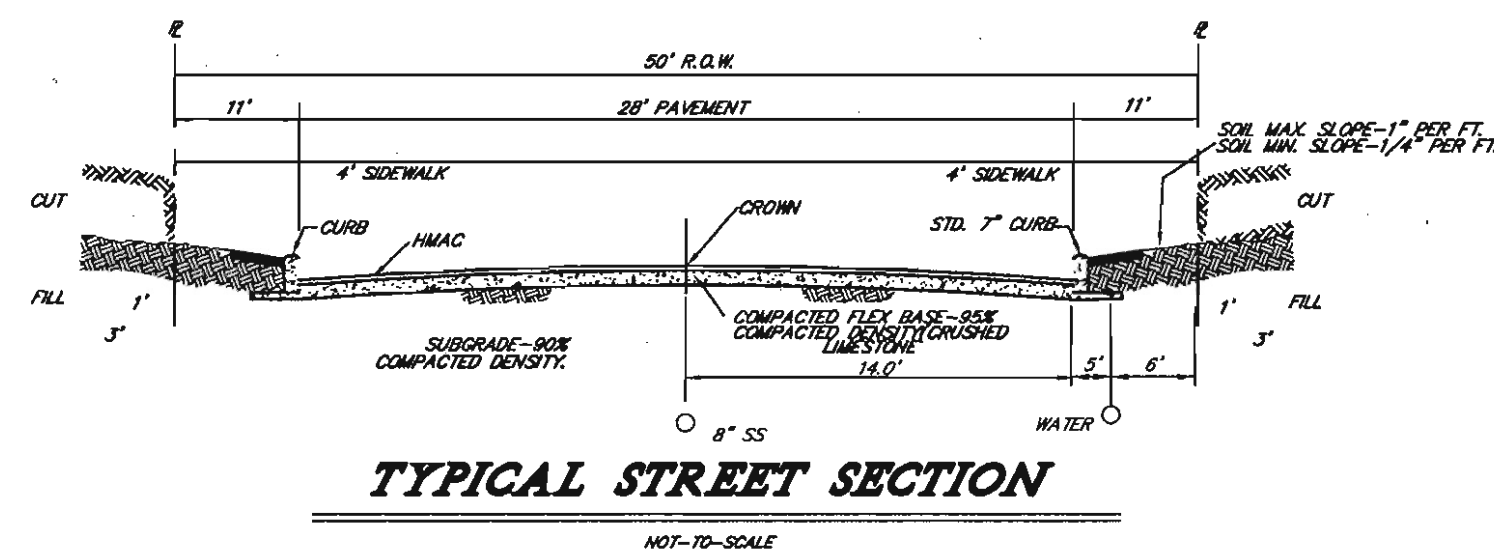
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TYPICAL SANITARY SEWER /
WATER CROSSING DETAIL
NOT TO SCALE



MATCHLINE STA 72+10.00
SEE SHEET C5.2



TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE

- NOTE:
1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"X4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE PER LATERAL DETAIL. SEE ERD ON SHEET C5.5. (NO SEPARATE PAY ITEM)
 2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM 2466 WITH LINE 20' JOINT CENTERED AT WATERMAIN.
 3. PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS 262).
 4. SEE THIS SHEET FOR TYPICAL SANITARY SEWER/WATER CROSSING DETAIL.
 5. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
 6. ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
 7. ALL MANHOLES SHALL HAVE CONCRETE RING ENCLOSURE AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS. SEE PLAN & PROFILE SHEETS FOR VENTED COVER LOCATIONS.
 8. BACKFILL MUST COMPLY WITH SAN ANTONIO WATER SYSTEMS SPECIFICATIONS 804.4
 9. SEE THIS SHEET FOR BENCHMARK INFORMATION.

LEGEND

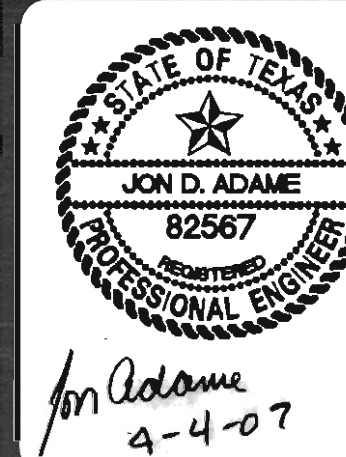
- BENCHMARK
- INLET PROTECTION
- SILT FENCE
- PROPOSED DRAINAGE
- SANITARY SEWER FLOW ARROW
- ROCK BERM
- STABILIZED CONSTRUCTION ENTRANCE/EXIT
- CONCRETE TRUCK WASHOUT PIT (TO BE FIELD LOCATED)
- CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (TO BE FIELD LOCATED)

- EXISTING SEWER - 8" SS PIPE
- PROPOSED SEWER - 8" SS PIPE
- EXISTING WATER - 12" W.P. PIPE
- PROPOSED WATER - 12" W.P. PIPE
- 100' SEWER ENVELOPE

Developer's Name: BRIGGS RANCH, LTD.	
Address: 13777 BRIGGS RANCH RD.	
City: SAN ANTONIO	State: TEXAS ZIP: 78245
Phone: (210) 677-0810	FAX: (210) 677-0150
SAWS Block Map: 164-676 Total EDU's: 73 Total Acreage: 37.77	
Total Linear Footage of Pipe: 7994 LF - 15" SDR 35, 2284 LF - 8" SDR 35, 1931 LF - 6" SDR 35	
Number of Lots: 76 SAWS JOB NO. 06-1777 Plat No. 060720	
Number of Manholes: 44	

GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

REVISIONS:
11/24/06: REVISED AS PER SAWS COMMENTS.
12/07/06: CHANGED OUTFALL SEWER LINE FROM 15" TO 12".
1/11/07: CHANGED SEWER LINE FROM 12" TO 15".
RE-ISSUE SHEET.
1/11/07: ADDED LINE "Y".
RE-ISSUE SHEET.



PAPE-DAWSON ENGINEERS
565 EAST RANNEY
SAN ANTONIO, TEXAS 78216
PHONE: 210.375.9000
FAX: 210.375.9010

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)
SANITARY SEWER OVERALL

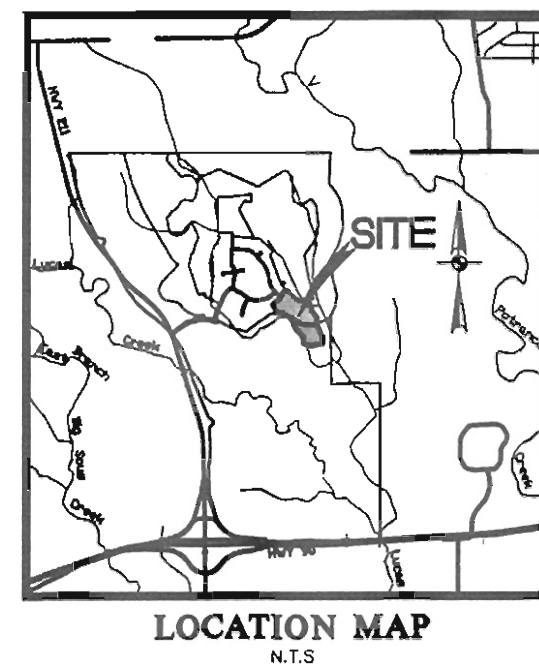
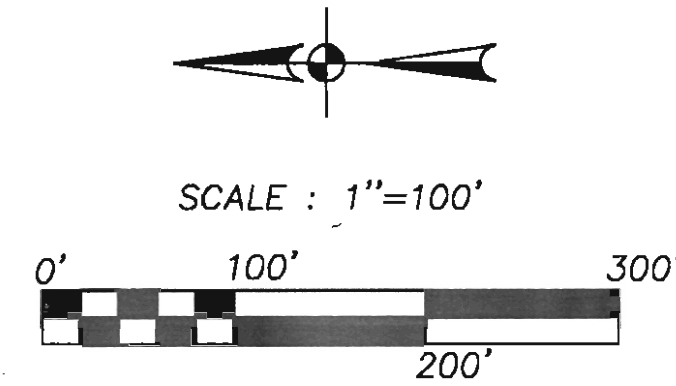
PLAT NO. 060720
JOB NO. 5066-24
DATE: AUGUST, 2006
DESIGNER: RH
CHECKED: CC DRAWN: GRG
SHEET: C5.1

AS-BUILT/PLAN OF RECORD: OCTOBER 31, 2008

Date: Feb. 28, 2007, 11:46am User ID: Rfrendrix
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MATCHLINE STA 72+10.00 SEE SHEET C51

TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE



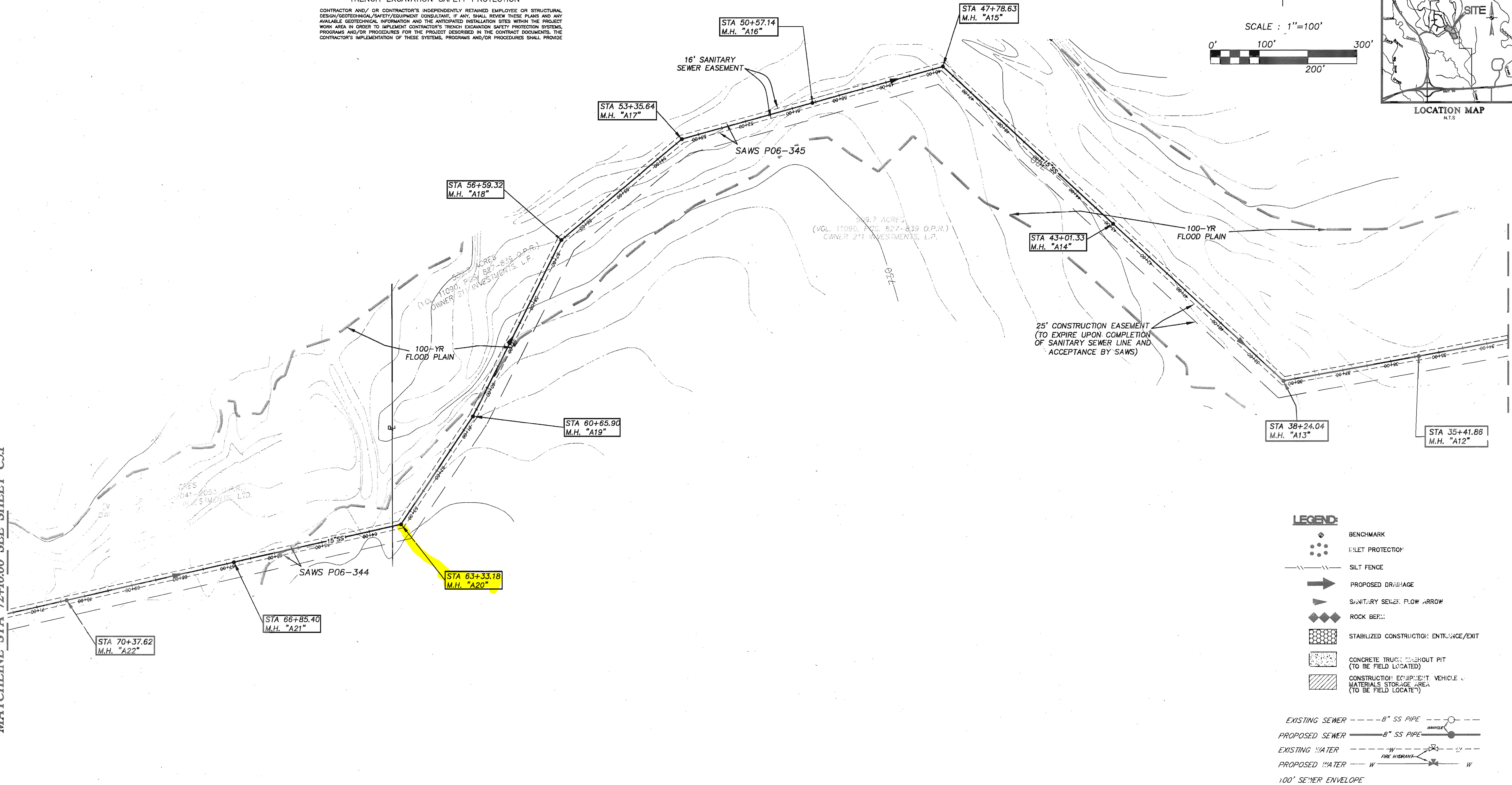
REVISIONS:
11/09/06: REVISED AS PER SAWS COMMENTS
12/07/06: CHANGED OUTFALL
02/28/07: CHANGED OUTFALL
SEWER LINE FROM 12" TO 15"
RE-ISSUE SHEET



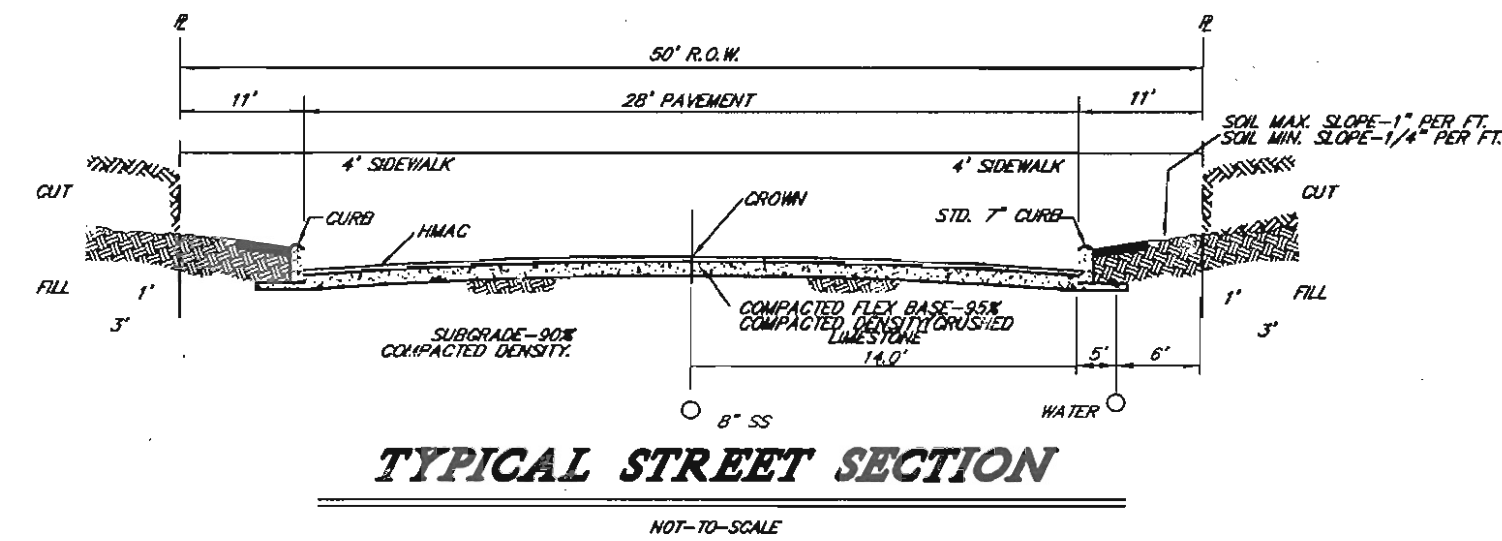
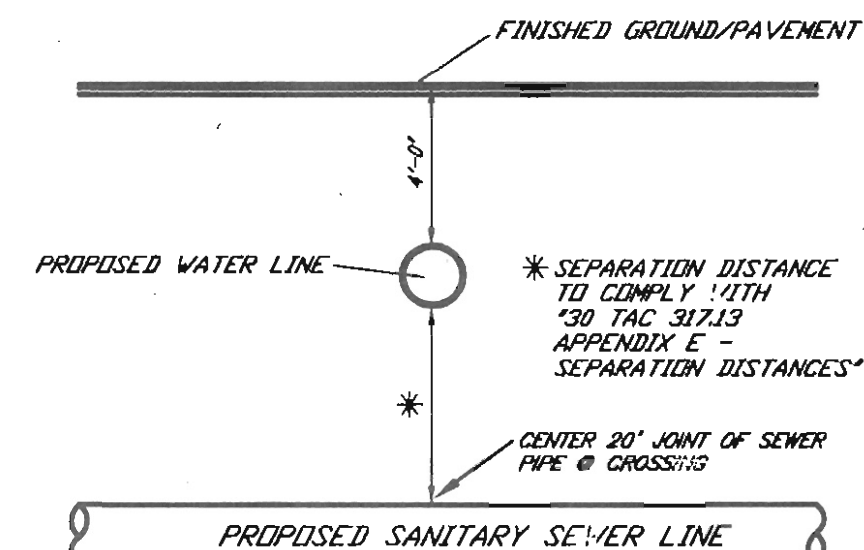
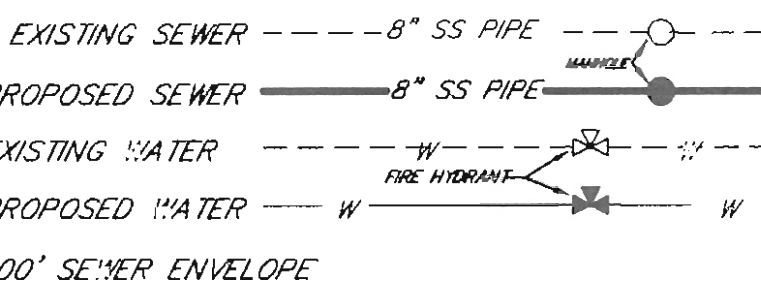
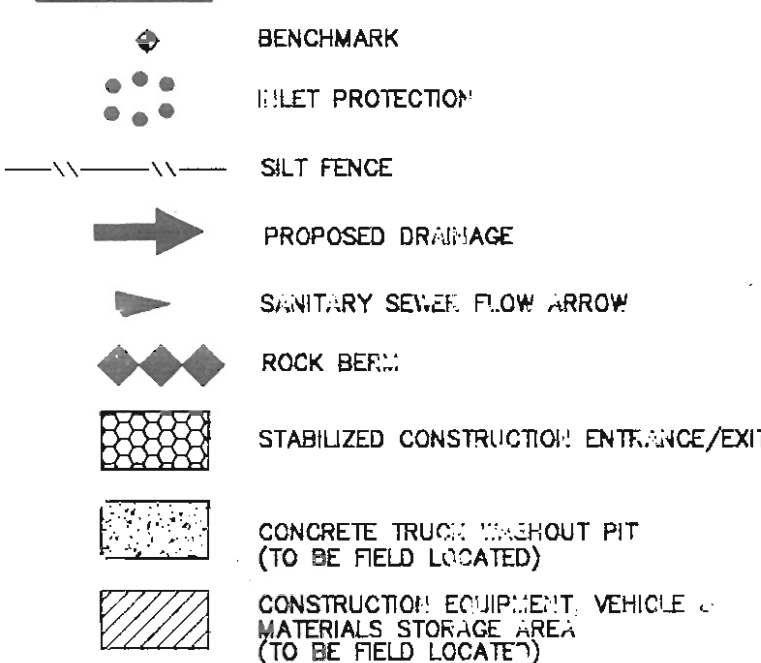
Jon Adame
2/28/07

PAPE-DAWSON ENGINEERS
666 EAST RAINSEY
SAN ANTONIO, TEXAS 78216
PHONE: 210.375.9000
FAX: 210.375.9070

MATCHLINE STA 34+65.00 SEE SHEET C53



LEGEND:



NOTE:

1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE PER LATERAL DETAIL AND ERD ON SHEET C53. (NO SEPARATE PAY ITEM)
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM 2241 WITH ONE (1) JOINT CENTERED AT WATERMAIN.
3. PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS B61)
4. SEE THIS SHEET FOR TYPICAL SANITARY SEWER/WATER CROSSING DETAIL.
5. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
6. ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
7. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASUREMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C53 FOR DETAILS. SEE PLAN & PROFILE SHEETS FOR VENTED COVER LOCATIONS.
8. BACKFILL MUST COMPLY WITH SAN ANTONIO WATER SYSTEMS SPECIFICATIONS 804.4
9. SEE THIS SHEET FOR BENCHMARK INFORMATION.

Developer's Name: BRIGGS RANCH LTD.	
Address: 13777 BRIGGS RANCH RD	
City: SAN ANTONIO	State: TEXAS ZIP: 78245
Phone: (210) 677-0810	FAX: (210) 677-0150
SAWS Block Map: 164-876 Total EDU's: 81 Total Acreage: 37.77	
Total Linear Footage of Pipe: 2284 LF - 15" SDR 35, 2284 LF - 6" SDR 35, 1931 LF - 6" SDR 26	
Number of Lots: 21	SAWS JOB NO. 06-1777 Plat No. 060720
Number of Manholes: 41	

GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)

SANITARY SEWER OVERALL

PLAT NO.
060720

JOB NO. 5066-24

DATE AUGUST, 2006

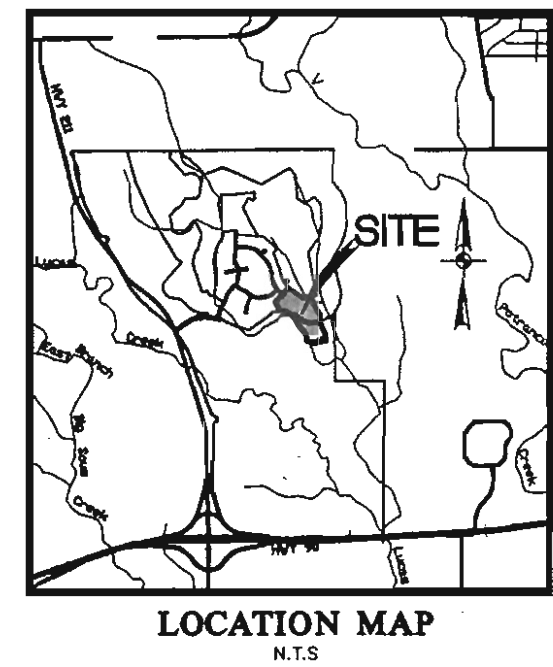
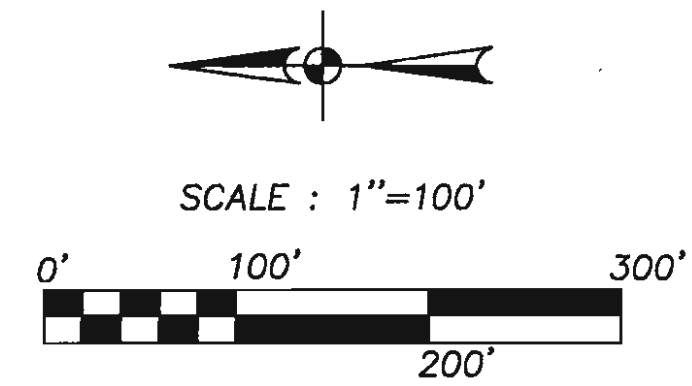
DESIGNER RH

CHECKED CC DRAWN CRG

SHEET C5.2

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE



REVISIONS:
11/08/06 REVISED AS PER SANS COMMENTS.
12/07/06 CHANGED OUTFALL SEWER LINE FROM 15" TO 12".
01/08/07 CHANGED OUTFALL SEWER LINE FROM 12" TO 15".
RE-ISSUE SHEET.



Jon D. Adame
2/13/07

PAPE-DAWSON ENGINEERS
666 EAST RAMSEY
SAN ANTONIO, TEXAS 78216
PHONE: 210.375.9000
FAX: 210.375.9010

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)
SANITARY SEWER OVERALL

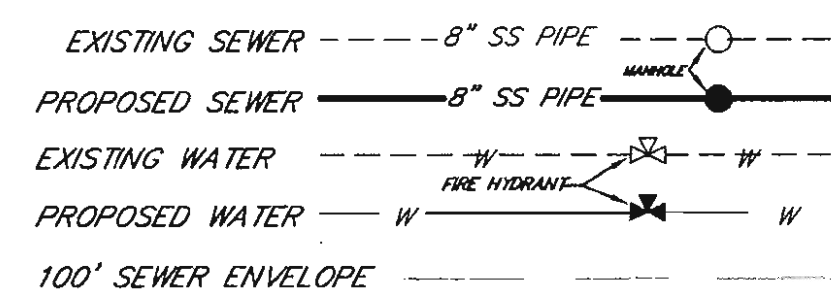
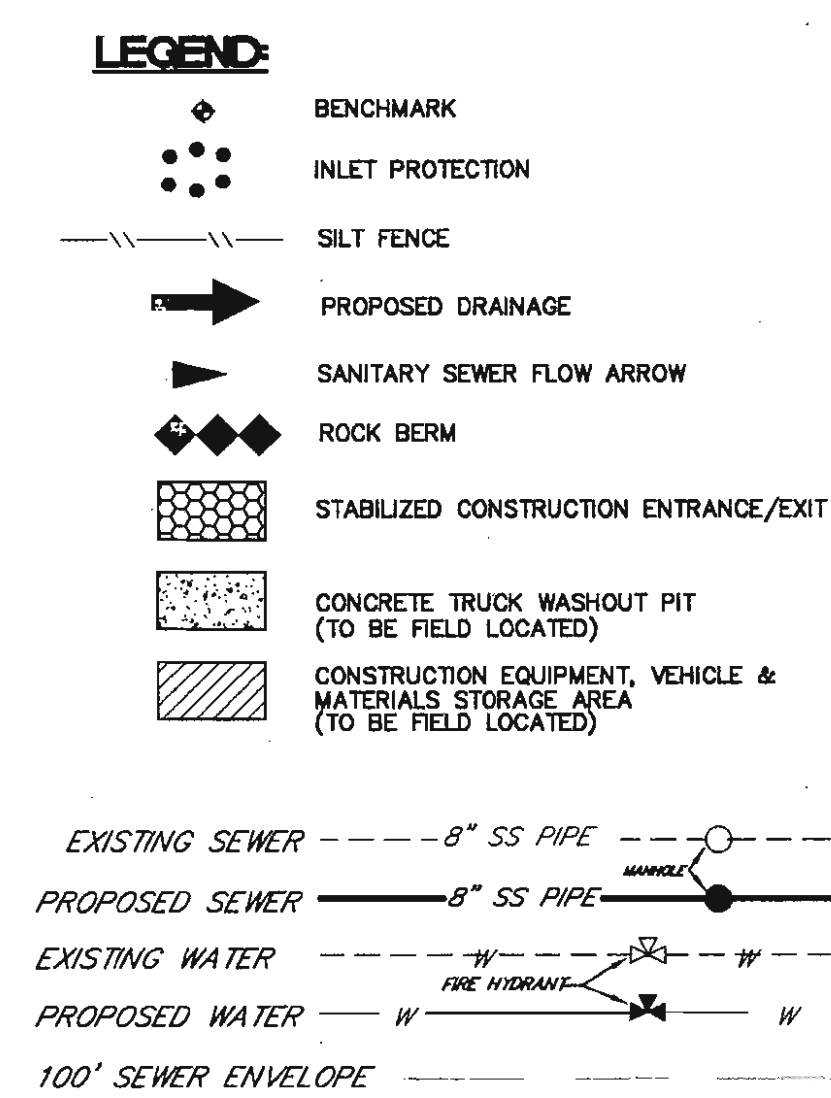
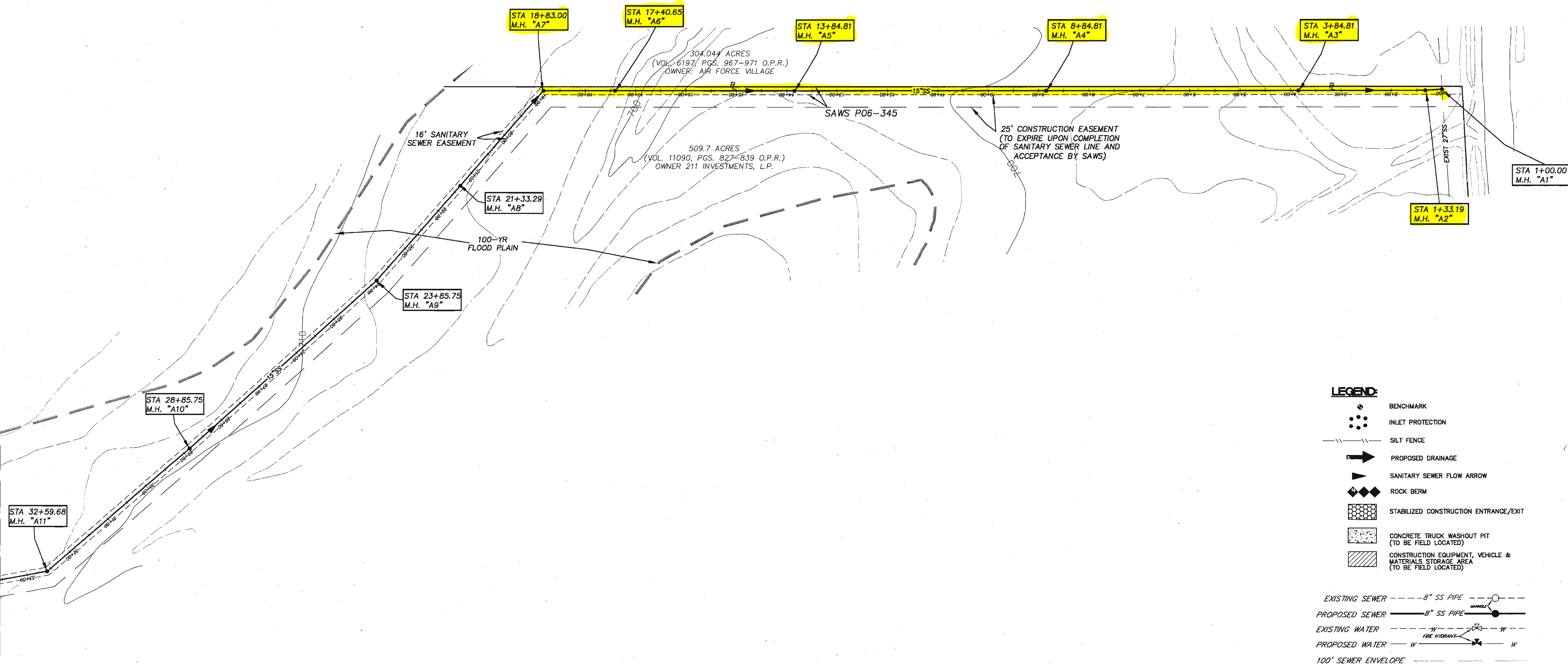
PLAT NO.
060720

JOB NO. 5066-24
DATE AUGUST, 2006
DESIGNER RH
CHECKED CC DRAWN GRG
SHEET C5.3

Developer's Name: BRIGGS RANCH, LTD.
Address: 13777 BRIGGS RANCH RD
City: SAN ANTONIO State: TEXAS ZIP: 78245
Phone: (210) 677-0810 FAX: (210) 677-0150
SAWS Block Map: 184-676 Total EDU's: 61 Total Acreage: 37.77
Total Linear Footage of Pipe: 7294 LF - 15" SDR 35, 2284 LF - 6" SDR 35, 1931 LF - 6" SDR 26
Number of Lots: 26 SAWS JOB NO.: 06-1777 Plot No.: 060720
Number of Manholes: 41

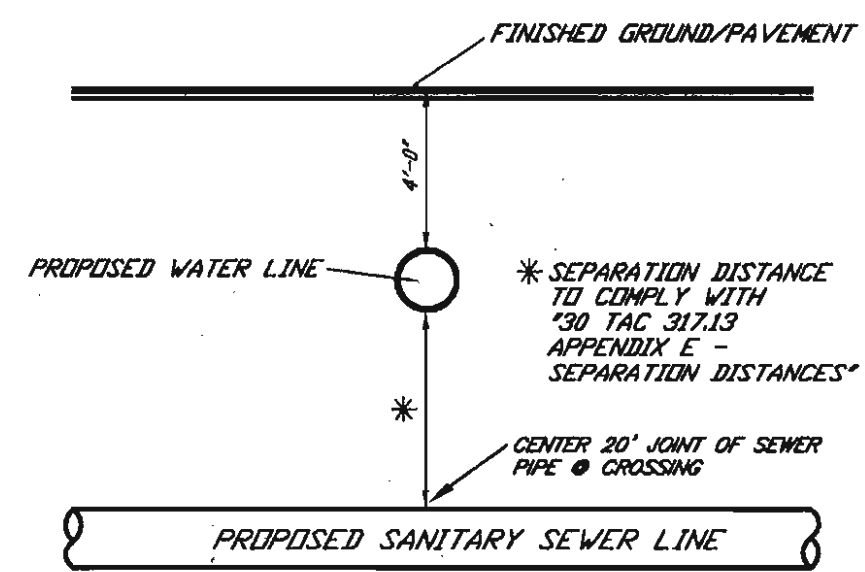
GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

MATCHLINE STA 34+65.00 SEE SHEET C5.2

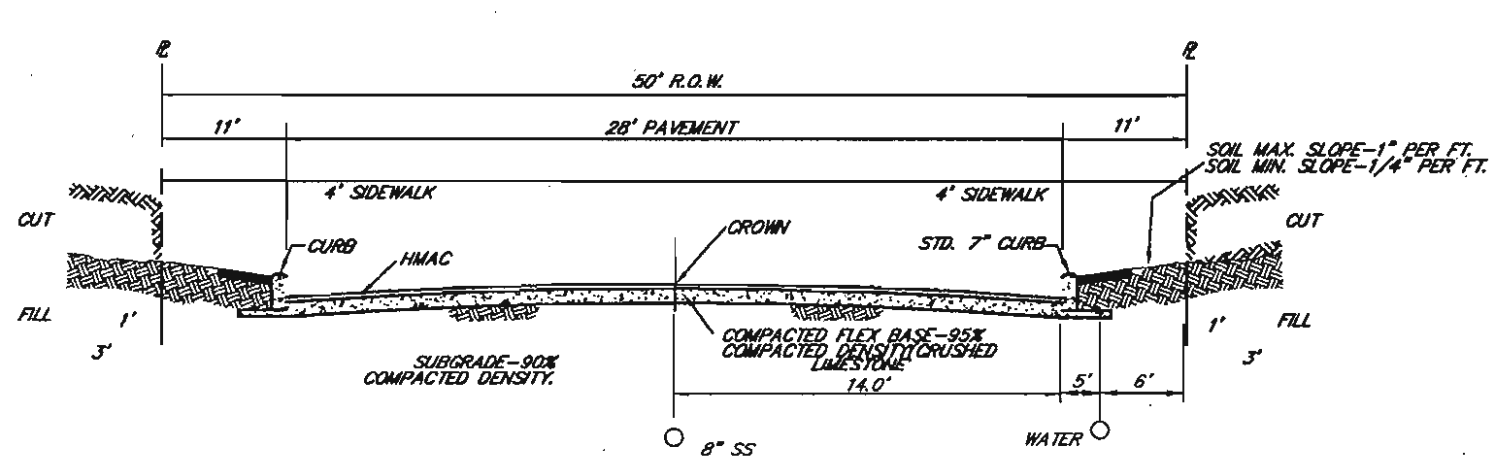


NOTES:

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE FOUR (4) FEET LONG TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE PER LATERAL DETAIL AND EXIST ON SHEET C5.3. (NO SEPARATE PAY ITEM)
- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 180 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D241 WITH ONE (1) JOINT CENTERED AT WATERMAIN.
- PIPE TYPE DESIGNATIONS ARE SDR 35 UNLESS NOTED AS 26A.
- SEE THIS SHEET FOR TYPICAL SANITARY SEWER/WATER CROSSING DETAIL.
- NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASUREMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS. SEE PLAN & PROFILE SHEETS FOR VENTED COVER LOCATIONS.
- BACKFILL MUST COMPLY WITH SAN ANTONIO WATER SYSTEMS SPECIFICATIONS 804.4
- SEE THIS SHEET FOR BENCHMARK INFORMATION.



TYPICAL SANITARY SEWER / WATER CROSSING DETAIL
NOT TO SCALE



TYPICAL STREET SECTION
NOT TO SCALE

NON-EDWARD'S AQUIFER RECHARGE ZONE
SANITARY SEWER SYSTEM
GENERAL NOTES

Revised January 26, 2006

1. All materials and construction procedures within the scope of this project shall be approved by the San Antonio Water System (SAWS) and comply with the following as applicable:

- Current Texas Commission on Environmental Quality's Design Criteria for Sewerage Systems [30 TAC 317.1, 30 TAC 317.2, 30 TAC 317.3 and 30 TAC 317.13].
- Current "San Antonio Water System Standard Specifications for Construction".
- Current City of San Antonio "Standard Specifications for Public Works Construction".
- Current TxDOT "Standard Specification for Construction of Highways, Streets and Drainage".
- Current City of San Antonio "Right - Of - Way Ordinance and Criteria Manual".

2. The Contractor shall not proceed with any pipe installation work until they obtain a copy of the approved G.C.P. from the Consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements.

3. The locations and depths of existing utilities, including service laterals, and drainage structures shown on the plans are approximate only. The Contractor shall verify the exact location and depths of underground utilities at least 48 hours prior to construction whether shown on plans or not, and to protect the same during construction.

San Antonio Water System	233-2010
COSA Drainage	207-2800
COSA Traffic Signal Operations	207-7765
Texas State Wide One Call Locator	1-800-545-6005
City Public Service	"
South Western Bell	"
Time Warner Cable	"
Valero Energy Co.	"
Bexar Metropolitan Water District	354-6536

4. The Contractor shall be responsible for restoring to its original or better condition from damage done to existing fences, curbs, streets, driveways, landscaping and structures.

5. The Contractor shall avoid cutting roots larger than one inch in diameter when excavating near existing trees. Excavation in vicinity of trees shall proceed with caution. The Contractor shall contact the City Arborist at 207-8053 for guidance. SAWS Construction Inspector shall also be notified.

6. The Contractor shall maintain service to existing sanitary sewers at all times during construction.

7. Due to Federal Regulations Title 49, Part 192.181, City Public Service must maintain access to gas valves at all times. The Contractor must protect and work around gas valves that are in the project areas.

8. All residential sewer service laterals shall be extended to the property line and capped and sealed.

9. On all manholes to be abandoned, the rings and covers shall be salvaged in accordance with the most current San Antonio Water System's Standard Specification for Construction, Item 101: Preparation of right-of-way. The hole should be backfilled to the satisfaction of the Inspector.

BLASTING

10. When allowable, blasting shall be performed in accordance with appropriate criteria established by the National Fire Protection Association [30 TAC 313.5 (c) (6)].

11. Blasting for sewer line excavation must be done in such a manner as to minimize the fracturing of rock beyond the required excavation. The Contractor shall consider the elevation of the existing sanitary sewer main in relation to the blasting charge and the relative direction of existing and proposed trenches. Blasting within such areas shall be accomplished only by qualified blasting contractors who hold blasting licenses from a qualified agency such as the San Antonio Fire Department in Bexar County. Any damage to existing sanitary sewers resulting from blasting shall be repaired and retested by the contractor at his own expense.

12. No blasting shall be performed within 75 feet of existing utilities.

13. After construction, testing will be done by TV camera by the Contractor and observed by Inspector, and Wastewater Engineering personnel, as the camera is run through the lines. Any abnormalities, such as broken pipe or misaligned joints, must be replaced by the Contractor at his expense. Contractor to provide TV tapes to Construction Inspection for review prior to final inspection of the project.

EXCAVATION

14. Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures. The Contractor's implementation of the systems, programs and/or procedures shall provide for adequate trench excavation safety protection that complies with as a minimum, OSHA Standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA Standards governing the presence and activities of individuals working in and around trench excavation.

15. Contractor is responsible for removal of all waste materials upon project completion. The Contractor shall not permanently place any waste materials in the 100-year flood plain without first obtaining an approved Flood Plain Development Permit.

16. Water jetting the backfill within a street will not be permitted. Sanitary sewer trenches subject to traffic shall conform to the S.A.W.S. Standard Specifications for Construction, Item No. 550 & 804.

WATER LINE CROSSING

17. Where the minimum 9 foot separation distance between sewer lines and water lines/mains cannot be maintained, the installation of sewer lines shall be in strict accordance with the Texas Natural Resource Conservation Commission's Rules (30 TAC 317.13 Appendix E).

EROSION AND SEDIMENTATION CONTROL

18. The Texas Commission on Environmental Quality and Environmental Protection Agency (EPA) require erosion and sedimentation control for construction of sewer collection systems. Developer or authorized representative shall provide erosion and sedimentation control as notes on the project's plan and profile sheets.

19. All temporary erosion and sedimentation controls shall be removed by the Contractor at final acceptance of the project by the San Antonio Water System.

SUPPLEMENTARY

20. No extra-payment shall be allowed for work called for on the plans but not included on the bid schedule. This incidental work will be required and shall be included under the pay item to which it relates.

21. The Developer dedicates the sanitary sewer mains upon completion by the Developer and acceptance by the San Antonio Water System. The San Antonio Water System will own and maintain said sanitary sewer mains which are located within this particular subdivision. (As applicable)

22. The Developer will be responsible for the lift station maintenance fee in effect at the time of certification. The current maintenance fee per lift station will be collected prior to plat recordation.

23. All PVC Sewer Pipe with over 14 feet of cover shall be extra strength pipe, Minimum Stiffness of 115 PSI.

24. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED WITH THE SAN ANTONIO WATER SYSTEM CONSTRUCTION INSPECTION DIVISION WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

SAN ANTONIO WATER SYSTEM
CRITERIA FOR SEWER MAIN CONSTRUCTION
IN THE VICINITY OF WATER MAINS

I. WHERE A SEWER MAIN CROSSES OVER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE (9) FEET, ALL PORTIONS OF THE SEWER MAIN WITHIN NINE (9) FEET OF THE WATER LINE SHALL BE CONSTRUCTED USING 150 PSI PRESSURE RATED DUCTILE IRON, CAST IRON, OR PVC PIPE AND JOINED WITH EQUALLY PRESSURE RATED RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON MATERIAL. A SECTION OF 150 PSI PRESSURE RATED PIPE AT LEAST EIGHTEEN (18) FEET IN LENGTH MAY BE CENTERED ON THE WATER MAIN IN LIEU OF PIPE CONNECTION REQUIREMENTS (NO SEPARATE PAY ITEM)

II. WHERE A SEMI-RIGID OR RIGID SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET BUT GREATER THAN TWO FEET, THE INITIAL BACKFILL SHALL BE CEMENT STABILIZED SAND (TWO OR MORE BAGS OF CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF THE SEWER WITHIN NINE FEET OF THE WATER MAIN.

III. WHERE A SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN TWO FEET, THE SEWER MAIN SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI WITHIN NINE FEET OF THE WATER MAIN, SHALL BE PLACED NO CLOSER THAN SIX (6") INCHES BETWEEN OUTER DIAMETERS, AND SHALL BE JOINED WITH PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OR A CAST IRON OR DUCTILE IRON MATERIAL. A SECTION OF PSI PRESSURE RATED PIPE OF A LENGTH GREATER THAN EIGHTEEN (18) FEET MAY BE CENTERED ON THE WATER MAIN IN LIEU OF PIPE CONNECTION REQUIREMENTS. (NO SEPARATE PAY ITEM).

IV. WHERE A SEWER MAIN PARALLELS A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET, THE SEWER MAIN SHALL BE BELOW THE WATER MAIN, SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI FOR BOTH PIPE AND JOINTS FOR A DISTANCE OF NINE FEET BEYOND THE POINT OF CONFLICT, SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE BETWEEN OUTER DIAMETERS OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY, AND SHALL BE JOINED WITH PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON MATERIALS.

V. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED ANY CLOSER THAN NINE FEET TO WATER MAINS.

VI. PLAN AND PROFILE MUST SHOW TYPE OR CROSSING AND MATERIAL TO USE.

Developer's Name: <u>BRIGGS RANCH, LTD.</u>	
Address: <u>13777 BRIGGS RANCH RD</u>	
City: <u>SAN ANTONIO</u>	State: <u>TEXAS</u> ZIP: <u>78245</u>
Phone# (210) <u>677-0810</u>	FAX# (210) <u>677-0150</u>
SAWS Block Map# <u>184-678</u> Total EDU's <u>81</u> Total Acreage <u>37.77</u>	
Total Linear Footage of Pipe: <u>7894 LF - 18" SDR 35, 2284 LF - 6" SDR 35, 1931 LF - 6" SDR 36</u>	
Number of Lots: <u>78</u>	SAWS JOB NO. <u>06-1777</u> Plat No. <u>060720</u>
Number of Manholes: <u>41</u>	

GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

REVISIONS:



PAPE-DAWSON ENGINEERS

555 EAST RAMSEY SAN ANTONIO TEXAS 78216
PHONE 210.375.9000 FAX 210.375.9010

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)

SANITARY SEWER NOTES

PLAT NO.
060720

JOB NO. 5066-24

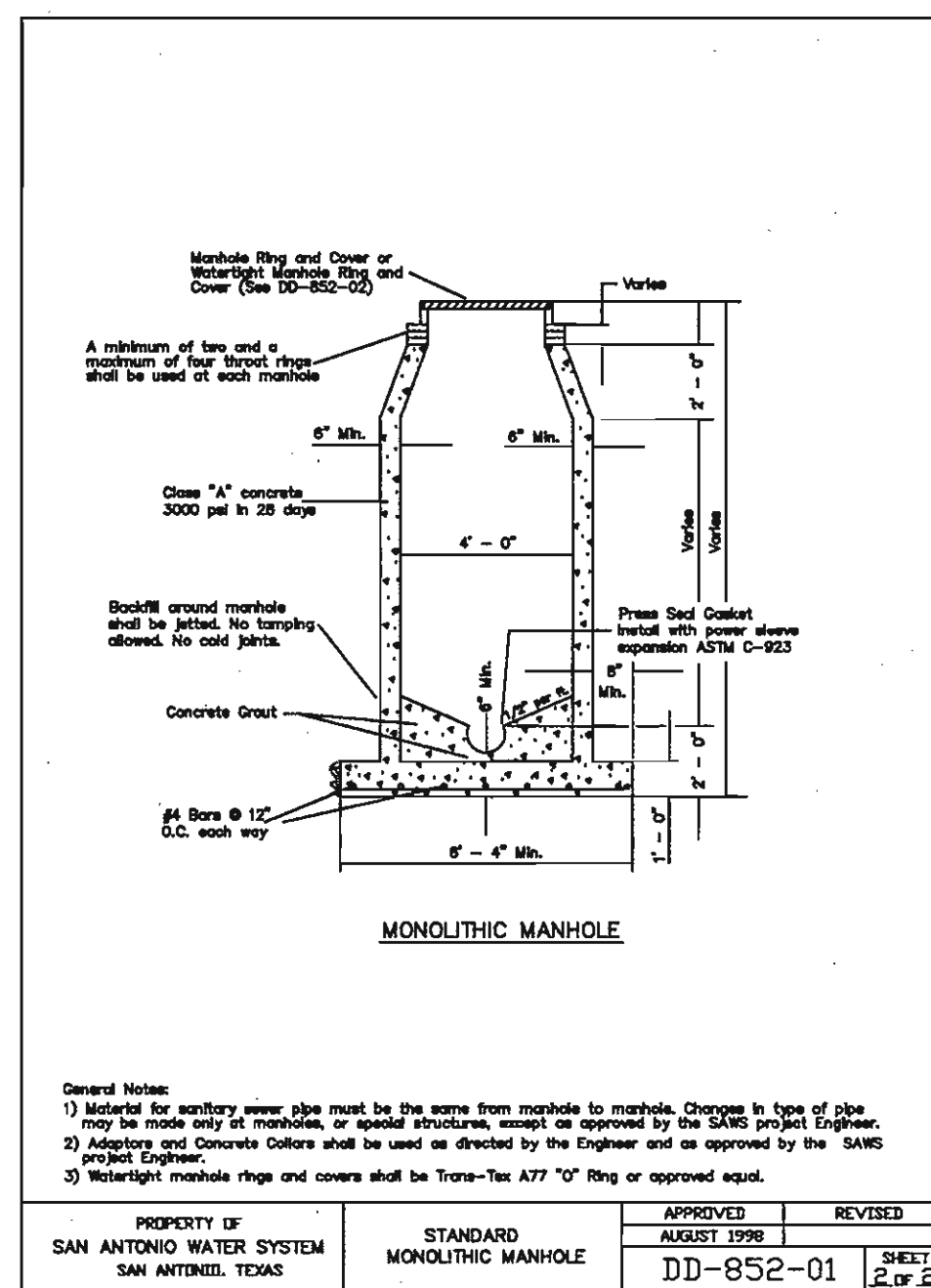
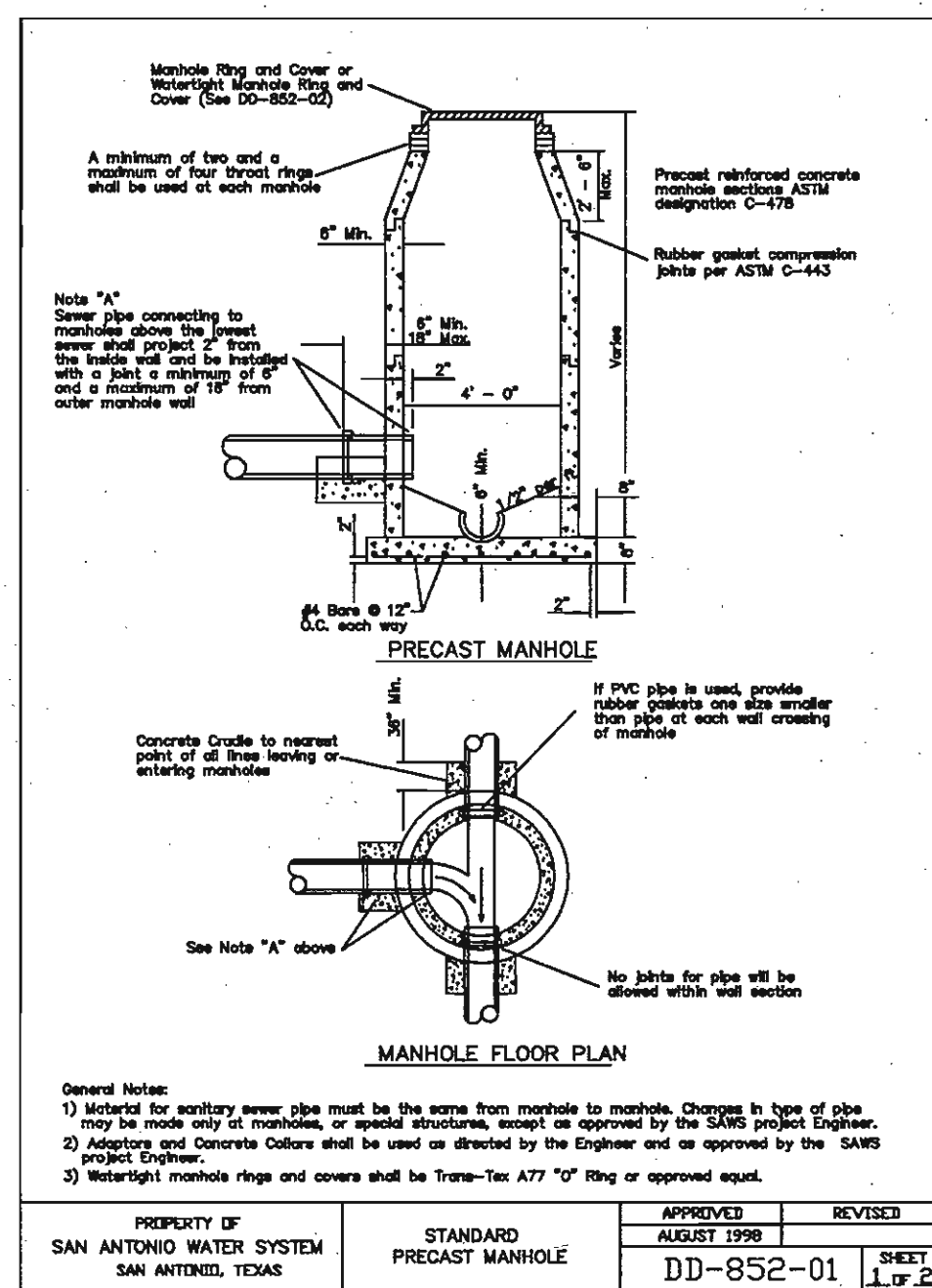
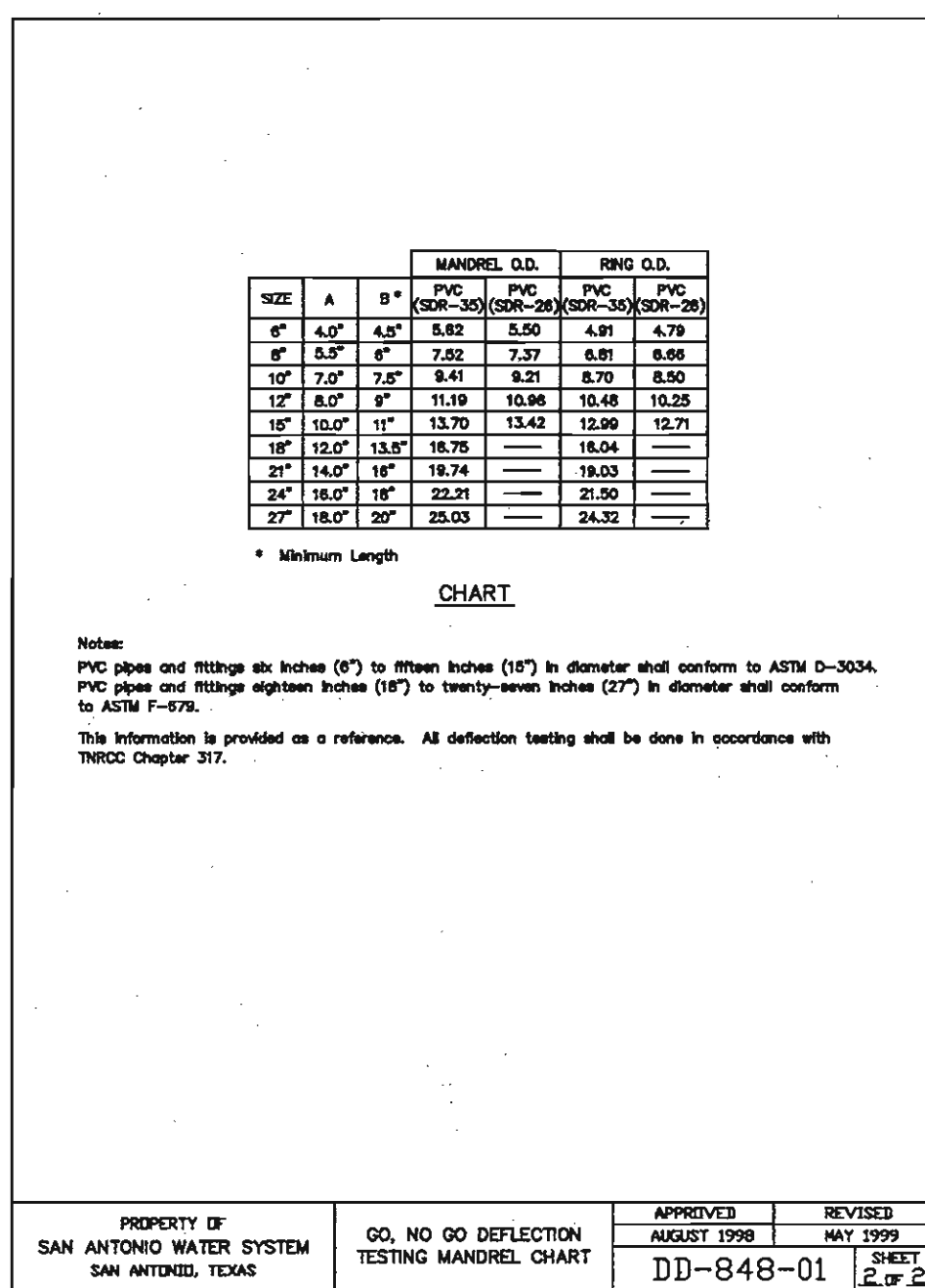
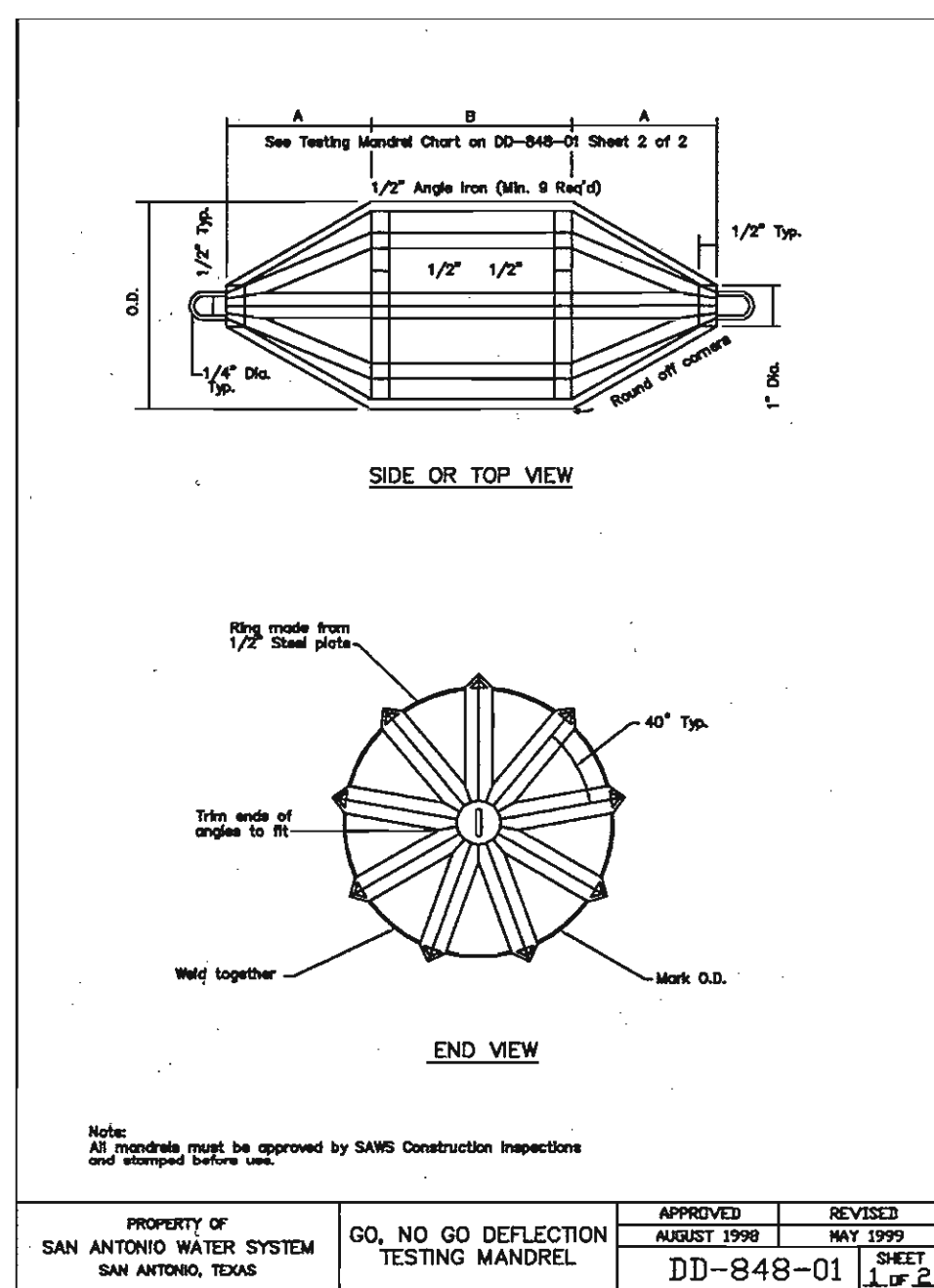
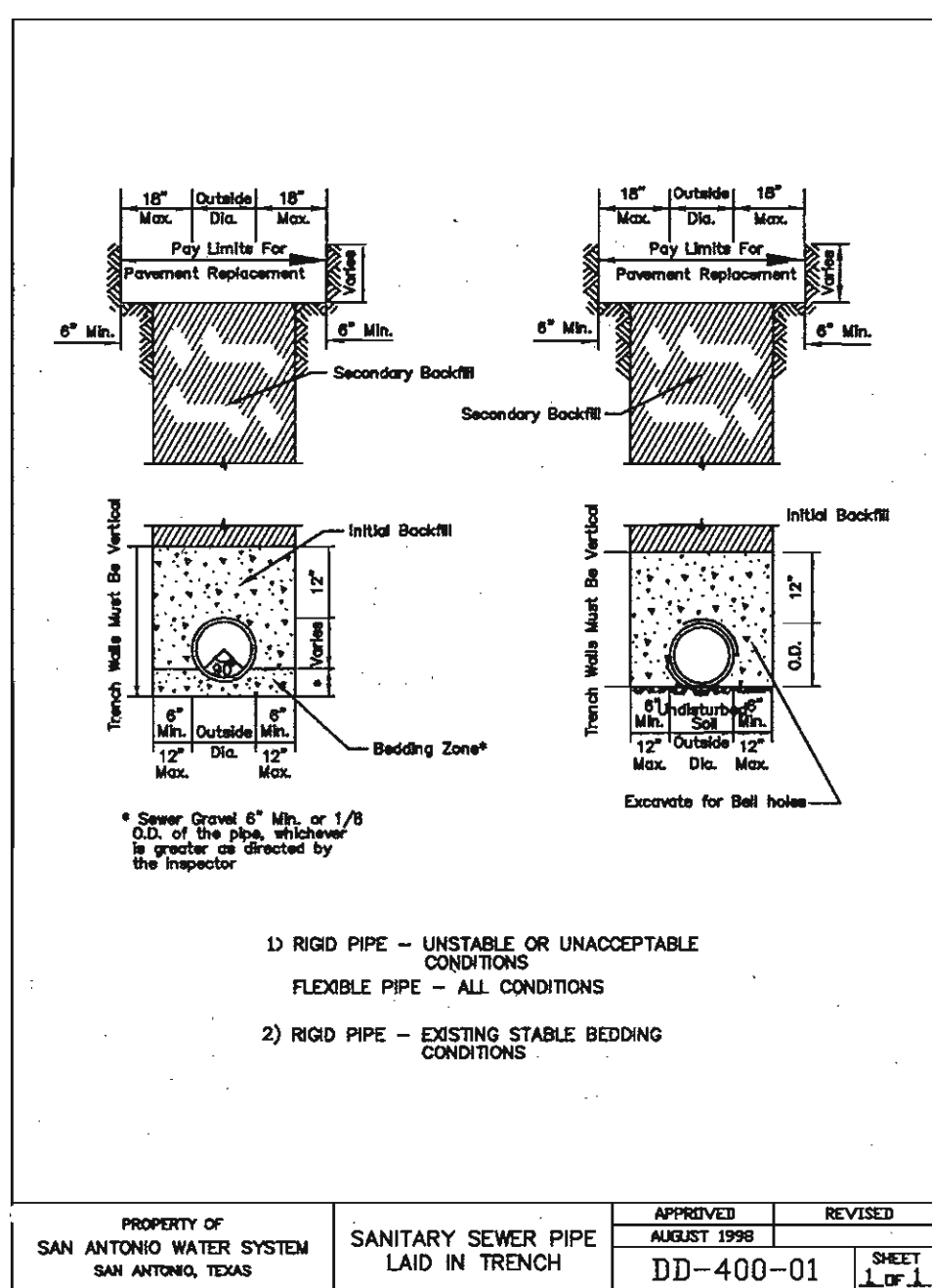
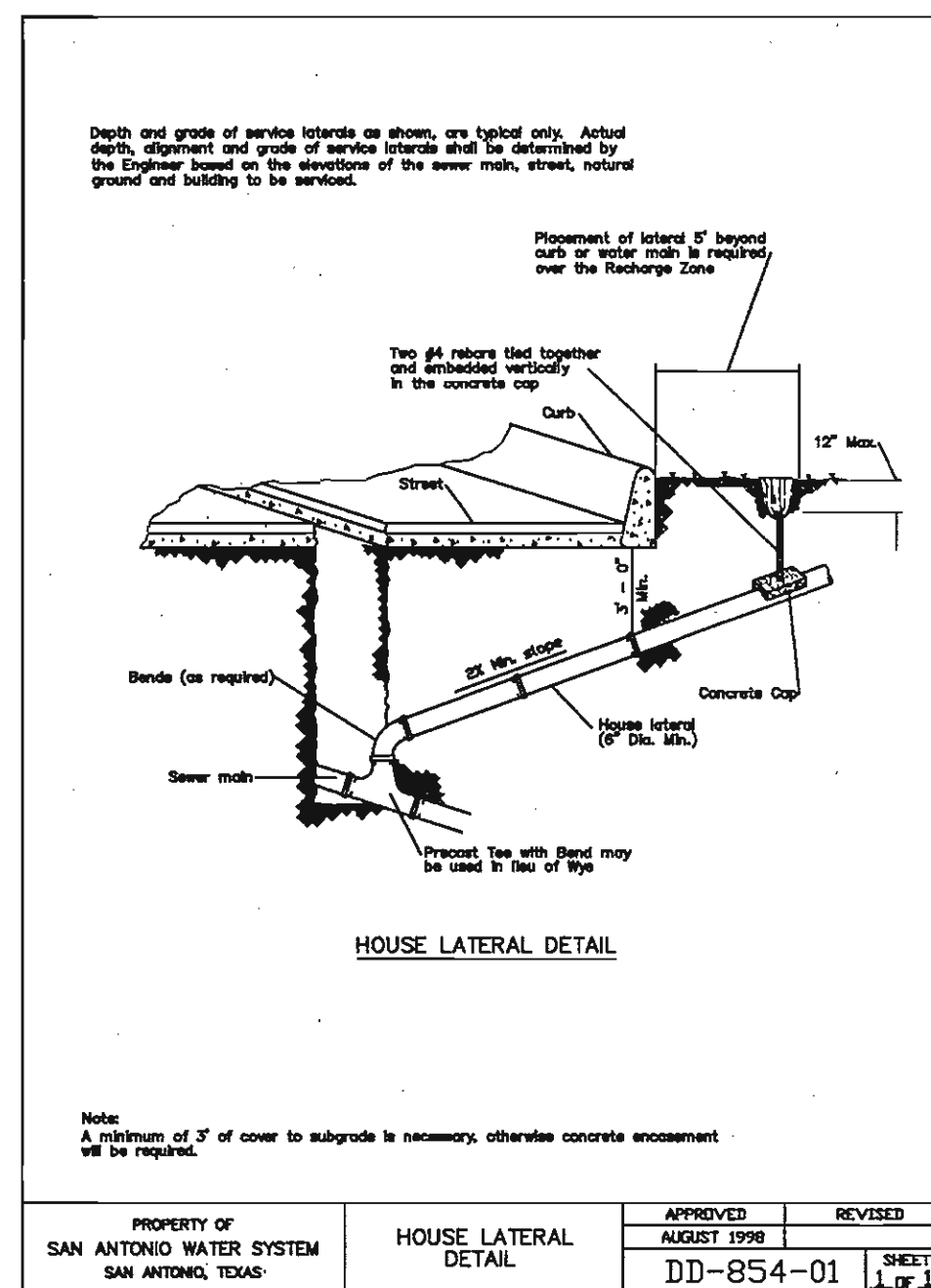
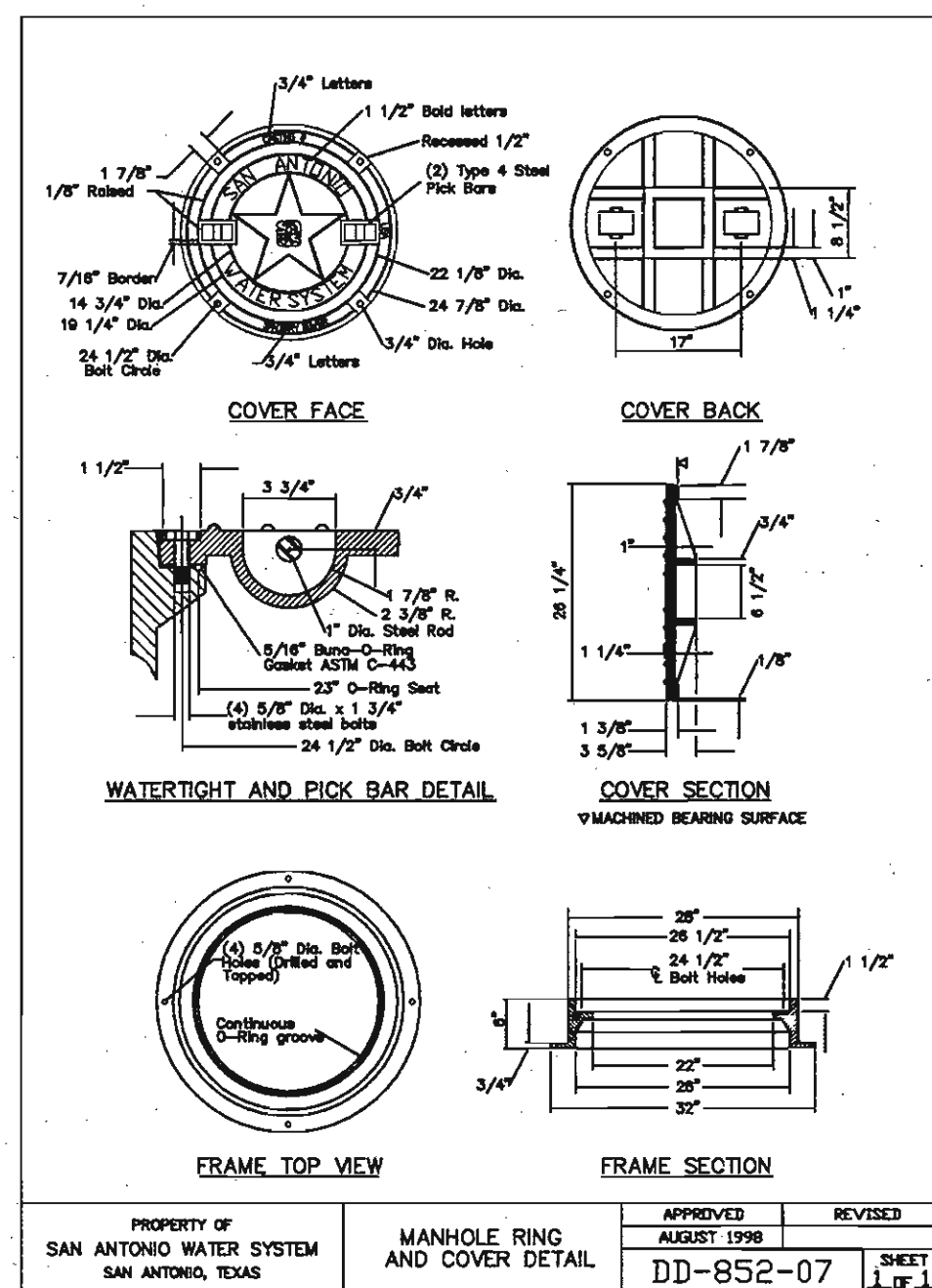
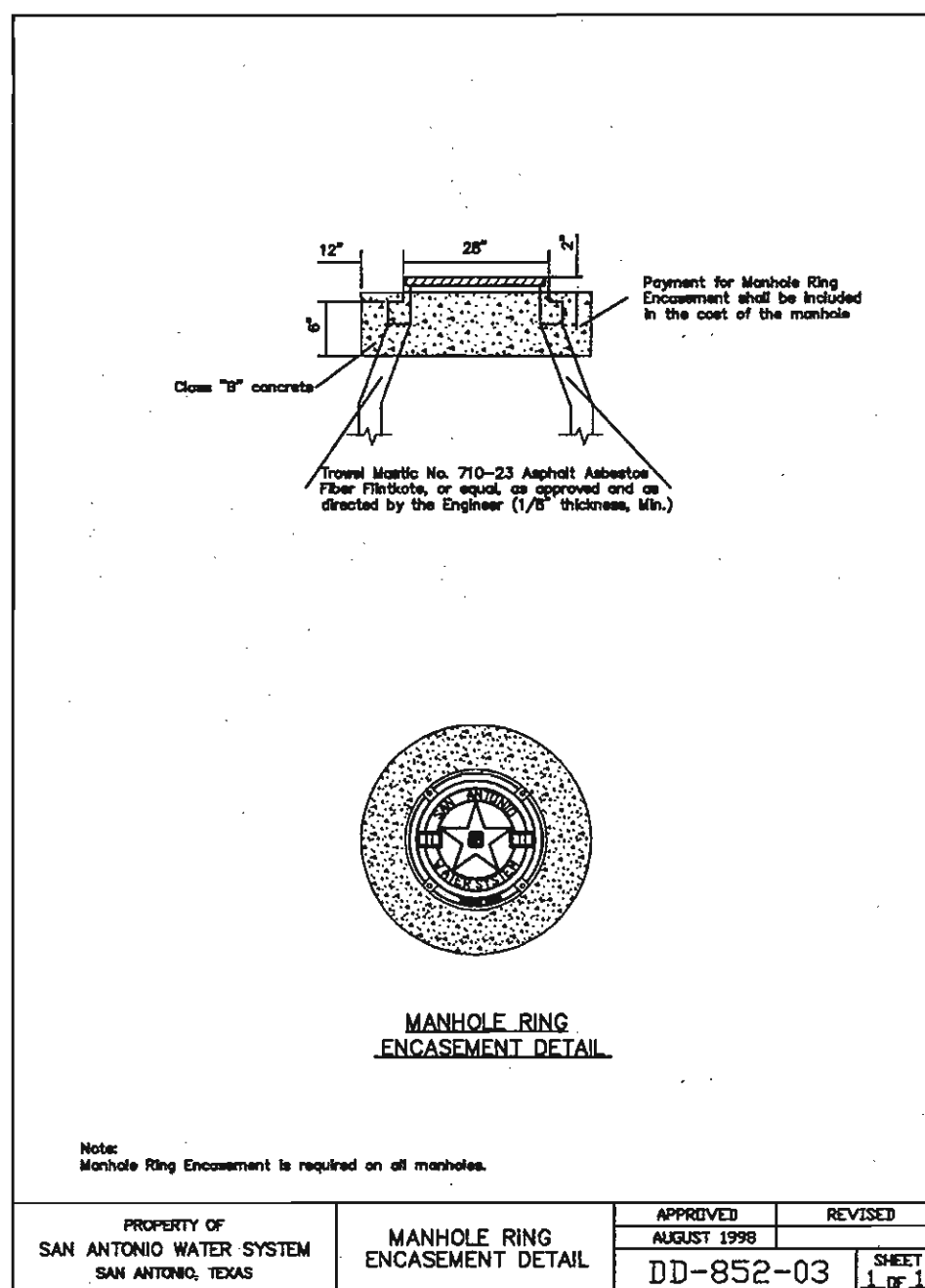
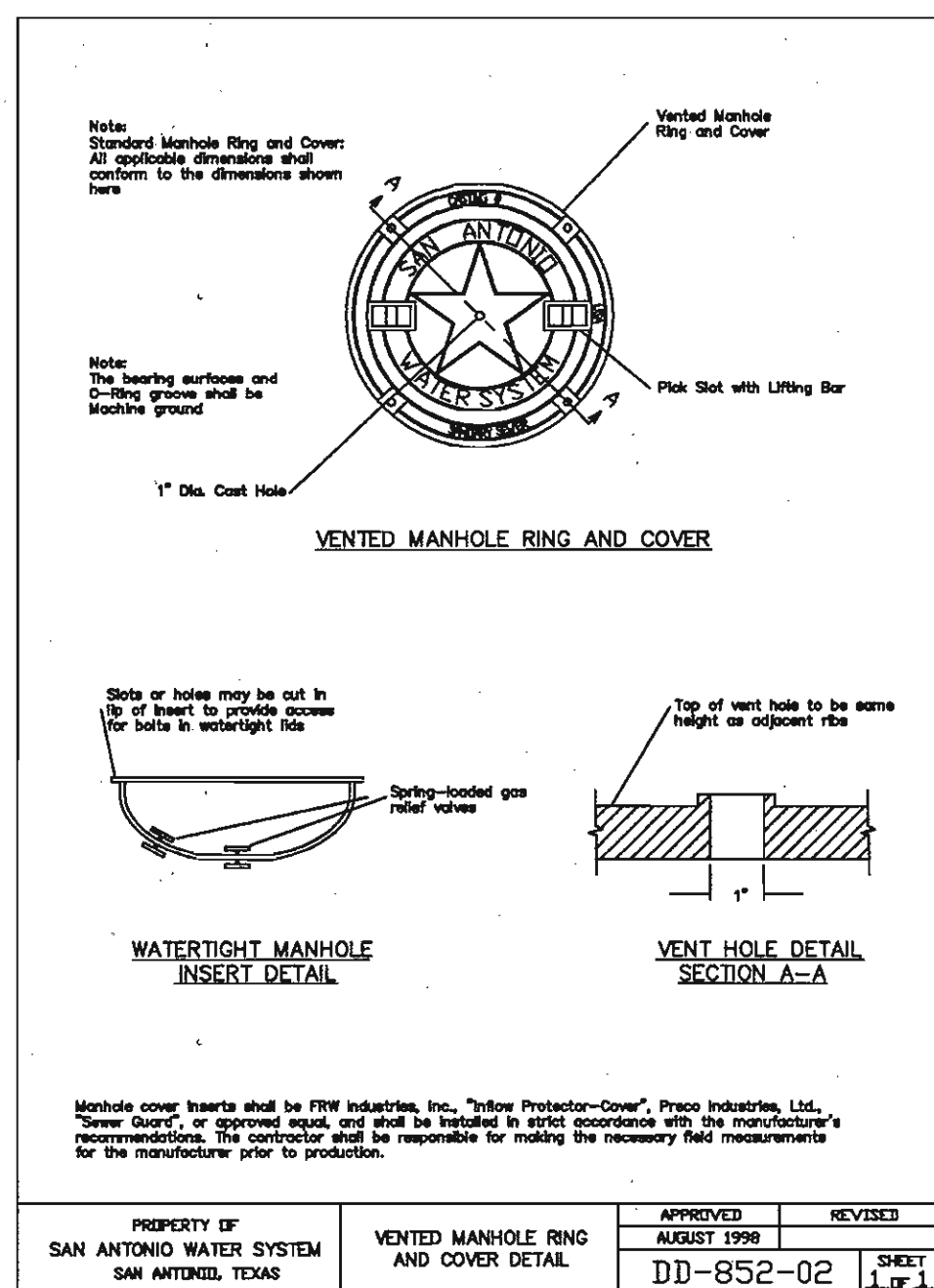
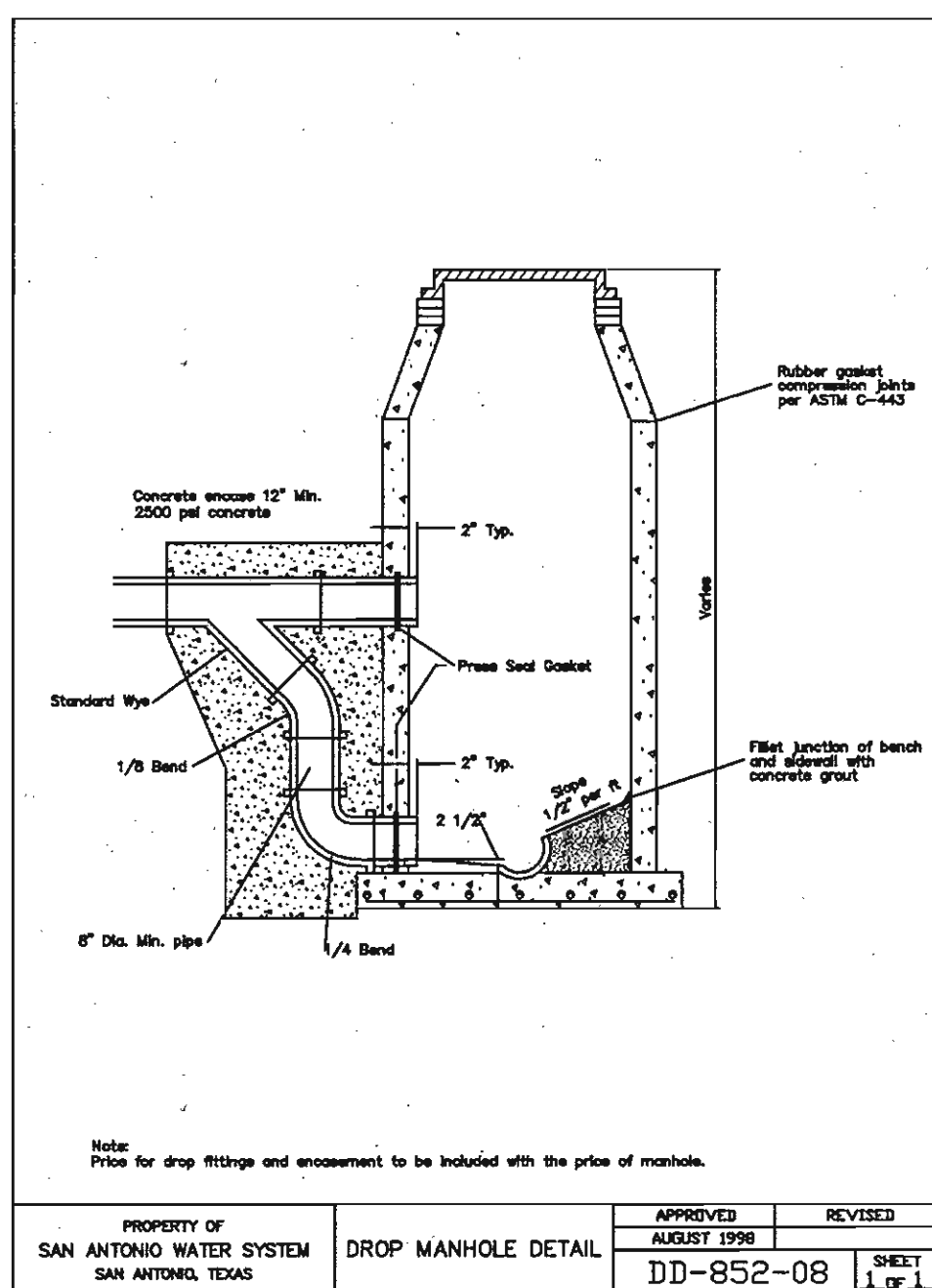
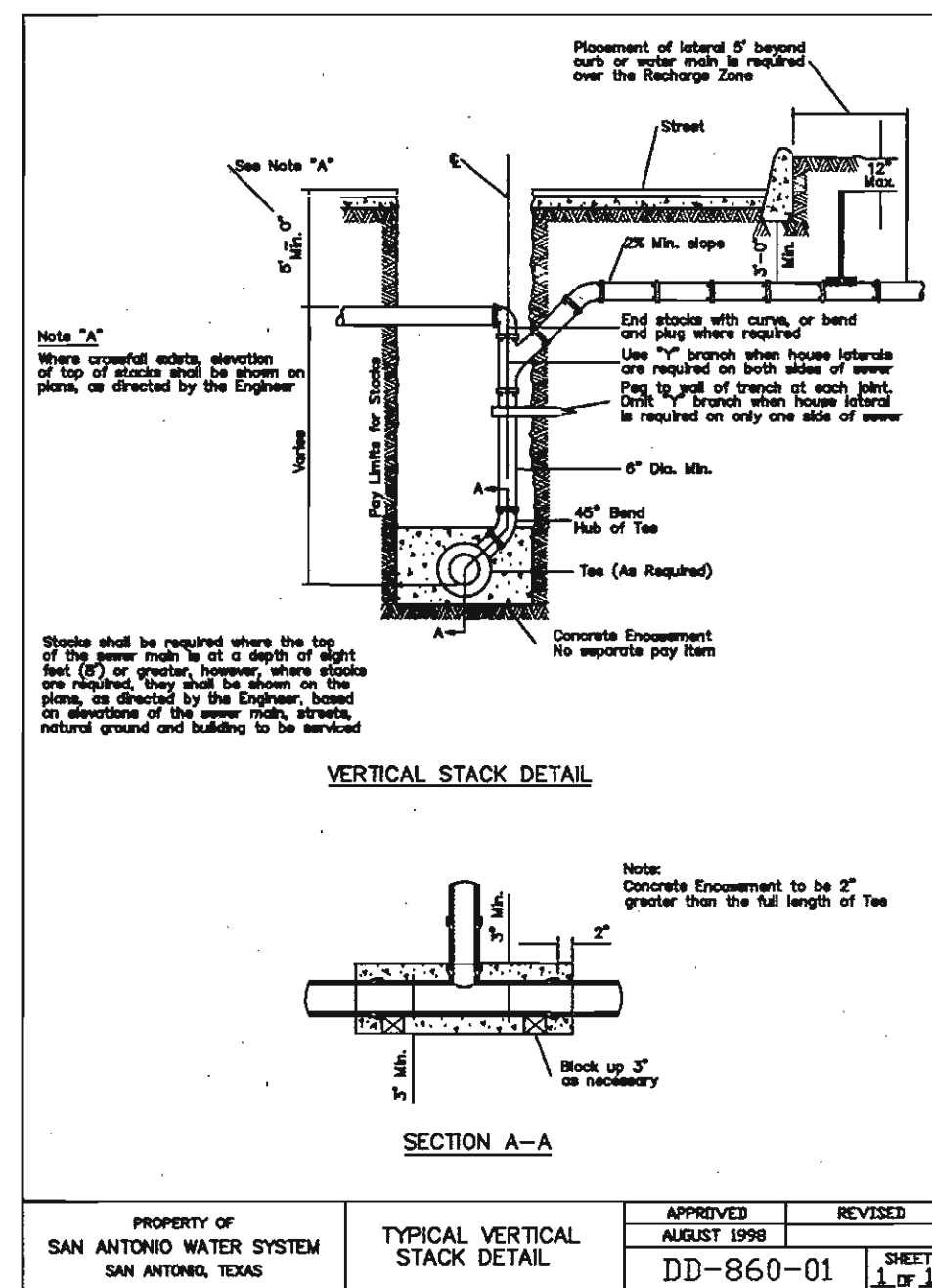
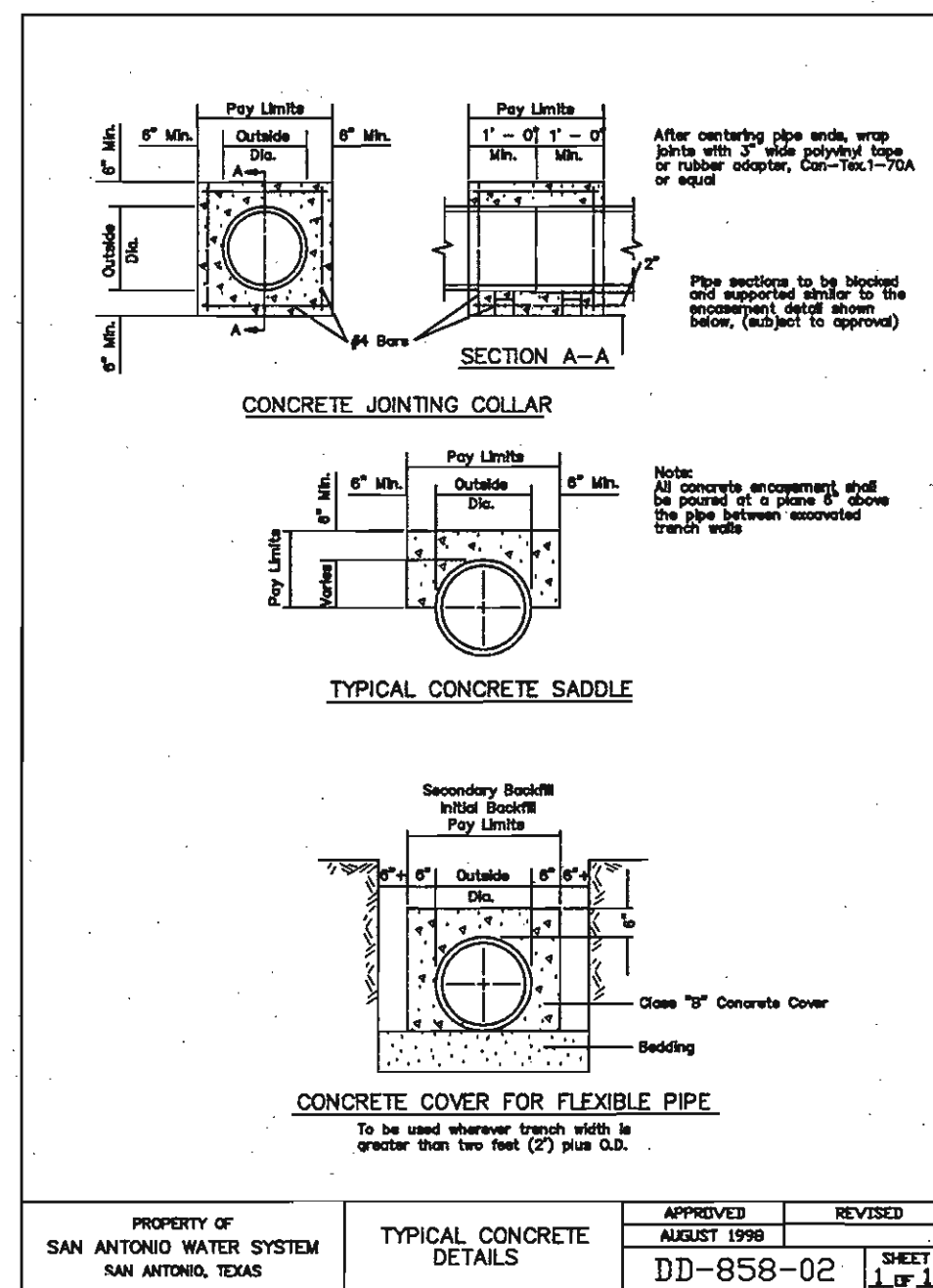
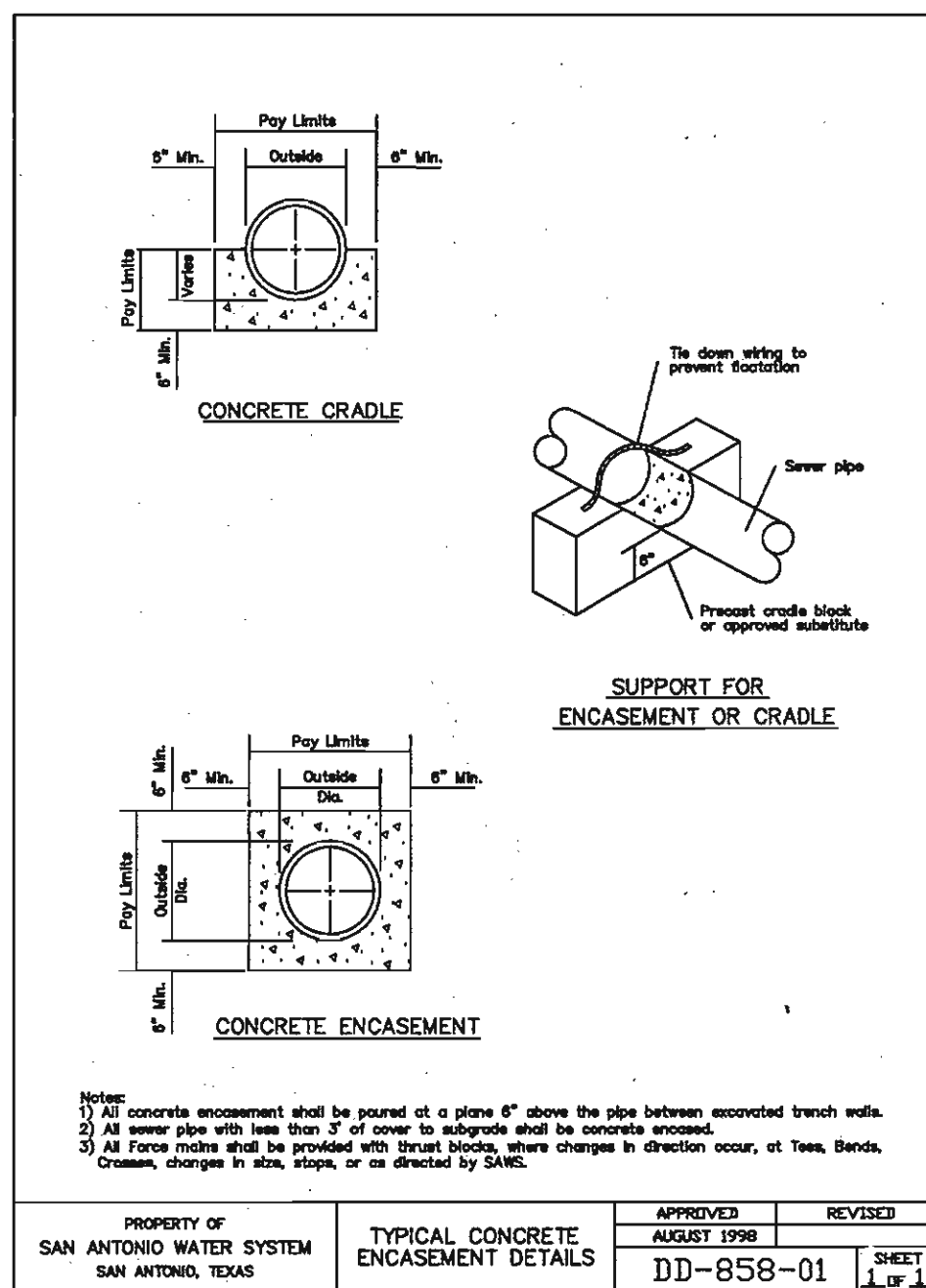
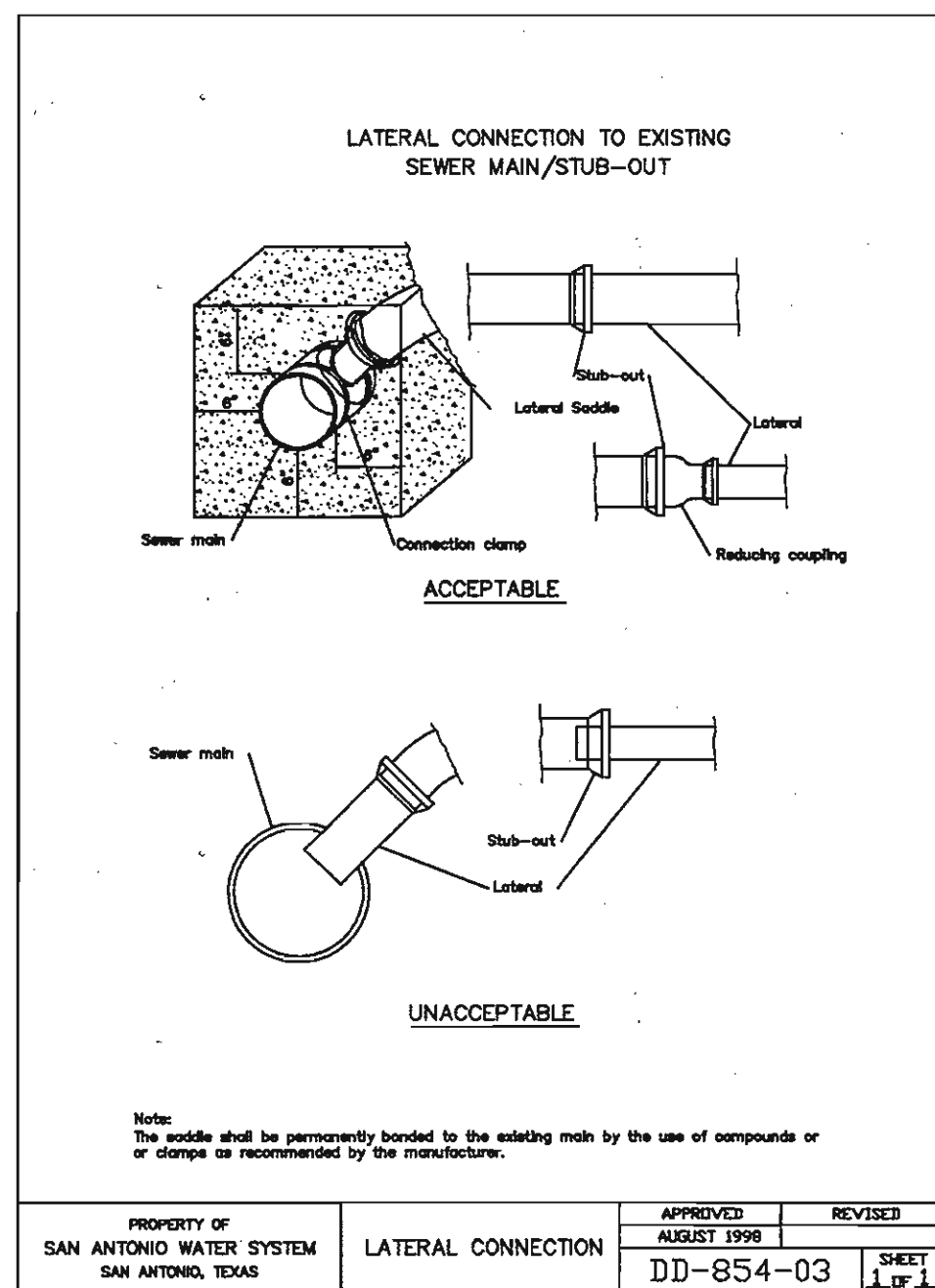
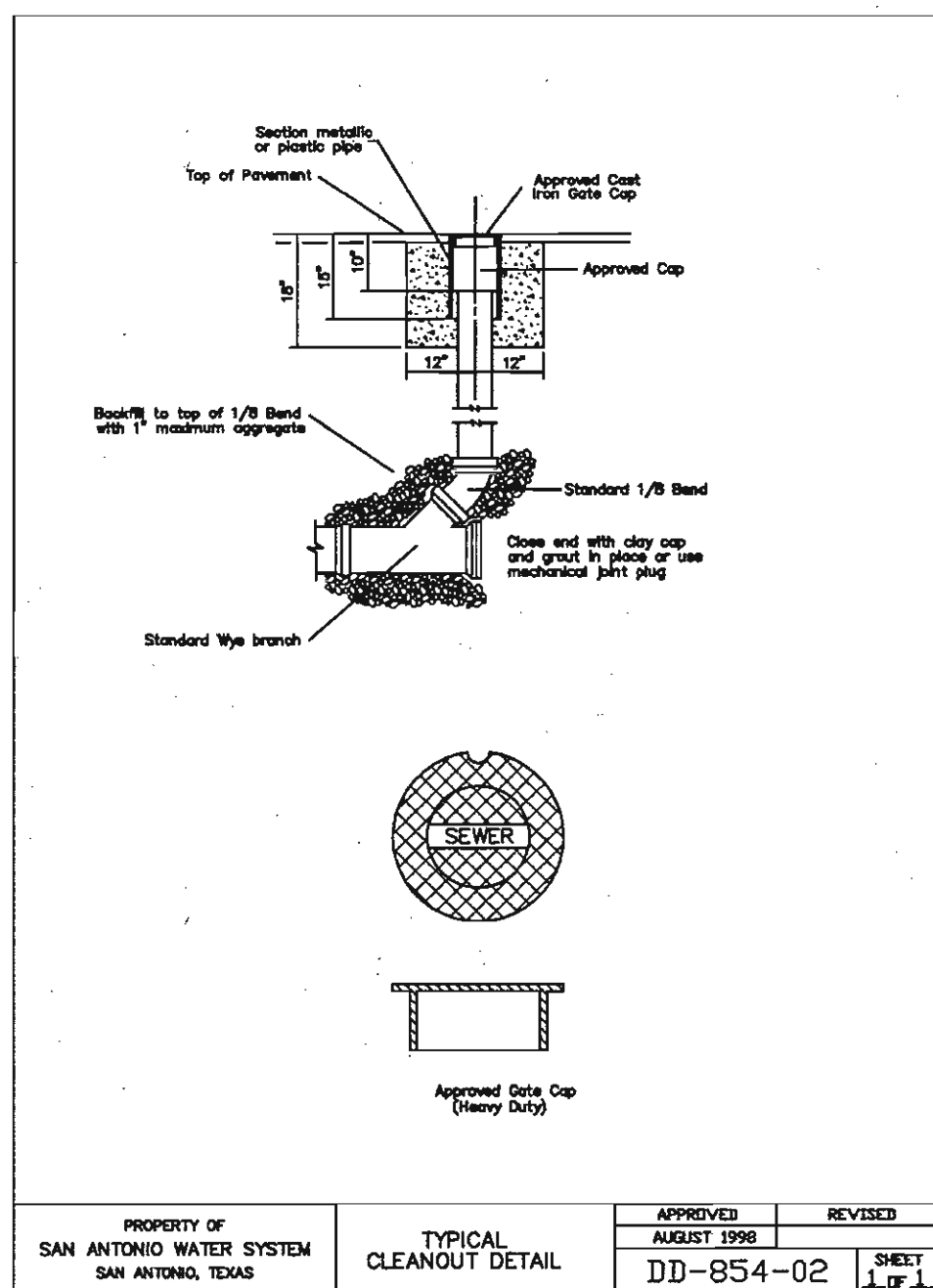
DATE AUGUST, 2006

DESIGNER

CHECKED DRAWN

SHEET C5.4

AS-BUILT/PLAN OF RECORD: OCTOBER 31, 2008



Developer's Name: BRIGGS RANCH LTD.
 Address: 13777 BRIGGS RANCH RD. City: SAN ANTONIO State: TEXAS ZIP: 78245
 Phone: (210) 677-0810 FAX: (210) 677-0150
 SAMS Block Map: 184-676 Total ECU's: 61
 Total Linear Footage of Pipe: 2944 LF - 18" DIA. 25' 2004 LF - 18" DIA. 25' 1031 LF - 18" DIA. 25'
 Number of Lot 26 SAMS JOB NO. 06-1777 Plat No. 060720
 Number of Manholes: 41

REVISIONS:

STATE OF TEXAS
 JON D. ADAMS
 82567
 REGISTERED PROFESSIONAL ENGINEER
 Jon Adams 9/14/06

PAPE-DAWSON ENGINEERS
 555 EAST FAIRWAY
 SAN ANTONIO, TEXAS 78216
 PHONE: 210.376.9000
 FAX: 210.376.9070

TRAILS OF BRIGGS RANCH UNIT 3A
 (PLANNED UNIT DEVELOPMENT)

SANITARY SEWR DETAIL S

PLAT NO.
060720

JOB NO. 5066-24

DATE AUGUST, 2006

DESIGNER

CHECKED - DRAWN -

SHEET C5.5

GENERAL CONSTRUCTION PERMIT
 S.A.W.S. JOB NO. 06-1777

AS-BUILT/PLAN OF RECORD: OCTOBER 31, 2008

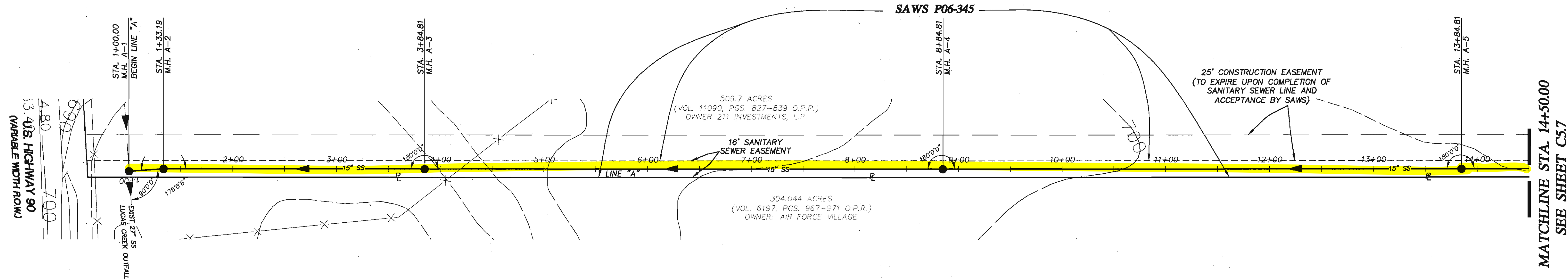
NOTE:

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. PER LATERAL DETAIL 402 ER2D ON SHEET C5.5
- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20" JOINT CENTERED AT WATER MAIN. (NO SEPARATE PAY ITEM)
- SEE SHEET C5.1 FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
- SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
- NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS

TRENCH EXCAVATION SAFETY PROTECTION

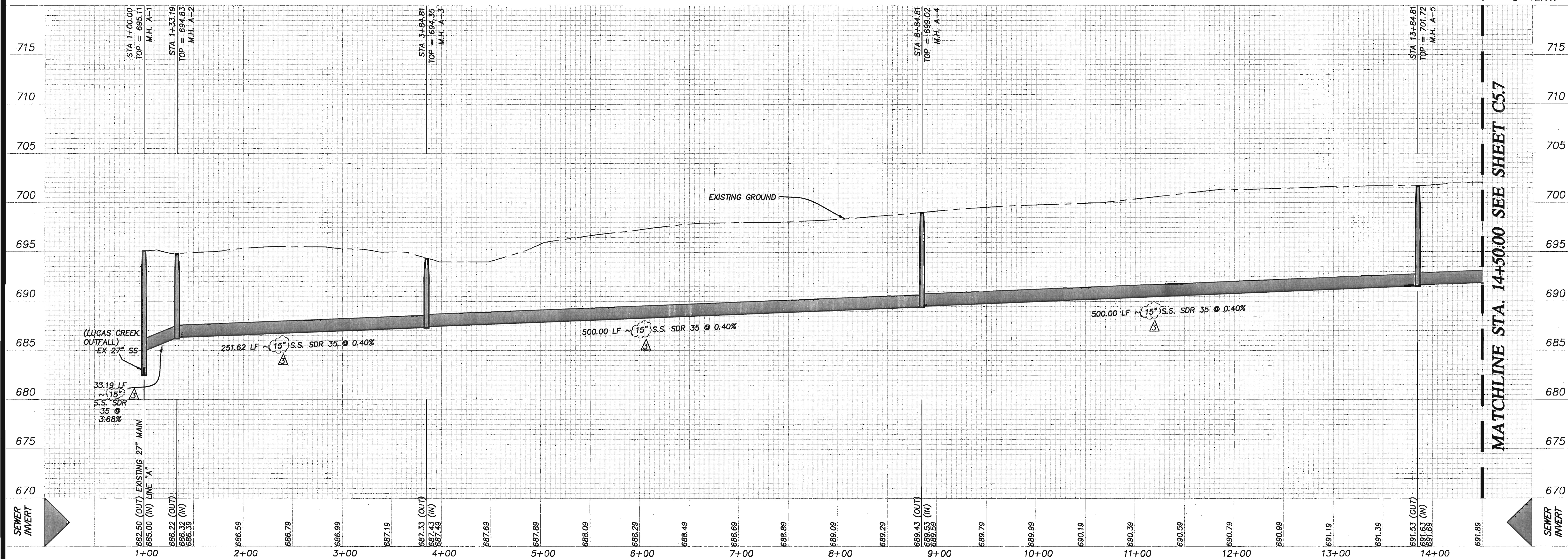
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

Developer's Name: **BRIGGS RANCH, LTD.**
 Address: **13777 BRIGGS RANCH RD**
 City: **SAN ANTONIO** State: **TEXAS** ZIP: **78245**
 Phone: **(210) 677-0810** FAX: **(210) 677-0150**
 SAWS Block Map: **184-676** Total EDU's: **81** Total Acreage: **37.77**
 Total Linear Footage of Pipe: **7294 LF - 15" SDR 35, 2294 LF - 8" SDR 35, 1931 LF - 6" SDR 35**
 Number of Lots: **76** SAWS JOB NO.: **06-1777** Plot No.: **060720**
 Number of Manholes: **41**



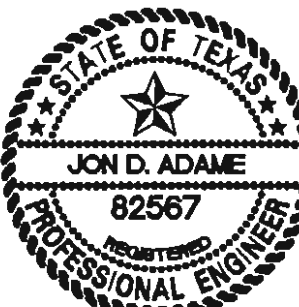
LINE "A"
STA. 1+00.00 TO 14+50.00

SCALE: 1" = 50' HORIZ.
 1" = 5' VERT.



GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

REVISIONS:
 1. 12-11-06 CHANGED OUTFALL FROM 15" TO 12".
 2. 2-23-07 CHANGED OUTFALL FROM 12" TO 15".
 -SHEET RE-ISSUED.
 -SHEET RE-ISSUED.



Jon Adame 2/28/07

PAPE-DAWSON ENGINEERS
 555 EAST FAIRWAY
 SAN ANTONIO, TEXAS 78216
 PHONE: 210.375.9000
 FAX: 210.375.9010

TRAILS OF BRIGGS RANCH UNIT 3A
 (PLANNED UNIT DEVELOPMENT)
LINE "A" STA 1+00.00 TO 14+50.00
SANITARY SEWER PLAN & PROFILE

PLAT NO.
060720

JOB NO. 5066-24

DATE AUGUST, 2006

DESIGNER RH

CHECKED CC **DRAWN** RH

SHEET **C5.6**

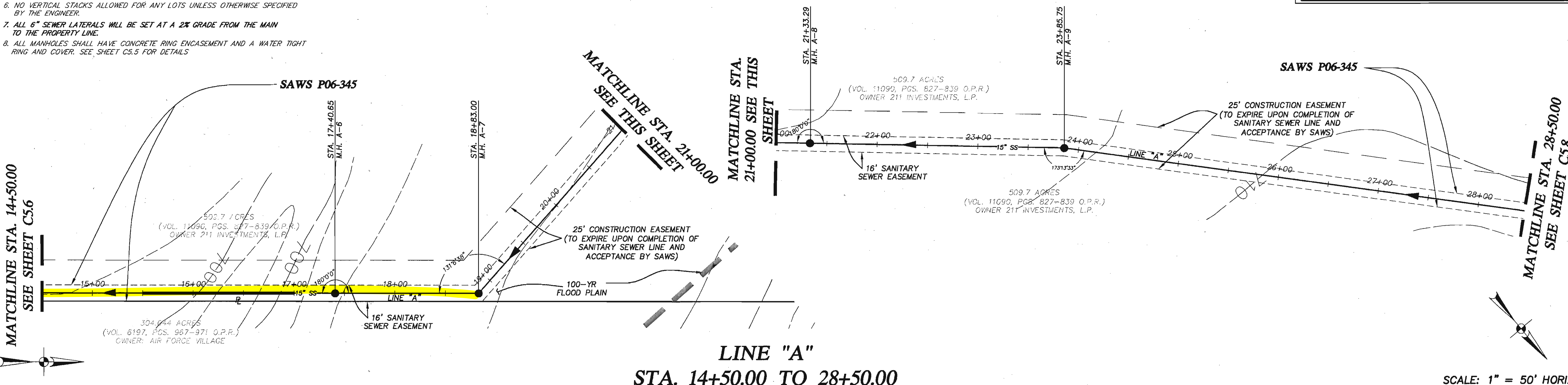
NOTE:

1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. PER LATERAL DETAIL 402 ERD ON SHEET C5.5
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20" JOINT CENTERED AT WATER MAIN. (NO SEPARATE PAY ITEM)
3. SEE SHEET C5.1 FOR BENCHMARK INFORMATION.
4. PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
5. SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
6. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
7. ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
8. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS

TRENCH EXCAVATION SAFETY PROTECTION

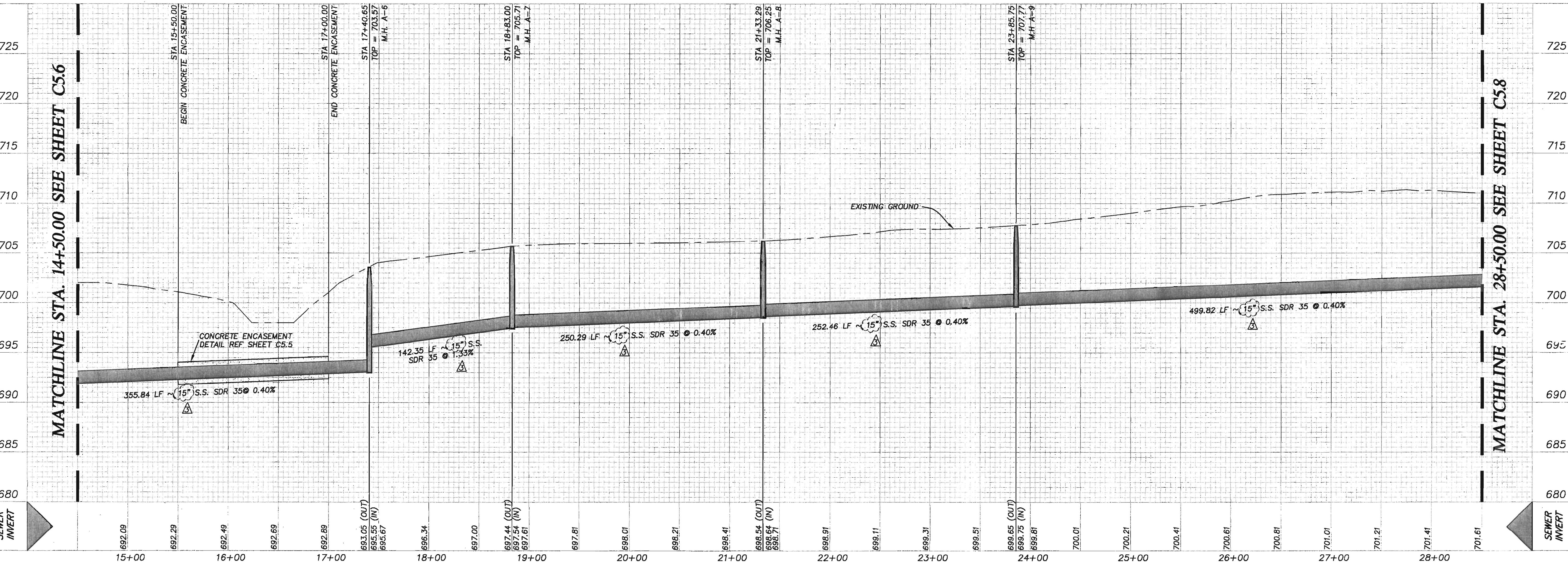
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

Developer's Name: **BRIGGS RANCH, LTD.**
 Address: **13777 BRIGGS RANCH RD**
 City: **SAN ANTONIO** State: **TEXAS** ZIP: **78245**
 Phone: **(210) 677-0810** FAX: **(210) 677-0150**
 SAWS Block Map: **164-676** Total EDU's: **61** Total Acreage: **37.77**
 Total Linear Footage of Pipe: **2894 LF - 15" SDR 35, 2294 LF - 8" SDR 35, 1931 LF - 8" SDR 26**
 Number of Lots: **76** SAWS JOB NO.: **06-1777** Plat No.: **060720**
 Number of Manholes: **41**



LINE "A"
STA. 14+50.00 TO 28+50.00

SCALE: 1" = 50' HORIZ.
 1" = 5' VERT.



GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

Date: Feb. 28, 2007, 11:09am User: ID: JAdkins
 File: P:\05066\05066.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARD COPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

REVISIONS:

NO.	DATE	REVISION
1	11-9-06	REVISED AS PER SAWS COMMENTS
2	12-01-06	CHANGED OUTFALL FROM 15" TO 12"
3	2-23-07	CHANGED OUTFALL FROM 12" TO 15"
4		SEWER LINE FROM 12" TO 15"
5		SHEET RE-ISSUED

STATE OF TEXAS
PROFESSIONAL ENGINEER
JOHN D. ADAMS
82567
 Jm Adams
 2/28/07

PAPE-DAWSON ENGINEERS
 555 EAST RAMSEY
 SAN ANTONIO, TEXAS 78216
 PHONE: 210.375.6000
 FAX: 210.375.6010

TRAILS OF BRIGGS RANCH UNIT 3A
 (PLANNED UNIT DEVELOPMENT)
LINE "A" STA 14+50.00 TO 28+50.00
SANITARY SEWER PLAN & PROFILE

PLAT NO. **060720**

JOB NO. **5066-24**

DATE **AUGUST, 2006**

DESIGNER **RH**

CHECKED **CC** DRAWN **RH**

SHEET **C5.7**

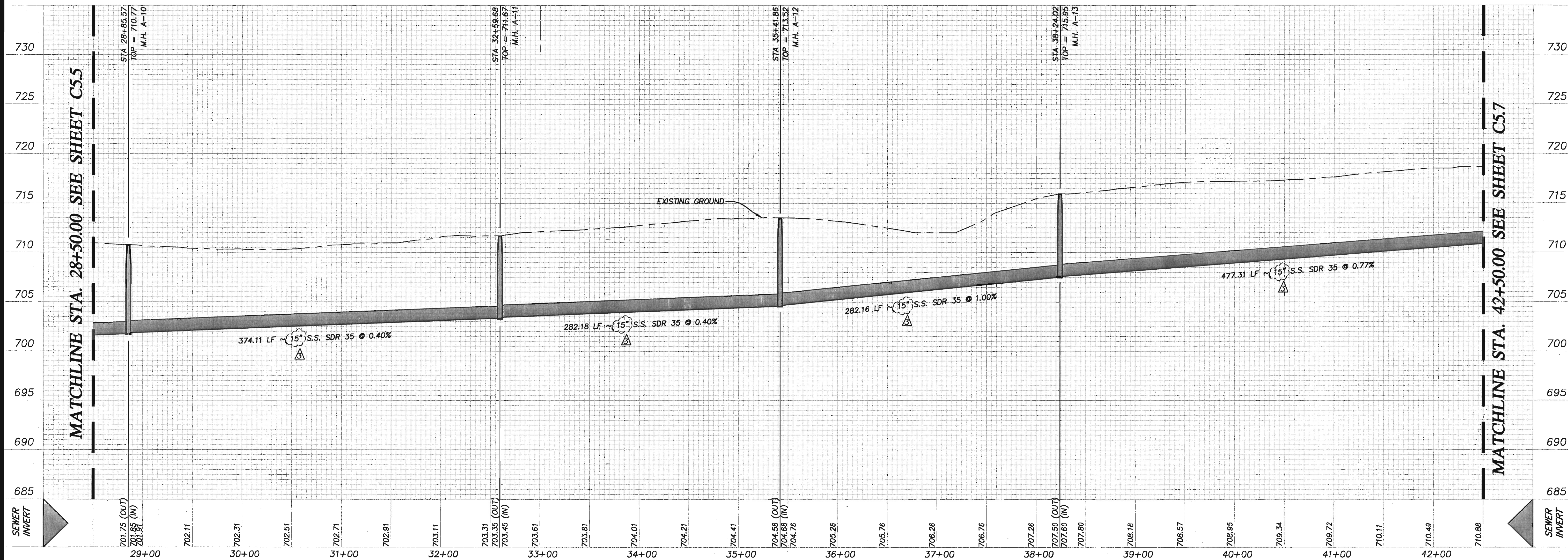
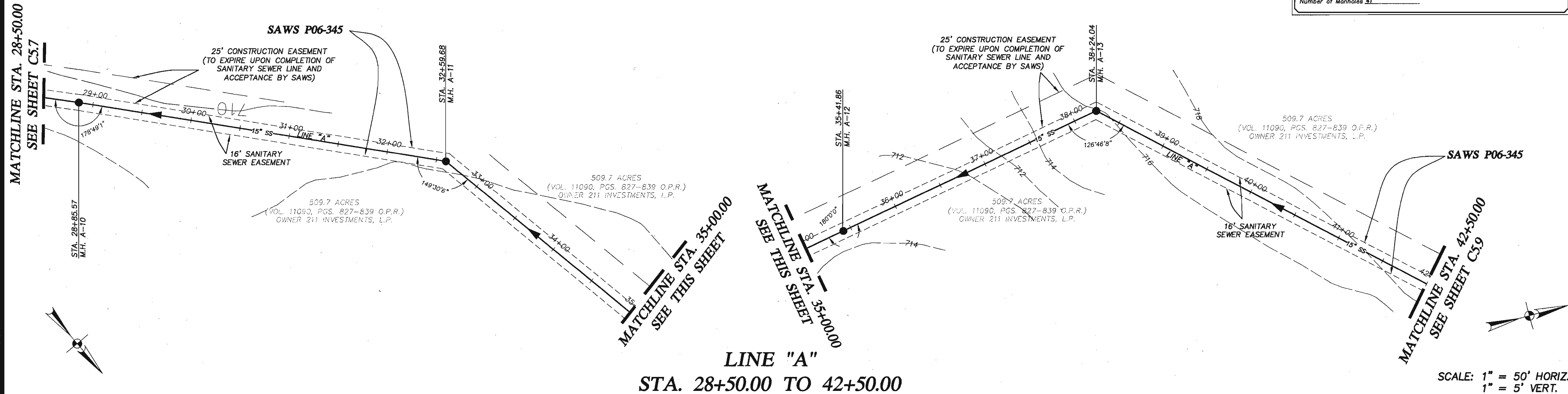
NOTE:

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. PER LATERAL DETAIL 402 ER20 ON SHEET C5.5
- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20" JOINT CENTERED AT WATER MAIN. (NO SEPARATE PAY ITEM)
- SEE SHEET C5.1 FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
- SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
- NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS.

TRENCH EXCAVATION SAFETY PROTECTION

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

Developer's Name: BRIGGS RANCH, LTD.		
Address: 13777 BRIGGS RANCH RD		
City: SAN ANTONIO	State: TEXAS	ZIP: 78245
Phone: (210) 677-0810	FAX: (210) 677-0150	
SAWS Block Map: 164-676	Total EDU's: 81	Total Acreage: 37.77
Total Linear Footage of Pipe: 7894 LF - 15" SDR 35, 2284 LF - 8" SDR 35, 1931 LF - 8" SDR 26		
Number of Lots: 76	SAWS JOB NO: 06-1777	Plot No. 060720
Number of Manholes: 41		



Date: Feb. 26, 2007, 11:09am User ID: J.Ackins
File: P:\30\68\24\Design\Civil\SS506824.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)
LINE "A" STA 28+50.00 TO 42+50.00
SANITARY SEWER PLAN & PROFILE

PLAT NO. 060720
JOB NO. 5066-24
DATE AUGUST, 2006
DESIGNER RH
CHECKED CC DRAWN RH
SHEET C5.8

PAPE-DAWSON ENGINEERS
565 EAST RAINBOW
SAN ANTONIO, TEXAS 78216
PHONE 210.575.9000
FAX 210.575.9010

REVISIONS:
1-8-06 REVISED AS PER SAWS COMMENTS.
12-01-06 CHANGED OUTFALL SIZES FROM 15" TO 12".
2-23-07 CHANGED OUTFALL SEWER LINE FROM 12" TO 15".
-SHEET RE-ISSUED.

STATE OF TEXAS
JON D. ADAME
82567
Professional Engineer
2-28-07

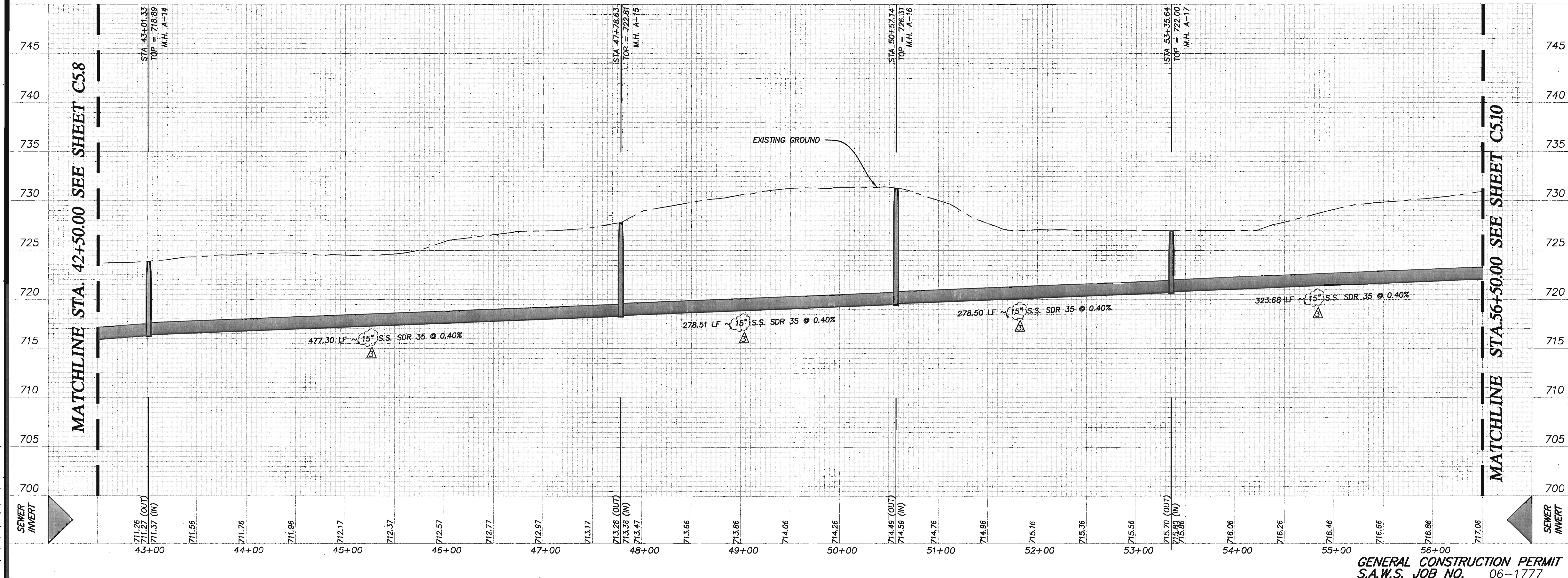
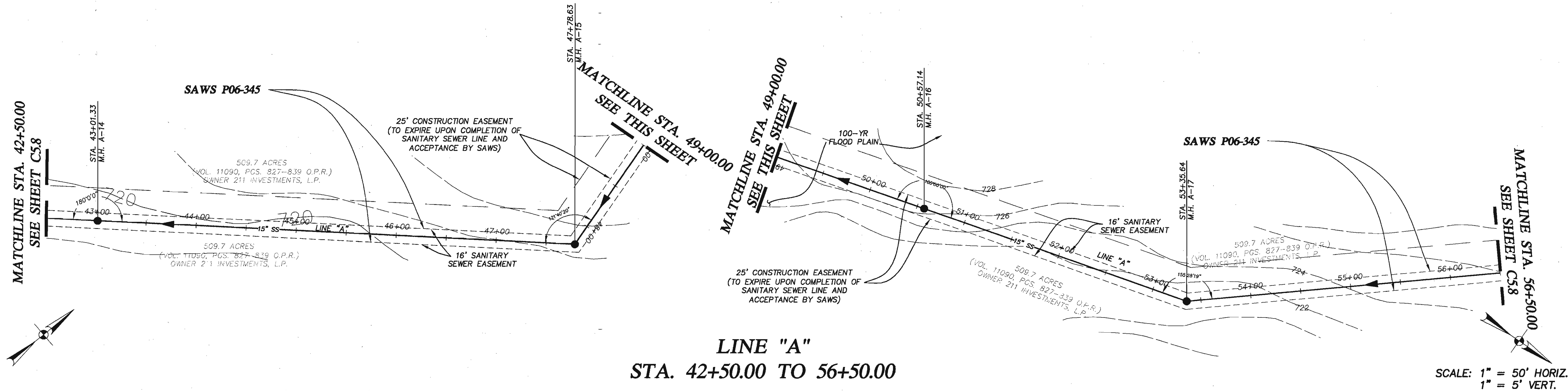
NOTE:

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. PER LATERAL DETAIL 402 ER20 ON SHEET C5.5
- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT WATER MAIN. (NO SEPARATE PAY ITEM)
- SEE SHEET C5.1 FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
- SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
- NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENGAGEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS.

TRENCH EXCAVATION SAFETY PROTECTION

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

Developer's Name: BRIGGS RANCH, LTD.			
Address: 13777 BRIGGS RANCH RD.			
City: SAN ANTONIO	State: TEXAS	ZIP: 78245	
Phone: (210) 677-0810	FAX: (210) 677-0150		
SAWS Block Map: 164-676	Total EDU's: 81	Total Acreage: 37.77	
Total Linear Footage of Pipe: 7294 LF - 15" SDR 35, 2284 LF - 6" SDR 35, 1931 LF - 6" SDR 26			
Number of Lots: 76	SAWS JOB NO: 06-1777	Plot No: 060720	
Number of Manholes: 41			



Date: Feb. 28, 2007, 11:09am User ID: J. Jackins
File: P:\30456\24\Design\Civil\355506624.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)
LINE "A" STA 42+50.00 TO 56+50.00
SANITARY SEWER PLAN & PROFILE

PLAT NO.
060720

JOB NO. 5066-24

DATE AUGUST, 2006

DESIGNER RH

CHECKED CC **DRAWN** RH

SHEET **C5.9**

REVISIONS:

11-9-06 REVISED AS PER SAWS COMMENTS

12-01-06 CHANGED CUTALL SHEET RE-ISSUED

2-23-07 CHANGED CUTALL SEWER LINE FROM 12" TO 15". -SHEET RE-ISSUED.

STATE OF TEXAS
JON D. ADAMS
82567
PROFESSIONAL ENGINEER
for Adams
2-28-07

PAPE-DAWSON ENGINEERS
555 EAST RAMSEY
SAN ANTONIO, TEXAS 78216
PHONE 210.575.9000
FAX 210.575.9070

AS-BUILT/PLAN OF RECORD: OCTOBER 31, 2008

1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2'x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO GROUND TO MARK THE END OF EACH SERVICE, PER LATERAL DETAIL 402 ERD ON SHEET C5.
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE (1) JOINT CENTERED AT WATER MAIN. (NO SEPARATE PAY ITEM)
3. SEE SHEET C5.1 FOR BENCHMARK INFORMATION.

4. PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
5. SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
6. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
7. ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
8. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASUREMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY REVISED GEOTECHNICAL/SAFETY/EQUIPMENT AND/OR STRUCTURAL SYSTEMS AT ALL SITES WITHIN THE PROJECT ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE PROTECTION TO TRENCH EXCAVATION WORKERS AND THE PUBLIC. CONTRACTOR SHALL COMPLY WITH ALL STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, TO CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY SYSTEM TO PROTECT ALL PERSONNEL FROM ALL PRESENT AND POTENTIAL DANGERS AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

Developer's Name: BRIGGS RANCH, LTD.

Address: 13777 BRIGGS RANCH RD

City: SAN ANTONIO State: TEXAS ZIP: 78245

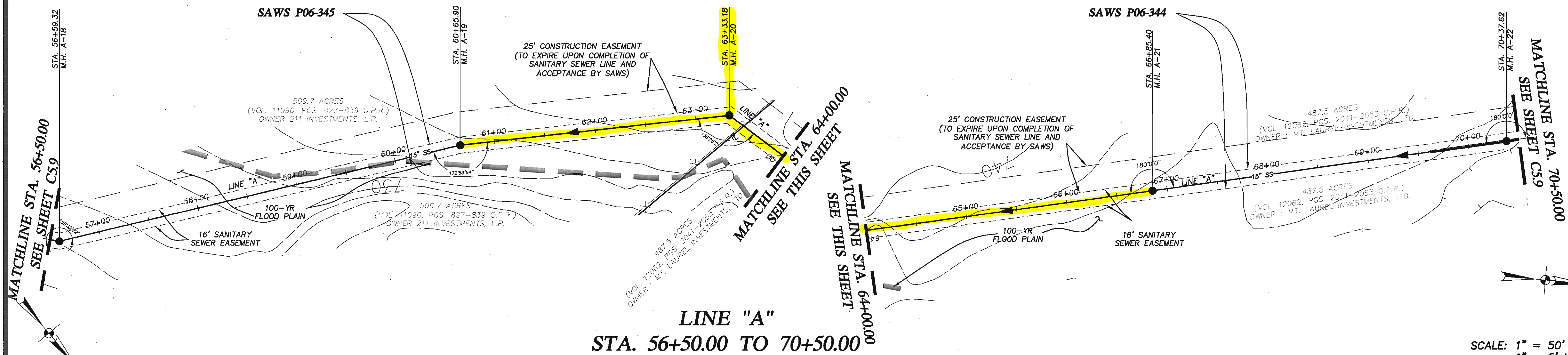
Phone: (210) 677-0810 FAX: (210) 677-0150

SAWS Block Map: 164-676 Total EDU's: 61 Total Acreage: 37.77

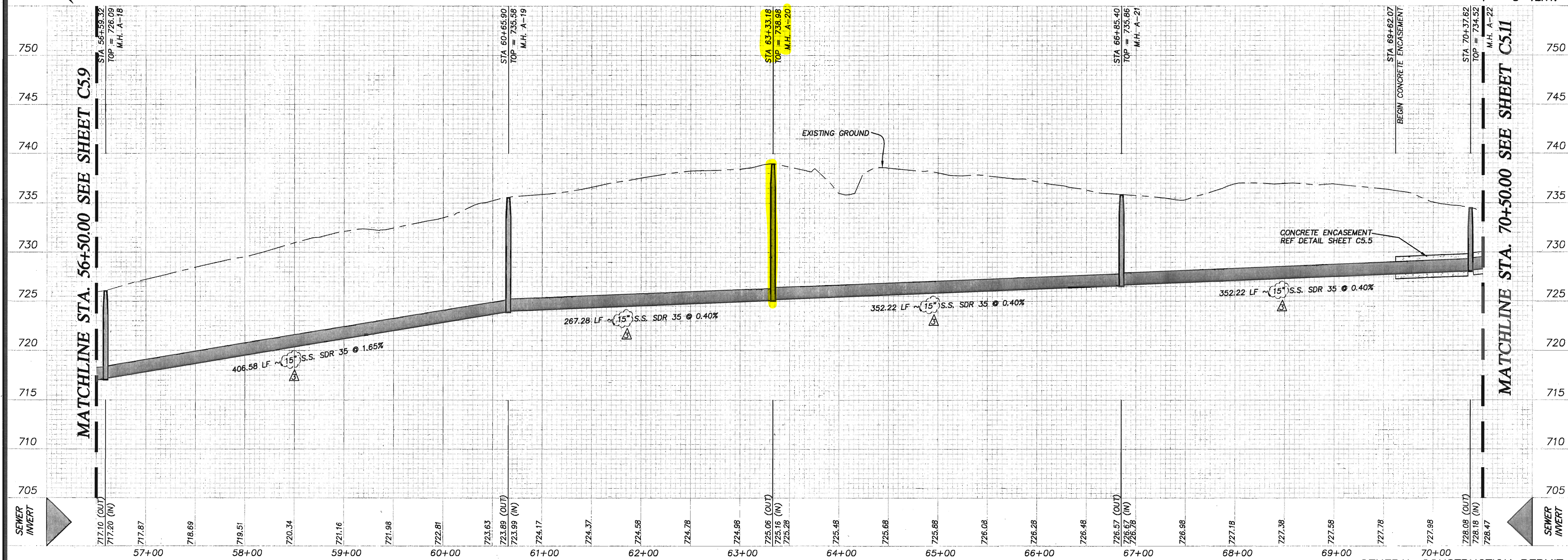
SAWS Block Footage of Pipe: 2894 LF - 15" SDR 35, 2284 LF - 8" SDR 35, 1931 LF - 8" SDR 35

Number of Lots: 76 SAWS JOB NO. 06-1777 Plat No. 060720

Number of Manholes: 41



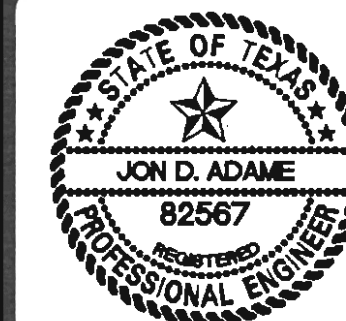
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

REVISIONS:

1	11-8--06 REVISED AS PER SAWS COMMENTS.
2	12-01--06 CHANGED OUTFALL SEWER LINE FROM 15" TO 12". --SHEET RE--ISSUED.
3	2-23--07 CHANGED OUTFALL SEWER LINE FROM 12" TO 15". --SHEET RE--ISSUED.



Jon Adams
2-28-0

PAPE-DAWSON  ENGINEERS

555 EAST RAMSEY | SAN ANTONIO TEXAS 78216 | PHONE: 210.375.6000
FAX: 210.375.8010

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)

PLAT N.O.
060720

JOB NO. 5066-24

DATE AUGUST, 2006

DESIGNER RH

CHECKED CC DRAWN RH

SHEET C5.10

1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2'x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE, PER LATERAL DETAIL 402 ERZD ON SHEET C5.5
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE' 20" JOINT CENTER AT WATER MAIN. (NO SEPARATE PAY ITEM)
3. SEE SHEET C5.1 FOR BENCHMARK INFORMATION.

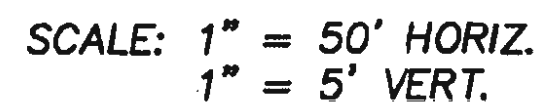
4. PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
5. SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
6. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
7. ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
8. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS



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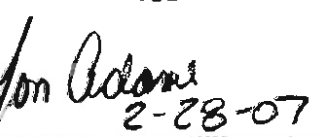
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT AREA AND DETERMINE THE APPROPRIATE DESIGN, CONSTRUCTION, AND MAINTENANCE SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND WITH A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S CONSULTANT SHALL REVIEW THESE PLANS AND THE PROJECT DESCRIPTION AND DETERMINE THE PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

Address: 13777 BRIGGS RANCH RD
 City: SAN ANTONIO State: TEXAS ZIP: 78245
 Phone: (210) 677-0810 FAX: (210) 677-0150
 SAWS Block Map: 164-676 Total EDU's: 61 Total Acreage: 32.77
 Total Linear Footage of Pipe: 7694 LF - 15" SDR 35, 2284 LF - 8" SDR 35, 1931 LF - 8" SDR 35
 Number of Lots: 76 SAWS JOB No. 06-1777 Plat No. 060720
 Number of Manholes: 41



REVISIONS

1	11-8-06 REVISED AS PER SAWS COMMENTS.
2	12-01-06 CHANGED OUTFALL SEWER LINE FROM 15" TO 12". -SHEET RE-ISSUED.
3	2-23-07 CHANGED OUTFALL SEWER LINE FROM 12" TO 15". -SHEET RE-ISSUED.



555 EAST RAMSEY
SAN ANTONIO TEXAS 78216
PHONE: 210.375.9000
FAX: 210.375.9010

SANITARY SEWER PLAN & PROFILE

SHEET **C5.11**

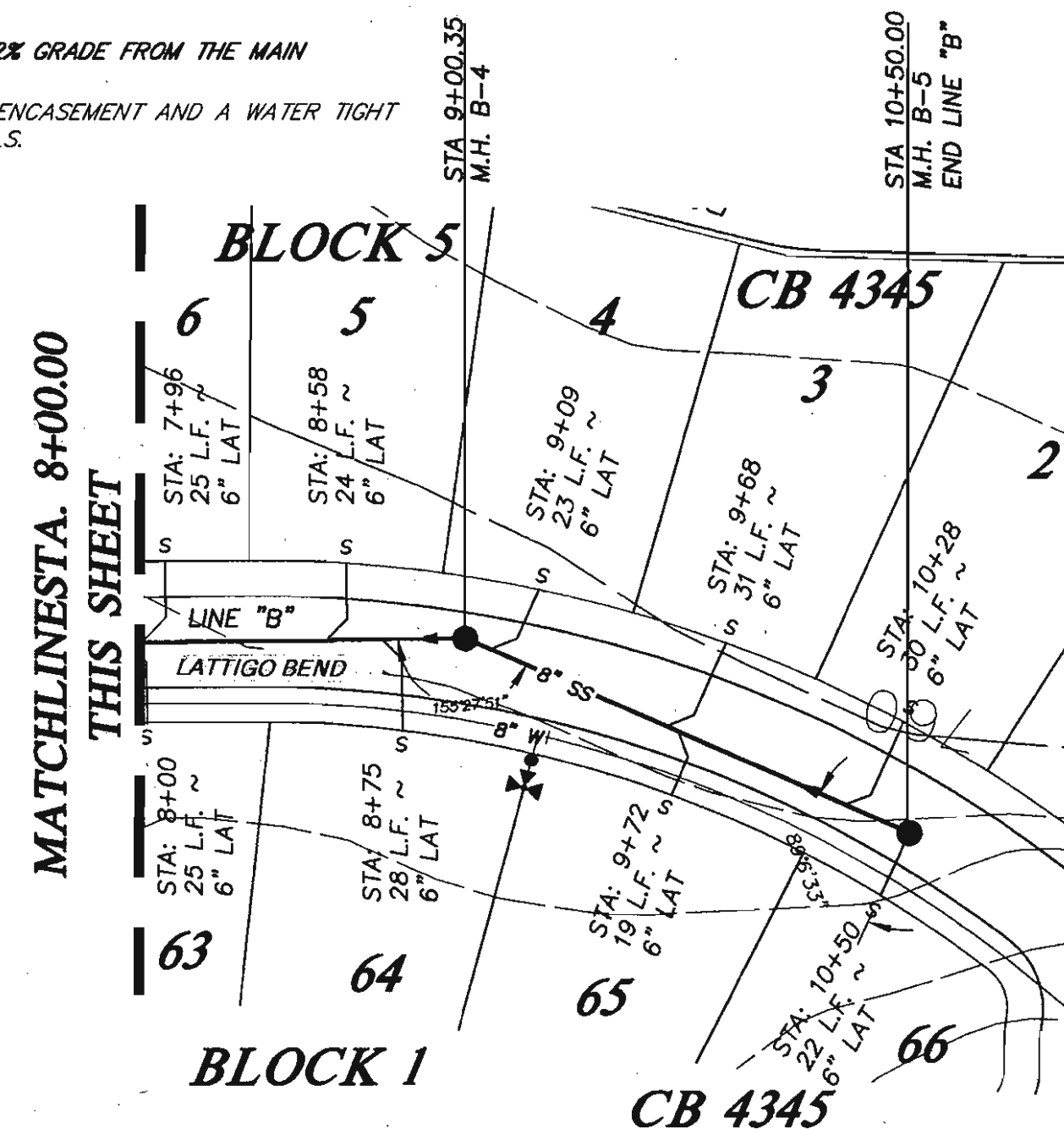
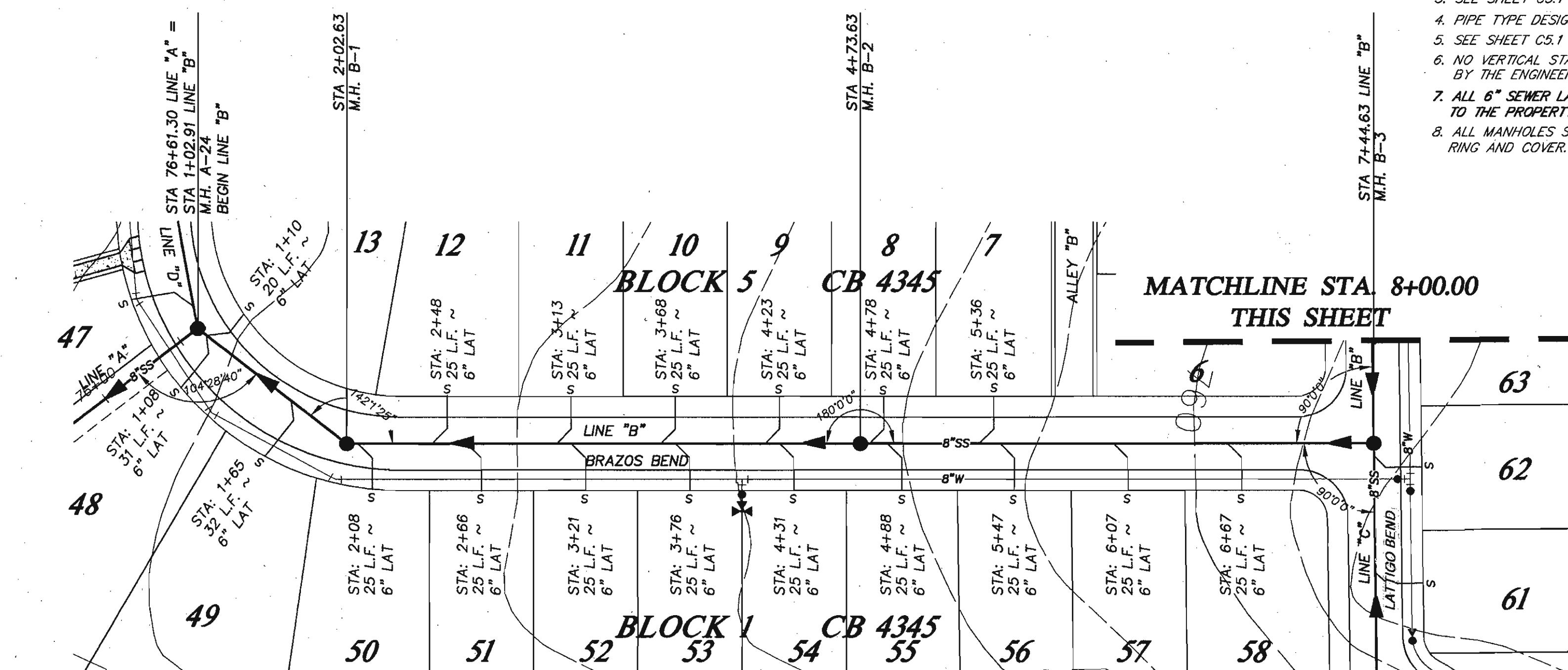
TRENCH EXCAVATION SAFETY PROTECTION

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

NOTE:

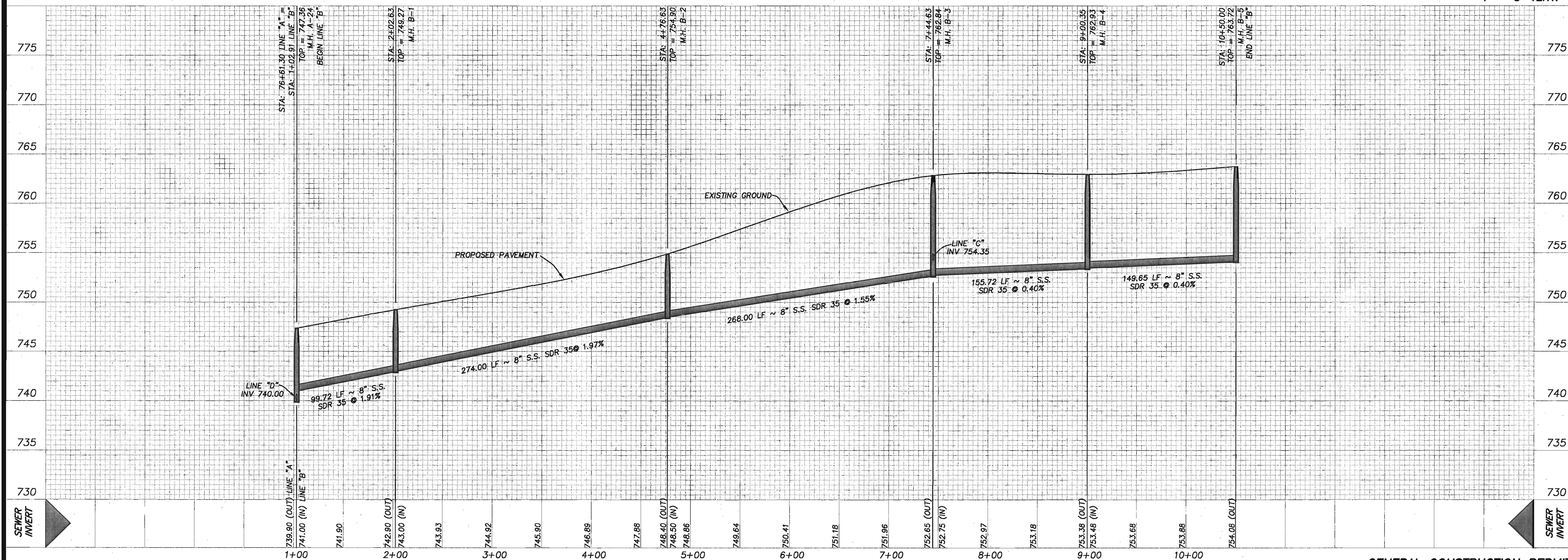
1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE, PER LATERAL DETAIL 402 ER20 ON SHEET C5.5.
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20" JOINT CENTERED AT WATER MAIN. (NO SEPARATE PAY ITEM)
3. SEE SHEET C5.1 FOR BENCHMARK INFORMATION.
4. PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
5. SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
6. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
7. ALL 8" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
8. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS.

Developer's Name: BRIGGS RANCH, LTD.
 Address: 13777 BRIGGS RANCH RD
 City: SAN ANTONIO State: TEXAS ZIP: 78245
 Phone: (210) 677-0810 FAX: (210) 677-0150
 SAWS Block Map: 164-676 Total EDU's: 61 Total Acreage: 37.77
 Total Linear Footage of Pipe: 7294 LF ~ 15" SDR 35, 2284 LF ~ 8" SDR 35, 1931 LF ~ 6" SDR 35
 Number of Lots: 76 SAWS JOB NO. 06-1777 Plat No. 060720
 Number of Manholes: 41



LINE "B" STA. 1+02.91 TO END

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)
LINE "B" STA 1+02.91 TO END
SANITARY SEWER PLAN & PROFILE

PLAT NO.
060720

JOB NO. 5066-24

DATE AUGUST, 2006

DESIGNER RH

CHECKED CC DRAWN RH

SHEET C5.12

Drawn: Sep 14, 2006, 3:50pm User: JP_Rhodes
File: P:\50\66\24\Design\Civil\SS506624.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

AS-BUILT/PLAN OF RECORD: OCTOBER 31, 2008

NOTE:

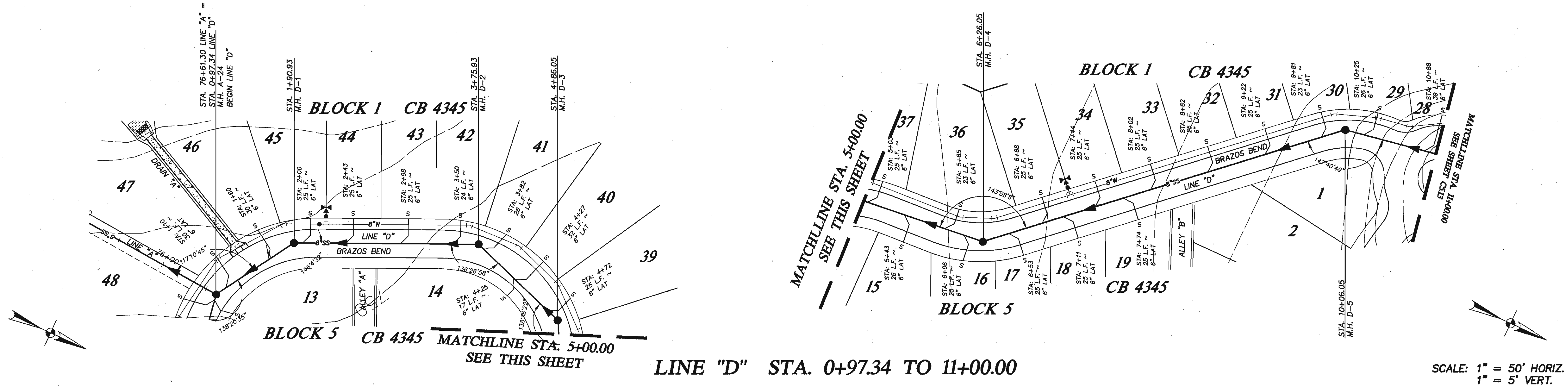
1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE, PER LATERAL DETAIL 402 ER2D ON SHEET C5.5.
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT WATER MAIN. (NO SEPARATE PAY ITEM)
3. SEE SHEET C5.1 FOR BENCHMARK INFORMATION.

4. PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
5. SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
6. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
7. ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
8. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS.

TRENCH EXCAVATION SAFETY PROTECTION

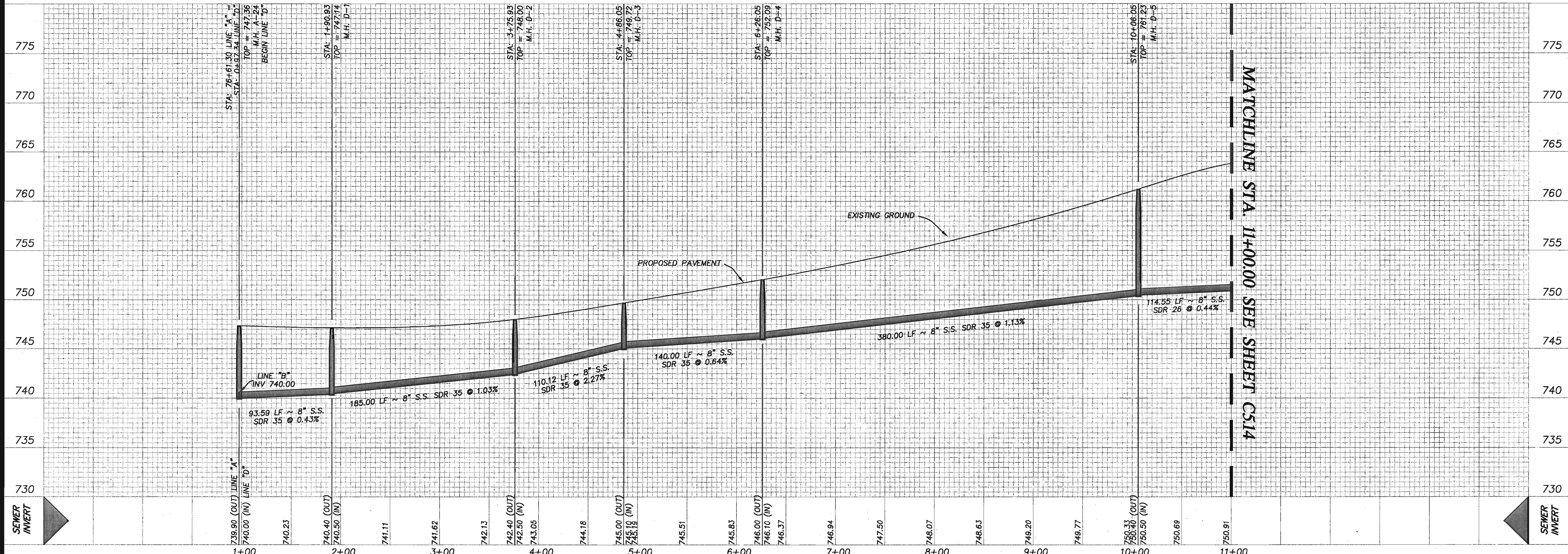
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

Developer's Name: BRIGGS RANCH, LTD.
 Address: 13777 BRIGGS RANCH RD
 City: SAN ANTONIO State: TEXAS ZIP: 78245
 Phone: (210) 677-0810 FAX: (210) 677-0150
 SAWS Block Map: 184-676 Total EDU's: 81 Total Acreage: 37.77
 Total Linear Footage of Pipe: 7294 LF - 12" SDR 35, 2234 LF - 8" SDR 35, 1931 LF - 6" SDR 35
 Number of Lots: 76 SAWS JOB NO. 06-1777 Plat No. 060720
 Number of Manholes: 41



LINE "D" STA. 0+97.34 TO 11+00.00

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)
LINE "D" STA 0+97.34 TO 11+00.00
SANITARY SEWER PLAN & PROFILE

PLAT NO. 060720
 JOB NO. 5066-24
 DATE AUGUST, 2006
 DESIGNER RH
 CHECKED CC DRAWN RH
 SHEET C5.13

Date: Sep 14, 2006 8:00am User: D. Blumhax
File: P:\50\66\24\Design\Civil\SS060624.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

AS-BUILT/PLAN OF RECORD: OCTOBER 31, 2008

1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUNDLINE END OF EACH SERVICE, PER LATERAL. DETAIL 402 ERD ON SHEET C5.5
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE (1) JOINT CENTERED AT WATER MAIN. (NO SEPARATE PAY ITEM)
3. SEE SHEET C5.1 FOR BENCHMARK INFORMATION.
4. PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
5. SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
6. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
7. ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
8. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT AREA AND PREPARE A WRITTEN REVIEW OF THE PLANS AND THE PROPOSED PROTECTIVE SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE PROTECTION OF THE TRENCH EXCAVATIONS AND THE ADJACENT AREAS TO THE TRENCH EXCAVATIONS TO MEET OR EXCEED ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATORY STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S EMPLOYEES SHALL BE TRAINED AND CERTIFIED IN THE PROTECTIVE SYSTEMS, PROGRAMS AND/OR PROCEDURES IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

Developer's Name: BRIGGS RANCH, LTD.

Address: 13777 BRIGGS RANCH RD

City: SAN ANTONIO State: TEXAS ZIP: 78245

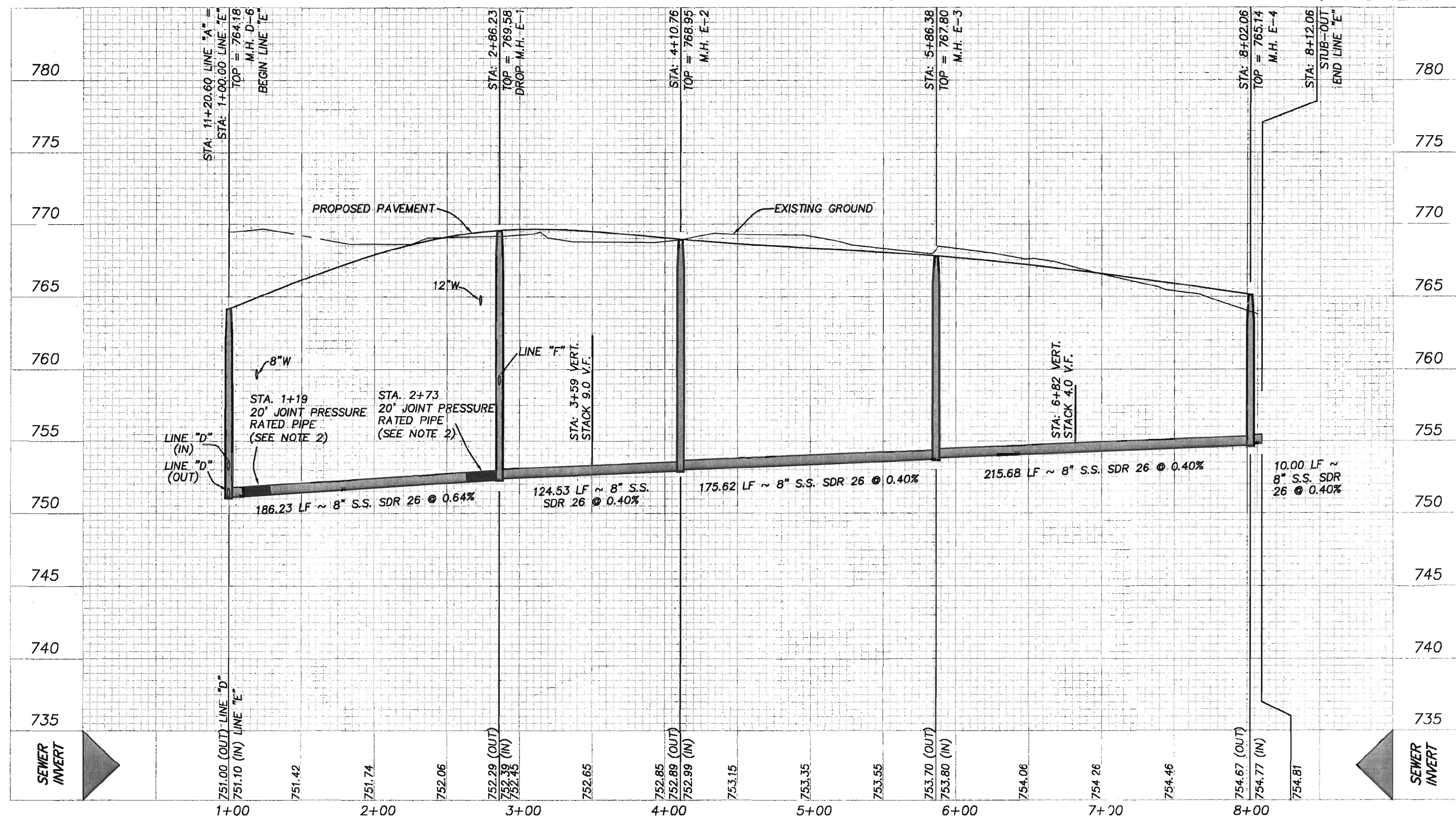
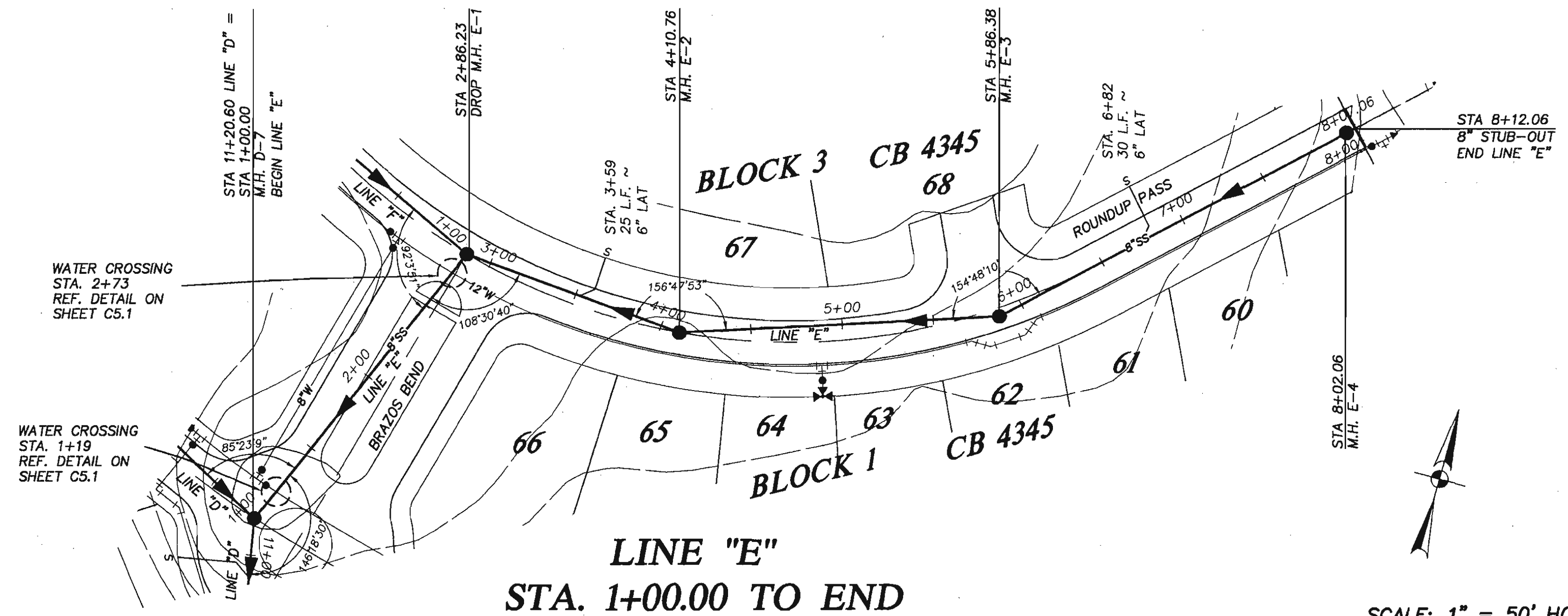
Phone: (210) 677-0810 FAX: (210) 677-0150

SAWS Block Map: 164-678 Total EDU's: 73 Total Acreage: 32.77

Total Linear Footage of Pipe: 7894 LF - 15" SDR 35, 2284 LF - 6" SDR 35, 1931 LF - 8" SDR 35

Number of Lots: 76 SAWS JOB No. 08-1777 Plat No. 060720

Number of Monoholes: 44



Date: Apr 04, 2007, 1:36pm User ID: JerryGarcia
File: P:\50\66\24\Design\Civil\SS506624.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

04/04/07: ADDED SEWER LATERALS
FOR LOTS 67 & 68 BLOCK 3, &
ADDED VERTICAL STACKS.
RE-ISSUE SHEET.



Jon Adlam
4-4-07.

PAPE-DAWSON ENGINEERS

TRAILS OF BRIGGS RANCH UNIT 3A
(PLANNED UNIT DEVELOPMENT)
LINE "D" STA 11+00.00 TO END
LINE "E" STA 1+00.00 TO END
SANITARY SEWER PLAN & PROFILE

PLAT NO.
060720

DB NO. 5066-24

DATE AUGUST, 2006DESIGNER RH

CHECKED CC DRAWN RH

SHEET CS.14

GENERAL CONSTRUCTION PERMIT
S.A.W.S. JOB NO. 06-1777

AS-BUILT/PLAN OF RECORD: OCTOBER 31, 2008

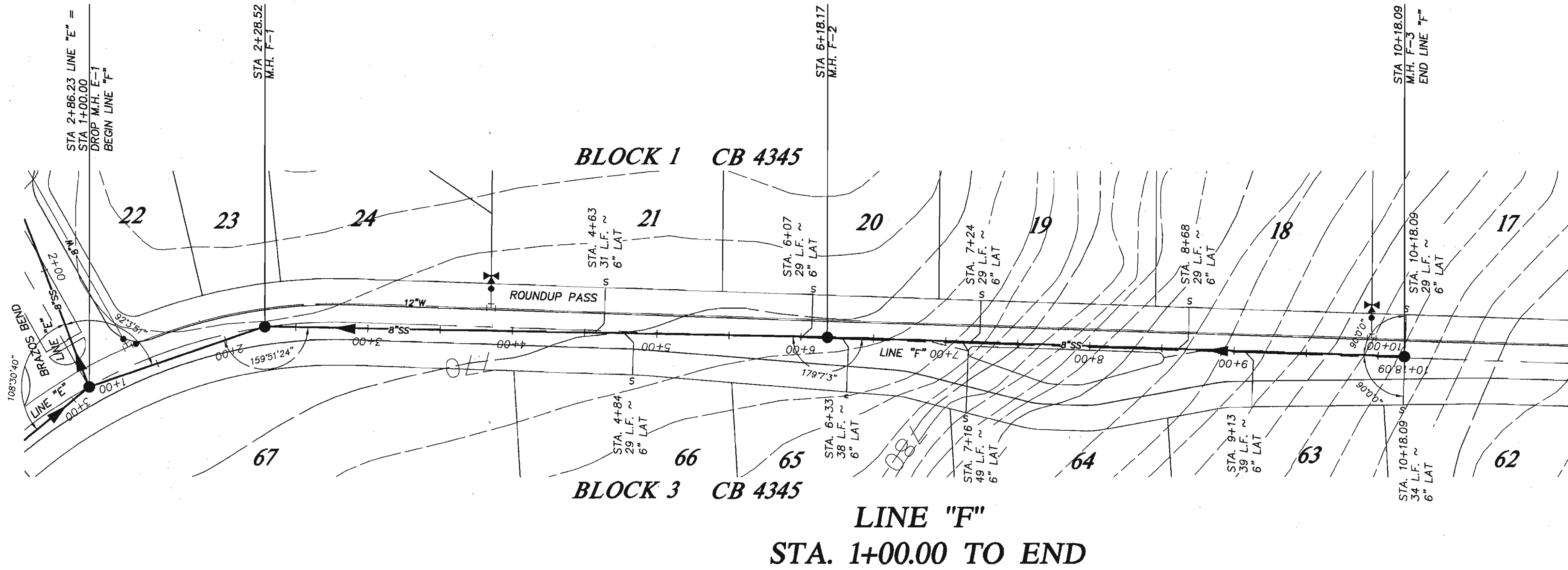
NOTE:

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2"x4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. PER LATERAL DETAIL 402 ERD ON SHEET C5.5
- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT WATER MAIN. (NO SEPARATE PAY ITEM)
- SEE SHEET C5.1 FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 35 (UNLESS NOTED AS SDR 26).
- SEE SHEET C5.1 FOR TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL.
- NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT A 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER. SEE SHEET C5.5 FOR DETAILS.

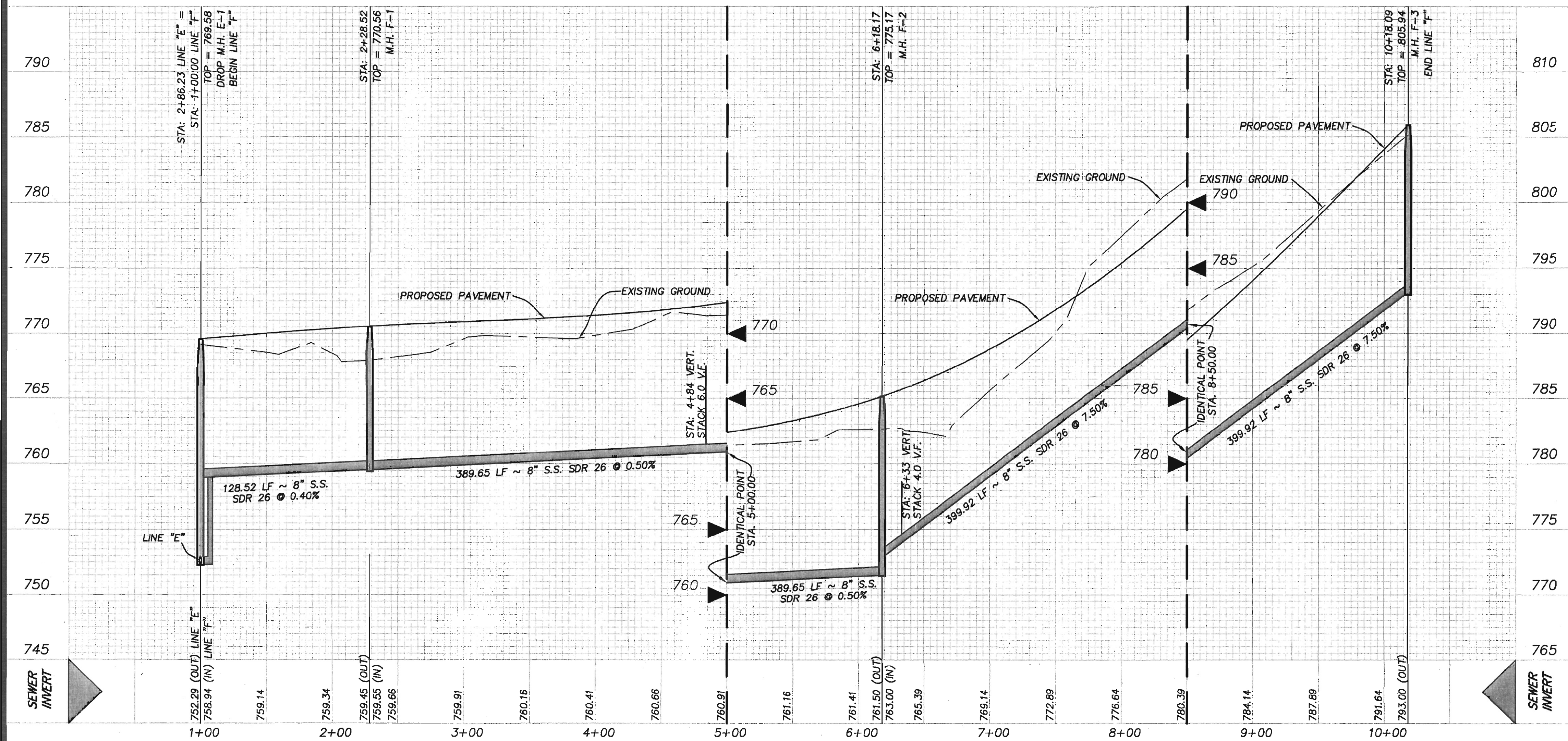
TRENCH EXCAVATION SAFETY PROTECTION

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

Developer's Name: **BRIGGS RANCH, LTD.**
 Address: **13777 BRIGGS RANCH RD**
 City: **SAN ANTONIO** State: **TEXAS** ZIP: **78245**
 Phone: **(210) 677-0810** FAX: **(210) 677-0150**
 SAWS Block Map: **164-676** Total EDU's: **73** Total Acreage: **37.77**
 Total Linear Footage of Pipe: **7224 LF ~ 18" SDR 35, 2284 LF ~ 8" SDR 35, 1931 LF ~ 8" SDR 26**
 Number of Lots: **78** SAWS JOB NO.: **06-1777** Plat No.: **060720**
 Number of Manholes: **14**



SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



Date: Apr. 04, 2007, 2:07pm User ID: JerryGarcia
 File: P:\50166\24\Design\DWG\SS506624.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.

REVISIONS:
 04/04/07 ADDED SEWER LINE "F"
 & ADDED NEW SHEET.

STATE OF TEXAS
JON D. ADAME
 82567
 PROFESSIONAL ENGINEER
 4-4-07

PAPE-DAWSON ENGINEERS
 655 EAST PANSEY | SAN ANTONIO, TEXAS 78216 | PHONE 210.375.9000 | FAX 210.375.9010

TRAILS OF BRIGGS RANCH UNIT 3A
 (PLANNED UNIT DEVELOPMENT)
LINE "F" STA 11+00.00 TO END
SANITARY SEWER PLAN & PROFILE

PLAT NO.
060720

JOB NO. 5066-24

DATE AUGUST 2006

DESIGNER RH

CHECKED CC DRAWN RH

SHEET **C5.15**

GENERAL CONSTRUCTION PERMIT
 S.A.W.S. JOB NO. 06-1777

AS-BUILT/PLAN OF RECORD: OCTOBER 31, 2008