

PROJECT NAME: Tinker Creek Interceptor
DATE: 9-99
TYPE: AB
LOCATION: mylar
TOTAL # SHEETS: 18
A/E FIRM: Cleanwater
OF SETS: 1

TINKER CREEK INTERCEPTOR



BOTETOURT COUNTY SERVICE AUTHORITY

Clean Water Engineers, Inc.

1 Roanoke Street

Fincastle, Virginia 24090

Date: September 28, 1979

Project Number 7930

"AS BUILT PLANS"
Sheet: 1 of 18

NOTE:

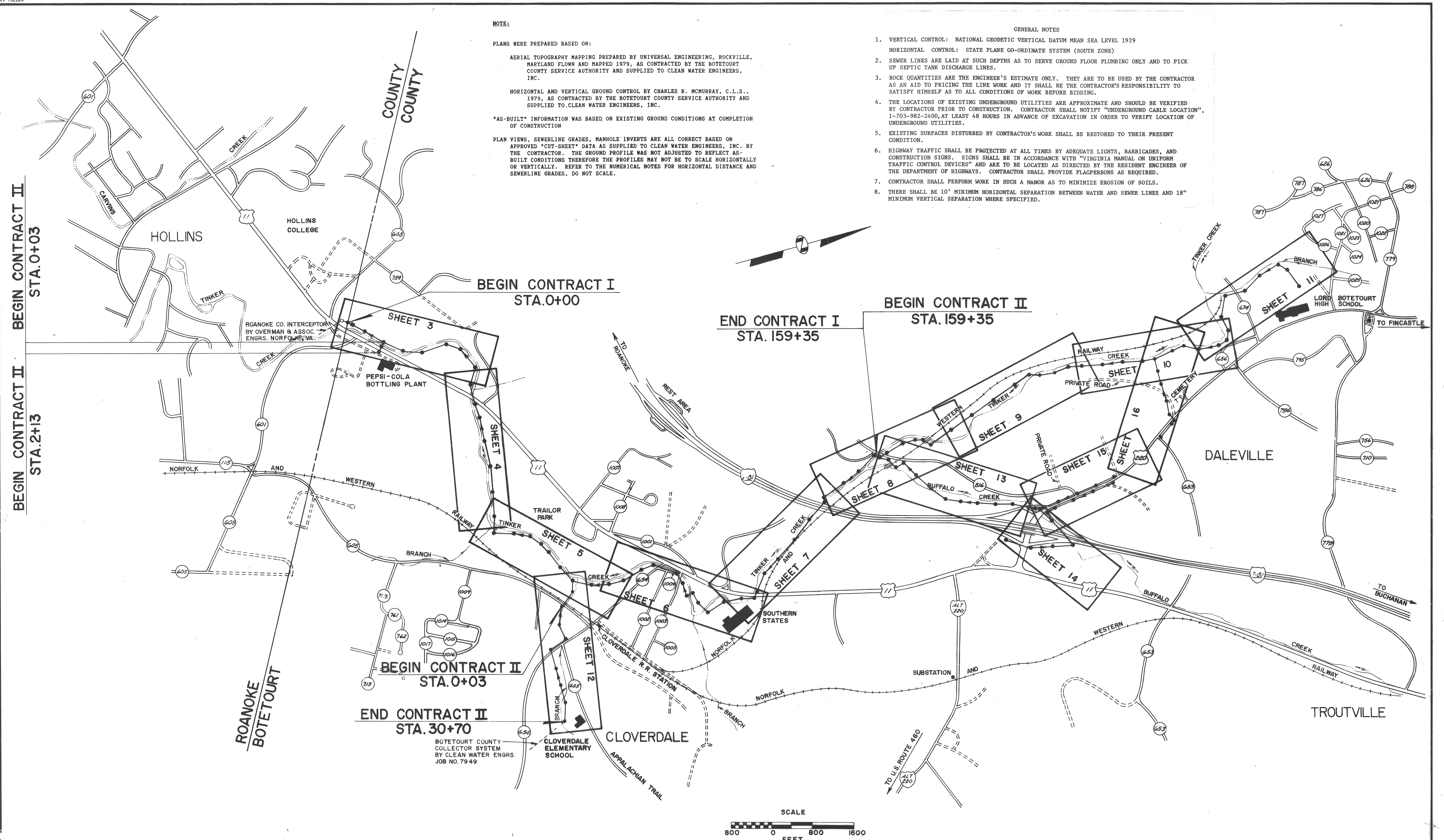
PLANS WERE PREPARED BASED ON:

AERIAL TOPOGRAPHY MAPPING PREPARED BY UNIVERSAL ENGINEERING, ROCKVILLE, MARYLAND FLOWN AND MAPPED 1979, AS CONTRACTED BY THE BOTETOURT COUNTY SERVICE AUTHORITY AND SUPPLIED TO CLEAN WATER ENGINEERS, INC.

HORIZONTAL AND VERTICAL GROUND CONTROL BY CHARLES R. MCMURRAY, C.L.S., 1979, AS CONTRACTED BY THE BOTETOURT COUNTY SERVICE AUTHORITY AND SUPPLIED TO CLEAN WATER ENGINEERS, INC.

AS-BUILT INFORMATION WAS BASED ON EXISTING GROUND CONDITIONS AT COMPLETION OF CONSTRUCTION

PLAN VIEWS, SEWERLINE GRADES, MANHOLE INVERTS ARE ALL CORRECT BASED ON APPROVED "CUT-SHEET" DATA AS SUPPLIED TO CLEAN WATER ENGINEERS, INC. BY THE CONTRACTOR. THE GROUND PROFILE WAS NOT ADJUSTED TO REFLECT AS-BUILT CONDITIONS THEREFORE THE PROFILES MAY NOT BE TO SCALE HORIZONTALLY OR VERTICALLY. REFER TO THE NUMERICAL NOTES FOR HORIZONTAL DISTANCE AND SEWERLINE GRADES, DO NOT SCALE.



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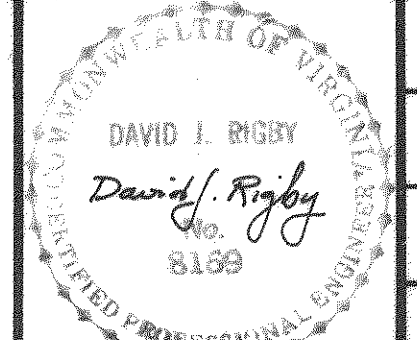
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- GENERAL NOTES
1. VERTICAL CONTROL: NATIONAL GEODETIC VERTICAL DATUM MEAN SEA LEVEL 1929
HORIZONTAL CONTROL: STATE PLANE CO-ORDINATE SYSTEM (SOUTH ZONE)
 2. SEWER LINES ARE LAID AT SUCH DEPTHS AS TO SERVE GROUND FLOOR PLUMBING ONLY AND TO PICK UP SEPTIC TANK DISCHARGE LINES.
 3. ROCK QUANTITIES ARE THE ENGINEER'S ESTIMATE ONLY. THEY ARE TO BE USED BY THE CONTRACTOR AS AN AID TO PRICING THE LINE WORK AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SATISFY HIMSELF AS TO ALL CONDITIONS OF WORK BEFORE BIDDING.
 4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY "UNDERGROUND CABLE LOCATION", 1-703-982-2400, AT LEAST 48 HOURS IN ADVANCE OF EXCAVATION IN ORDER TO VERIFY LOCATION OF UNDERGROUND UTILITIES.
 5. EXISTING SURFACES DISTURBED BY CONTRACTOR'S WORK SHALL BE RESTORED TO THEIR PRESENT CONDITION.
 6. HIGHWAY TRAFFIC SHALL BE PROTECTED AT ALL TIMES BY ADEQUATE LIGHTS, BARRICADES, AND CONSTRUCTION SIGNS. SIGNS SHALL BE IN ACCORDANCE WITH "VIRGINIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND ARE TO BE LOCATED AS DIRECTED BY THE RESIDENT ENGINEER OF THE DEPARTMENT OF HIGHWAYS. CONTRACTOR SHALL PROVIDE FLAGPERSONS AS REQUIRED.
 7. CONTRACTOR SHALL PERFORM WORK IN SUCH A MANNER AS TO MINIMIZE EROSION OF SOILS.
 8. THERE SHALL BE 10' MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES AND 18" MINIMUM VERTICAL SEPARATION WHERE SPECIFIED.

Designed: DJR	<h1>Clean Water Engineers, Inc.</h1> <p>Fincastle, Virginia</p>	<h2>TINKER CREEK INTERCEPTOR</h2> <p>FOR</p> <h3>BOTETOURT COUNTY SERVICE AUTHORITY "AS BUILTS"</h3>		REVISED 5-21-81 Revised 2-8-80
Drafted: LHW				Sheet: 2 of 18
Checked: LHW				Scale: AS SHOWN
Approved: DJR				Date: 9-28-79 Project: 7930

SEE PLANS PREPARED BY OVERMAN & ASSOC. NORFOLK, VA. FOR BOTETOURT COUNTY SERVICE AUTH. BEGIN CONTRACT

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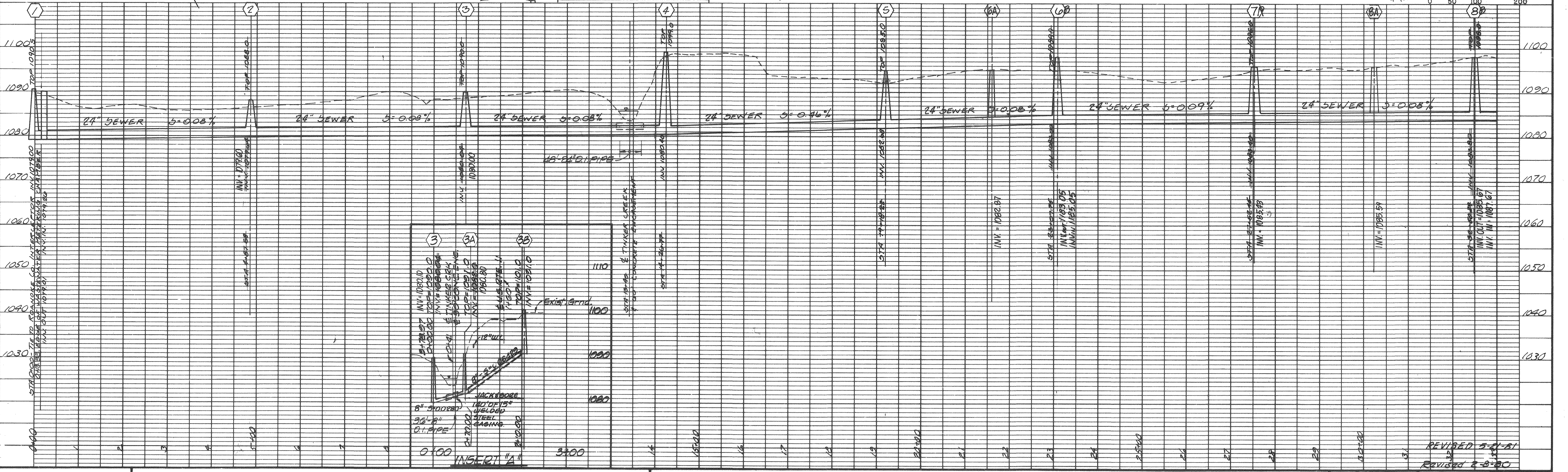
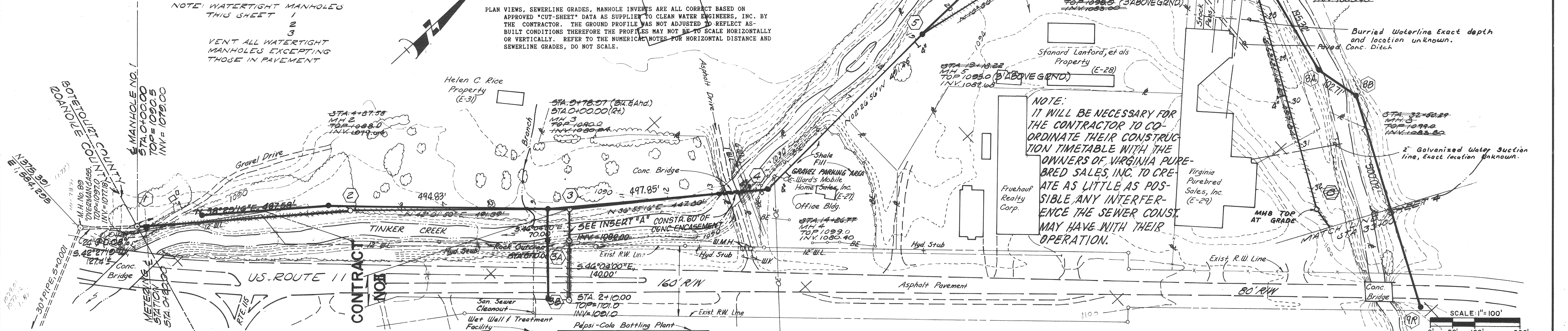
NOTE:

HEAVY BUILDING MATERIALS & CONSTRUCTION EQUIPMENT IN THIS AREA MUST BE MOVED. ACTUAL LOCATION OF THESE OBSTACLES TO BE VERIFIED BY CONTRACTOR & MOVED PRIOR TO CONSTRUCTION.

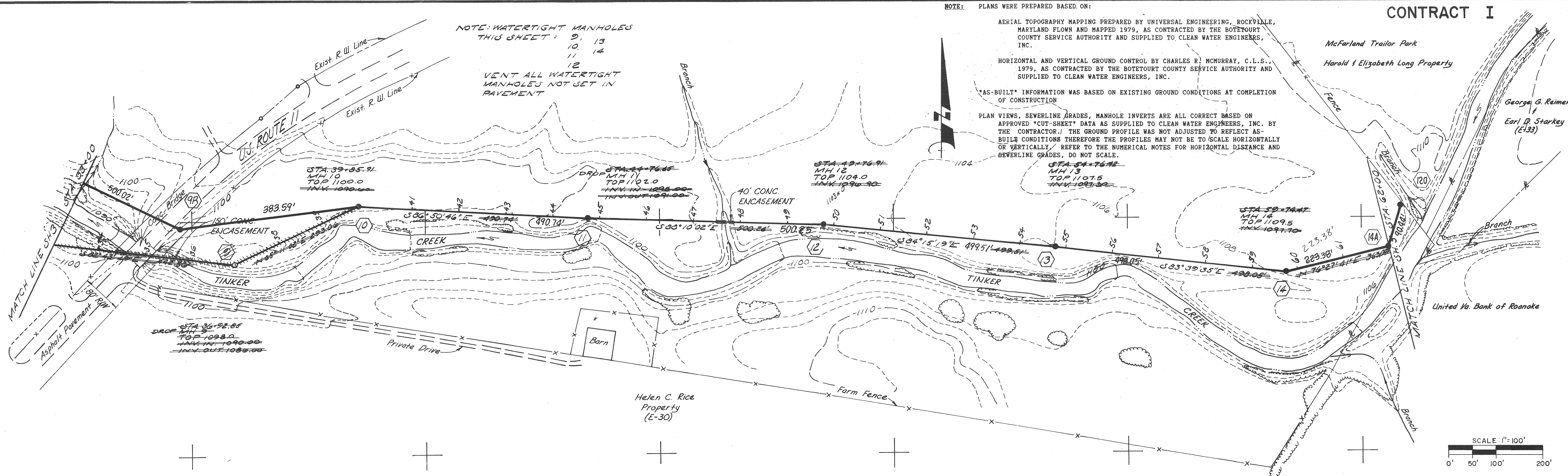
8" Conc. Buried Storm Drains Exact Depth and location unknown.

Buried Waterline Exact depth and location unknown. Paved Conc. Ditch

NOTE: IT WILL BE NECESSARY FOR THE CONTRACTOR TO CO-ORDINATE THEIR CONSTRUCTION TIMETABLE WITH THE OWNERS OF VIRGINIA PURE-BRED SALES, INC. TO CREATE AS LITTLE AS POSSIBLE ANY INTERFERENCE THE SEWER CONST. MAY HAVE WITH THEIR OPERATION.



AS 1025B





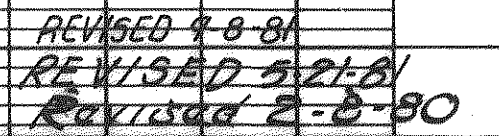
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Scale: HORIZ. 1"=100' VERT. 1"=10'
Date: 9-28-79
Project: 7930

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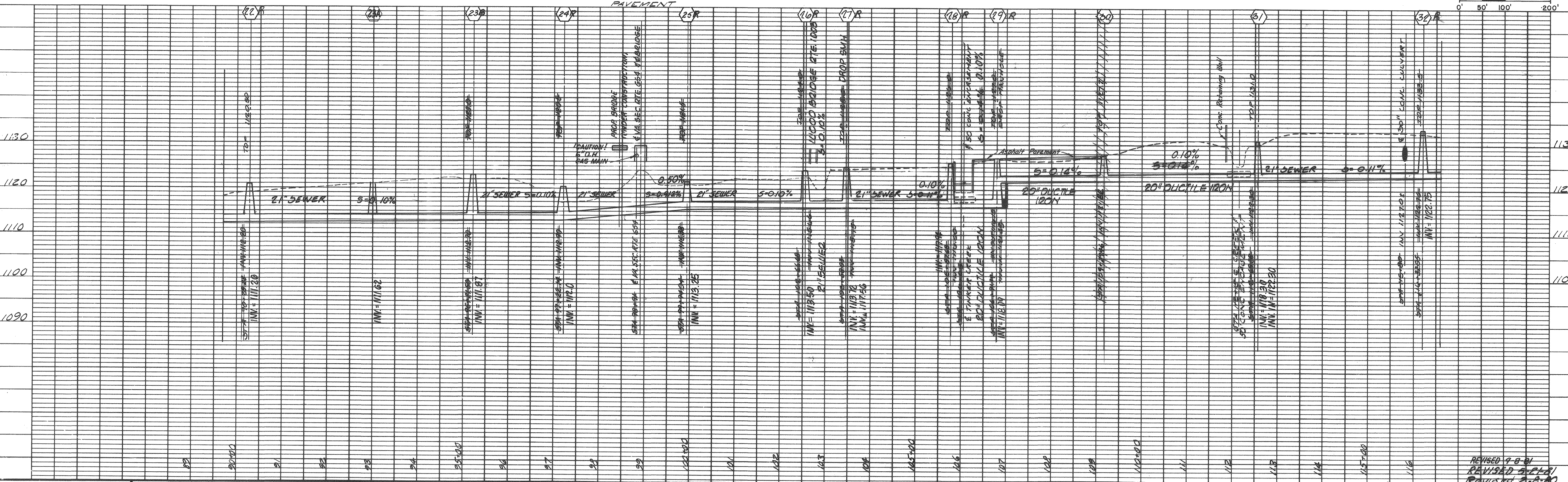
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NOTE: WATERTIGHT MANHOLES
THIS SHEET: 22 28
23 29
24 30
25 31
26 32
27

VENT ALL WATERTIGHT
MANHOLES NOT SET IN
PAVEMENT

SCALE: 1" = 100'

A horizontal scale bar with alternating black and white segments. It is marked with '0'', '50'', '100'', and '200'' at the ends. The text 'SCALE: 1" = 100'' is centered above the bar.



REVISED 9-8-81
REVISED 5-21-81
REVISED 2-8-81

"AS BUILTS"

DANIEL F. RIJBY
 MD
 8169
 BOARD OF PROFESSIONAL MEDICAL REGISTRATION
 STATE OF VIRGINIA

Sheet: 6 of 18
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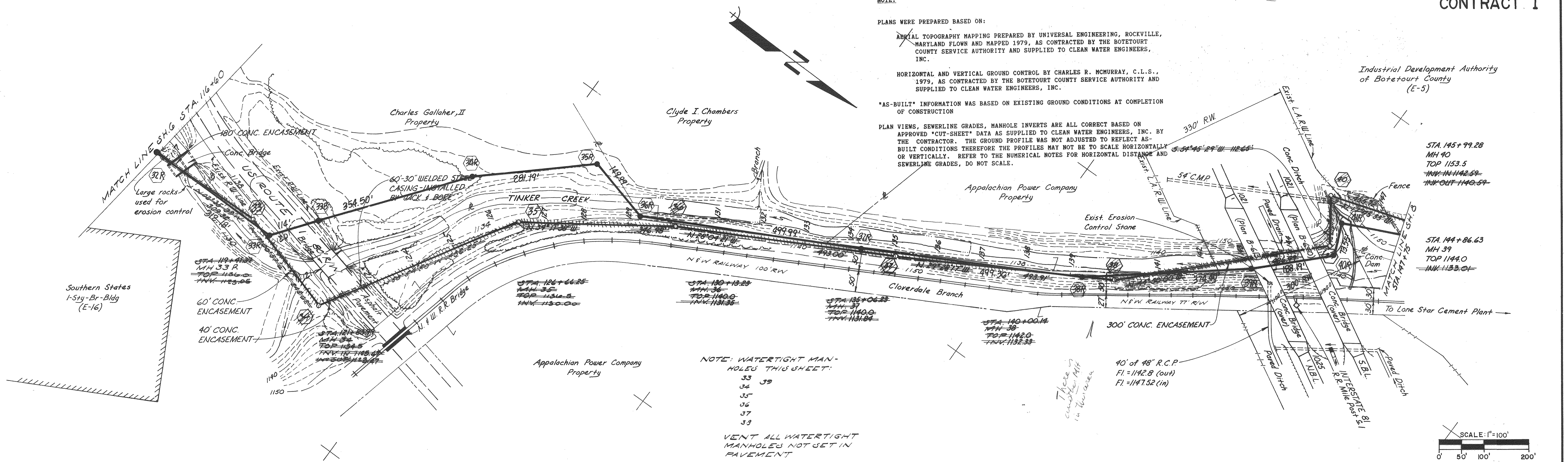
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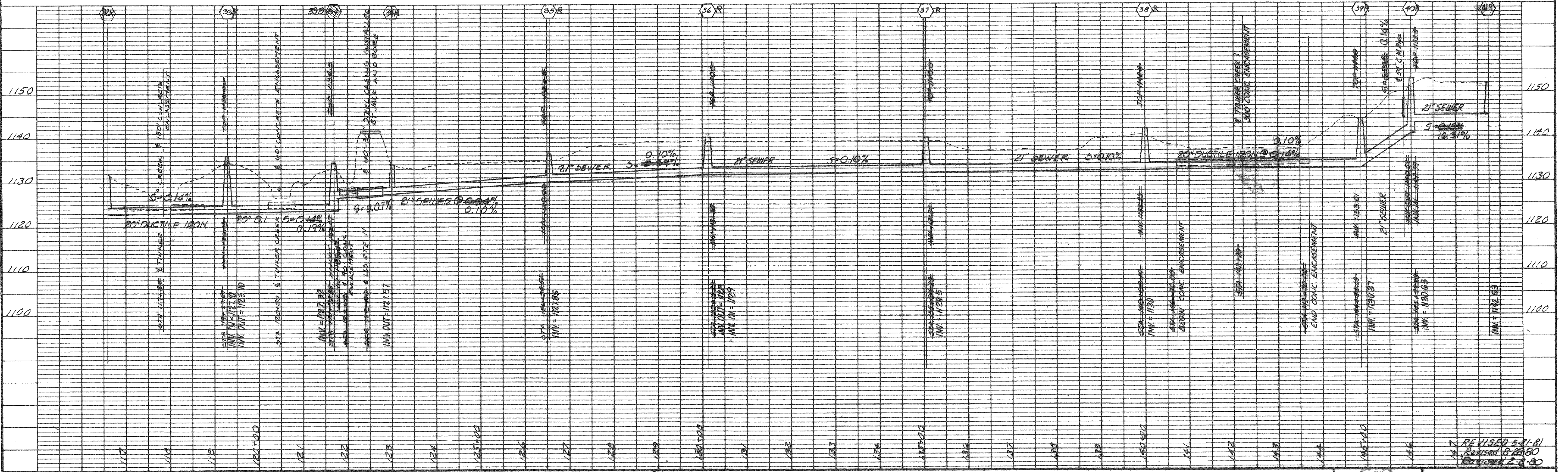
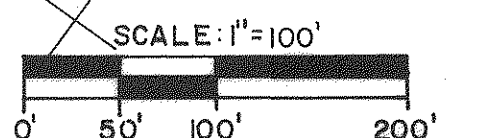
Industrial Development Authority
of Botetourt County
(E-5)



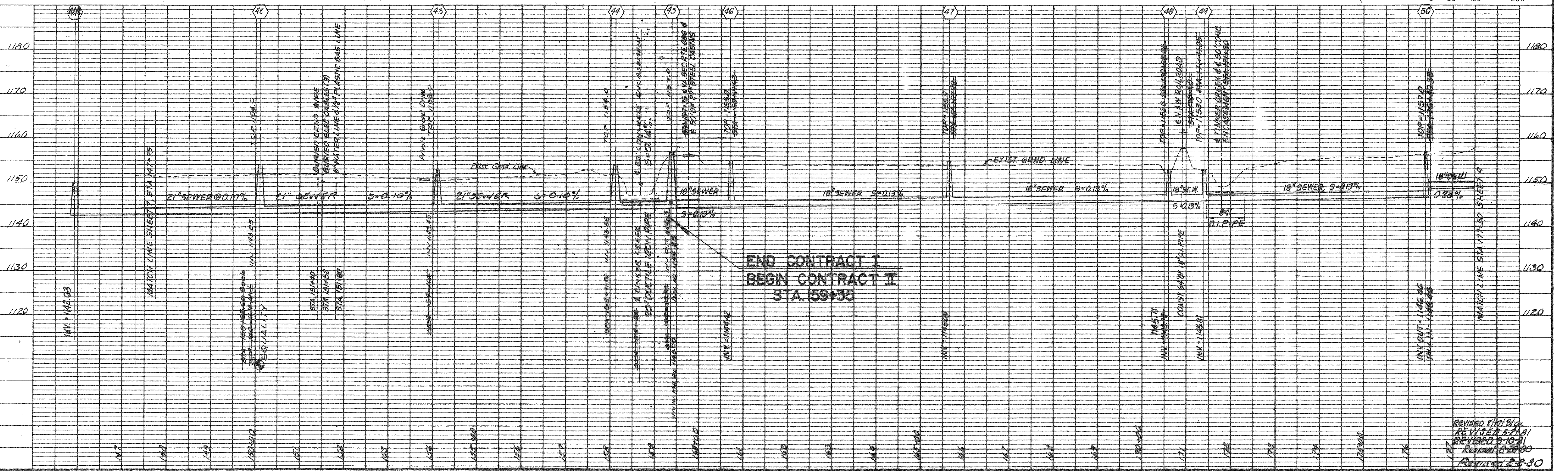
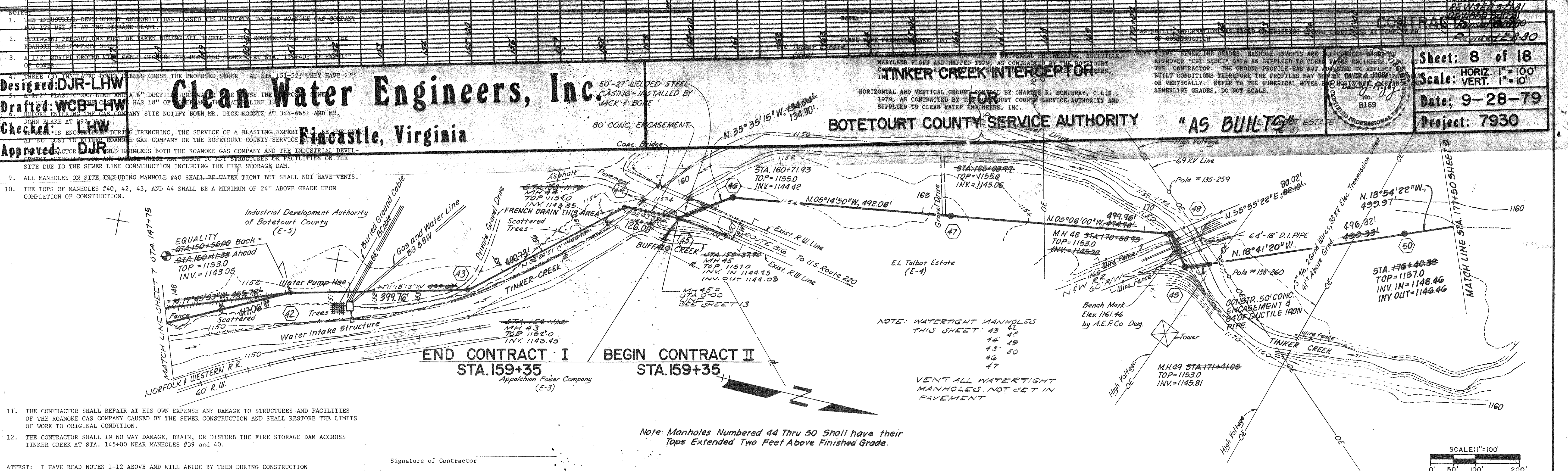
NOTE: WATERTIGHT MANHOLES THIS SHEET:

- 33
- 34
- 35
- 36
- 37
- 38
- 39

VENT ALL WATERTIGHT MANHOLES NOT SET IN PAVEMENT



Designed: DJR-LHW Drafted: WCB-LHW Checked: LHW Approved: DJR	<h2 style="margin: 0;">Clean Water Engineers, Inc.</h2> <p style="margin: 0;">Fincastle, Virginia</p>	<h3 style="margin: 0;">TINKER CREEK INTERCEPTOR</h3> <p style="margin: 0;">FOR</p> <p style="margin: 0;">BOTETOURT COUNTY SERVICE AUTHORITY</p> <p style="margin: 0;">"AS BUILTS"</p>	<div style="border: 1px solid black; border-radius: 50%; padding: 5px; width: 50px; margin: 0 auto;"> DAVID J. RIGBY 8169 PROFESSIONAL ENGINEER </div>	Sheet: 7 of 18 Scale: HORIZ. 1"=100' VERT. 1"=10' Date: 9-28-79 Project: 7930
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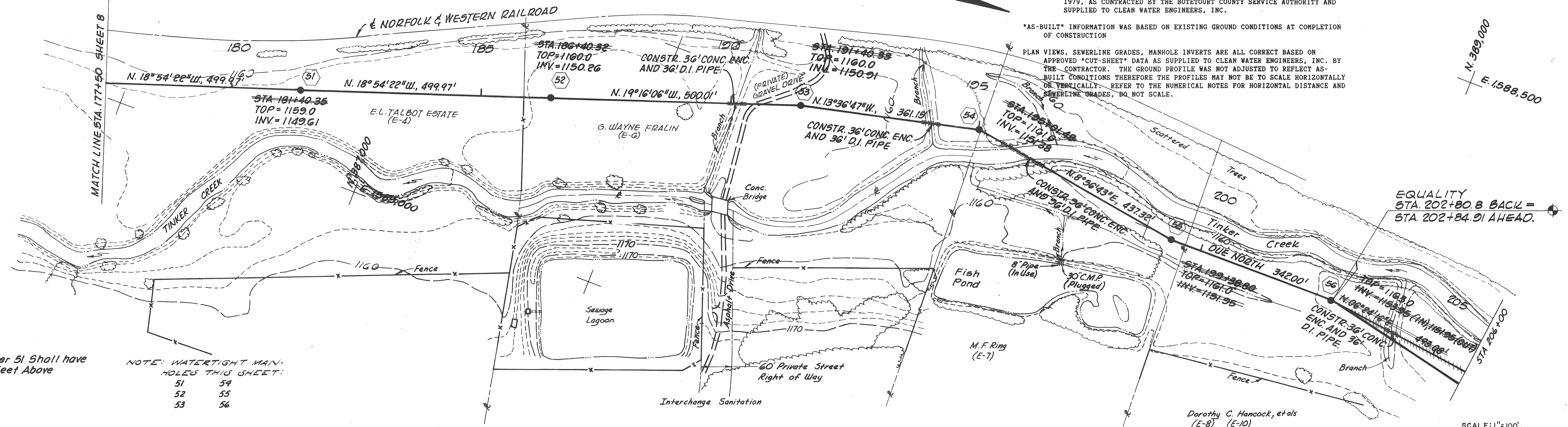
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CONTRACT II

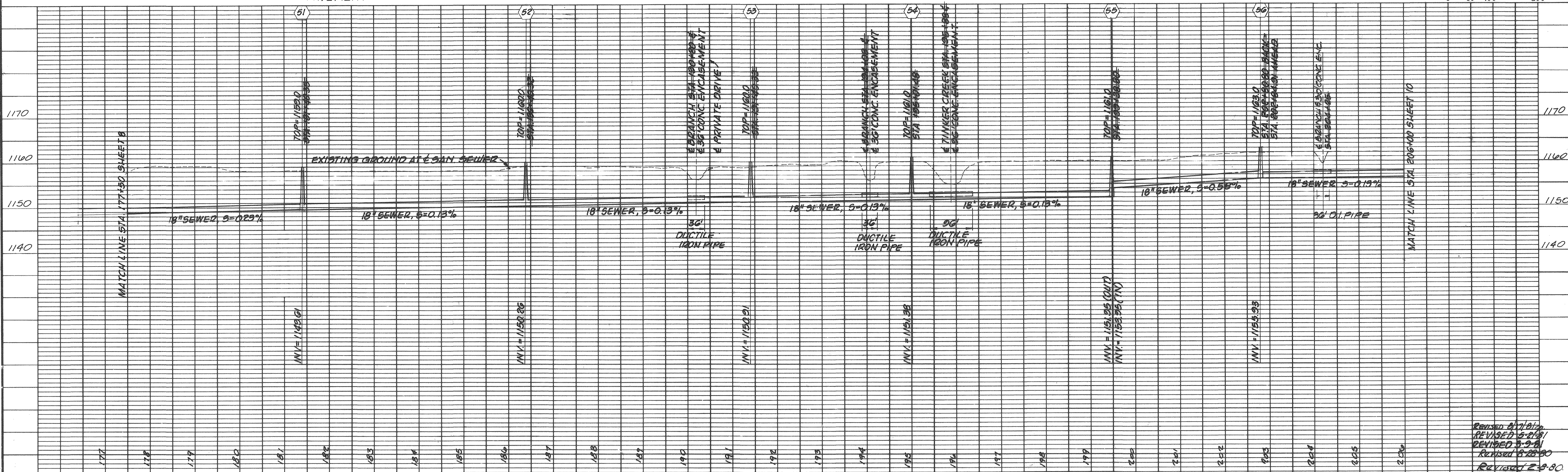


Note: Manhole Number 51 Shall have its Top Extended Two Feet Above Finished Grade.

NOTE: WATERTIGHT MANHOLES THIS SHEET:
51 54
52 55
53 56

VENT ALL WATERTIGHT MANHOLES NOT SET IN PAVEMENT

SCALE: 1"=100'
0' 50' 100' 200'



REVISION 8/1/80,
REVISED 5-25-81/
REVISED 8-2-81/
REVISED 8-28-80
REVISED 2-9-80

Designed: DJR-LHW
Drafted: WCB-LHW
Checked: LHW
Approved: DJR

Clean Water Engineers, Inc.
Fincastle, Virginia

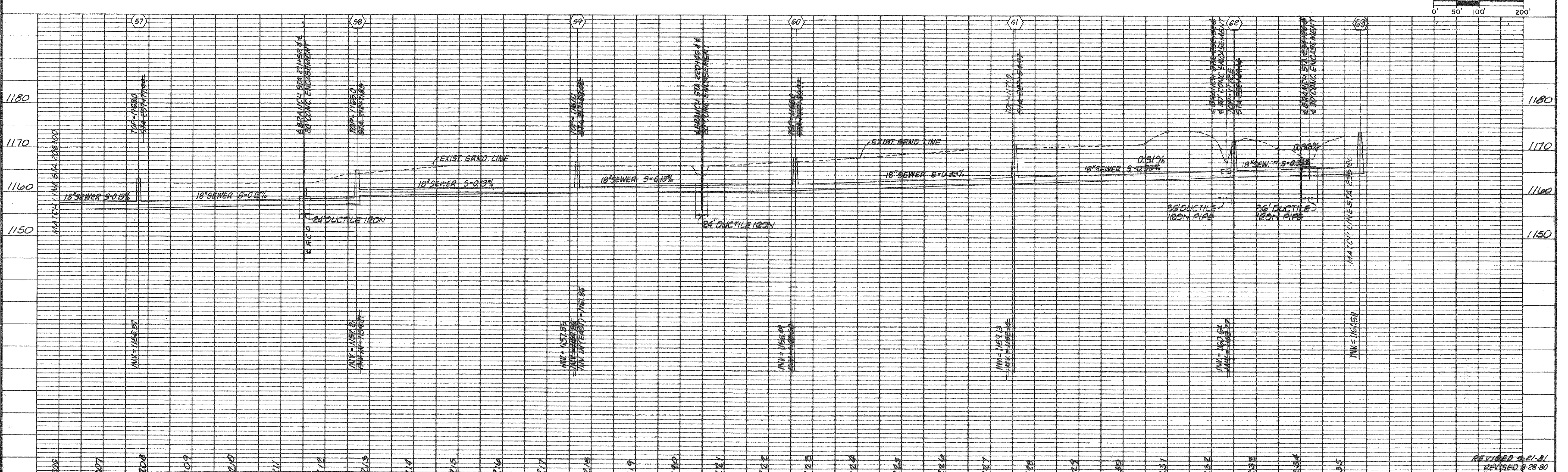
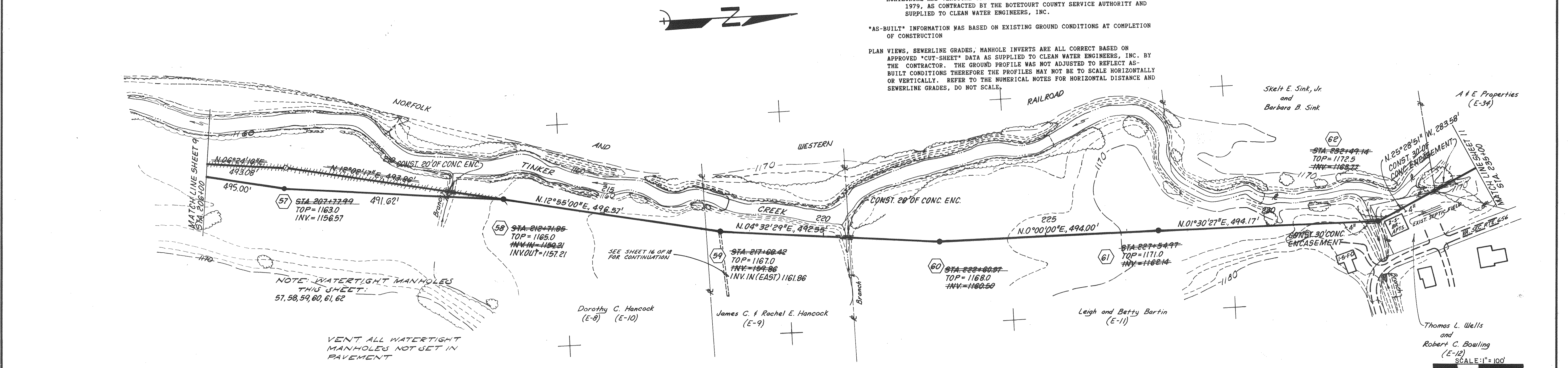
TINKER CREEK INTERCEPTOR
FOR
BOTETOURT COUNTY SERVICE AUTHORITY

"AS BUILTS"

Daniel R. Rigg
Professional Engineer

Sheet: 9 of 18
Scale: HORIZ. 1"=100'
VERT. 1"=10'
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Designed:DJR-LHW
Drafted:WCB-LHW
Checked: LHW
Approved: DJR

Clean Water Engineers, Inc.

Fincastle, Virginia

TINKER CREEK INTERCEPTOR

FOR

BOTETOURT COUNTY SERVICE AUTHORITY

"AS BUILT"

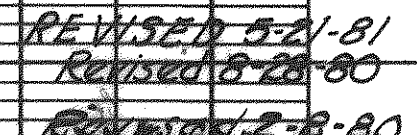
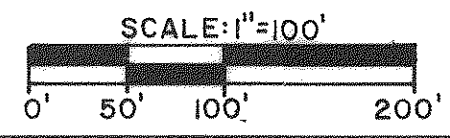
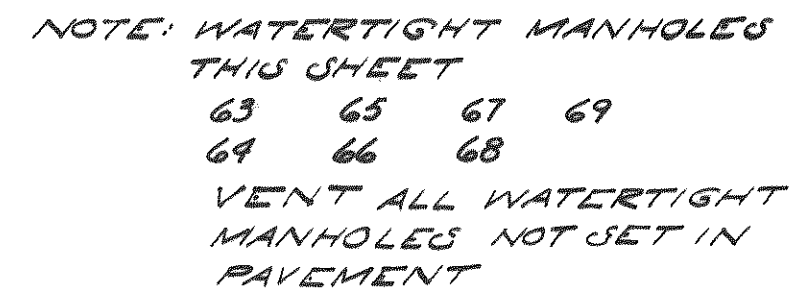
REVISOR 2-21-81
REVISED 3-28-80
REDESIGNED 2-8-80

Sheet: 10 of 18
Scale: HORIZ. 1"=100'
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DAVID J. RIGBY
David J. Rigby
 No. 8169
 CERTIFIED PROFESSIONAL ENGINEER
 STATE OF VIRGINIA

Clean Water Engineers, Inc.

COM SECTION
Fincastle, Virginia



Clean Water Engineers, Inc.
Fincastle, Virginia

A circular professional engineer seal for David J. Rigby, No. 8169, State of New York. The seal features a decorative border of small stars. The text "DAVID J. RIGBY" is written in a cursive script across the center, with "N.Y.C." in small capital letters below it. The number "8169" is printed in a bold, sans-serif font below the signature. The words "REGISTERED PROFESSIONAL ENGINEER" are written in a circular path around the bottom half of the seal.

Sheet: 11 of 18
Scale: HORIZ. 1" = 100' VERT. 1" = 10'
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AF 102288

CONTRACT I
See Sheet 5 of 18
for Continuation

CONTRACT II

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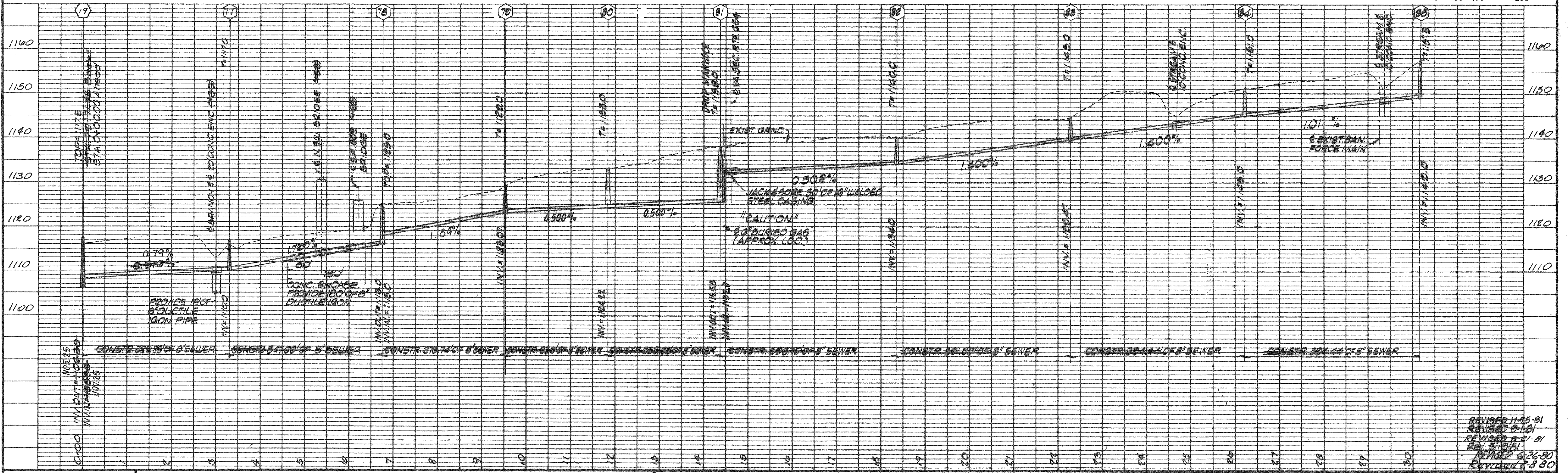
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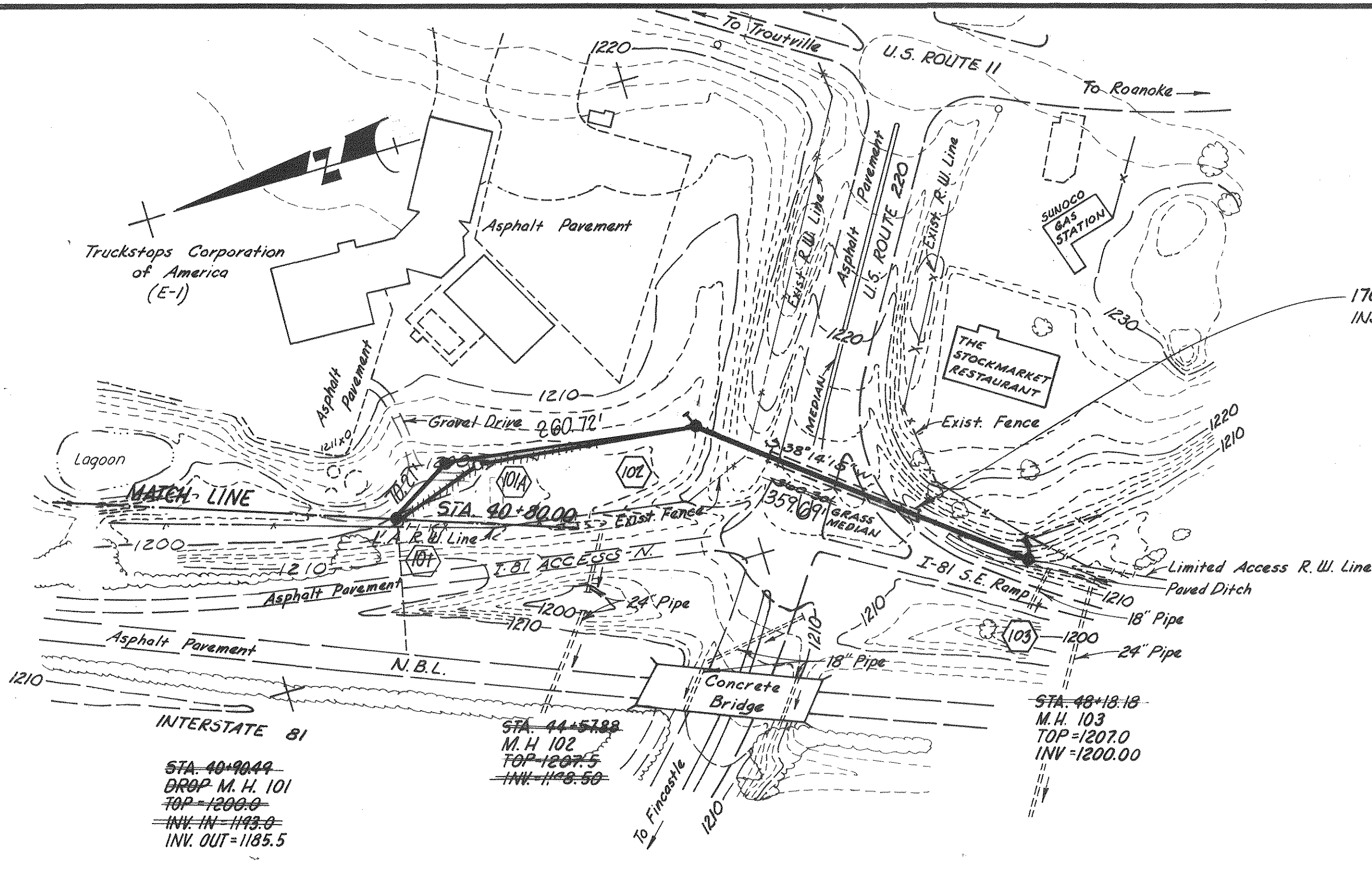
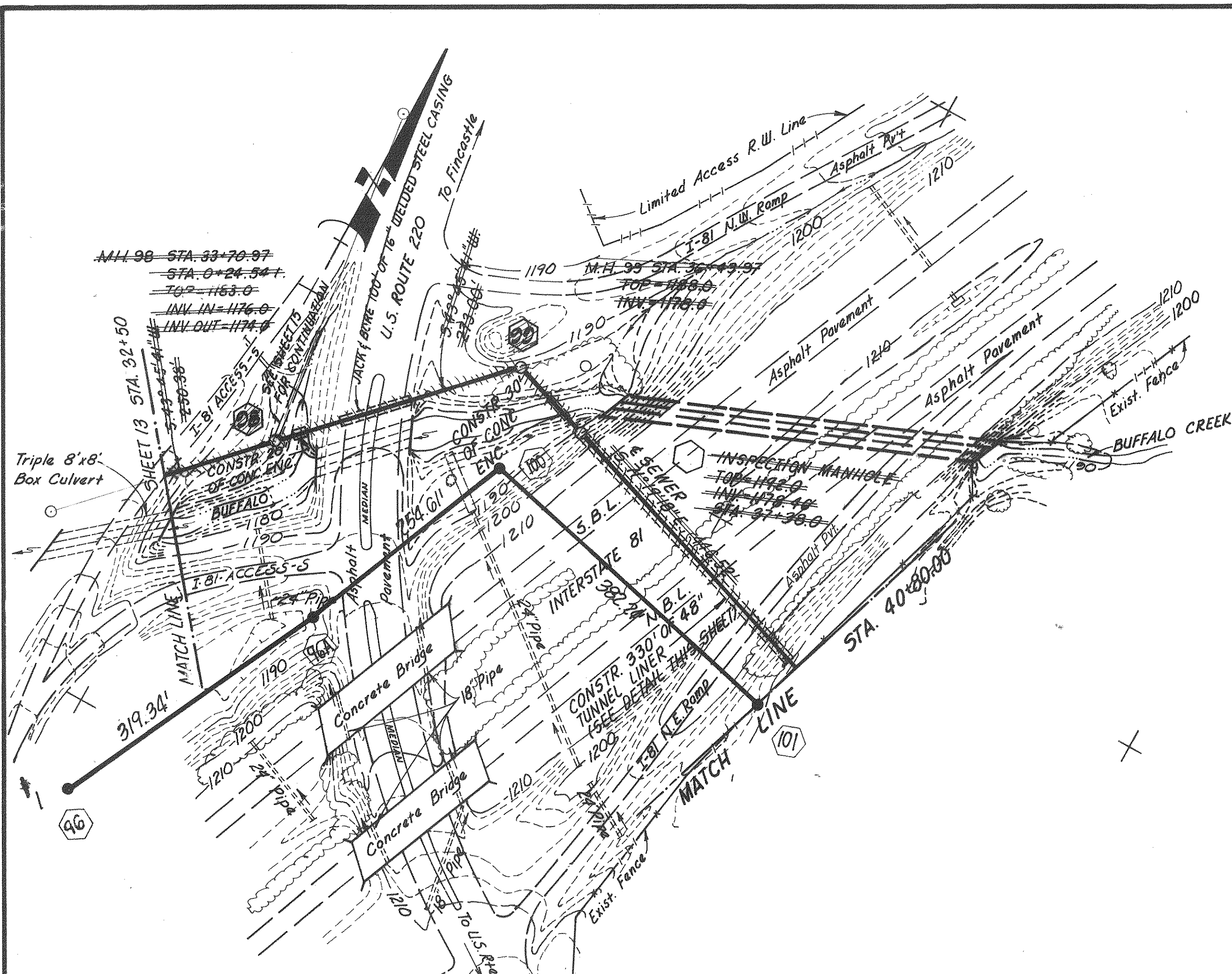
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CONTRACT II

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THIS SHEET:
19 80 84
77 81 85
73 82
79 83
VENT ALL WATERTIGHT
MANHOLES NOT SET IN
PAVEMENT

SCALE: 1"=100'
0 50' 100' 200'





NOTE: WATERTIGHT MANHOLES
THIS SHEET: 98
99
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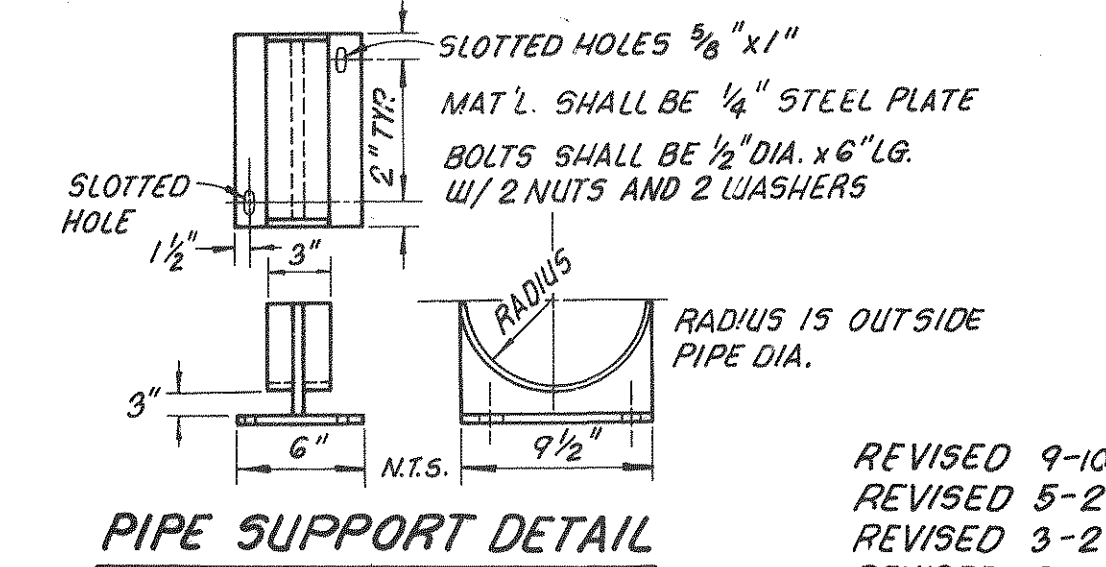
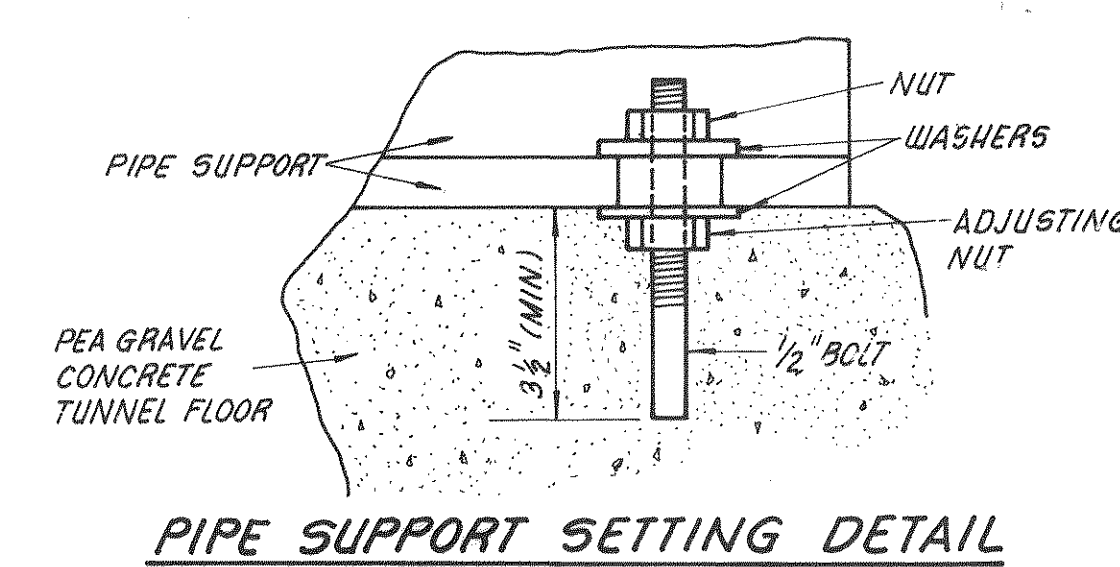
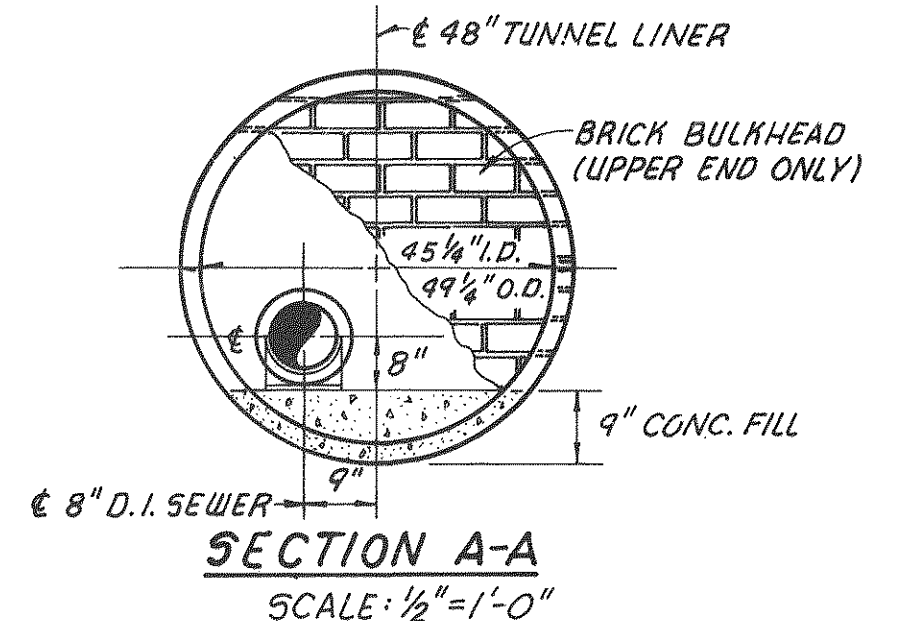
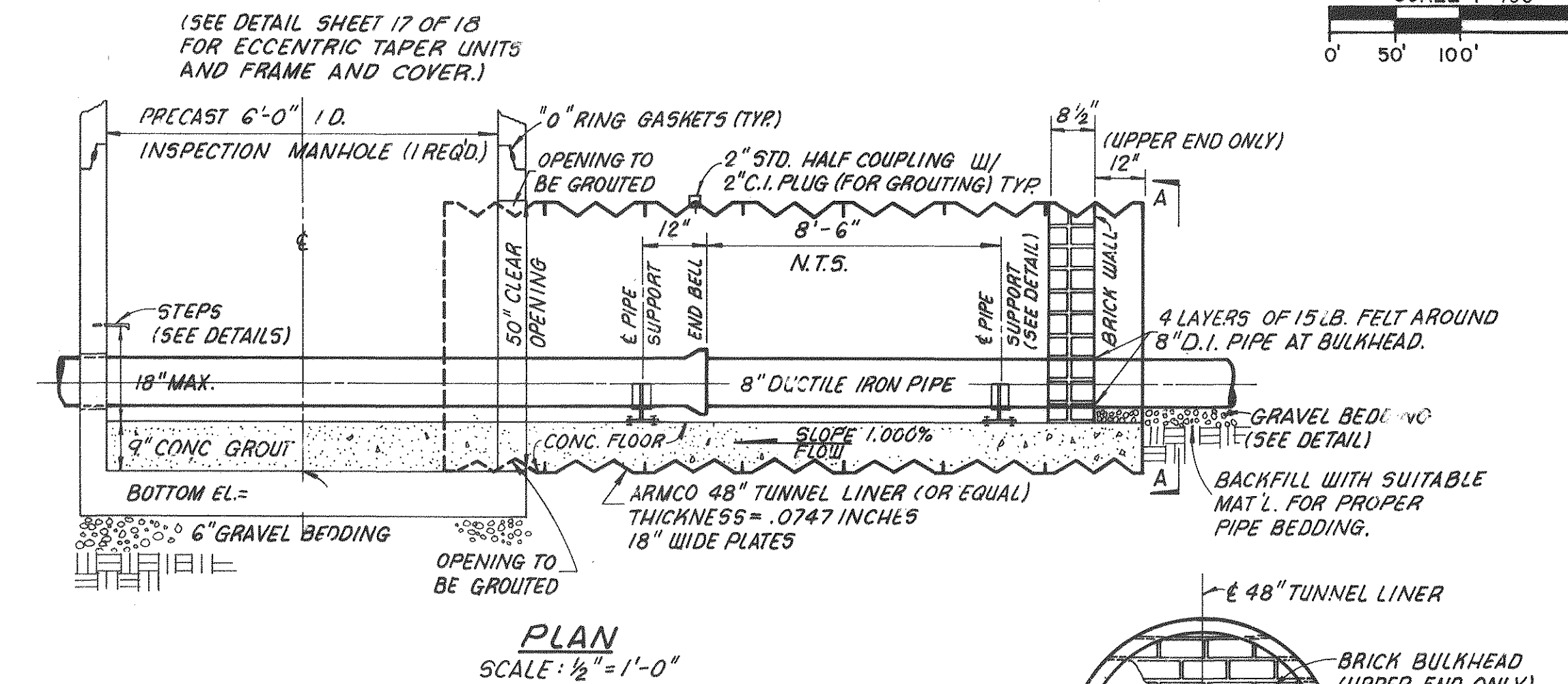
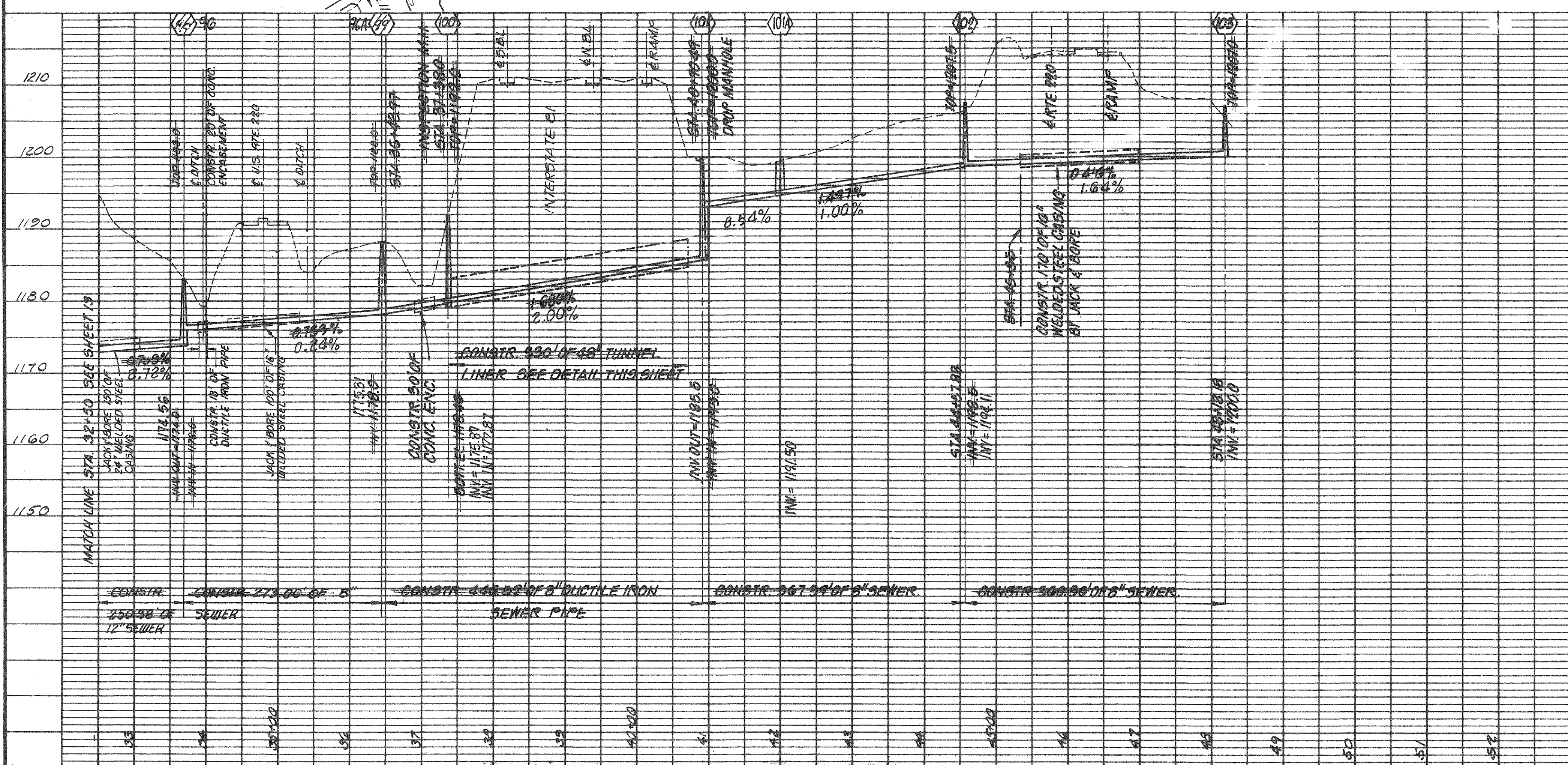
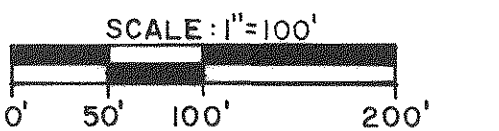
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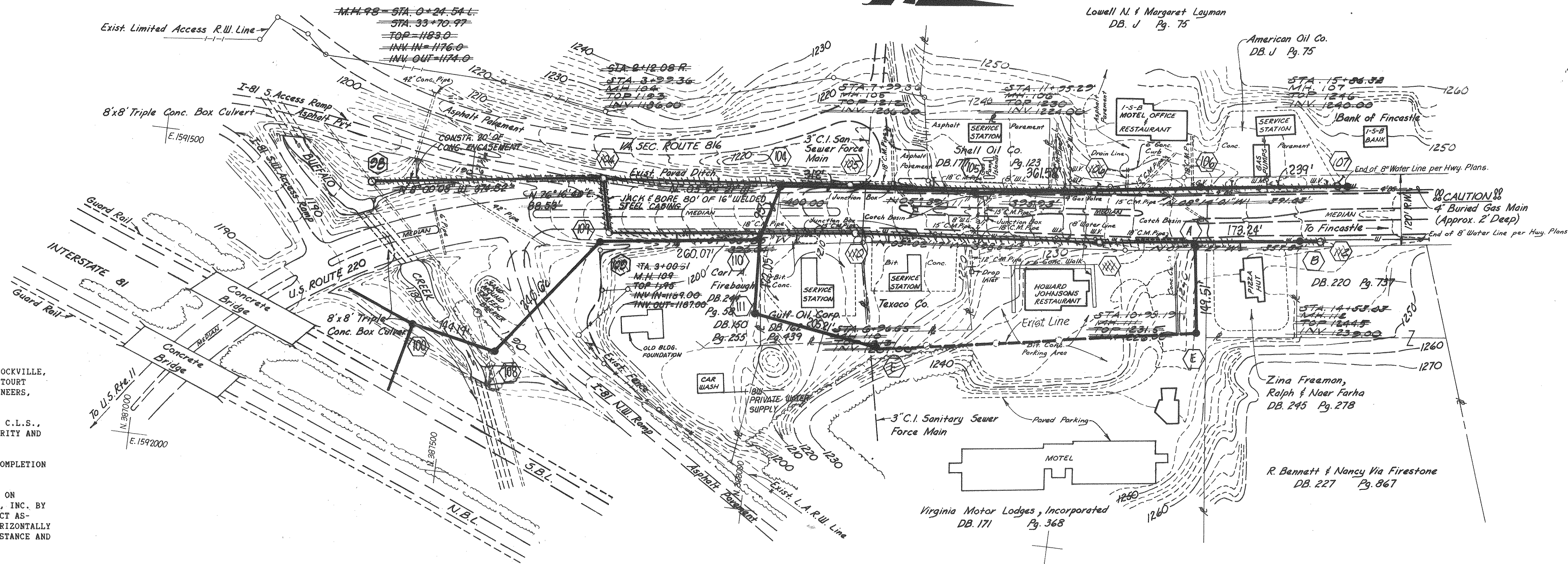
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REVISED 9-10-81
REVISED 5-21-81
REVISED 3-2-81
REVISED 2-8-81



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SHEET: 98
99
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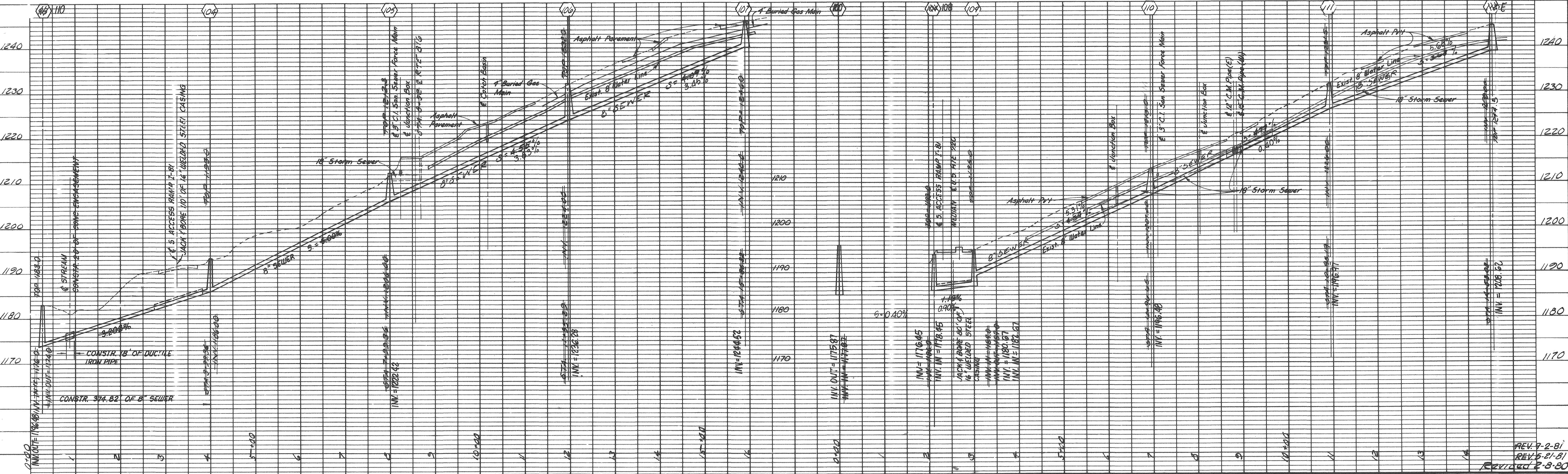
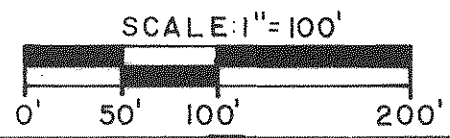
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INC.

HORIZONTAL AND VERTICAL GROUND CONTROL BY CHARLES R. McMURRAY, C.L.S.,
1979, AS CONTRACTED BY THE BOTETOURT COUNTY SERVICE AUTHORITY AND
SUPPLIED TO CLEAN WATER ENGINEERS, INC.

"AS-BUILT" INFORMATION WAS BASED ON EXISTING GROUND CONDITIONS AT COMPLETION
OF CONSTRUCTION

PLAN VIEWS, SEWERLINE GRADES, MANHOLE INVERTS ARE ALL CORRECT BASED ON
APPROVED "CUT-SHEET" DATA AS SUPPLIED TO CLEAN WATER ENGINEERS, INC. BY
THE CONTRACTOR. THE GROUND PROFILE WAS NOT ADJUSTED TO REFLECT AS-
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NOTE:

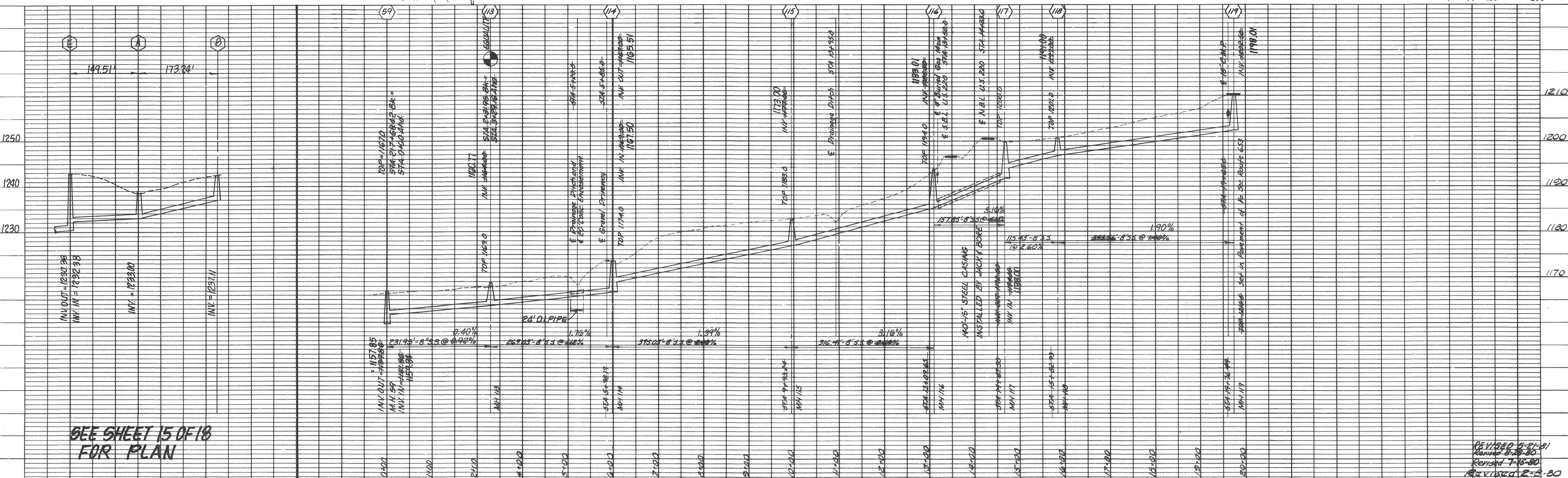
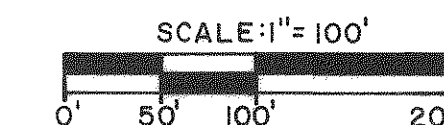
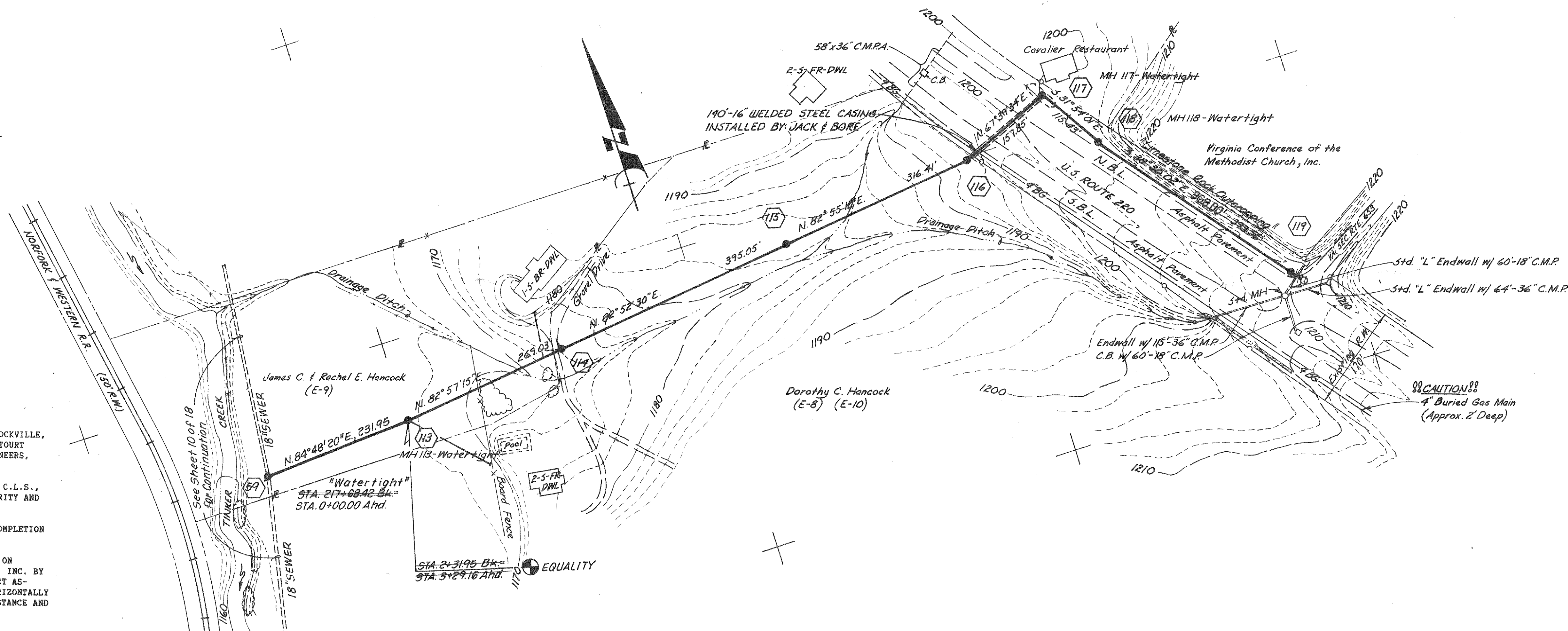
PLANS WERE PREPARED BASED ON:

AERIAL TOPOGRAPHY MAPPING PREPARED BY UNIVERSAL ENGINEERING, ROCKVILLE, MARYLAND FLOWN AND MAPPED 1979, AS CONTRACTED BY THE BOTETOURT COUNTY SERVICE AUTHORITY AND SUPPLIED TO CLEAN WATER ENGINEERS, INC.

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SEE SHEET 15 OF 18
FOR PLAN

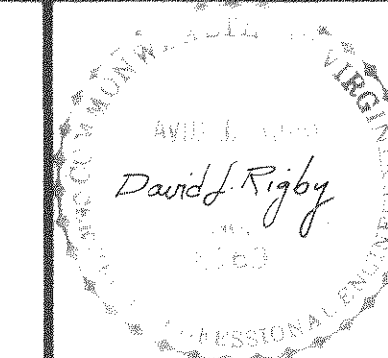
REVISED 9-21-81
Revised 8-28-80
Revised 7-15-80
Revised 2-9-80

Designed: DJR
Drafted: WCB
Checked: CEP
Approved: DJR

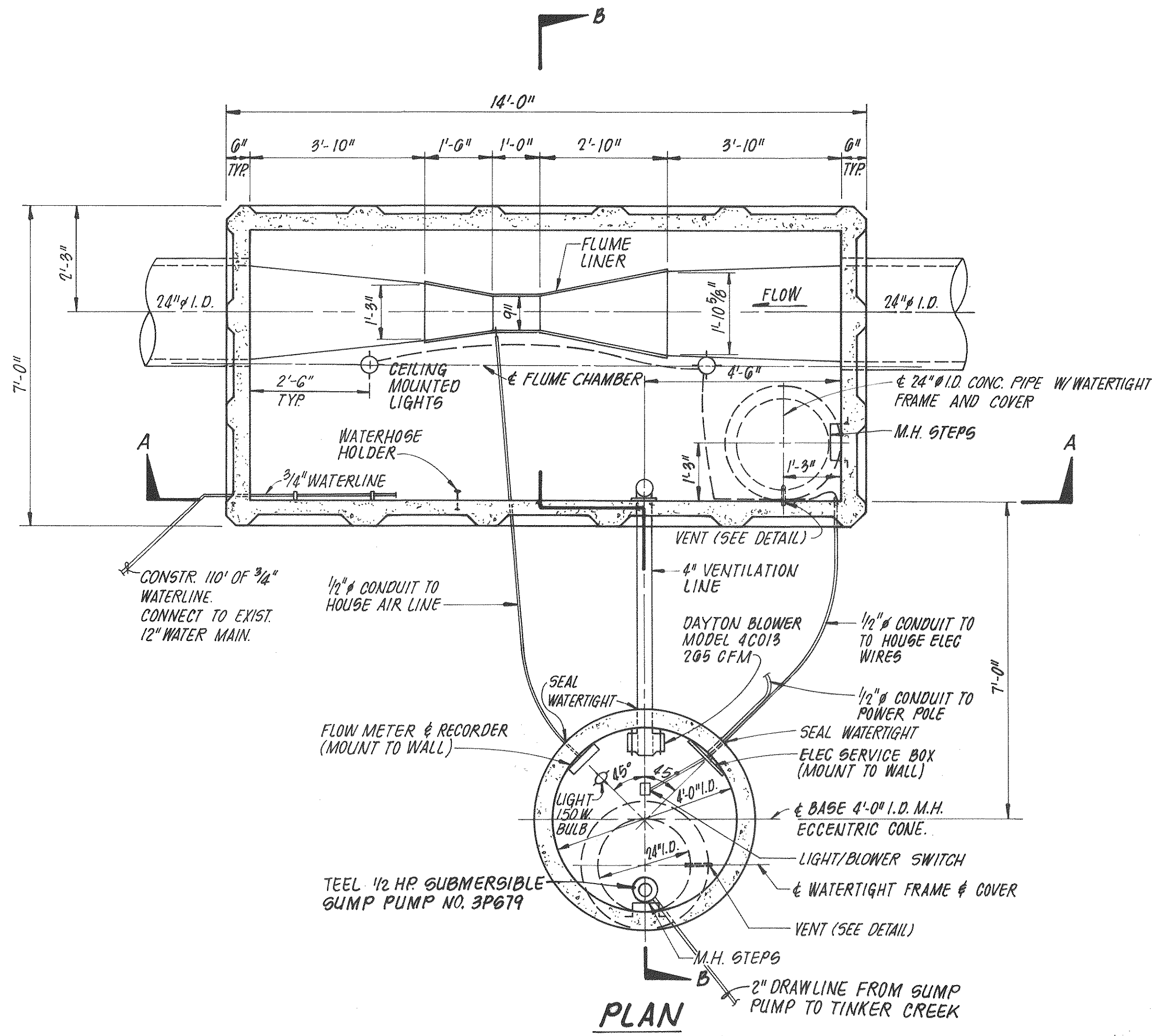
Clean Water Engineers, Inc.
Fincastle, Virginia

TINKER CREEK INTERCEPTOR
FOR
BOTETOURT COUNTY SERVICE AUTHORITY

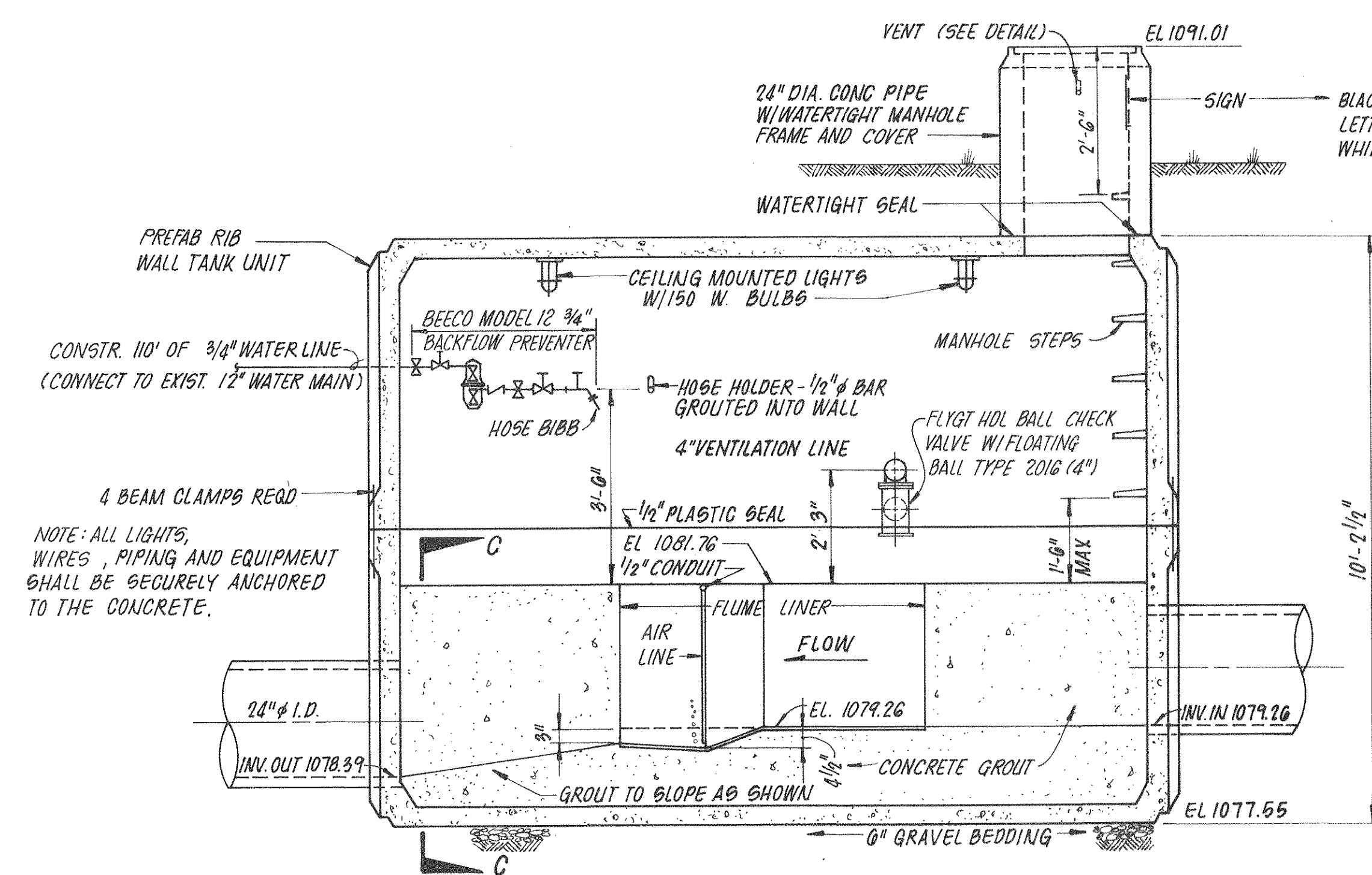
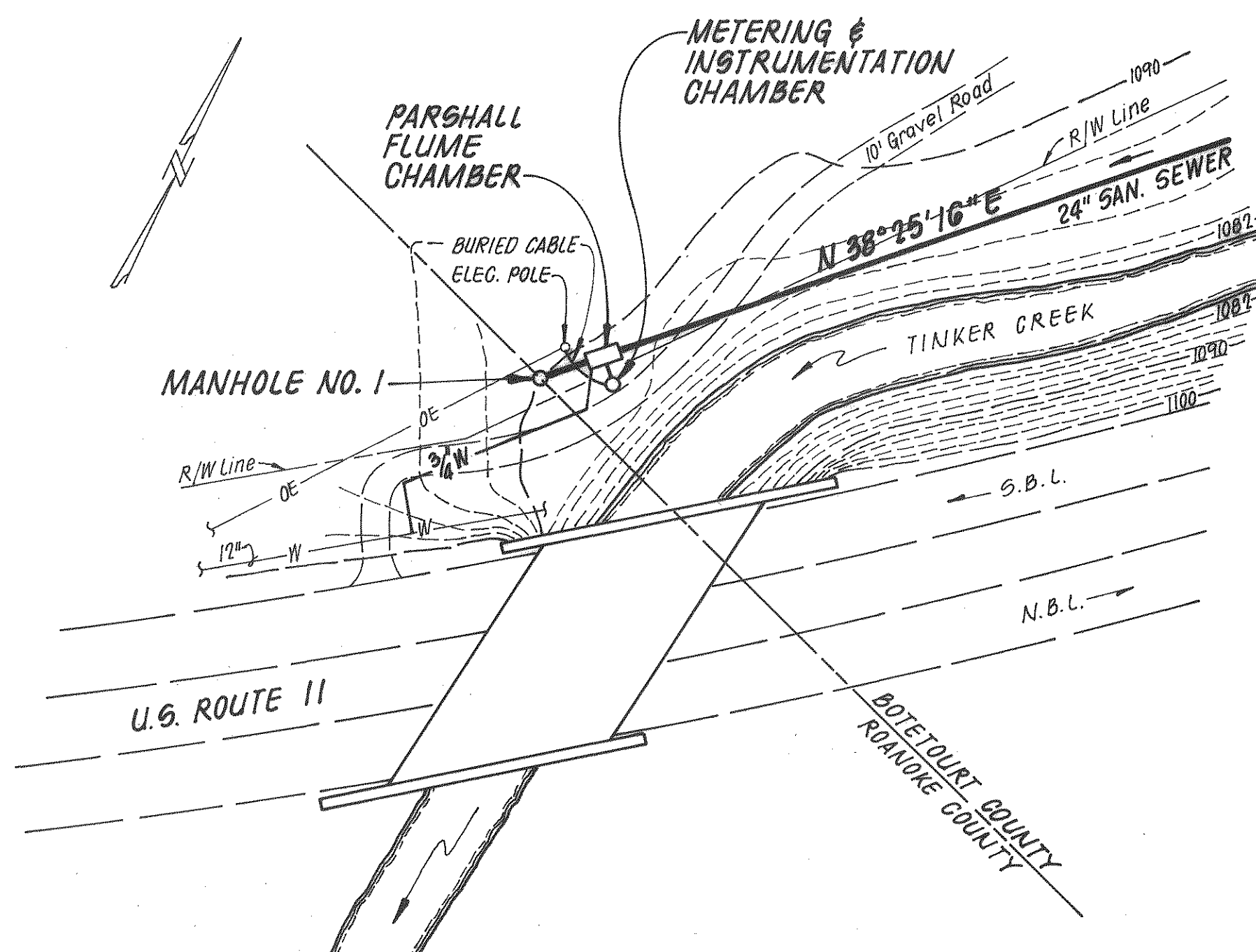
"AS BUILTS"



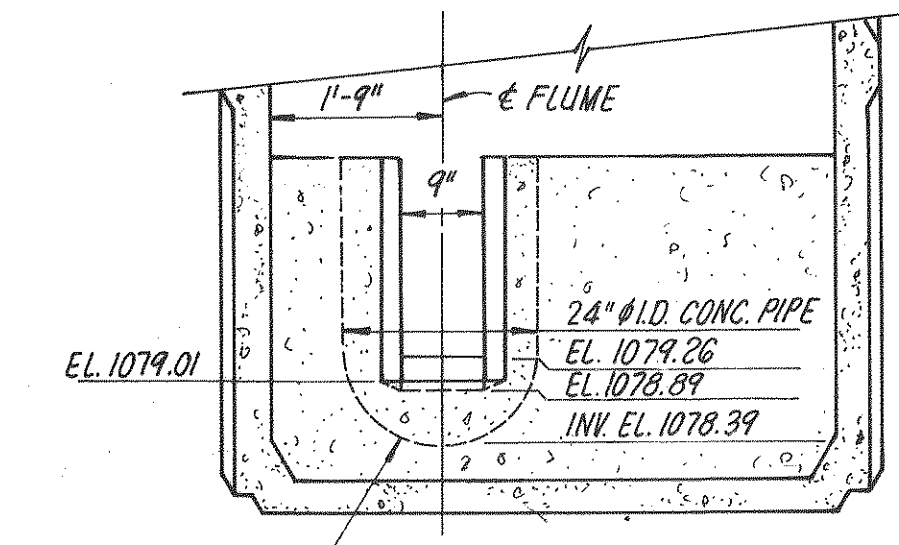
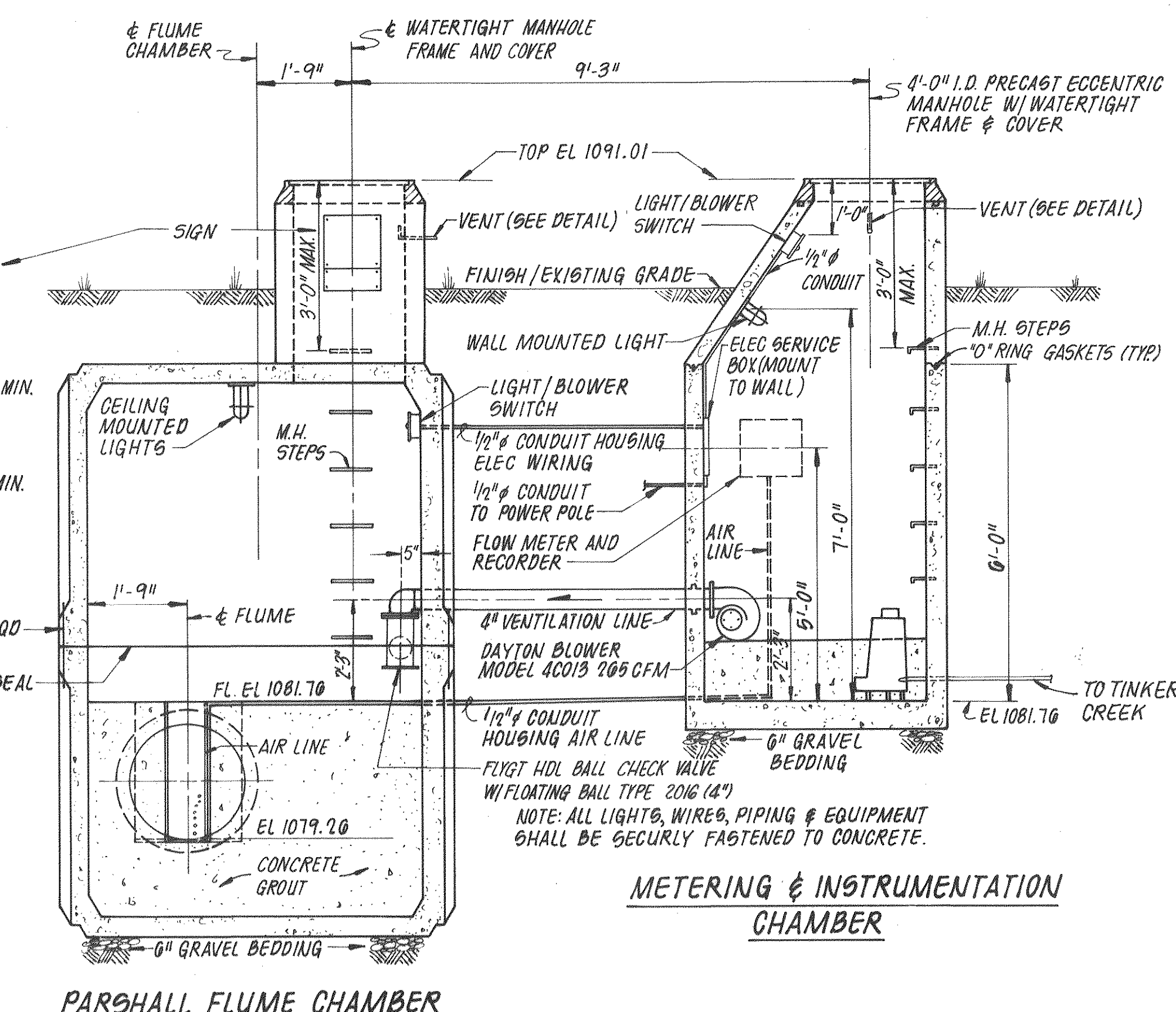
Sheet: 16 of 18
Scale: HORIZ. 1"=100'
VERT. 1"=10'
Date: 11-27-79
Project: 7930



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ALUM. SAFETY SIGN (MOUNTED TO WALL) TO READ:
CAUTION
 DO NOT ENTER
 VENTILATE
 CHAMBER
 BEFORE ENTERING
 VENTILATION SWITCH
 LOCATED IN
 MANHOLE

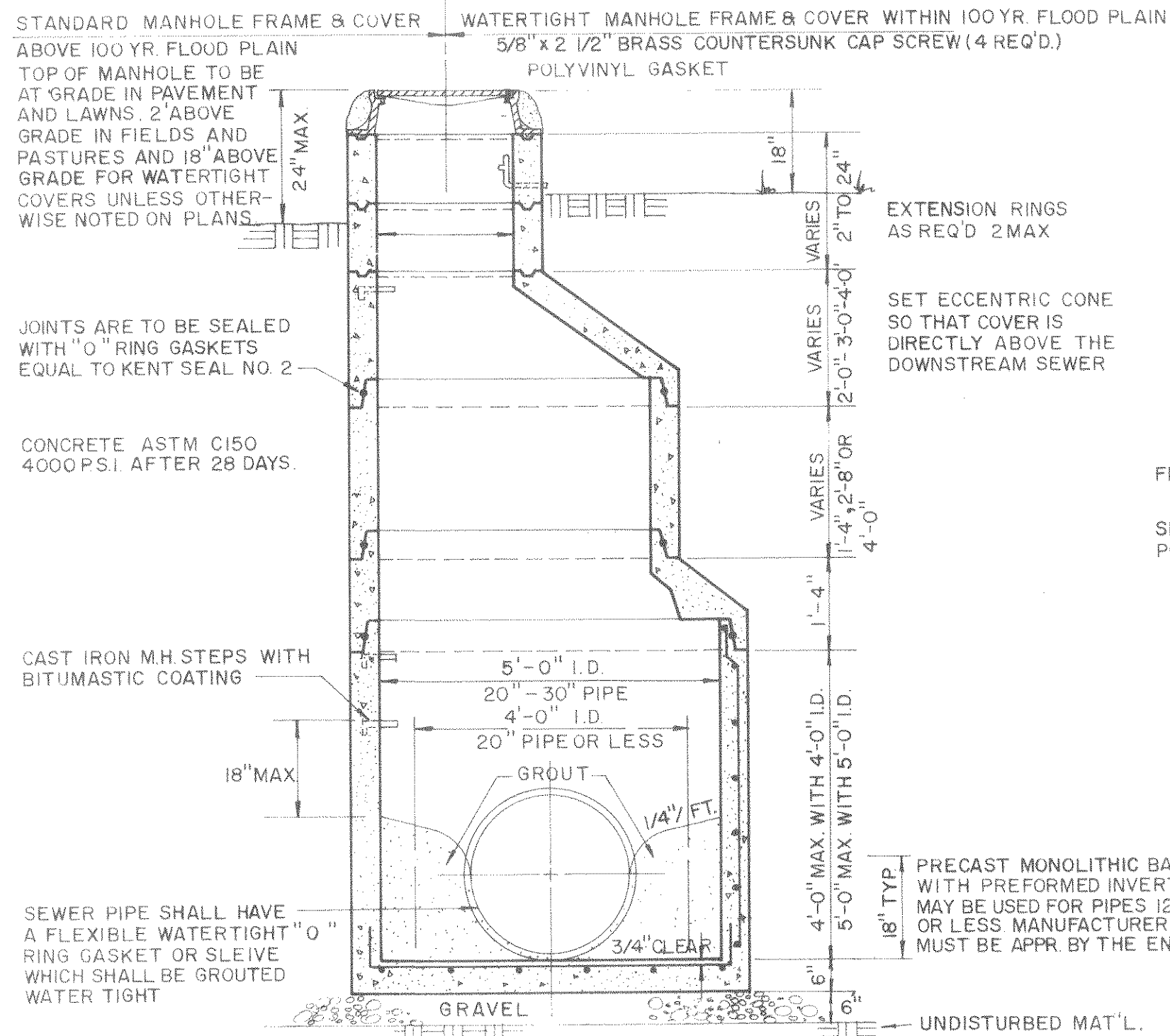


Designed: DJR/JMD
 Drafted: RSM/CLA
 Checked: CEP/JMD
 Approved: DJR

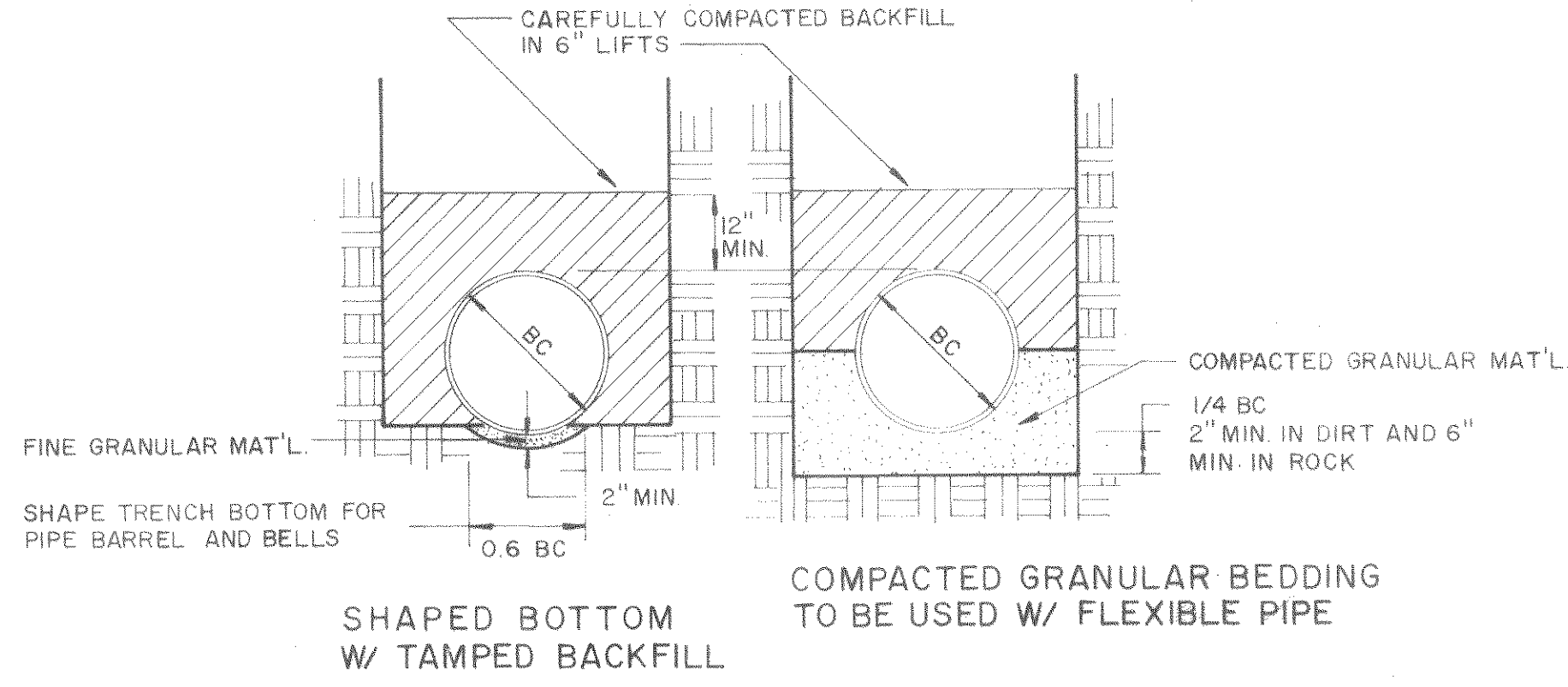
Clean Water Engineers, Inc.
 Fincastle, Virginia

TINKER CREEK INTERCEPTOR
 FOR
 BOTETOURT COUNTY SERVICE AUTHORITY
 "AS BUILTS"

REVISOR FROM
 SHEET 17 OF 18 DATED 9-28-79
 David J. Rigby
 Sheet: 17 of 18
 Scale: AS SHOWN
 Date: 10-21-81
 Project: 7930

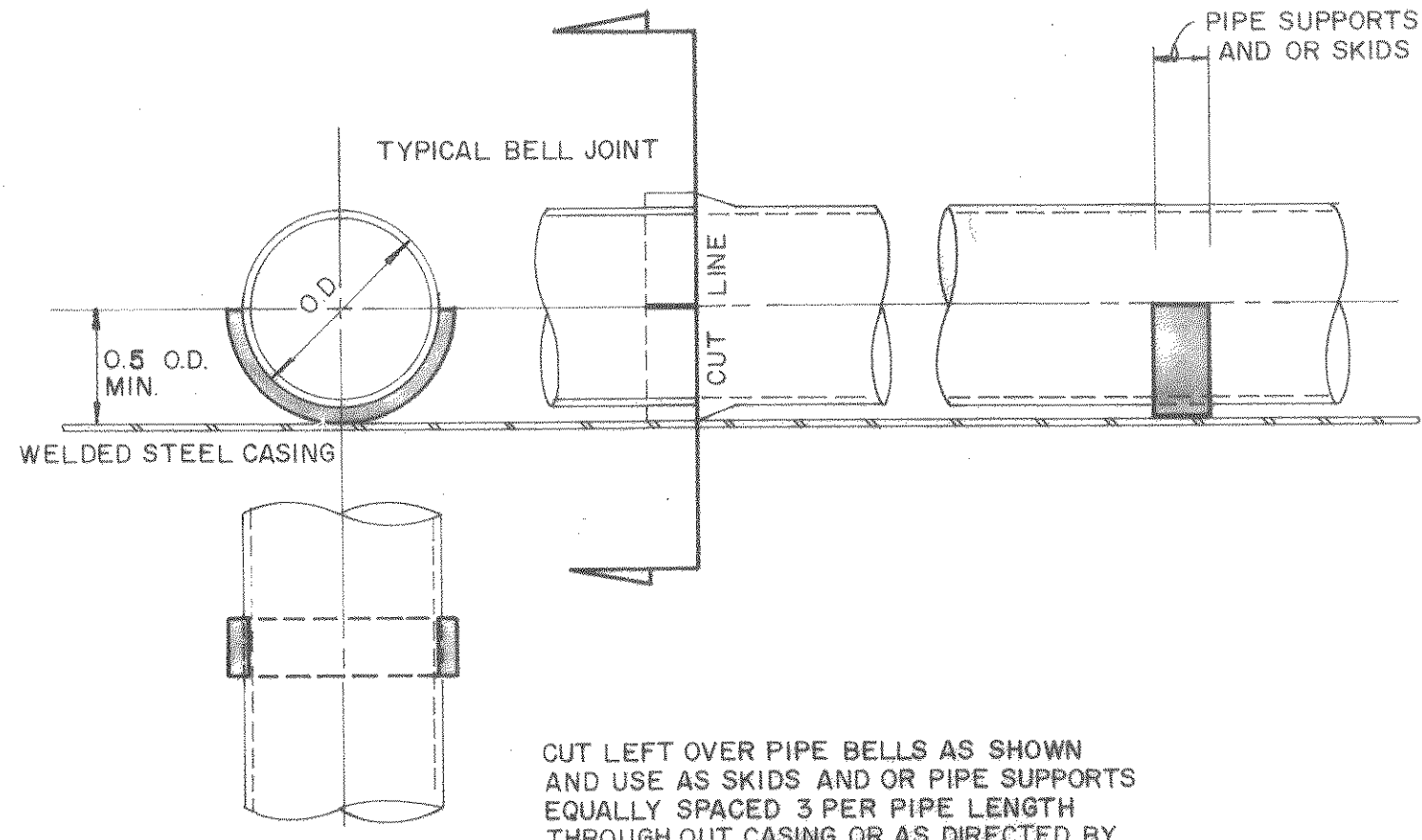


PRECAST ECCENTRIC MANHOLE

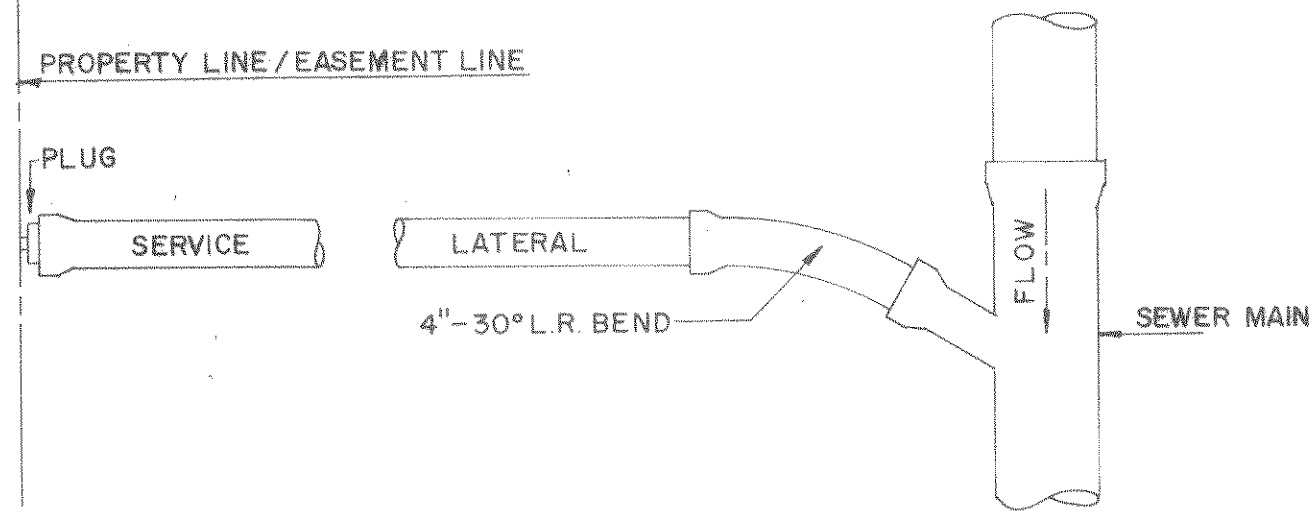


THE CONTRACTOR SHALL CHOOSE ONE OF THESE METHODS OF PIPE BEDDING UNLESS OTHERWISE DIRECTED BY THE ENGINEER

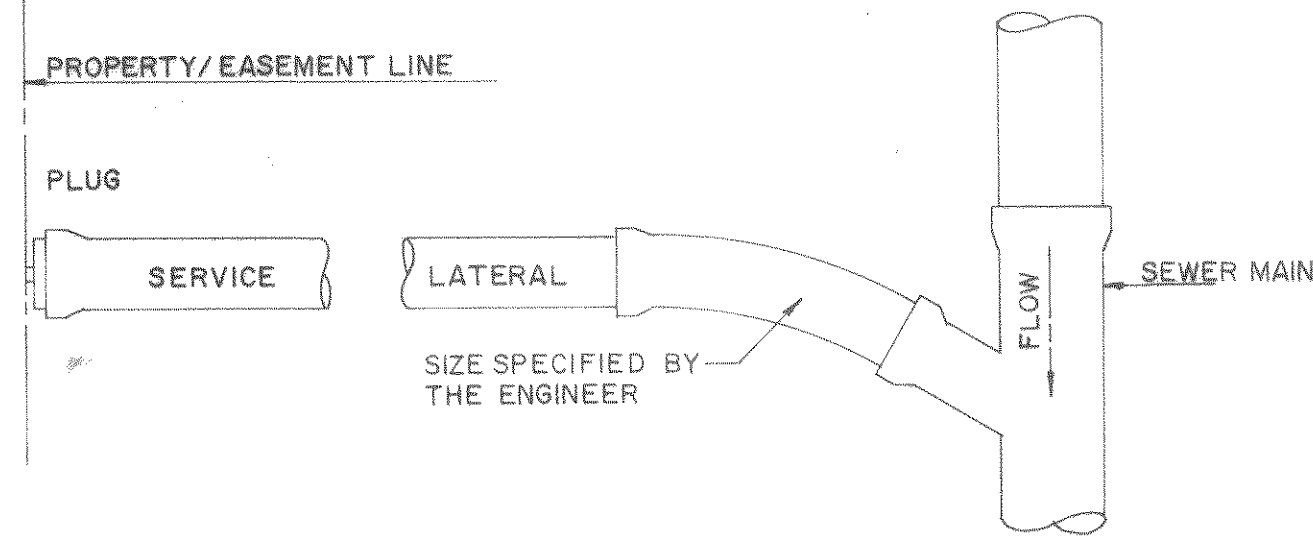
BEDDING DETAIL
FIRST CLASS—CLASS B BEDDING



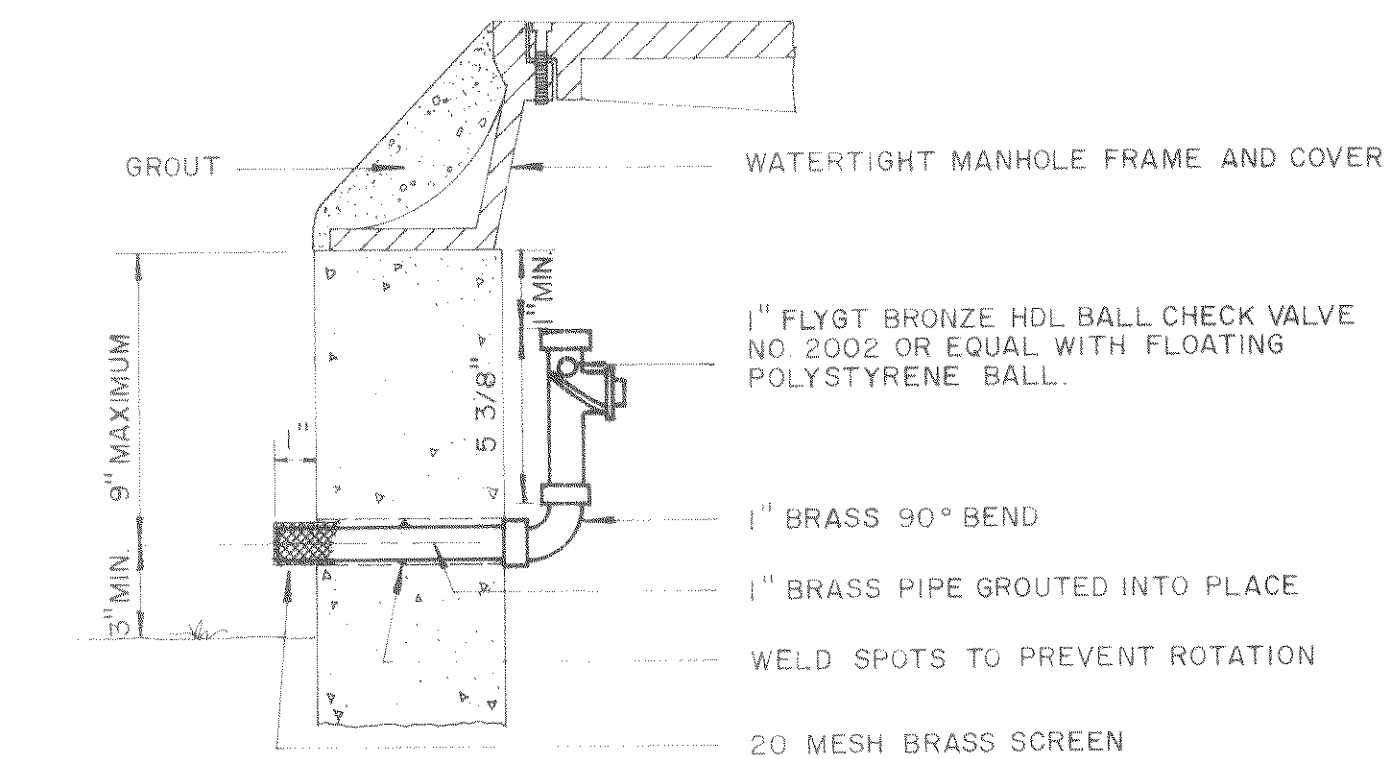
SKID DETAIL



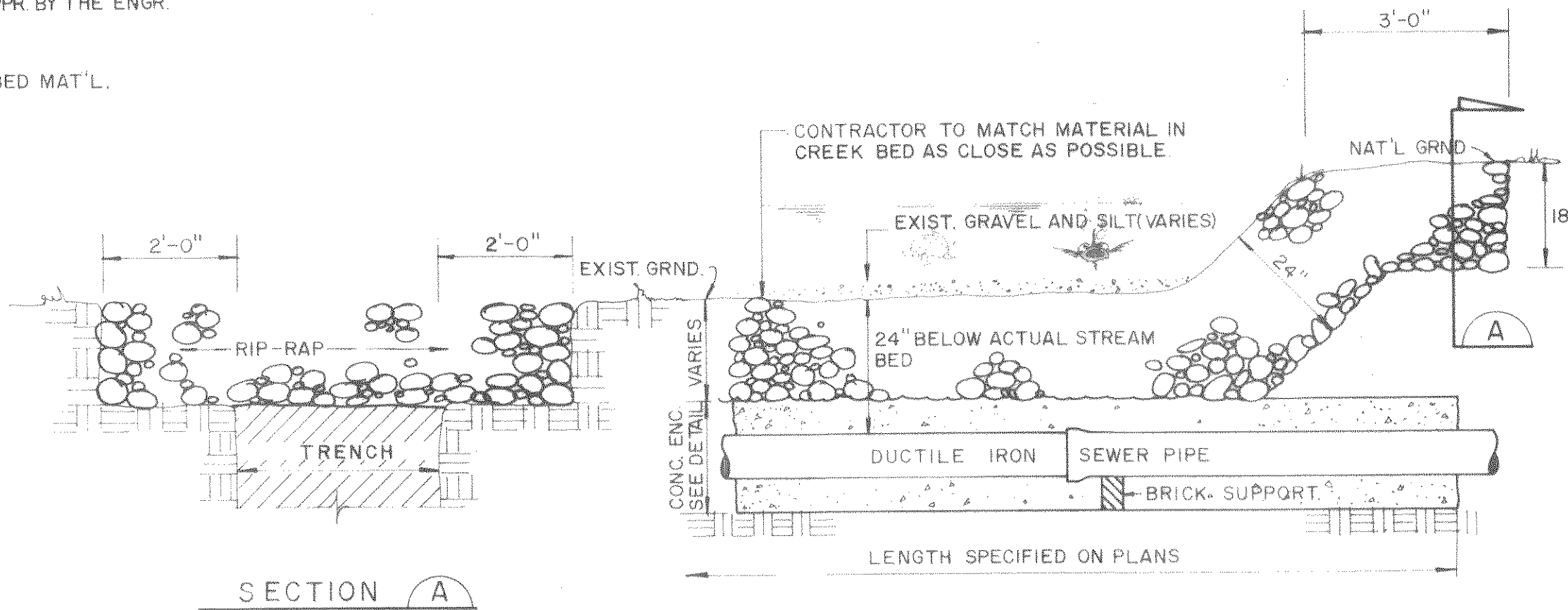
RESIDENTIAL SERVICE CONNECTION



COMMERCIAL SERVICE CONNECTION

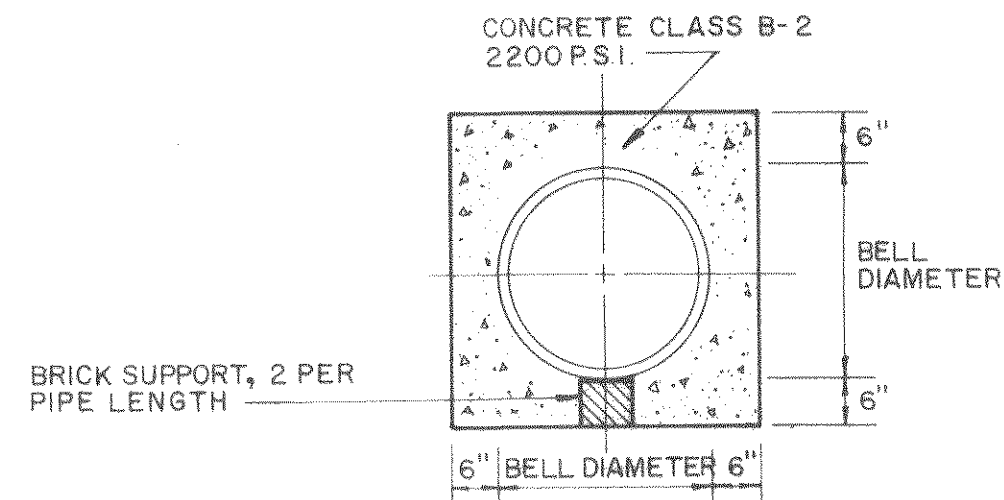


WATERTIGHT MANHOLE VENT DETAIL

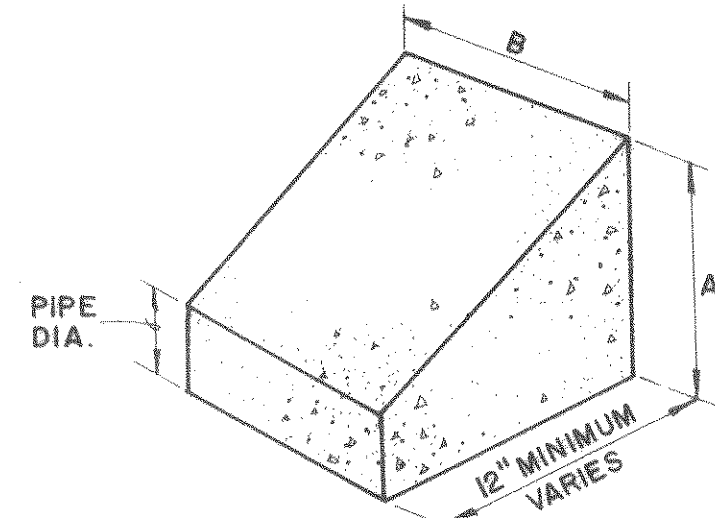


NOTE: AFTER CONSTR OF EACH CREEK CROSSING THE LINES SHALL BE TESTED FOR INFILTRATION IN ACCORDANCE WITH THE SPECIFICATIONS WITH ZERO INFILTRATION. SHOULD INFILTRATION BE PRESENT, THE CONTRACTOR SHALL RECONSTRUCT THE CROSSING UNTIL ZERO INFILTRATION IS OBTAINED.

TYPICAL CREEK CROSSING AND BANK PROTECTION



CONCRETE ENCASED PIPE



THRUST BLOCK SIZES

PIPE DIAMETER	TEE, CROSS, 90°		45° WYE		22 1/2°	
	A	B	A	B	A	B
4"	12"	12"	12"	12"	12"	12"
6"	15"	24"	18"	18"	18"	18"
8"	18"	30"	24"	24"	18"	18"
10"	24"	36"	30"	30"	24"	24"
12"	30"	42"	36"	36"	30"	30"

NOTE:

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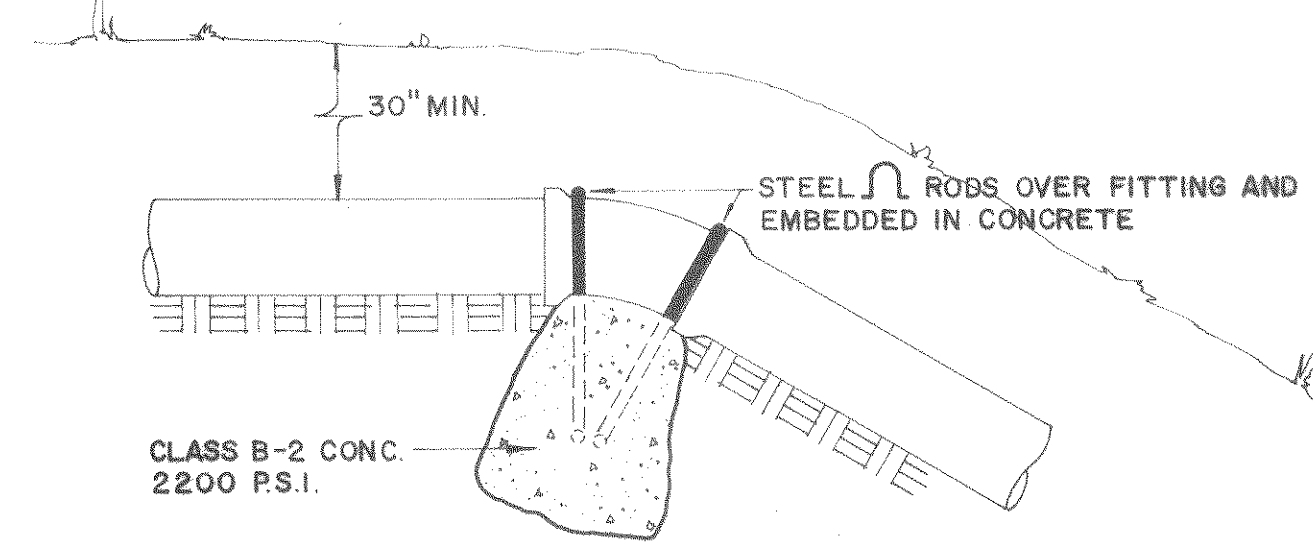
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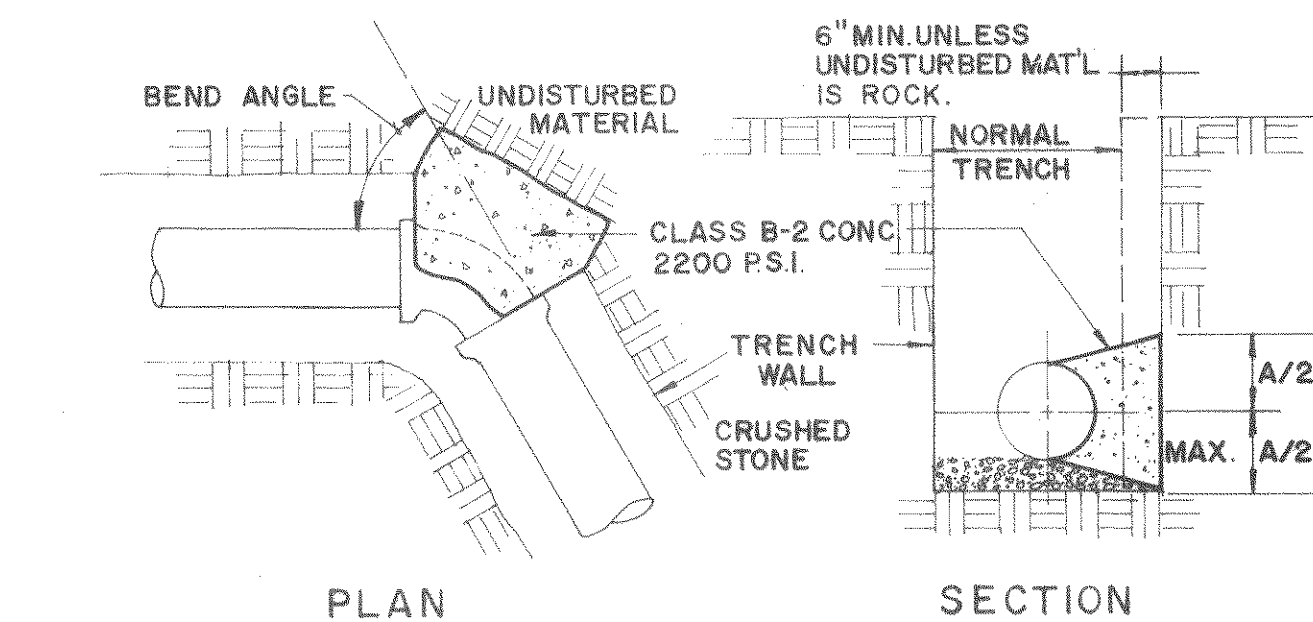
REVISED 5-21-81



PROFILE			
FITTING SIZE	ROD SIZE	NO. OF RODS	EMBEDMENT
4" - 6" - 8"	No. 4	2	24"
10" - 12"	" 6	"	"
FITTING SIZE	VOLUME OF THRUST BLOCK IN CUBIC YARDS		
	90°	45°	22 1/2°
	4	0.15	0.1
	6	0.35	0.2
	8	0.65	0.35
	10	1.0	0.55
	12	1.4	0.7

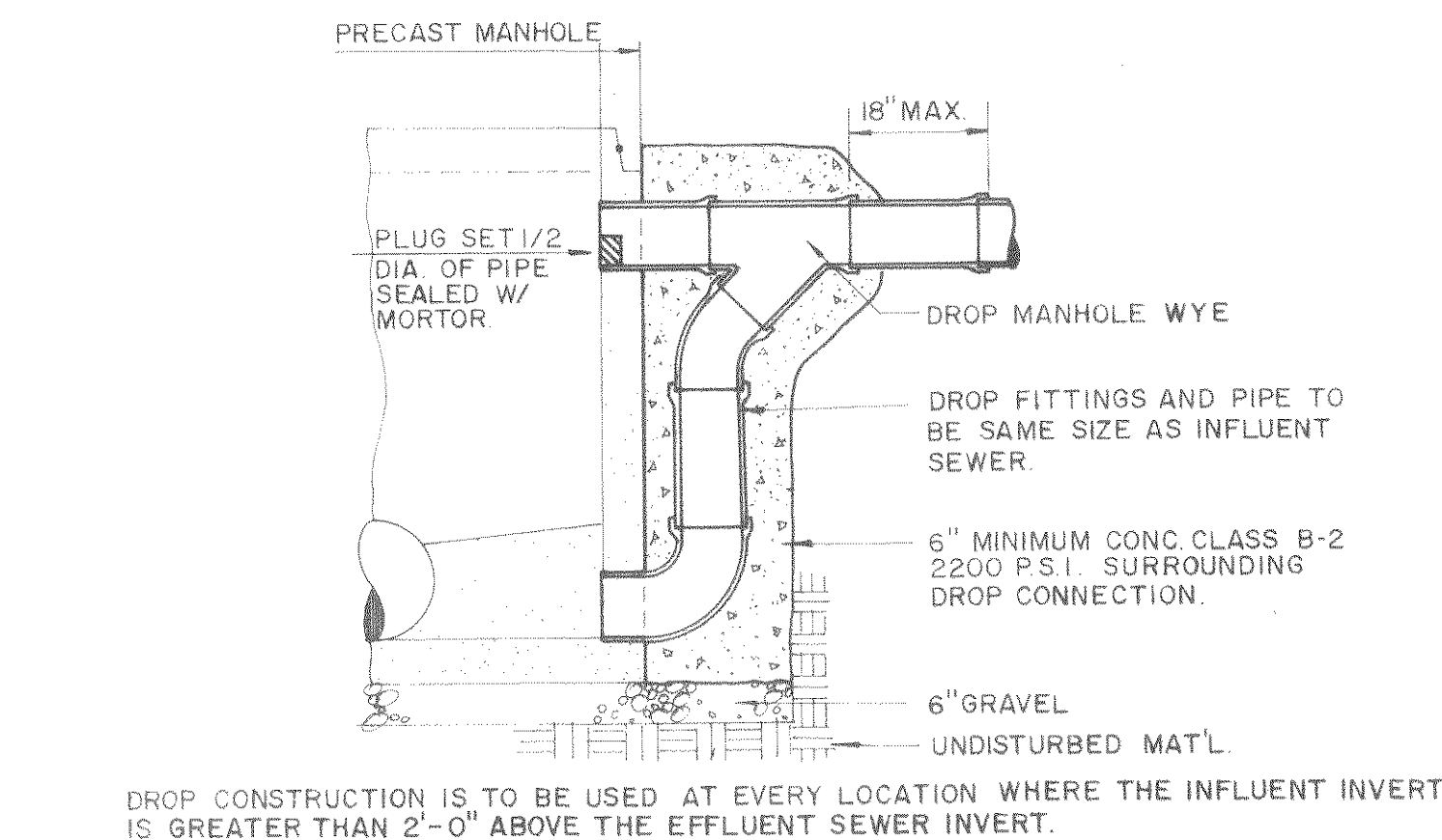
1. KEEP CONC CLEAR OF JOINT AND JOINT ACCESSORIES.
2. THRUST BLOCKS FOR VERTICAL UP BENDS SHALL BE THE SAME VOLUME AS FOR HORIZONTAL BENDS.

VERTICAL THRUST BLOCK DETAIL



NOTES:
1. AREA OF THRUST BLOCK BASED ON 1500 P.S.F. LATERAL BEARING PRESSURE AND A TEST PRESSURE WITHIN PIPE OF 150 P.S.I., VELOCITY OF 10 F.P.S.
2. THRUST BLOCKS ARE REQUIRED AT ALL BENDS OF MORE THAN 10°.
3. BEARING SURFACE OF THRUST BLOCKS MUST BE NORMAL TO RESULTANT THRUST OF BEND AND BEAR ON SUITABLE UNDISTURBED MATERIAL.
4. KEEP CONCRETE CLEAR OF JOINT AND JOINT ACCESSORIES.

HORIZONTAL THRUST BLOCK DETAIL



DROP CONSTRUCTION IS TO BE USED AT EVERY LOCATION WHERE THE INFLUENT INVERT IS GREATER THAN 2'-0" ABOVE THE EFFLUENT SEWER INVERT.

DROP CONSTRUCTION AT STANDARD MANHOLE

PRIMARY AND SECONDARY ROAD CROSSING

Clean Water Engineers, Inc.
Fincastle, Virginia

TINKER CREEK INTERCEPTOR
FOR
BOTETOURT COUNTY SERVICE AUTHORITY

DAVID J. RIGBY
DAVID J. RIGBY
DAVID J. RIGBY

Sheet: 18 of 18
Scale: NONE
Date: 9-28-79
Project: 7930

Designed: DJR CEP
Drafted: CEP
Checked: DJR
Approved: DJR