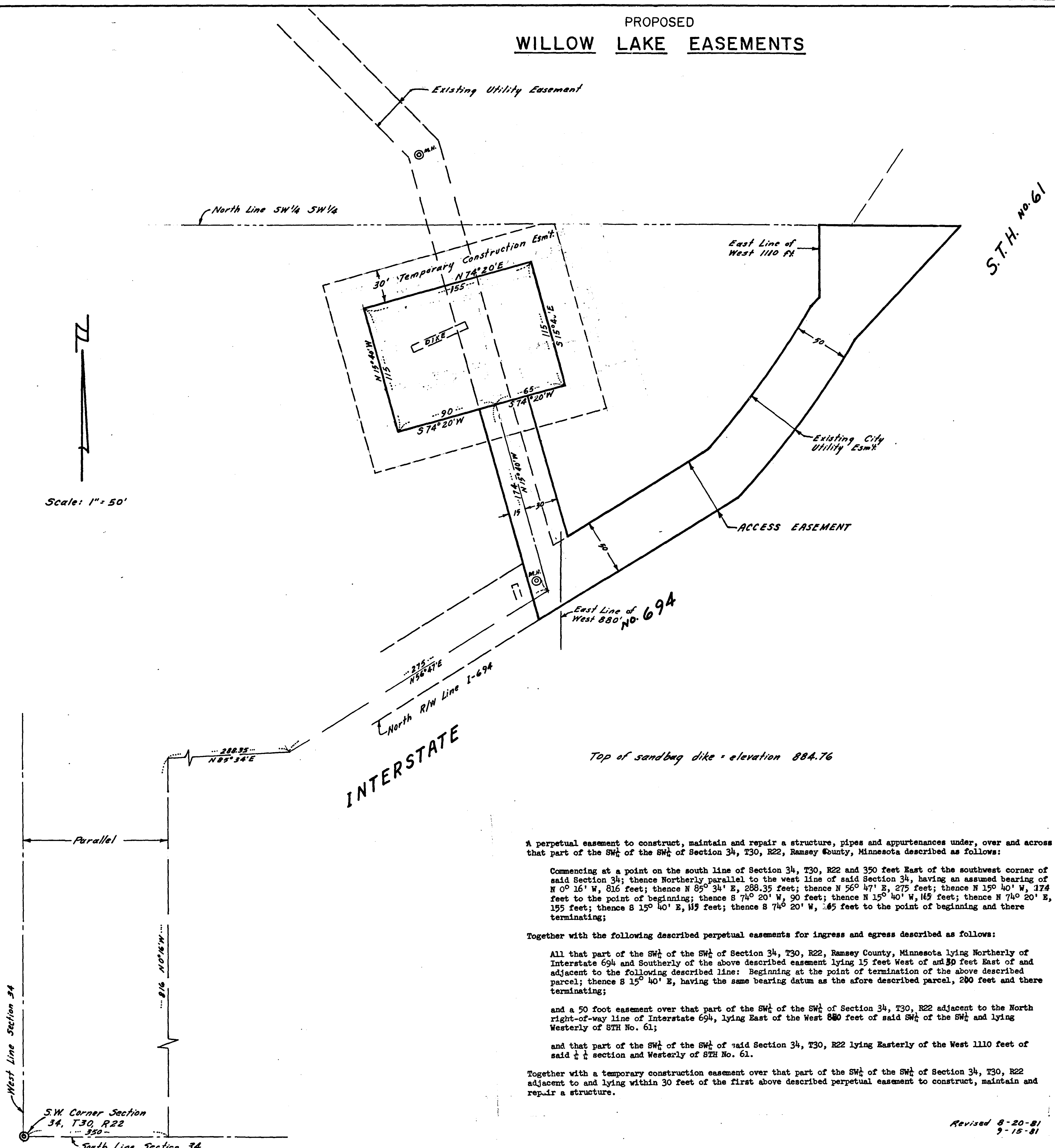


PROPOSED
WILLOW LAKE EASEMENTS



Scale: 1" = 50'

A perpetual easement to construct, maintain and repair a structure, pipes and appurtenances under, over and across that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34, T30, R22, Ramsey County, Minnesota described as follows:

Commencing at a point on the south line of Section 34, T30, R22 and 350 feet East of the southwest corner of said Section 34; thence Northerly parallel to the west line of said Section 34, having an assumed bearing of N 0° 16' W, 816 feet; thence N 85° 34' E, 288.35 feet; thence N 56° 47' E, 275 feet; thence N 15° 40' W, 174 feet to the point of beginning; thence S 74° 20' W, 90 feet; thence N 15° 40' W, 115 feet; thence N 74° 20' E, 155 feet; thence S 15° 40' E, 115 feet; thence S 74° 20' W, 105 feet to the point of beginning and there terminating;

Together with the following described perpetual easements for ingress and egress described as follows:

All that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34, T30, R22, Ramsey County, Minnesota lying Northerly of Interstate 694 and Southerly of the above described easement lying 15 feet West of and 30 feet East of and adjacent to the following described line: Beginning at the point of termination of the above described parcel; thence S 15° 40' E, having the same bearing datum as the afore described parcel, 200 feet and there terminating;

and a 50 foot easement over that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34, T30, R22 adjacent to the North right-of-way line of Interstate 694, lying East of the West 880 feet of said SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ and lying Westerly of STH No. 61;

and that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of said Section 34, T30, R22 lying Easterly of the West 1110 feet of said $\frac{1}{4}$ section and Westerly of STH No. 61.

Together with a temporary construction easement over that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34, T30, R22 adjacent to and lying within 30 feet of the first above described perpetual easement to construct, maintain and repair a structure.

Revised 8-20-81
9-15-81

RAMSEY COUNTY
DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION PLANS FOR EXCAVATION, PLACEMENT OF
FILL, CULVERT INSTALLATION, GRADING, AND RESTORATION
FOR:

EARTHEN DIKE AND DISCHARGE
CONTROL CULVERT FOR COUNTY
DITCH 18 AND WILLOW LAKE

LOCATION: APPROXIMATELY 500 FEET NNW OF THE INTERSECTION
OF I-694 AND T.H. 61 IN VADNAIS HEIGHTS, MINNESOTA

INDEX

SHEET	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS, DETAILS, & STATEMENT OF ESTIMATED QUANTITIES
3	EASEMENT
4	PLAN & PROFILE
5	CROSS-SECTIONS
6	SANITARY SEWER MANHOLE ADJUSTMENT

DESIGN SQUAD *[Signature]* DATE 8/17/81
DRAWN BY *[Signature]* DATE 8/17/81
CHECKED BY *[Signature]* DATE 8/21/81

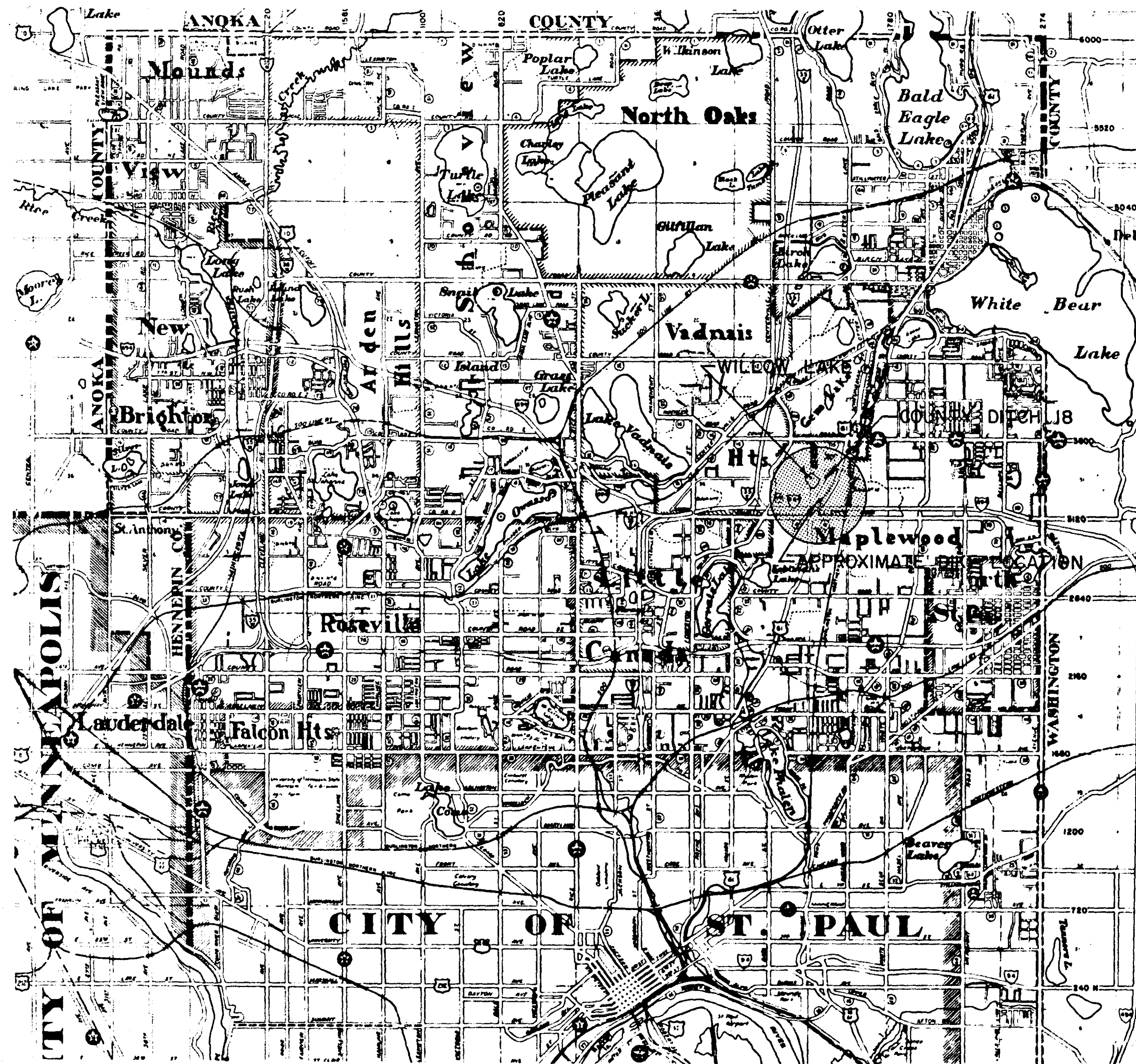
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
DATE 8-21-81 REG NO 11654 ENGR *[Signature]*

RECOMMENDED FOR APPROVAL *[Signature]* DATE 8-21-81
RECOMMENDED FOR APPROVAL *[Signature]* DATE 8/21/81
RECOMMENDED FOR APPROVAL *[Signature]* DATE 8/21/81
RECOMMENDED FOR APPROVAL *[Signature]* DATE 8/24/81
RECOMMENDED FOR APPROVAL *[Signature]* DATE 8-24-81
RECOMMENDED FOR APPROVAL *[Signature]* DATE 8-26-81
APPROVED *[Signature]* DATE 10-7-81

RECOMMENDED FOR APPROVAL *[Signature]* DATE 10-18-81
APPROVED *[Signature]* DATE 10/26/81
CHAIRMAN OF THE RAMSEY COUNTY BOARD

MINNESOTA DEPARTMENT OF TRANSPORTATION
RECOMMENDED FOR APPROVAL _____ DATE _____
RECOMMENDED FOR APPROVAL _____ DATE _____
APPROVAL _____ DATE _____
DISTRICT STATE AID ENGINEER

PLAN REVISIONS		
DATE	SHEET NO.	BY
9/29/81	2, 3, 4	<i>[Signature]</i>
10/22/81	2	<i>[Signature]</i>

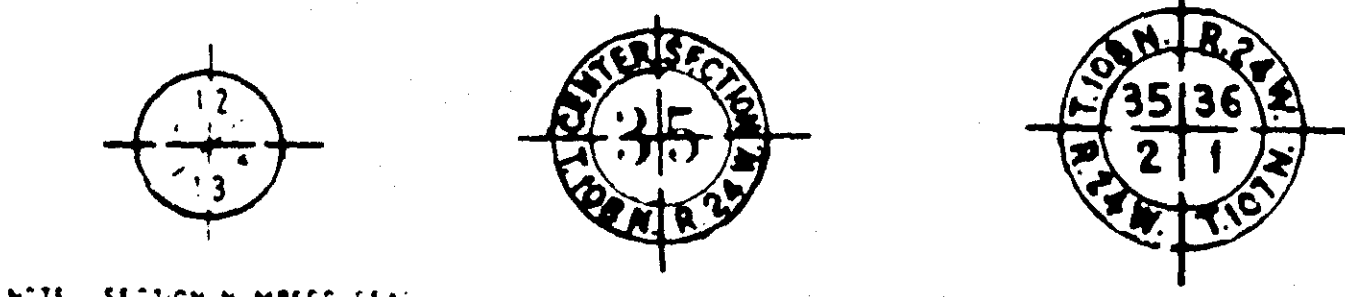


PLANS SYMBOLS

STATE LINE		SPRINGS	
COUNTY LINE		MARSH	
TOWNSHIP OR RANGE LINE		TIMBER	
SECTION LINE		ORCHARD	
QUARTER LINE		BRUSH	
SIXTEENTH LINE		NURSERY	
RIGHT OF WAY LINE		CATCH BASIN	
PRESENT RIGHT OF WAY LINE		FIRE HYDRANT	
CONTROL OF ACCESS LINE		CATTLE GUARD	
PROPERTY LINE (Except Land Lines)		OVERPASS (Highway Over)	
VACATED PLATTED PROPERTY		UNDERPASS (Highway Under)	
CORPORATE OR CITY LIMITS		BRIDGE	
TRUNK HIGHWAY CENTER LINE		BUILDING (One Story Frame)	
RETAINING WALL		F FRAME C CONCRETE	
RAILROAD		S STONE T TILE	
RAILROAD RIGHT OF WAY LINE		B BRICK ST STUCCO	
RIVER OR CREEK		IRON PIPE OR ROD	
DRY RUN		MONUMENT (STONE, CONCRETE, OR METAL)	
DRAINAGE DITCH		WOODEN HUB	
DRAIN TILE		GRAVEL PIT	
CULVERT		SAND PIT	
DROP INLET		BORROW PIT	
GUARD RAIL		ROCK QUARRY	
BARBED WIRE FENCE			
WOODEN WIRE FENCE			
CHAIN LINK FENCE			
RAILROAD SNOW FENCE			
STONE WALL OR FENCE			
HEDGE			
RAILROAD CROSSING SIGN			
RAILROAD CROSSING BELL			
ELECTRIC WARNING SIGN			
CROSSING GATE			
MEANDER CORNER			

UTILITIES SYMBOLS

POWER POLE LINE		CONDUIT	
TELEPHONE OR TELEGRAPH POLE LINE		TELEPHONE CABLE IN CONDUIT	
JOINT TELEPHONE AND POWER ON POWER POLES		ELECTRIC CABLE IN CONDUIT	
ON TELEPHONE POLES		TELEPHONE MANHOLE	
ANCHOR		ELECTRIC MANHOLE	
STEEL TOWER		BURIED TELEPHONE CABLE	
STREET LIGHT		BURIED ELECTRIC CABLE	
PIEDESTAL TELEPHONE CABLE TERMINAL		AERIAL TELEPHONE CABLE	
GAS MAIN		SEWER (SANITARY OR STORM)	
WATER MAIN		SEWER MANHOLE	



PIT DATA

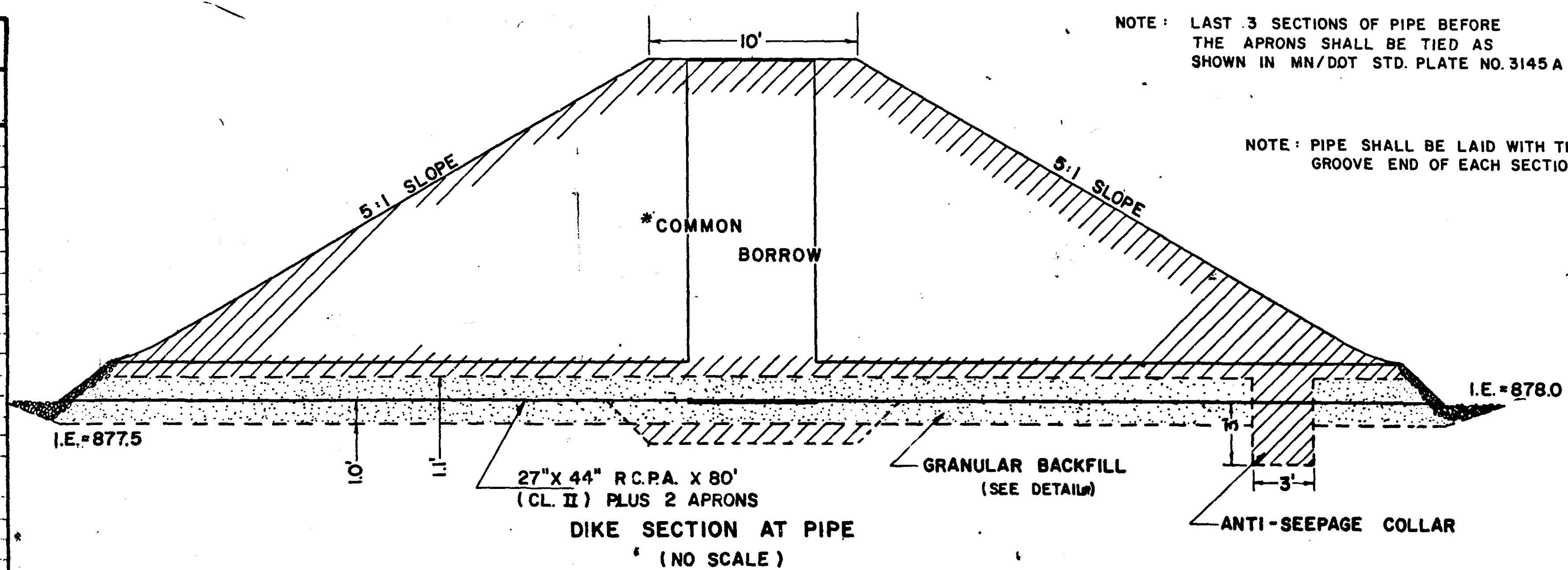
PIT NO. _____ Located in Dead Haul
PIT NO. _____ Located in Dead Haul

THE 1978 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" SHALL GOVERN.

STATEMENT OF ESTIMATED QUANTITIES				
ITEM NO	ITEM	UNIT	ESTIMATED QUANTITIES	FINAL ESTIMATED QUANTITIES
2101.502	CLEARING	EA.	7	
2101.507	GRUBBING	EA.	7	
2105.501	COMMON EXCAVATION	C.Y.	140	
2105.511	COMMON CHANNEL EXCAVATION	C.Y.	150	
2105.523	COMMON BORROW (LV) - DIKE	C.Y.	640	
2105.525	TOPSOIL BORROW (LV) - "	C.Y.	50	
2451.503	GRANULAR BACKFILL	C.Y.	40	
2211.501	AGGREGATE BASE, CL-5 (100% CRUSHED)	TON	60	
2501.521	44" SPAN R.C. PIPE ARCH CULVERT CL 2	L.F.	80	
2501.525	44" SPAN R.C. PIPE ARCH APRONS	EA.	2	
2506.508	CONSTRUCT MANHOLE DESIGN 4020 (MODIFIED)	EA.	1	
2511.501	RANDOM RIP RAP CL. A	C.Y.	20	
2511.504	FILTER BLANKET TYPE 1	C.Y.	9	
2575.502	SEED MIXTURE 5	LB.	10	
2575.511	MULCH MATERIAL TYPE 5	TON	0.2	
412.601	F & I. GALV. STEEL FISH BARRIER PLATE	LUMP SUM	1	
506.603	F & I. PRECAST CONCRETE MANHOLE RISERS	L.F.	12.5	
2105.523	COMMON BORROW (LV) - SANITARY SEWER MH WORK	C.Y.	55	
2105.525	TOPSOIL BORROW (LV) - SANITARY SEWER MH WORK	C.Y.	10	

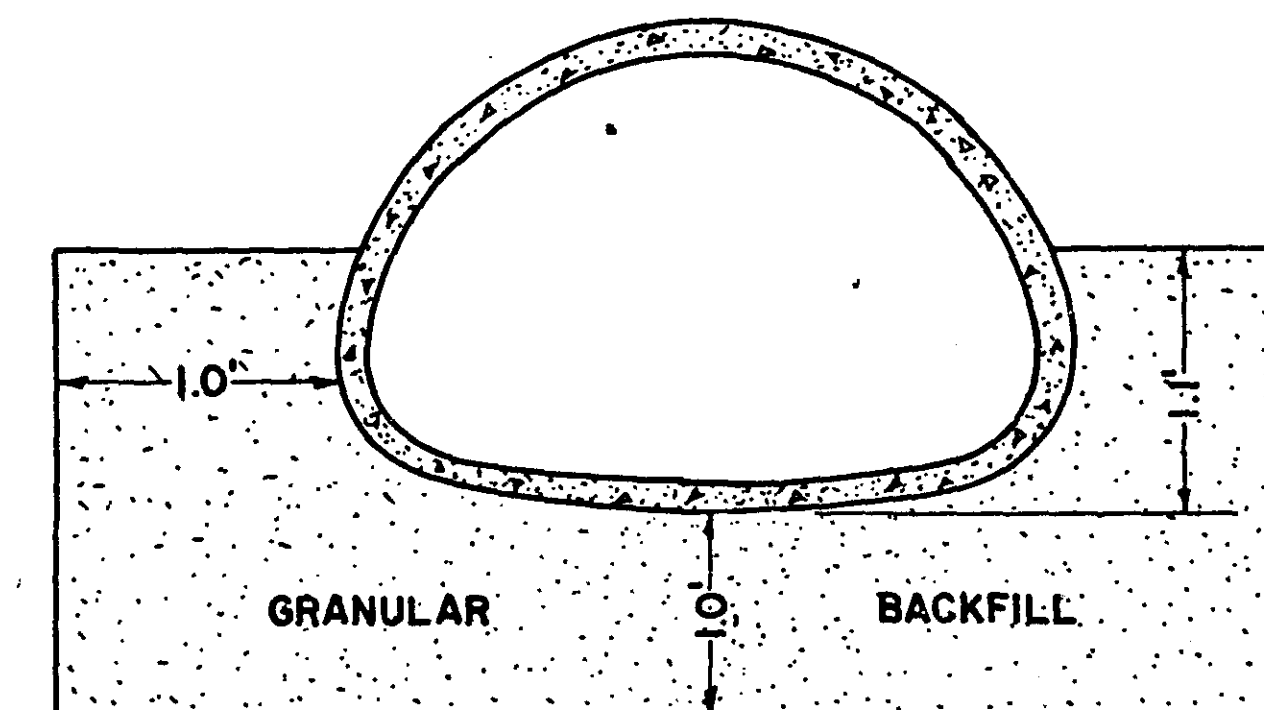
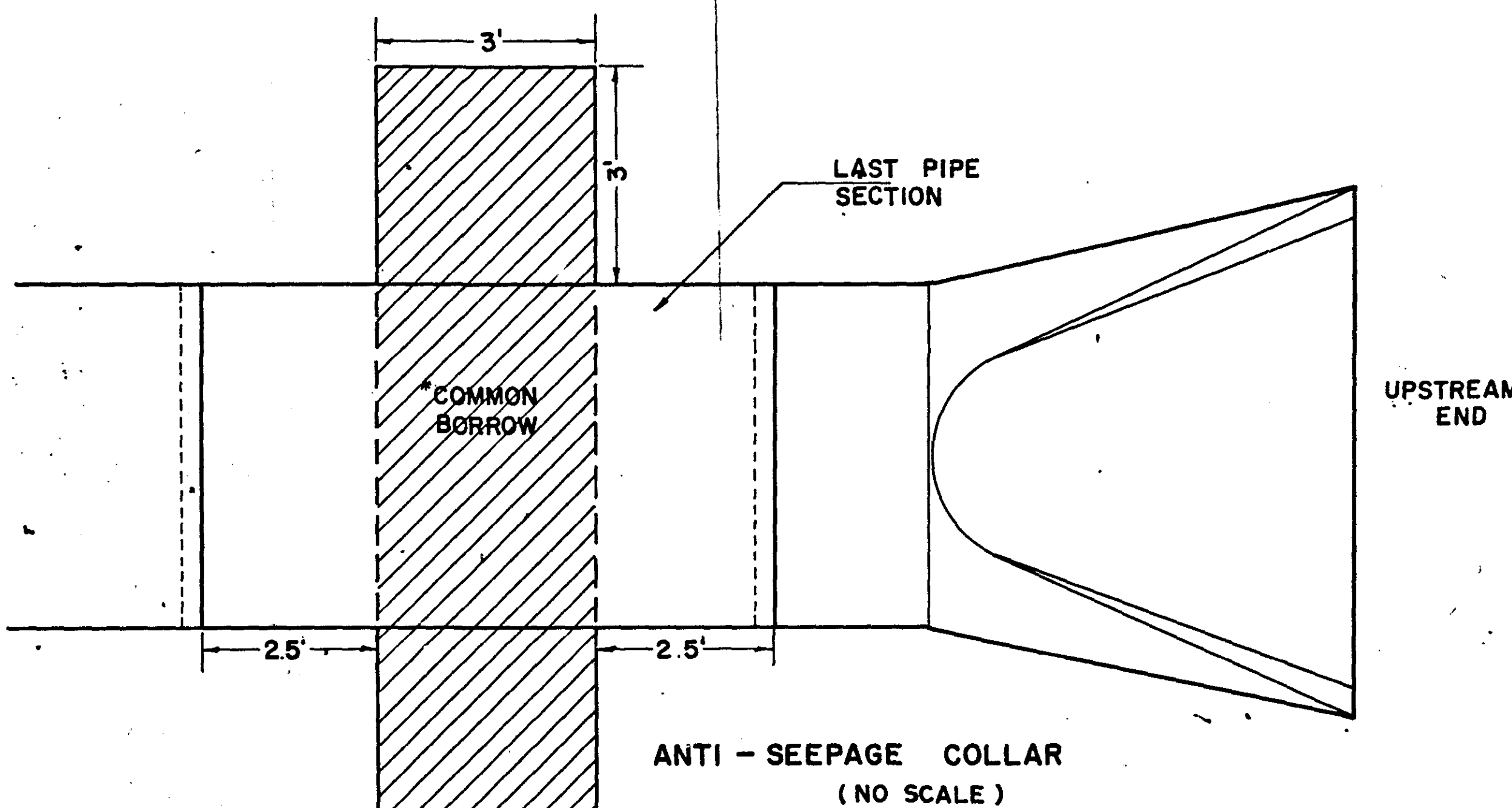
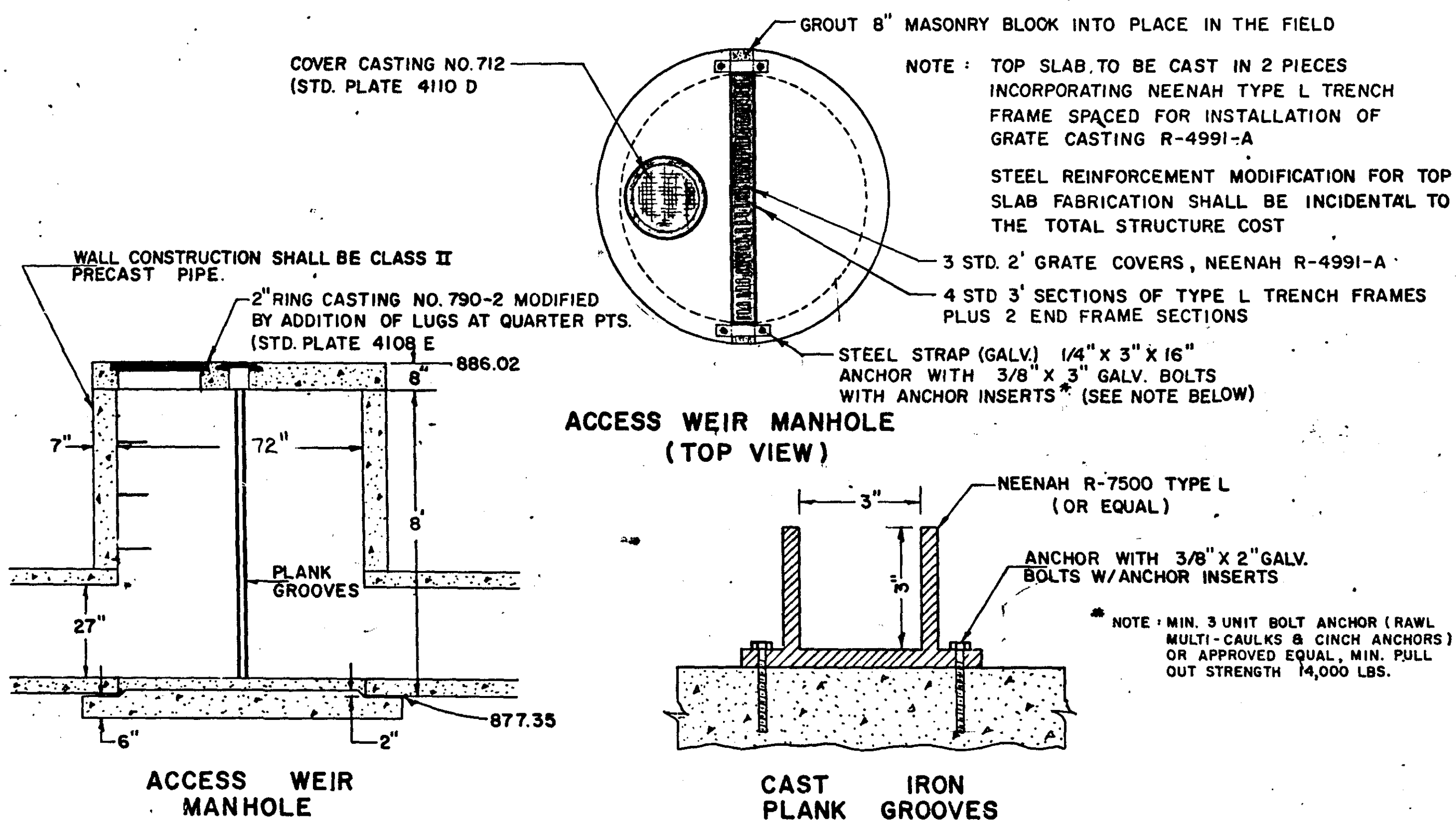
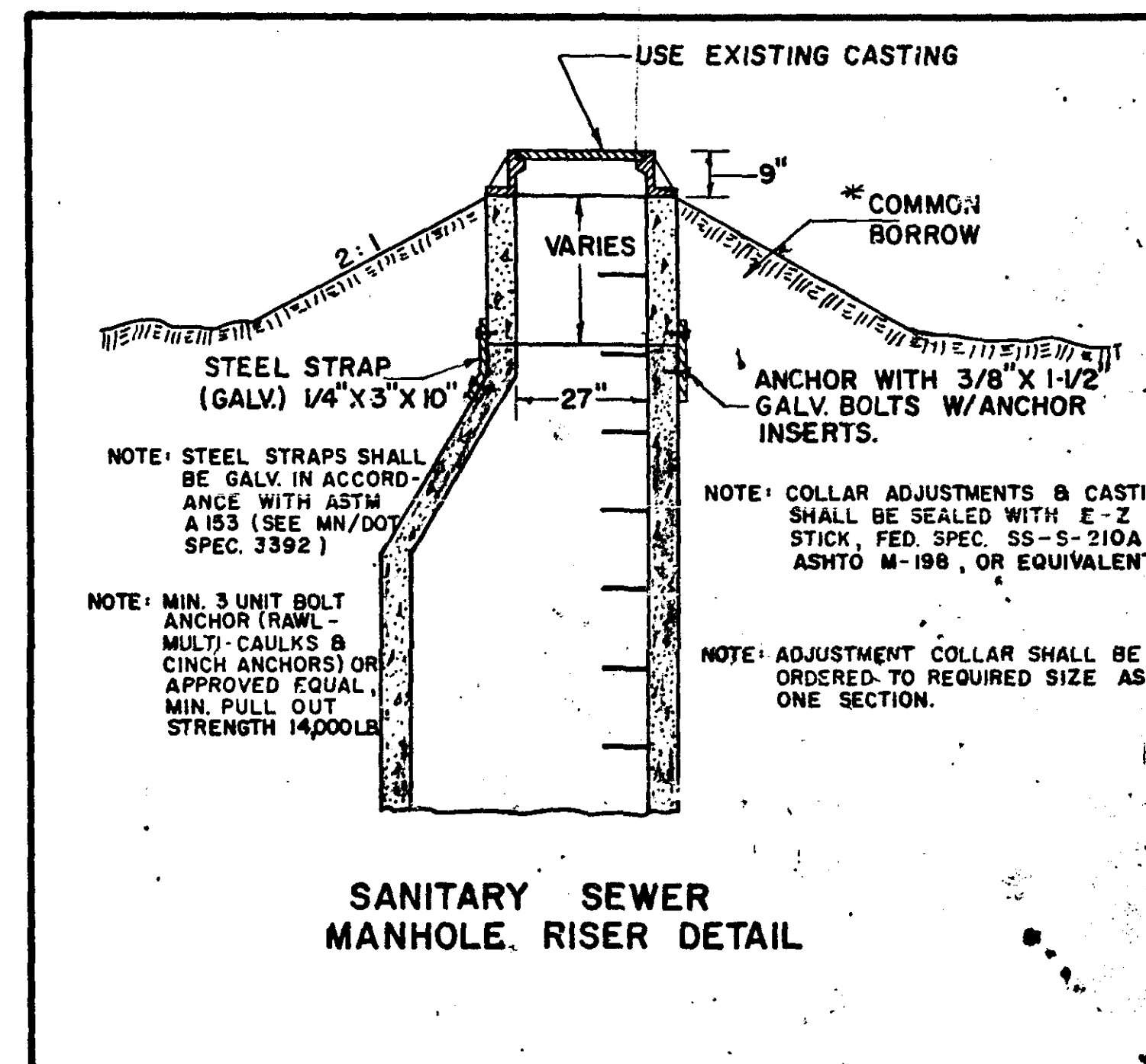
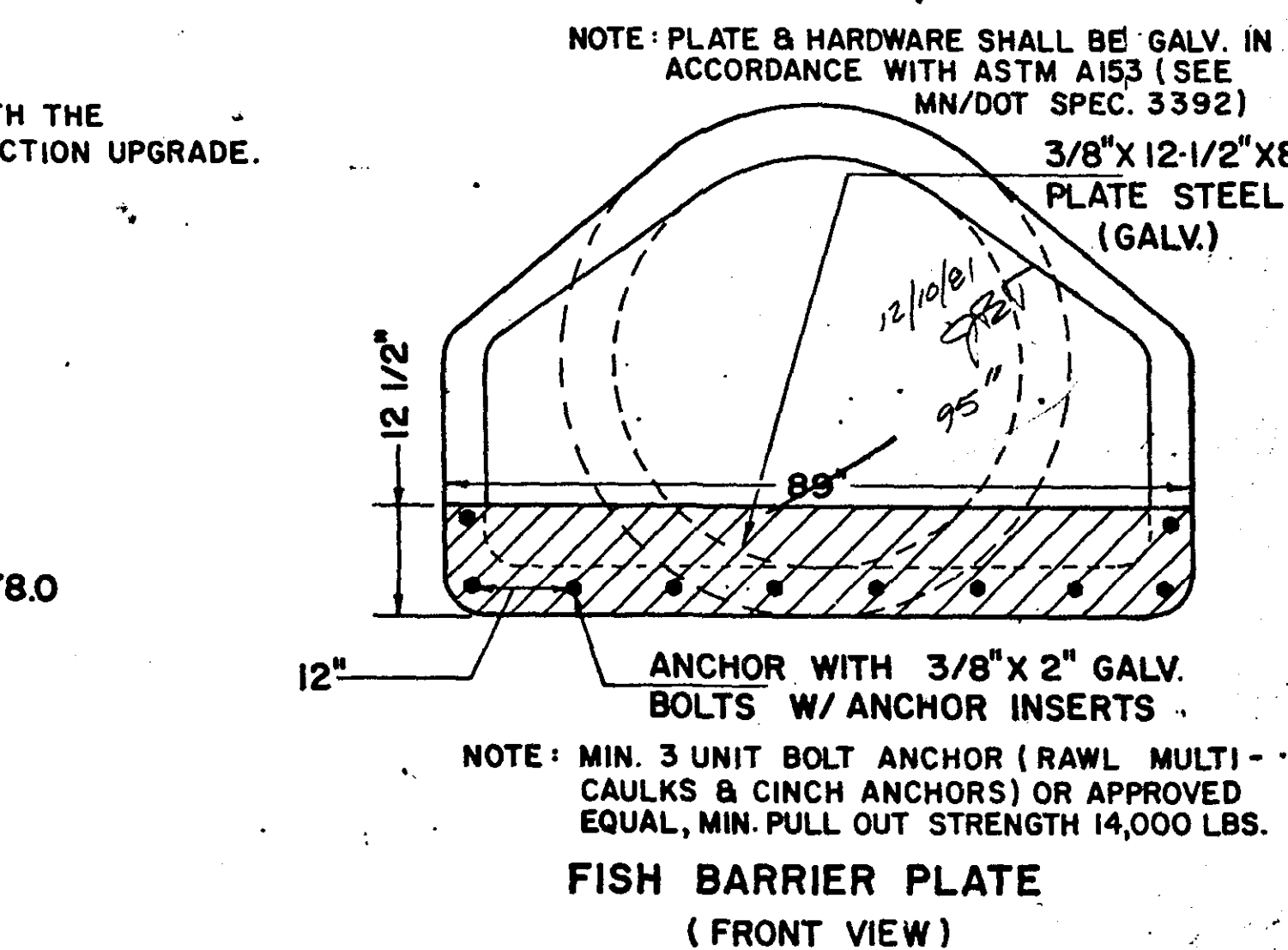
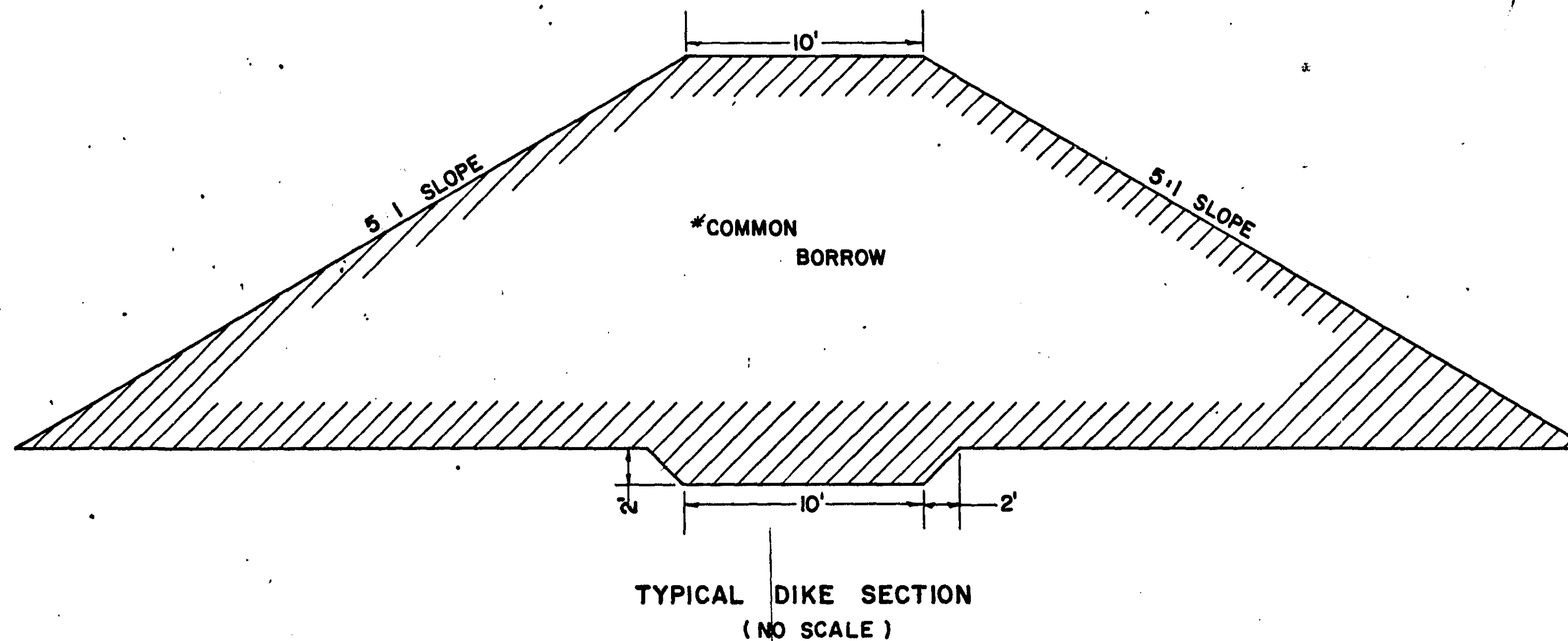
STANDARD DETAIL PLATES	
3000 I	REINFORCED CONCRETE PIPE
3014 H	REINFORCED CONCRETE PIPE ARCH DETAIL
3110 F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE ARCH
3133 A	RIP RAP AT R.C.P. OUTLETS
3145 A	CONCRETE PIPE JOINT TIES
4020 C	MANHOLE OR CATCH BASIN - 72" I.D.
4108 E	MANHOLE ADJUSTING RINGS - 2" CASTING NO. 790-2
4110 D	COVER CASTING FOR MANHOLE - CASTING NO. 712
4011 D	PRECAST CONCRETE BASE
4180 G	MANHOLE OR CATCH BASIN STEP, TYPE W (STEEL REINFORCED PLASTIC)

CLEAR AND GRUB CHART						
STATION	LOCATION		DESCRIPTION	SIZE	CLEAR	GRUB
	LT	RT				
2+14	23'		COTTONWOOD	36"		
2+39		36'	OAK	20"		
2+67	37'		BOXELDER	4"		
2+68	39'		BOXELDER	4"		
2+70	22'		COTTONWOOD	48"		
2+74	23'		COTTONWOOD	20"		
2+74		10'	BOXELDER	16"		

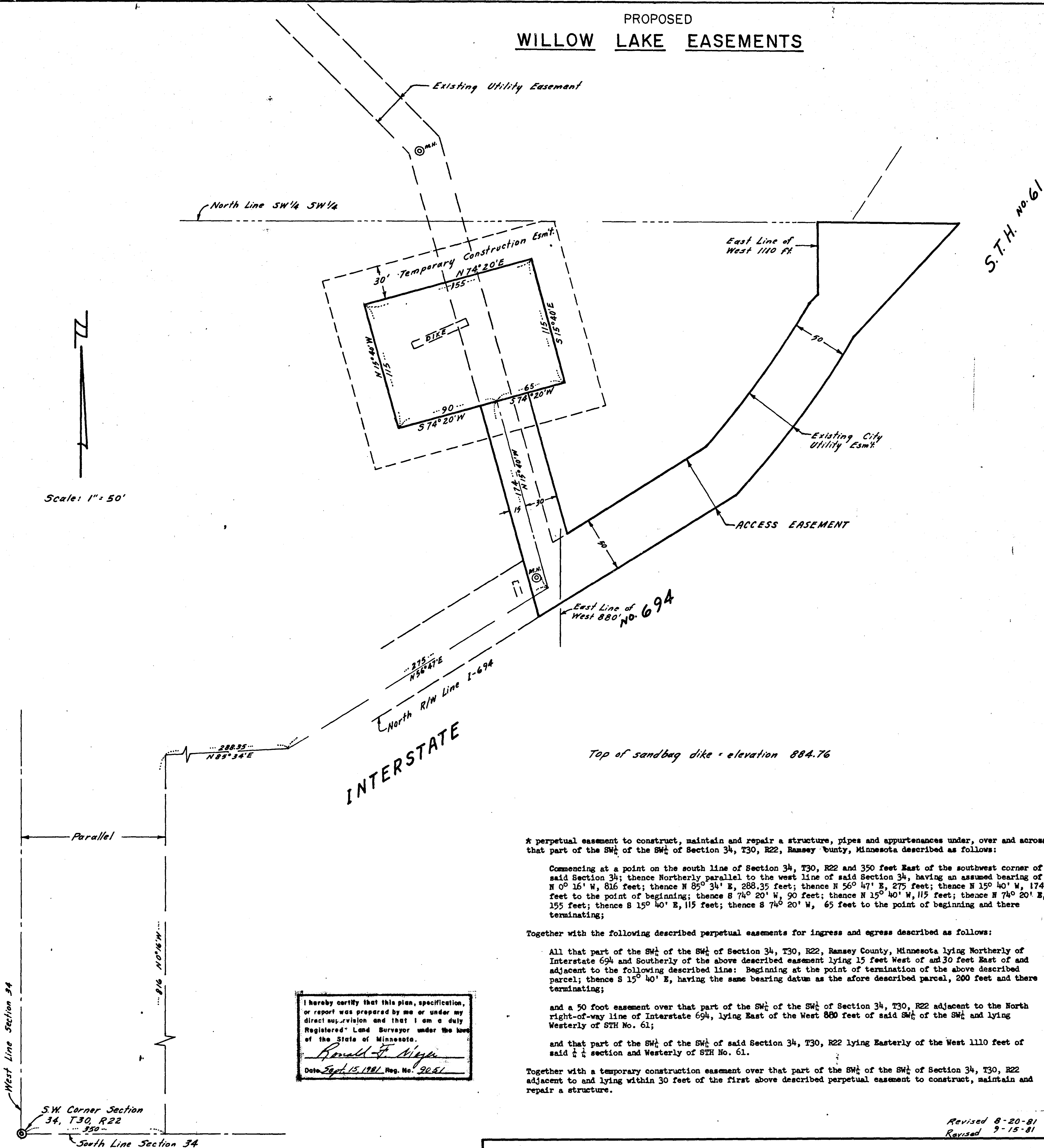


NOTE: 3' ROUNDING SHALL BE CONSTRUCTED AT ALL SLOPE TRANSITIONS.

NOTE: COMMON BORROW SHALL EXHIBIT SEMI PLASTIC TO PLASTIC CHARACTERISTICS IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM. ALL MATERIAL DELIVERED TO THE DIKE AREA SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ENGINEER.



PROPOSED
WILLOW LAKE EASEMENTS



* perpetual easement to construct, maintain and repair a structure, pipes and appurtenances under, over and across that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34, T30, R22, Ramsey County, Minnesota described as follows:

Commencing at a point on the south line of Section 34, T30, R22 and 350 feet East of the southwest corner of said Section 34; thence Northerly parallel to the west line of said Section 34, having an assumed bearing of N 0° 16' W, 816 feet; thence N 85° 34' E, 288.35 feet; thence N 56° 47' E, 275 feet; thence N 15° 40' W, 174 feet to the point of beginning; thence S 74° 20' W, 90 feet; thence N 15° 40' W, 115 feet; thence N 74° 20' E, 155 feet; thence S 15° 40' E, 115 feet; thence S 74° 20' W, 65 feet to the point of beginning and there terminating;

Together with the following described perpetual easements for ingress and egress described as follows:

All that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34, T30, R22, Ramsey County, Minnesota lying Northerly of Interstate 694 and Southerly of the above described easement lying 15 feet West of and 30 feet East of and adjacent to the following described line: Beginning at the point of termination of the above described parcel; thence S 15° 40' E, having the same bearing datum as the afore described parcel, 200 feet and there terminating;

and a 50 foot easement over that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34, T30, R22 adjacent to the North right-of-way line of Interstate 694, lying East of the West 880 feet of said SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ and lying Westerly of STH No. 61;

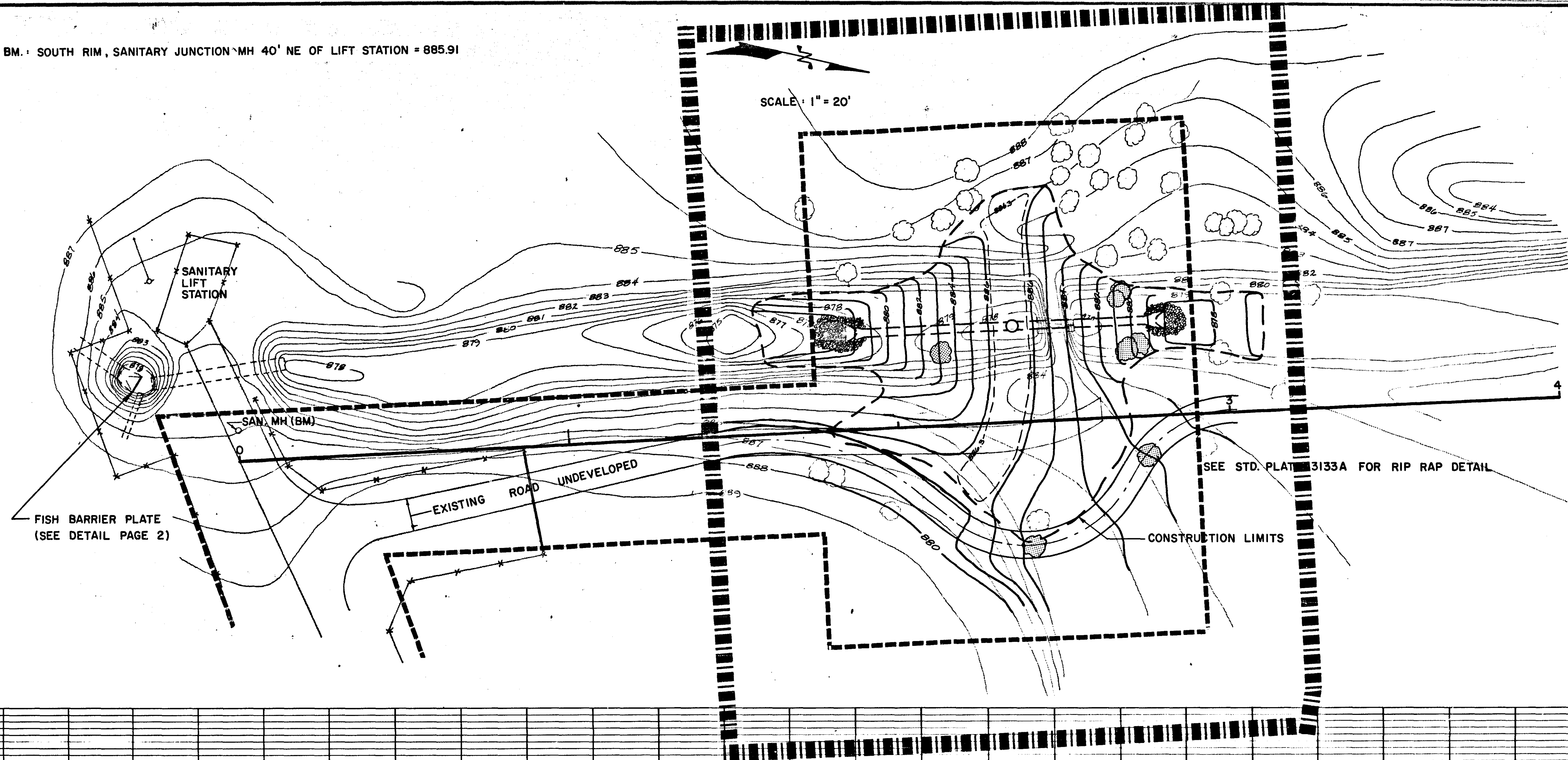
and that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of said Section 34, T30, R22 lying Easterly of the West 1110 feet of said $\frac{1}{4}$ section and Westerly of STH No. 61.

Together with a temporary construction easement over that part of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 34, T30, R22 adjacent to and lying within 30 feet of the first above described perpetual easement to construct, maintain and repair a structure.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.
Ronald F. Meyer
Date Sept. 15, 1981, Reg. No. 9251

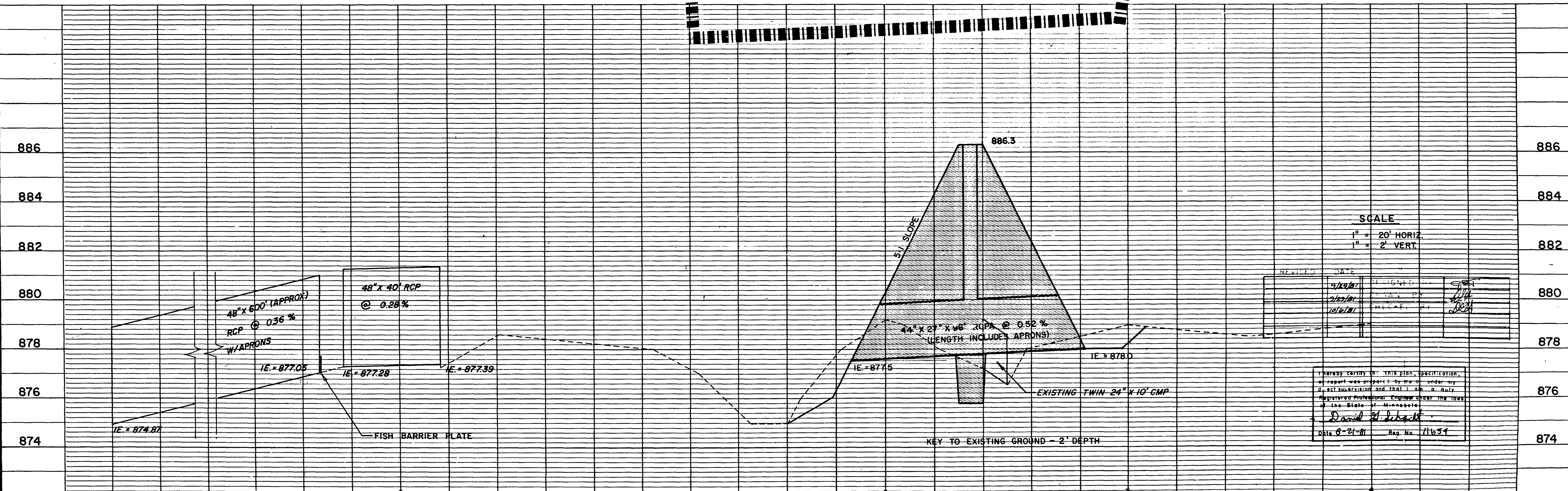
BM: SOUTH RIM, SANITARY JUNCTION MH 40' NE OF LIFT STATION = 885.91

SCALE: 1" = 20'



NOTE: REMOVE ONLY THOSE TREES SHADED

TEMPORARY CONSTRUCTION EASEMENT
 PERPETUAL EASEMENT

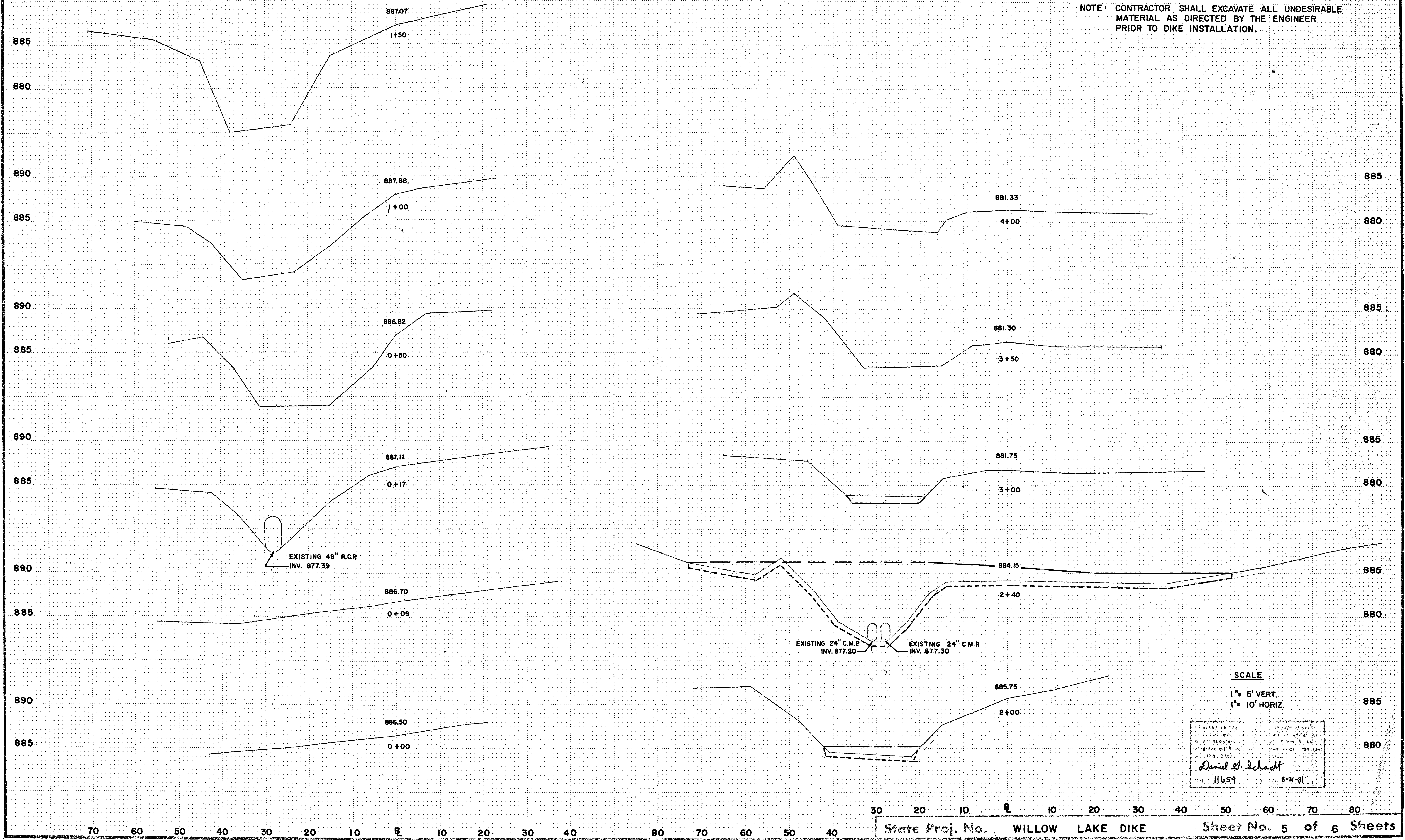


SCALE
 1" = 20' HORIZ.
 1" = 2' VERT.

DATE	BY	CHKD
5/25/81	[Signature]	[Signature]
6/22/81	[Signature]	[Signature]
10/6/81	[Signature]	[Signature]

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
 Daniel H. Schmitt
 0816-21-81 Reg. No. 11634

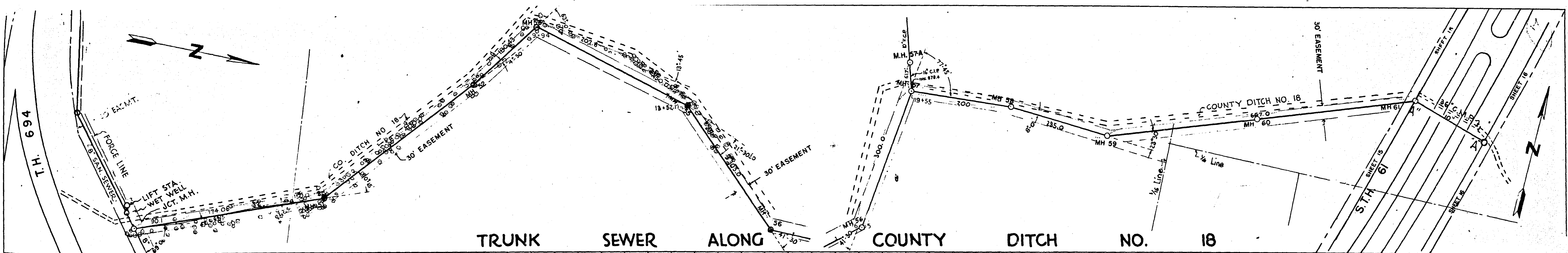
NOTE: CONTRACTOR SHALL EXCAVATE ALL UNDESIRABLE MATERIAL AS DIRECTED BY THE ENGINEER PRIOR TO DIKE INSTALLATION.



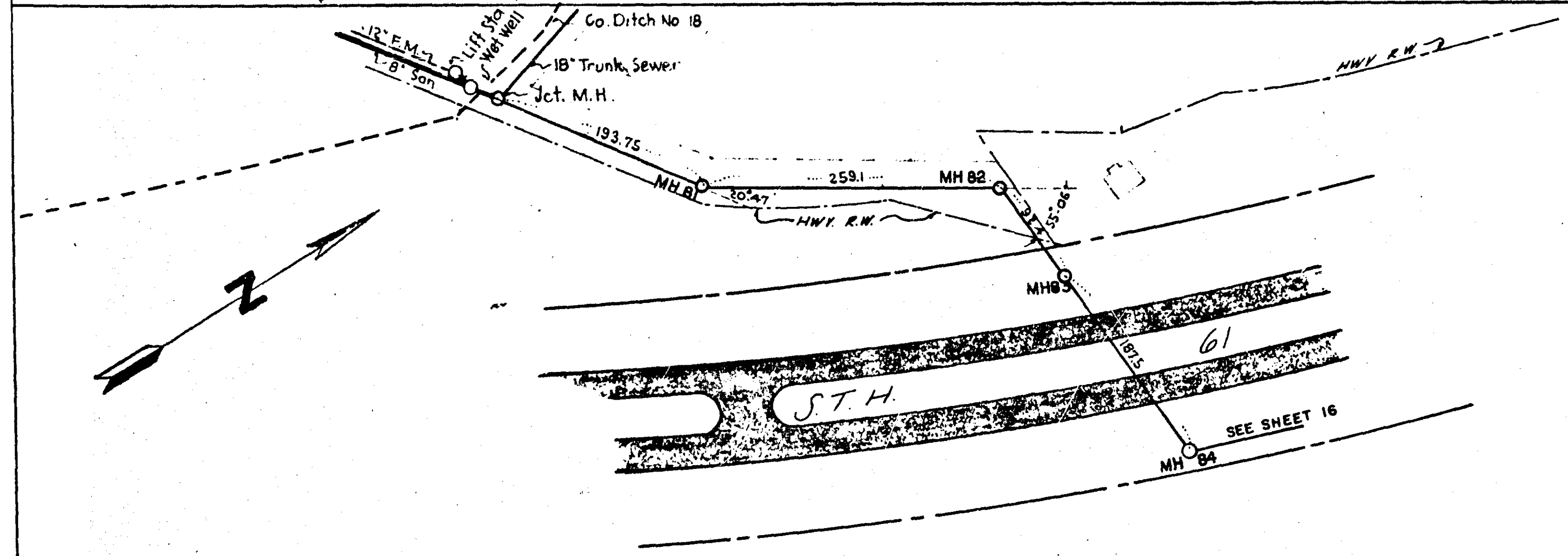
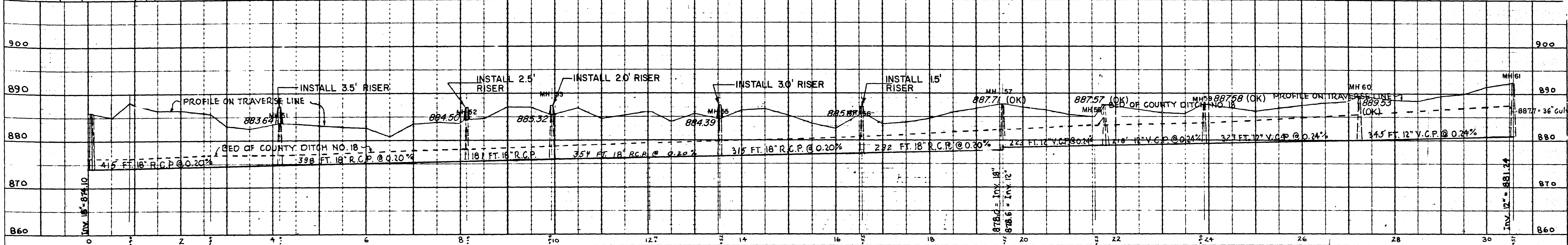
SCALE
1" = 5' VERT.
1" = 10' HORIZ.

Daniel H. Schmitt
11659 8-24-81

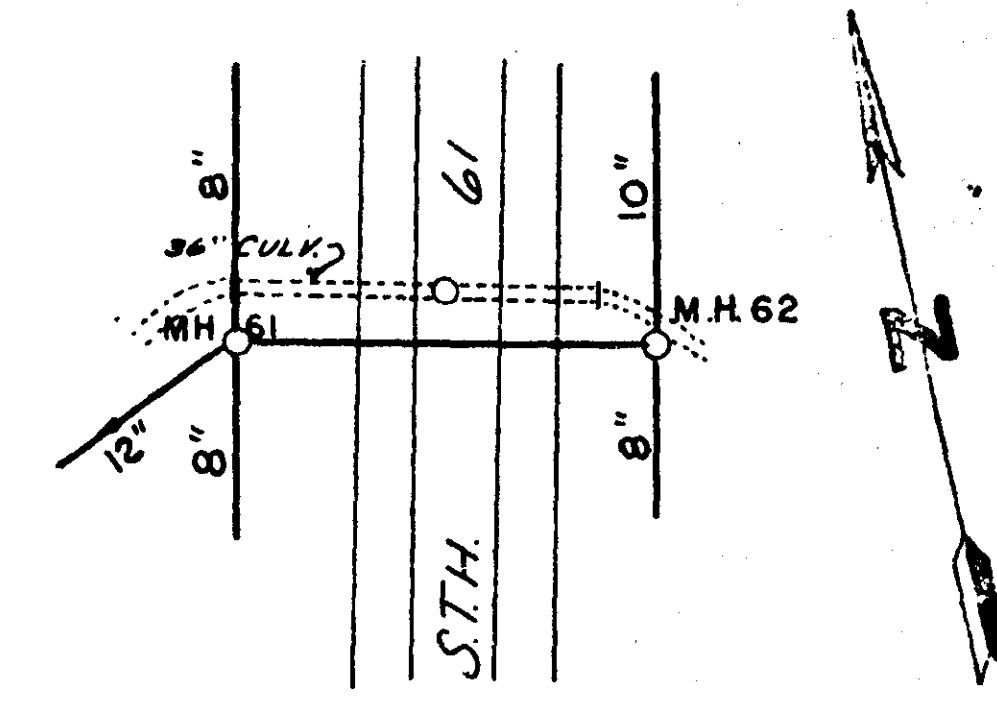
COPY EQUIPMENT FORM #1



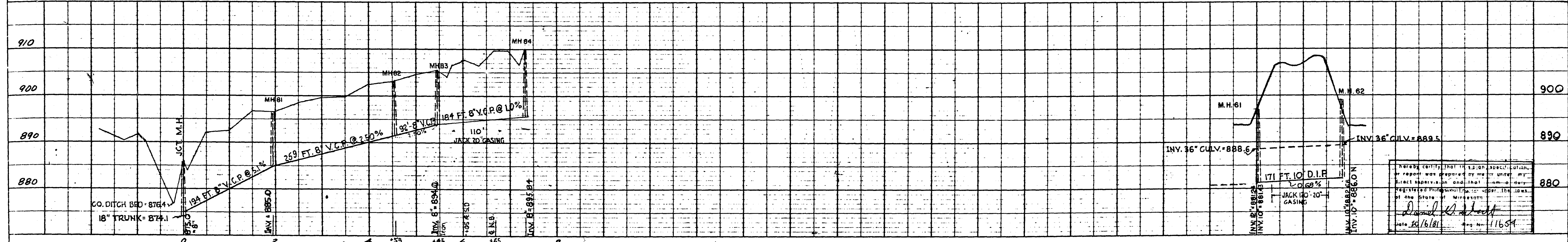
TRUNK SEWER ALONG COUNTY DITCH NO. 18



* SEE SANITARY SEWER MANHOLE RISER DETAIL ON SHEET 2 FOR SPECIFIC REQUIREMENTS



H.Y. XING A-A



HEREBY CERTIFY THAT THE DESIGN SPECIFICATION, REPORT AND DRAWINGS PREPARED BY ME IN UNDER MY PROFESSIONAL SEAL AND SIGNATURE ARE TRUE AND CORRECT AND THAT I AM A REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 Daniel R. ...
 10/16/81 ... 11654