

# RAMSEY COUNTY DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION PLAN FOR PUMP, ELECTRICAL SERVICE,  
AND AERATION CHUTE.

## SIVER LAKE EAST AERATION SYSTEM

CON. 47360

### INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	QUANTITIES, DETAILS
3-4	PLANS & PROFILES
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PROJECT LOCATION

### PLANS SYMBOLS

<p>STATE LINE COUNTY LINE TOWNSHIP OR RANGE LINE SECTION LINE QUARTER LINE SIXTEENTH LINE RIGHT OF WAY LINE PRESENT RIGHT OF WAY LINE CONTROL OF ACCESS LINE PROPERTY LINE (Except Land Lines) VACATED PLATTED PROPERTY CORPORATE OR CITY LIMITS TRUNK HIGHWAY CENTER LINE RETAINING WALL RAILROAD RAILROAD RIGHT OF WAY LINE RIVER OR CREEK DI - DUN DRAINAGE DITCH DRAIN TILE CULVERT DROP INLET GUARD RAIL BARBED WIRE FENCE WOVEN 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 SLOPE EASEMENT (CONST. LIMITS)</p>	<p>SPRINGS MARSH TIMBER ORCHARD BRUSH NURSERY CATCH BASIN FIRE HYDRANT CATTLE GUARD OVERPASS (Highway Over) UNDERPASS (Highway Under) BRIDGE BUILDING (One Story Frame) F FRAME C CONCRETE S STONE T TILE B BRICK ST STUCCO IRON PIPE OR ROD MONUMENT (STONE, CONCRETE, OR METAL) WOODEN MIB GRAVEL PIT SAND PIT BORROW PIT ROCK QUARRY</p>
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### UTILITIES SYMBOLS

<p>POWER POLE LINE TELEPHONE OR TELEGRAPH POLE LINE JOINT TELEPHONE AND POWER OR POWER POLES ON TELEPHONE POLES ANCHOR STEEL TOWER STREET LIGHT PNEUMATIC TELEPHONE CABLE TERMINAL GAS MAIN WATER MAIN</p>	<p>CONDUIT TELEPHONE CABLE IN CONDUIT ELECTRIC CABLE IN CONDUIT TELEPHONE MANHOLE ELECTRIC MANHOLE BURIED TELEPHONE CABLE BURIED ELECTRIC CABLE AERIAL TELEPHONE CABLE SEWER, (SANITARY OR STORM) SEWER MANHOLE</p>
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NOTE: SECTION NUMBERS ARE FROM THE SCL.

### PIT DATA

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

DESIGN SQUAD DES DATE 6/20/86  
 DRAWN BY [Signature] DATE 6/20/86  
 CHECKED BY [Signature] DATE 6/20/86

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 6/20/86 REG NO 16159 ENGR [Signature]

RECOMMENDED FOR APPROVAL DES DATE 6/23/86 RECOMMENDED FOR APPROVAL \_\_\_\_\_ COUNTY ENGINEER DATE \_\_\_\_\_  
 RECOMMENDED FOR APPROVAL [Signature] DATE 6/20/86 APPROVED \_\_\_\_\_ CHAIRMAN OF THE RAMSEY COUNTY BOARD DATE \_\_\_\_\_  
 RECOMMENDED FOR APPROVAL DES DATE 6/23/86 APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
 RECOMMENDED FOR APPROVAL RHP DATE 6-20-86 APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
 RECOMMENDED FOR APPROVAL [Signature] DATE 6-20-86  
 RECOMMENDED FOR APPROVAL [Signature] DATE 6-23-86  
 APPROVED [Signature] DATE 6-20-86

PLAN REVISIONS		
DATE	SHEET NO.	BY

THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

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 \*STATEMENT OF ESTIMATED QUANTITIES\*  
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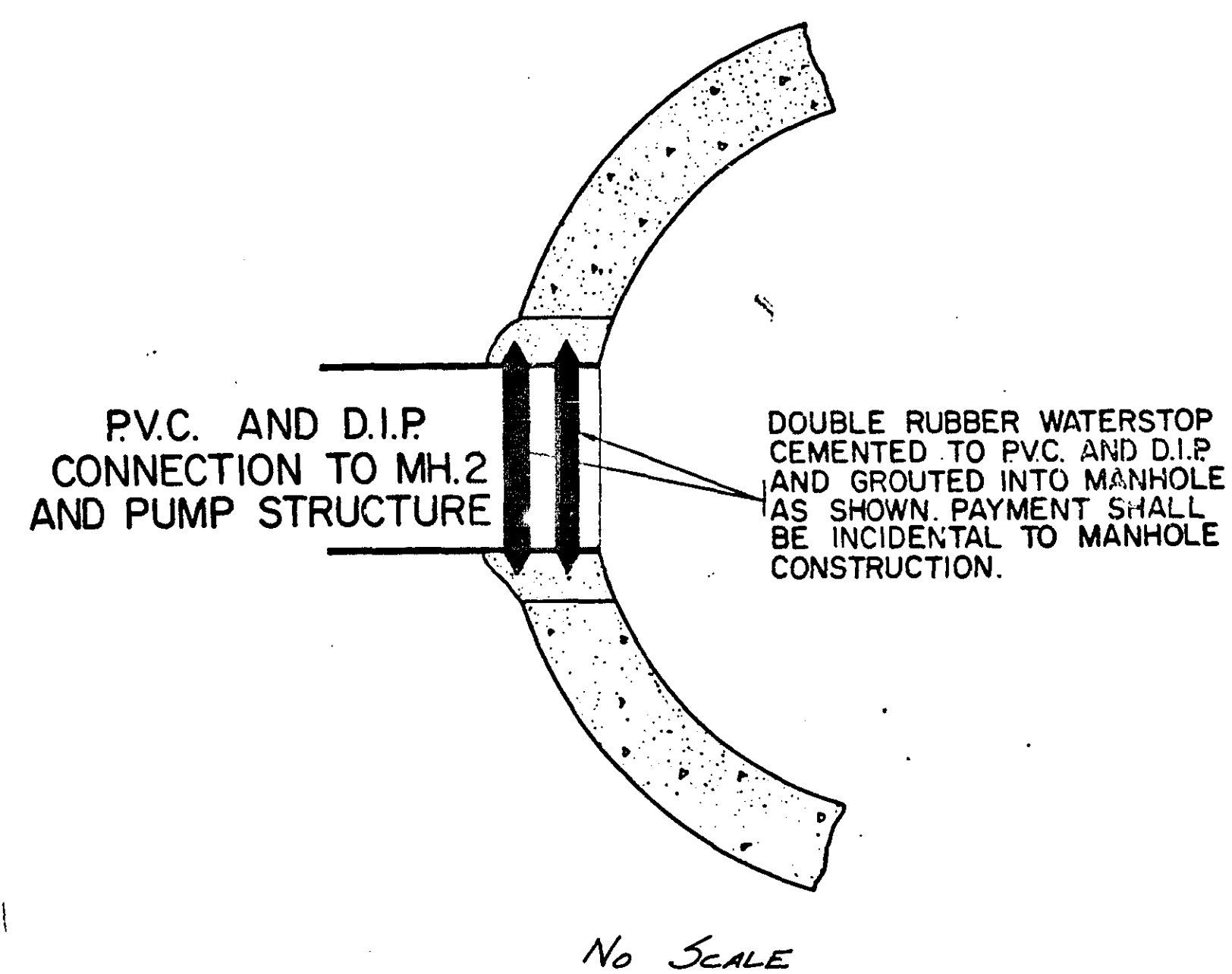
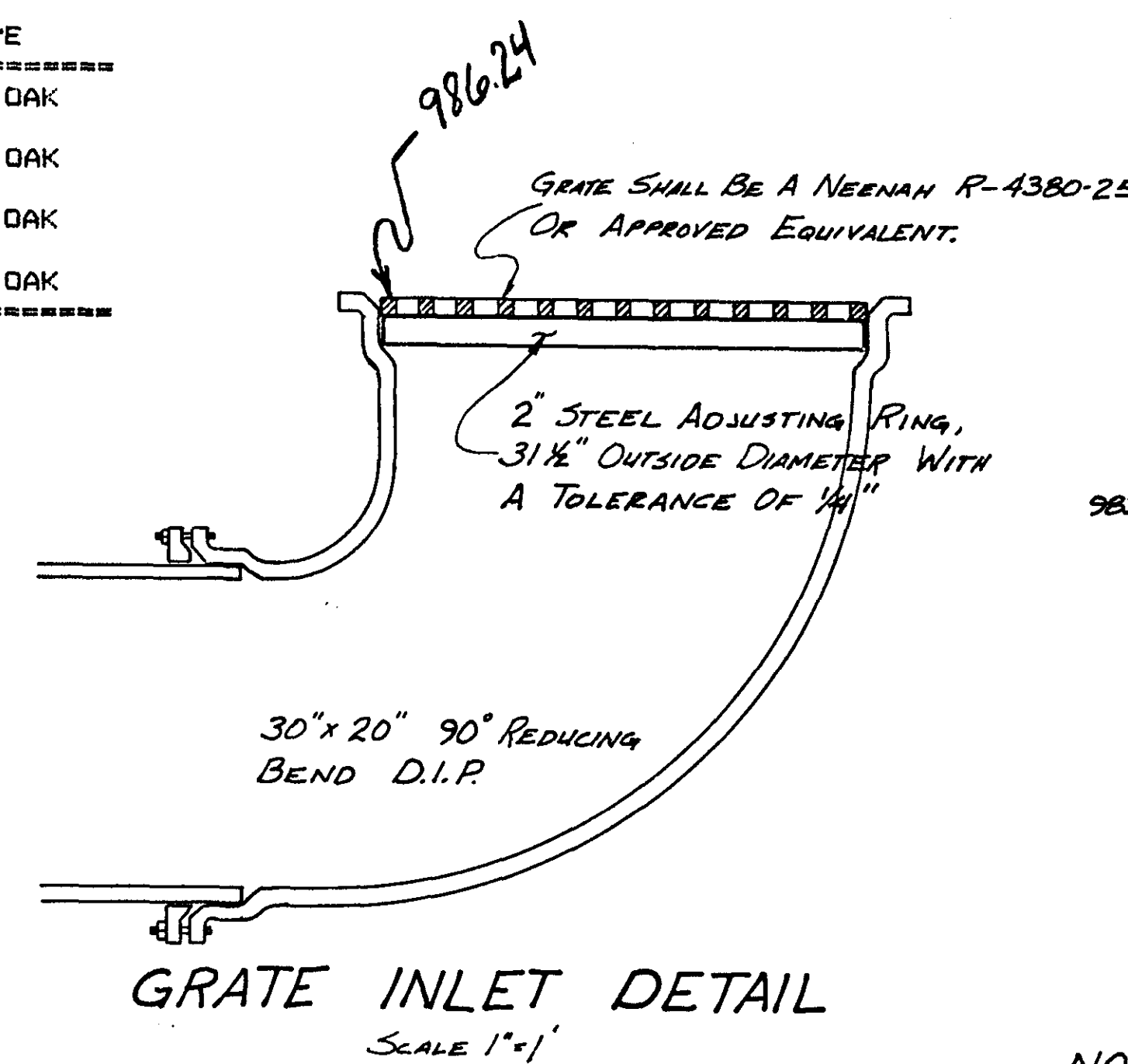
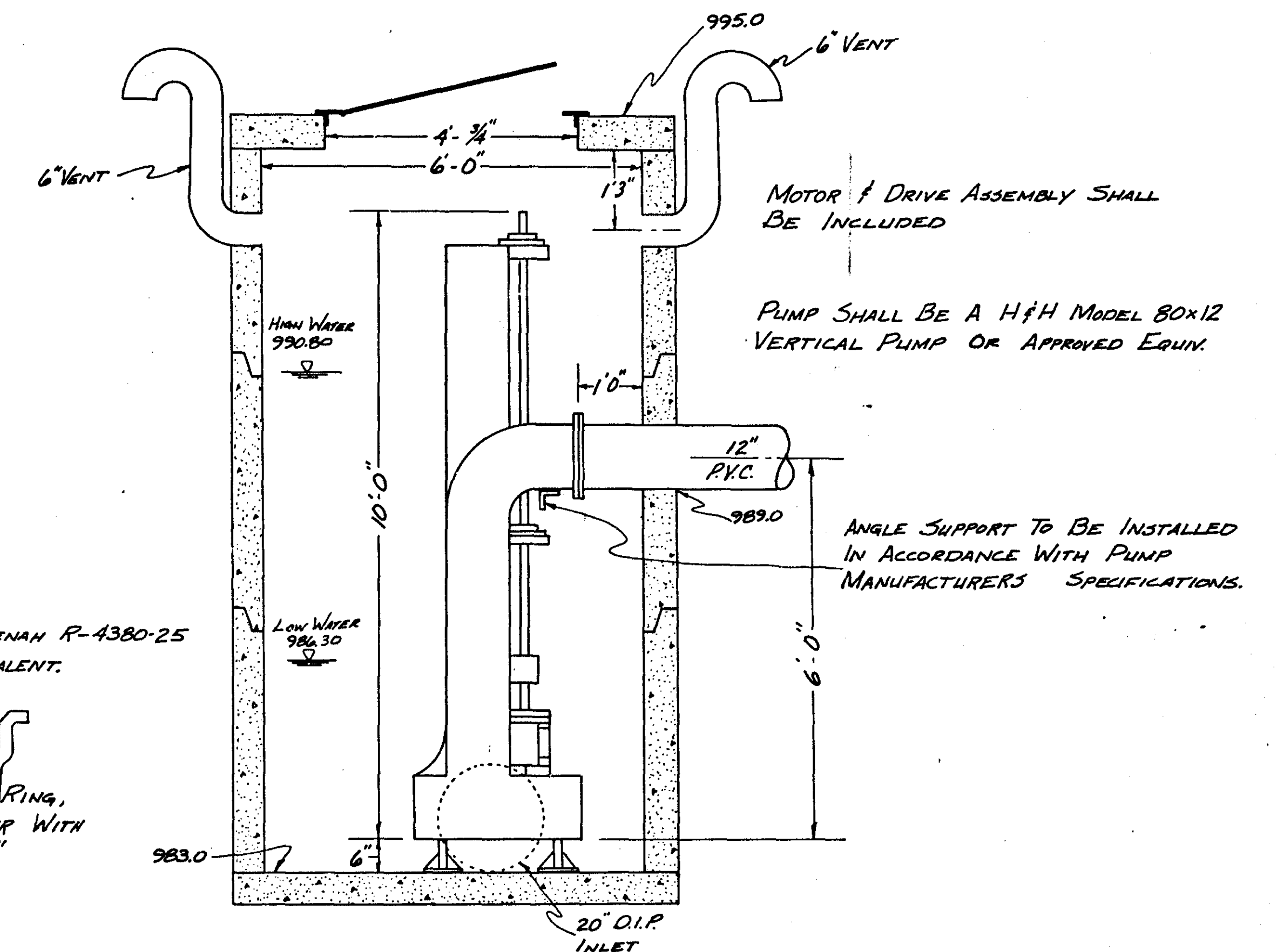
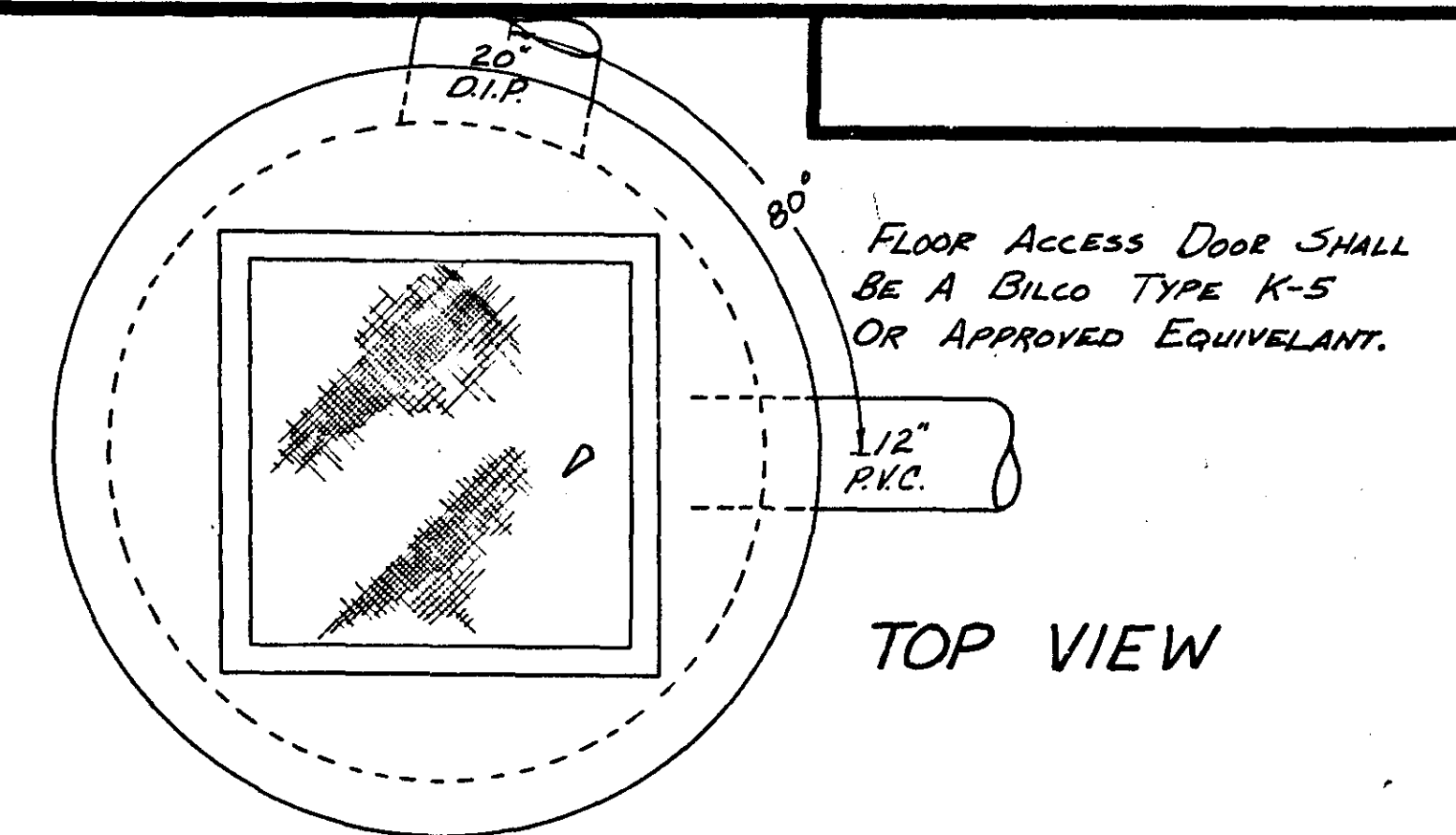
SPECIFICATION NUMBER	ITEM	UNIT	ESTIMATED QUANTITIES	FINAL QUANTITIES
2021.501	MOBILIZATION	L.S.	1	
2101.502	CLEARING	TREE	4	
2101.507	GRUBBING	TREE	4	
2105.523	COMMON BORROW (L.V.)	C.Y.	155	
2105.525	TOPSOIL BORROW (L.V.)	C.Y.	75	
2211.502	AGGREGATE BASE, CLASS 5A	C.Y.	25	
2501.515	15" R C PIPE APRON	EACH	1	
2503.511	15" R C PIPE CULVERT	L.F.	82	
0503.601	30" DIP INLET GRATE	L.S.	1	
0503.602	30" X 20" DIP 90 REDUCING BEND	EACH	1	
0503.602	12" X 45 PVC BEND	EACH	1	
0503.603	20" DUCTILE IRON PIPE, CLASS 50	L.F.	55	
0503.603	12" PVC PIPE	L.F.	260	
0504.602	AERATOR CHUTE	EACH	1	
0504.604	PUMP, MOTOR, AND CONTROLS	SYSTEM	1	
2506.508	PUMP MANHOLE	EACH	1	
2506.506	CONSTRUCT MANHOLES, DESIGN A OR F	L.F.	19.20	
2511.502	RANDOM RIPRAP, CLASS IV	C.Y.	7	
2511.511	GRANULAR FILTER	C.Y.	3.40	
2511.515	GEOTEXTILE FILTER, TYPE III	S.Y.	145	
2511.515	GEOTEXTILE FILTER, TYPE IV	S.Y.	7	
0545.604	ELECTRIC SERVICE	SYSTEM	1	
2575.501	SEEDING	ACRE	0.20	
2575.502	SEED MIXTURE, TYPE 5	POUND	10	
2575.511	MULCH MATERIAL, TYPE I	TON	0.40	

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 \* STANDARD DETAIL PLATES \*  
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PLATE NO.	DESCRIPTION
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 K	REINFORCED CONCRETE PIPE
3006 E	GASKET JOINT FOR R.C.P.I.P.E
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133 B	RIPRAP AT RCP GUILLETS
3145 E	CONCRETE PIPE TIES
4005 K	MANHOLE OR CATCH BASIN
4180 H	MANHOLE OR CATCH BASIN STEP

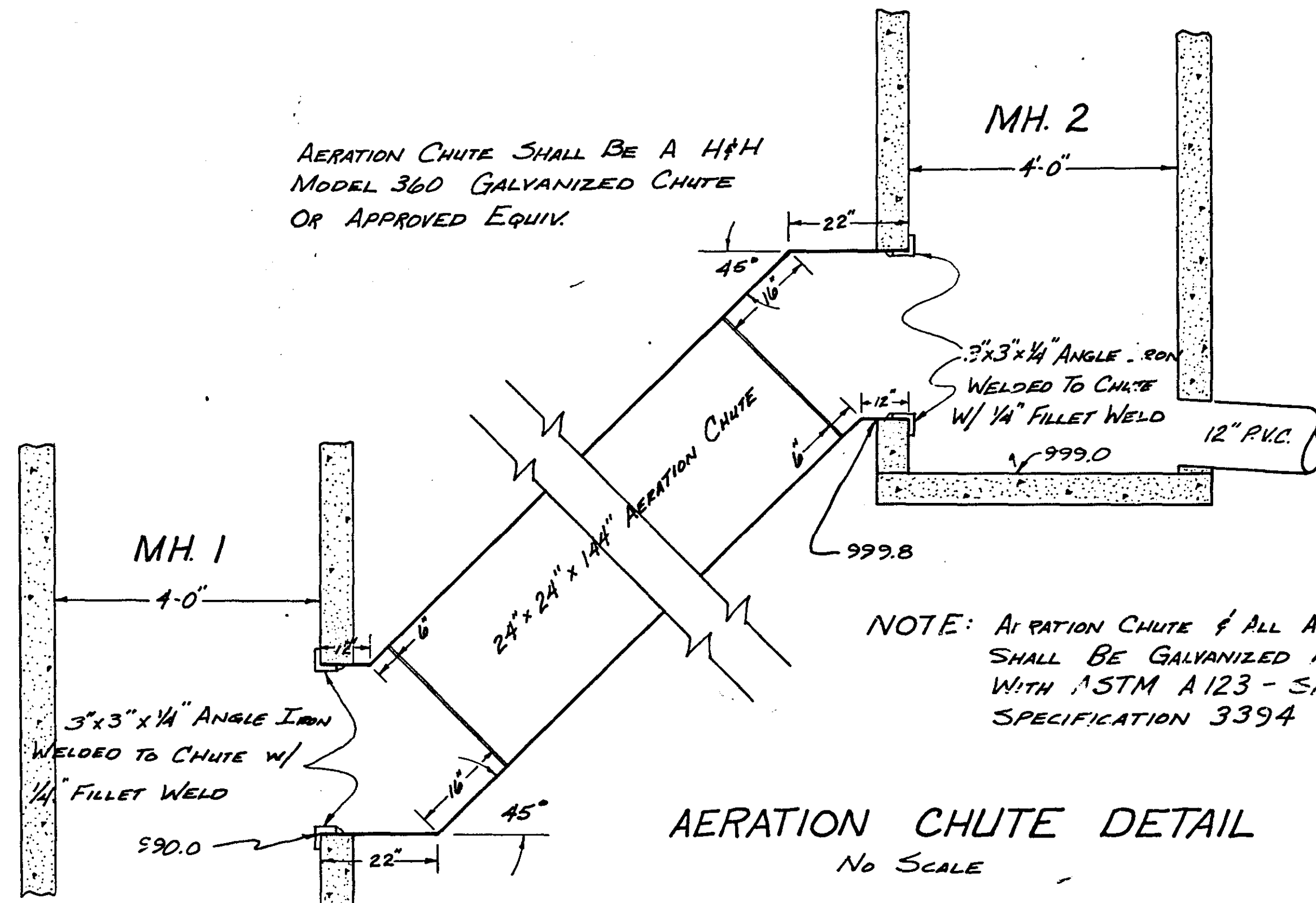
\*\*\*\*\*  
 CLEAR AND GRUBB CHART  
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STATION	TYPE
3+54	10' LT. 8" OAK
3+45	9' LT. 8" OAK
3+33	10' LT. 5" OAK
5+80	26' LT. 8" OAK

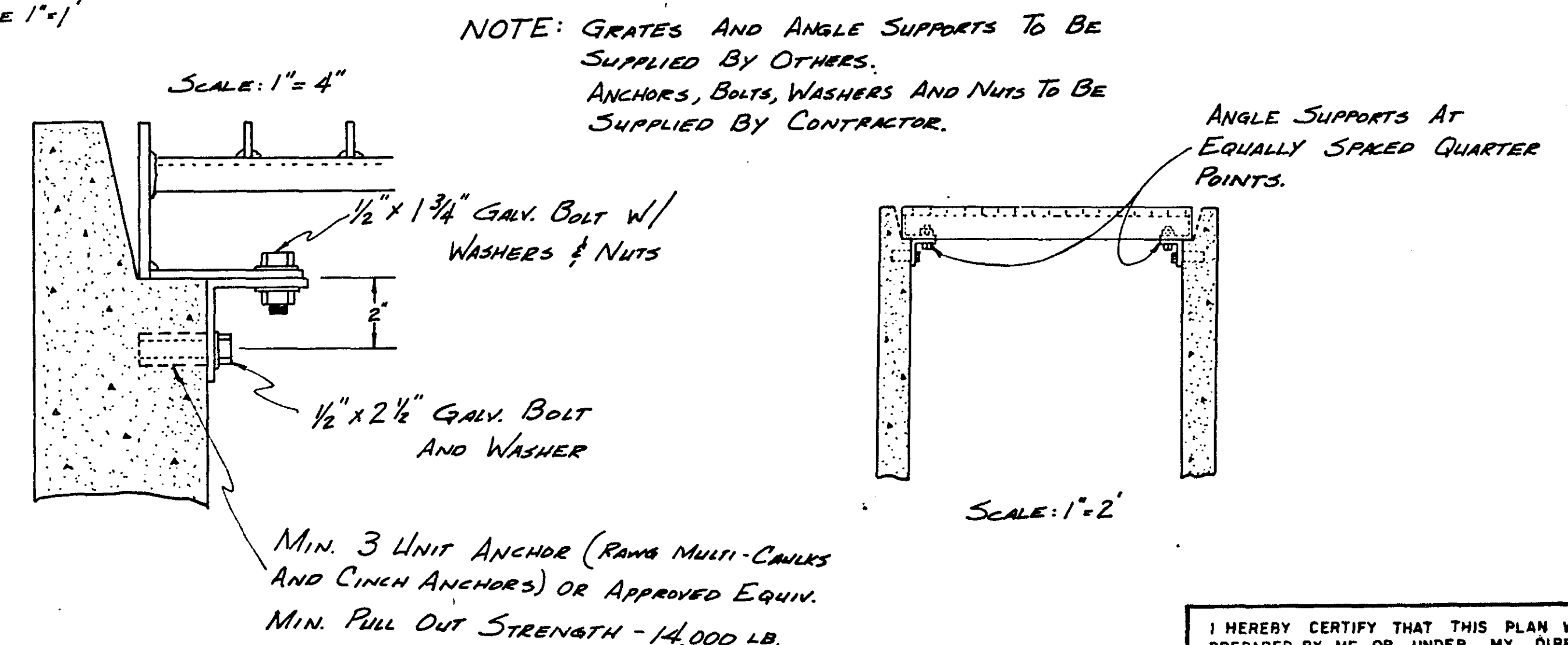


NOTE: MANHOLE CUTOUT SURFACES SHALL BE TREATED WITH NEAT CEMENT PRIOR TO GROUTING IN APPURTENANCES.

AERATION CHUTE SHALL BE A H&H MODEL 360 GALVANIZED CHUTE OR APPROVED EQUIV.



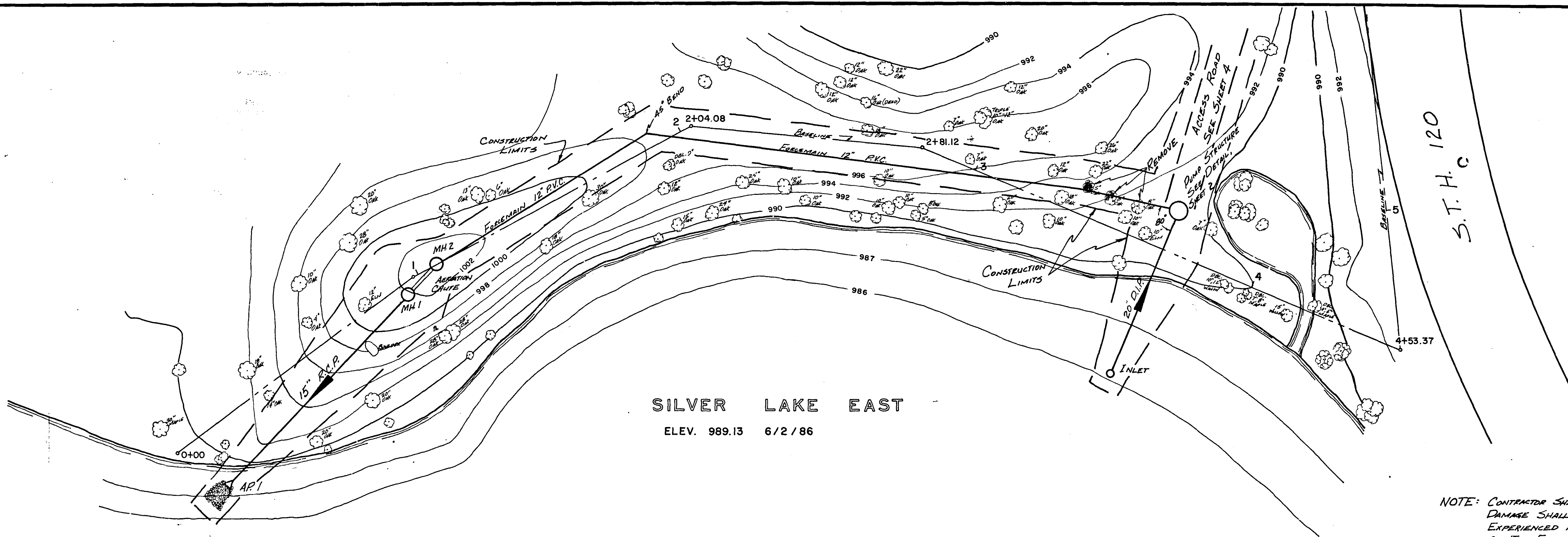
NOTE: AERATION CHUTE & ALL APPURTENANCES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 - SEE MDOT SPECIFICATION 3394



GRATE ANCHOR DETAIL

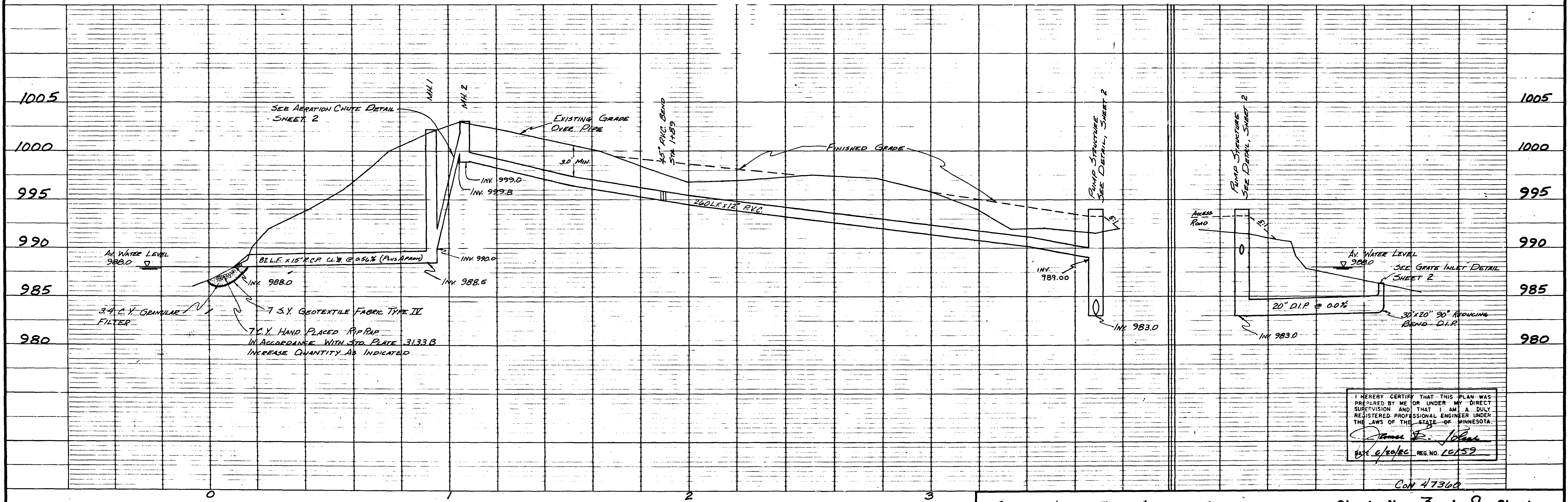
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 \_\_\_\_\_  
 (DATE 6/30/00 REG. NO. 16153)





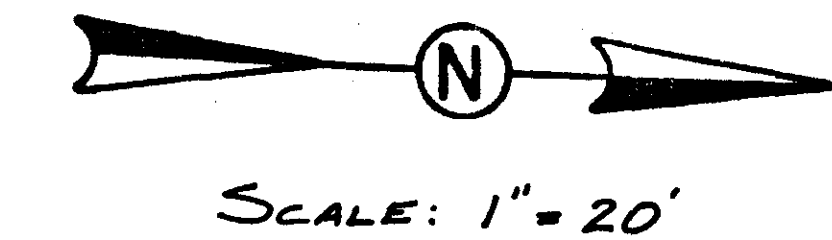
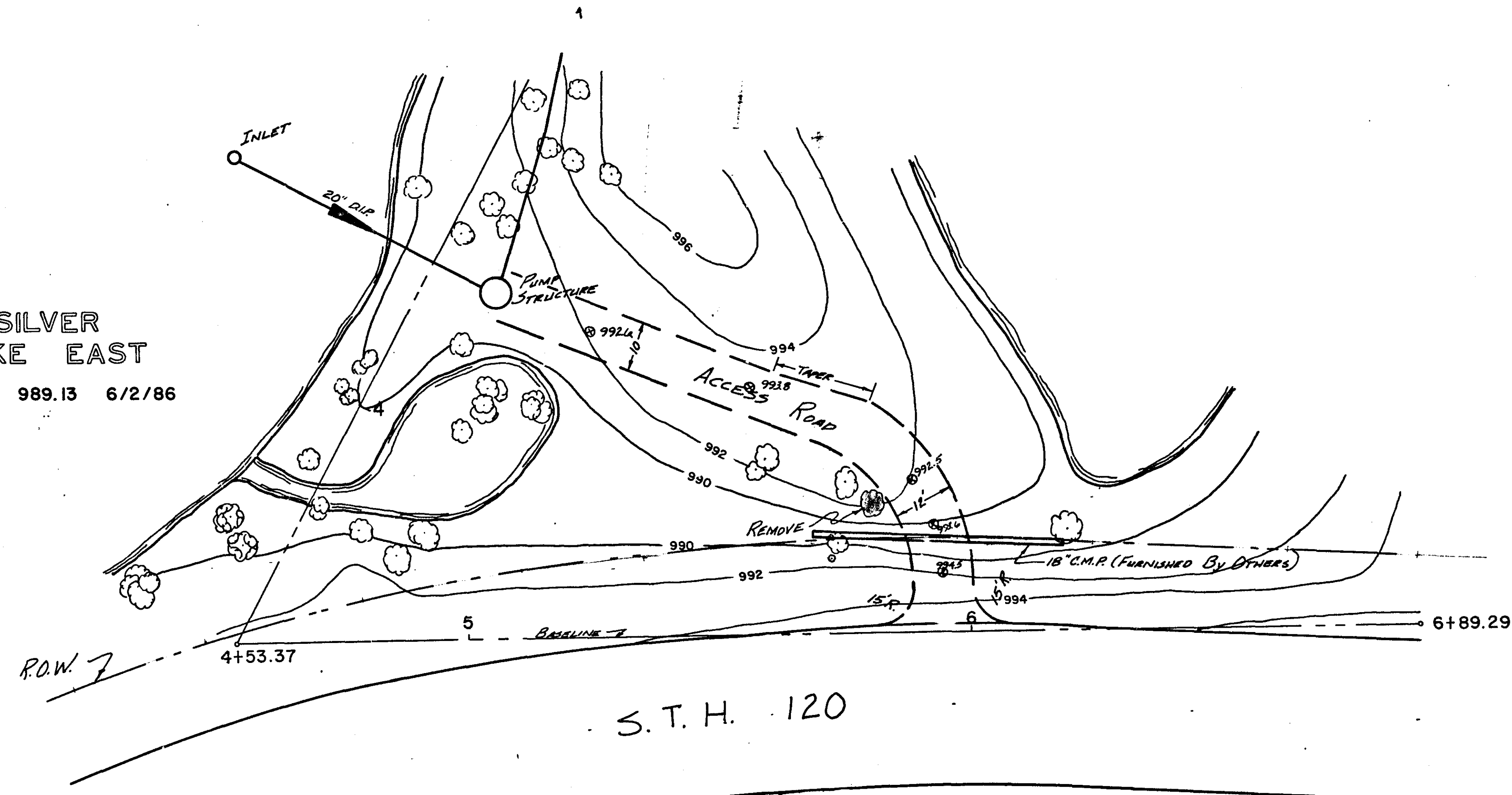
SILVER LAKE EAST  
ELEV. 989.13 6/2/86

NOTE: CONTRACTOR SHALL SAFEGUARD EXISTING TREES. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY BY AN EXPERIENCED ARBORIST OR TO THE SATISFACTION OF THE ENGINEER. SHOULD DAMAGE REQUIRE SUBSEQUENT REMOVAL, REPLACEMENT WITH A TREE OF EQUAL VALUE UP TO \$250.00 SHALL BE PROVIDED PRIOR TO FINAL PAYMENT.

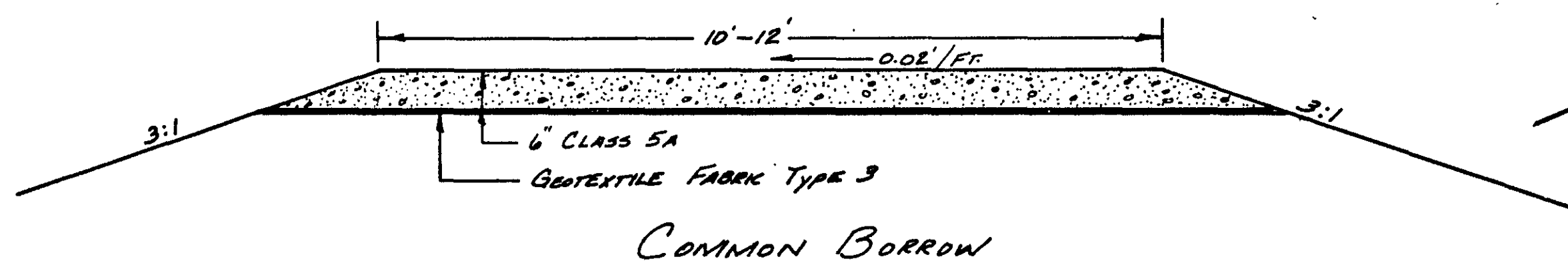


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*James E. Johnson*  
 DATE 6/20/86 REG. NO. 10152

SILVER  
LAKE EAST  
ELEV. 989.13 6/2/86



TYPICAL SECTION  
ACCESS ROAD  
SCALE 1"=2'



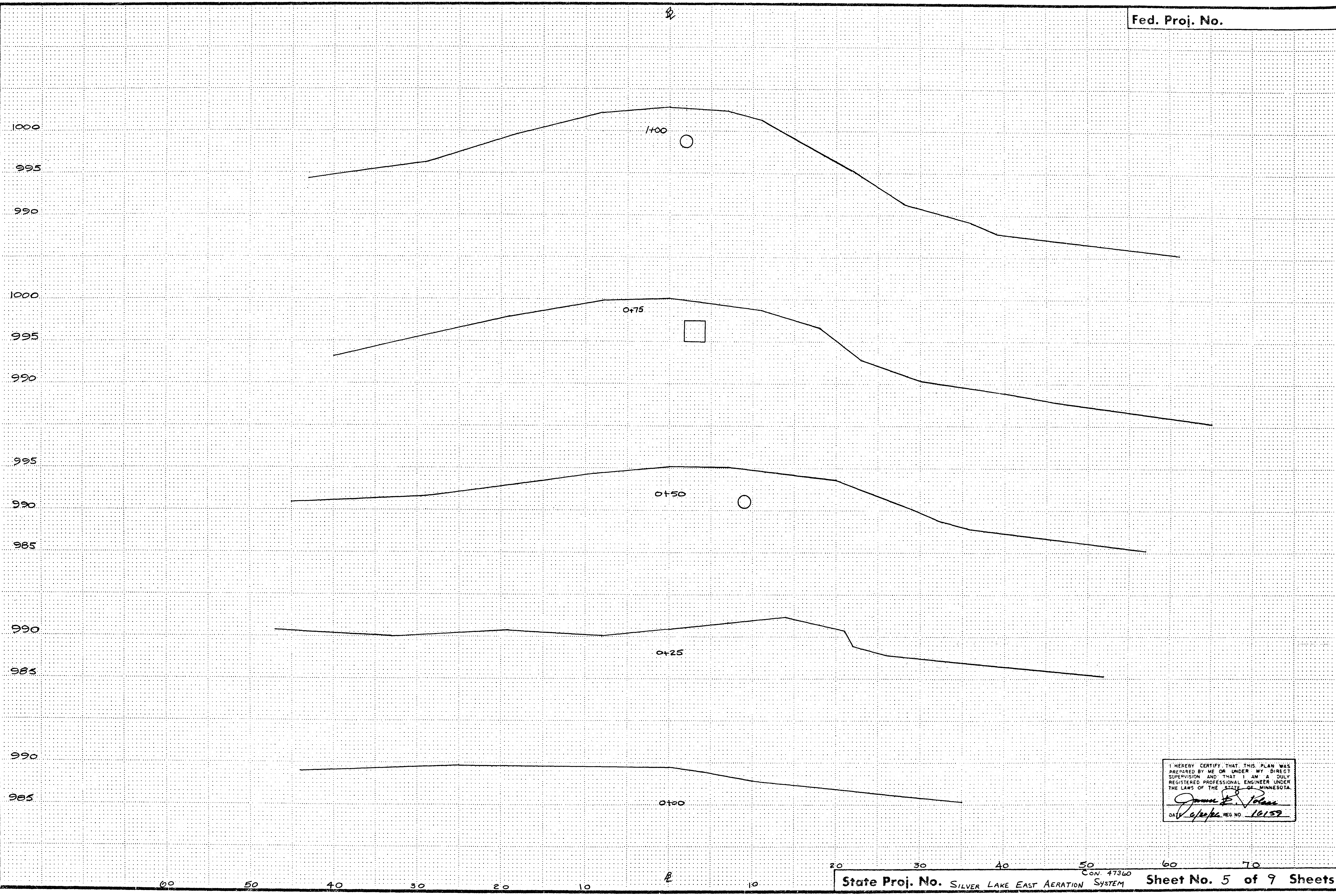
NOTE: EXACT LOCATION OF ACCESS ROAD SHALL BE DETERMINED IN THE FIELD BY ENGINEER.

Ⓢ PROPOSED SPOT ELEVATIONS

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.  
*James E. Olson*  
 DATE 6/20/86 REG. NO. 16159

CON 47300



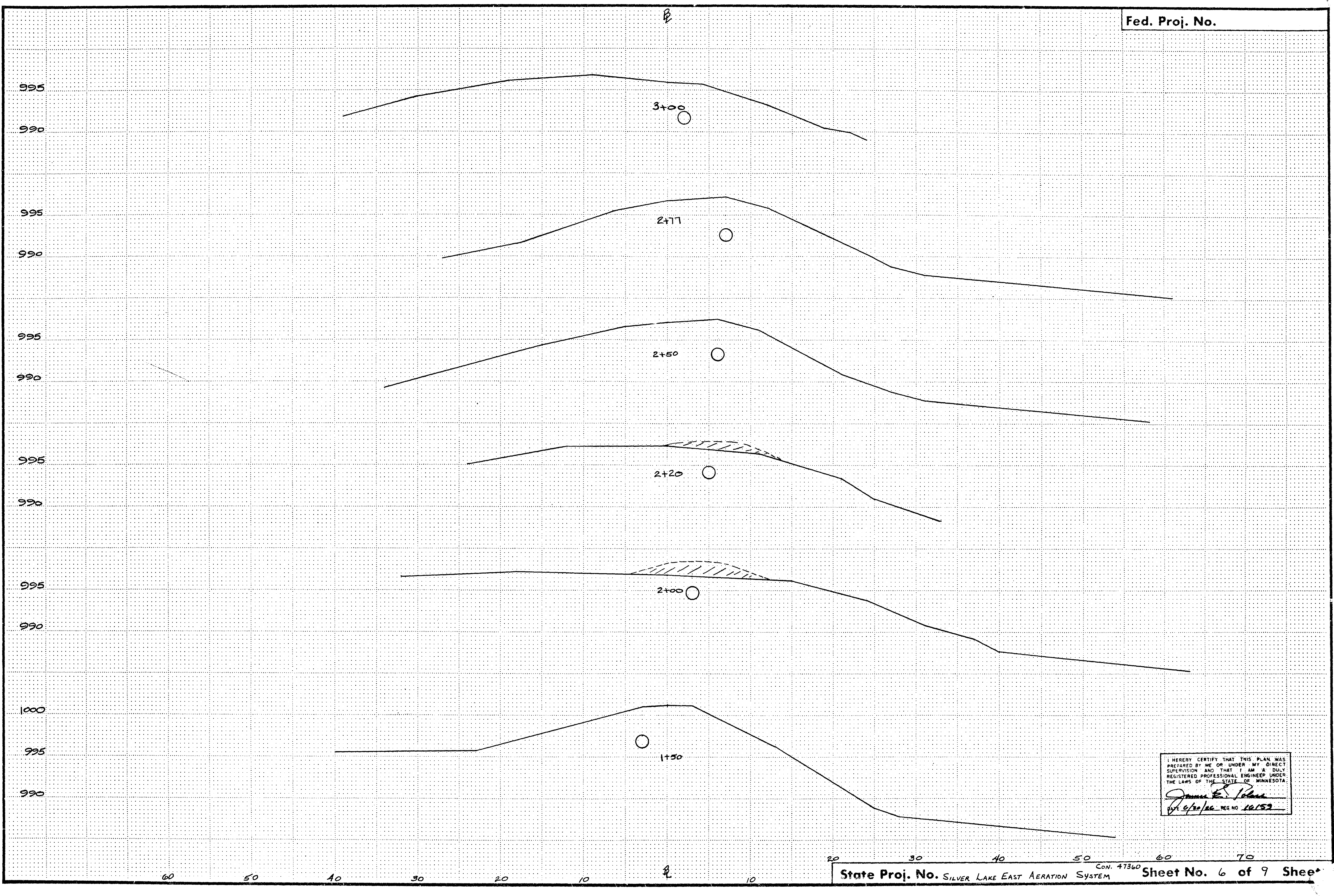


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*James E. P. Ross*  
 DATE 6/20/62 REG NO. 16159

COPY EQUIPMENT FORM # 3389

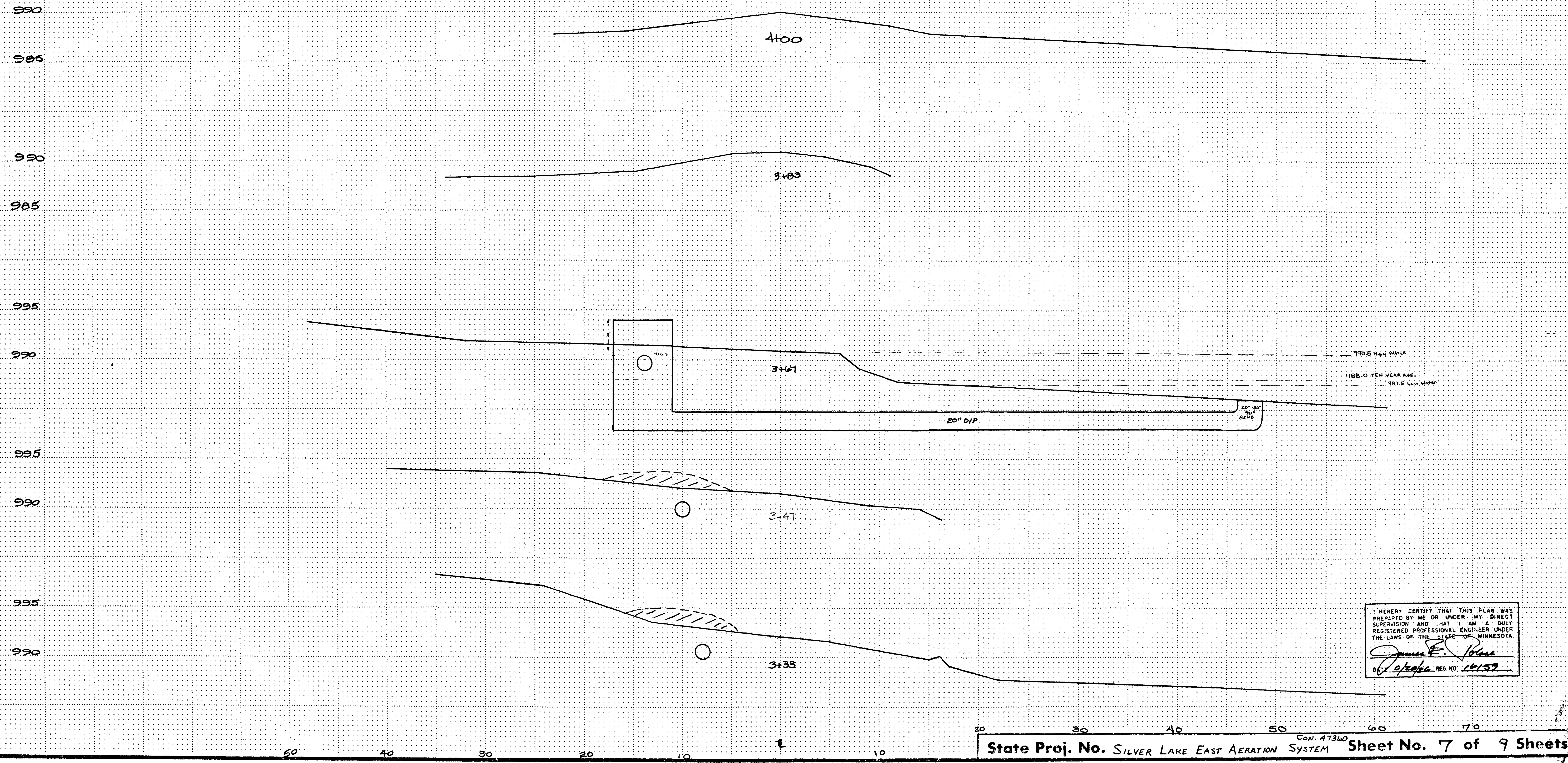




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*James E. Plass*  
 DATE 6/20/66 REG NO 10159



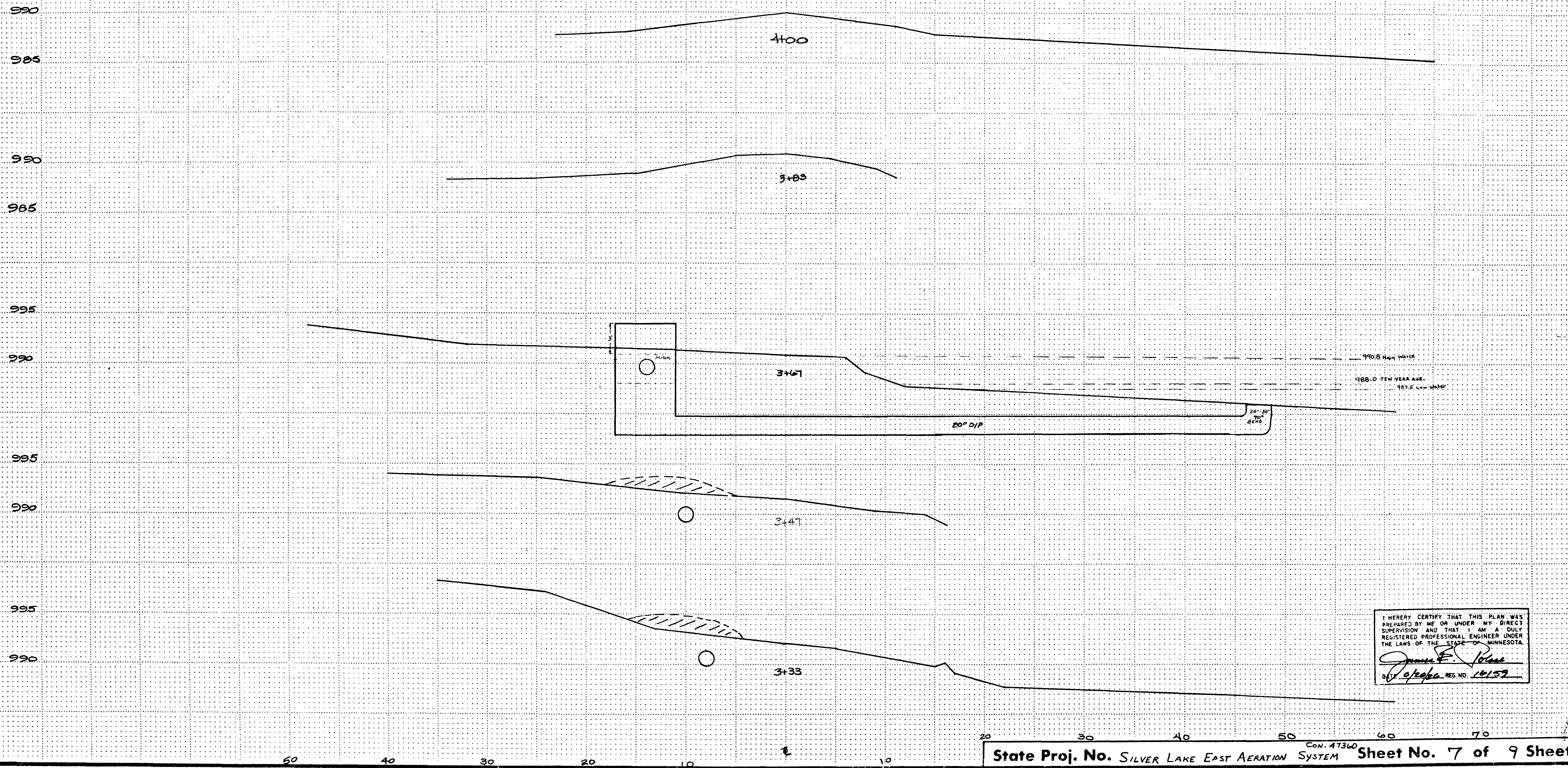


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*James E. Polase*  
 DATE 6/20/60 REG. NO. 14152

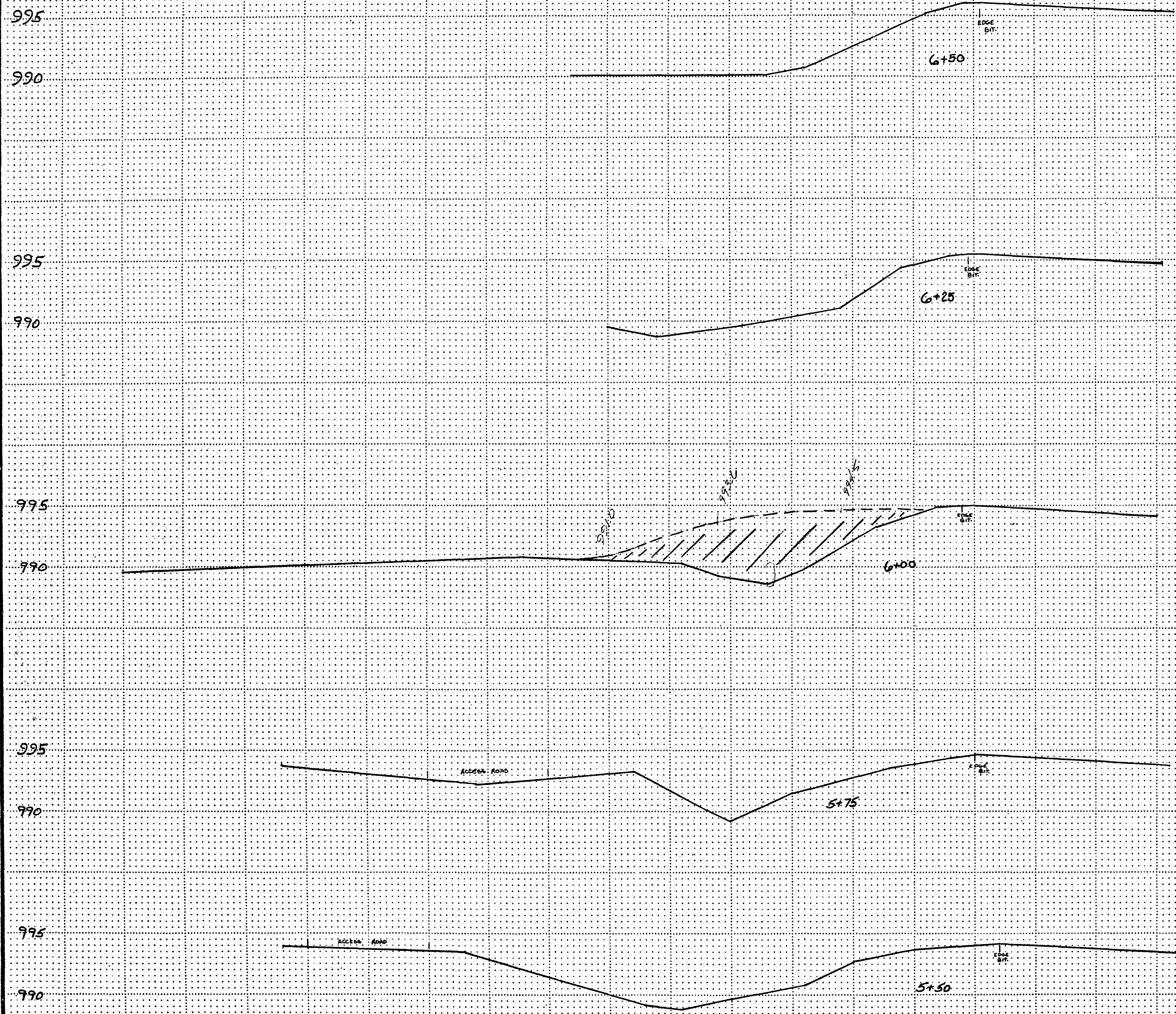
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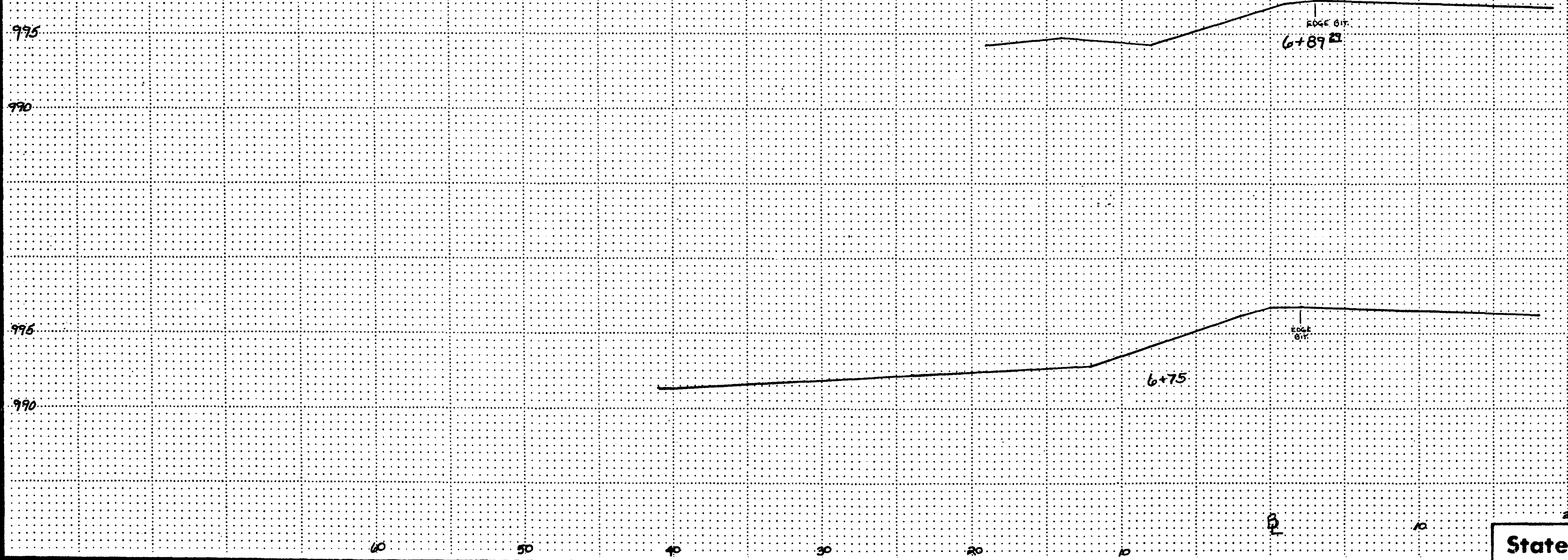


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*James E. [Signature]*  
 10/20/52 REG. NO. 10152

COPY EQUIPMENT FORM BY 17885





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.  
*James A. Olson*  
DATE 6/20/62 REG NO 10159