

PROJECT
POWER PAPER
NATURAL GAS PIPELINE
HARRIMAN, TN

PREPARED FOR
MIDCOAST ENERGY RESOURCES
HOUSTON, TEXAS

PREPARED BY
ETE CONSULTING ENGINEERING, INC.
OAK RIDGE, TENNESSEE

GENERAL NOTES:
(REFER TO SECTION 11, TECHNICAL SPECIFICATIONS)

- 1) NORTH ARROWS AND COORDINATES SHOWN ON THESE DRAWINGS ARE BASED ON THE TENNESSEE LAMBERT GRID.
- 2) THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL ORDINANCES INCLUDING THOSE RELATIVE TO EROSION CONTROL.
- 3) EXISTING UTILITIES SHOWN WITHIN THE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR CONTACTING THE UTILITY COMPANIES INVOLVED BEFORE ANY FIELD WORK IS COMMENCED. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO THE COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
- 4) THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER, UNDER AND AROUND EXISTING UTILITIES, THE CONTRACTOR SHALL BE REQUIRED TO FURNISH SUCH EQUIPMENT AT NO COST TO MIDCOAST ENERGY RESOURCES, INC.
- 5) THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL BASED ON THE STANDARDS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" 1988 EDITION.

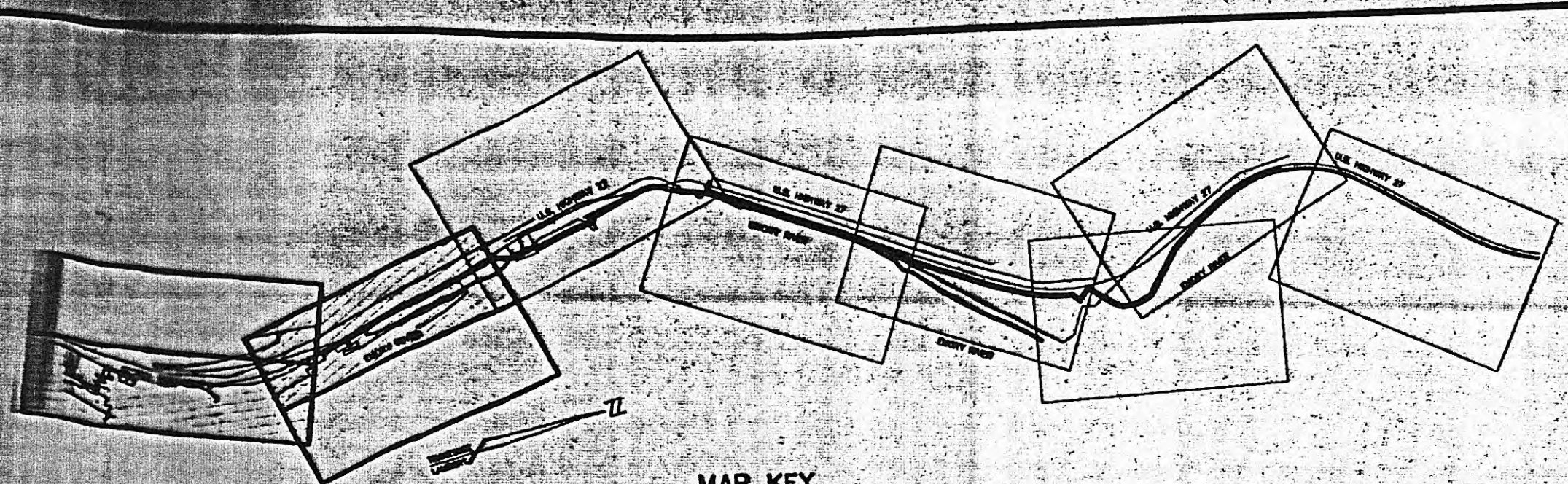
SPECIAL NOTES ON TRENCHING

- 1) PROTECT EXCAVATION BY SHORING, BRACING, SHEET PILING, UNDERPINNING OR OTHER METHODS REQUIRED TO PREVENT CAVE-IN OF LOOSE SOIL. PROTECTION SHALL BE IN ACCORDANCE WITH OSHA, 29CFR 1929.652.
 - A) TRENCHES MORE THAN 5 FEET IN DEPTH SHALL BE SHORED, LAID BACK TO A STABLE SLOPE, OR PROVIDE SOME OTHER EQUIVALENT MEANS OF PROTECTION.
 - B) REFER TO OSHA, 29CFR 1926.652, APPENDICES A AND B, FOR THE MINIMUM REQUIREMENTS FOR SLOPES THAT ARE LAID BACK.
 - C) REFER TO OSHA, 29CFR 1926.652, APPENDIX C, FOR THE MINIMUM REQUIREMENTS FOR SHORING AND BRACING.
 - D) TRENCHES LESS THAN 5 FEET IN DEPTH SHALL BE EFFECTIVELY PROTECTED WHEN EXAMINATION OF THE GROUND INDICATES HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED.
 - E) EMPLOYEES REQUIRED TO BE IN TRENCHES 4 FEET OR MORE IN DEPTH SHALL HAVE AN ADEQUATE MEANS OF EXIT, SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.

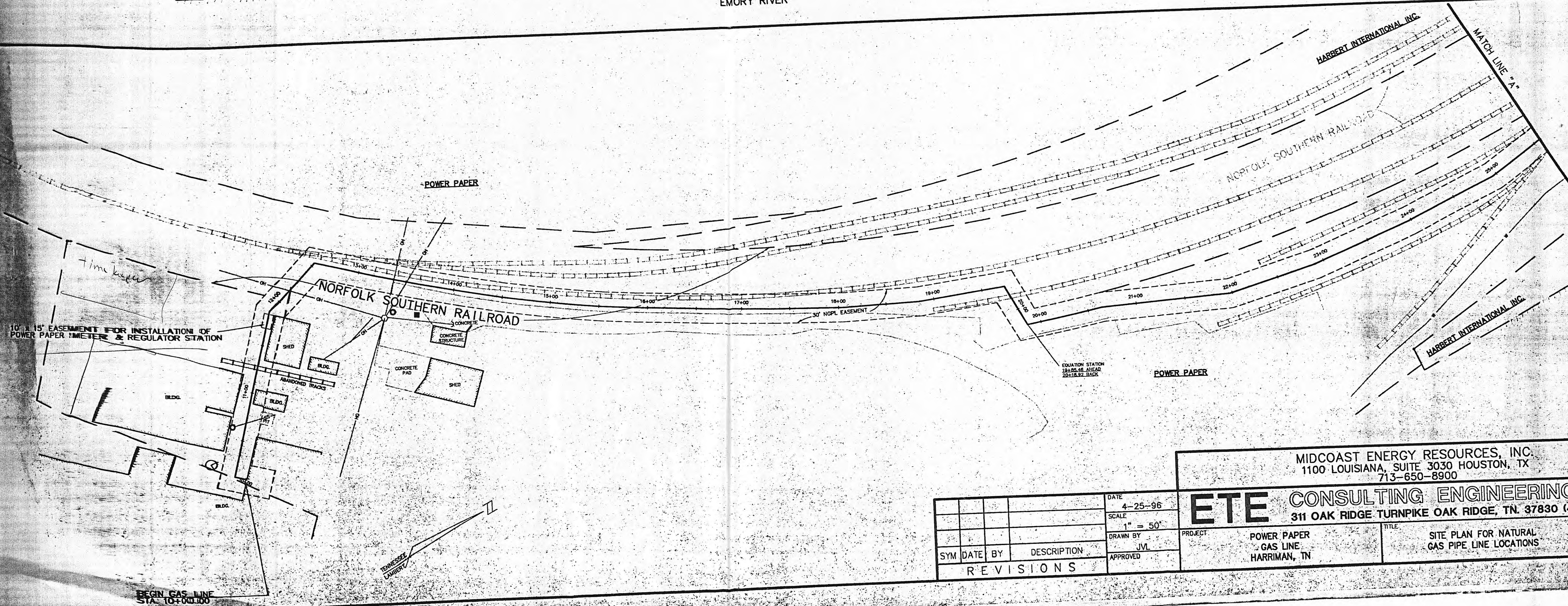
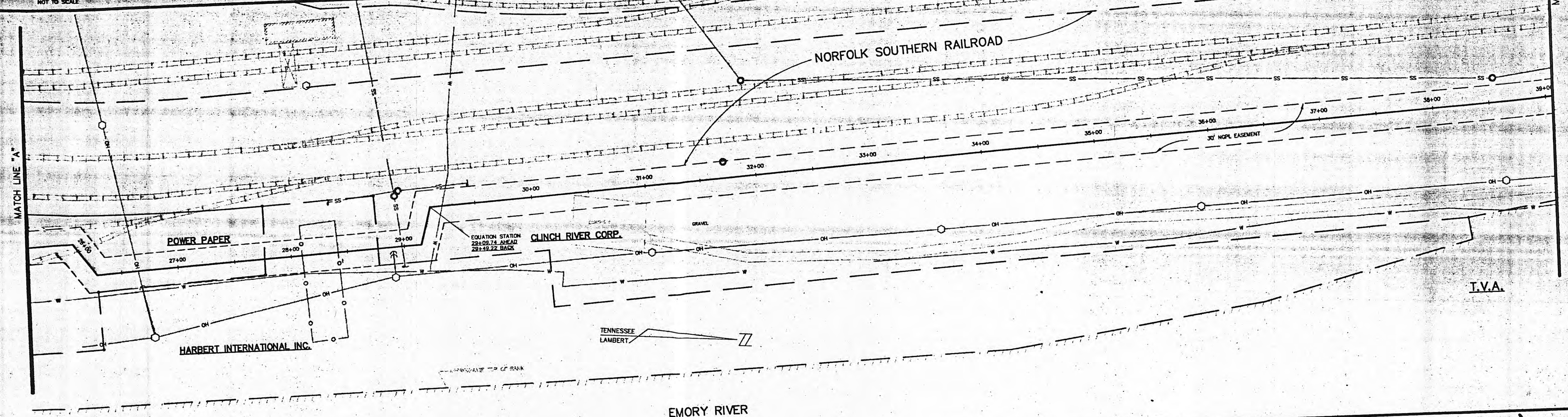
LEGEND
(EXISTING)

W	WATER LINE
OH	OVERHEAD UTILITY
SS	SANITARY SEWER LINE
G	UNDERGROUND GAS LINE
SPRINT	UNDERGROUND TELEPHONE
FM	FORCE MAIN SEWER
FENCE (CHAIN)	FENCE (CHAIN)
SM	SANITARY MANHOLE
PP	POWER POLE
SIGN	SIGN
LP	LIGHT POLE
GUY WIRE	GUY WIRE
IPF	IRON PIN FOUND
GV	GAS VALVE
WV	WATER VALVE
RR	RAILROAD CROSSING
750	CONTOUR LINE (1 FOOT)
30' CMP	COR. METAL PIPE

				DATE 4-25-96	ETE CONSULTING ENGINEERS 311 OAK RIDGE TURNPIKE OAK RIDGE, TN. 37830		PROJECT POWER PAPER GAS LINE HARRIMAN, TN		TITLE SITE PLAN FOR GAS PIPE LINE L			
				SCALE 1" = 50'								
				DRAWN BY JVL	CLIENT MIDCOAST ENERGY RESOURCES HOUSTON, TEXAS							
				APPROVED								
REVISIONS												



MAP KEY
NOT TO SCALE



SYM	DATE	BY	DESCRIPTION

DATE
4-25-96
SCALE
1" = 50'
DRAWN BY
JVL
APPROVED

MIDCOAST ENERGY RESOURCES, INC.
1100 LOUISIANA, SUITE 3030 HOUSTON, TX
713-650-8900

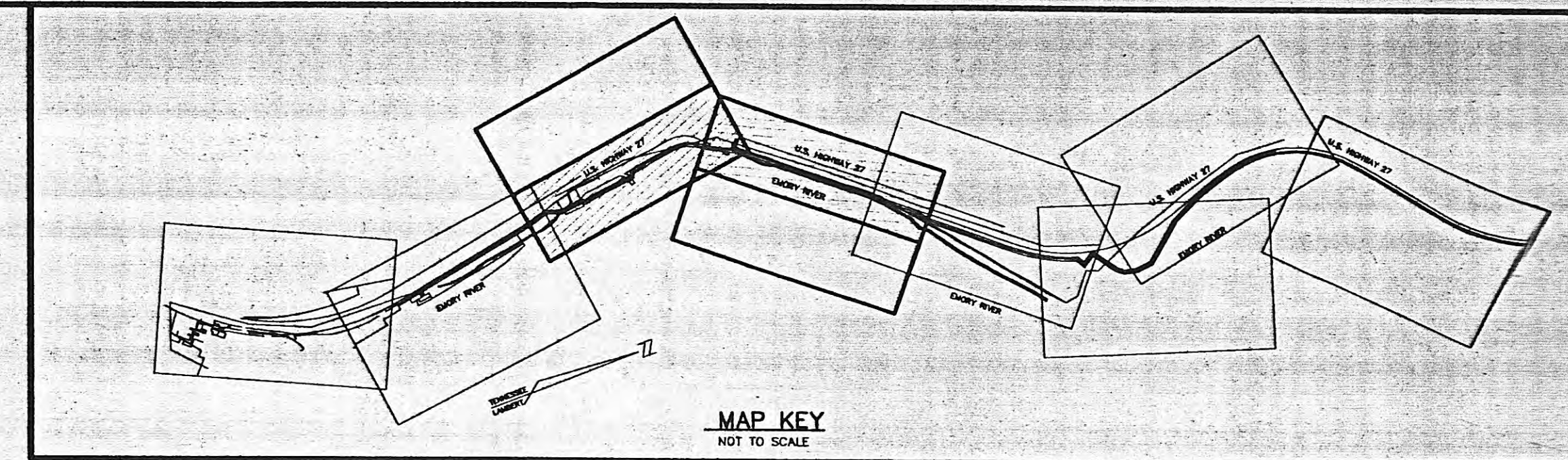
ETE CONSULTING ENGINEERING,
311 OAK RIDGE TURNPIKE OAK RIDGE, TN. 37830 (423)

PROJECT: POWER PAPER
GAS LINE
HARRIMAN, TN

TITLE: SITE PLAN FOR NATURAL
GAS PIPE LINE LOCATIONS

LEGEND

GAS LINE (NEW)
EASEMENT LIMITS
PROPERTY LINE

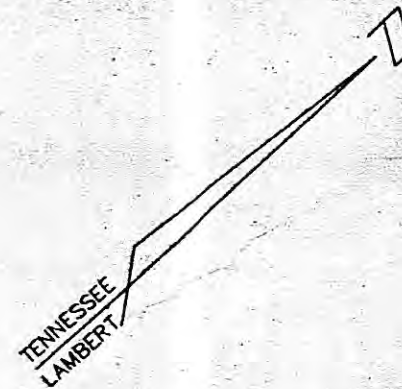


U.S. HWY. 27

NORFOLK SOUTHERN RAILROAD

T.V.A.

EMORY RIVER



MATCH LINE "C"

MATCH LINE "D"

MATCH LINE "B"

MATCH LINE "C"

NORFOLK SOUTHERN RAILROAD

T.V.A.

T.V.A.

EMORY RIVER

CLINCH RIVER CORP.

SEWER PLANT

EQUATION STATION
280.25.36 AHEAD
48+33.33 BACK

MIDCOAST ENERGY RESOURCES, INC.
1100 LOUISIANA, SUITE 3030 HOUSTON, TX
713-650-8900

ETE CONSULTING ENGINEERING, INC.
311 OAK RIDGE TURNPIKE OAK RIDGE, TN. 37830 (423) 482-4053

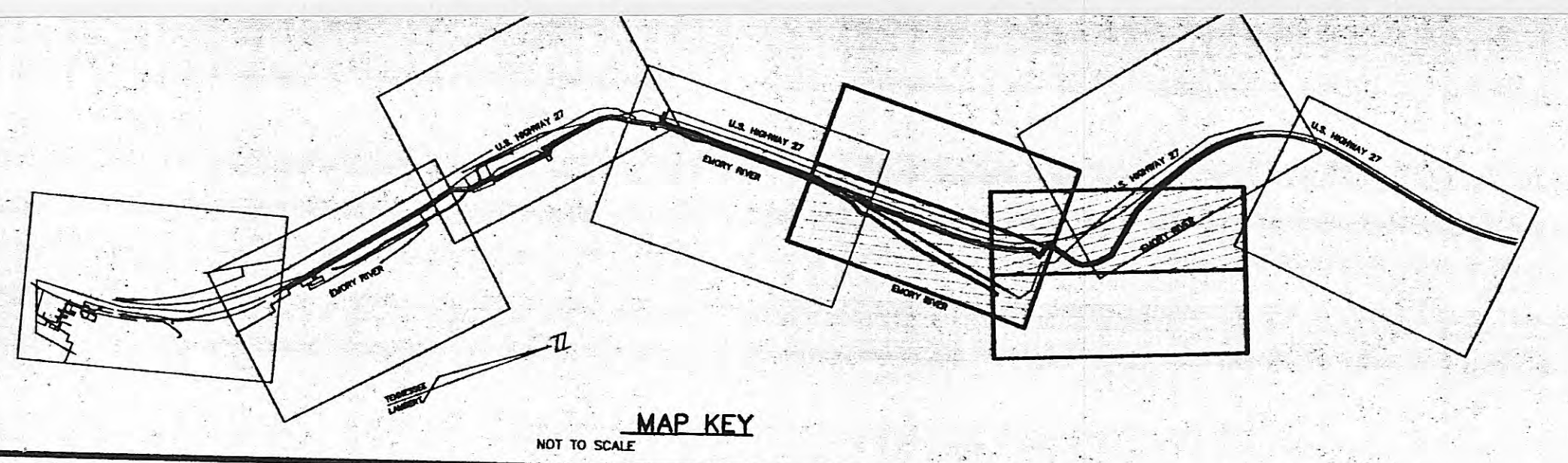
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			REVISIONS

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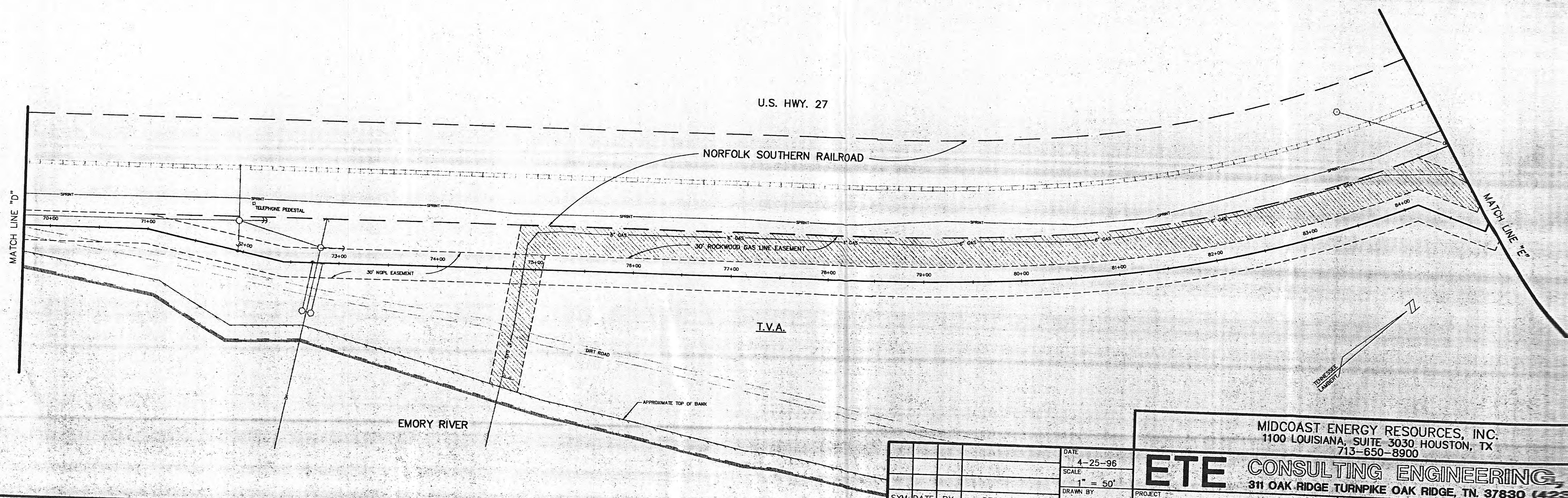
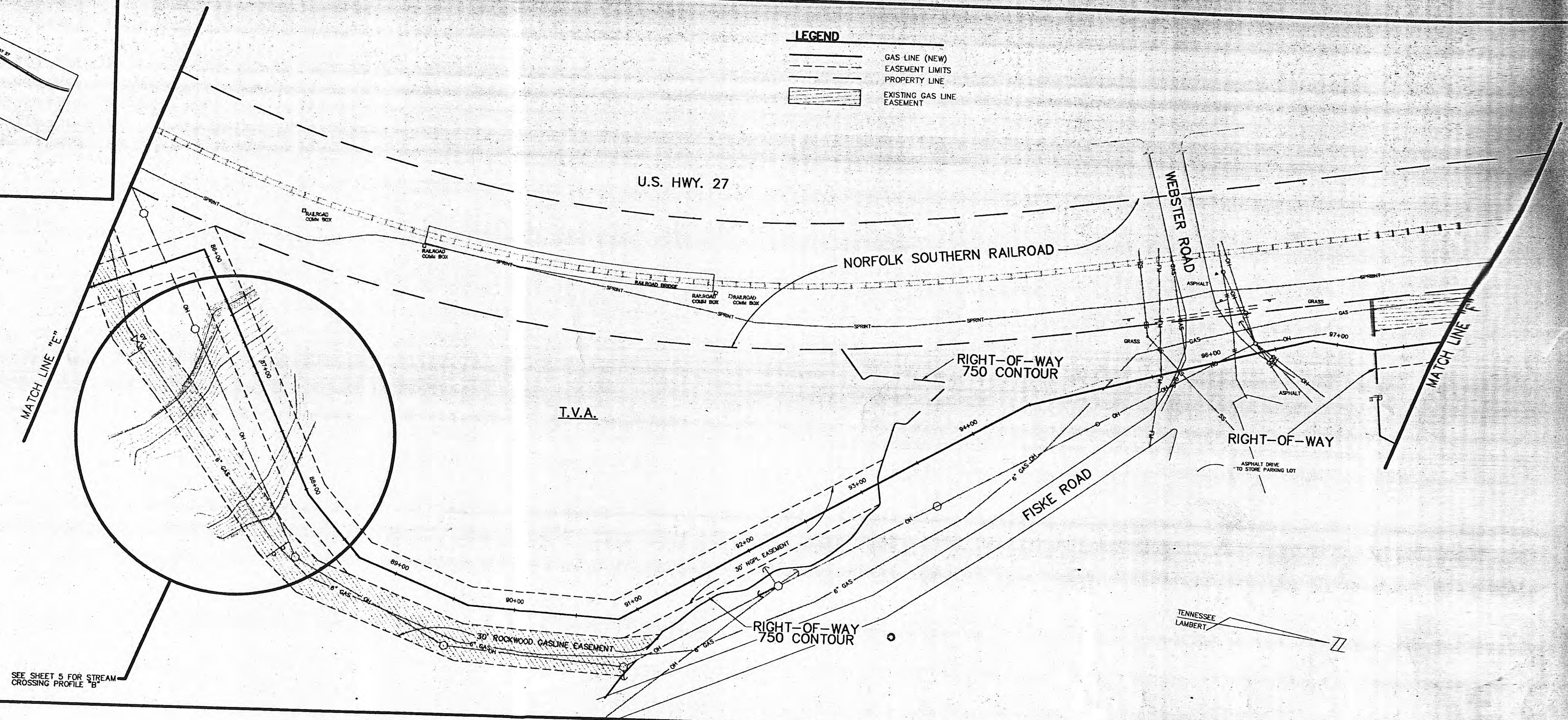
PROJECT
POWER PAPER
GAS LINE
HARRIMAN, TN

TITLE
SITE PLAN FOR NATURAL
GAS PIPE LINE LOCATIONS

JOB No.
95-527
SHEET
3 OF 3



- LEGEND**
- GAS LINE (NEW)
 - EASEMENT LIMITS
 - PROPERTY LINE
 - EXISTING GAS LINE EASEMENT



SYM	DATE	BY	DESCRIPTION
			REVISIONS

MIDCOAST ENERGY RESOURCES, INC.
1100 LOUISIANA, SUITE 3030 HOUSTON, TX
713-650-8900

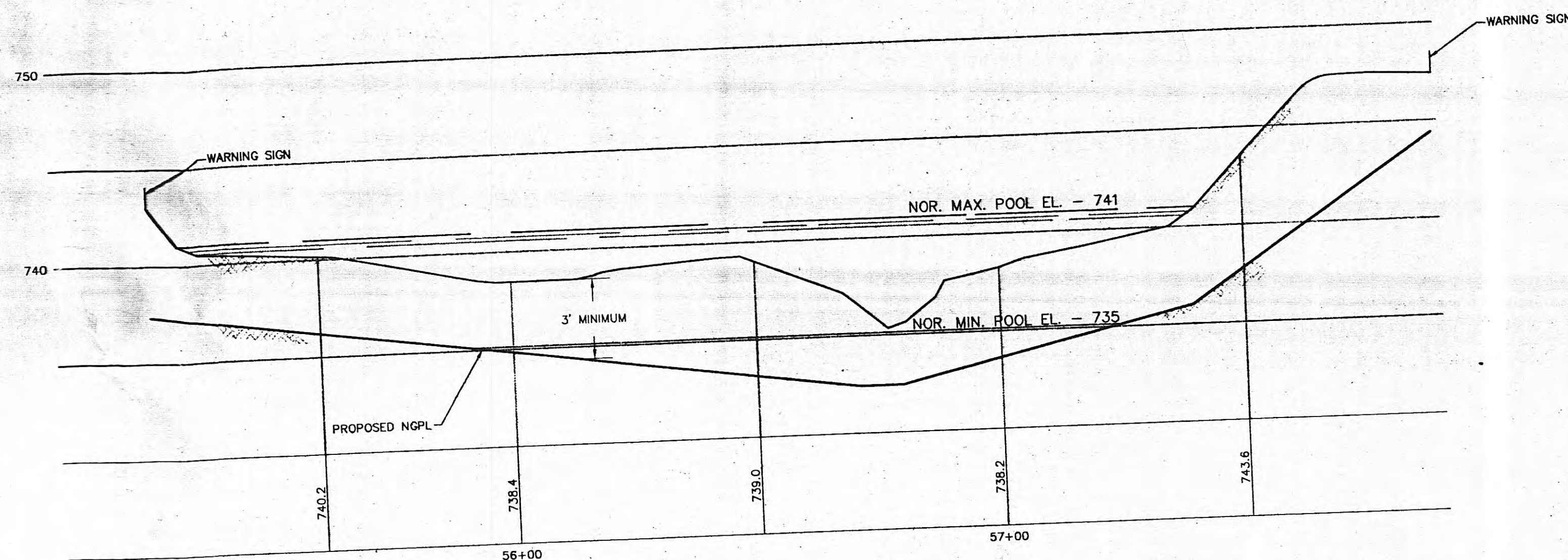
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POWER PAPER
GAS LINE
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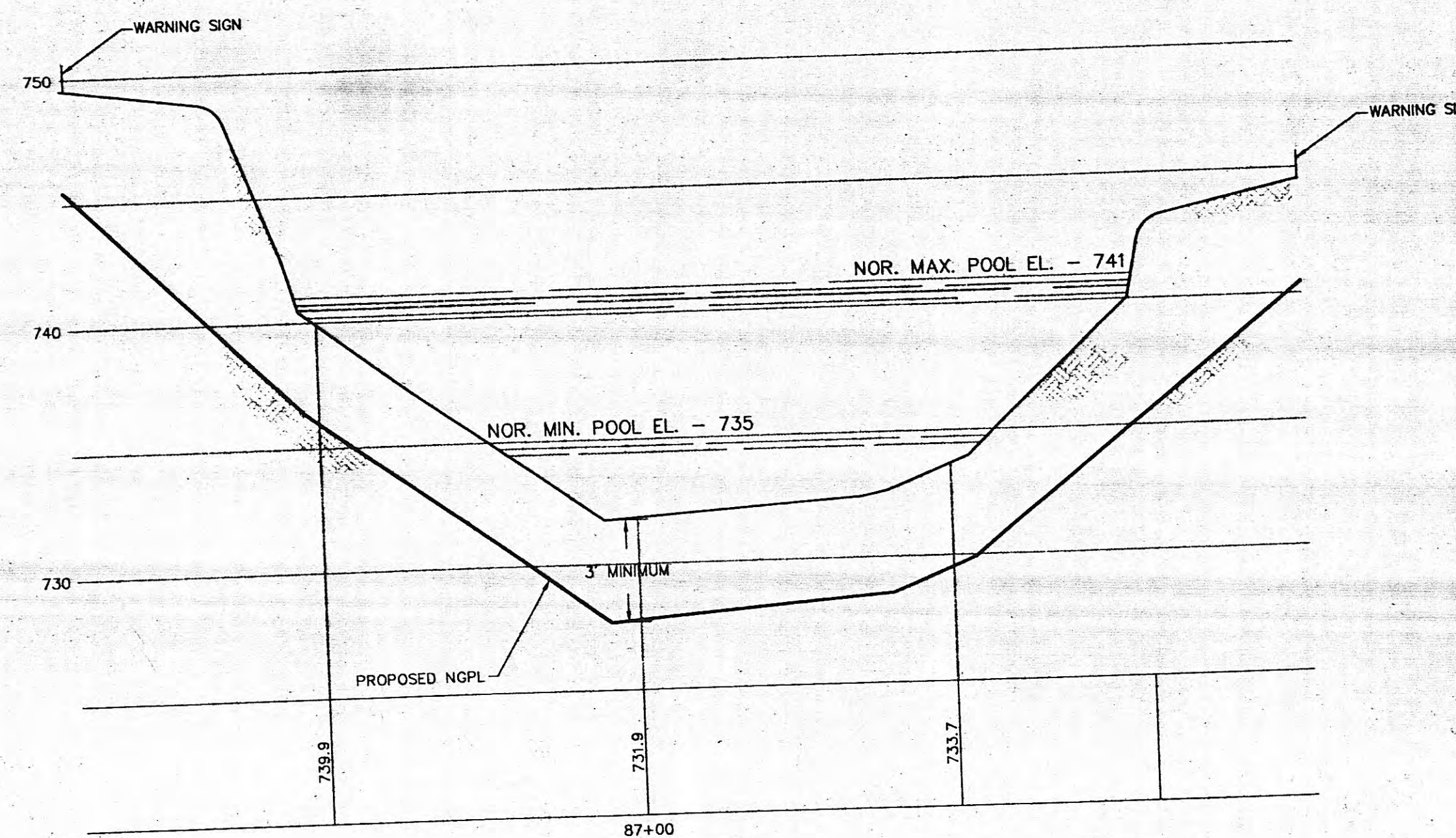
JOB No.
95-527
SHEET
4 OF 4



STREAM CROSSING "A"
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'

NOTES:

- 1) PIPELINE TO BE USED FOR TRANSPORTING NATURAL GAS.
- 2) 3 1/2" OUTSIDE DIAMETER GAS PIPELINE WITH 0.156" WALL THICKNESS.
- 3) NEGATIVE BUOYANCY IS 3.46 LB./LF.
- 4) EXCAVATED MATERIAL TO BE SPOILED ON RIVER BANK ABOVE EL. 750.



STREAM CROSSING "B"
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'

<table border="1"> <tr> <td>DATE</td> <td>4-25-96</td> </tr> <tr> <td>SCALE</td> <td>AS NOTED</td> </tr> </table>				DATE	4-25-96	SCALE	AS NOTED	ETE CONSULTING ENGINEERING, INC. 311 OAK RIDGE TURNPIKE OAK RIDGE, TN. 37830 (423)482-4051		JOB No. 95-527
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SCALE	AS NOTED									
DRAWN BY MRC	CLIENT MIDCOAST ENERGY RESOURCES HOUSTON, TEXAS	PROJECT POWER PAPER GAS LINE HARRIMAN, TN	TITLE SITE PLAN FOR NATURAL GAS PIPE LINE LOCATIONS							
SYM DATE BY DESCRIPTION				APPROVED		SHEET 6 OF 6				