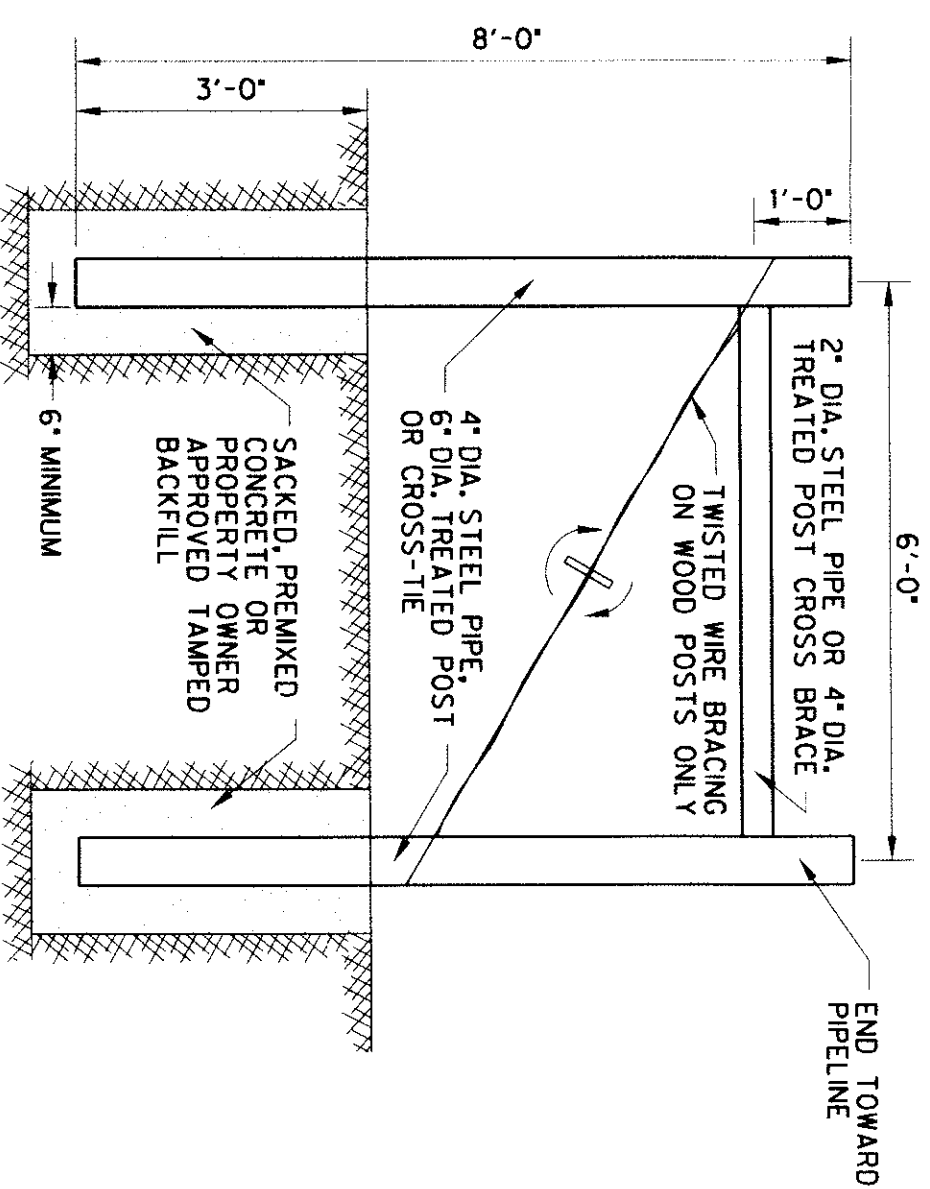
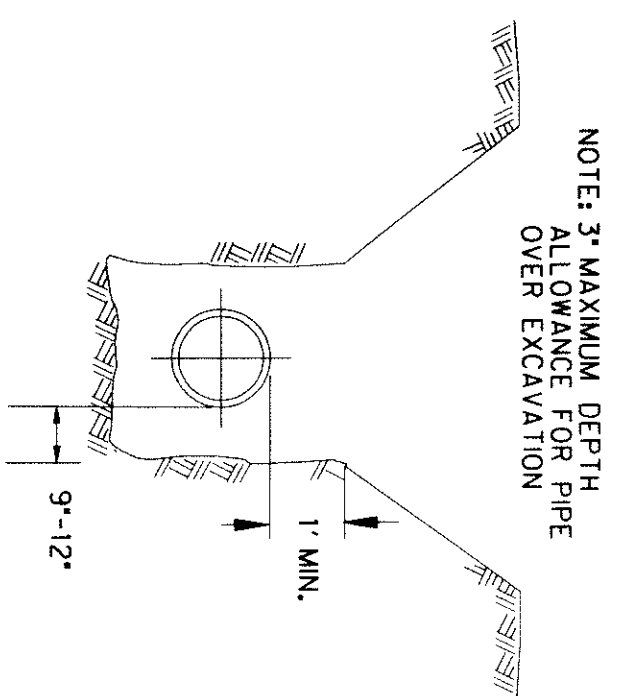




FENCE BRACE DETAIL

N.T.S.



TRENCH DETAIL

CONCRETE ENCASEMENT DETAIL

N.T.S.

PIPE EMBEDMENT DETAIL

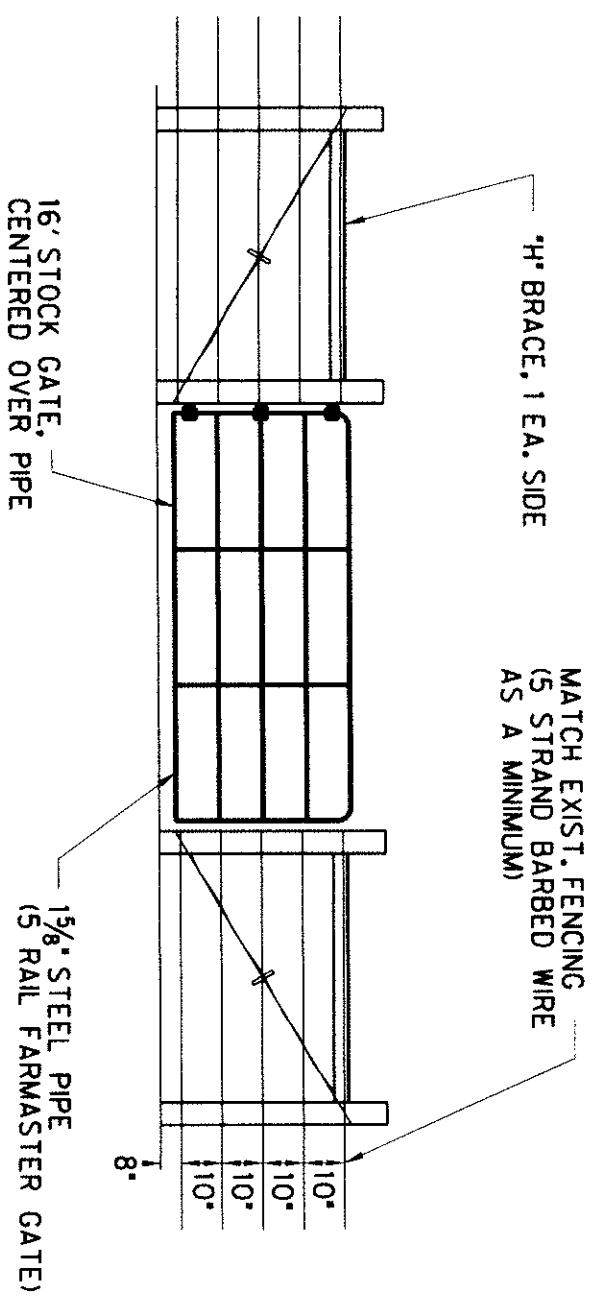
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CONCRETE STREET

ASPHALT STREET

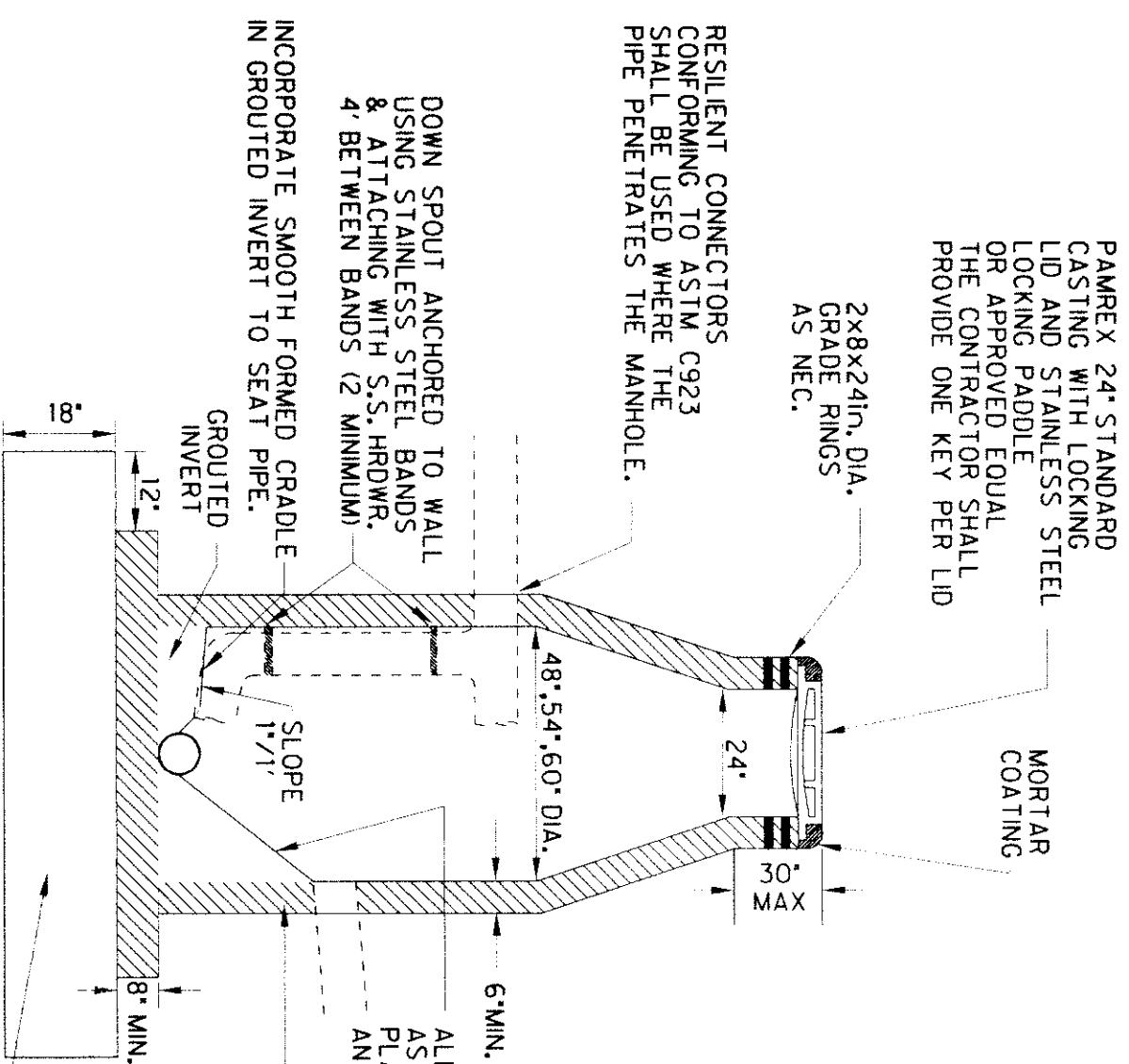
PAVEMENT REPAIR

N.T.S.



**TYPICAL INSTALLATION
GATE AT FENCE BRACES**

N.T.S.



MANHOLE DETAIL

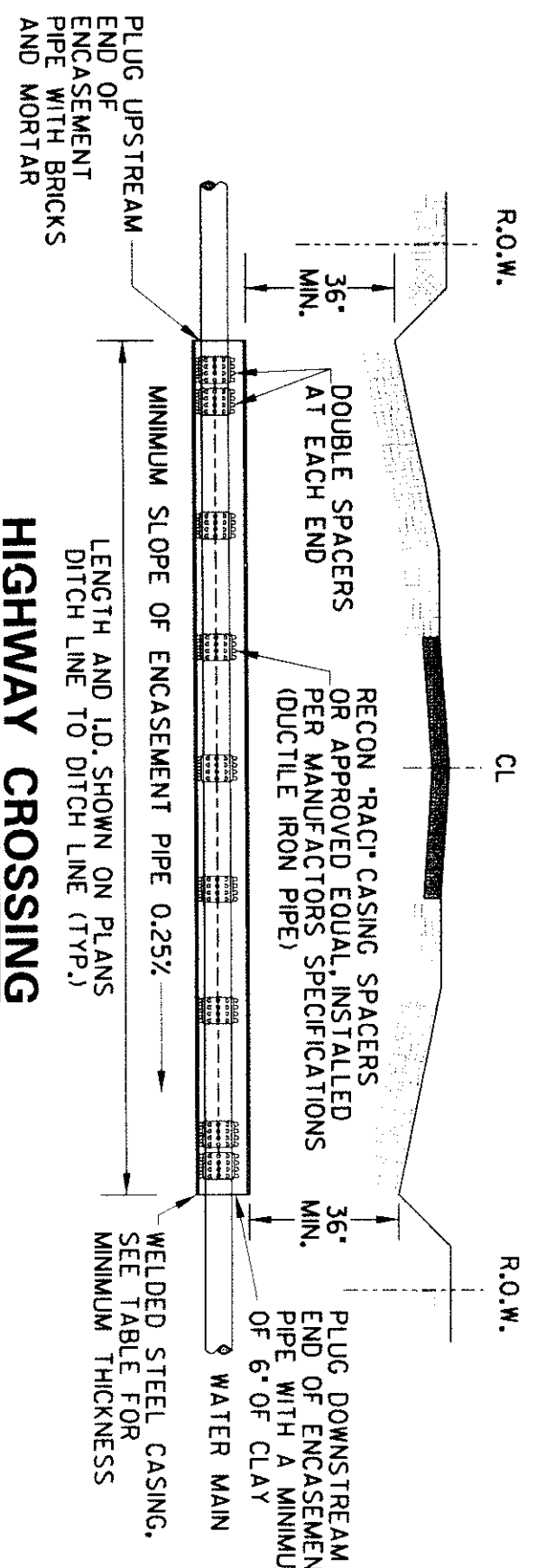
N.T.S.

SANITARY SEWER SERVICE DETAIL

N.T.S.

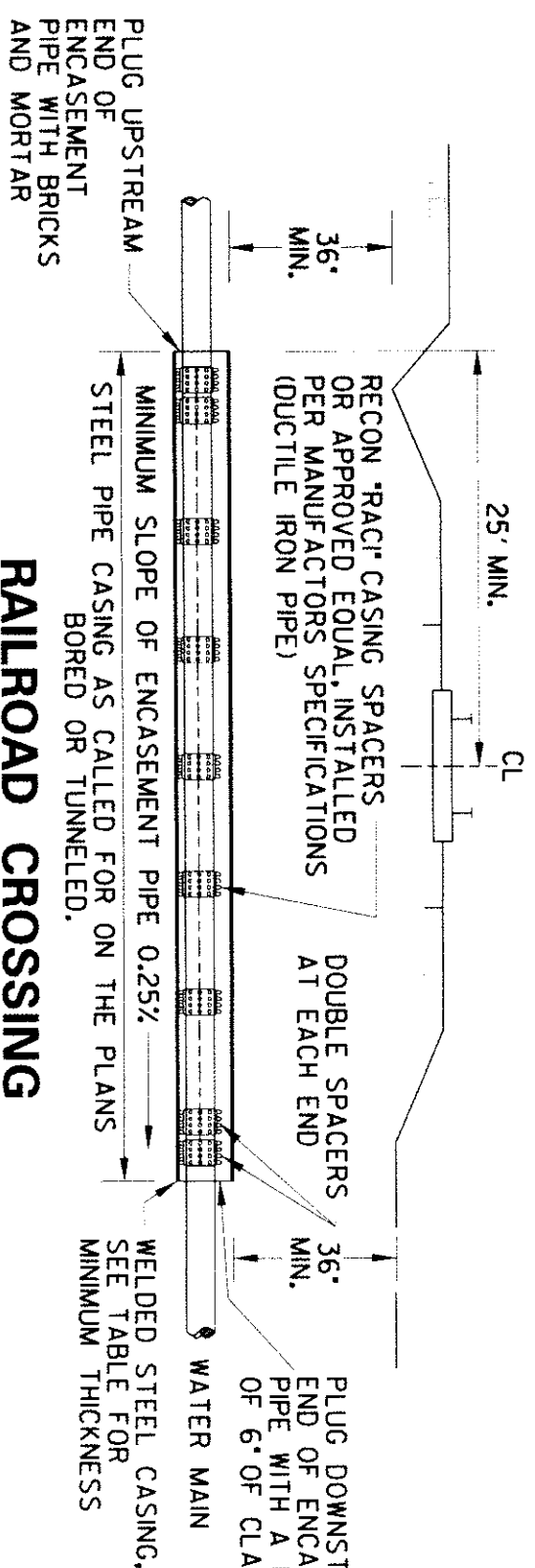
SANITARY SEWER CLEANOUT DETAIL

N.T.S.



HIGHWAY CROSSING

N.T.S.



RAILROAD CROSSING

N.T.S.

**STEEL CASING WALL
THICKNESS CHART**

DIAMETER CASING PIPE	RAILROAD THICKNESS	HIGHWAY THICKNESS
OVER 12" TO 18"	0.2810"	0.2500"
OVER 18" TO 24"	0.2810"	0.2500"
OVER 24" TO 30"	0.2810"	0.2500"
OVER 30" TO 36"	0.2810"	0.2500"
OVER 36" TO 42"	0.2810"	0.2500"
OVER 42" TO 48"	0.2810"	0.2500"
OVER 48" TO 54"	0.2810"	0.2500"
OVER 54" TO 60"	0.2810"	0.2500"
OVER 60" TO 66"	0.2810"	0.2500"
OVER 66" TO 72"	0.2810"	0.2500"
OVER 72" TO 78"	0.2810"	0.2500"
OVER 78" TO 84"	0.2810"	0.2500"
OVER 84" TO 90"	0.2810"	0.2500"
OVER 90" TO 96"	0.2810"	0.2500"
OVER 96" TO 102"	0.2810"	0.2500"
OVER 102" TO 108"	0.2810"	0.2500"
OVER 108" TO 114"	0.2810"	0.2500"
OVER 114" TO 120"	0.2810"	0.2500"
OVER 120" TO 126"	0.2810"	0.2500"
OVER 126" TO 132"	0.2810"	0.2500"
OVER 132" TO 138"	0.2810"	0.2500"
OVER 138" TO 144"	0.2810"	0.2500"
OVER 144" TO 150"	0.2810"	0.2500"
OVER 150" TO 156"	0.2810"	0.2500"
OVER 156" TO 162"	0.2810"	0.2500"
OVER 162" TO 168"	0.2810"	0.2500"
OVER 168" TO 174"	0.2810"	0.2500"
OVER 174" TO 180"	0.2810"	0.2500"
OVER 180" TO 186"	0.2810"	0.2500"
OVER 186" TO 192"	0.2810"	0.2500"
OVER 192" TO 198"	0.2810"	0.2500"
OVER 198" TO 204"	0.2810"	0.2500"
OVER 204" TO 210"	0.2810"	0.2500"
OVER 210" TO 216"	0.2810"	0.2500"
OVER 216" TO 222"	0.2810"	0.2500"
OVER 222" TO 228"	0.2810"	0.2500"
OVER 228" TO 234"	0.2810"	0.2500"
OVER 234" TO 240"	0.2810"	0.2500"
OVER 240" TO 246"	0.2810"	0.2500"
OVER 246" TO 252"	0.2810"	0.2500"
OVER 252" TO 258"	0.2810"	0.2500"
OVER 258" TO 264"	0.2810"	0.2500"
OVER 264" TO 270"	0.2810"	0.2500"
OVER 270" TO 276"	0.2810"	0.2500"
OVER 276" TO 282"	0.2810"	0.2500"
OVER 282" TO 288"	0.2810"	0.2500"
OVER 288" TO 294"	0.2810"	0.2500"
OVER 294" TO 300"	0.2810"	0.2500"

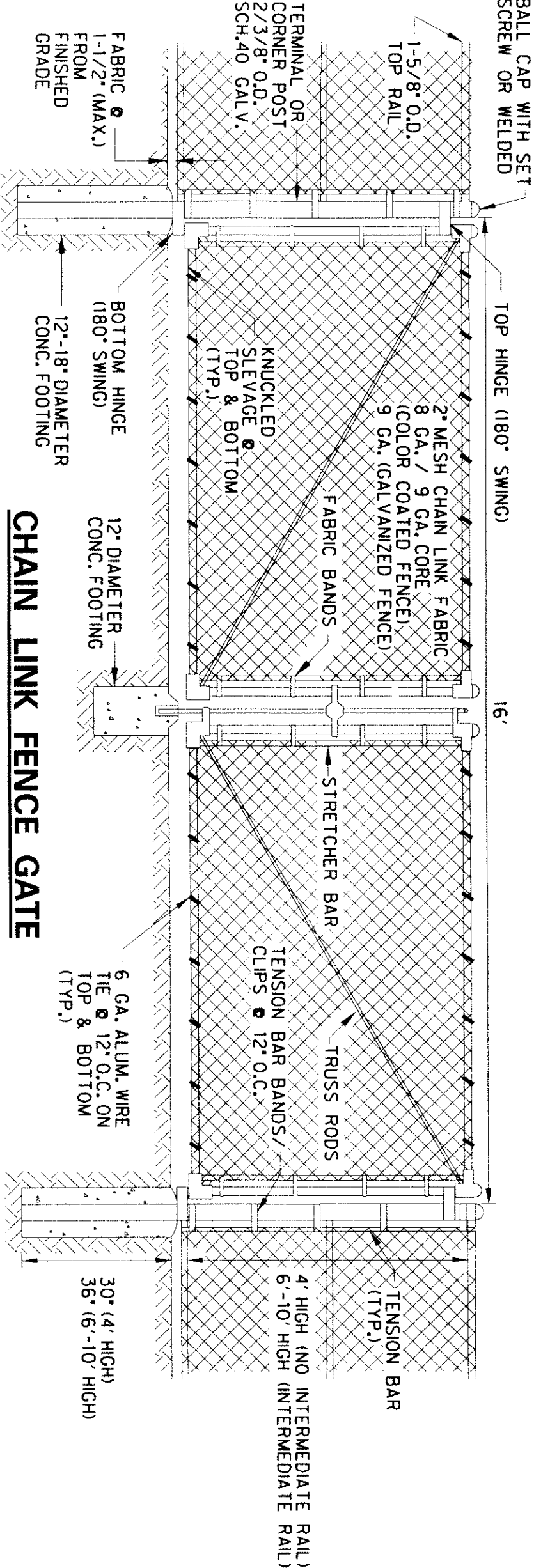
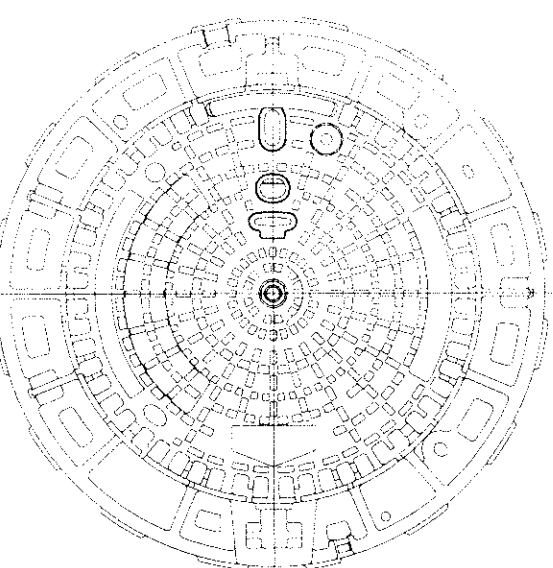
MANHOLE COVER AND FRAME SHALL BE CALLED PAMREX OR APPROVED
EQUAL COVER AND FRAME SHALL BE MANUFACTURED FROM DUCTILE IRON.
COVERS SHALL BE HINGED AND INCORPORATE A 90 DEGREE BLOCKING
SYSTEM TO PREVENT ACCIDENTAL CLOSURE. COVERS SHALL BE ONE MAN
OPERABLE USING STANDARD TOOLS AND SHALL BE CAPABLE OF WITHSTANDING
A TEST LOAD OF 80,000 LBS.

FRAMES SHALL BE CIRCULAR, INCORPORATE A SEATING RING AND A FITTED
PLUG IN THE HINGE HOUSING, AND BE AVAILABLE IN A 24 INCH CLEAR OPENING.
THE FRAME DEPTH SHALL NOT EXCEED 4 INCHES, AND THE FLANGE SHALL
INCORPORATE BEDDING SLOTS, BOLT HOLES, AND LIFTING EYES.

ALL COMPONENTS SHALL BE BLACK COATED.

FRAME WEIGHT: 73 LBS.
COVER WEIGHT: 122 LBS.
TOTAL WEIGHT: 195 LBS.

PAMREX IS AVAILABLE FROM JIM COX SALES, INC. (800) 838-7377.



CHAIN LINK FENCE GATE

N.T.S.

CITY OF CLEBURNE

HAL INDUSTRIAL PARK SANITARY SEWER

SANITARY SEWER DETAILS

CHILDRESS ENGINEERS
ENGINEERS & CONSULTANTS
221 N. ROBERTSON DRIVE
CLEBURNE, TEXAS 76033

DESIGNED BY: RTC

DRAWN BY: JDL

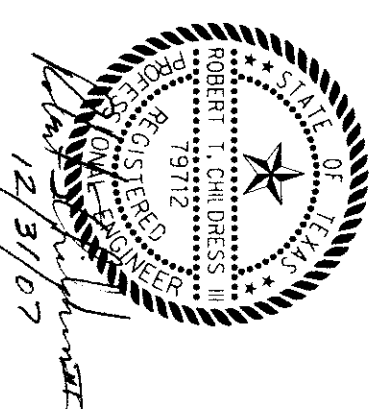
CHECKED BY: RTC

REV. BY DATE SYMBOL

DATE: DECEMBER 2007

JOB NO: 06070

SHEET NO. 11 OF 11

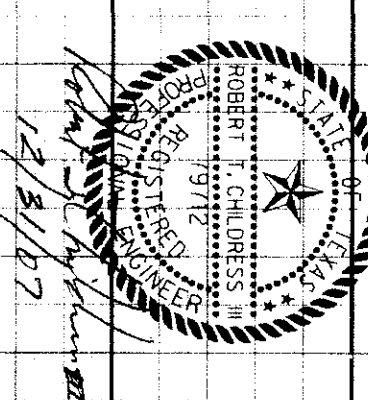
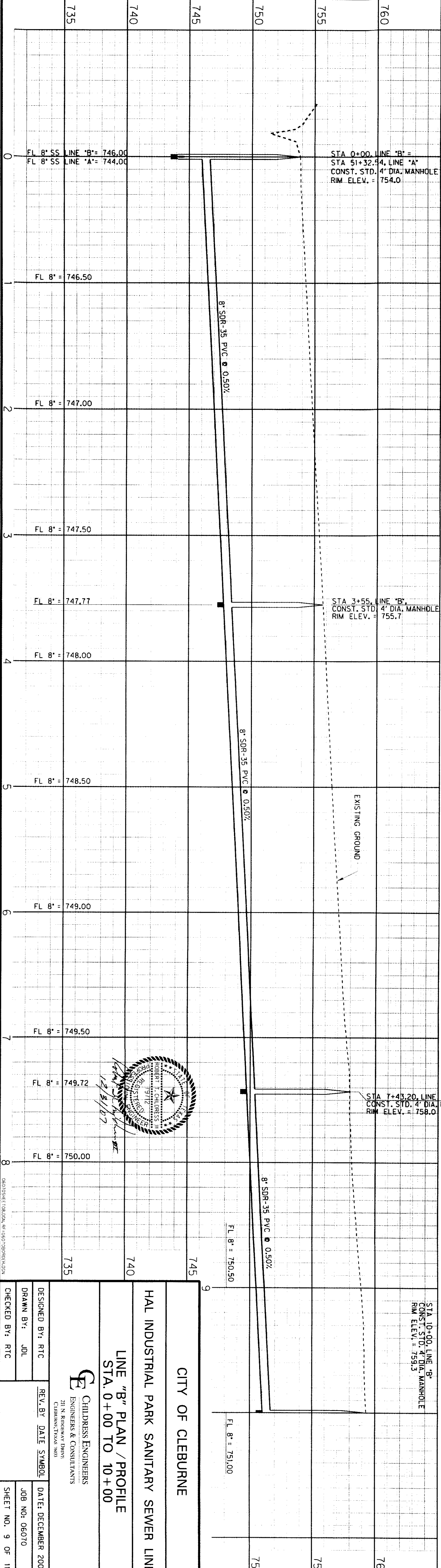
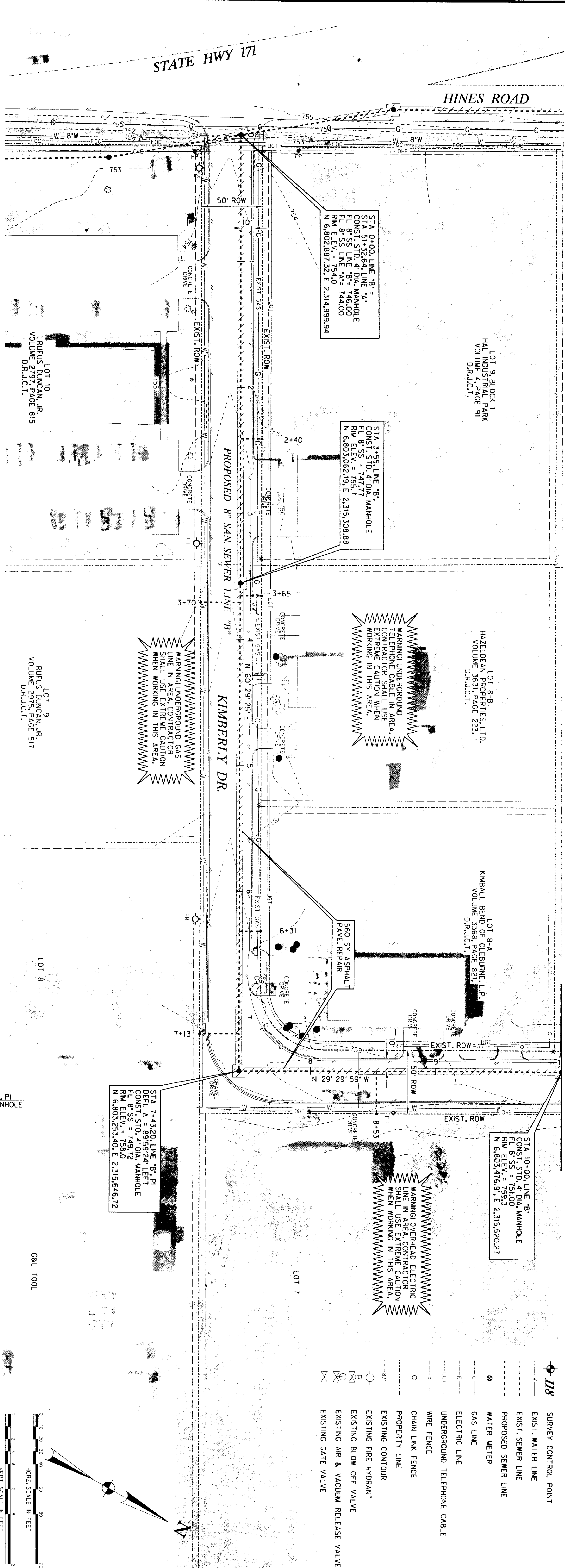


6/27/07/11/12/07

MATCH LINE - STA 10+00
SEE SHEET 9

LEGEND:

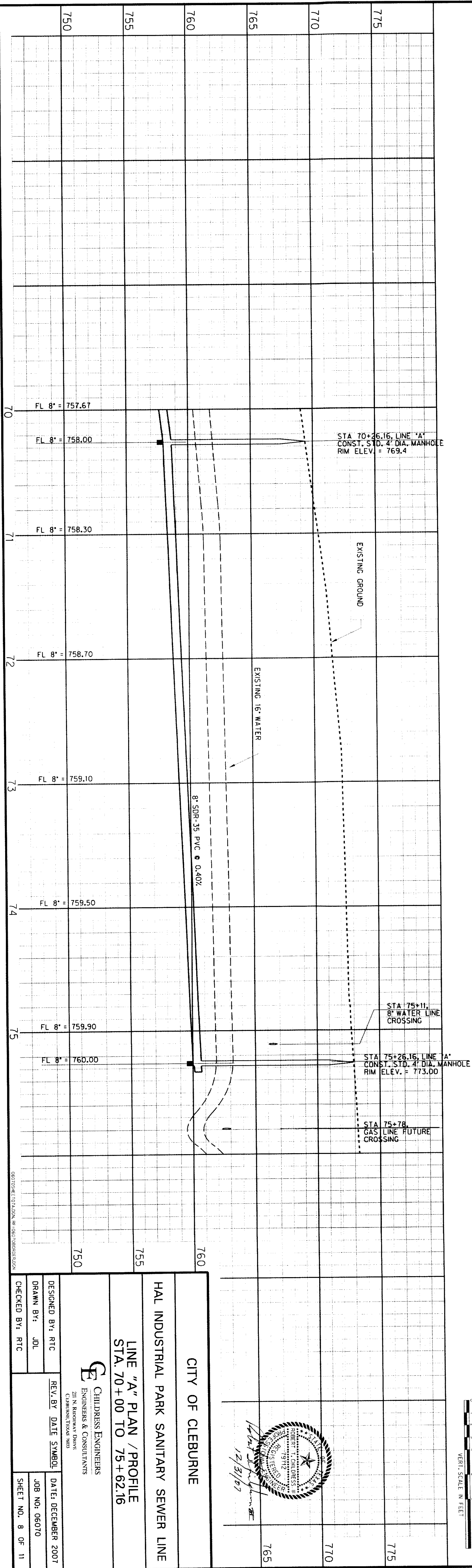
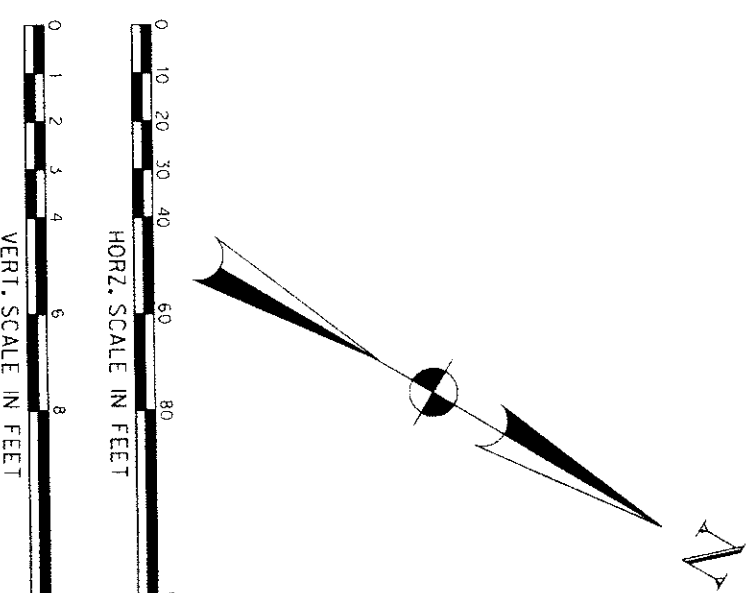
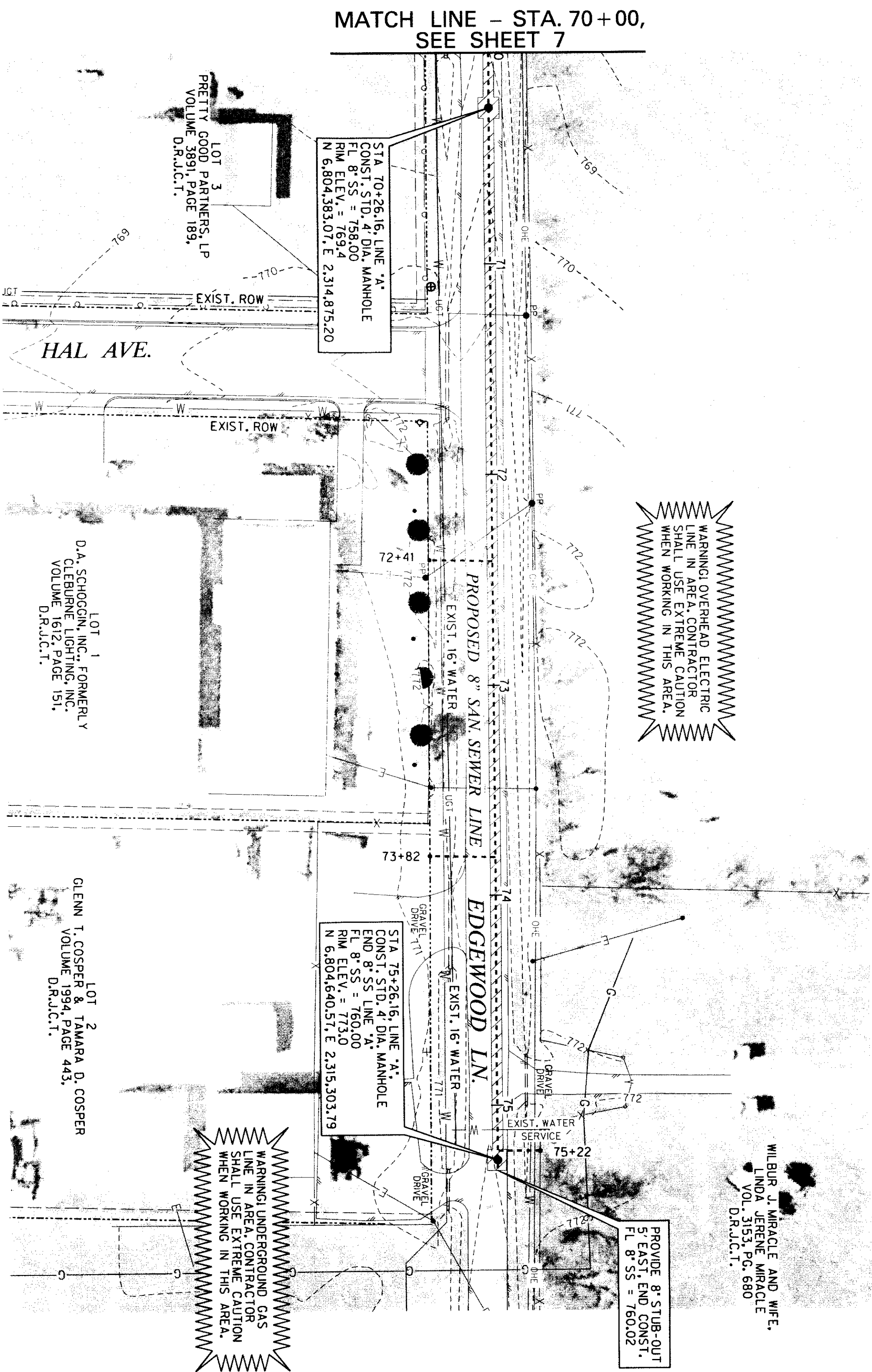
- 1/8" SURVEY CONTROL POINT
- EXIST. WATER LINE
- EXIST. SEWER LINE
- PROPOSED SEWER LINE
- WATER METER
- GAS LINE
- ELECTRIC LINE
- UNDERGROUND TELEPHONE CABLE
- WIRE FENCE
- CHAIN LINK FENCE
- PROPERTY LINE
- EXISTING CONTOUR
- EXISTING FIRE HYDRANT
- EXISTING BLOW OFF VALVE
- EXISTING AIR & VACUUM RELEASE VALVE
- EXISTING GATE VALVE

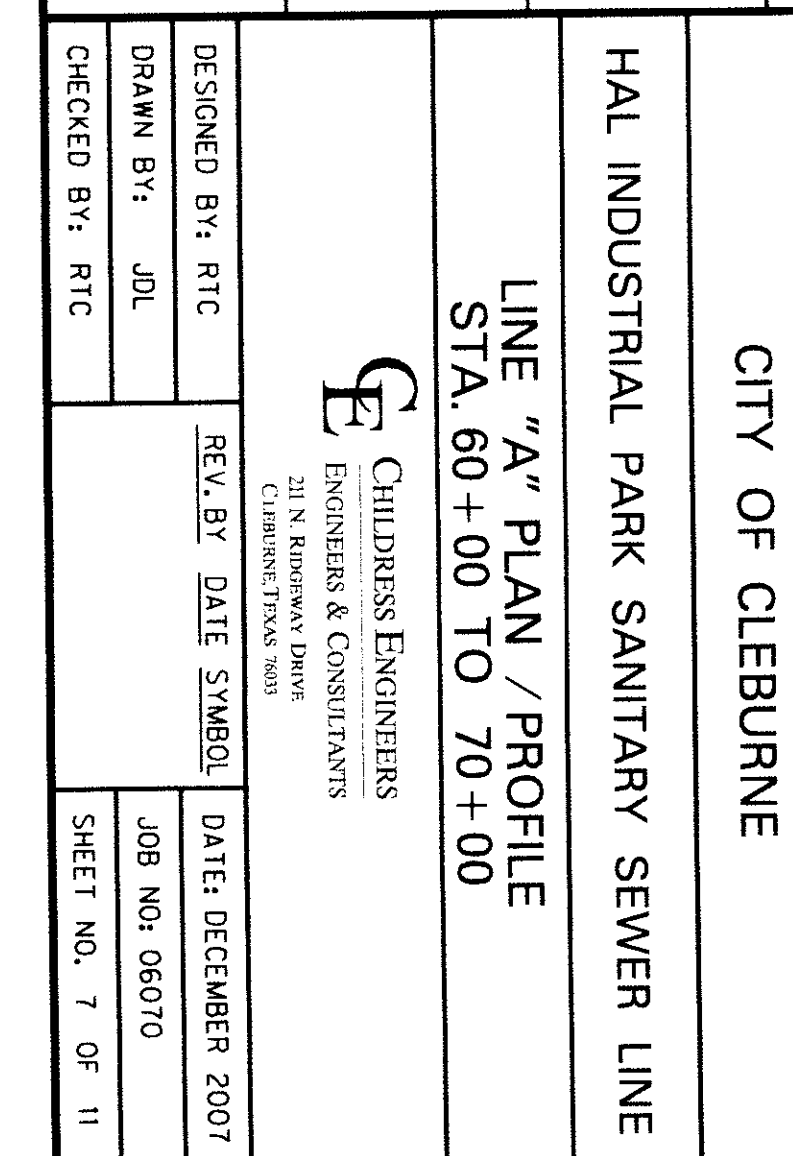
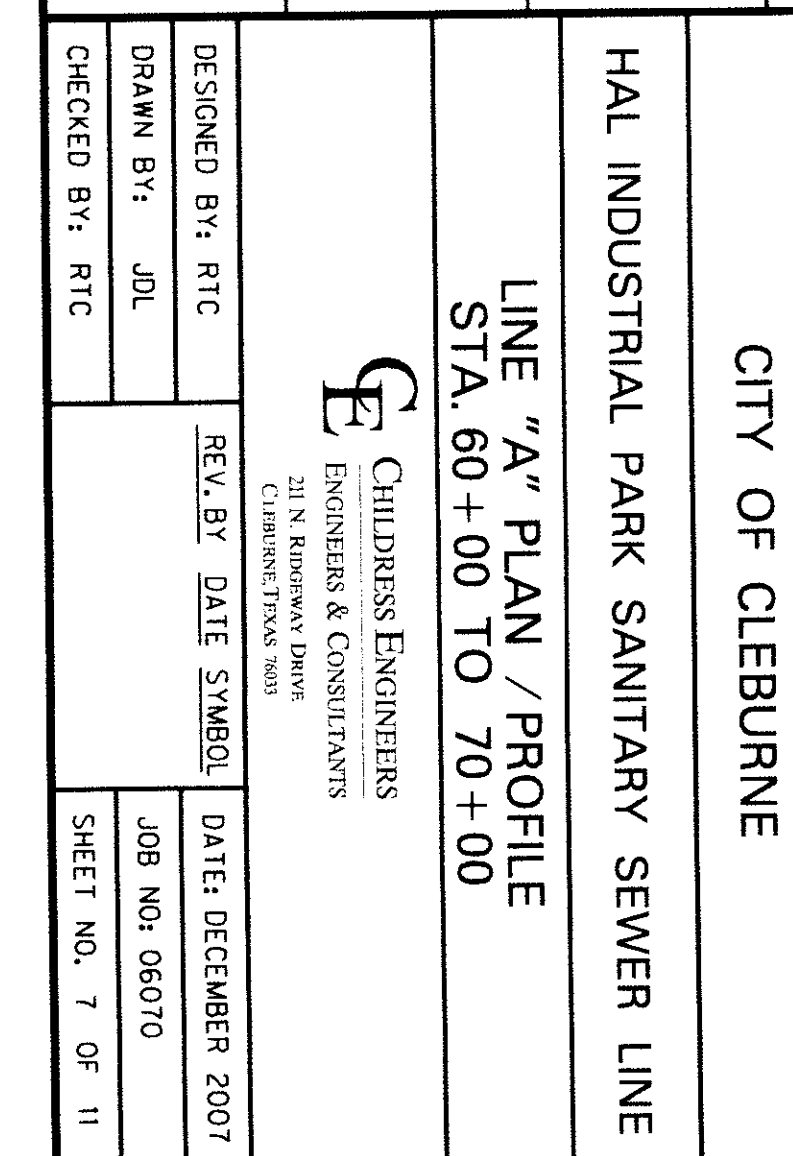
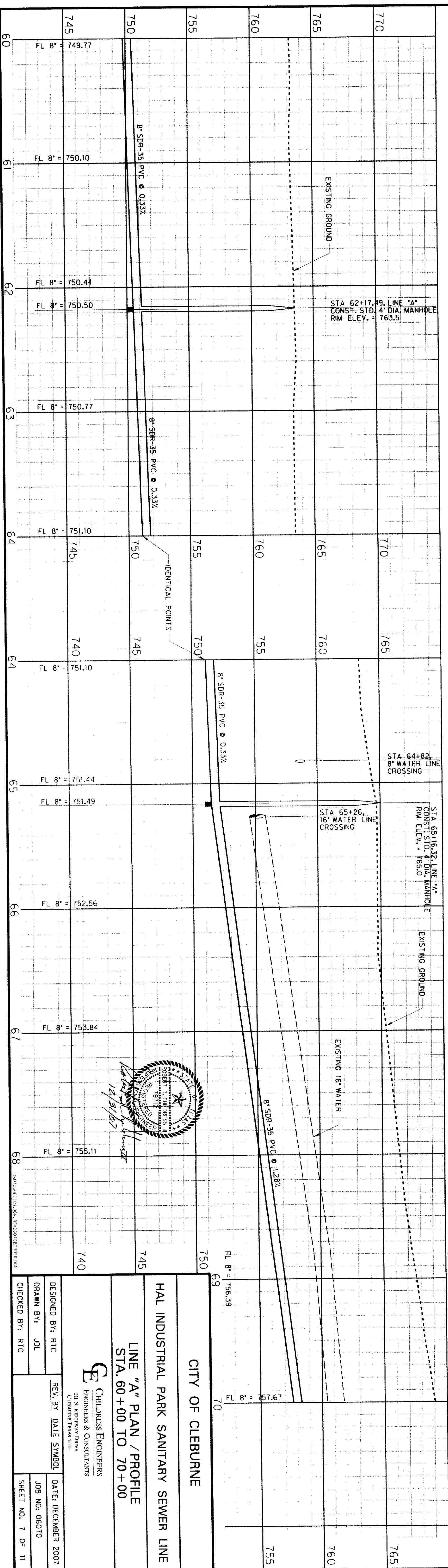
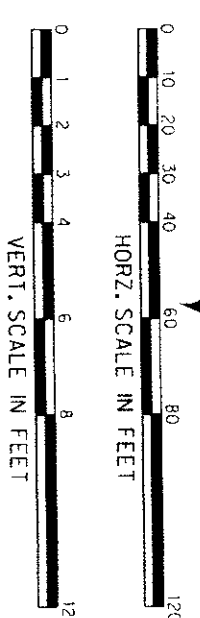
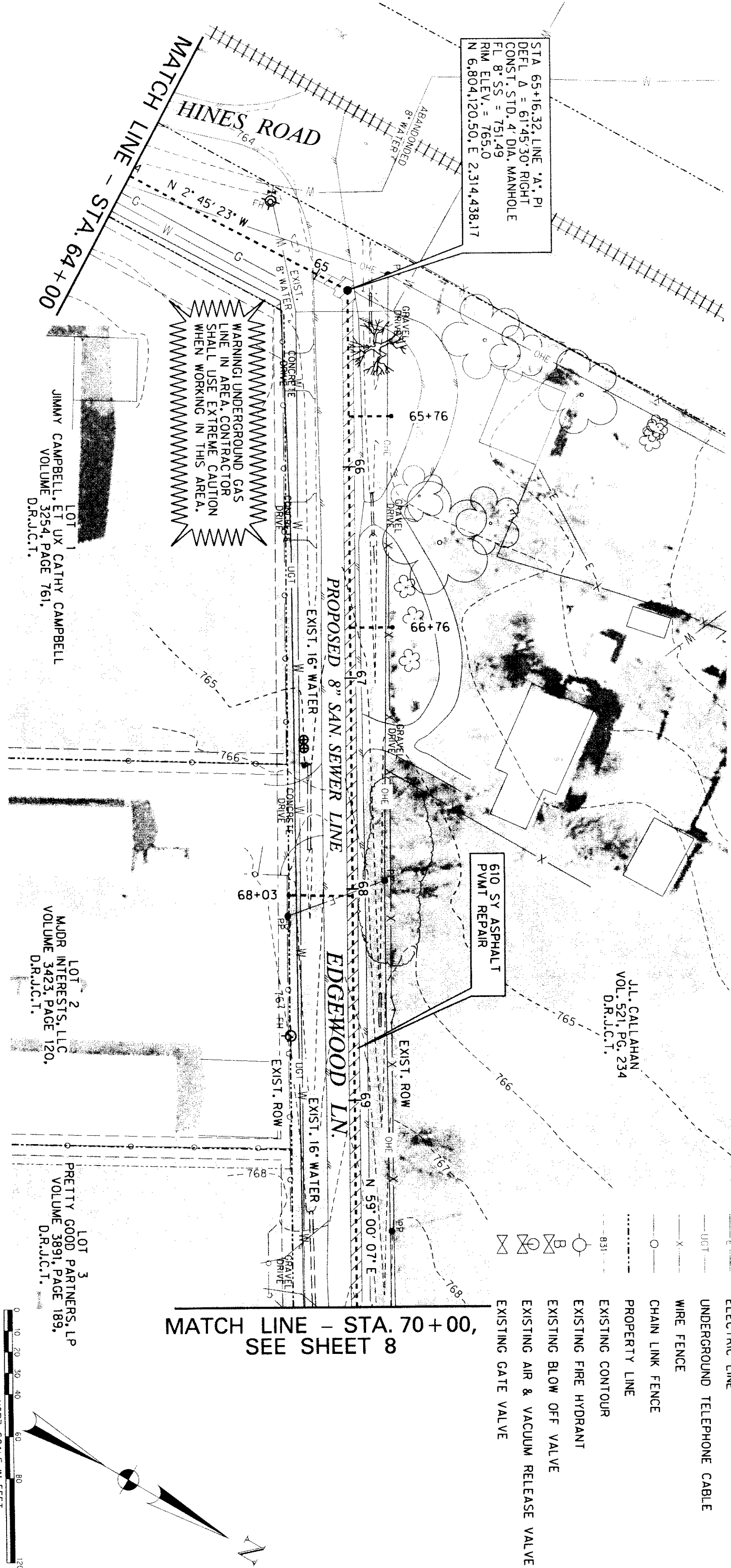
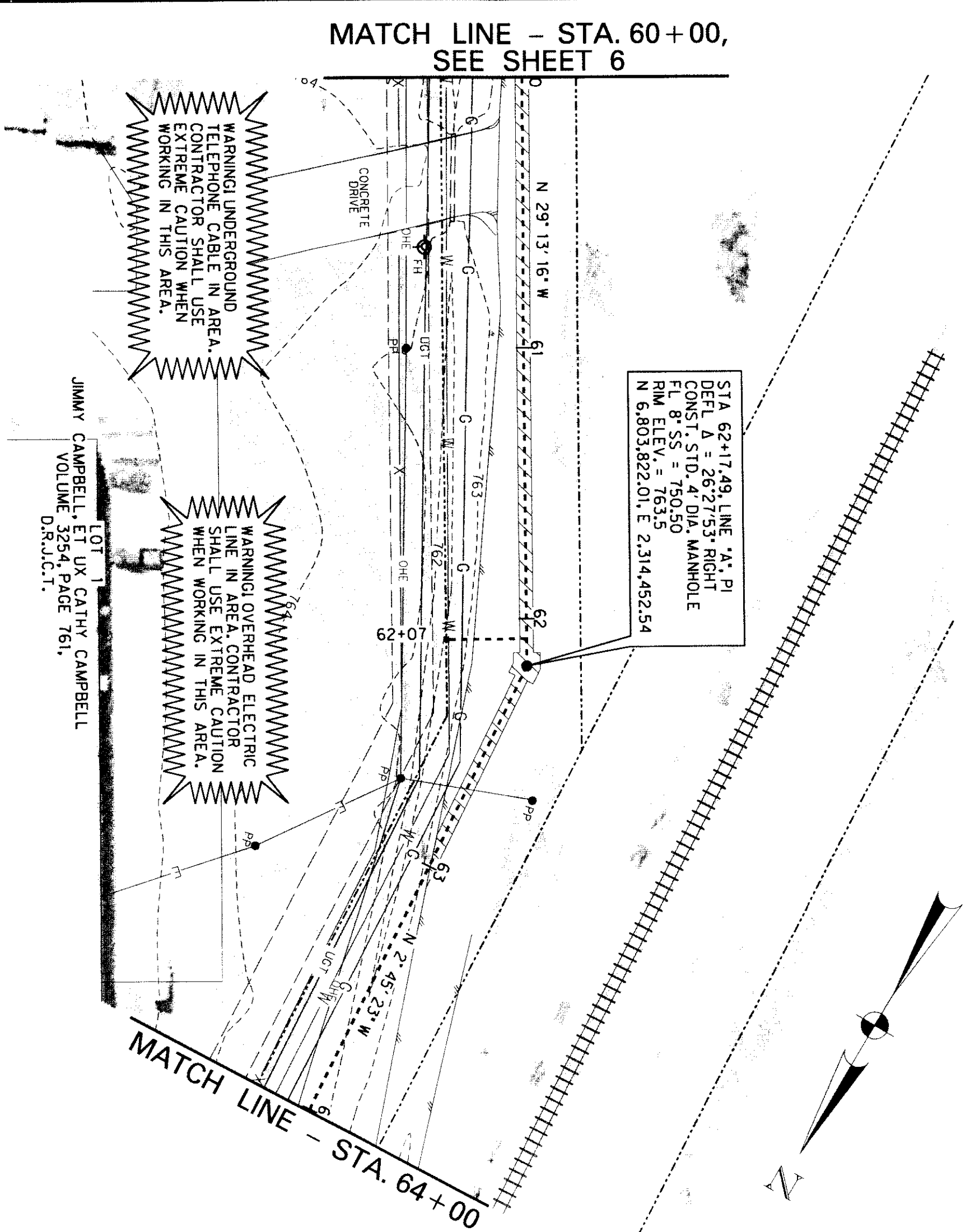


CITY OF CLEBURNE	
HAL INDUSTRIAL PARK SANITARY SEWER LINE	
LINE "B" PLAN / PROFILE	
STA. 0+00 TO 10+00	
CHILDRESS ENGINEERS	
ENGINEERS & CONSULTANTS	
201 N. RICHMOND DRIVE	
CLEBURNE, TEXAS 76033	
DESIGNED BY: RTC	REV. BY: DATE SYMBOL
DRAWN BY: JDL	
CHECKED BY: RIC	
DATE: DECEMBER 2007	
JOB NO: 06070	
SHEET NO. 9 OF 11	

LEGEND:

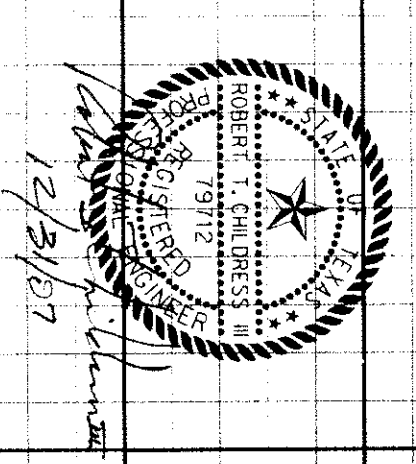
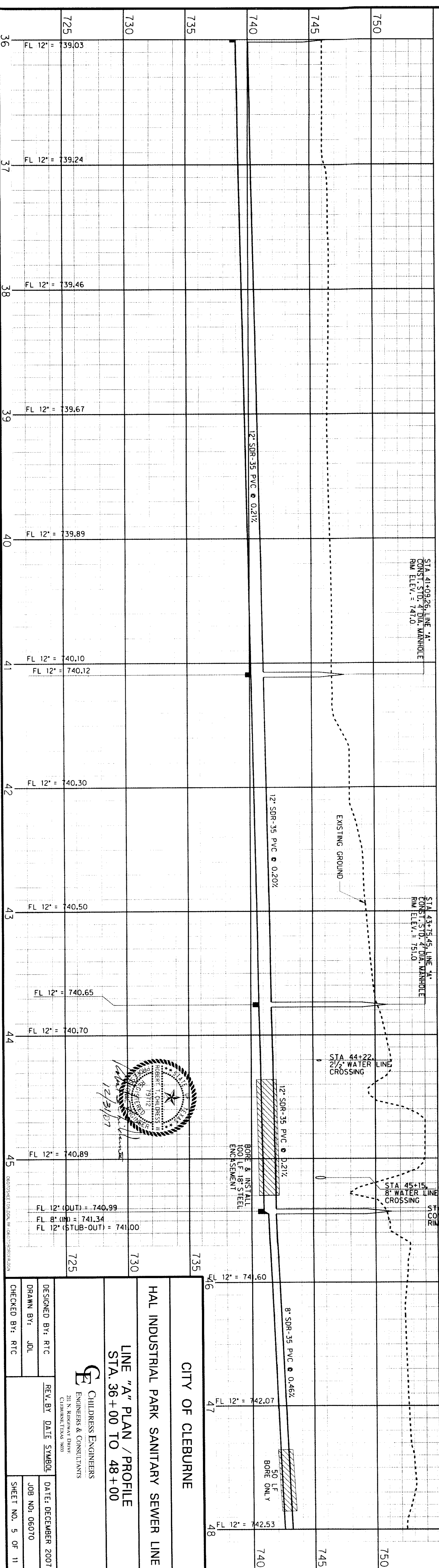
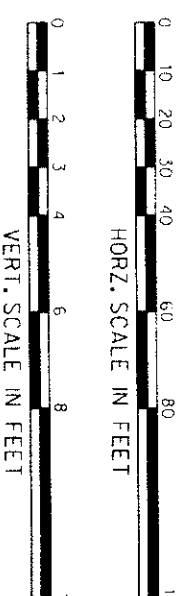
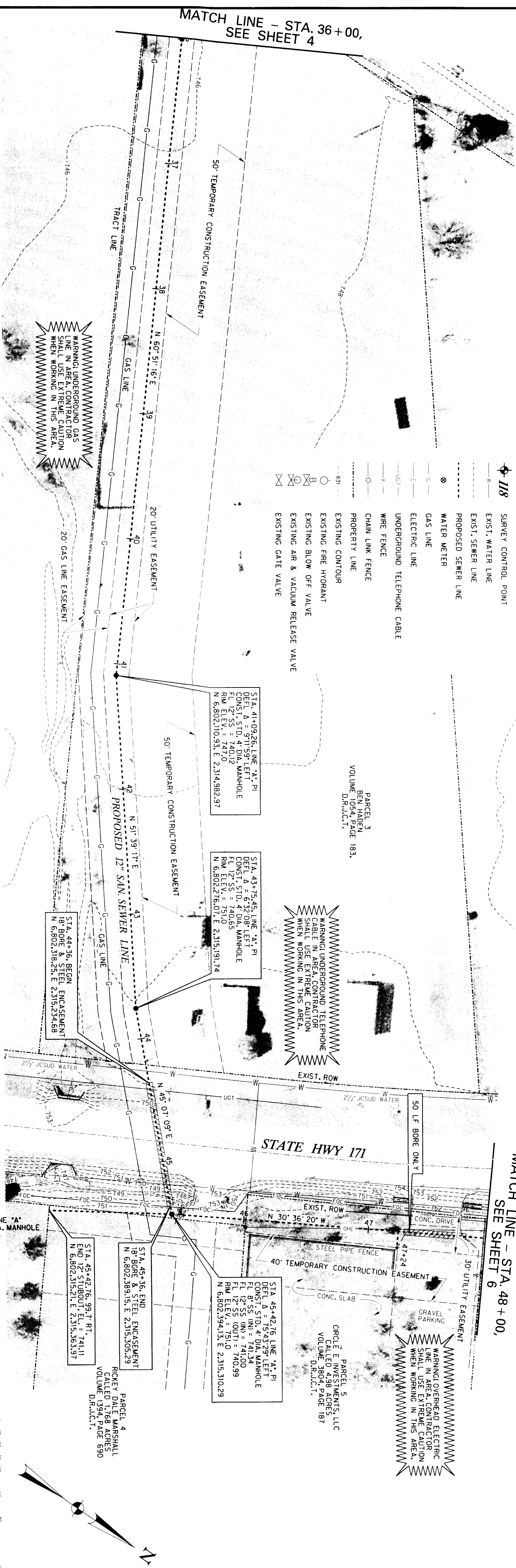
- 118 SURVEY CONTROL POINT
- EXIST. WATER LINE
- EXIST. SEWER LINE
- PROPOSED SEWER LINE
- ⊙ WATER METER
- GAS LINE
- ELECTRIC LINE
- UNDERGROUND TELEPHONE CABLE
- WIRE FENCE
- CHAIN LINK FENCE
- PROPERTY LINE
- EXISTING CONTOUR
- ⊙ EXISTING FIRE HYDRANT
- ⊙ EXISTING BLOW OFF VALVE
- ⊙ EXISTING AIR & VACUUM RELEASE VALVE
- ⊙ EXISTING GATE VALVE





LEGEND:

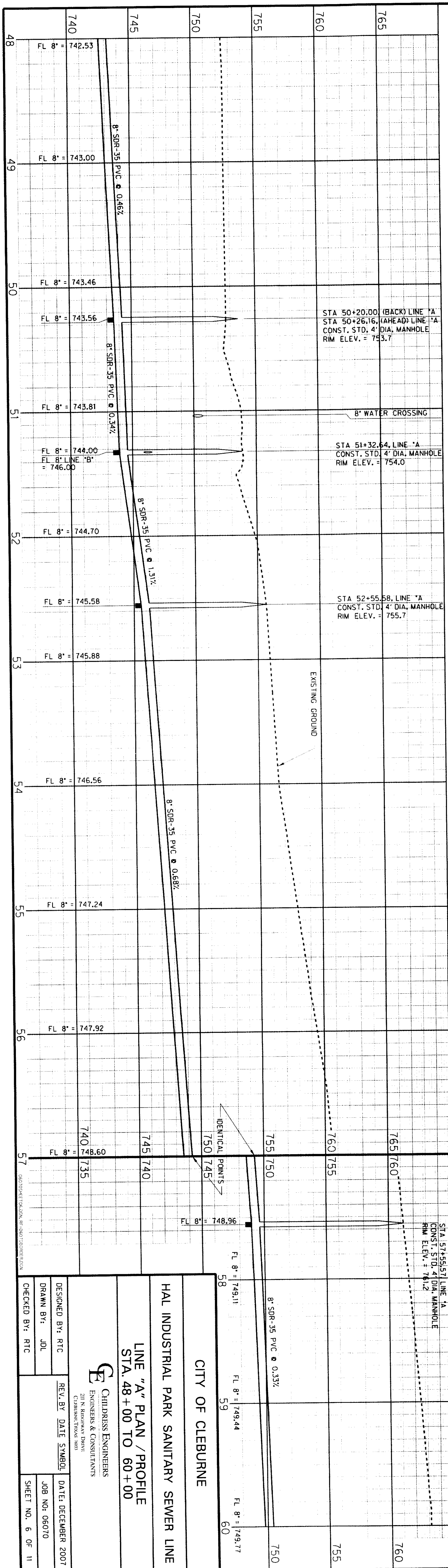
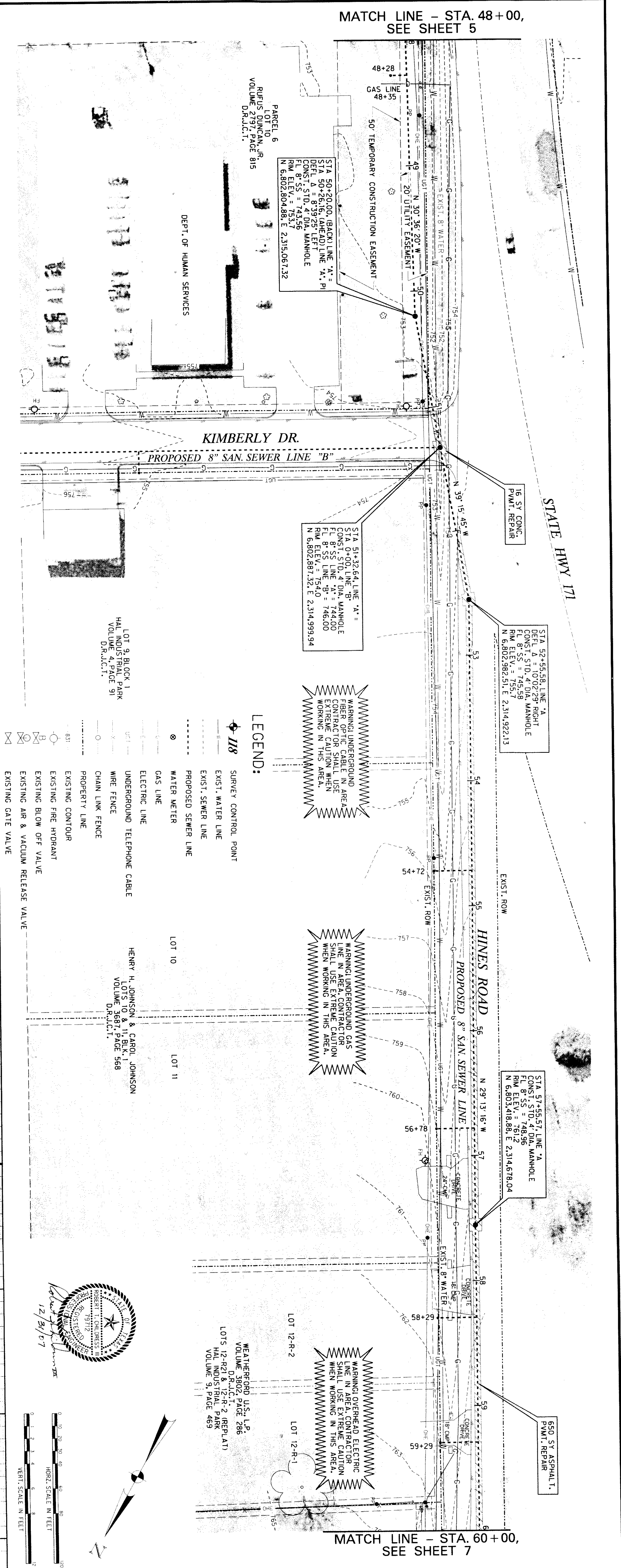
- 1/8" SURVEY CONTROL POINT
- EXIST. WATER LINE
- EXIST. SEWER LINE
- PROPOSED SEWER LINE
- ⊙ WATER METER
- GAS LINE
- ELECTRIC LINE
- UNDERGROUND TELEPHONE CABLE
- WIRE FENCE
- CHAIN LINK FENCE
- PROPERTY LINE
- EXISTING CONTOUR
- EXISTING FIRE HYDRANT
- EXISTING BLOW OFF VALVE
- EXISTING AIR & VACUUM RELEASE VALVE
- EXISTING GATE VALVE



CITY OF CLEBURNE
HAL INDUSTRIAL PARK SANITARY SEWER LINE
LINE "A" PLAN / PROFILE
STA. 36 + 00 TO 48 + 00

CHILDRESS ENGINEERS
ENGINEERS & CONSULTANTS
211 N. RICHMOND DRIVE
CLEBURNE, TEXAS 76033

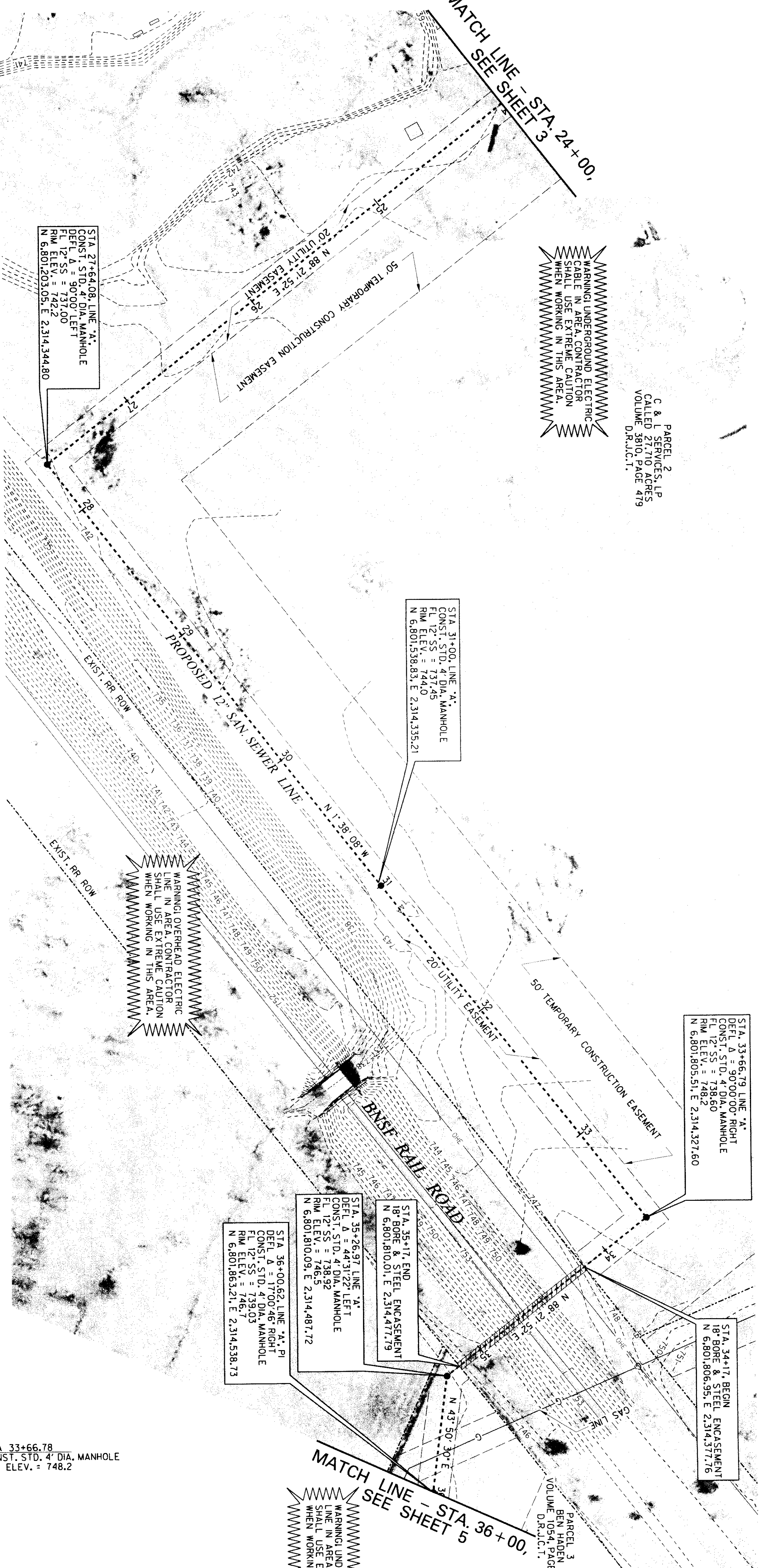
DESIGNED BY: RTC
DRAWN BY: JDL
CHECKED BY: RTC
REV. BY: DATE SYMBOL
DATE: DECEMBER 2007
JOB NO. 06070
SHEET NO. 5 OF 11



PARCEL 2
C & I SERVICES, LP
CALLED 27.70 ACRES
VOLUME 2801 PAGE 419
D.R.J.C.T.

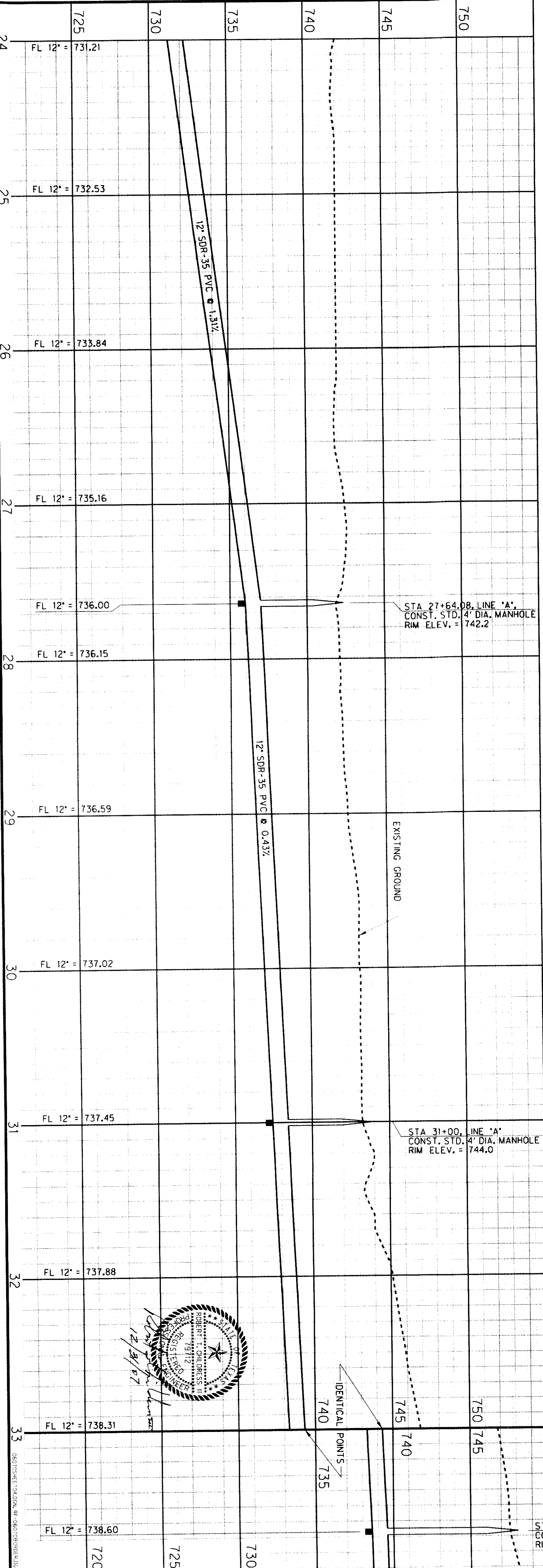
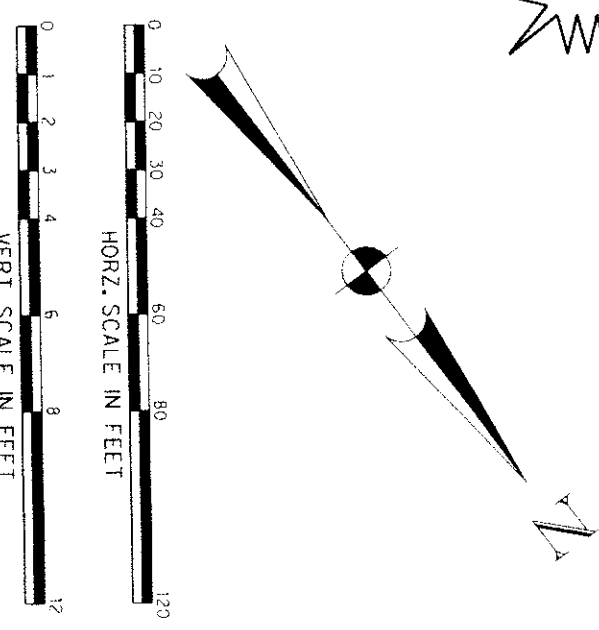
WARNING UNDERGROUND ELECTRIC
CABLE IN AREA. CONTRACTOR
SHALL USE EXTREME CAUTION
WHEN WORKING IN THIS AREA.

MATCH LINE - STA. 24+00.
SEE SHEET 3.



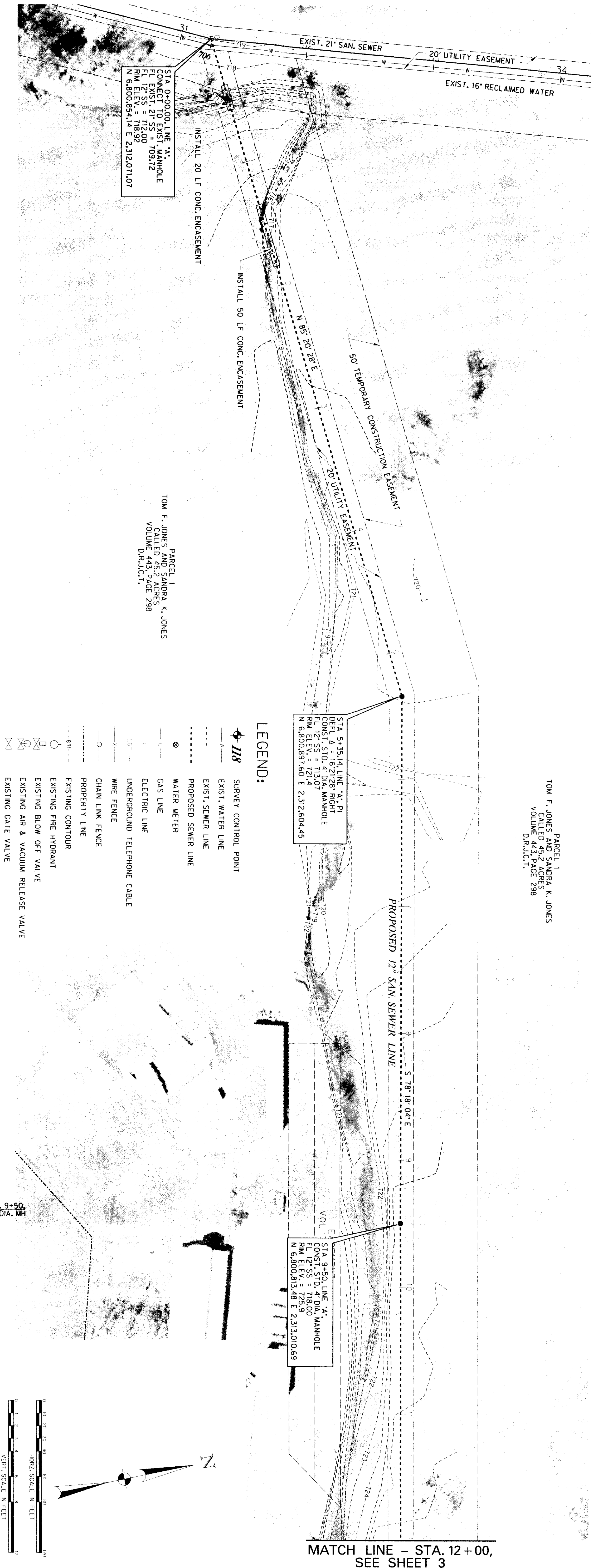
LEGEND:

- 1/8" SURVEY CONTROL POINT
- EXIST. WATER LINE
- EXIST. SEWER LINE
- PROPOSED SEWER LINE
- WATER METER
- GAS LINE
- ELECTRIC LINE
- UNDERGROUND TELEPHONE CABLE
- WIRE FENCE
- CHAIN LINK FENCE
- PROPERTY LINE
- EXISTING CONTOUR
- EXISTING FIRE HYDRANT
- EXISTING BLOW OFF VALVE
- EXISTING AIR & VACUUM RELEASE VALVE
- EXISTING GATE VALVE



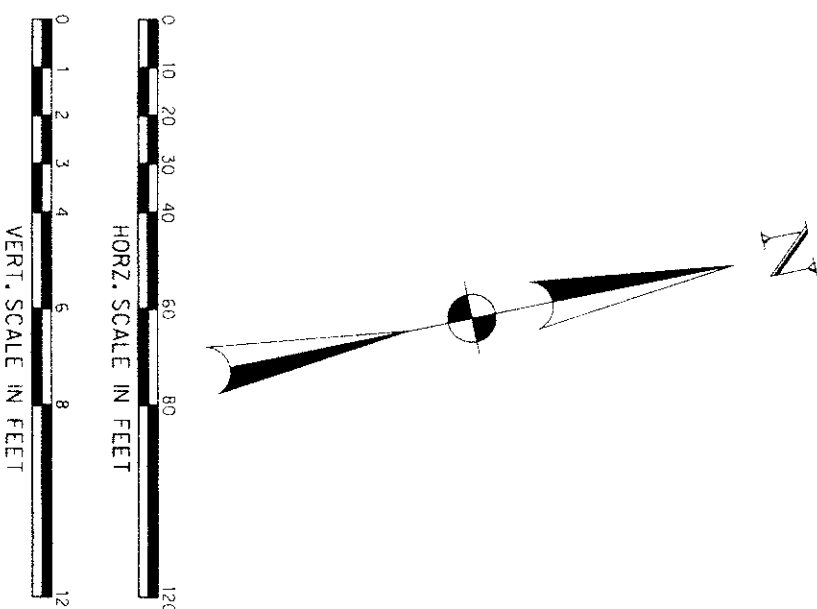
CITY OF CLEBURNE			
HAL INDUSTRIAL PARK SANITARY SEWER LINE			
LINE "A" PLAN / PROFILE STA. 24+00 TO 36+00			
CHILDRESS ENGINEERS ENGINEERS & CONSULTANTS 231 N. BRIDGEMAN DRIVE CLEBURNE, TEXAS 76033		REV. BY DATE SYMBOL	
DESIGNED BY: RTC	REV. BY	DATE	SYMBOL
DRAWN BY: JDL			
CHECKED BY: RTC			
DATE: DECEMBER 2007		JOB NO. 06070	
SHEET NO. 4 OF 11			

PARCEL 1
TOM F. JONES AND SANDRA K. JONES
CALLED 45.2 ACRES
VOLUME 443, PAGE 298
D.R.U.C.T.

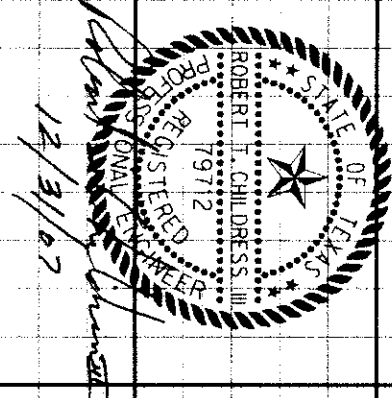
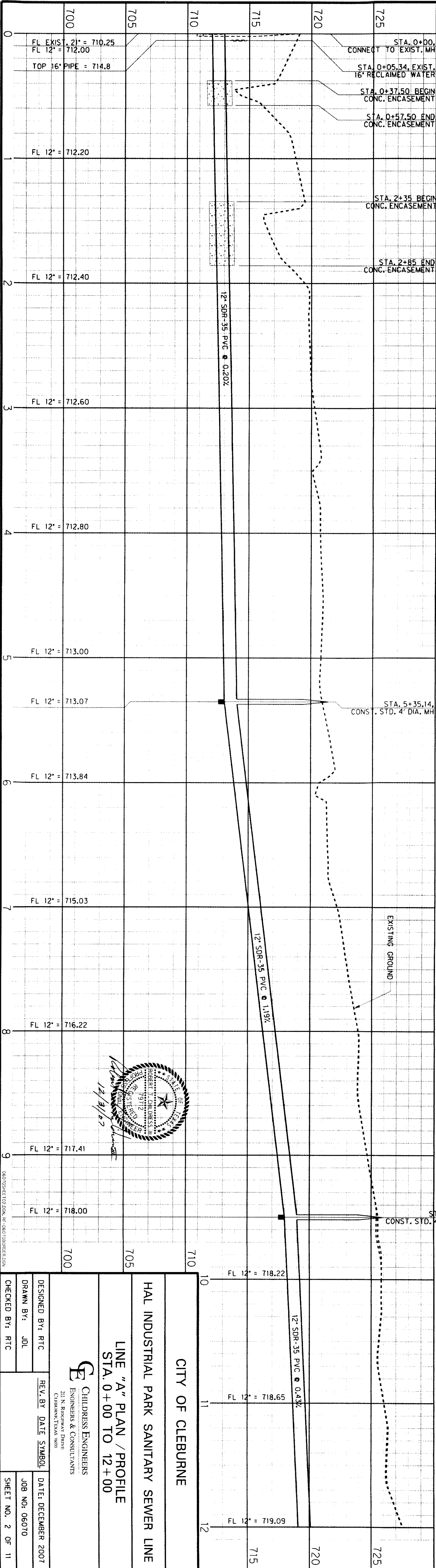


LEGEND:

- 1/8" SURVEY CONTROL POINT
- EXIST. WATER LINE
- EXIST. SEWER LINE
- PROPOSED SEWER LINE
- WATER METER
- GAS LINE
- ELECTRIC LINE
- UNDERGROUND TELEPHONE CABLE
- WIRE FENCE
- CHAIN LINK FENCE
- PROPERTY LINE
- EXISTING CONTOUR
- EXISTING FIRE HYDRANT
- EXISTING BLOW OFF VALVE
- EXISTING AIR & VACUUM RELEASE VALVE
- EXISTING GATE VALVE

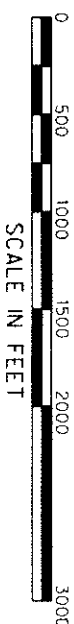


MATCH LINE - STA. 12+00,
SEE SHEET 3



CITY OF CLEBURNE	
HAL INDUSTRIAL PARK SANITARY SEWER LINE	
LINE "A" PLAN / PROFILE	
STA. 0+00 TO 12+00	
CHILDRESS ENGINEERS	
ENGINEERS & CONSULTANTS	
211 N. RICHMOND AVENUE	
CLEBURNE, TEXAS 76033	
DESIGNED BY: RTC	REV. BY DATE SYMBOL
DRAWN BY: JDL	DATE: DECEMBER 2007
CHECKED BY: RTC	JOB NO: 06070
	SHEET NO. 2 OF 11

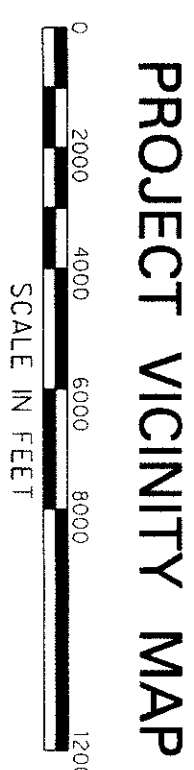
WOOD LN



LEGEND:

 5 SURVEY CONTROL POINT

1. THE EXISTING UTILITIES ARE SHOWN FOR REFERENCE ONLY. THEIR LOCATIONS ARE APPROXIMATE AND NOT TO BE CONSIDERED ACCURATE NOR ALL INCLUSIVE. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
2. CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTROL POINTS ARE FURNISHED FOR THE CONTRACTOR'S USE TO ESTABLISH THE PROPOSED WORK AREAS. HE SHALL BE RESPONSIBLE FOR PROTECTING THESE POINTS AND TRANSFERRING THEM TO AN AREA OUTSIDE THE CONSTRUCTION LIMITS IF NECESSARY.
3. THE CONTRACTOR SHALL NOTIFY THE CITY OF CLEBURNE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGED UTILITIES AT HIS EXPENSE.
5. THE CONTRACTOR SHALL STRIP AND STOCKPILE 6 INCHES OF TOP SOIL FROM THE CONSTRUCTION AREA PRIOR TO EXCAVATION. UPON COMPLETION OF THE CONSTRUCTION, THE TOP SOIL SHALL BE SPREAD IN A WORKMANLIKE MANNER.
6. EXCESS EXCAVATED MATERIAL SHALL BE SPREAD ON SITE AT THE DIRECTION OF THE OWNER/ENGINEER. LARGE ROCKS AND OTHER CONSTRUCTION DEBRIS SHALL BE HAULED OFF SITE AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR SHALL RETURN ALL EXCAVATED AREAS, FENCES, SIDEWALKS, UTILITIES, PAVED AREAS, ETC. TO THEIR PRECONSTRUCTION CONDITION OR BETTER. THIS WORK SHALL BE CONSIDERED INCIDENTAL AND NOT A SEPARATE BID ITEM, UNLESS OTHERWISE SHOWN ON THE BID SCHEDULE.
8. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES AND SHALL BE RESPONSIBLE FOR ALL STORM WATER CONTROL, PUMPING, AND Dewatering NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT. THIS WORK SHALL BE CONSIDERED INCIDENTAL AND NOT A SEPARATE PAY ITEM.
9. THE MINIMUM COVER SHALL BE 42" UNLESS OTHERWISE SHOWN ON PLANS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEDING AND ESTABLISHING GRASS IN THE AREAS OF DISTURBED SOIL. HYDROMULCHING OR SODDING MAY BE SUBSTITUTED FOR SEEDING AT THE CONTRACTOR'S OPTION.
11. THE CONTRACTOR SHALL INSTALL H-BRACING PRIOR TO CUTTING ANY FENCE. ALL FENCES AND GATES SHALL BE CLOSED DURING PERIODS WHEN CONSTRUCTION ACTIVITIES ARE IN PROGRESS. THE CONTRACTOR SHALL ERECT TEMPORARY FENCING IF NECESSARY AND EXERCISE EXTREME CARE TO INSURE THAT NO LIVESTOCK ARE ALLOWED TO ESCAPE.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION AGAINST EROSION AND SILTATION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO HAY BALE DIKES AND SILT FENCES AS REQUIRED.
13. THE CONTRACTOR SHALL ADHERE TO THE TCEQ RULES GOVERNING SEPARATION DISTANCES AS FOUND IN THE RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS § 290.44 (e) AND THE DESIGN CRITERIA FOR SEWAGEAGE SYSTEMS § 317.13, APPENDIX E.
14. THE CONTRACTOR SHALL INSTALL 3" MAGNETIC LOCATOR TAPE MARKED SANITARY SEWER ABOVE THE BEDDING.
15. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A STORM WATER POLLUTION PREVENTION PLAN AND SUBMITTING ALL REQUIRED TYPES DOCUMENTATION, INCLUDING NOI, AND NOI FORMS, AND MEETING ALL REQUIREMENTS OF THE TCEQ REGULATIONS.
16. ALTHOUGH JOINTS MAY BE DEFLECTED ACCORDING TO MANUFACTURERS RECOMMENDATIONS IN ORDER TO AVOID MINOR P.L.'S IN THE ALIGNMENT, THE ALIGNMENT SHALL NOT VARY SO AS TO CAUSE THE PIPELINE TO EXTEND BEYOND THE EASEMENT LINE.
17. A TRENCH SAFETY SYSTEM DESIGN SHALL BE PROVIDED BY THE CONTRACTOR AS A SEPARATE SPECIFICATION ITEM FOR THIS PROJECT. THE TRENCH SAFETY SYSTEM PLANS AND SPECIFICATIONS MUST BE DESIGNED, SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER CURRENTLY LICENSED TO PERFORM WORK IN THE STATE OF TEXAS. TRENCH EXCAVATION, SHORING, ETC. SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PROVIDED THEREOF. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL EXCAVATION WORK AND SITE CONDITIONS ARE WITHIN REGULATIONS AS ESTABLISHED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS AS CONTAINED IN SUBPART F, PART 1926 OF 29 CFR. THAT APPLIES TO THE USES OF THE TRENCH EXCAVATION PLANS. THE CONTRACTOR'S NEGLIGENCE IN PERFORMANCE OF CONTRACT WORK OR FROM THE OWNER'S FAILURE TO NOTE EXCEPTIONS TO THE EXCAVATION PLAN SHALL REMAIN THE SOLE RESPONSIBILITY AND LIABILITY OF THE CONTRACTOR.
18. WATER SHALL NOT BE TAKEN FROM THE CITY'S MAIN WITHOUT PRIOR KNOWLEDGE AND APPROVAL.
19. BORROW LOGS ARE PROVIDED FOR APPROXIMATE ROCK LOCATION ONLY. THEY CAN BE FOUND IN APPENDIX A OF THE SPECIFICATIONS.
20. THE CONTRACTOR SHALL BACKFILL AND COMPACT THE TOP 8" OF ALL UTILITY DITCHES, WITHIN EXISTING PAVEMENT, WITH FLEXIBLE BASE MATERIAL OR 1" CRUSHED ROCK AS TEMPORARY PAVEMENT UNTIL THOSE AREAS CAN BE REPAIRED ACCORDING TO THE PLANS AND SPECIFICATIONS.
21. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL HOUSES AND BUSINESSES EACH NIGHT AND SHALL FACILITATE AND DIRECT TRAFFIC DURING CONSTRUCTION ACTIVITIES.
22. THE CONTRACTOR SHALL NOT DISTURB LARGE TREES IN THE TEMPORARY CONSTRUCTION EASEMENT. TREES THAT OVERHANG THE PERMANENT EASEMENT MAY BE TRIMMED AS NECESSARY.



SHEET INDEX	
NO.	DESCRIPTION
1	PROJECT LOCATION MAP / SHEET INDEX / SURVEY CONTROL POINTS
2	LINE A STA. 0+00 TO 12+00 PLAN / PROFILE
3	LINE A STA. 12+00 TO 24+00 PLAN / PROFILE
4	LINE A STA. 24+00 TO 36+00 PLAN / PROFILE
5	LINE A STA. 36+00 TO 48+00 PLAN / PROFILE
6	LINE A STA. 48+00 TO 60+00 PLAN / PROFILE
7	LINE A STA. 60+00 TO 70+00 PLAN / PROFILE
8	LINE A STA. 70+00 TO 75+02.65 END PLAN / PROFILE
9	LINE B STA. 0+00 TO 10+00 PLAN / PROFILE
10	LINE B STA. 10+00 TO 18+40 END PLAN / PROFILE
11	SANITARY SEWER DETAILS



CITY OF CLEBURNE	
HAL INDUSTRIAL PARK SANITARY SEWER	
PROJECT LOCATION MAP / SHEET INDEX	
SURVEY CONTROL POINTS	
 CHILDRESS ENGINEERS ENGINEERS & CONSULTANTS 231 N. RUDOLPH AVE. CLEBURNE, TEXAS 76033	
DESIGNED BY: RTC	REV. BY: DATE SYMBOL:
DRAWN BY: JDL	DATE: DECEMBER 2007
CHECKED BY: RTC	JOB NO. 06070
	SHEET NO. 1 OF 11

CONSTRUCTION PLANS

FOR

HAL INDUSTRIAL PARK SANITARY SEWER

COUNCIL AND STAFF

TED REYNOLDS
MAYOR

KYLE BOLES
MAYOR PRO TEM

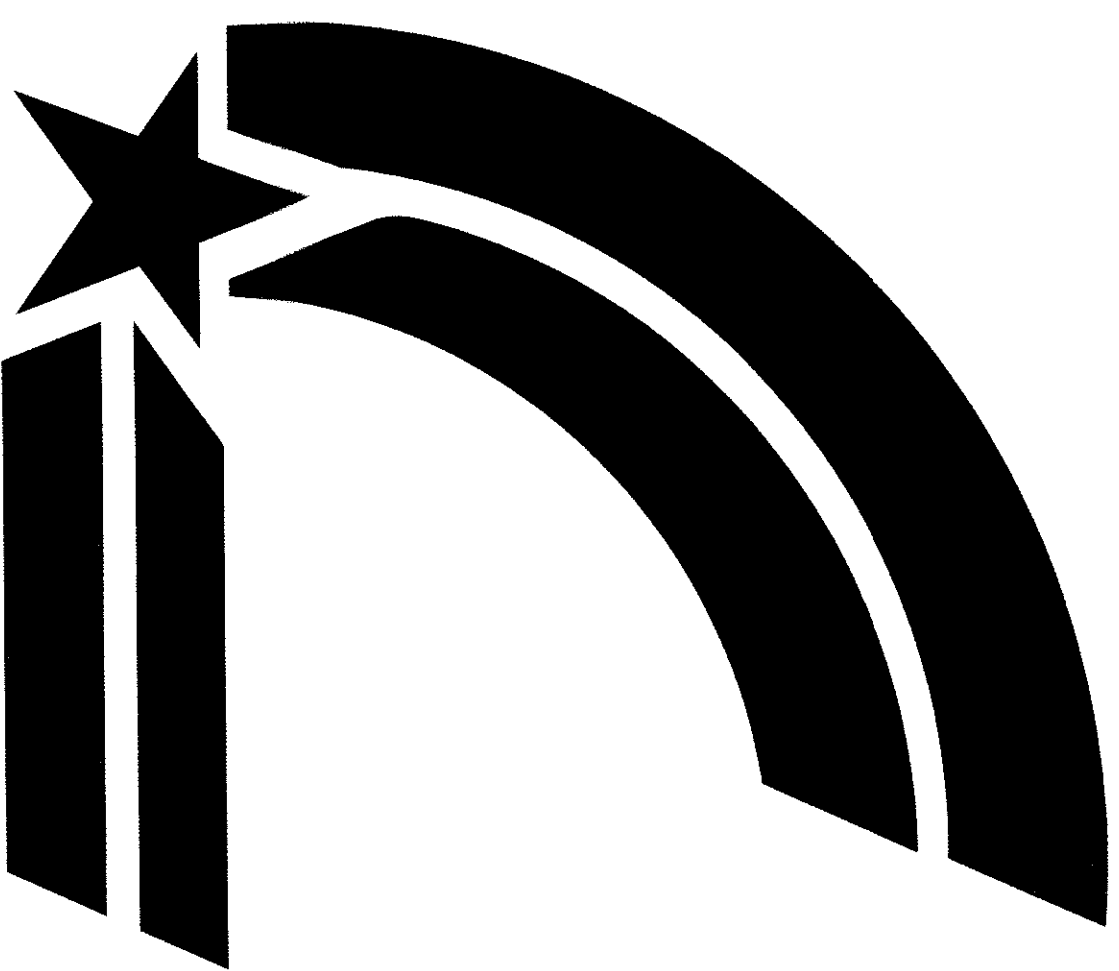
SONNY RUSSELL
SINGLE MEMBER DISTRICT NO. 1

BOB FORCE
SINGLE MEMBER DISTRICT NO. 3

JOHN WARREN
SINGLE MEMBER DISTRICT NO. 4

CHESTER NOLEN, C.P.M.
CITY MANAGER

RUSSELL SCHREIBER, P.E.
PUBLIC WORKS DIRECTOR



City of Cleburne

2007



PREPARED BY:

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Robert T. Childress III
ROBERT T. CHILDRESS III, P.E.
12/23/07
DATE

JOHNSON COUNTY, TEXAS