

MINN. PROJ. NO. _____
 MINN. PROJ. NO. _____

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

CONSTRUCTION PLAN FOR GRADING, DRAINAGE, AGGREGATE BASE, BITUMINOUS SURFACING, CONC. C & G, SAN. SEW., WATERMAIN

LOCATED ON I05TH AVE. N.E. (C.R. 87) BETWEEN T.H. 65 AND RADISSON ROAD (C.R. 52) (Geographic Description)
 FROM TO (Legal Description)

COUNTY PROJECT NO. 88-22-87
 STATE AID PROJ. NO. STATE AID PROJ. NO.

GROSS LENGTH	5150 FEET	0.975 MILES	GROSS LENGTH	FEET	MILES
BRIDGES-LENGTH	0 FEET	0 MILES	BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	0 FEET	0 MILES	EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	5150 FEET	0.975 MILES	NET LENGTH	FEET	MILES

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO.	TITLE
1	TITLE
2-3	TRAFFIC CONTROL PLAN
4	ESTIMATED QUANTITIES AND DETAILS
5	DRAINAGE TABULATIONS AND DETAILS
6	TYPICAL SECTIONS
7-11	PLAN AND PROFILE
12	INTERSECTION PLAN
13-16	DRAINAGE PLAN
17	SANITARY SEWER AND WATERMAIN
18-19	SIGNALING AND MARKING PLAN
20-21	SIGNAL PLAN
22	TRAFFIC SIGNAL DETAILS
23-43	CROSS SECTIONS

THIS PLAN CONTAINS 43 SHEETS

DESIGN DESIGNATION

ΣN1820 662,000
 R-Value 70
 ADT (1990) = 4800
 Proj. ADT (2010) = 8600
 Soil Factor () = 340
 Soil Factor 10 Ton Design
 Shoulder Width NONE

Design Speed 50 MPH
 Based on STOPPING Sight Distance
 Height of eye 3.5' Height of object 0.5'
 Design Speed not achieved at:
 STA. TO STA. MPH
 STA. TO STA. MPH
 STA. TO STA. MPH

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 Aug 1, 1988 REG. NO. 9092 ENGR. *Harold Olson* CONSULTANT
 Recommended for Approval 19
 PAUL K. RUOD, ANOKA CO. ENGINEER, REG. NO. 6549
 Recommended for Approval 19
 JON G. OLSON, ASSIST. CO. ENGINEER-CONST., REG. NO. 12183
 Recommended for Approval 19
 WILLIAM A. SIRONEN, ASSIST. CO. ENGR.-ADM., REG. NO. 14738
 Recommended for Approval 19
 DISTRICT STATE AID ENGINEER
 Recommended for Approval 19
 STATE AID PLANS AND SPECS ENGINEER
 Approved 19
 STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 APPROVED _____
 DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO. _____ CO. PROJ. NO. 88-22-871
 STATE PROJ. NO. _____ SHEET NO. 1 OF 43 SHEETS

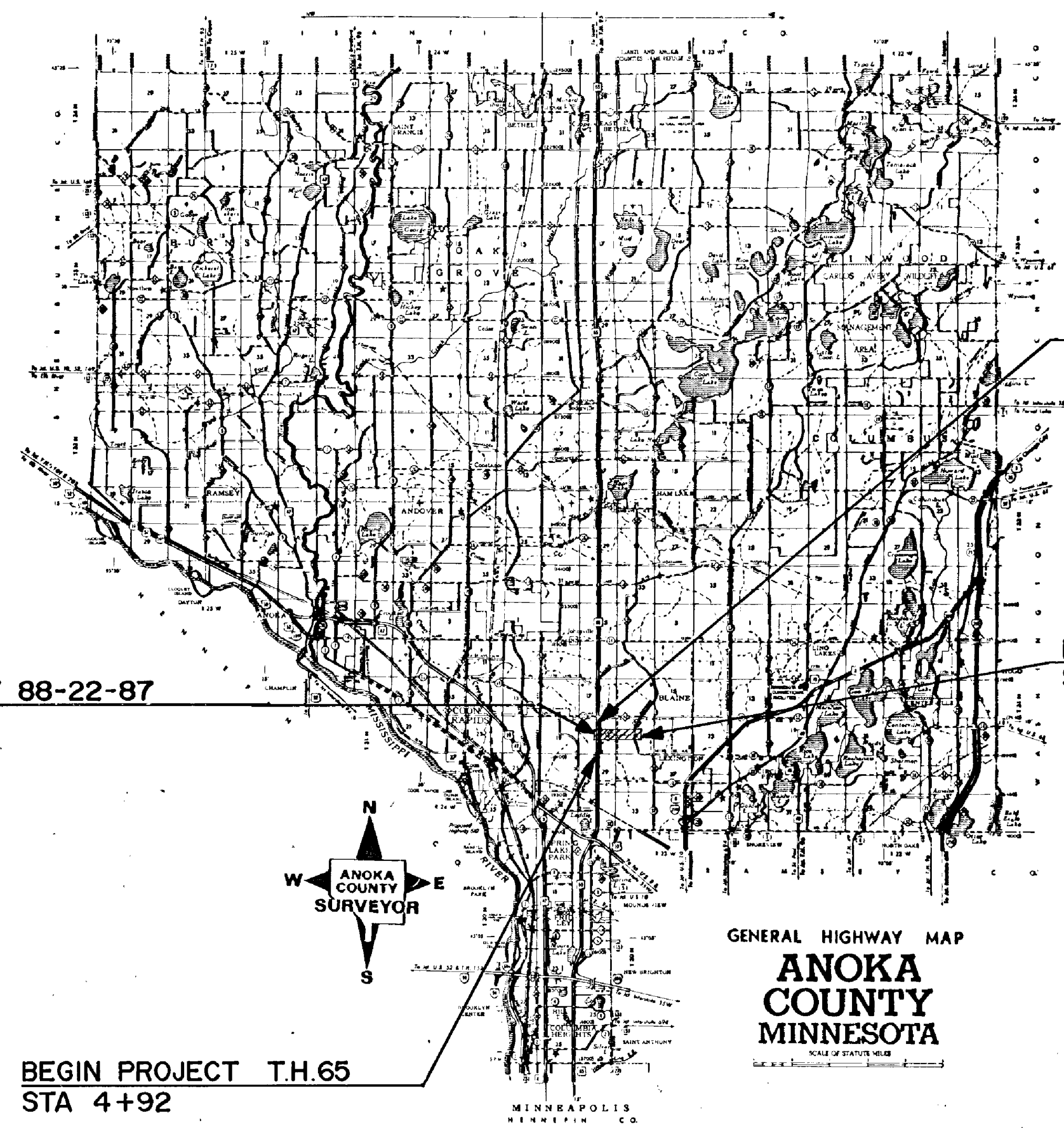
PLANS SYMBOLS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- SLOPE EASEMENT
- PRESENT RIGHT OF WAY LINE
- CONTROL OF ACCESS LINE
- PROPERTY LINE (Exclpt Land Lines)
- VACATED PLATTED PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY LINE
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- DRAIN TILE
- COVERLET
- GRASS PILE
- GRAVEL PILE
- BAHOLD 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
- MEANWER CORNER
- SPRINKLER
- MARSH
- TANGLER
- ORCHARD
- WILDRUSH
- MURKLEY
- CATCH BASIN
- FIRE HYDRANT
- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- DIXIE
- BUILDING (One Story Frame)
- P - FRAME C - CONCRETE
- S - STONE T - TILE
- B - BRICK ST - STUCCO
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN PILE
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY

UTILITIES SYMBOLS

- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE AND POWER ON POWER POLES
- ON TELEPHONE POLES
- ANCHOR
- STEEL TOWER
- STREET LIGHT
- PEDESTAL (TELEPHONE CABLE TERMINAL)
- GAS MAIN
- WATER MAIN
- 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

BEGIN PROJECT 88-22-87
 STA. 10+12

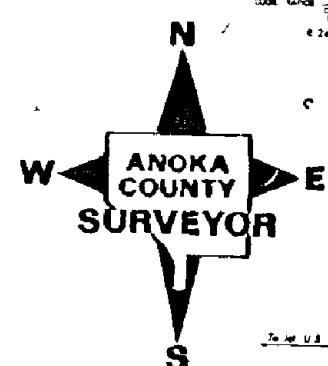


END PROJECT T.H. 65
 STA 19+65

END PROJECT 88-22-87
 STA 61+62

BEGIN PROJECT T.H. 65
 STA 4+92

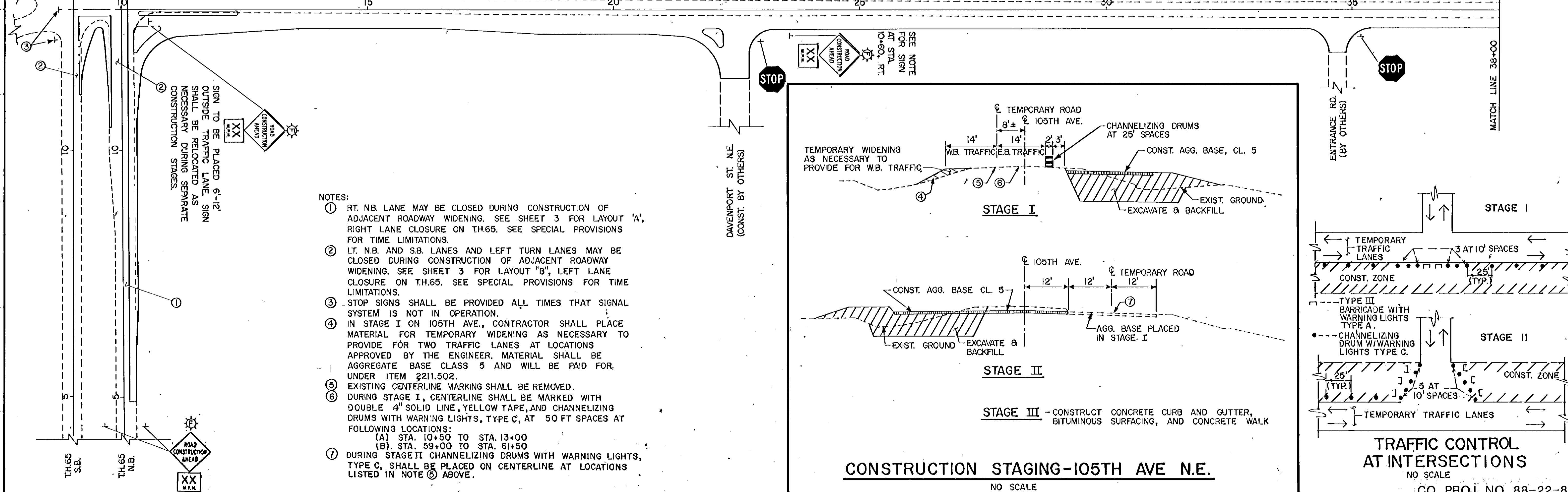
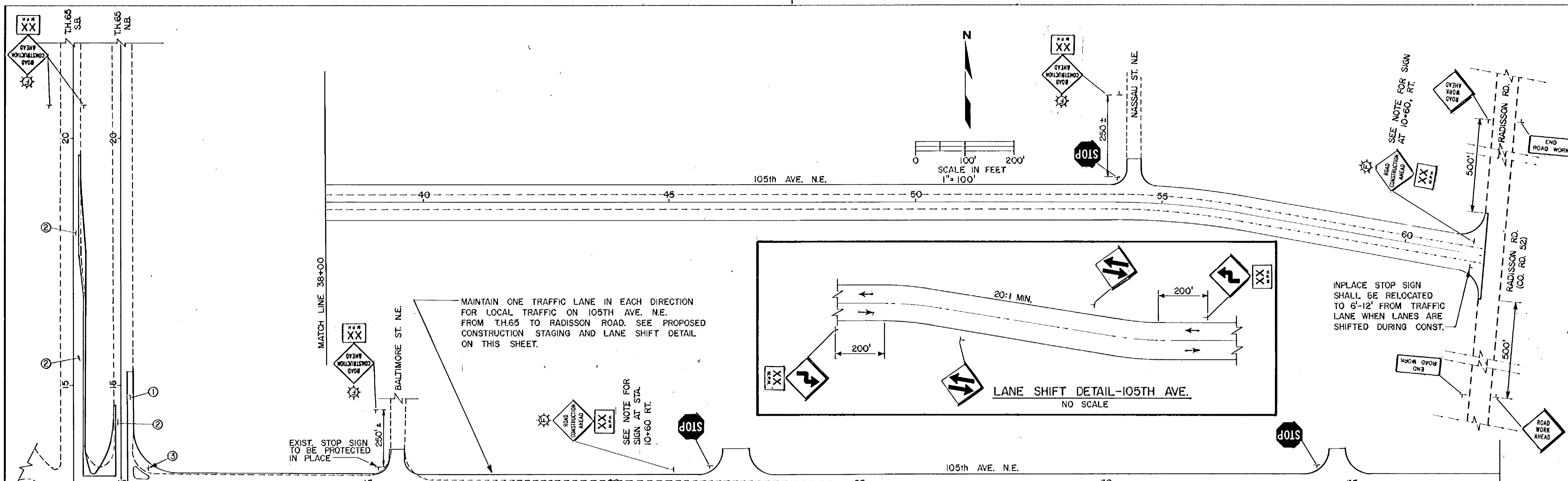
GENERAL HIGHWAY MAP
 ANOKA COUNTY
 MINNESOTA



SCALES

PLAN 50'
 PROFILE HORIZ. 50' VERT. 5'
 INDEX MAP 2.7 MILES
 GENERAL LAYOUT

TITLE SHEET w/mmp Order Form 432 REV. 2-88



- NOTES:
- RT. NB. LANE MAY BE CLOSED DURING CONSTRUCTION OF ADJACENT ROADWAY WIDENING. SEE SHEET 3 FOR LAYOUT "A", RIGHT LANE CLOSURE ON T.H.65. SEE SPECIAL PROVISIONS FOR TIME LIMITATIONS.
 - LT. N.B. AND S.B. LANES AND LEFT TURN LANES MAY BE CLOSED DURING CONSTRUCTION OF ADJACENT ROADWAY WIDENING. SEE SHEET 3 FOR LAYOUT "B", LEFT LANE CLOSURE ON T.H.65. SEE SPECIAL PROVISIONS FOR TIME LIMITATIONS.
 - STOP SIGNS SHALL BE PROVIDED ALL TIMES THAT SIGNAL SYSTEM IS NOT IN OPERATION.
 - IN STAGE I ON 105TH AVE., CONTRACTOR SHALL PLACE MATERIAL FOR TEMPORARY WIDENING AS NECESSARY TO PROVIDE FOR TWO TRAFFIC LANES AT LOCATIONS APPROVED BY THE ENGINEER. MATERIAL SHALL BE AGGREGATE BASE CLASS 5 AND WILL BE PAID FOR UNDER ITEM 2211.502.
 - EXISTING CENTERLINE MARKING SHALL BE REMOVED.
 - DURING STAGE I, CENTERLINE SHALL BE MARKED WITH DOUBLE 4" SOLID LINE, YELLOW TAPE, AND CHANNELIZING DRUMS WITH WARNING LIGHTS, TYPE C, AT 50 FT SPACES AT FOLLOWING LOCATIONS:
 (A) STA. 10+50 TO STA. 13+00
 (B) STA. 59+00 TO STA. 61+50
 - DURING STAGE II CHANNELIZING DRUMS WITH WARNING LIGHTS, TYPE C, SHALL BE PLACED ON CENTERLINE AT LOCATIONS LISTED IN NOTE 6 ABOVE.

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RDC JEC

CHECKED
RCL

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

Ralph D. Clark

DATE 8-1-87 REG. NO. 4860

T&K&DA

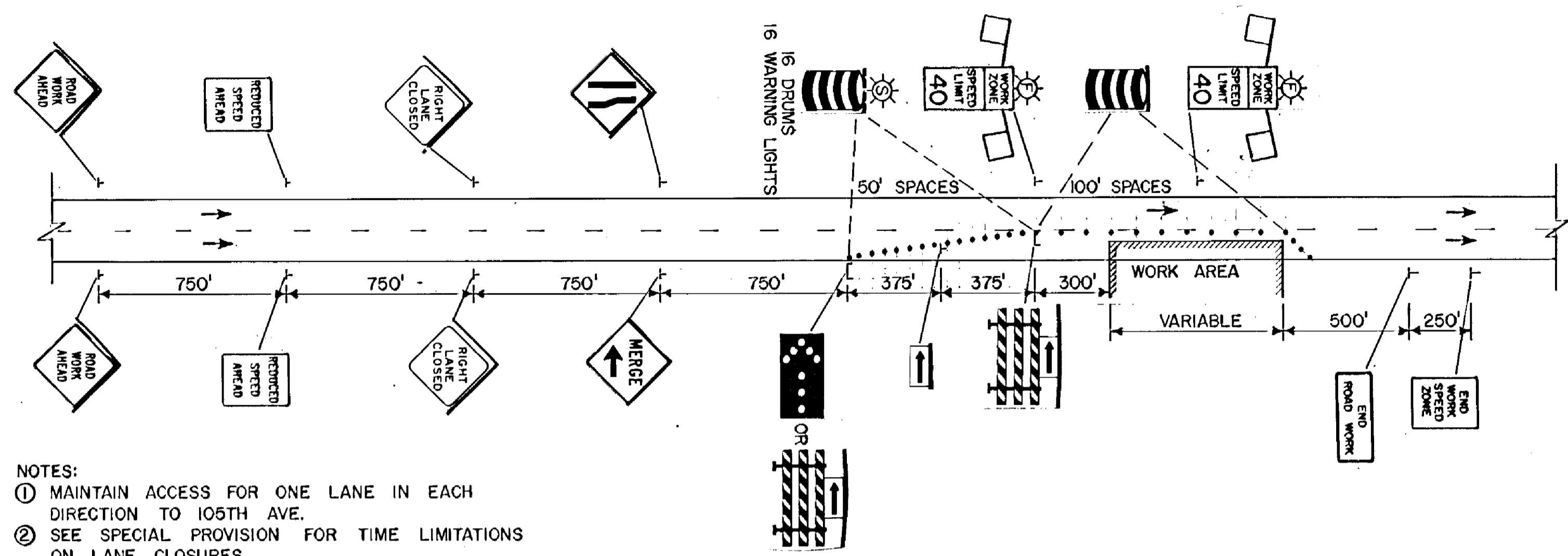
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

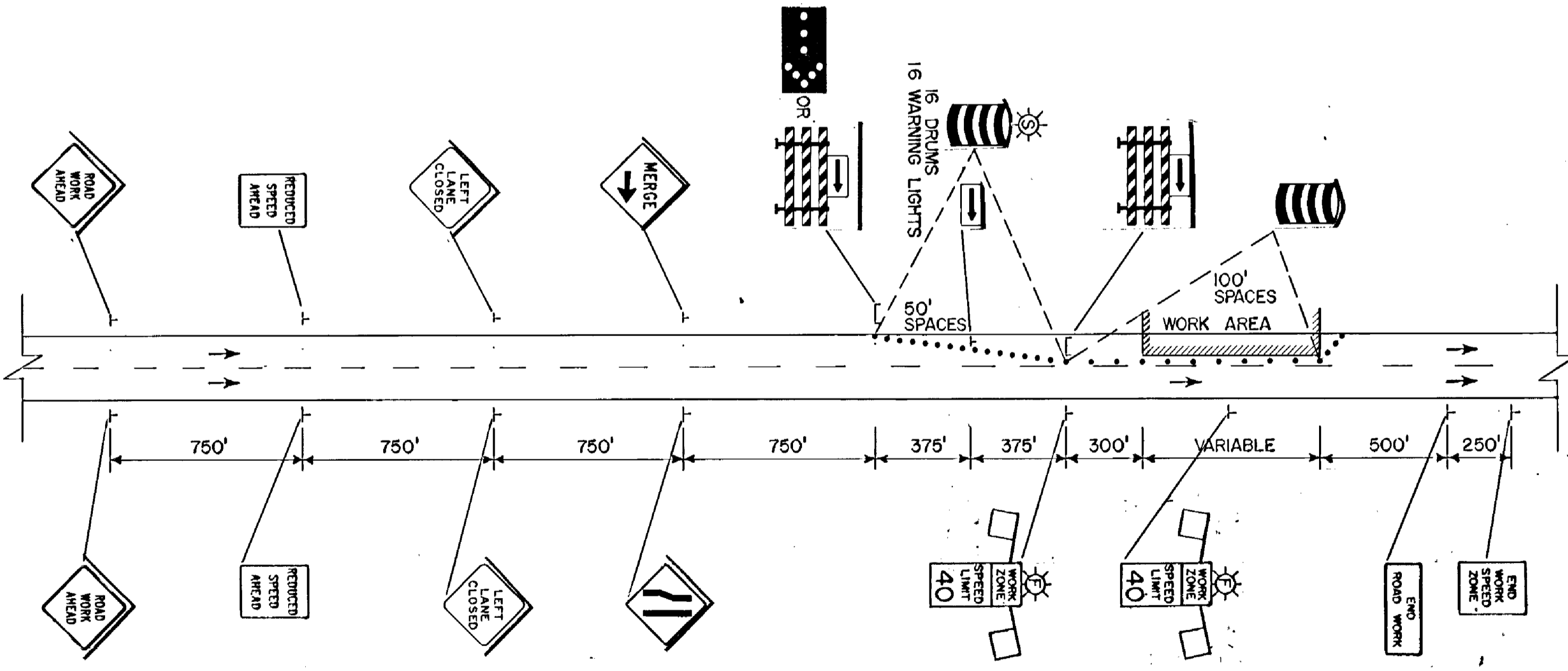
TRAFFIC CONTROL PLAN
SHEET NO. 2 OF 43 SHEETS

COMMISSION NO. 9326



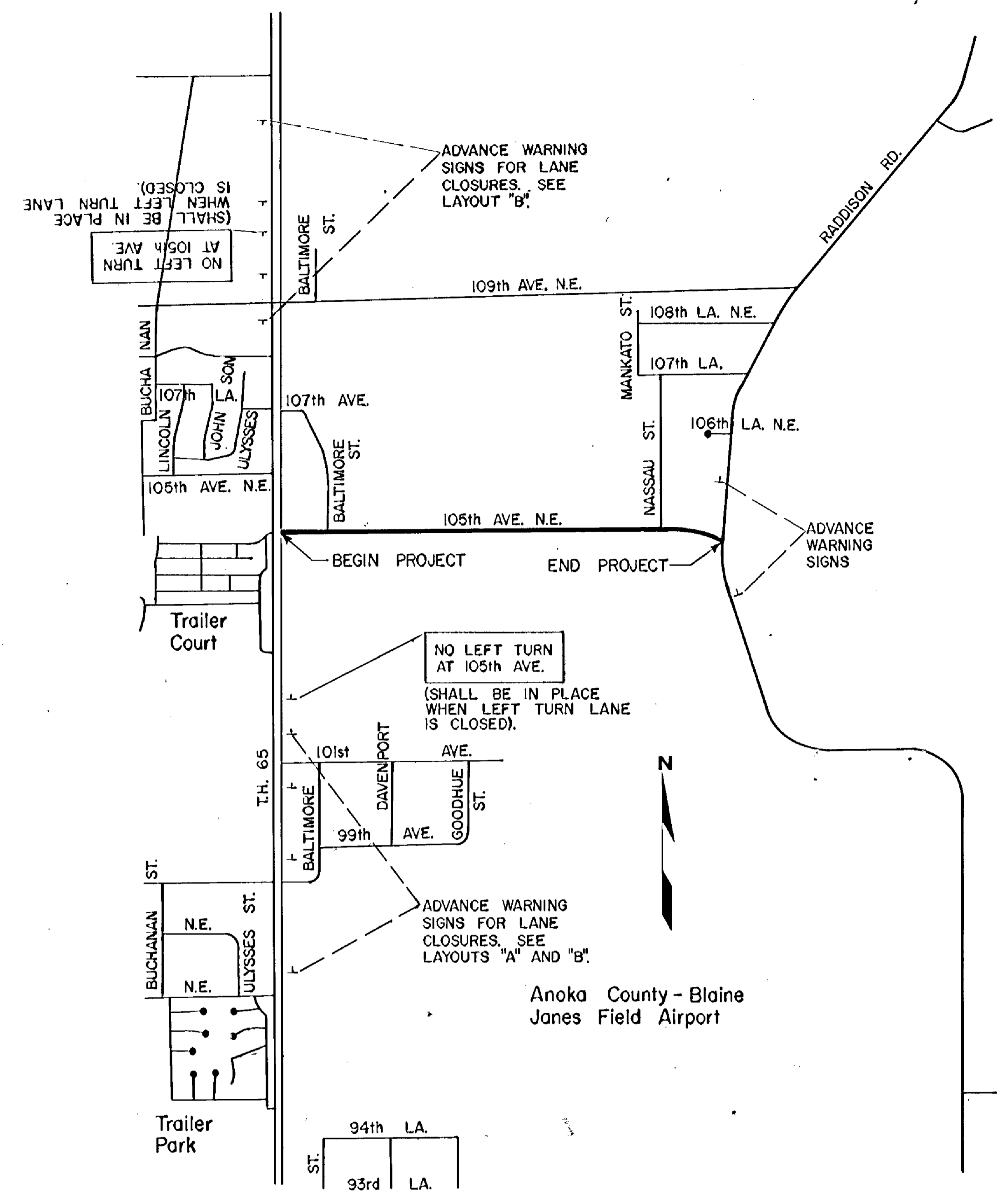
NOTES:
 ① MAINTAIN ACCESS FOR ONE LANE IN EACH DIRECTION TO 105TH AVE.
 ② SEE SPECIAL PROVISION FOR TIME LIMITATIONS ON LANE CLOSURES.

LAYOUT "A"-RIGHT LANE CLOSURE ON T.H.65
 NO SCALE



NOTES:
 ① LEFT TURN LANES AND MEDIAN OPENING AT 105TH AVE. MAY BE CLOSED WHEN LEFT LANES ON T.H.65 ARE CLOSED.
 ② SEE SPECIAL PROVISIONS FOR TIME LIMITATIONS ON LANE CLOSURES.

LAYOUT "B"-LEFT LANE CLOSURE ON T.H.65
 NO SCALE



PROJECT LOCATION MAP
 SCALE IN FEET

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
 RDC JEC
 CHECKED
 RCL
 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
Rafael D. Clark
 DATE 8-1-89 REG. NO. 4860

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

TRAFFIC CONTROL PLAN
 SHEET NO. 3 OF 43 SHEETS

CO. PROJ. NO. 88-22-87

COMMISSION NO.
 9326

STATEMENT OF ESTIMATED QUANTITIES

NO.	SPEC. NO.	ITEM	UNIT	ESTIMATED QUANTITIES	FINAL QUANTITIES
1	2021.501	MOBILIZATION	LS	1.0	
2	2031.501	FIELD OFFICE, TYPE D	EA	1.0	
3	2101.511	CLEARING AND GRUBBING	LS	1.0	
4	2104.501	REMOVE CULVERT PIPE	LF	1050.0	
5	2104.501	REMOVE FENCE	LF	1252.0	
6	2104.513	SAWING BITUMINOUS PAVEMENT	LF	2448.0	
7	2104.521	SALVAGE FENCE	LF	402.0	
8	2104.521	SALVAGE 72" CS PIPE	LF	80.0	
9	2104.523	SALVAGE GUARD POSTS	EA	9.0	
10	2105.501	COMMON EXCAVATION (P)	CY	19684.0	
11	2105.505	MUCK EXCAVATION	CY	41628.0	
12	2105.507	SUBGRADE EXCAVATION	CY	4472.0	
13	2105.521	GRANULAR BORROW (EV)	CY	56000.0	
14	2112.501	SUBGRADE PREPARATION	RD. STA.	40.5	
15	2130.501	WATER	M GAL	500.0	
16	2211.503	AGGREGATE BASE PLACED, CLASS 5A (P)	CY	10136.0	
17	2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	906.0	
18	2331.510	BINDER COURSE MIXTURE	TON	7324.0	
19	2331.514	BASE COURSE MIXTURE	TON	9765.0	
20	2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	214.0	
21	2341.508	WEARING COURSE MIXTURE	TON	3743.0	
22	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	4439.0	
23	2501.511	18" RC PIPE CULVERT, CL. III	LF	33	
24	2501.511	72" RC PIPE CULVERT, CL. III	LF	210.0	
25	2501.515	18" RC PIPE APRON	EA	5.0	
26	2501.515	21" RC PIPE APRON	EA	1.0	
27	2501.515	30" RC PIPE APRON	EA	1.0	
28	2501.515	36" RC PIPE APRON	EA	1.0	
29	2501.515	72" RC PIPE APRON	EA	4.0	
30	2503.511	12" RC PIPE SEWER, CL. III	LF	525.4	
31	2503.511	15" RC PIPE SEWER, CL. III	LF	875.1	
32	2503.511	18" RC PIPE SEWER, CL. III	LF	769.6	
33	2503.511	21" RC PIPE SEWER, CL. III	LF	129.6	
34	2503.511	24" RC PIPE SEWER, CL. III	LF	577.8	
35	2503.511	27" RC PIPE SEWER, CL. III	LF	483.0	
36	2503.511	30" RC PIPE SEWER, CL. III	LF	657.5	
37	2503.511	36" RC PIPE SEWER, CL. III	LF	583.1	
38	2506.507	CONSTRUCT CB, DES. C OR G	LF	56.1	
39	2506.507	CONSTRUCT CB, DES. A OR F	LF	37.9	
40	2506.507	CONSTRUCT CB, DES. 4020E-60	LF	44.2	
41	2506.507	CONSTRUCT CB, DES. 4020E-72	LF	23.5	
42	2506.507	CONSTRUCT MH, DES. 4020E-72	LF	8.8	
43	2506.516	CASTING ASSEMBLY	EA	33	
44	2521.501	4" CONCRETE WALK	SF	22759.0	
45	2521.501	6" CONCRETE WALK	SF	1595.0	
46	2531.501	CONCRETE CURB AND GUTTER, DES B612	LF	844.0	
47	2531.501	CONCRETE CURB AND GUTTER, DES B618	LF	10734.0	
48	2531.503	CONCRETE MEDIAN	SY	403.0	
49	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SY	154.0	
50	2564.531	F & I SIGN PANELS, TYPE C	SF	252.0	
51	2564.531	F & I SIGN PANELS, TYPE D	SF	133.0	
52	2564.532	TRAFFIC CONTROL	LS	1.0	
53	2573.501	BALE CHECK	EA	24.0	
54	2573.502	SILT FENCE, HEAVY DUTY	LF	100.0	
55	2575.501	SEEDING (P)	AC	3.5	
56	2575.502	SEED, MIXTURE NO. 900	LBS	160.0	
57	2575.505	SODDING, TYPE - EROSION CONTROL	SY	431.0	
58	2575.511	MULCH MATERIAL TYPE I	TON	7.1	
59	2575.519	DISK ANCHORING (P)	AC	3.5	
60	2575.531	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	TON	1.0	
61	2580.501	TEMPORARY LANE MARKING	RD. STA.	20.0	
62	0331.601	2" WEARING COURSE MIXTURE PLACED	SY	320.0	
63	0503.511	18" RC PIPE SAN SEW, CL V 16'-18'	LF	144.0	
64	0503.511	12" PVC SAN SEW, 16'-18'	LF	380.0	
65	0503.511	8" PVC SAN SEW, 0'-10'	LF	293.0	
66	0503.511	8" PVC SAN SEW, 10'-12'	LF	386.0	
67	0503.511	8" PVC SAN SEW, 12'-14'	LF	328.0	
68	0503.511	8" PVC SAN SEW, 14'-16'	LF	161.0	
69	0503.511	8" PVC SAN SEW, 16'-18'	LF	53.0	
70	0503.602	STANDARD MANHOLE	EA	6.0	
71	0503.603	EXTRA DEPTH OF MANHOLE	LF	34.5	
72	0503.603	4" PVC SERVICE LATERAL	LF	385.0	
73	0503.603	8" X 4" PVC WYE	EA	6.0	
74	0503.611	GRANULAR FOUNDATION	TON	100.0	
75	0504.602	F & I 12" GV & BOX	EA	3.0	
76	0504.602	F & I 10" GV & BOX	EA	3.0	
77	0504.602	F & I 8" GV & BOX	EA	1.0	
78	0504.602	F & I HYDRANT	EA	4.0	
79	0504.602	WATER SERVICE CONNECTION	EA	6.0	
80	0504.603	12" DIP WATERMAIN	LF	519.0	
81	0504.603	10" DIP WATERMAIN	LF	1230.0	
82	0504.603	8" DIP WATERMAIN	LF	85.0	
83	0504.603	F & I HYDRANT BRANCH LINE (6" DIP)	LF	110.0	
84	0504.603	1-1/2" COPPER SERVICE PIPE	LF	325.0	
85	0504.620	F & I MJDIP FITTINGS	LBS	3075.0	
86	0557.603	INSTALL FENCE	LF	402.0	

STATEMENT OF ESTIMATED QUANTITIES

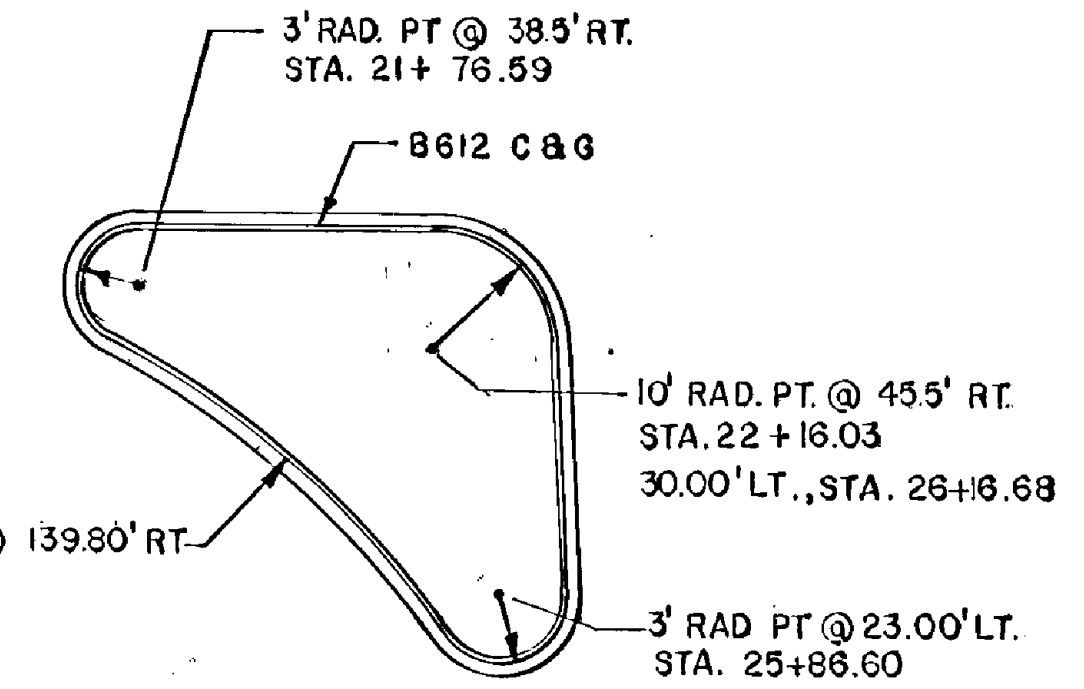
NO.	SPEC. NO.	ITEM	UNIT	ESTIMATED QUANTITIES	FINAL QUANTITIES
87	0564.602	PAV'T MESSAGE (LT. ARROW) POLY PREFORM	EA	34.0	
88	0564.602	PAV'T MESSAGE (RT. ARROW) POLY PREFORM	EA	10.0	
89	0564.602	PAV'T MESSAGE (LT.-THRU ARROW) POLY PREFORM	EA	2.0	
90	0564.602	PAV'T MESSAGE (ONLY) POLY PREFORM	EA	2.0	
91	0564.603	4" WIDE SOLID LINE WHITE-PAINT	LF	3710.0	
92	0564.603	4" WIDE BROKEN LINE WHITE-PAINT	LF	10635.0	
93	0564.603	8" WIDE SOLID LINE WHITE-PAINT	LF	690.0	
94	0564.603	12" WIDE STOP LINE WHITE-PAINT	LF	250.0	
95	0564.603	24" WIDE STOP LINE WHITE-PAINT	LF	140.0	
96	0564.603	4" WIDE SOLID LINE YELLOW-PAINT	LF	11490.0	
97	0564.603	4" WIDE BROKEN LINE YELLOW-PAINT	LF	9120.0	
98	0564.603	4" WIDE DOUBLE SOLID LINE YELLOW-PAINT	LF	205.0	
99	0564.604	CROSSWALK MARKING-POLY PREFORM	SF	1860.0	
100	0565.511	REVISE FULL TRAF. ACT.-TRAF. CONTROL SYSTEM	SIS. SYS.	1.0	

NOTES:

- (P) PLANNED QUANTITIES.
- INCLUDES AGGREGATE SHOULDERING, CLASS 5.
- INCLUDES 600 CY ESTIMATED FOR TEMPORARY WIDENING.
- INCLUDES SHOULDER MIXTURE.
- FOR ENTRANCES, INCLUDES 3 INCHES COMPACTED AGGREGATE BASE, CLASS 5.
- INCLUDES GV & BOX.

STANDARD PLATE LIST

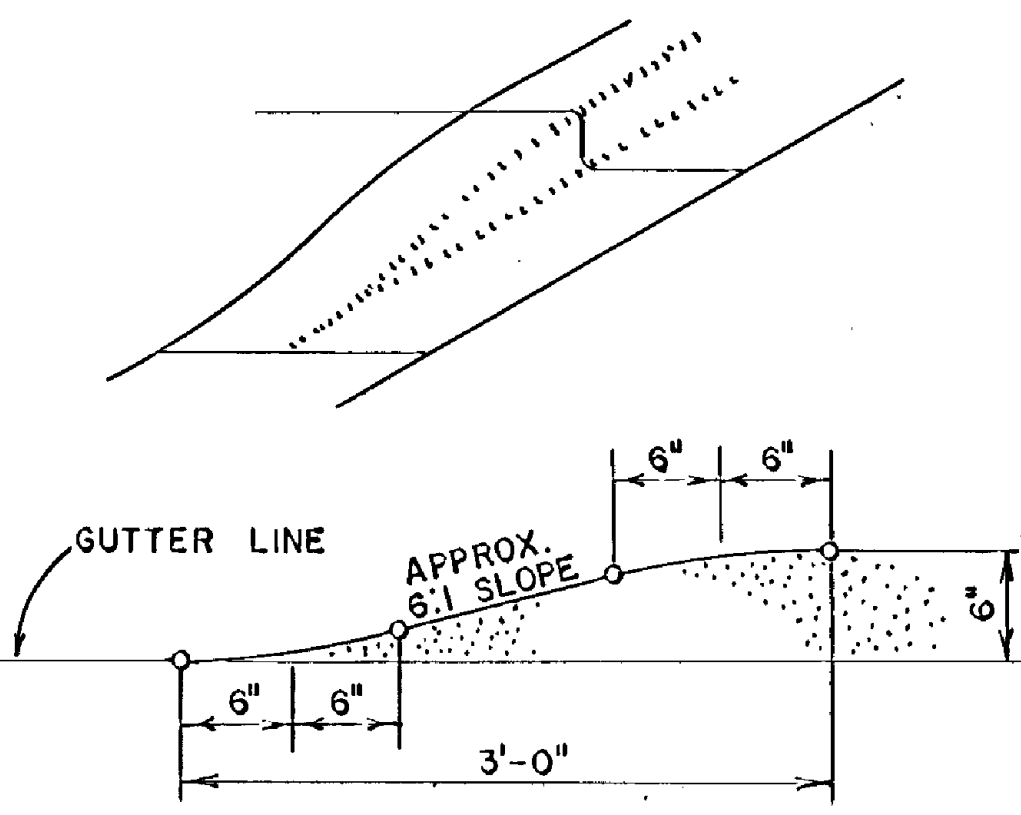
3000K	REINFORCED CONCRETE PIPE (3 SHEETS)
3006F	GASKET JOINT FOR R.C. PIPE (2 SHEETS)
3040F	CORRUGATED METAL PIPE CULVERT
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123I	METAL APRON FOR C.S. PIPE
3124B	METAL APRON CONNECTION
3133B	RIPRAP AT RCP OUTLETS
3134B	RIPRAP AT CMP OUTLETS
3145E	CONCRETE PIPE TIES
322IC	CORRUGATED STEEL PIPE COUPLING BAND (3 SHEETS)
4000I	MANHOLE OR CATCH BASIN
4002E	MANHOLE OR CATCH BASIN
4005K	MANHOLE OR CATCH BASIN
4006K	MANHOLE OR CATCH BASIN
4010G	CONCRETE SHORT CONE & ADJUSTING RING
4011D	PRECAST CONCRETE BASE
4020E	MANHOLE OR CATCH BASIN
4101C	RING CASTING FOR MANHOLE OR CATCH BASIN
4110D	COVER CASTING FOR MANHOLE
4129F	CATCH BASIN FRAME CASTING
4151B	GRATE CASTING FOR CATCH BASIN
4160D	CURB BOX CASTING FOR CATCH BASIN
4180H	MANHOLE OR CATCH BASIN STEP
7035J	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036C	PEDESTRIAN CURB RAMP
7100F	CONCRETE CURB AND GUTTERS
7111G	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS
8000I	STANDARD BARRICADES (2 SHEETS)
8110C	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8111B	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED)
8112C	PEDESTAL FOUNDATION
8115C	PEDESTRIAN PUSH BUTTON INSTALLATION
8119C	GROUND MOUNTED CABINET FOUNDATION
8120H	P-80 AND P-90 POLE FOUNDATIONS
8121B	TRANSFORMER BASE WITH POLE BASE FOUNDATION
8122C	PEDESTAL AND PEDESTAL BASE
8123B	POLE AND MAST ARM
8124D	MAST ARM SIGNAL HEAD MOUNTS
8130D	SAW CUT LOOP DETECTORS
9322I	CHAIN LINK FENCE (2 SHEETS)



ISLAND DETAIL

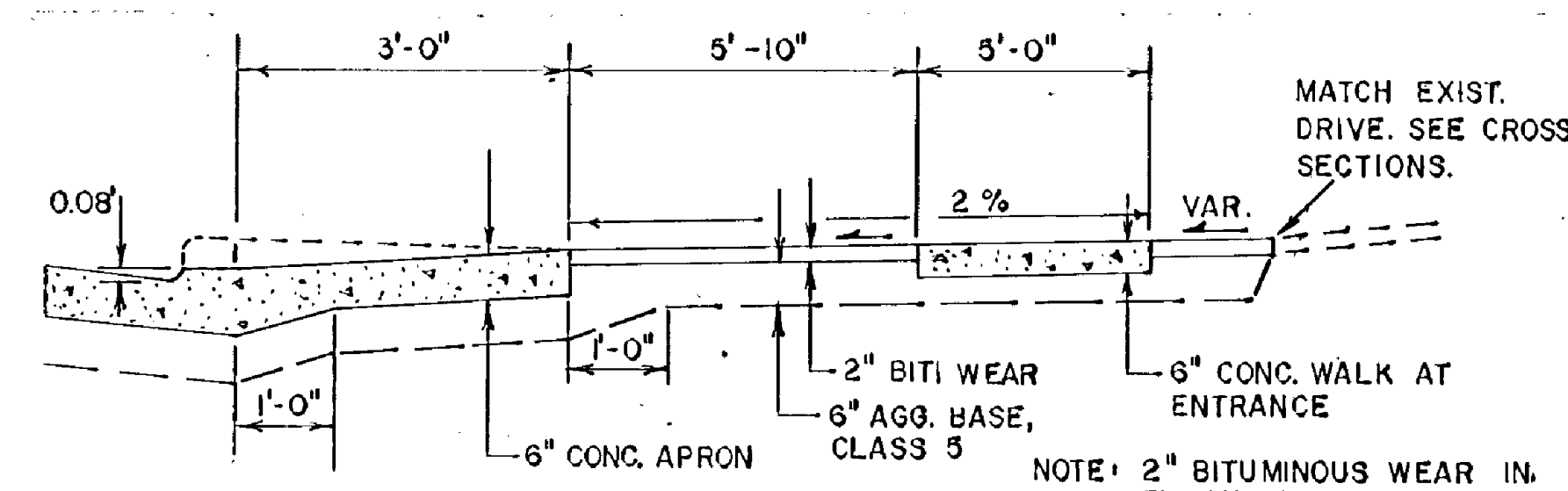
AT DAVENPORT STREET

NO SCALE



CURB TRANSITION DETAIL

SCALE IN. FEET



TYPICAL DRIVEWAY ENTRANCE SECTION

NO SCALE

ORIGINAL SURVEY BY DATE FIELD BOOK BY DATE AS-BUILT BY DATE FIELD BOOK BY DATE

DESIGNED DRAWN RCL TJV
 CHECKED RCL
 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 2/1/88 REG. NO. 9092

T&K&D
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

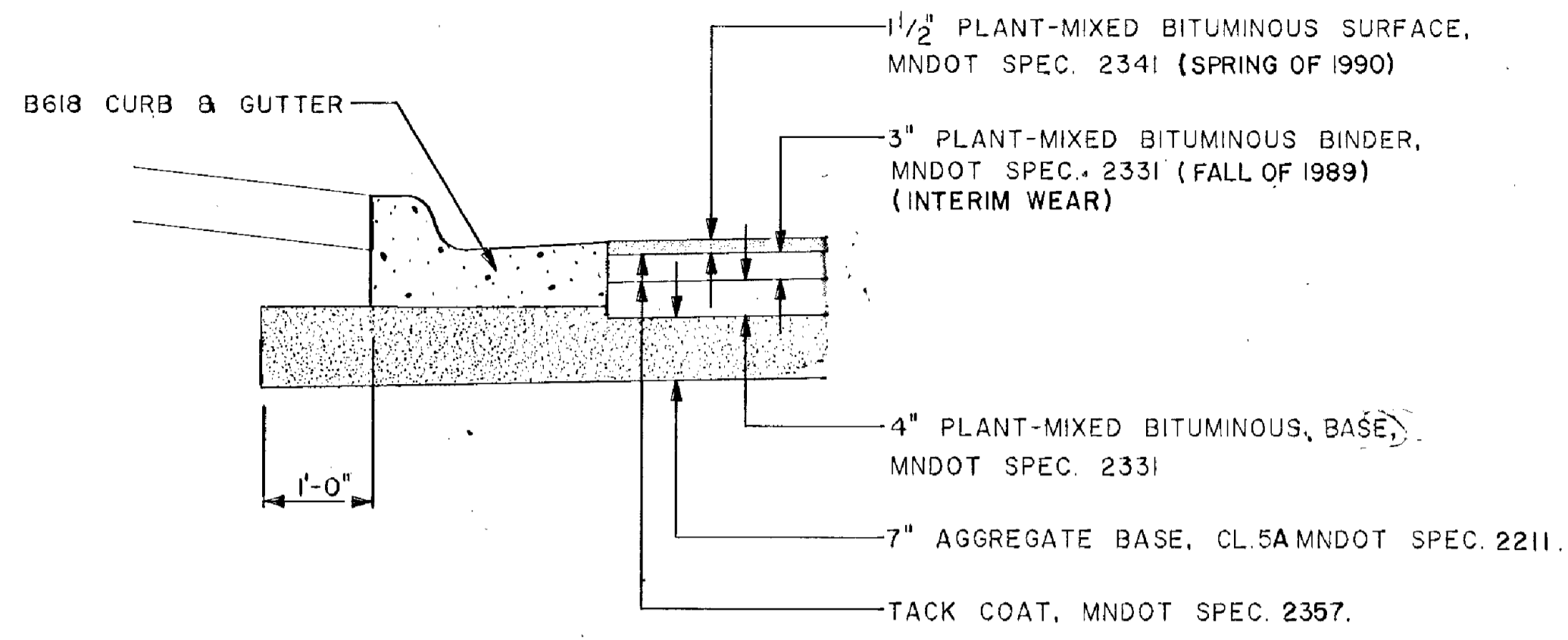
ANOKA COUNTY
 105TH AVE. N.E.

ESTIMATED QUANTITIES AND DETAILS
 SHEET NO. 4 OF 43 SHEETS

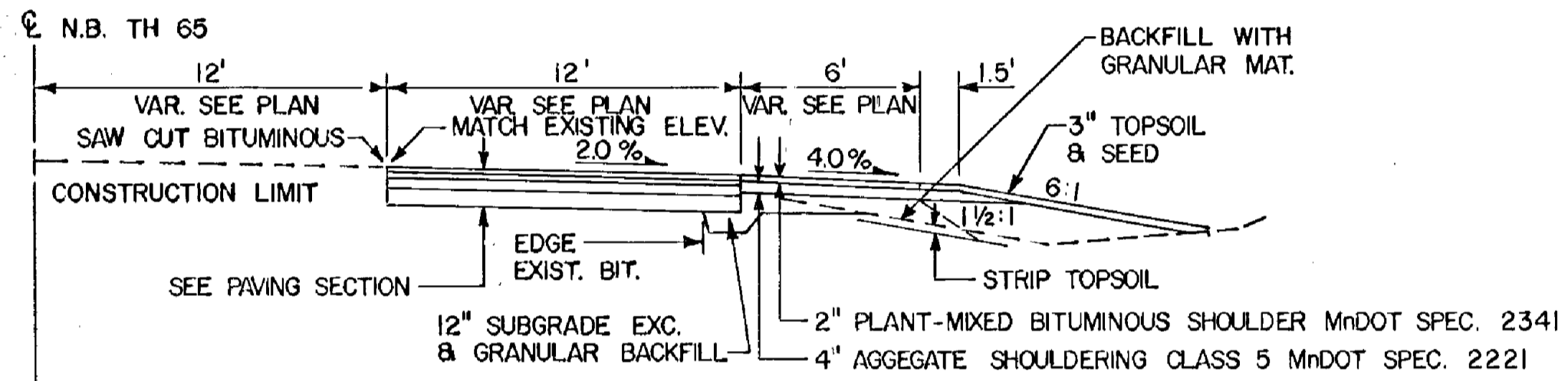
CO. PROJ. NO. 88-22-87

COMMISSION NO. 9326

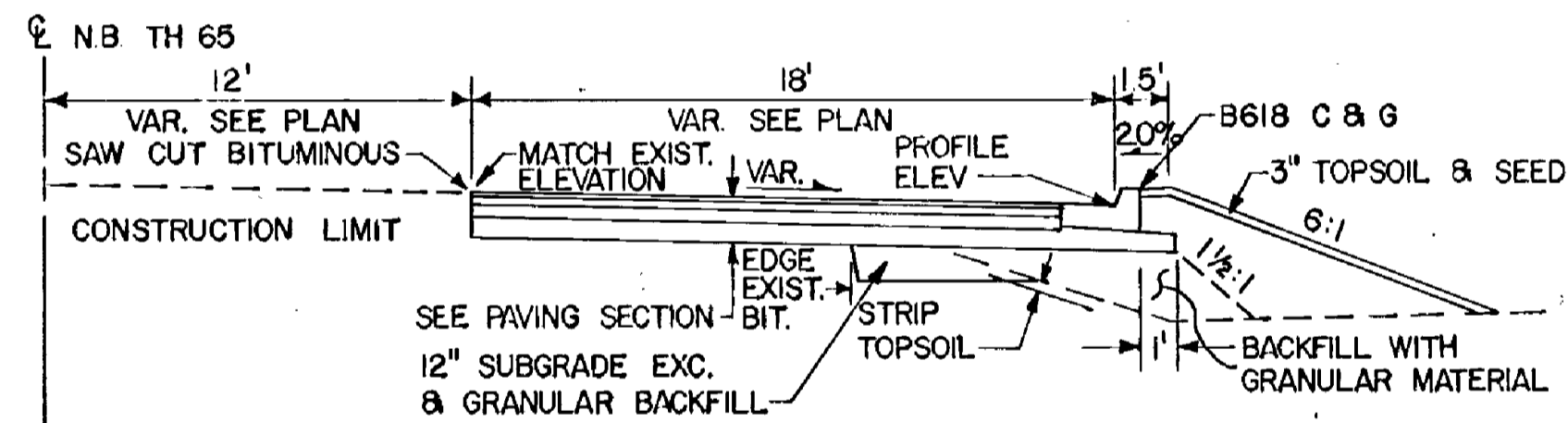
NO.	DATE	BY	DESCRIPTION
			REVISIONS



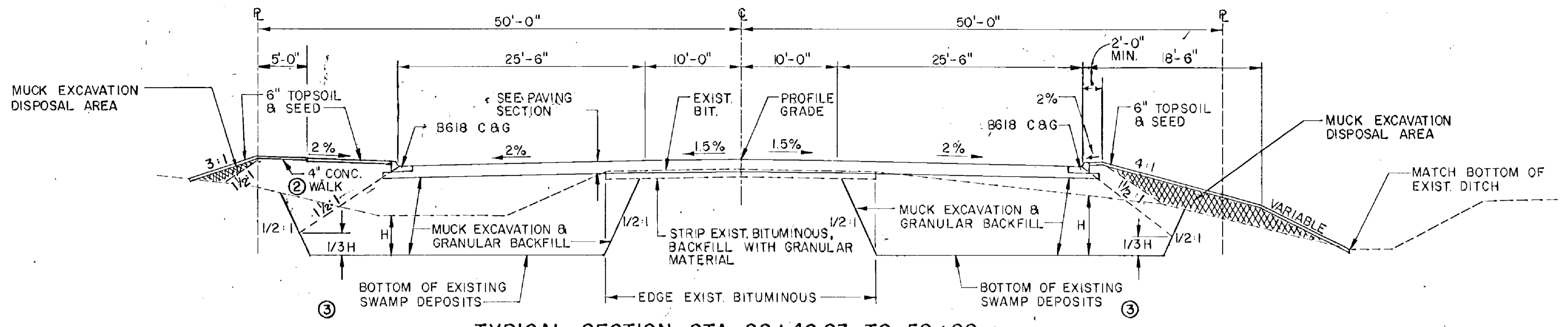
PAVING SECTION



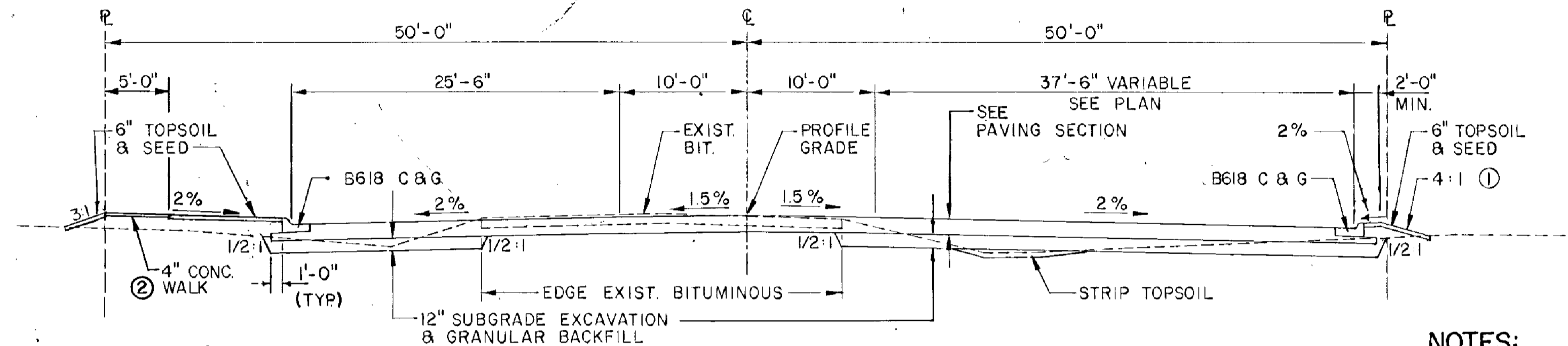
TYPICAL SECTION - T.H. 65 TURN LANE WITH SHOULDER



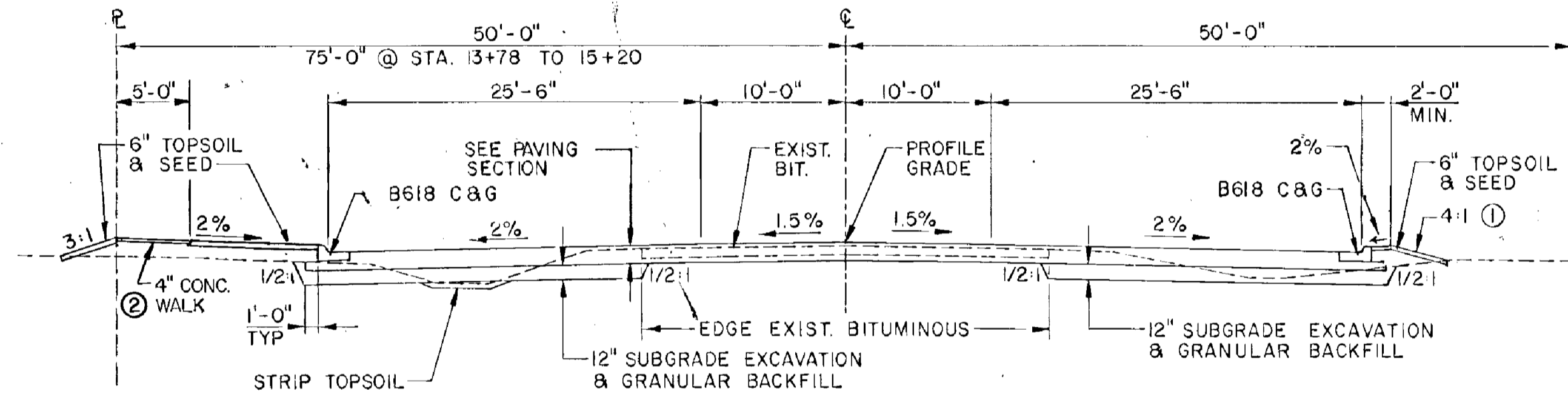
TYPICAL SECTION - T.H. 65 TURN LANE WITH CURB & GUTTER



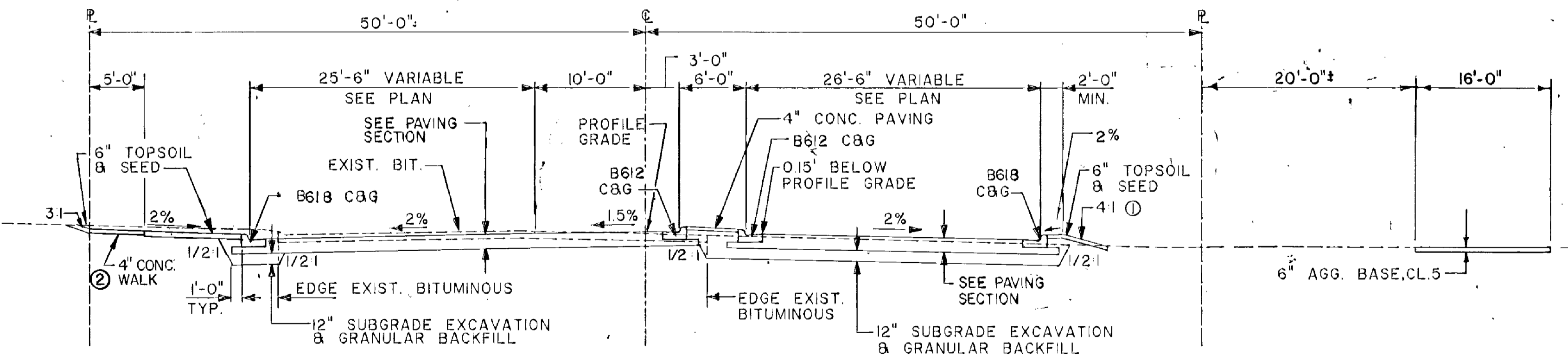
TYPICAL SECTION STA. 22+46.03 TO 50+00



TYPICAL SECTION STA. 16+59.61 TO 22+46.03



TYPICAL SECTION STA. 12+25 TO 16+59.61
TYPICAL SECTION STA. 50+00 TO 61+62



TYPICAL SECTION STA. 10+25 TO 12+25

- NOTES:**
- ① 3:1 BEYOND 18.5' FROM FACE OF CURB (TYP)
 - ② CONC. WALK IS 6" THROUGH ENTRANCES. PLACE 6" MIN. GRANULAR MATERIAL BENEATH ALL CONC. WALK.
 - ③ MUCK EXCAVATION LIMITS ESTIMATED TO BE FROM STA. 21+00 TO STA. 50+00

ORIGINAL SURVEY BY DATE FIELD BOOK

STAKING BY DATE FIELD BOOK

AS-BUILT BY DATE FIELD BOOK

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN RCL CGN

CHECKED RCL

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

Donald R. King

DATE 8/1/87 REG. NO. 9092

TKDA

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED

ENGINEERS ARCHITECTS PLANNERS

SAINT PAUL, MINNESOTA

ANOKA COUNTY

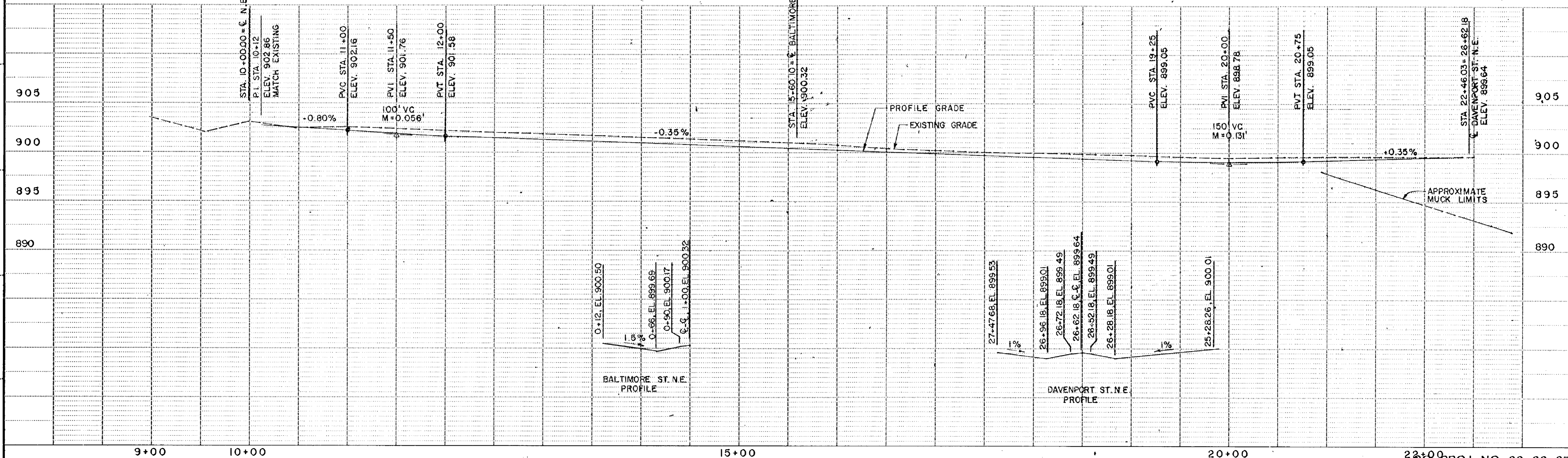
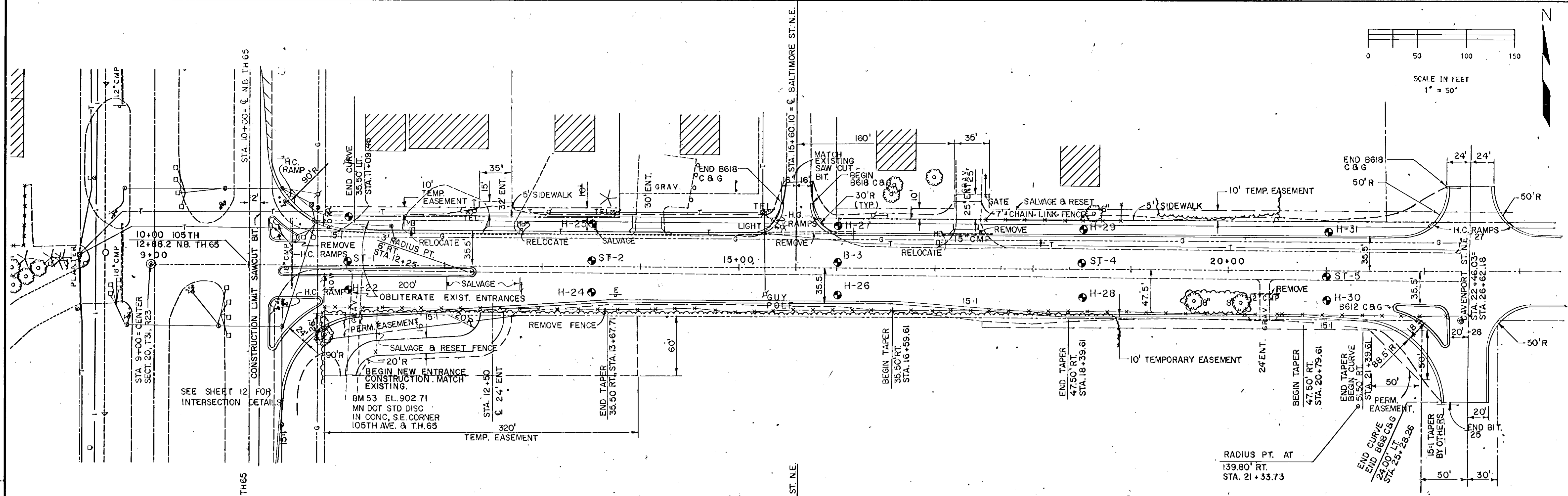
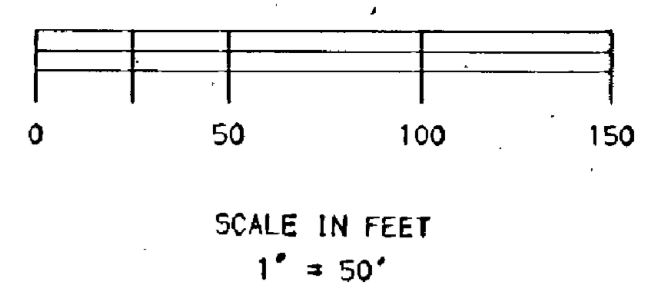
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87

TYPICAL SECTIONS

COMMISSION NO. 9326

SHEET NO. 6 OF 43 SHEETS



ORIGINAL SURVEY	STAKING	AS-BUILT
BY	BY	BY
DATE	DATE	DATE

NO.	DATE	BY	DESCRIPTION

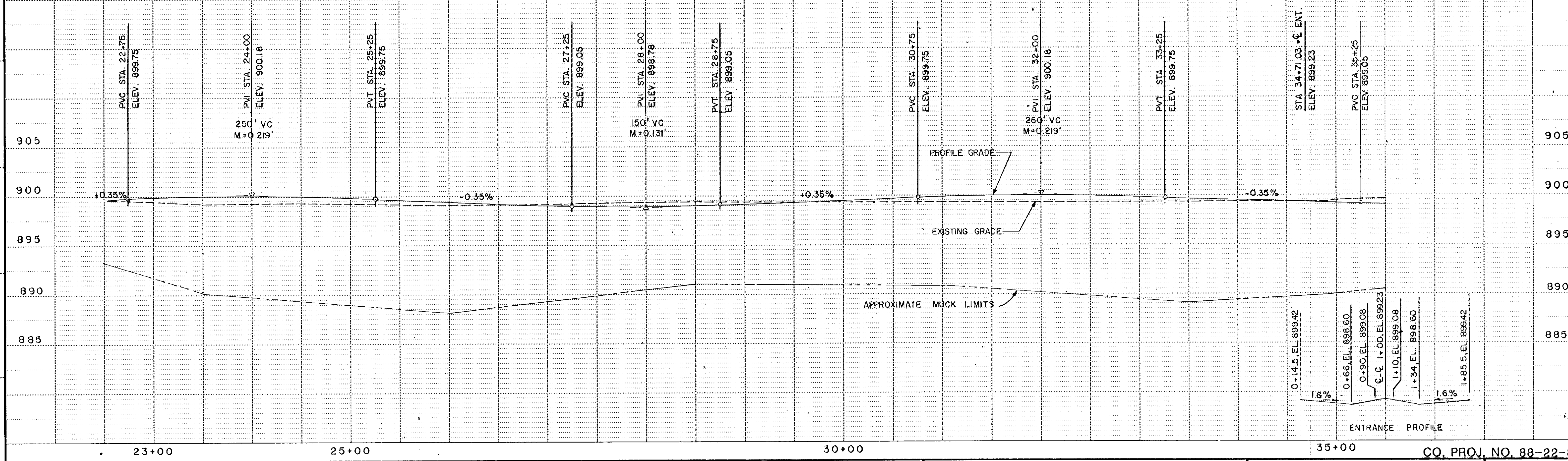
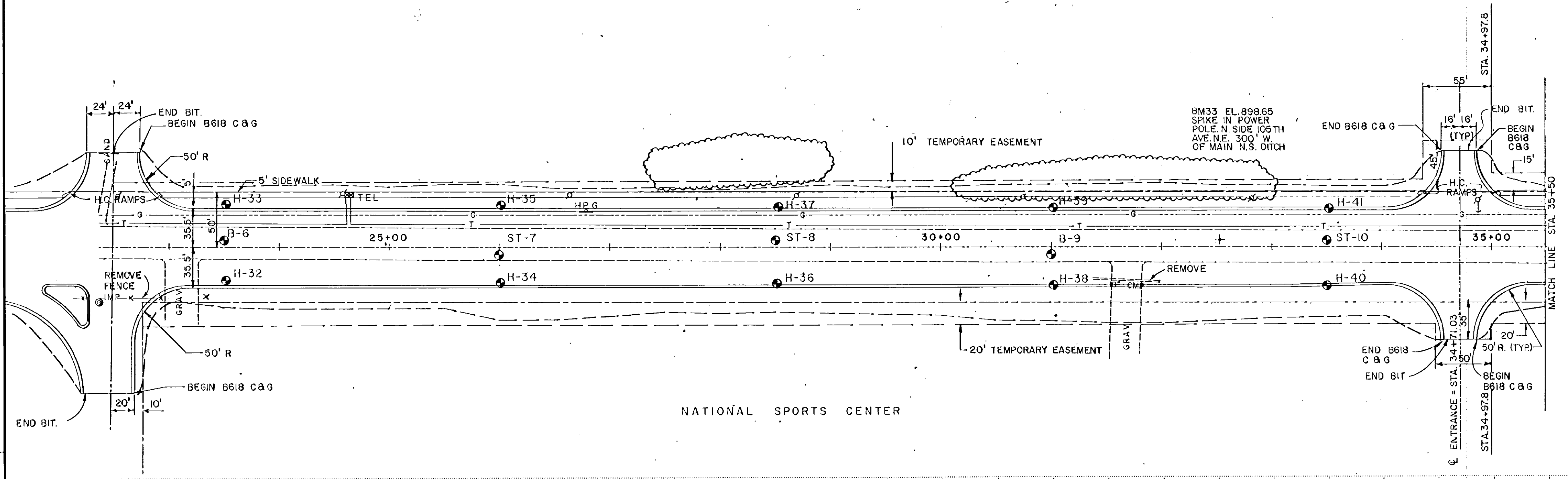
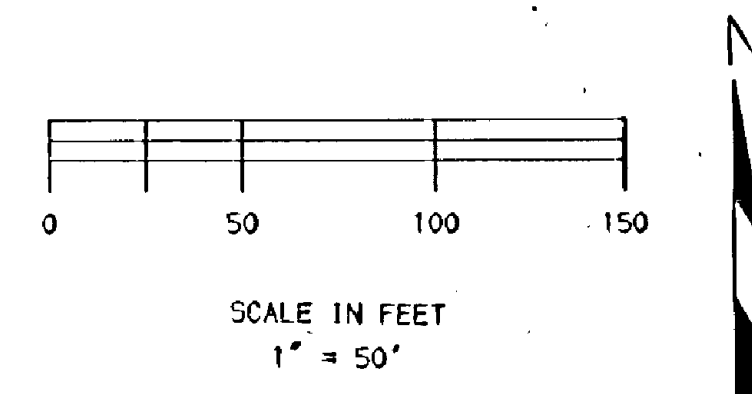
DESIGNED DRAWN RCL CGN
 CHECKED RCL
 I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
Ronald City
 DATE 2/1/01 NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

PLAN AND PROFILE
 9+00 TO 22+36.03
 SHEET NO. 7 OF 43 SHEETS

COMMISSION NO.
9326



ORIGINAL SURVEY		STAKING		AS-BUILT	
BY	DATE	BY	DATE	BY	DATE

NO.	DATE	DESCRIPTION

DESIGNED DRAWN
RCL CGN

CHECKED
RCL

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

Ronald King
DATE 8/1/88 REG. NO. 9092

TKDA

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES INCORPORATED

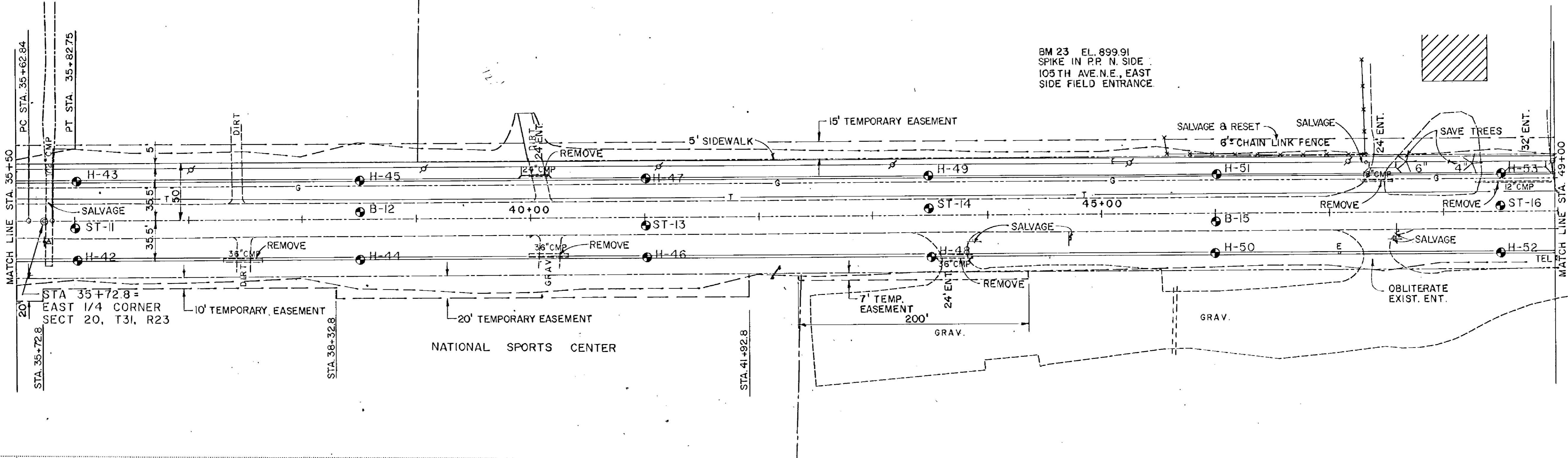
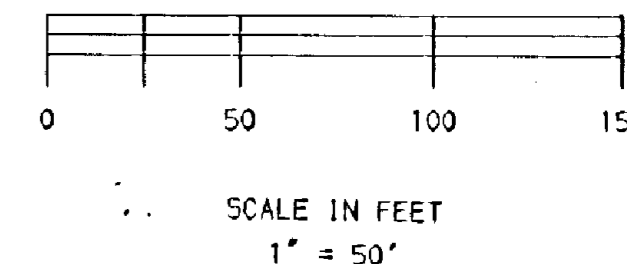
ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

PLAN AND PROFILE
22+36.03 TO 35+50
SHEET NO. 8 OF 43 SHEETS

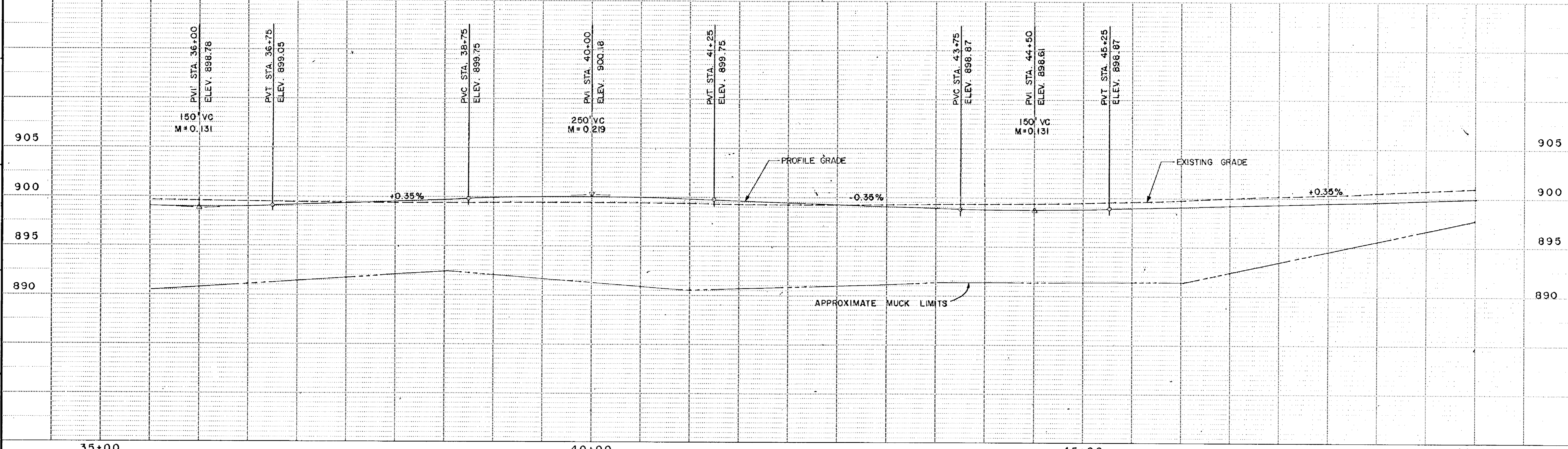
CO. PROJ. NO. 88-22-87
COMMISSION NO.
9326

PI STA. 35+72.8
 $\Delta = 0^\circ 47' 47''$ (LT)
 $D = 4'$
 $R = 1432.40'$
 $T = 9.96'$
 $L = 19.31'$

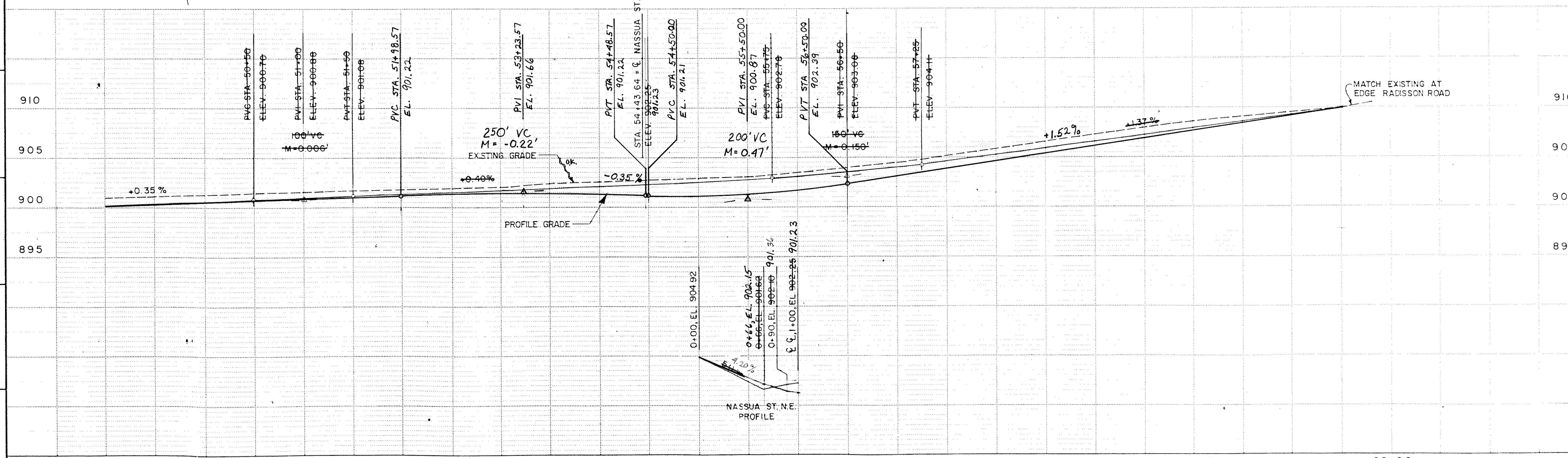
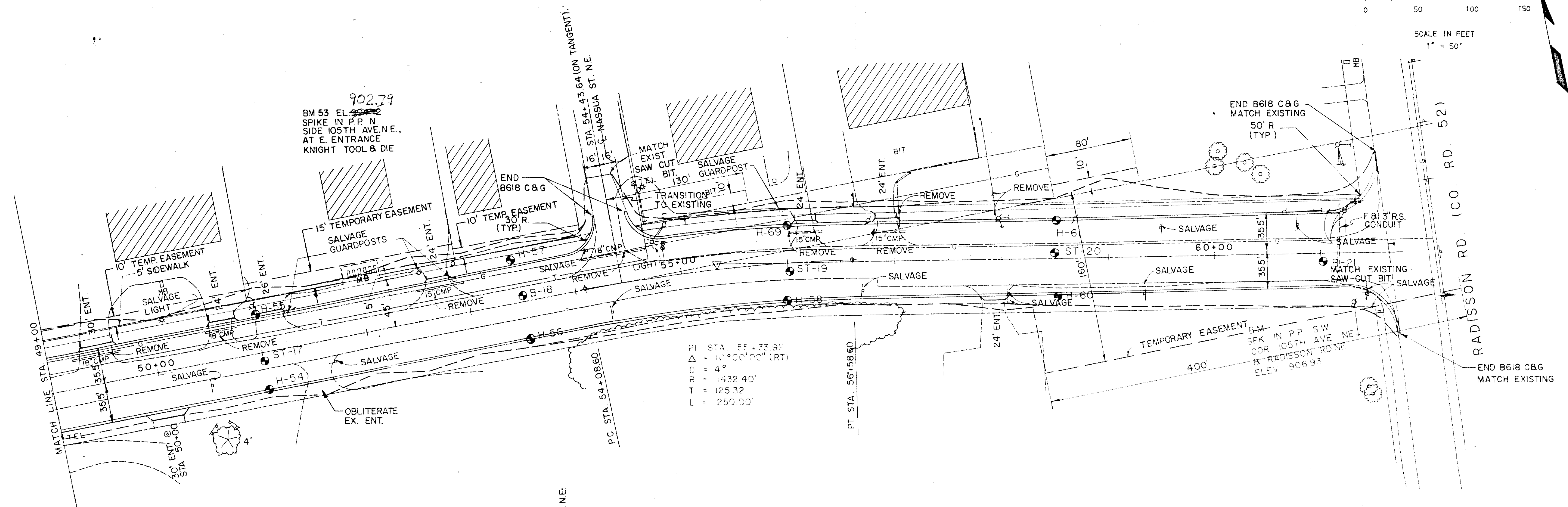
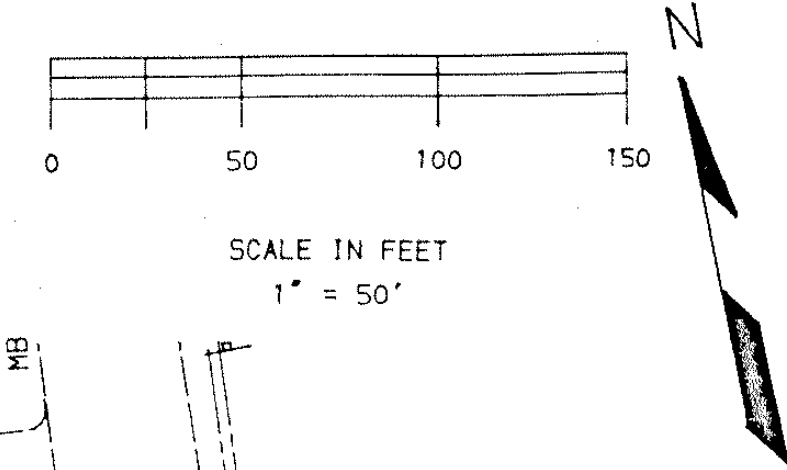


BM 23 EL. 899.91
 SPIKE IN P.P. N. SIDE
 105TH AVE. N.E., EAST
 SIDE FIELD ENTRANCE.

ORIGINAL SURVEY FIELD BOOK	BY	DATE	AS-BUILT FIELD BOOK	BY	DATE



<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	BY	DESCRIPTION					DESIGNED DRAWN RCL CGN CHECKED RCL	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DATE 8/1/88 REG. NO. 9092	<h1 style="margin: 0;">TKDA</h1> TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED ENGINEERS ARCHITECTS PLANNERS SAINT PAUL, MINNESOTA	ANOKA COUNTY 105TH AVE. N.E.	CO. PROJ. NO. 88-22-87	COMMISSION NO. 9326
NO.	DATE	BY	DESCRIPTION											
PLAN AND PROFILE 35+50 TO 49+00 SHEET NO. 9 OF 43 SHEETS														



ORIGINAL SURVEY	DATE	BY
STAKING	DATE	BY
AS BUILT	DATE	BY
FIELD BOOK	DATE	BY

49+00 50+00 55+00 60+00 62+00 CO. PROJ. NO. 88-22-87

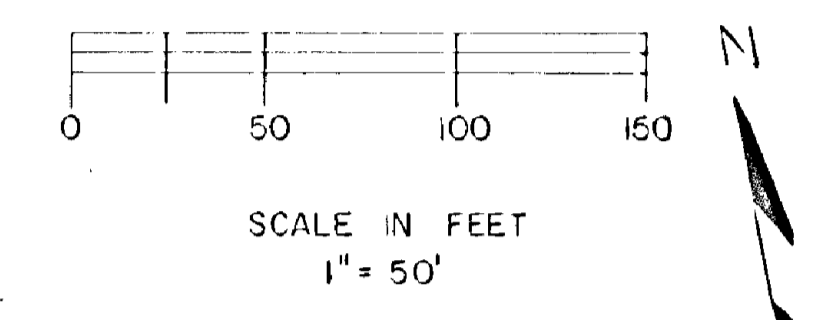
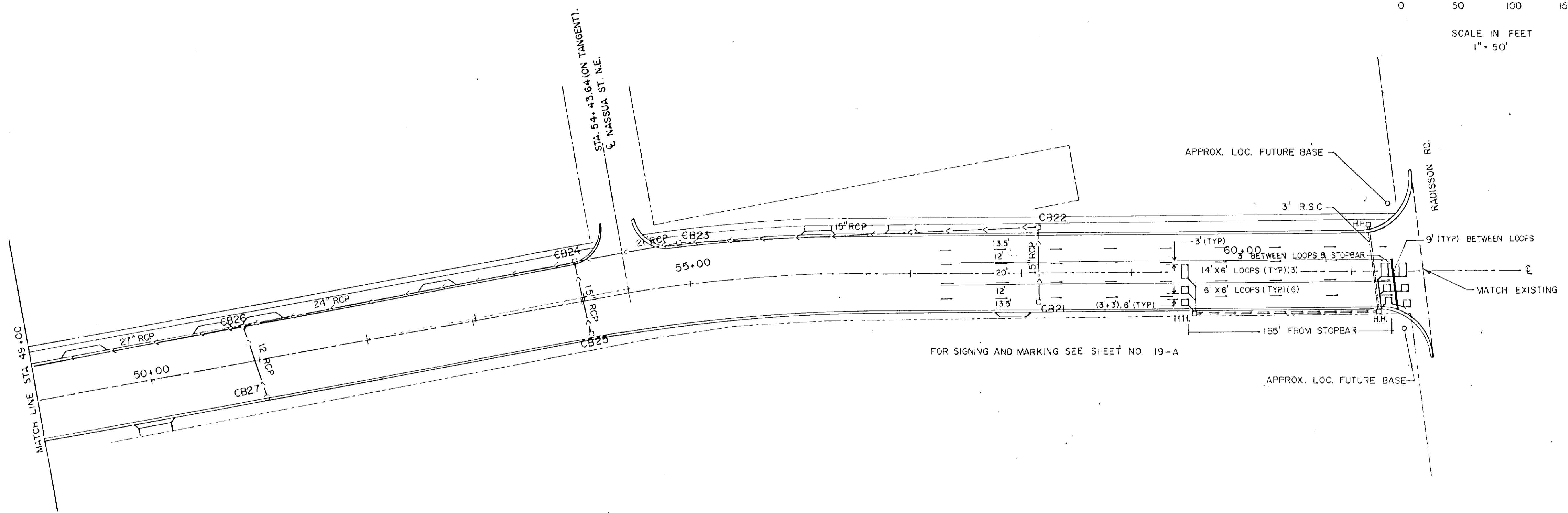
NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN RCL CGN
 CHECKED RCL
 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 8/1/85 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

PLAN AND PROFILE
 49+00 TO 62+00
 SHEET NO. 10 OF 43 SHEETS
 COMMISSION NO. 9326



FOR SIGNING AND MARKING SEE SHEET NO. 19-A

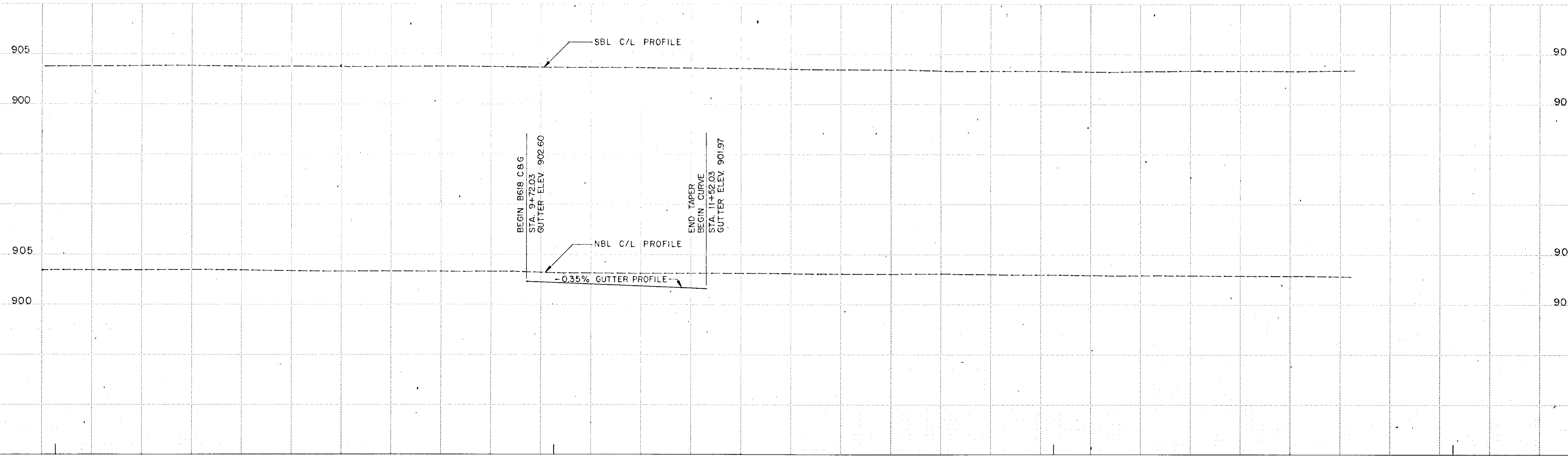
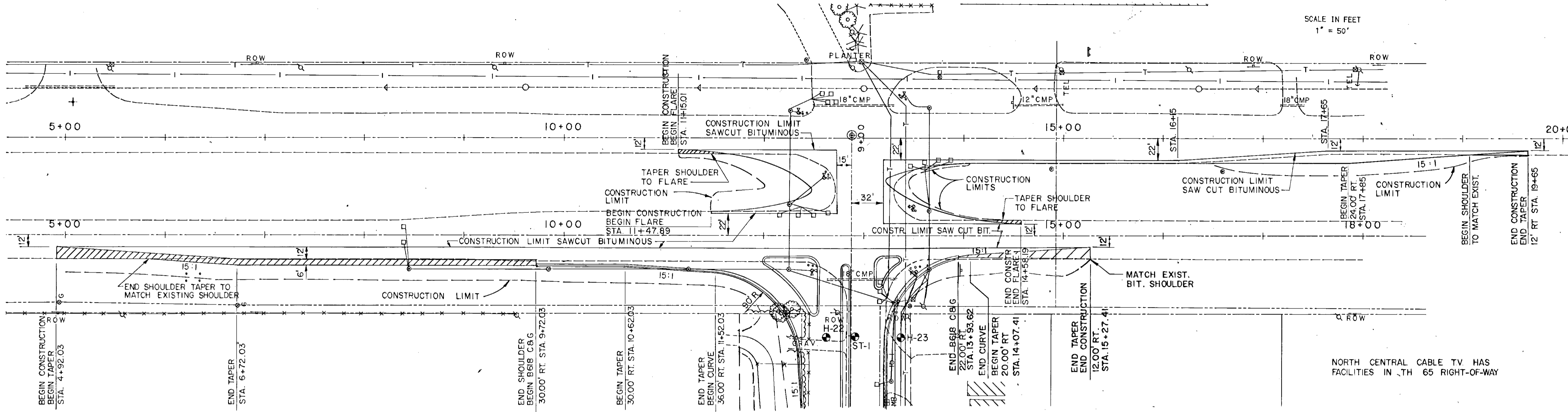
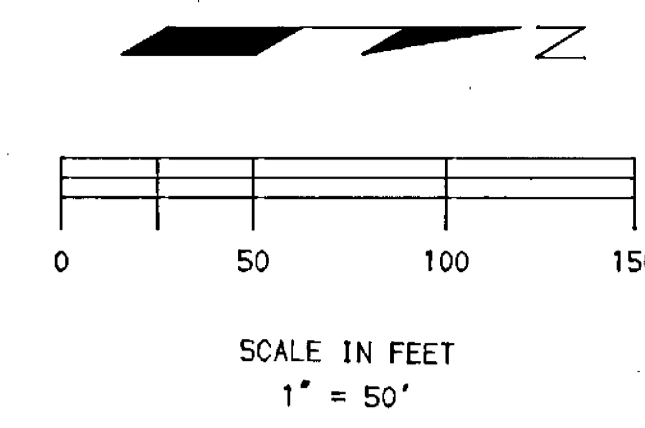
NEW SIGNAL CONST.

REVISIONS			
DATE	BY	DATE	BY

S.A.P. _____ S.P. _____ C.P. 88-22-87

BM 53 EL. 902.71
 MN DOT STD DISC
 IN CONC. SE. CORNER
 105TH AVE & TH 65

SEE SHEET 12 FOR
 INTERSECTION DETAILS



ORIGINAL SURVEY	BY	DATE	FIELD BOOK	BY	DATE
AS BUILT	BY	DATE	FIELD BOOK	BY	DATE

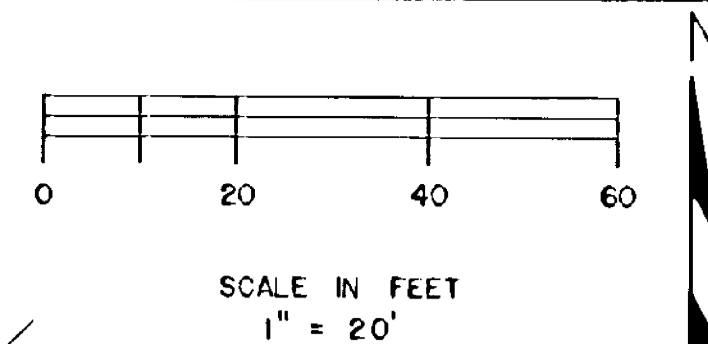
NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN RCL CGN
 CHECKED RCL
 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 8/1/88 REG. NO. 9092

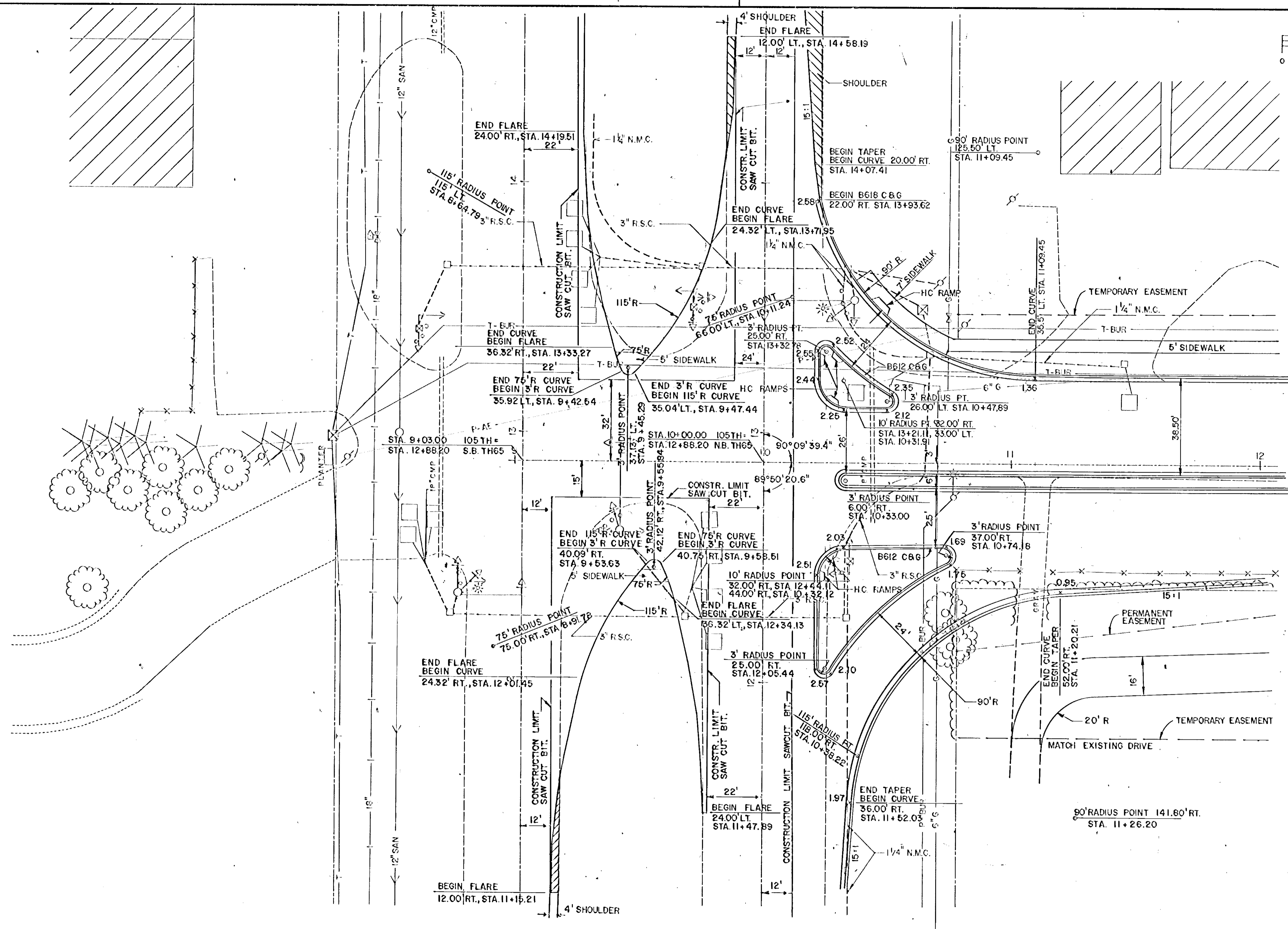
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ KING DUWALL ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87 19+00
 PLAN AND PROFILE
 T.H. 65
 SHEET NO. 11 OF 43 SHEETS
 COMMISSION NO. 9326



ORIGINAL SURVY	BY	DATE
FIELD BOOK	BY	DATE
STAMPING	BY	DATE
FIELDWORK	BY	DATE



- NOTES:
1. X 1.97 DENOTES GUTTER ELEV. 901.97.
 2. NORTH CENTRAL CABLE TV HAS FACILITIES IN T.H.65 RIGHT-OF-WAY.
 3. ALL PARABOLIC FLARES ARE 1:7.

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL CGN

CHECKED
RCL

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

David King
DATE: 8/1/89 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

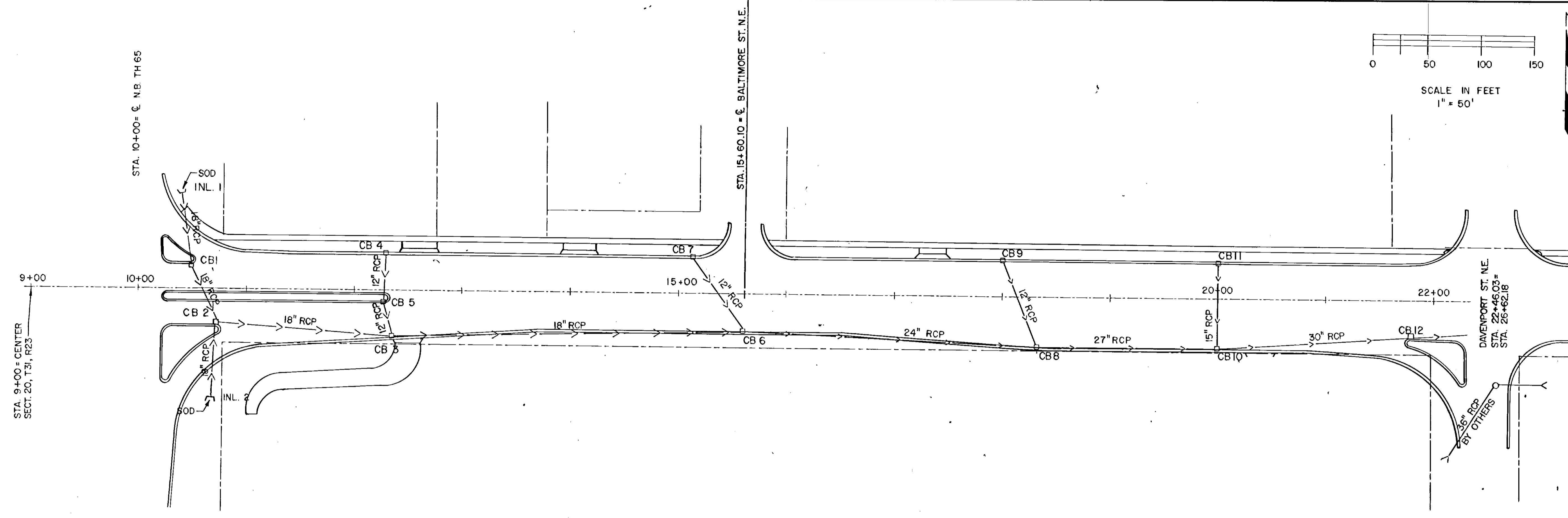
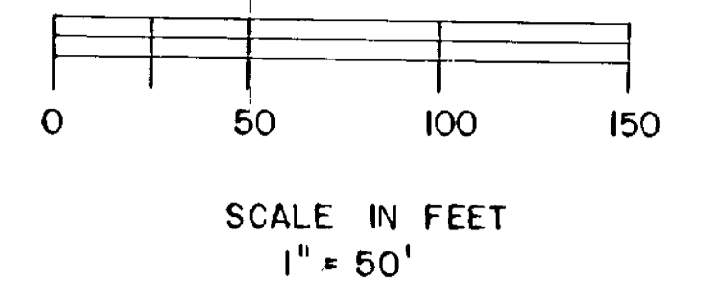
ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87

INTERSECTION PLAN
T.H. 65 AND 105TH AVE.

SHEET NO. 12 OF 43 SHEETS

COMMISSION NO.
9326



Station	Manhole / Inlet	Dimensions / Slope	Notes
900	INLET 2	0.55%	18" x 63.1' RCP CL III (W/APRON)
895	CB 4	0.50%, 0.50%	12" x 34.2' RCP CL III, 12" x 44.5' RCP CL III
890	CB 5	0.50%	12" x 83.9' RCP CL III
900	INLET 1	0.55%	18" x 66.6' RCP CL III (W/APRON)
895	CB 1	0.55%	18" x 60.8' RCP CL III
890	CB 2	0.55%	18" x 157.9' RCP CL III
900	CB 3	0.55%	18" x 330.1' RCP CL III
895	CB 6	0.17%	24" x 272.3' RCP CL III
890	CB 8	0.16%	27" x 168' RCP CL III
900	CB 10	0.19%	30" x 177.4' RCP CL III

ORIGINAL SURVEY BY DATE FIELD BOOK BY DATE
 STAKING BY DATE FIELD BOOK BY DATE
 AS-BUILT BY DATE FIELD BOOK BY DATE

NO.	DATE	BY	DESCRIPTION
REVISIONS			

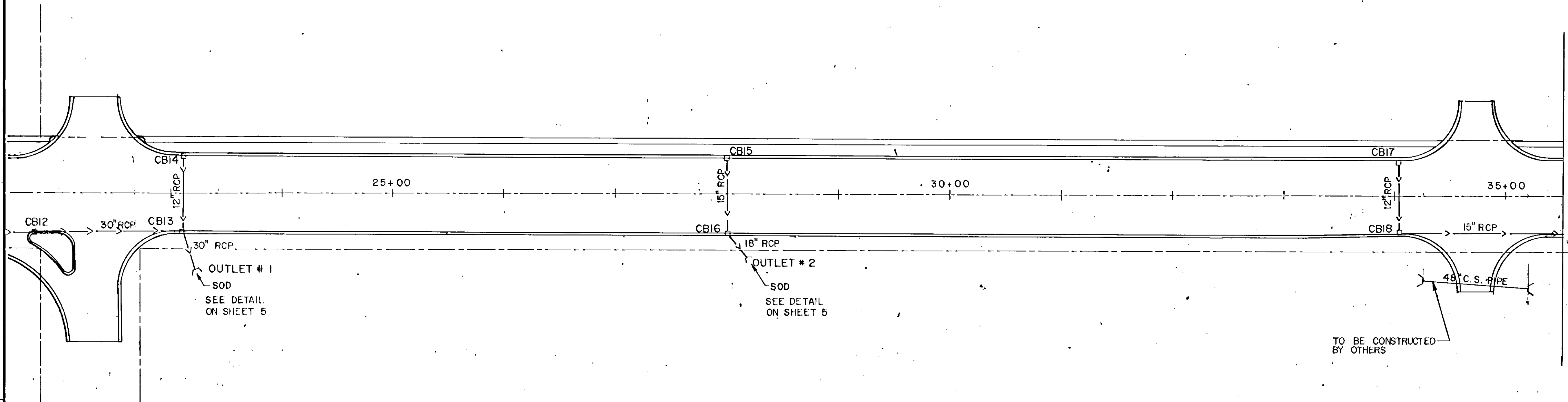
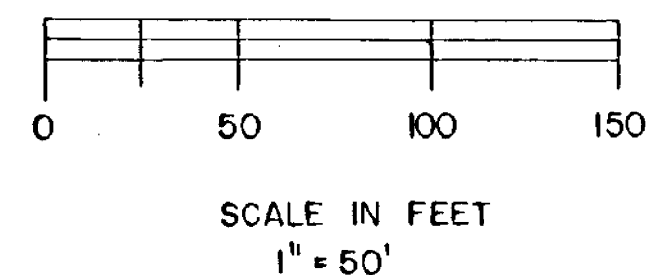
DESIGNED DRAWN RCL CGN
 CHECKED RCL
 I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
Ronald J. O'Connell
 DATE 8/11/83 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

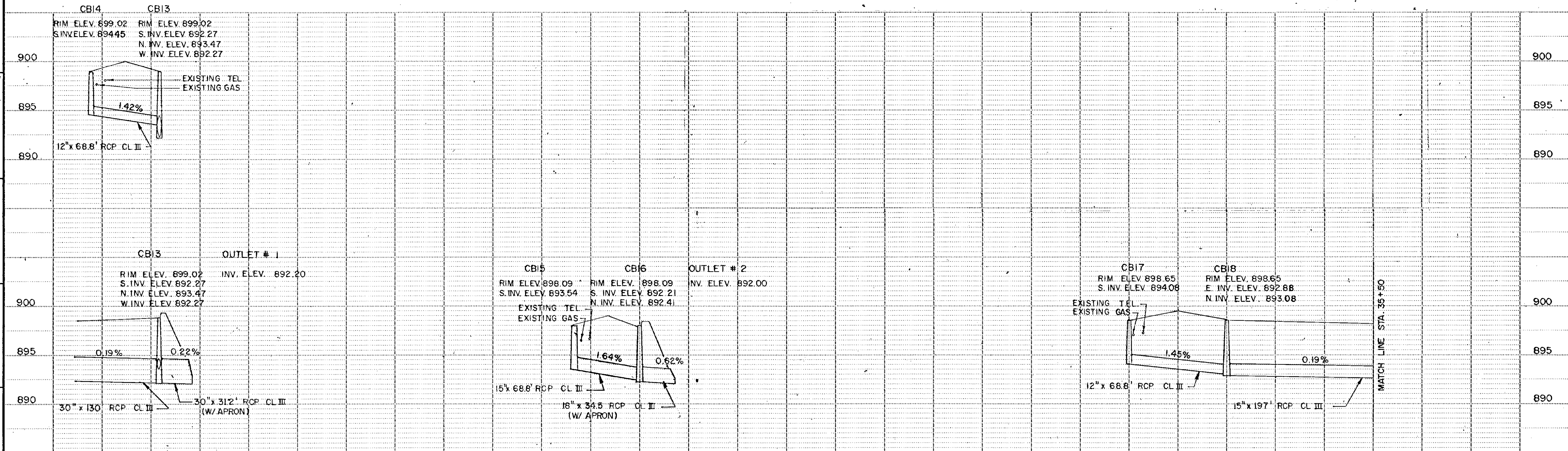
ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
 DRAINAGE PLAN
 9+00 TO 22+36.03
 SHEET NO. 13 OF 43 SHEETS

COMMISSION NO.
 9326



TO BE CONSTRUCTED BY OTHERS



CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION

REVISIONS

DESIGNED DRAWN
RCL CGN

CHECKED
RCL

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.

Ronald R. King
DATE 8/1/88 REG. NO. 9092

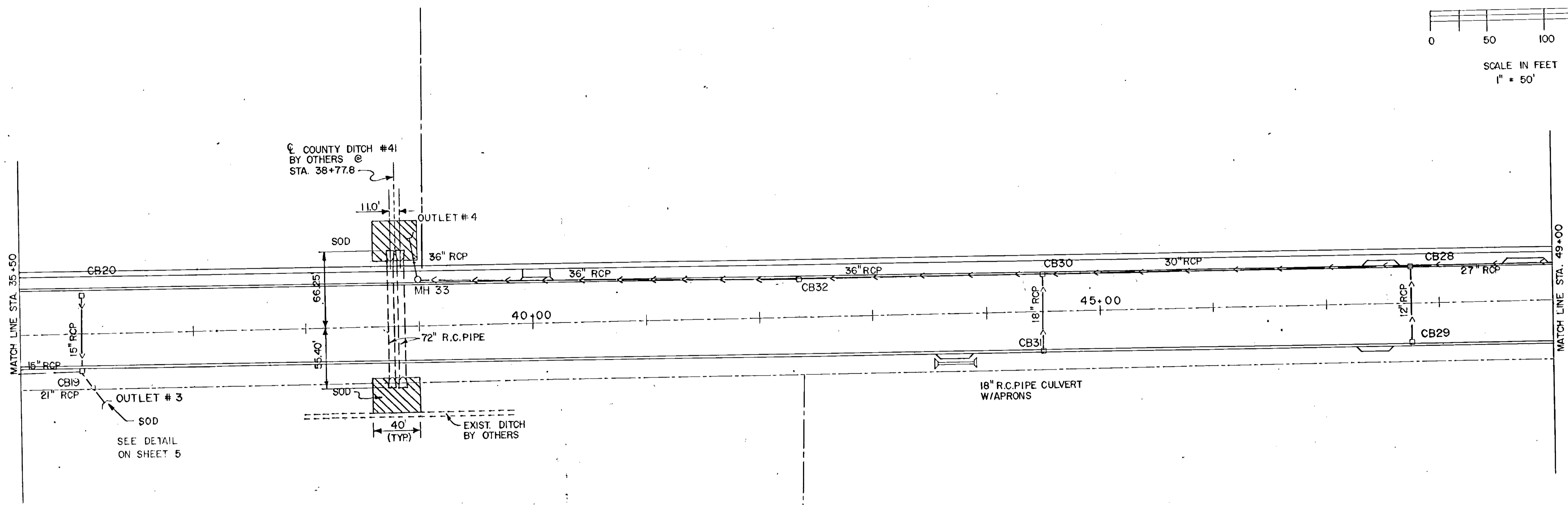
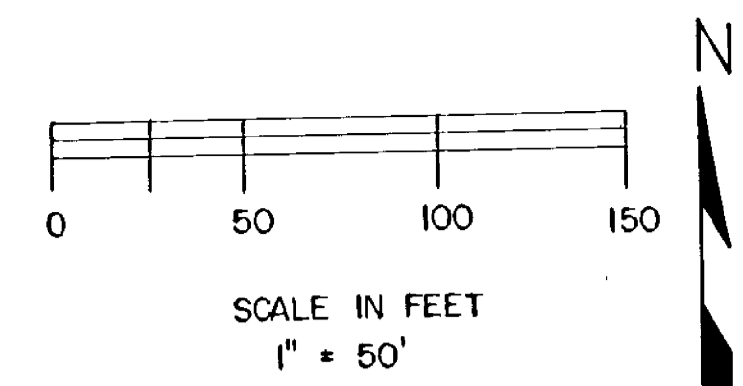
TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

DRAINAGE PLAN
22+36.03 TO 35+50
SHEET NO. 14 OF 43 SHEETS

COMMISSION NO.
9326



AS-BUILT	BY	DATE
STAKING	BY	DATE
ORIGINAL SURVEY	BY	DATE

	CB20 RIM ELEV. 898.09 S. INV. ELEV. 893.54 EXISTING TEL EXISTING GAS 15" x 68.8' RCP CL III 1.50% 0.29%	CB19 RIM ELEV. 898.09 S. INV. ELEV. 892.11 N. INV. ELEV. 892.51 W. INV. ELEV. 892.51 0.19%	OUTLET # 3 INV. ELEV. 892.00 21" x 38.7' RCP CL III (W APRON)	OUTLET # 4 INV. ELEV. 890.96	MH 33 RIM ELEV. 899.83 N. INV. ELEV. 891.03 E. INV. ELEV. 891.03 0.16%	CB32 RIM ELEV. 898.54 W. INV. ELEV. 891.57 E. INV. ELEV. 891.57 0.16%	CB30 RIM ELEV. 897.92 W. INV. ELEV. 891.91 S. INV. ELEV. 893.11 E. INV. ELEV. 892.31 0.41% 18" x 68.8' RCP CL III	CB31 RIM ELEV. 897.92 N. INV. ELEV. 893.39	CB28 RIM ELEV. 898.92 W. INV. ELEV. 893.03 S. INV. ELEV. 894.23 E. INV. ELEV. 893.23 0.52% 12" x 68.8' RCP CL III	CB29 RIM ELEV. 898.92 N. INV. ELEV. 894.59	
900											900
895											895
890											890
900											900
895											895
890											890

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL CGN

CHECKED
RCL

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

Ronald King
DATE 8/1/87 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

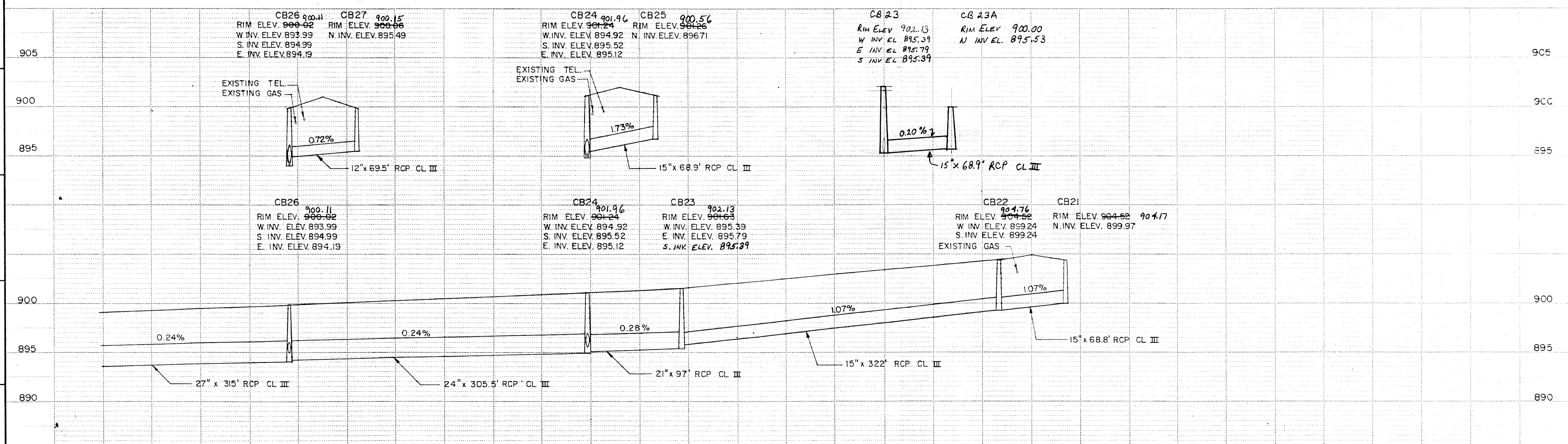
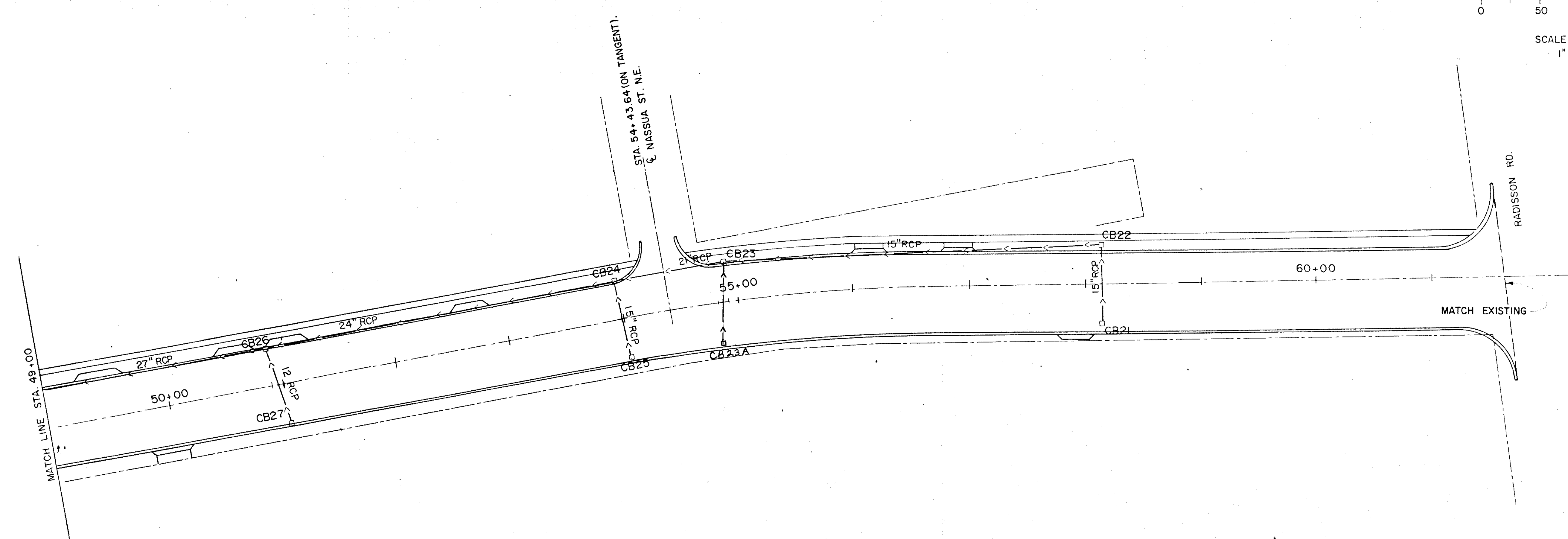
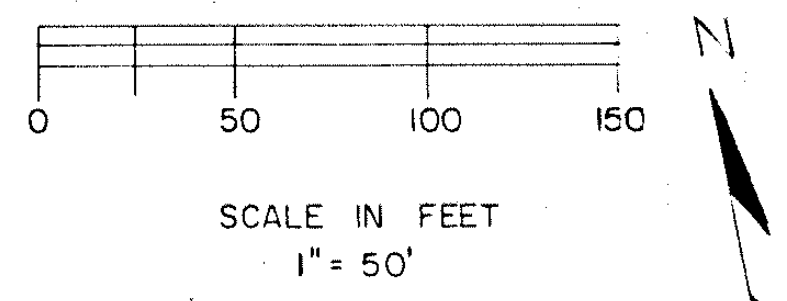
TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

DRAINAGE PLAN
35+50 TO 49+00

SHEET NO. 15 OF 43 SHEETS

COMMISSION NO.
9326



ORIGINAL SURVEY	BY	DATE	FIELD BOOK
STAKING	BY	DATE	FIELD BOOK
AS BUILT	BY	DATE	FIELD BOOK

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL CGN

CHECKED
RCL

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

Ronald C. King
DATE 8/1/89 REG. NO. 3092

TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

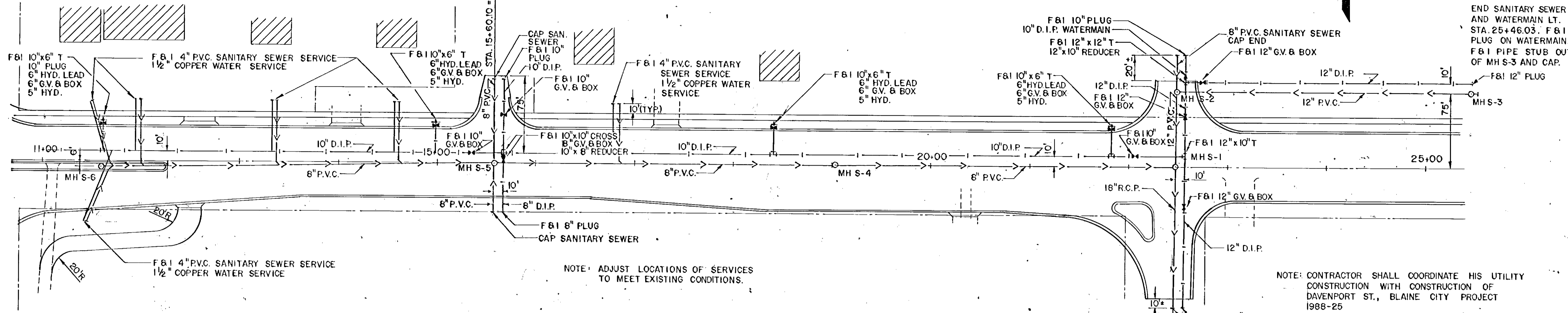
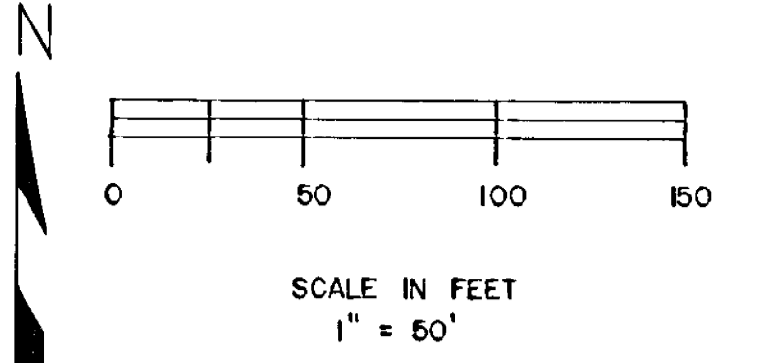
ANOKA COUNTY,
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87

DRAINAGE PLAN
49+00 TO 62+00

SHEET NO. 16 OF 43 SHEETS

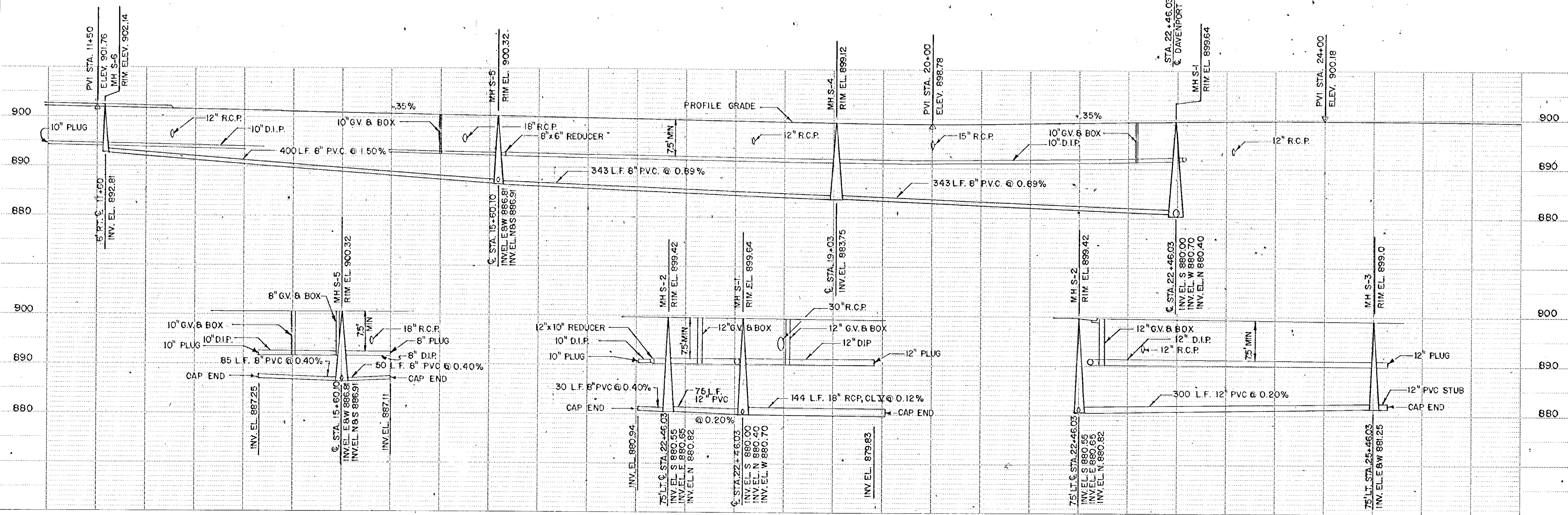
COMMISSION NO.
9326



NOTE: ADJUST LOCATIONS OF SERVICES TO MEET EXISTING CONDITIONS.

NOTE: CONTRACTOR SHALL COORDINATE HIS UTILITY CONSTRUCTION WITH CONSTRUCTION OF DAVENPORT ST., BLAINE CITY PROJECT 1988-25

END SANITARY SEWER AND WATERMAIN LT. STA. 25+46.03. F&I PLUG ON WATERMAIN. F&I PIPE STUB OUT OF MH S-3 AND CAP.



NO.	DATE	BY	DESCRIPTION

DESIGNED: DAVAN
 RCL OGN
 CHECKED:
 RCL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A QUALY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

David C. King
 DATE: 8/1/88
 REG. NO. 9092

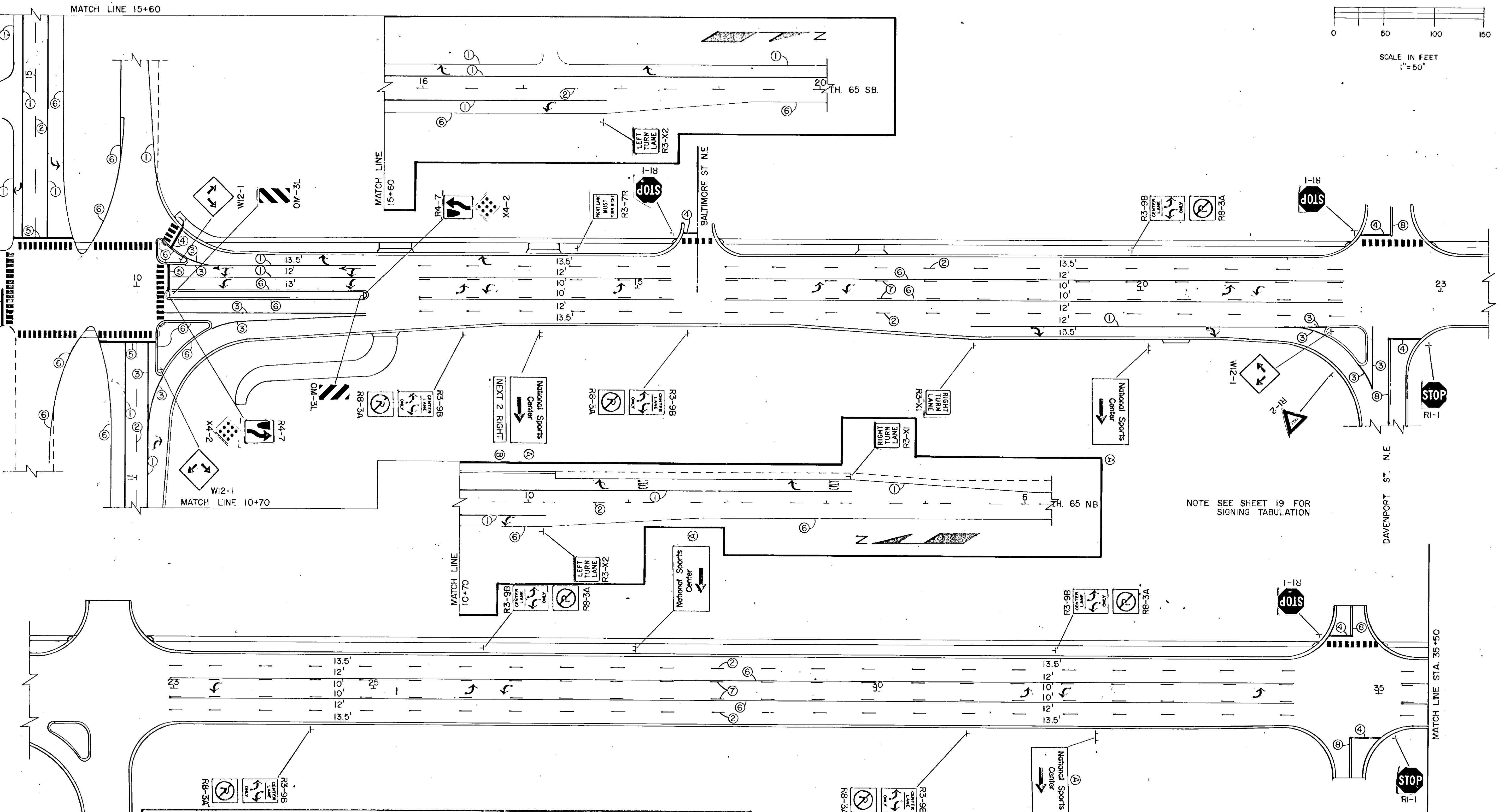
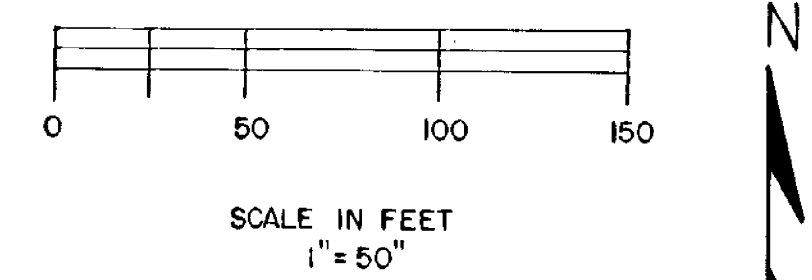
ANOKA COUNTY
 ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON
 AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87 25:00
SANITARY SEWER AND WATERMAIN
 SHEET NO. 17 OF 43 SHEETS

COMMISSION NO. **9326**



NOTE SEE SHEET 19 FOR SIGNING TABULATION

PAVEMENT MARKING		QUANTITY						
ITEM	SPEC. NO.	PLAN LEGEND	UNIT	9+00 TO 23+00	23+00 TO 35+00	35+00 TO 49+00	49+00 TO 62+00	TOTAL
PAV'T MESSAGE (LT. ARROW) POLY PREFORM	0564.602	④	EACH	13	6	7	8	34
PAV'T MESSAGE (RT. ARROW) POLY PREFORM	0564.602	⑤	EACH	10	-	-	-	10
PAV'T MESSAGE (LT.-THRU ARROW) P-PREF.	0564.602	⑥	EACH	2	-	-	-	2
PAV'T MESSAGE (ONLY) POLY PREFORM	0564.602	⑦	EACH	2	-	-	-	2
4" SOLID LINE WHITE - PAINT	0564.603	①	LIN.FT.	3710	-	-	-	3710
4" BROKEN LINE WHITE - PAINT	0564.603	②	LIN.FT.	3255	2240	2800	2340	10,635
8" SOLID LINE WHITE - PAINT	0564.603	③	LIN.FT.	690	-	-	-	690

PAVEMENT MARKING		QUANTITY						
ITEM	SPEC. NO.	PLAN LEGEND	UNIT	9+00 TO 23+00	23+00 TO 35+00	35+00 TO 49+00	49+00 TO 62+00	TOTAL
12" STOP LINE WHITE - PAINT	0564.603	④	LIN.FT.	125	55	-	-	250
24" STOP LINE WHITE - PAINT	0564.603	⑤	LIN.FT.	140	-	-	-	140
4" SOLID LINE YELLOW - PAINT	0564.603	⑥	LIN.FT.	4110	2240	2800	2340	11,490
4" BROKEN LINE YELLOW - PAINT	0564.603	⑦	LIN.FT.	1740	2240	2800	-	9120
4" DBL SOLID LINE YELLOW - PAINT	0564.603	⑧	LIN.FT.	115	70	-	20	205
CROSSWALK MARKING - POLY PREFORM	0564.604	⑨	SQ. FT.	1575	165	-	120	1860

NO.	DATE	BY	DESCRIPTION

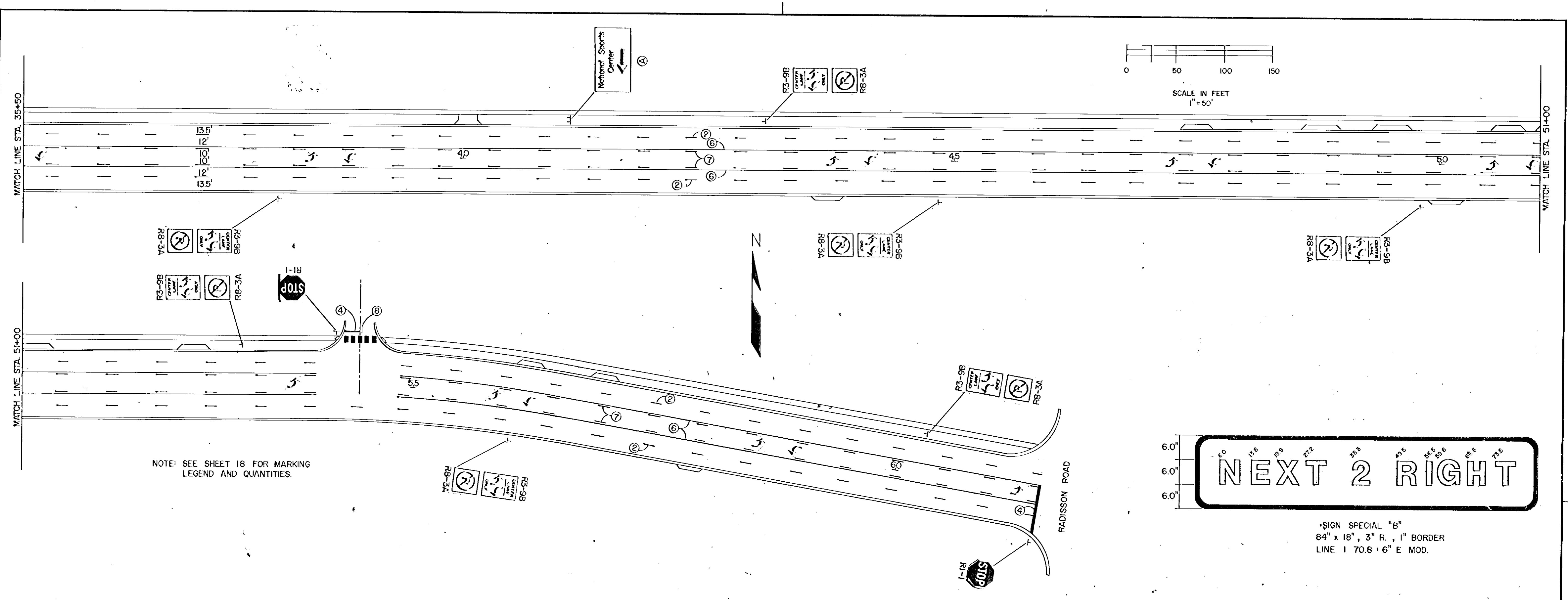
DESIGNED DRAWN RDC CGN
 CHECKED RCL
 I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
Rolp D. Clow
 DATE 8-2-89 REG. NO. 4860

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

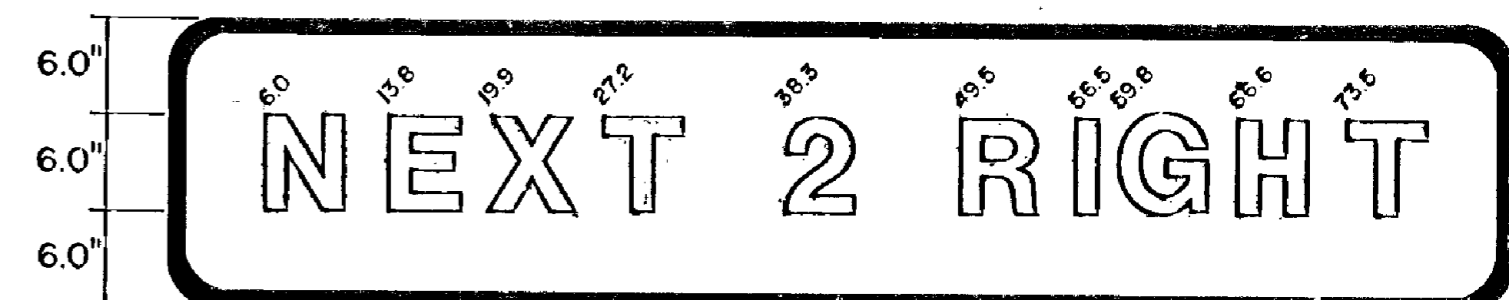
105TH AVE. N.E.
 ANOKA COUNTY

SIGNING AND MARKING PLAN
 SHEET NO. 18 OF 43 SHEETS

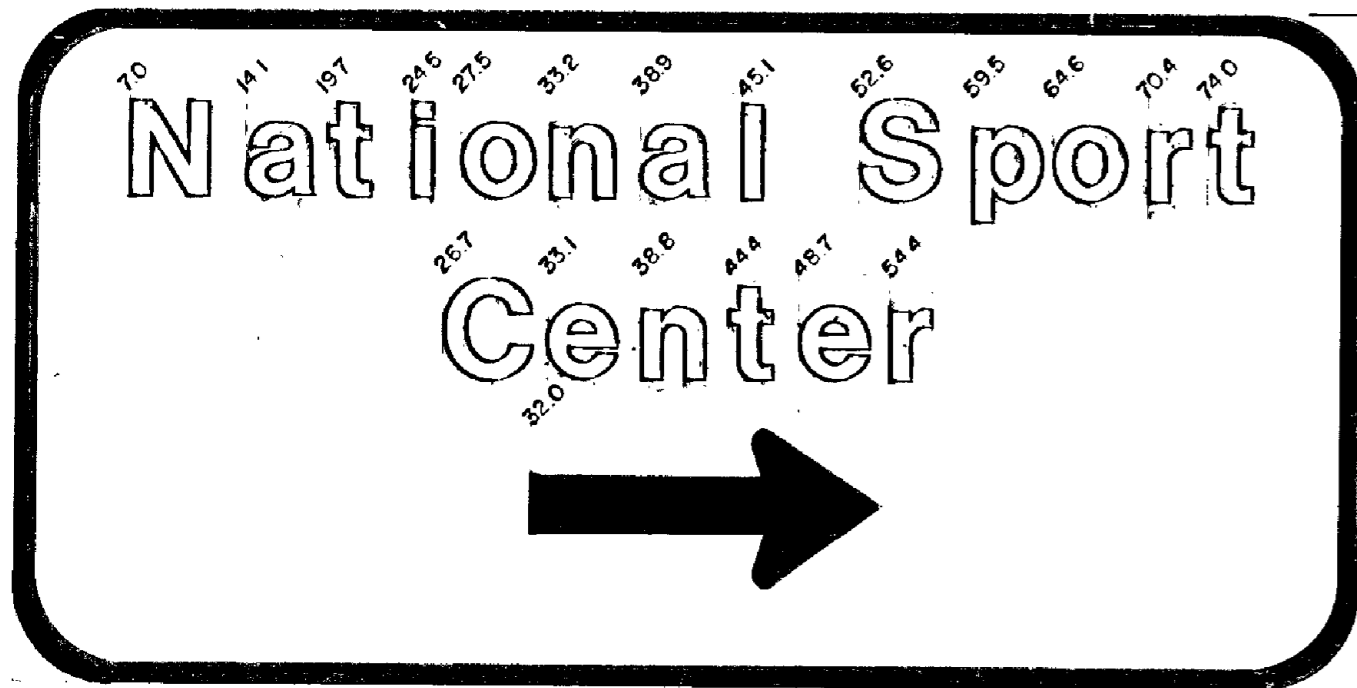
CO. PROJ. NO
 88-22-87
 COMMISSION NO.
 9326



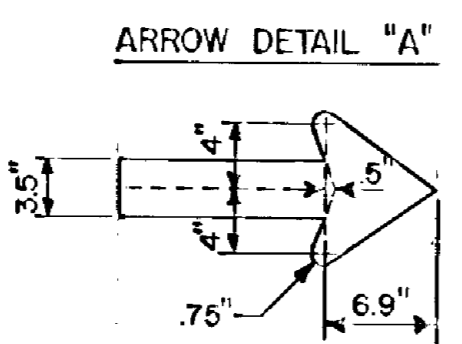
NOTE: SEE SHEET 18 FOR MARKING LEGEND AND QUANTITIES.



*SIGN SPECIAL "B"
84" x 18", 3" R., 1" BORDER
LINE 1 70.8 : 6" E MOD.



SIGN SPECIAL "A"
84" x 42", 6" R., 1.25" BORDER
LINE 1 70.0 : 6" - 4.5" E MOD
LINE 2 30.6 : 6" - 4.5" E MOD
LINE 3 20.0 : SEE ARROW DETAIL "A"
USE LT. OR RT. ARROW AS SHOWN ON PLANS



SIGNS					
CODE NO.	PANEL LEGEND	PANEL SIZE (INCHES)	PANEL AREA (SQ. FT.)	NO. OF SIGNS	TOTAL AREA (SQ. FT.)
R1-1	STOP	30 x 30	6.25	7	43.75
R1-2	YIELD	36 x 36 x 36	3.90	1	3.90
R3-X1	RIGHT TURN LANE	30 x 30	6.25	2	12.50
R3-X2	LEFT TURN LANE	30 x 30	6.25	2	12.50
R3-7R	RIGHT LANE MUST TURN RIGHT	30 x 30	6.25	1	6.25
R8-3A	NO PARKING	24 x 24	4.00	14	56.00
R3-9B	CENTER LANE ONLY	24 x 36	6.00	14	84.00
R4-7	KEEP RIGHT	24 x 30	5.00	2	10.00
W12-1	DOUBLE ARROW	24 x 24	4.00	3	12.00
X4-2	HAZARD MARKER	18 x 18	2.25	2	4.50
OM-3L	OBJECT MARKER	12 x 36	3.00	2	6.00
SPEC (A)	NATIONAL SPORT CENTER	84 x 42	24.50	5	122.50
SPEC (B)	NEXT 2 RIGHT	84 x 18	10.50	1	10.50
				TOTAL	384.40

NOTE: SIGNS SPEC. (A) (B) (C) ARE TYPE D. ALL OTHER SIGNS ARE TYPE C.

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
RDC JEC
CHECKED
RCL
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
Boyd D. Clora
DATE 8-1-89 REG. NO. 4860

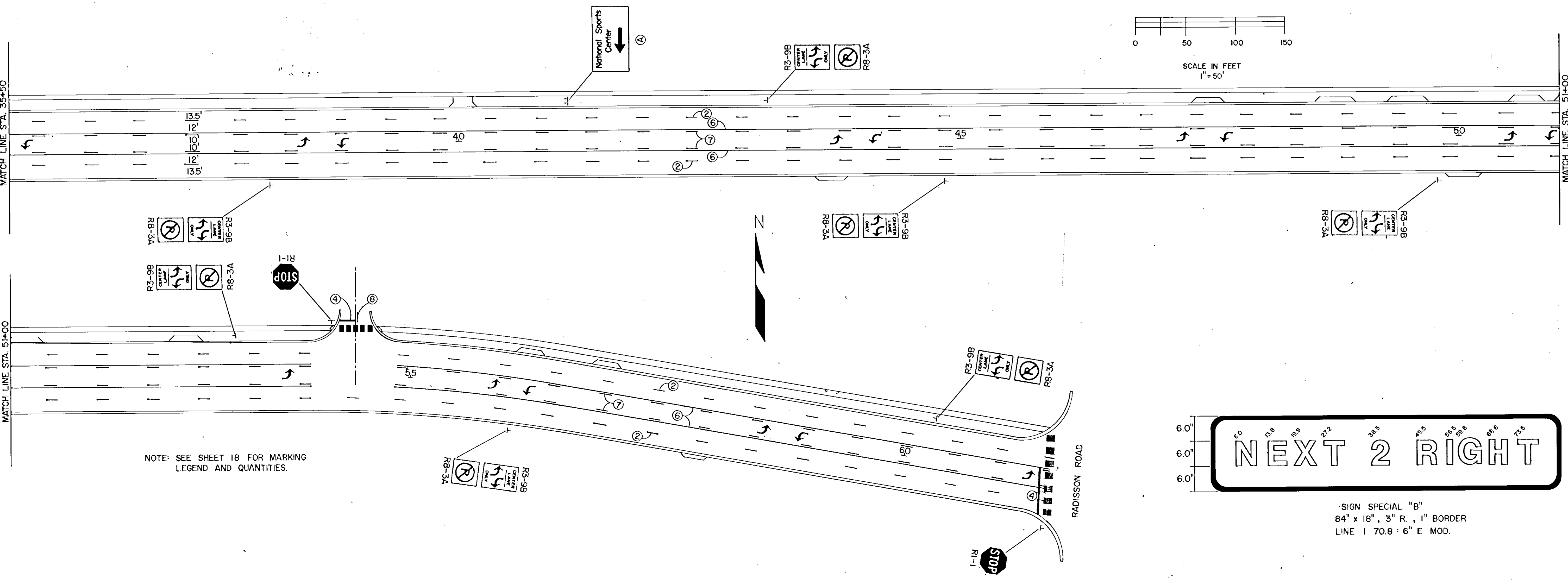
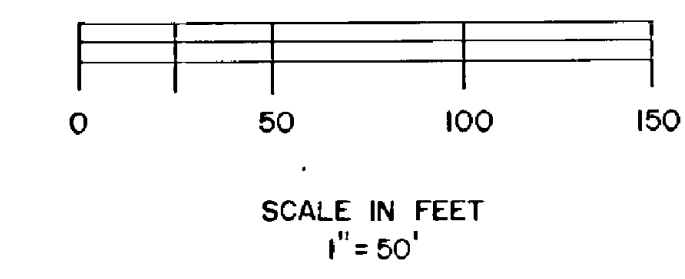
TKDA
TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
ENGINEERS ARCHITECTS PLANNERS
SAINT PAUL, MINNESOTA

105TH AVE. N.E.
ANOKA COUNTY

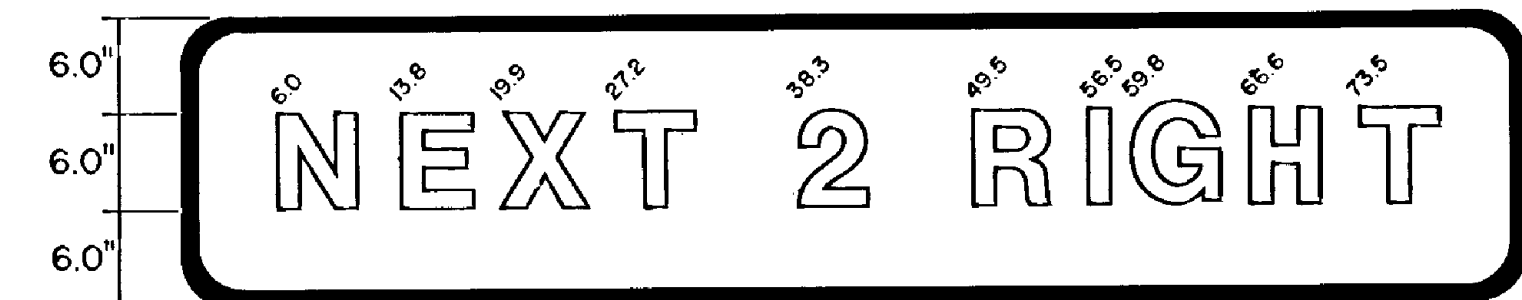
SIGNING AND MARKING PLAN
SHEET NO. 19 OF 43 SHEETS

CO. PROJ. NO. 88-22-87

COMMISSION NO. 9326



NOTE: SEE SHEET 18 FOR MARKING LEGEND AND QUANTITIES.

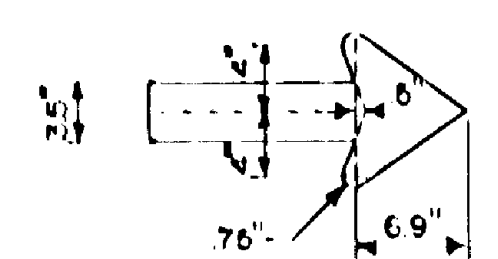


SIGN SPECIAL "B"
84" x 18", 3" R., 1" BORDER
LINE 1 70.8 : 6" E MOD.



SIGN SPECIAL "A"
84" x 42", 6" R., 1 1/2" BORDER
LINE 1 70.0 : 6" - 4.5" E MOD
LINE 2 30.6 : 6" - 4.5" E MOD
LINE 3 20.0 : SEE ARROW DETAIL "A"
USE LT. OR RT. ARROW AS SHOWN ON PLANS

ARROW DETAIL "A"



SIGNS					
CODE NO.	PANEL LEGEND	PANEL SIZE (INCHES)	PANEL AREA (SQ. FT.)	NO. OF SIGNS	TOTAL AREA (SQ. FT.)
R1-1	STOP	30 x 30	6.25	7	43.75
R1-2	YIELD	36 x 36 x 36	3.90	1	3.90
R3-X1	RIGHT TURN LANE	30 x 30	6.25	2	12.50
R3-X2	LEFT TURN LANE	30 x 30	6.25	2	12.50
R3-7R	RIGHT LANE MUST TURN RIGHT	30 x 30	6.25	1	6.25
R8-3A	NO PARKING	24 x 24	4.00	14	56.00
R3-9B	CENTER LANE ONLY	24 x 36	6.00	14	84.00
R4-7	KEEP RIGHT	24 x 30	5.00	2	10.00
W12-1	DOUBLE ARROW	24 x 24	4.00	3	12.00
X4-2	HAZARD MARKER	18 x 18	2.25	2	4.50
OM-3L	OBJECT MARKER	12 x 36	3.00	2	6.00
SPEC (A)	NATIONAL SPORT CENTER	84 x 42	24.50	5	122.50
SPEC (B)	NEXT 2 RIGHT	84 x 18	10.50	1	10.50
				TOTAL	384.40

NOTE: SIGNS SPEC. (A) & (B) ARE TYPE D.
ALL OTHER SIGNS ARE TYPE C.

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED	RDC	DRAWN	JEC
CHECKED	RCL		

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

Robert D. Olson
DATE 8-1-89 REG. NO. 4860

TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

105TH AVE. N.E.
ANOKA COUNTY

SIGNING AND MARKING PLAN
SHEET NO. 19-A OF 43 SHEETS

COMMISSION NO.
9326

NOTES:

- ALL SIGNAL FACES SHALL BE 12" 3 SECTION R-Y-G EXCEPT FACE NO.'S 1-1, 1-2, 5-1, 5-2 WHICH SHALL BE 12" 3 SECTION RLTA - YLTA - GLTA AND FACE NO.'S 3-1, 3-3, 4-1 4-2 WHICH SHALL BE 12" 4 SECTION R-Y-G-GLTA
- ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS.
- SEE SPECIAL PROVISIONS FOR STATE FURNISHED EQUIPMENT.
- ALL PEDESTRIAN INDICATIONS SHALL BE 12" X 12".
- LUMINAIRE (1) SHALL HAVE A PHOTOELECTRIC CELL AND CHECK SWITCH.
- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- HAND HOLES NO. 8, 10 & 11 SHALL HAVE GRAY IRON FRAME AND COVER CASTINGS.
- INPLACE SIGNAL SYSTEM ITEMS THAT SHALL REMAIN IN SERVICE AS PART OF THE PROPOSED SYSTEM ARE SHOWN WITH UNSCREENED LINES. ITEMS THAT ARE TO BE REMOVED, SALVAGED, OR ABANDONED ARE SHOWN WITH SCREENED LINES.

LOOP DETECTORS			
NUMBER	SIZE	FUNCTION	LOCATION
D1-1	2-6'X6'	1	0' 8 35'
D2-1	6'X6'	1	480'
D2-2	6'X6'	1	480'
D4-1 *	4-6'X6'	2	0' 8 10'
D5-1	2-6'X6'	1	0' 8 35'
D6-1	6'X6'	1	0' 8 440'
D6-2	6'X6'	1	0' 8 440'
D3-1	2-6'X6'	3	120'
D3-2	2-6'X6'	1	0' 8 15'
D3-3	2-6'X6'	1	0' 8 15'
D3-4	6'X6'	4	120'

* DETECTORS INPLACE
 LOOP DETECTOR FUNCTIONS:
 1 = CALL AND EXTEND.
 2 = DELAYED CALL-IMMEDIATE EXTEND.
 3 = EXTEND ONLY.
 4 = QUEUE DETECTOR
 LOCATION = DISTANCE FROM STOP LINE TO DETECTORS.

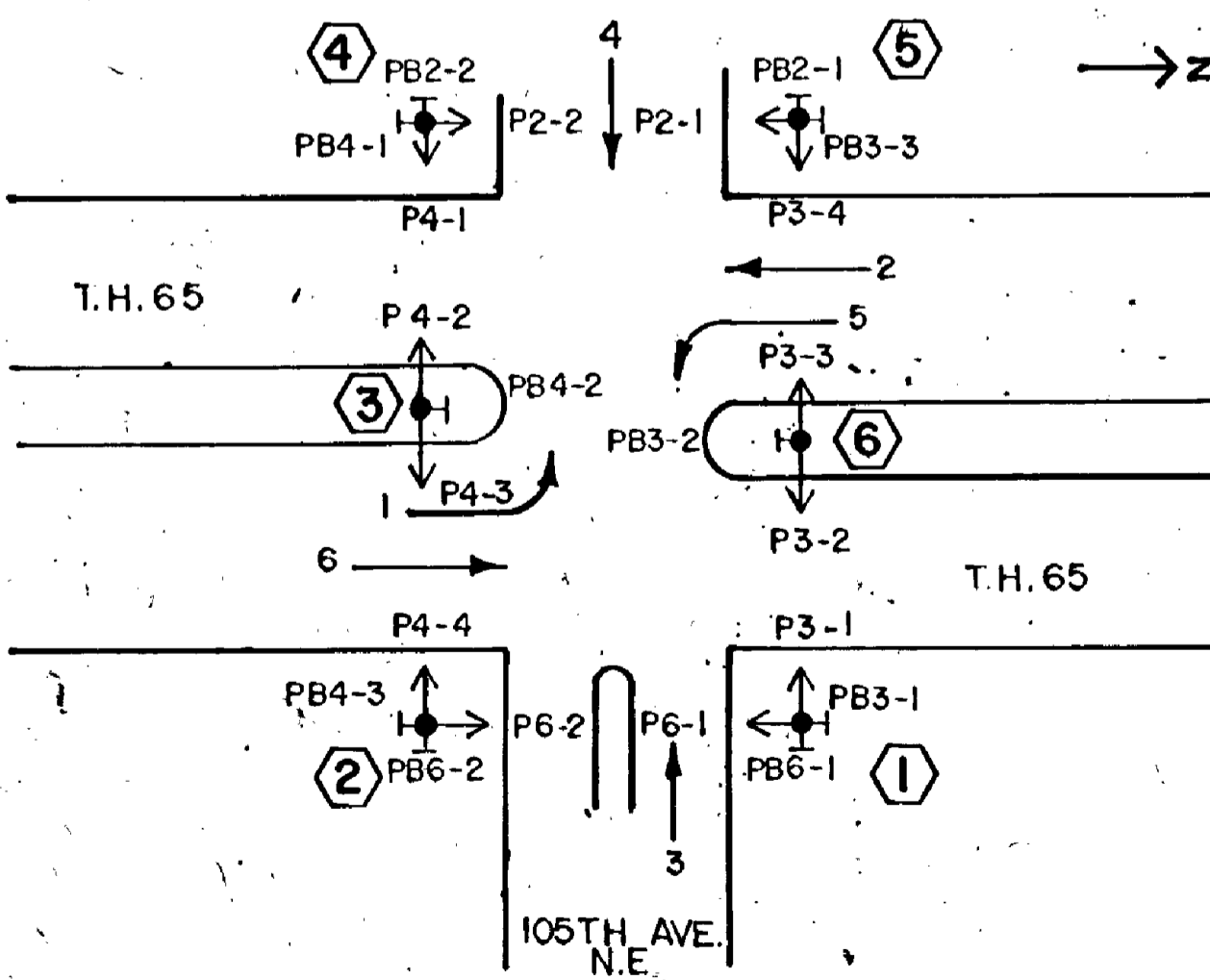
(3) TYPE P90-A-25
 P90 POLE FOUNDATION
 1- ONE WAY SIGNAL OVERHEAD
 TYPE 30A - POLE MOUNTED -90°
 TYPE 10A - POLE MOUNTED -0°
 TYPE 10B - POLE MOUNTED -270°
 1 PEDESTRIAN PUSH BUTTON WITH SIGN (RIO-4C)
 EXTEND INTO H.H.15:
 3" R.S.C.
 2-12/C#12
 2-3/C#12

(6) TYPE P90-A-30
 P90 POLE FOUNDATION
 1- ONE WAY SIGNAL OVERHEAD
 TYPE 30A - POLE MOUNTED -90°
 TYPE 10A - POLE MOUNTED -0°
 TYPE 10B - POLE MOUNTED -270°
 1- PEDESTRIAN PUSH BUTTON WITH SIGN (RIO-4C)
 EXTEND INTO H.H.3:
 3" R.S.C.
 2-12/C#12
 2-3/C#12

(1) TYPE P100-A-30-D40-9 (DAVIT AT 355°)
 P90 POLE FOUNDATION
 1- ONE WAY SIGNALS OVERHEAD
 TYPE 10B - POLE MOUNTED -0°
 TYPE 10B - POLE MOUNTED -270°
 2- PEDESTRIAN PUSH BUTTONS WITH SIGNS (RIO-4C)
 LUMINAIRE - 250 WATT H.P.S. - P.E.C.
 STREET LIGHT CHECK SWITCH
 EXTEND INTO H.H.1:
 2" R.S.C.
 3-1/C #2
 1" R.S.C.
 T.D.W.

(2) 10' SIGNAL PEDESTAL (TYPE ID)
 2 PEDESTRIAN PUSH BUTTONS WITH SIGNS (RIO-4C)
 EXTEND INTO H.H.11:
 3" R.S.C.
 1-12/C#12
 2-3/C#12

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



APPROVED: _____ DATE _____
 DIRECTOR OF TRAFFIC ENGINEERING

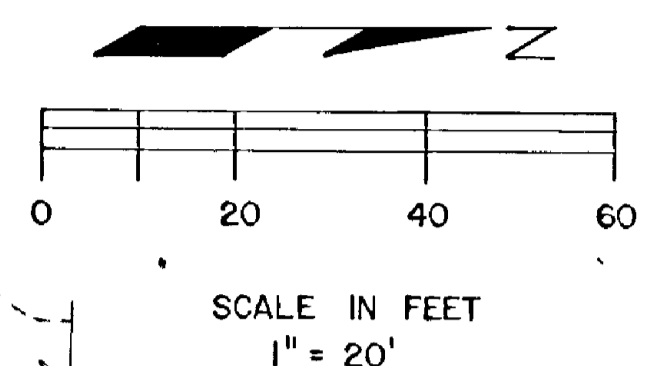
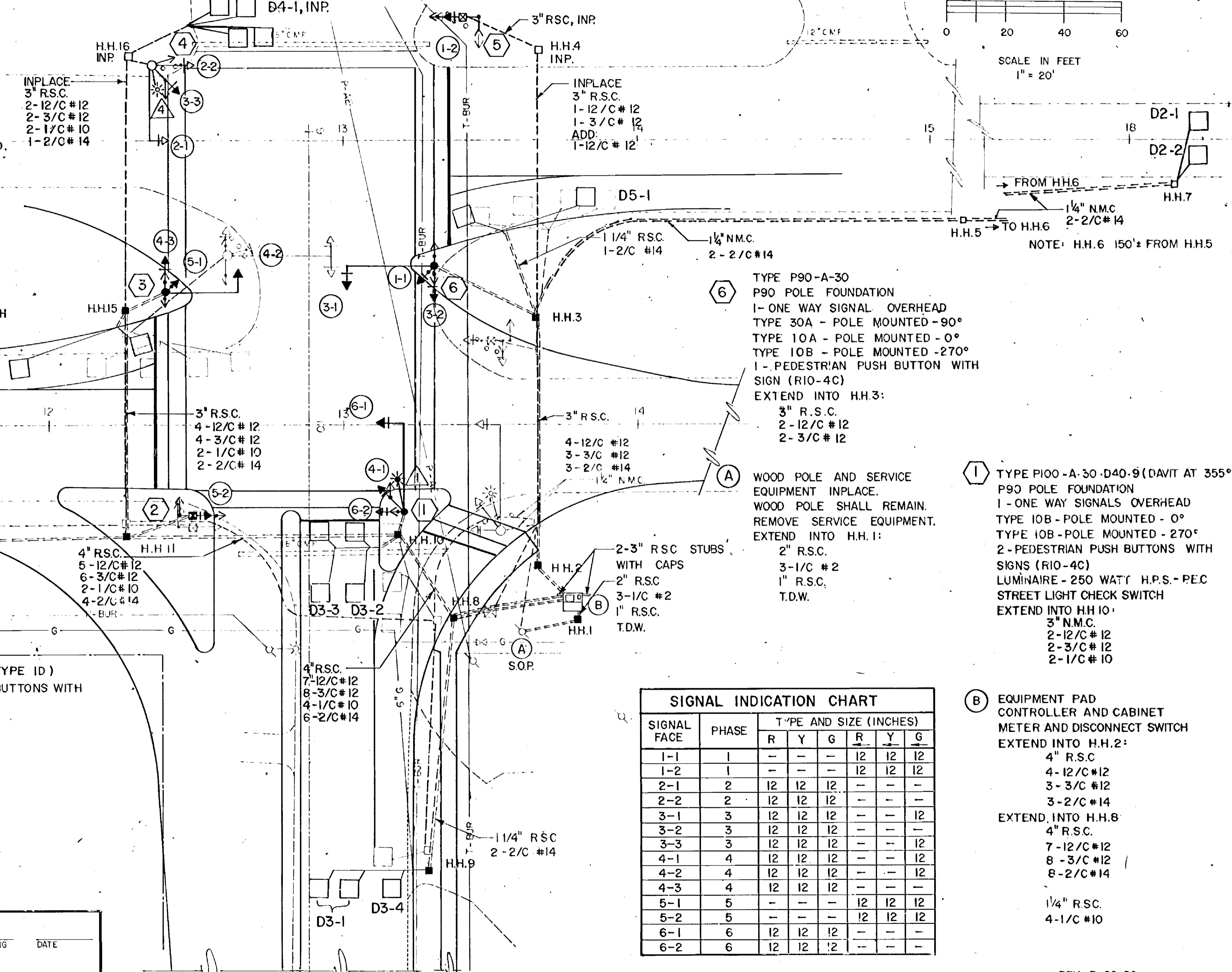
RECOMMENDED FOR APPROVAL: _____ DATE _____
 DISTRICT ENGINEER

(4) FURNISH AND INSTALL
 1- PEDESTRIAN PUSH BUTTON WITH SIGN (RIO-4C)
 MODIFY 10A-POLE MOUNTED AT 270° TO 10B-POLE MOUNTED AT 270°
 EXTEND INTO H.H.16: 1-12/C #12

(4) INPLACE AND TO REMAIN IN SERVICE:
 TYPE A-25-D40-9
 ONE WAY SIGNAL OVERHEAD
 TYPE 10B-POLE MOUNTED AT 0°
 TYPE 10A-POLE MOUNTED AT 270° (TO BE MODIFIED)
 ONE PEDESTRIAN PUSH BUTTON
 EXTENDED INTO H.H.16:
 3" R.S.C., 1-12/C#12
 2-3/C#12, 2-1/C#10
 LUMINAIRE-P.E.C., STREET LIGHT CHECK SWITCH

(5) FURNISH AND INSTALL
 1- SET PEDESTRIAN INDICATIONS
 1- PEDESTRIAN PUSH BUTTON WITH SIGN (RIO-4C)
 EXTEND INTO H.H.4:
 1-12/C#12
 MODIFY SIGNAL PEDESTAL (TYPE 1B) TO SIGNAL PEDESTAL (TYPE 1D)

(5) INPLACE AND TO REMAIN IN SERVICE:
 SIGNAL PEDESTAL (TYPE 1B) TO BE MODIFIED
 1- PEDESTRIAN PUSH BUTTON
 EXTENDED INTO H.H.4:
 3" R.S.C.
 1-12/C #12
 1-3/C #12



SIGNAL INDICATION CHART							
SIGNAL FACE	PHASE	TYPE AND SIZE (INCHES)					
		R	Y	G	R	Y	G
1-1	1	-	-	-	12	12	12
1-2	1	-	-	-	12	12	12
2-1	2	12	12	12	-	-	-
2-2	2	12	12	12	-	-	-
3-1	3	12	12	12	-	-	12
3-2	3	12	12	12	-	-	-
3-3	3	12	12	12	-	-	12
4-1	4	12	12	12	-	-	-
4-2	4	12	12	12	-	-	-
4-3	4	12	12	12	-	-	-
5-1	5	-	-	-	12	12	12
5-2	5	-	-	-	12	12	12
6-1	6	12	12	12	-	-	-
6-2	6	12	12	12	-	-	-

(B) EQUIPMENT PAD
 CONTROLLER AND CABINET
 METER AND DISCONNECT SWITCH
 EXTEND INTO H.H.2:
 4" R.S.C.
 4-12/C#12
 3-3/C #12
 3-2/C #14
 EXTEND INTO H.H.8
 4" R.S.C.
 7-12/C#12
 8-3/C#12
 8-2/C#14
 1/4" R.S.C.
 4-1/C #10

REV 3-26-90
 CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION
1	1-16-89	RDC	REVISED SIGNAL INDICATIONS, MAST ARMS & OTHERS

DESIGNED DRAWN: RDC CGN
 CHECKED: RDC
 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: 8-1-89 REG. NO. 4860

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUJALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

SIGNAL PLAN
 INTERSECTION LAYOUT
 SHEET NO. 20 OF 43 SHEETS

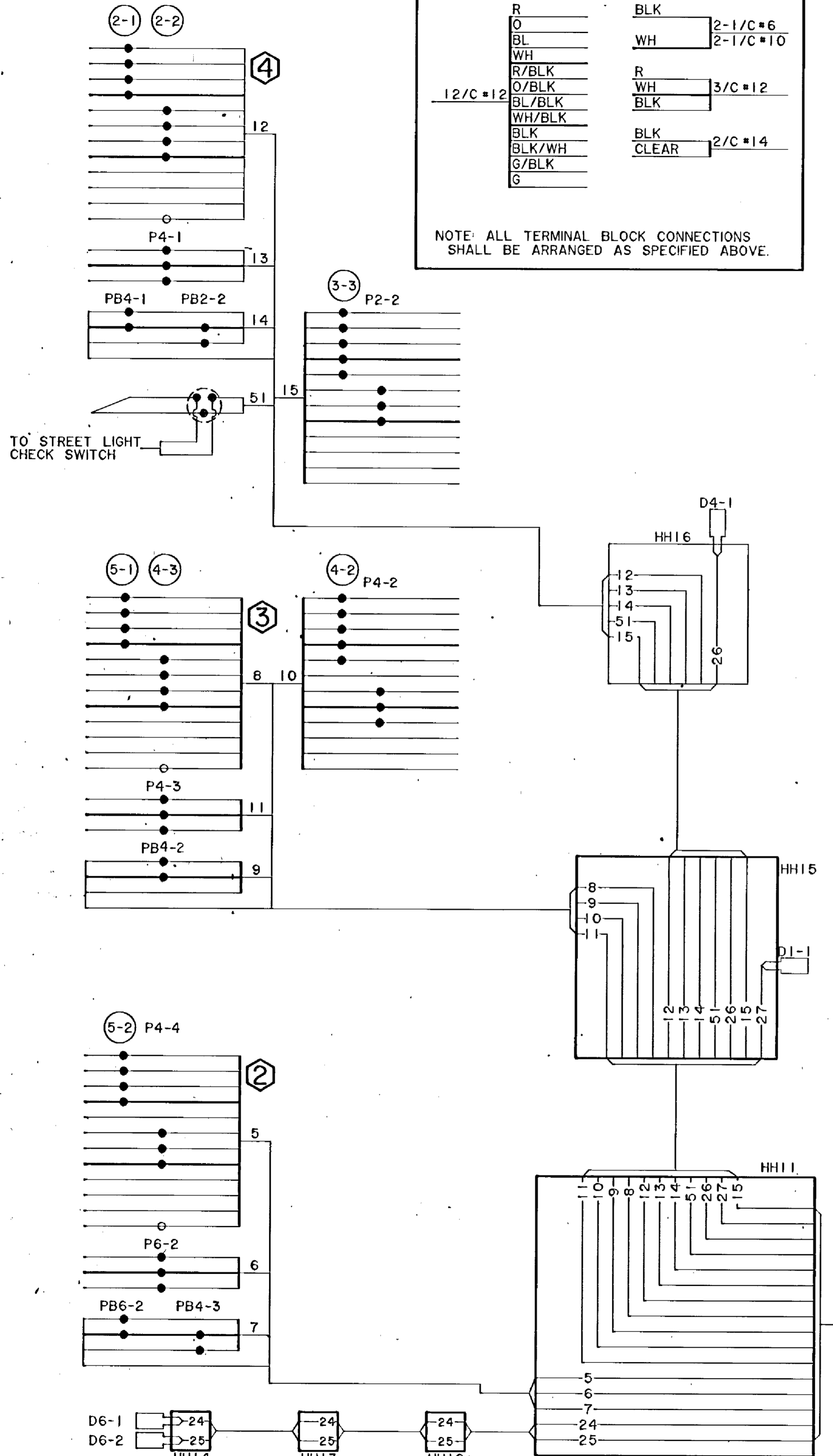
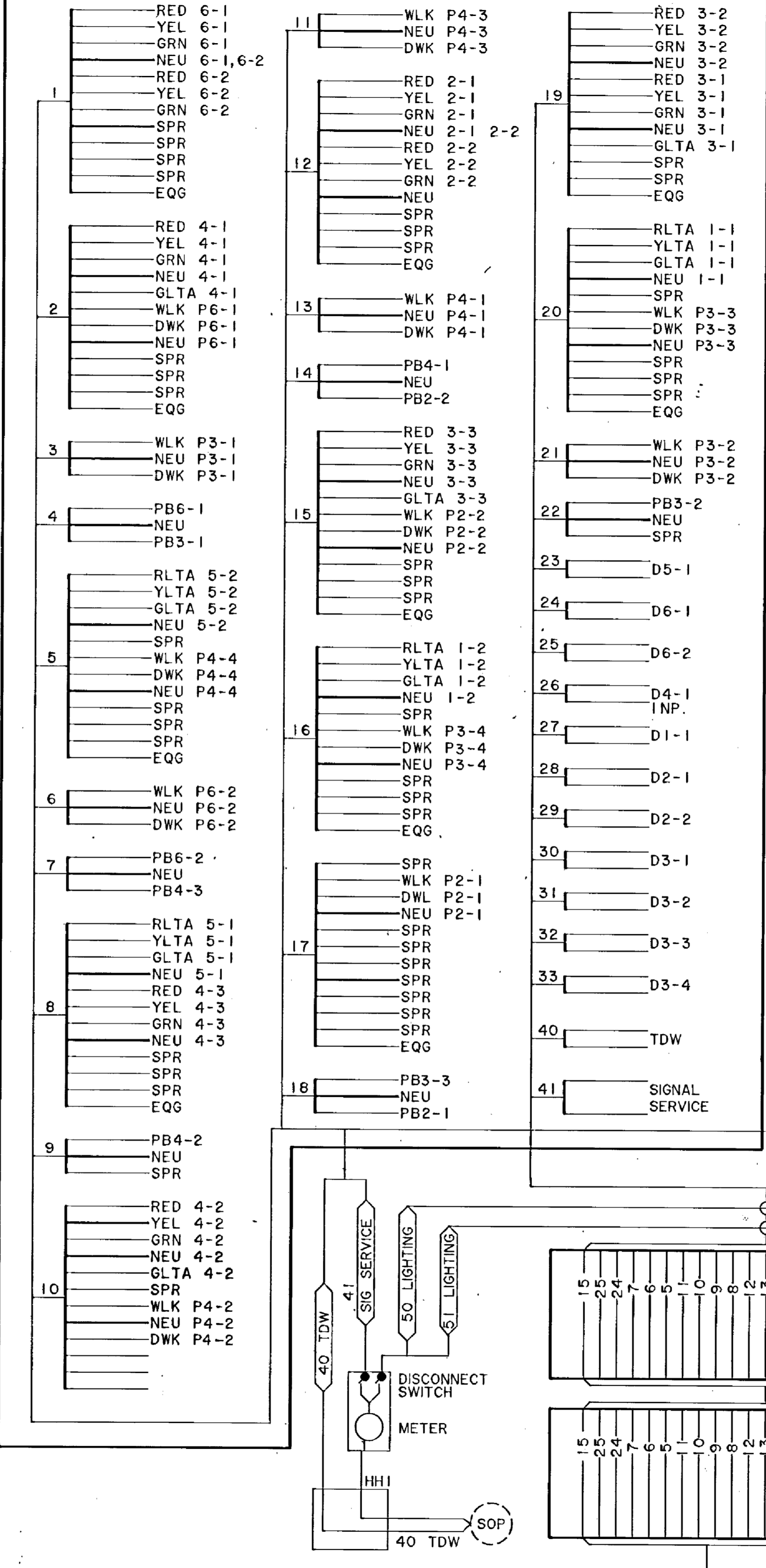
COMMISSION NO.
 9326

CONDUCTOR COLOR CODING

R	BLK	2-1/C#6
O	WH	2-1/C#10
BL	R	3/C#12
WH	WH	3/C#12
R/BLK	BLK	2/C#14
O/BLK	CLEAR	2/C#14
BL/BLK		
WH/BLK		
BLK		
BLK/WH		
G/BLK		
G		

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

CONTROLLER CABINET



ORIGINAL SURVEY BY DATE FIELDBOOK BY DATE
 STAKING BY DATE FIELDBOOK BY DATE
 AS BUILT BY DATE FIELDBOOK BY DATE

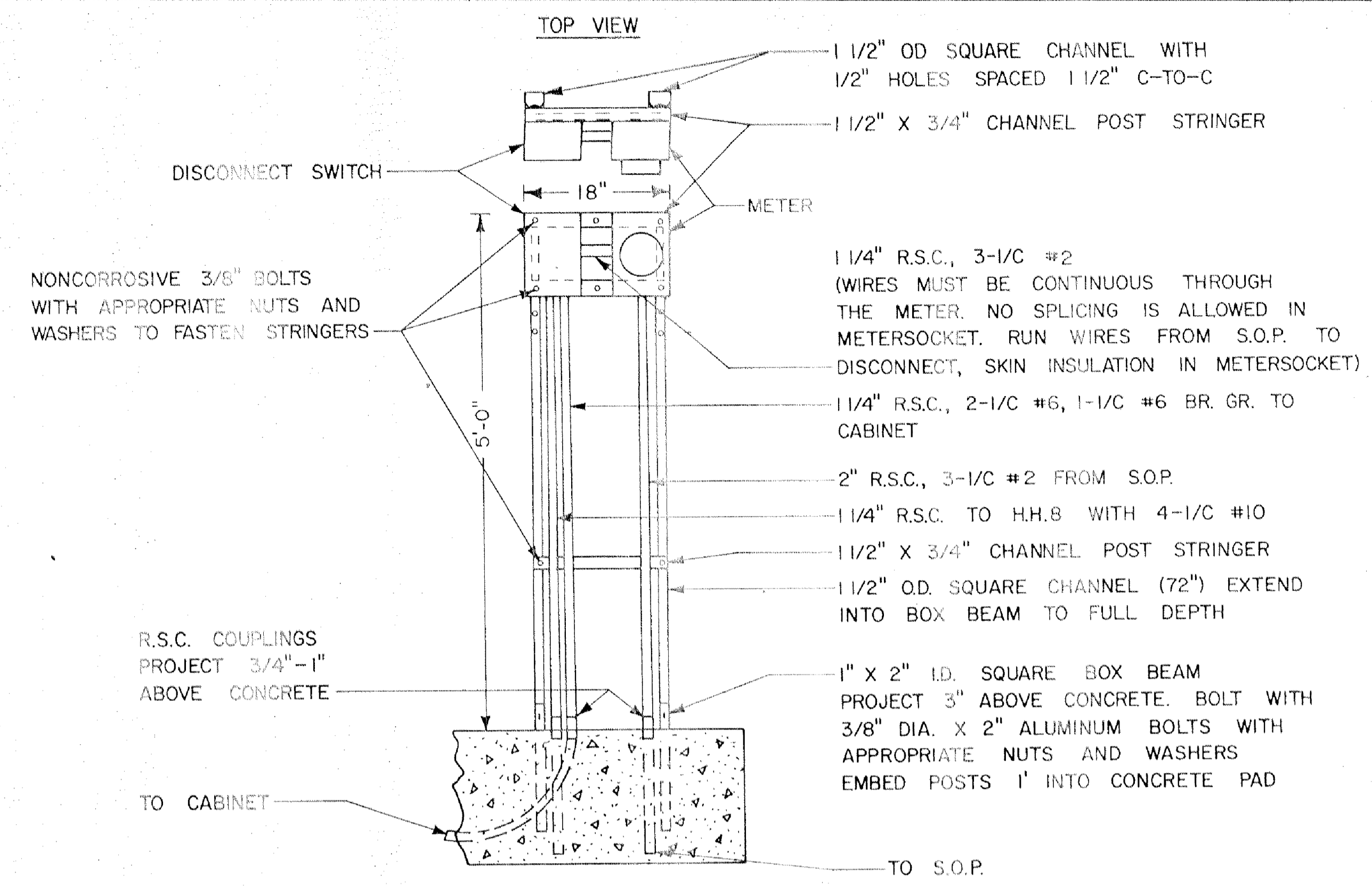
NO.	DATE	BY
1	11-16-89	RDC

DESIGNED JEB
 DRAWN BLK
 CHECKED JEB
 DATE 11-16-89
 REG. NO. 8943

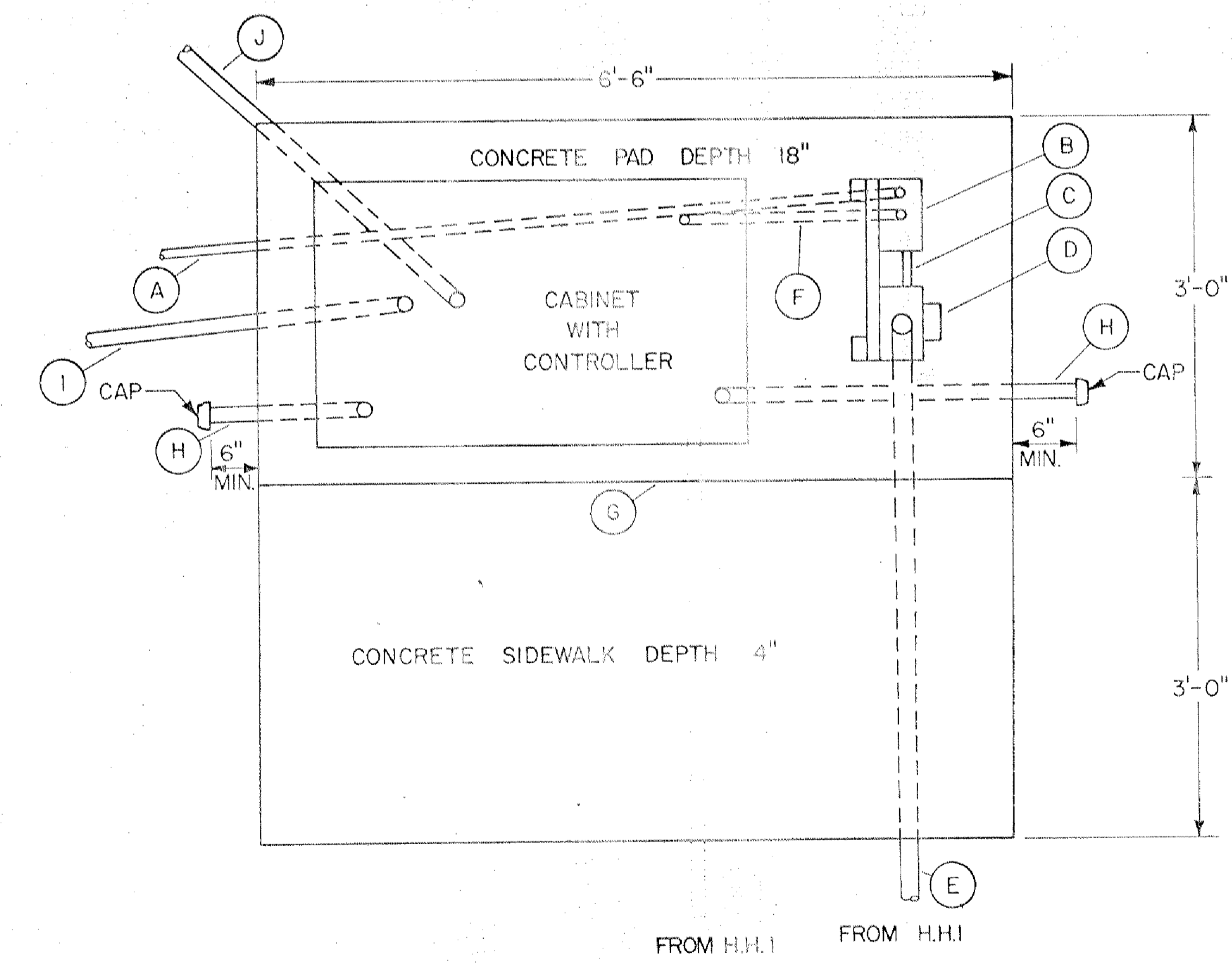
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

SIGNAL PLAN
 FIELD WIRING DIAGRAM
 SHEET NO. 21 OF 43 SHEETS
 CO. PROJ. NO. 88-22-87
 COMMISSION NO. 9326



MOUNTING BRACKET FOR DISCONNECT SWITCH AND METER



- (A) 1 1/4" R.S.C. TO H.H.8 WITH LUMINAIRE CABLES
- (B) DISCONNECT SWITCH
- (C) 1 1/4" R.S.C. WITH 3-1/2" #2
- (D) METER
- (E) 2" R.S.C. WITH 3-1/2" #2
- (F) 1 1/4" R.S.C. 2-1/2" #6 AND 1-1/2" #6 BR. GR.
- (G) PREFORMED JOINT FILLER
- (H) 3" R.S.C. STUBS WITH CAPS
- (I) 4" R.S.C., 5-12/C #12, 10-3/C #12, 8-2/C #14 TO H.H.8
- (J) 4" R.S.C., 3-12/C #12, 4-3/C #12, 3-2/C #14 TO H.H.2

CONCRETE PAD WITH CABINET, CONTROLLER, METER AND DISCONNECT SWITCH
SEE INTERSECTION LAYOUTS FOR CONDUIT AND CABLE INFORMATION

PRINTED
NOV 16 1989
Toltz, King, Duvall, Anderson and Associates, Incorporated

CO. PROJ. NO. 88-22-87

ORIGINAL SURVEY	BY	DATE
FIELD BOOK	BY	DATE
AS BUILT	BY	DATE
FIELD BOOK	BY	DATE

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED	RDC	DRAWN	JEC
CHECKED	RDC	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		8-1-89 REG. NO. 4860	

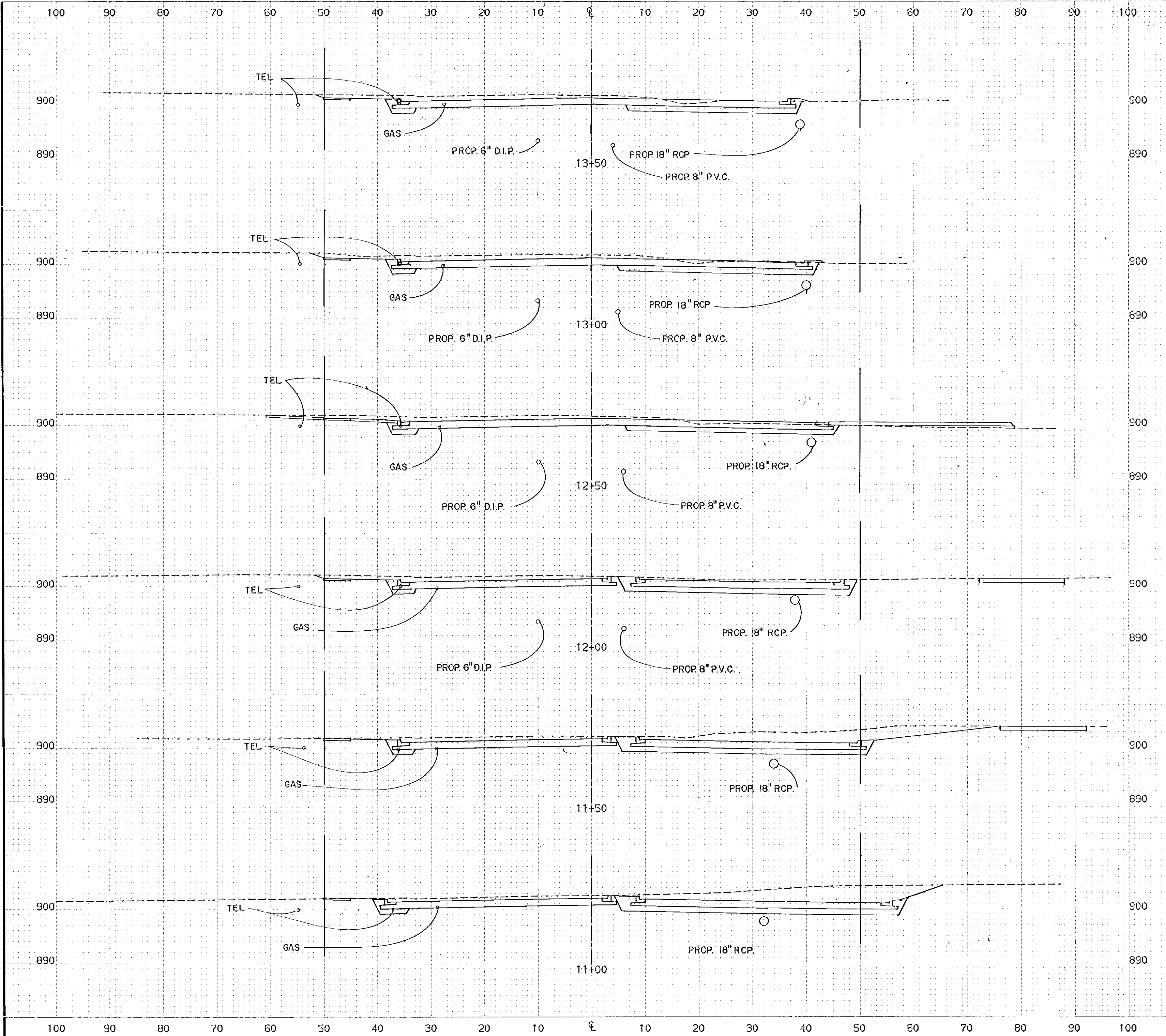
TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

TRAFFIC SIGNAL DETAILS
SHEET NO. 22 OF 43 SHEETS

COMMISSION NO.
9326



COMMON EXC.	SUBGRADE EXC.	MUCK EXC.	GRANULAR BOR.
266	79	0	79
275	80	0	80
323	81	0	81
428	88	0	88
499	103	0	103

ORIGINAL SURVEY	BY	DATE
FIELD BOOK		
STAKING	BY	DATE
FIELD BOOK		
AS-BUILT	BY	DATE
FIELD BOOK		

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV

CHECKED
RCL

HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

Ronald C. King
DATE 8/1/89 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

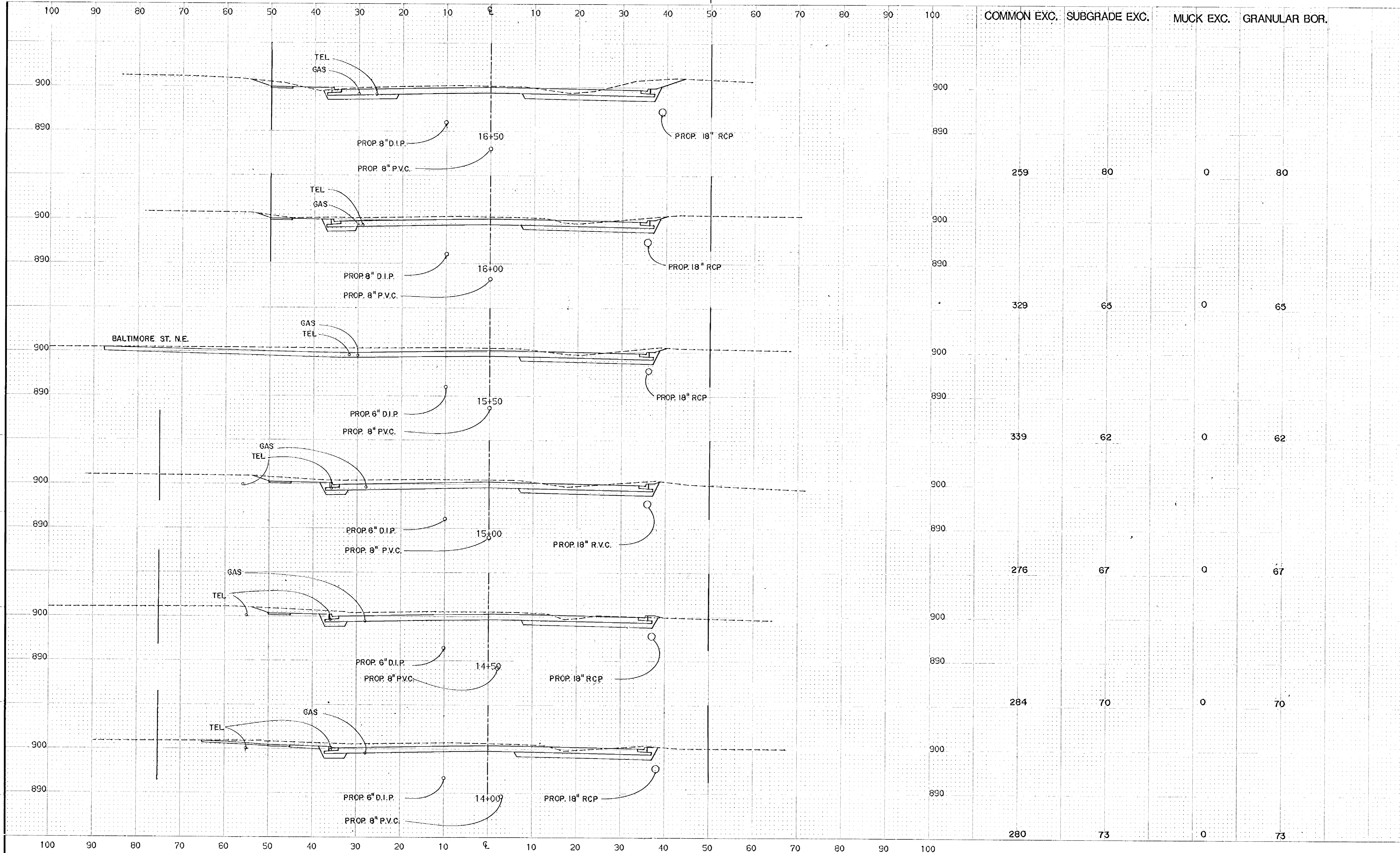
TOLTZ, KING, DUVALL, ANDERSON
AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
11+00 TO 13+50
SHEET NO. 23 OF 43 SHEETS

CO. PROJ. NO. 88-22-87

COMMISSION NO.
9326



COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.

259 80 0 80

329 65 0 65

339 62 0 62

276 67 0 67

284 70 0 70

280 73 0 73

FIELD BOOK BY DATE FIELD BOOK BY DATE FIELD BOOK BY DATE

NO.	DATE	BY	DESCRIPTION

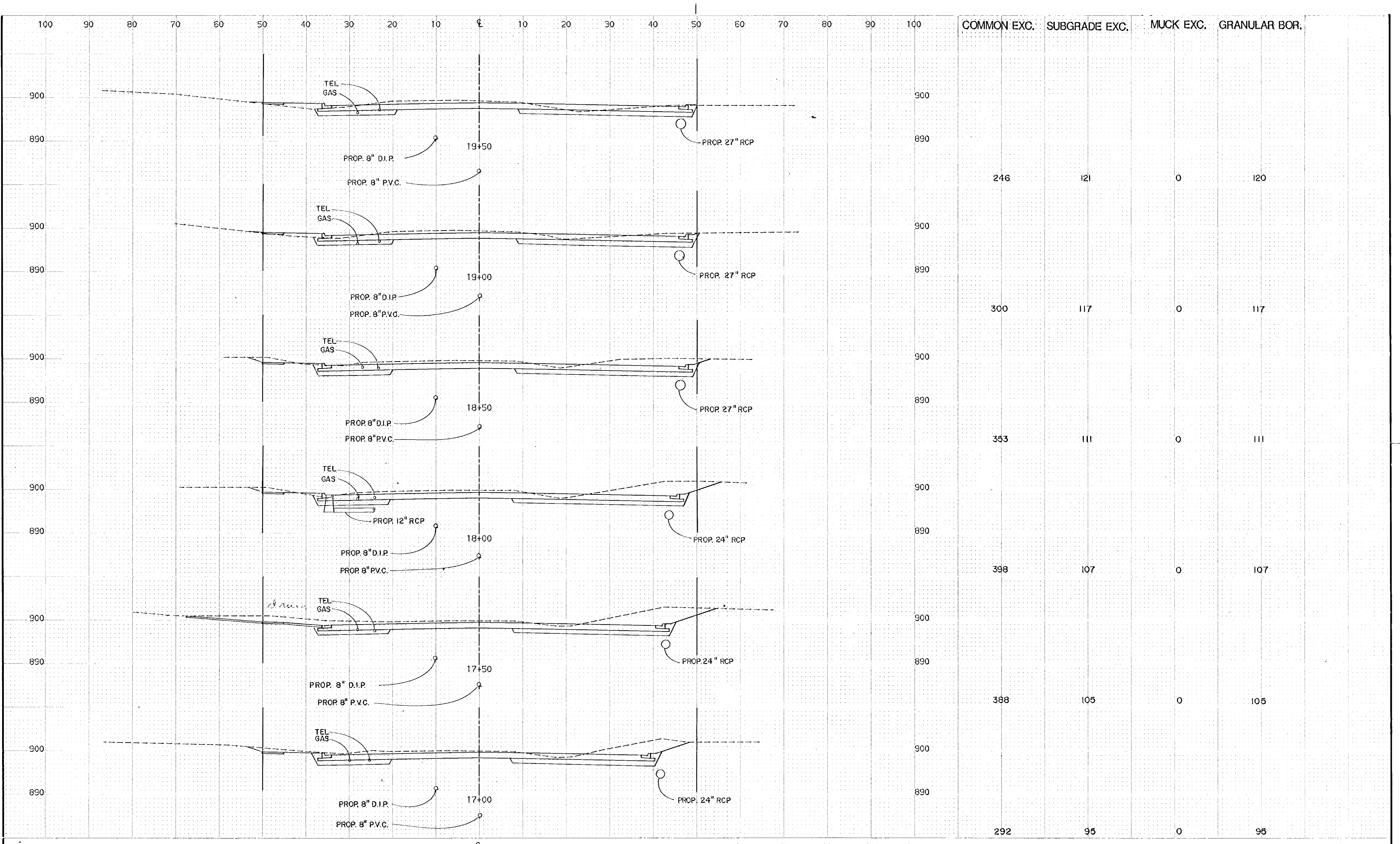
DESIGNED DRAWN
RCL TV
CHECKED
RCL
DATE 8/1/87 REG. NO. 9092

T&K&DA
ENGINEERS ARCHITECTS PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
14+00 TO 16+50
SHEET NO. 24 OF 43 SHEETS

CO. PROJ. NO. 88-22-87
COMMISSION NO. 9326



NO.	DATE	BY	DESCRIPTION

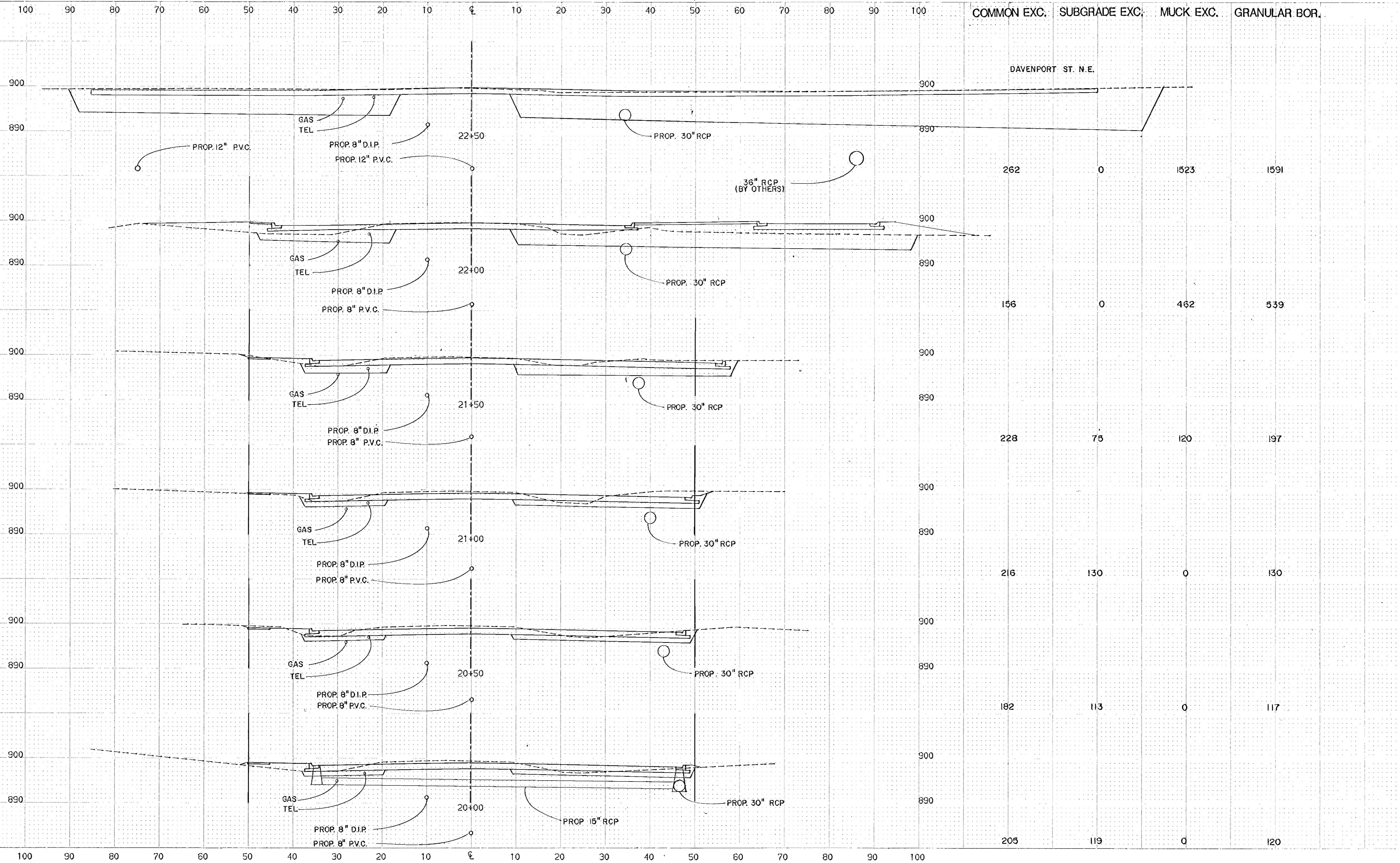
DESIGNED DRAWN
RCL TV
CHECKED
RCL

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
Ronald A. King
DATE 8/1/87 REG. NO. 9092

T&K&DA
ENGINEERS ARCHITECTS PLANNERS
TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
CROSS SECTIONS
17+00 TO 19+50
SHEET NO. 25 OF 43 SHEETS
COMMISSION NO. 9326



COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.

DAVENPORT ST. N.E.

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV
CHECKED
RCL

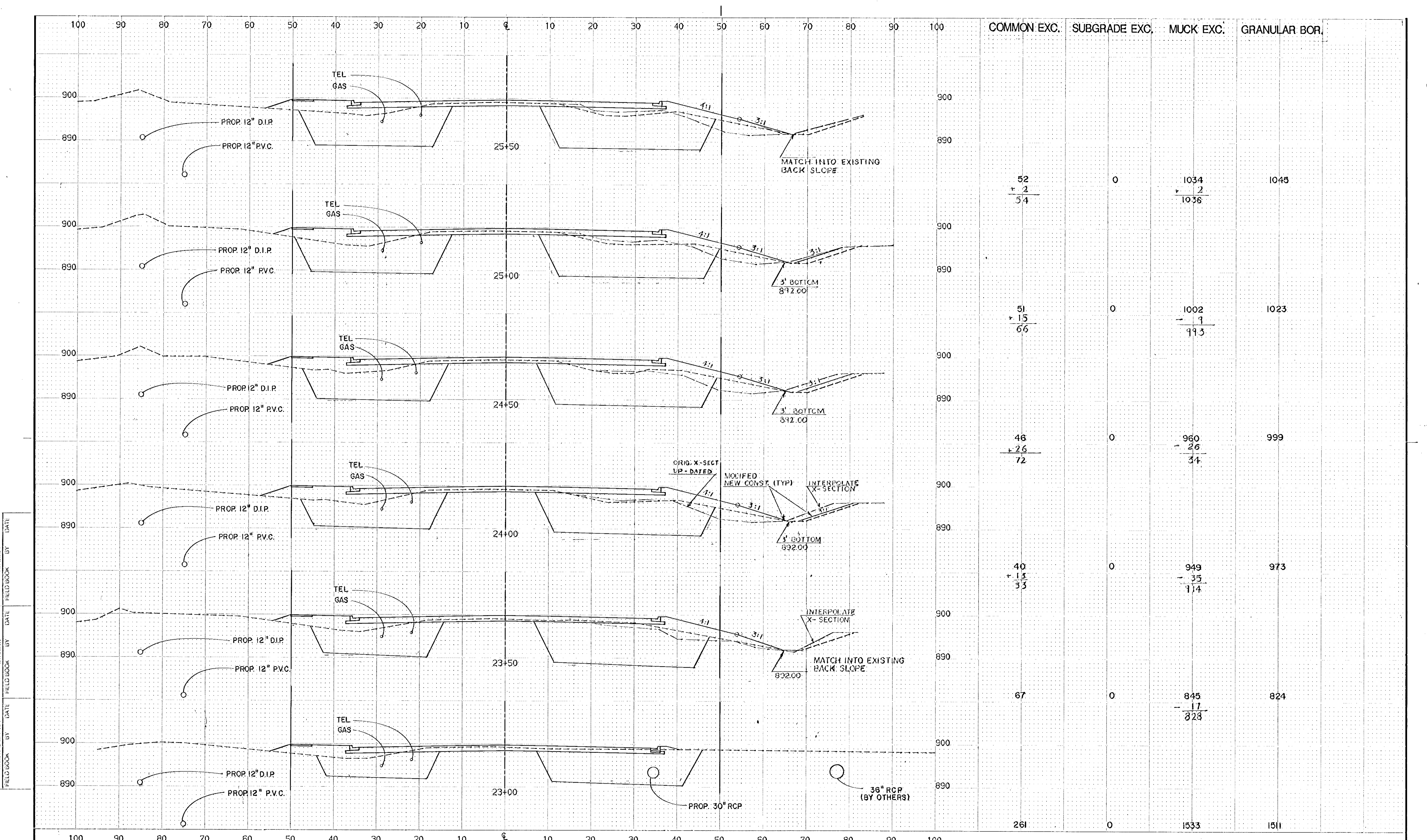
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY THE ENGINEER IN MY DIRECT SUPERVISION AND THAT I AM A ONLY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
Ronald King
DATE *8/1/87* REG. NO. 9092

T&K&A
ENGINEERS ARCHITECTS PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
20+00 TO 22+50
SHEET NO. 26 OF 43 SHEETS

COMMISSION NO.
9326



FIELD BOOK BY DATE

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV

CHECKED
RCL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

Ronald C. King
DATE 8/1/77 REG. NO. 9092

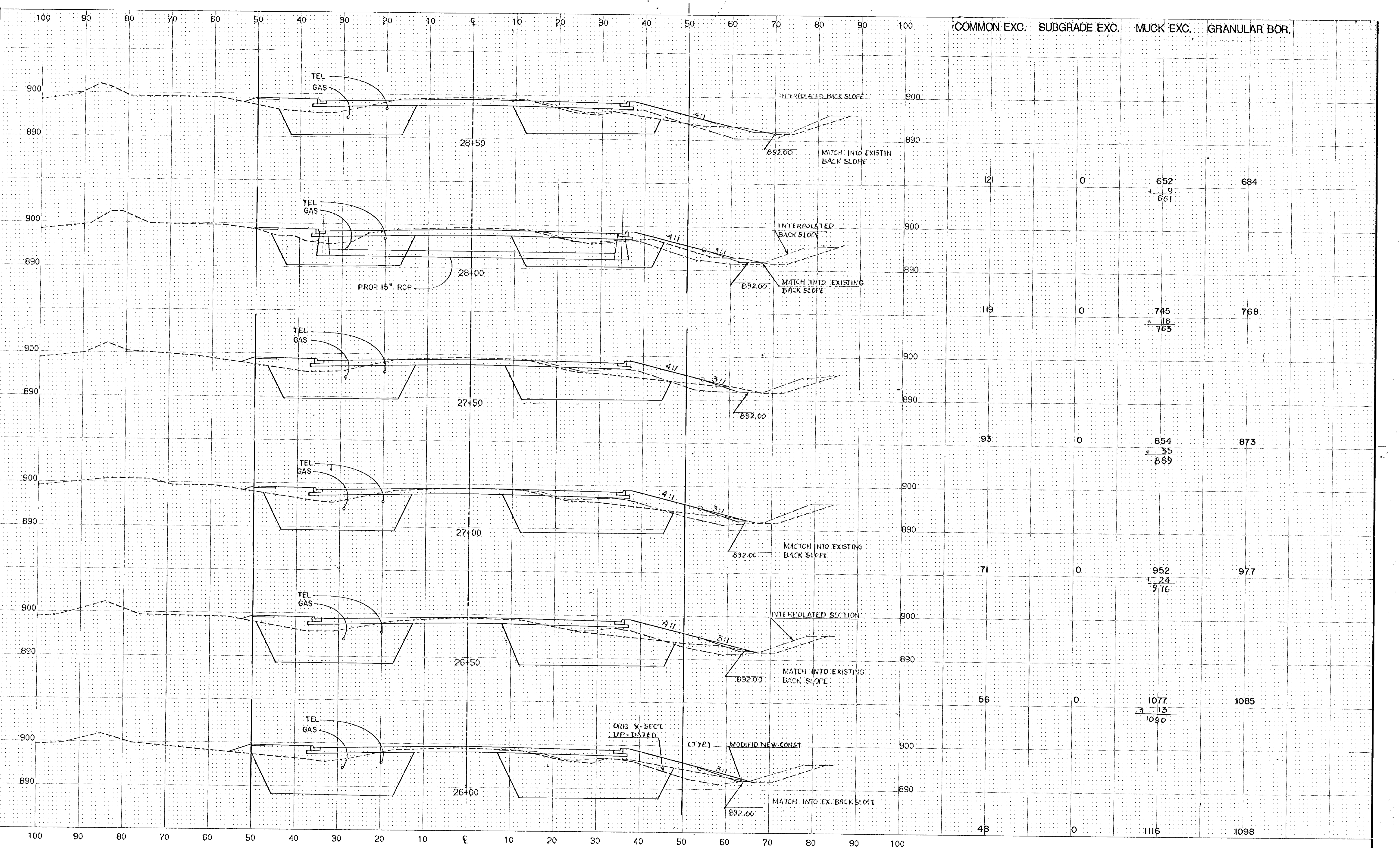
TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
23+00 TO 25+50
SHEET NO. 27 OF 43 SHEETS

CO. PROJ. NO. 88-22-87
COMMISSION NO.
9326



COMMON EXC.	SUBGRADE EXC.	MUCK EXC.	GRANULAR BOR.
121	0	652 + 9 661	684
119	0	745 + 18 763	768
93	0	854 + 35 889	873
71	0	952 + 24 976	977
56	0	1077 + 13 1090	1085
48	0	1116	1098

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV
CHECKED
RCL

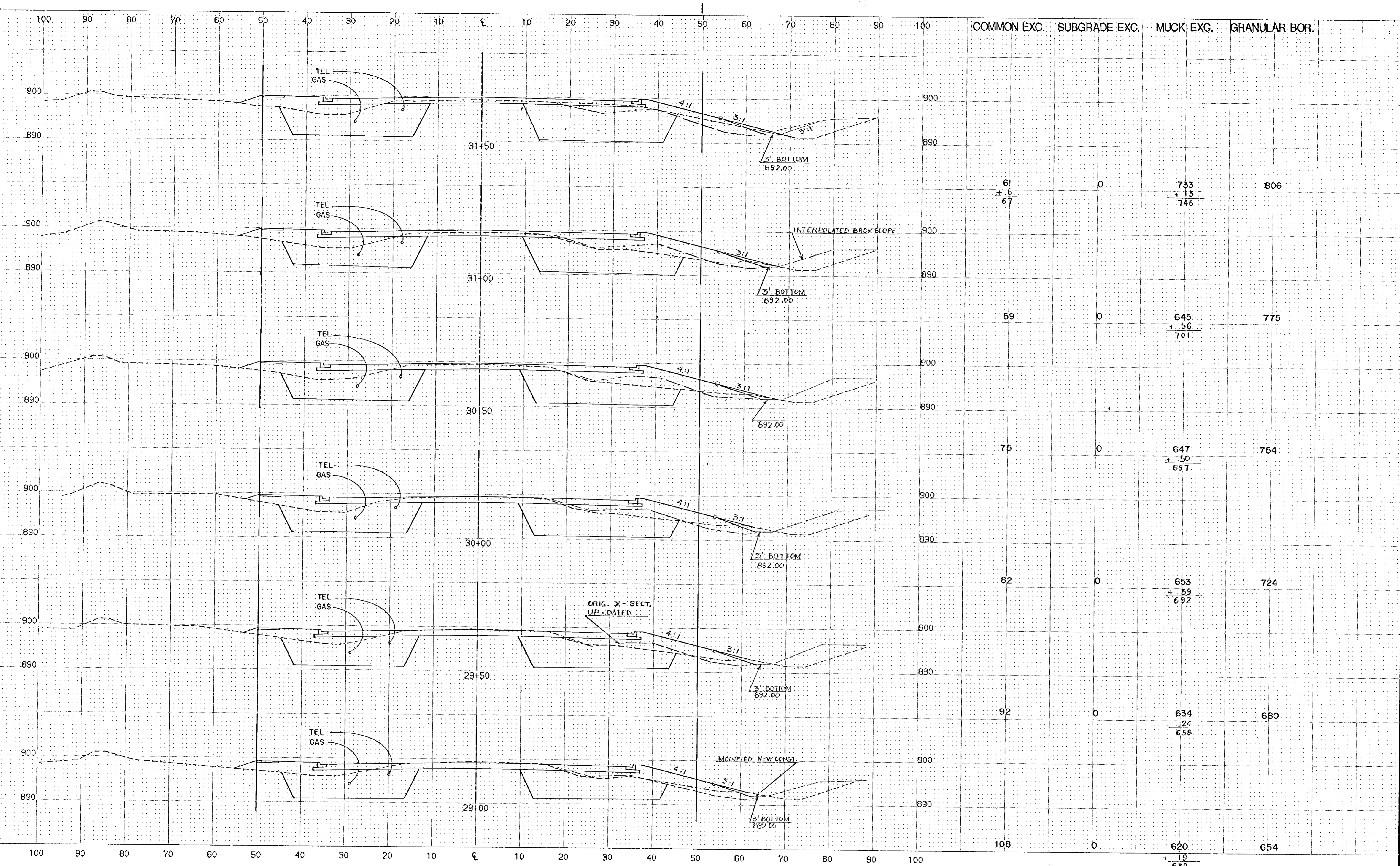
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
Ronald King
 DATE 6/1/87 REG. NO. 9092

ANOKA COUNTY
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
CROSS SECTIONS
26+00 TO 28+50
SHEET NO. 28 OF 43 SHEETS
 COMMISSION NO.
9326



NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
RCL TV

CHECKED
RCL

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

Ronald C. King
DATE 8/1/87 REG. NO. 9092

TOLZ KING

ENGINEERS ARCHITECTS PLANNERS

TOLTZ KING, DUVALL ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

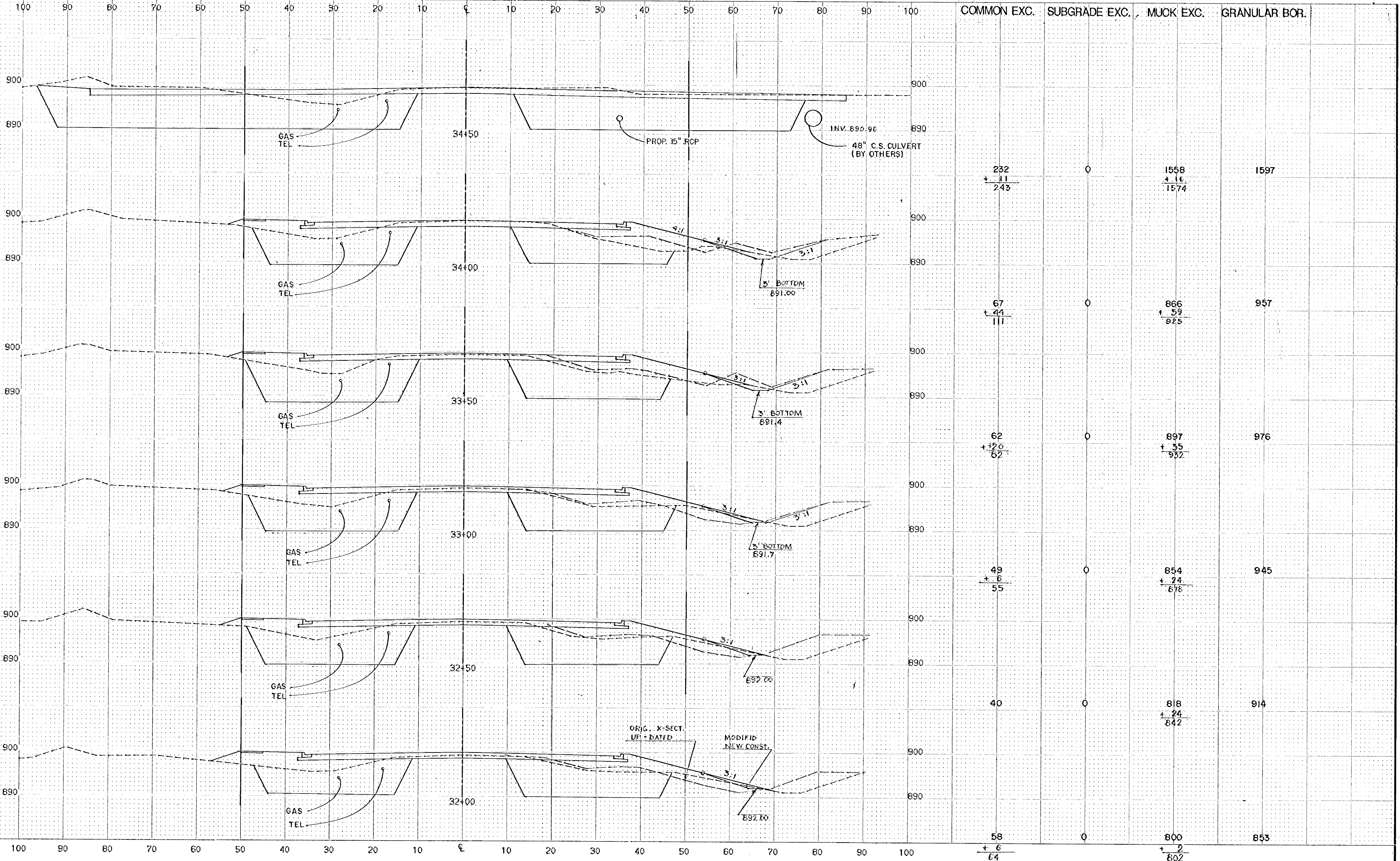
ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87

CROSS SECTIONS
29+00 TO 31+50

SHEET NO. 29 OF 43 SHEETS

COMMISSION NO.
9326



COMMON EXC.	SUBGRADE EXC.	MUCK EXC.	GRANULAR BOR.
232 + 11 243	0	1558 + 16 1574	1597
67 + 44 111	0	866 + 59 925	957
62 + 32.0 62	0	897 + 35 932	976
49 + 6 55	0	854 + 24 878	945
40	0	818 + 24 842	914
58 + 6 64	0	800 + 2 802	853

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV
CHECKED
RCL

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

Renald C. King
DATE 8/1/89 REG. NO. 9092

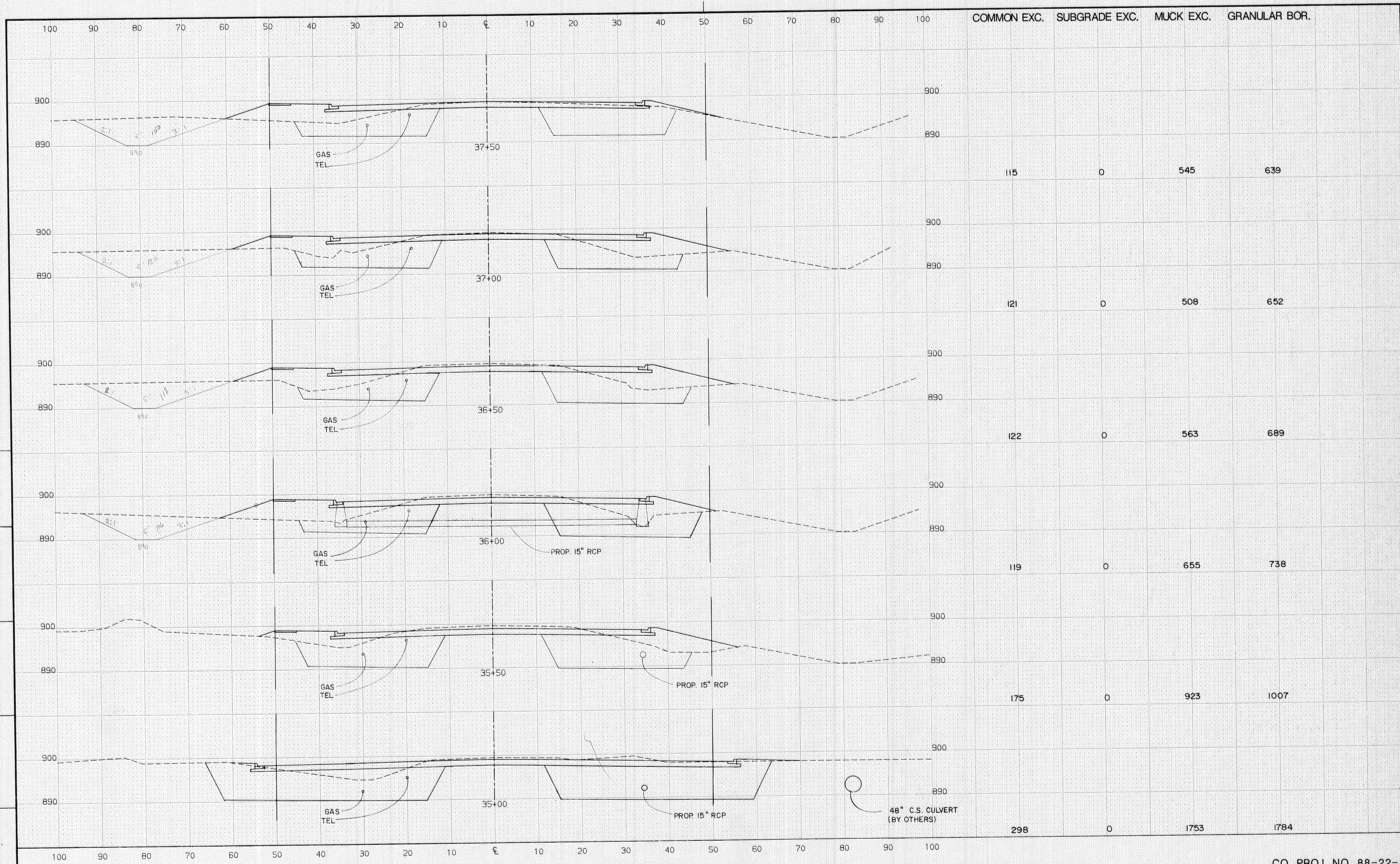
T K A
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVAL, ANDERSON
AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
COMMISSION NO.
9326

CROSS SECTIONS
32+00 TO 34+50
SHEET NO. 30 OF 43 SHEETS



ORIGINAL SURVEY BY DATE
 AS BUILT FIELD BOOK BY DATE
 STAKING BY DATE
 FIELD BOOK BY DATE

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN RCL TV
 CHECKED RCL
 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
Ronald C. King
 DATE 8/1/87 REG. NO. 9092

TKDA

ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

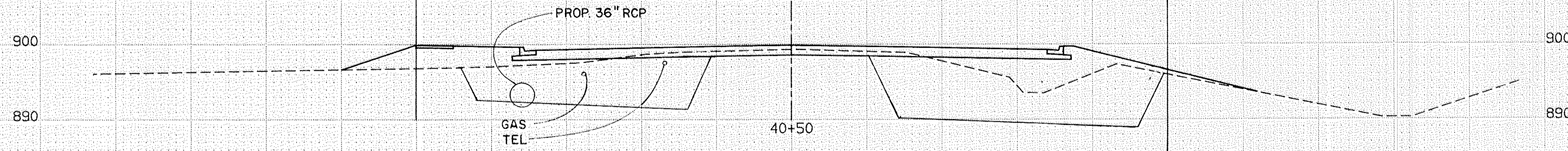
ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS
 35+00 TO 37+50
 SHEET NO. 31 OF 43 SHEETS

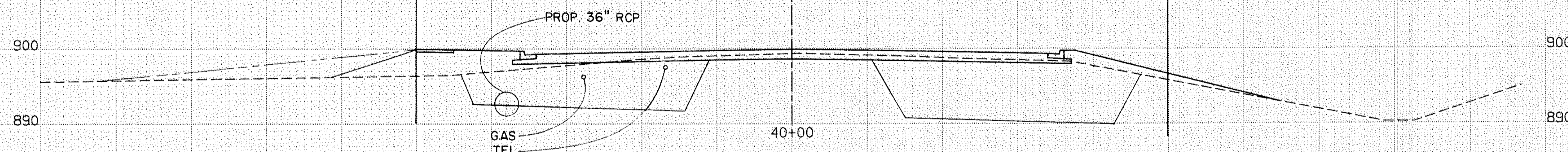
CO. PROJ. NO. 88-22-87
 COMMISSION NO.
 9326

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

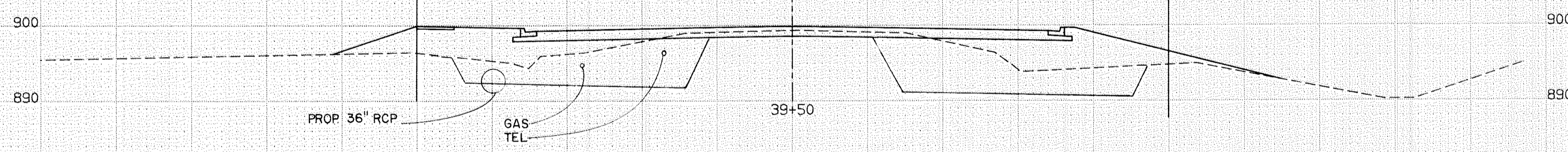
COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



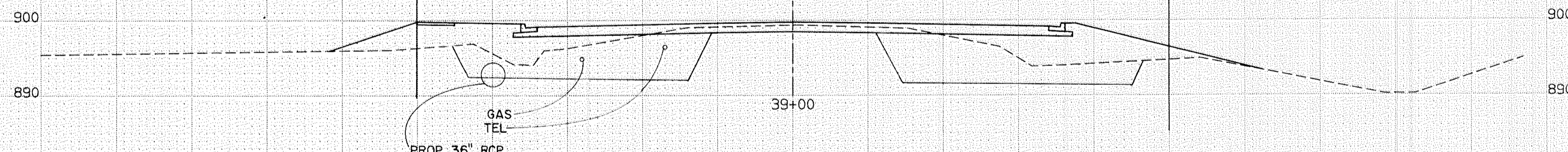
68 0 779 792



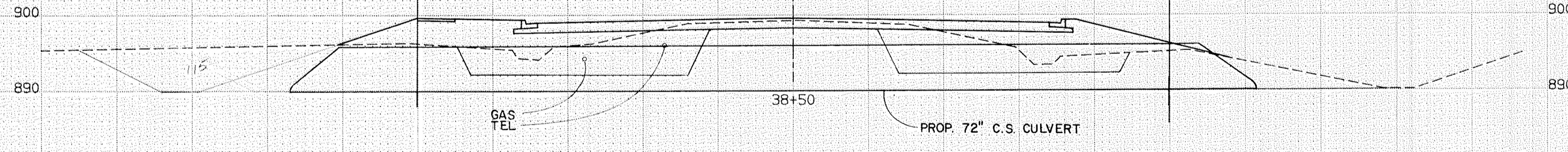
61 0 679 728



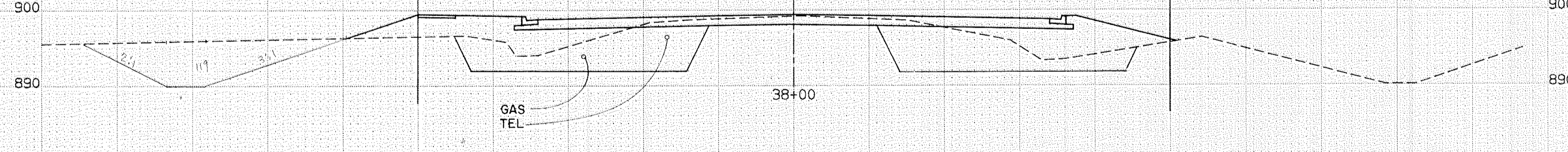
48 0 557 693



52 0 497 606



59 0 476 609



87 0 544 625

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

CO. PROJ. NO. 88-22-87

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
RCL TV
CHECKED
RCL

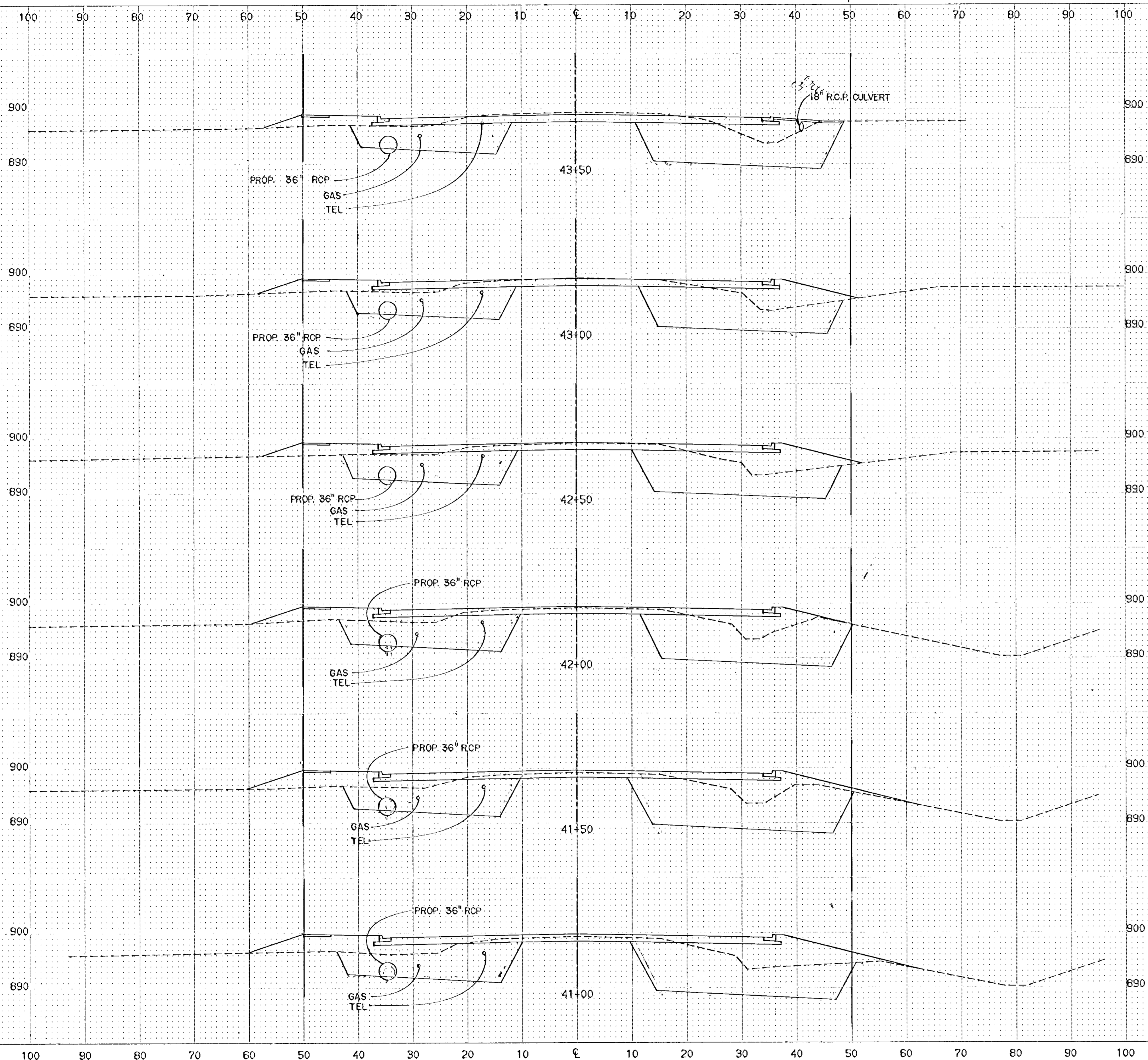
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
Ronald King
DATE *2/1/89* REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
38+00 TO 40+50
SHEET NO. 32 OF 43 SHEETS

COMMISSION NO.
9326



COMMON EXC.	SUBGRADE EXC.	MUCK EXC.	GRANULAR BOR.
115	0	645	652
95	0	649	697
82	0	714	751
59	0	749	815
49	0	784	870
54	0	779	854

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
RCL TV
CHECKED
RCL

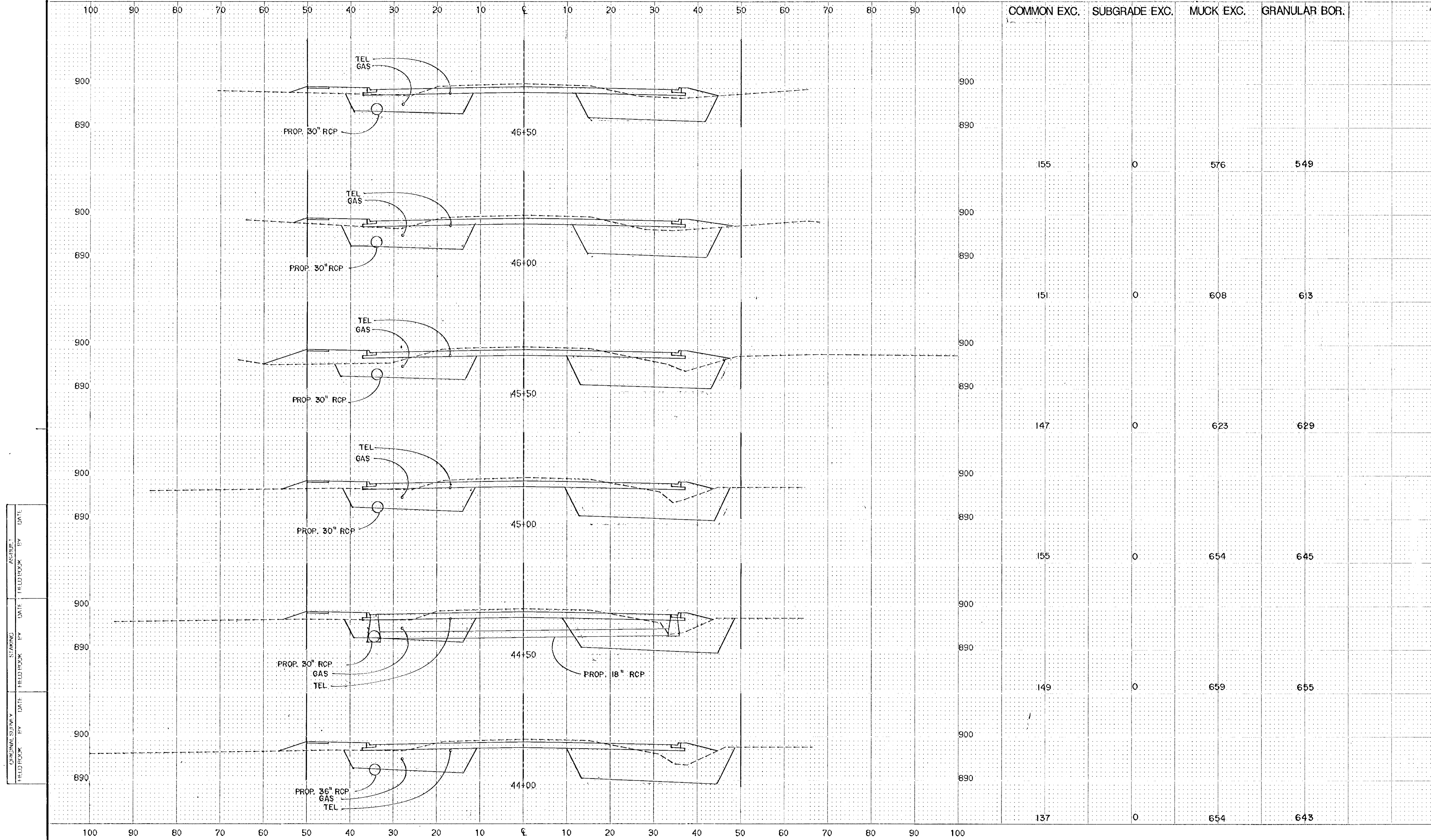
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Ronald City
DATE *6/11/77* REG. NO. *9092*

TOLTZ KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
ENGINEERS ARCHITECTS PLANNERS
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CROSS SECTIONS
41+00 TO 43+50
SHEET NO. 33 OF 43 SHEETS

CO. PROJ. NO. 88-22-87
COMMISSION NO.
9326



COMMON EXC.	SUBGRADE EXC.	MUCK EXC.	GRANULAR BOR.
155	0	576	549
151	0	608	613
147	0	623	629
155	0	654	645
149	0	659	655
137	0	654	643

ORIGINAL SURVEY	BY	DATE	FIELD BOOK	BY	DATE
AS-BUILT	BY	DATE	FIELD BOOK	BY	DATE

NO.	DATE	BY	DESCRIPTION

DESIGNED TV
DRAWN TV
CHECKED RCL
RCL

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

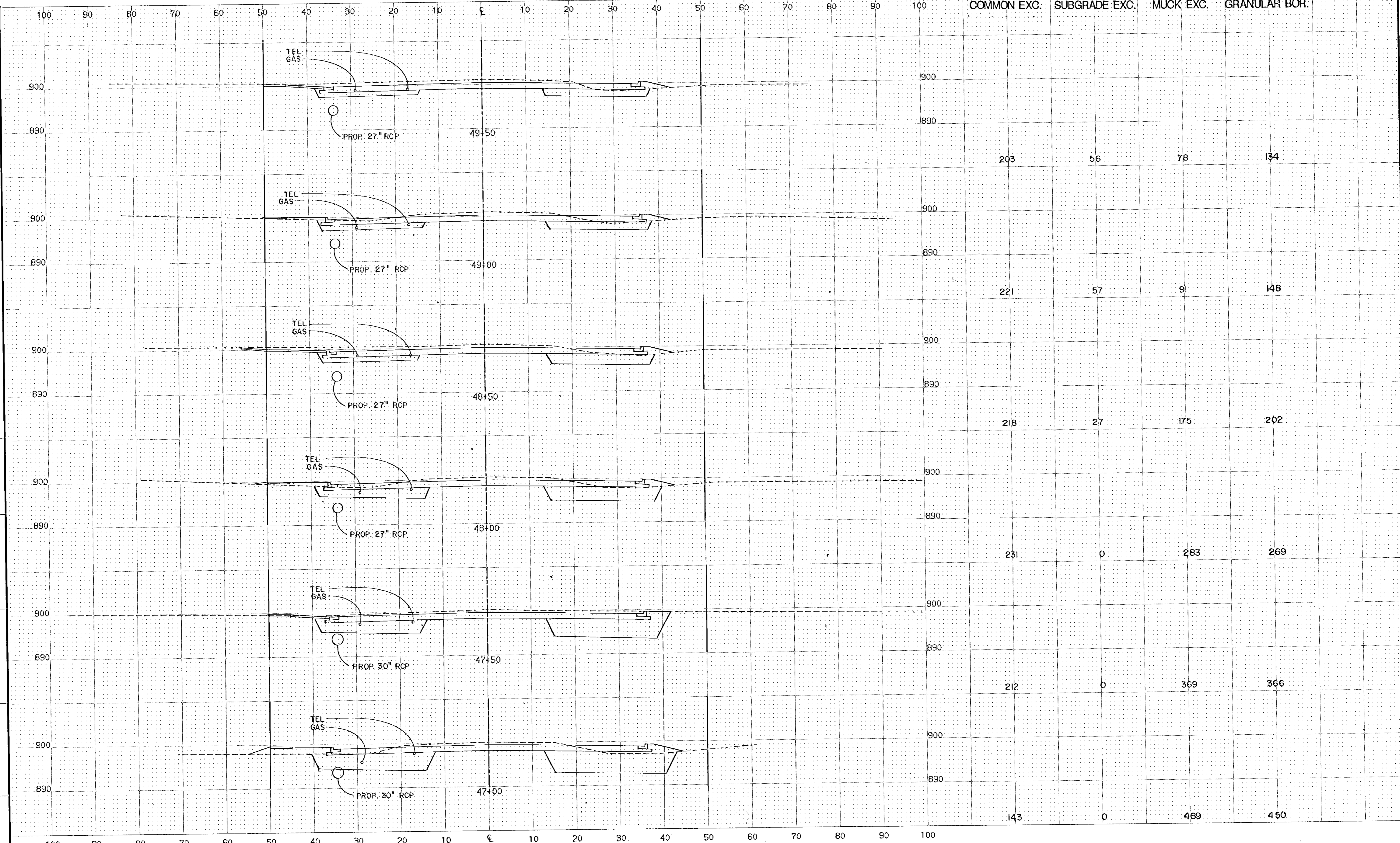
Ronald C. Kelly
DATE 5/1/89 REG. NO. 9092

TOLZ KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
ENGINEERS ARCHITECTS PLANNERS
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
CROSS SECTIONS
44+00 TO 46+50
SHEET NO. 34 OF 43 SHEETS
COMMISSION NO. 9326

COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



ORIGINAL SURVEY BY DATE FIELD BOOK
 STAKING BY DATE FIELD BOOK
 ASPIRANT BY DATE FIELD BOOK

CO. PROJ. NO. 88-22-87

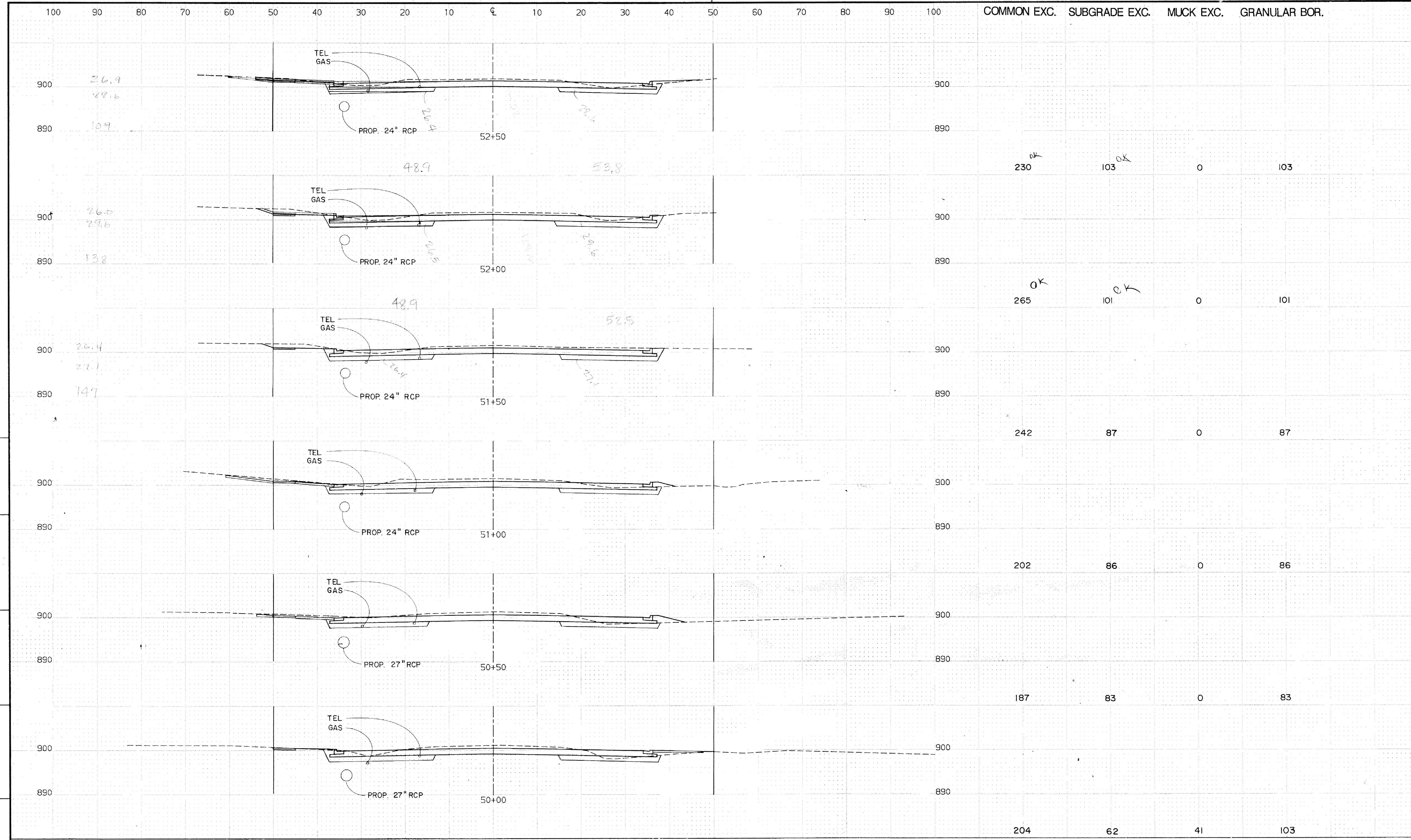
NO.	DATE	BY	DESCRIPTION

DESIGNED BY RCL
 DRAWN BY TV
 CHECKED BY RCL
 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 8/1/85 REG. NO. 9092

T K D A
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVAL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS
 47+00 TO 49+50
 SHEET NO. 35 OF 43 SHEETS
 COMMISSION NO. 9326



100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
RCL TV

CHECKED
RCL

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

Ronald J. King
DATE 8/1/83 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS

TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

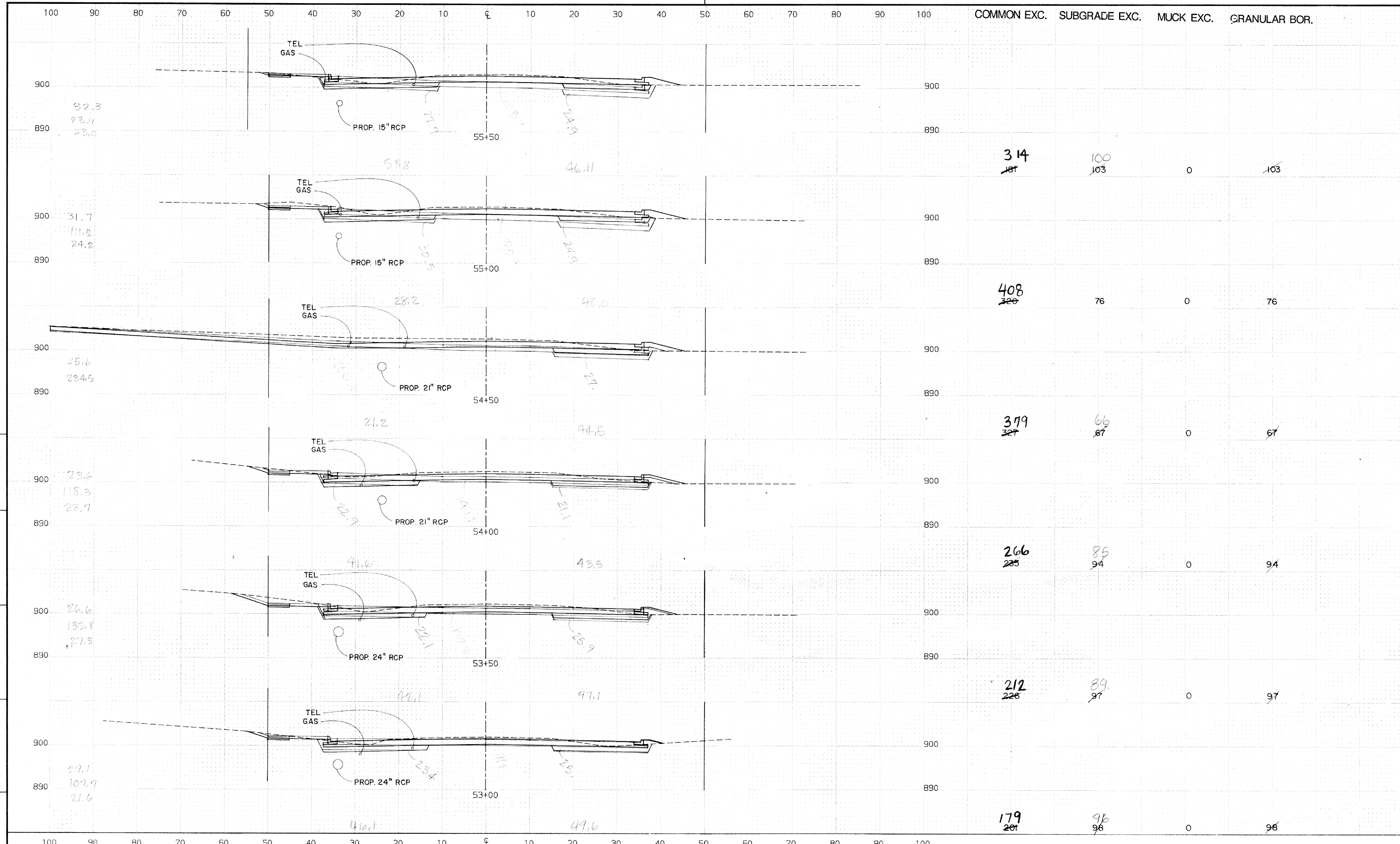
CO. PROJ. NO. 88-22-87

COMMISSION NO.
9326

**CROSS SECTIONS
50+00 TO 52+50**

SHEET NO. 36 OF 43 SHEETS

COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.



ORIGINAL SURVEY BY DATE
 CHECKED BY DATE
 STARTING BY DATE
 CHECKED BY DATE
 ASBUILT BY DATE

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
 RCL - TV
 CHECKED
 RCL

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 8/1/89 REG. NO. 9092

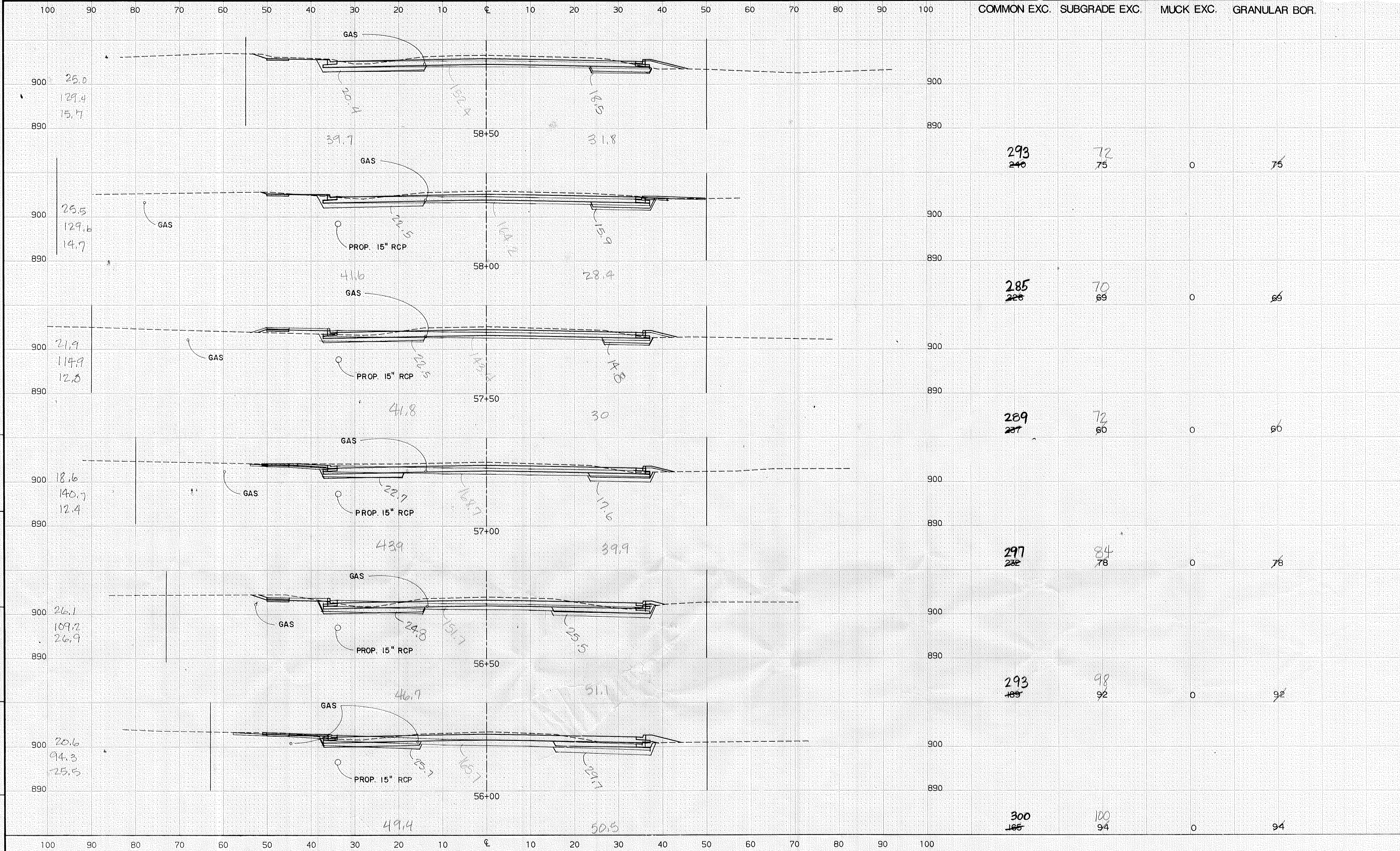
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS
 53+00 TO 55+50
 SHEET NO. 37 OF 43 SHEETS

COMMISSION NO.
 9326

CO. PROJ. NO. 88-22-87



COMMON EXC. SUBGRADE EXC. MUCK EXC. GRANULAR BOR.

ORIGINAL SURVEY BY DATE FIELD BOOK BY DATE
 STAKING BY DATE FIELD BOOK BY DATE
 AS-BUILT BY DATE FIELD BOOK BY DATE

NO.	DATE	BY	DESCRIPTION
REVISIONS			

DESIGNED DRAWN
 RCL TV
 CHECKED
 RCL

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 8/1/87 REG. NO. 9092

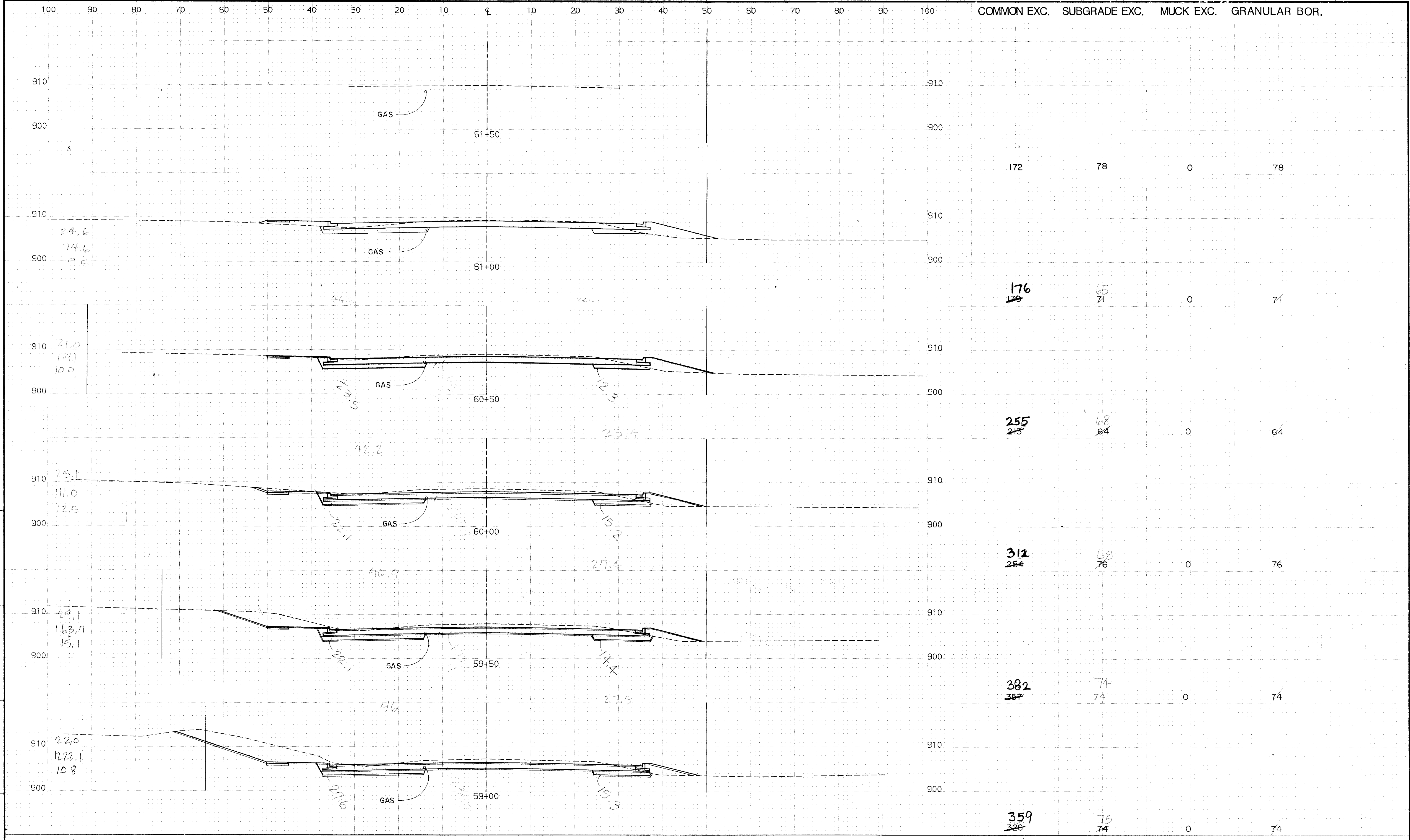
TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS
 56+00 TO 58+50
SHEET NO. 38 OF 43 SHEETS

COMMISSION NO.
 9326

CO. PROJ. NO. 88-22-87



ORIGINAL SURVEY BY DATE
 AS BUILT BY DATE
 STAKING BY DATE
 FIELD BOOK BY DATE

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV
CHECKED
RCL

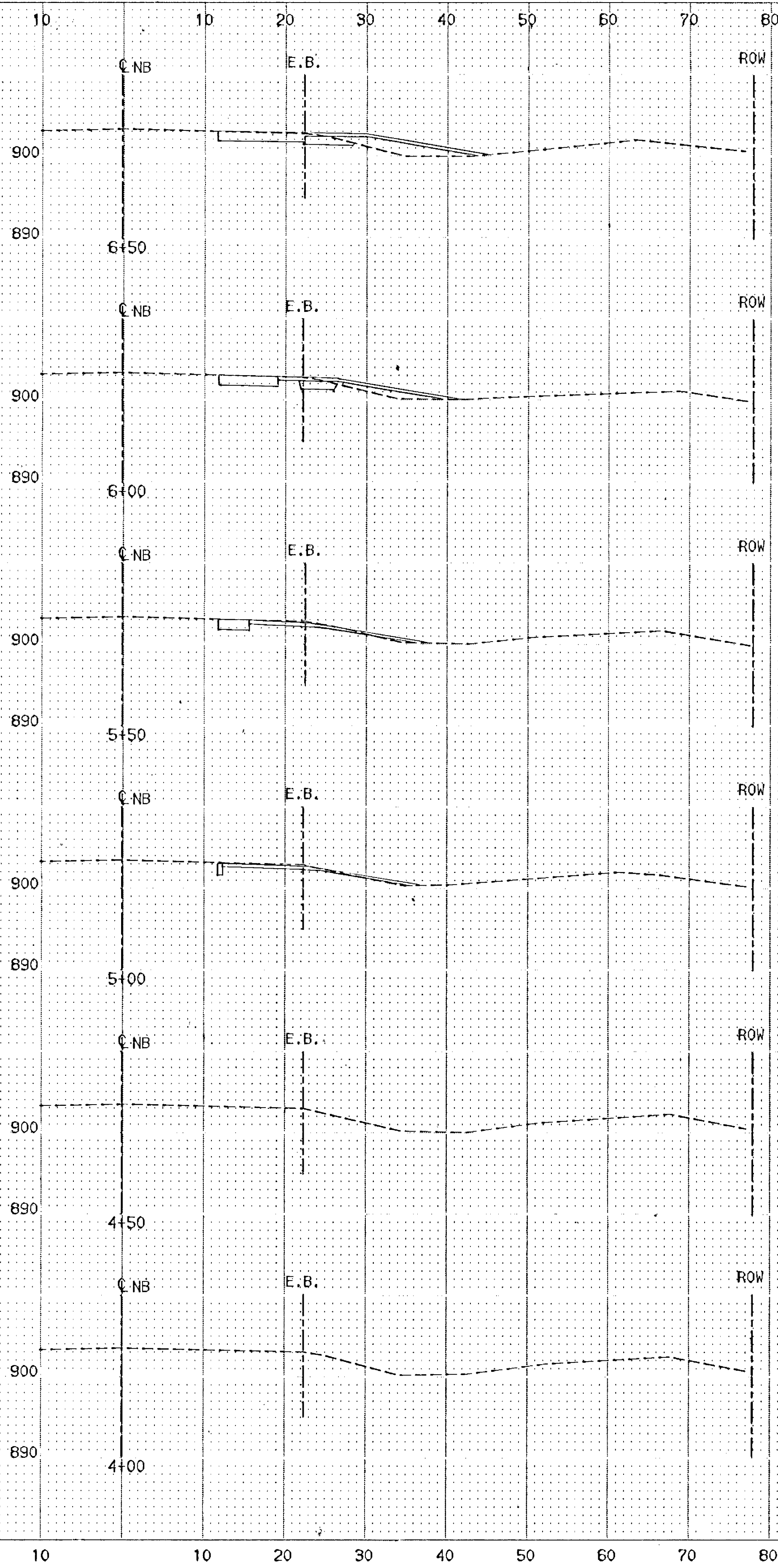
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
 DATE 8/1/87 REG. NO. 9092

TKDA
 ENGINEERS ARCHITECTS PLANNERS
 TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

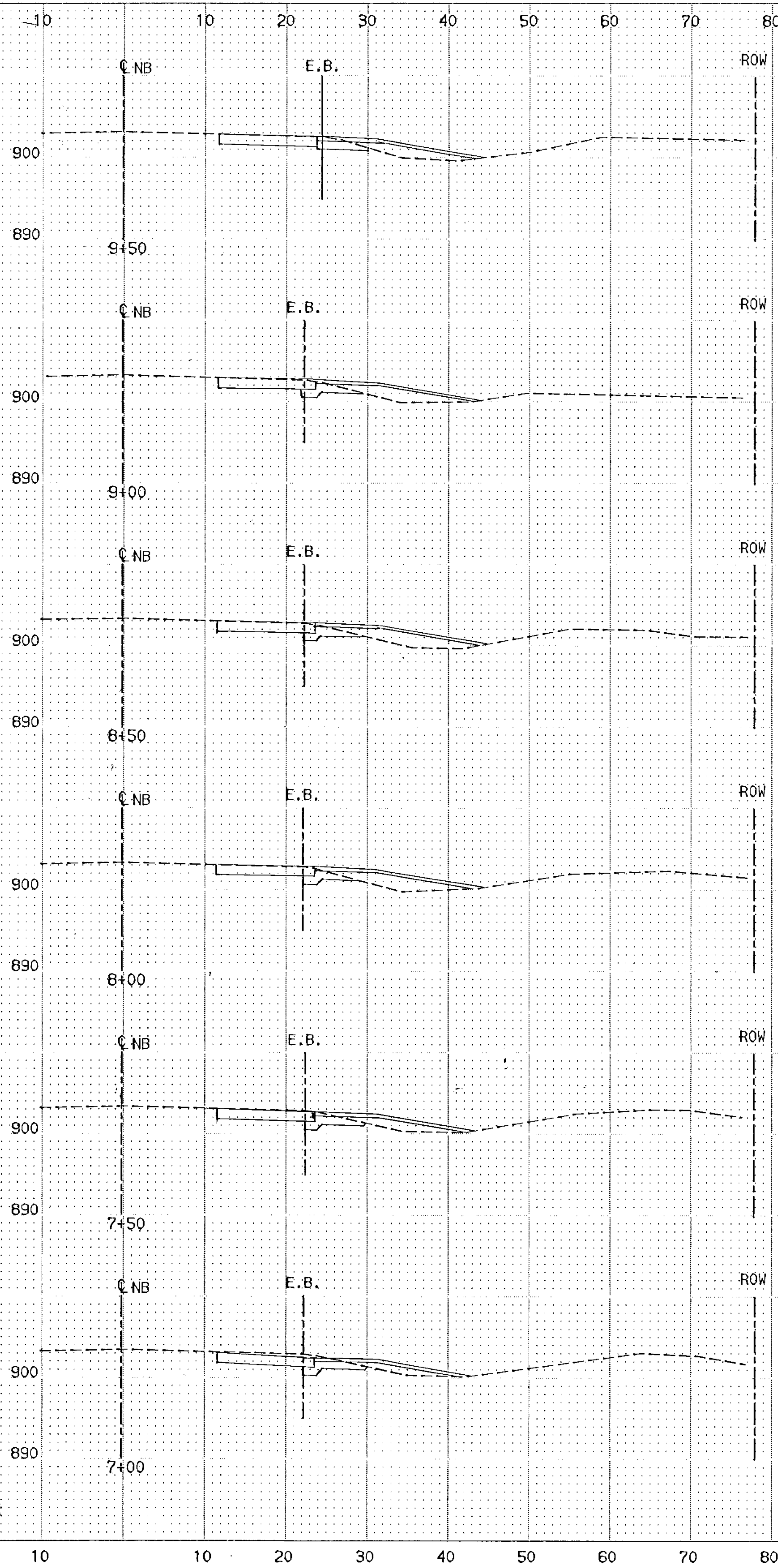
ANOKA COUNTY
 105TH AVE. N.E.

CROSS SECTIONS
 59+00 TO 61+50
 SHEET NO. 39 OF 43 SHEETS

COMMISSION NO.
 9326



COMMON EXC.	SUBGRADE EXC.	GRANULAR BOR.
21	9	10
17	4	4
8	0	0
0	0	0
0	0	0
0	0	0



COMMON EXC.	SUBGRADE EXC.	GRANULAR BOR.
29	11	14
28	11	16
28	10	16
28	11	16
32	13	16
28	11	13

NO.	DATE	BY	DESCRIPTION

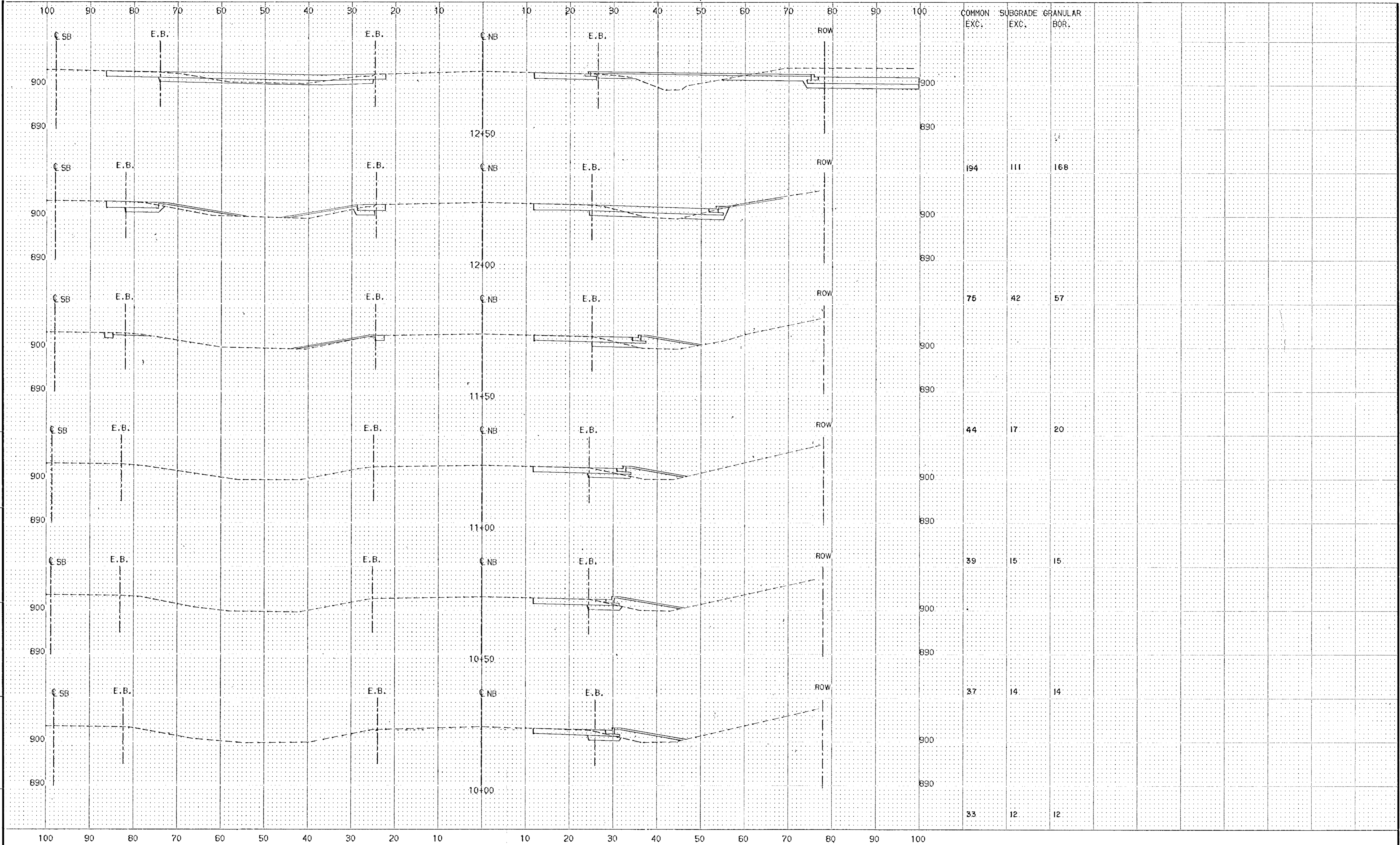
DESIGNED DRAWN
RCL TV
CHECKED
RCL

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
Ronald C. King
DATE *8/14/87* REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
CROSS SECTIONS TH65
4+00 TO 9+50
SHEET NO. 400 OF 43 SHEETS
COMMISSION NO. 9326



COMMON EXC.	SUBGRADE EXC.	GRANULAR BOR.
		14
194	111	168
75	42	57
44	17	20
39	15	15
37	14	14
33	12	12

ORIGINAL SUPPLY	BY	DATE	FIELD BOOK	BY	DATE
AS-BUILT	BY	DATE	FIELD BOOK	BY	DATE
STAKING	BY	DATE	FIELD BOOK	BY	DATE

NO.	DATE	BY	DESCRIPTION

DESIGNED	RCL	DRAWN	TV
CHECKED	RCL		

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

Ronald C. ...
 DATE *6/11/87* REG. NO. 9092

T K T A
 ENGINEERS ARCHITECTS PLANNERS

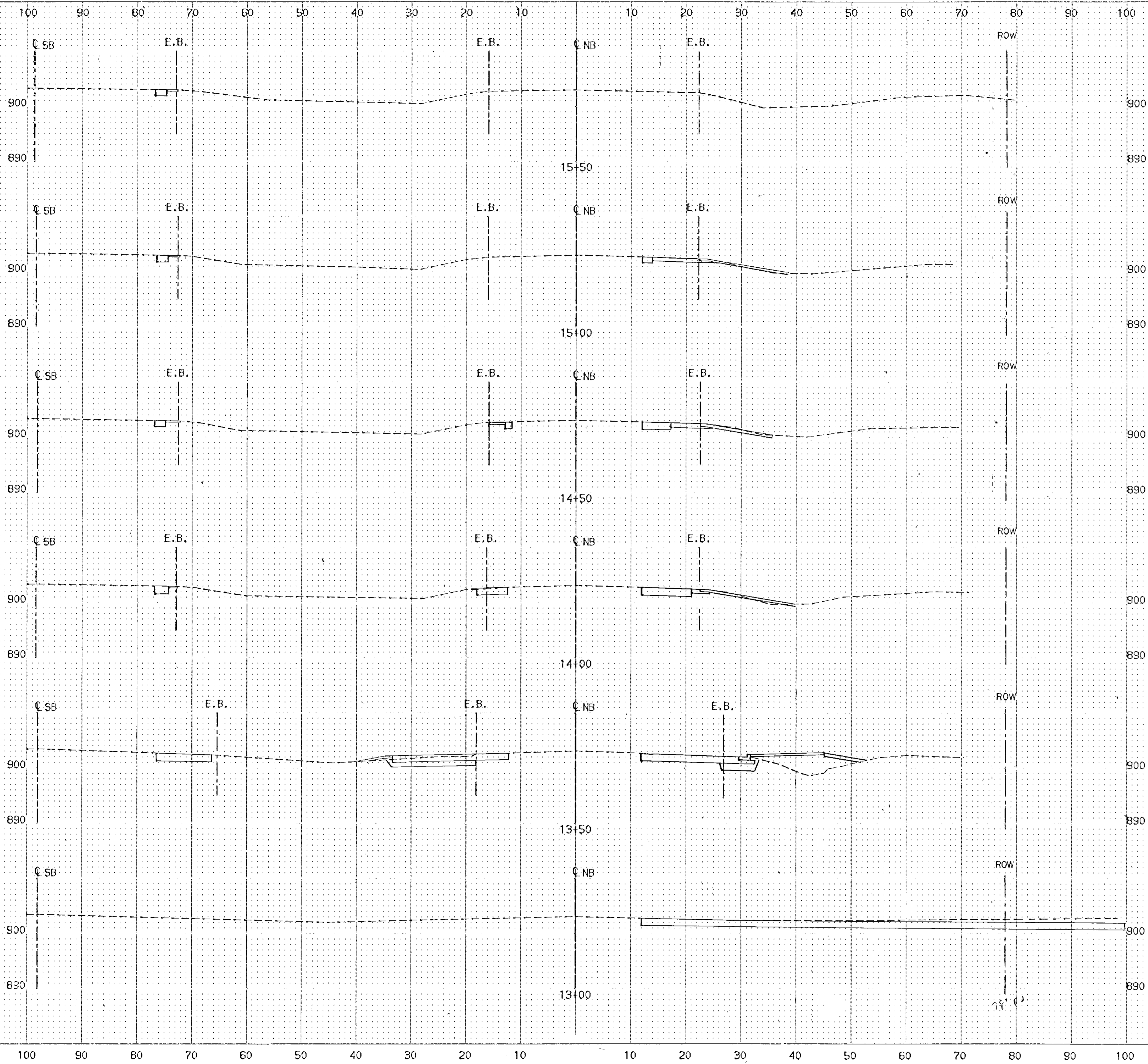
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
 SAINT PAUL, MINNESOTA

ANOKA COUNTY
 105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
 COMMISSION NO. 9326

CROSS SECTIONS TH65
 10+00 TO 12+50

SHEET NO. 41 OF 43 SHEETS



COMMON EXC.	SUBGRADE EXC.	GRANULAR BOR.
10	0	0
27	0	0
40	0	0
79	22	22
181	23	23
278	70	109

NO.	DATE	BY	DESCRIPTION

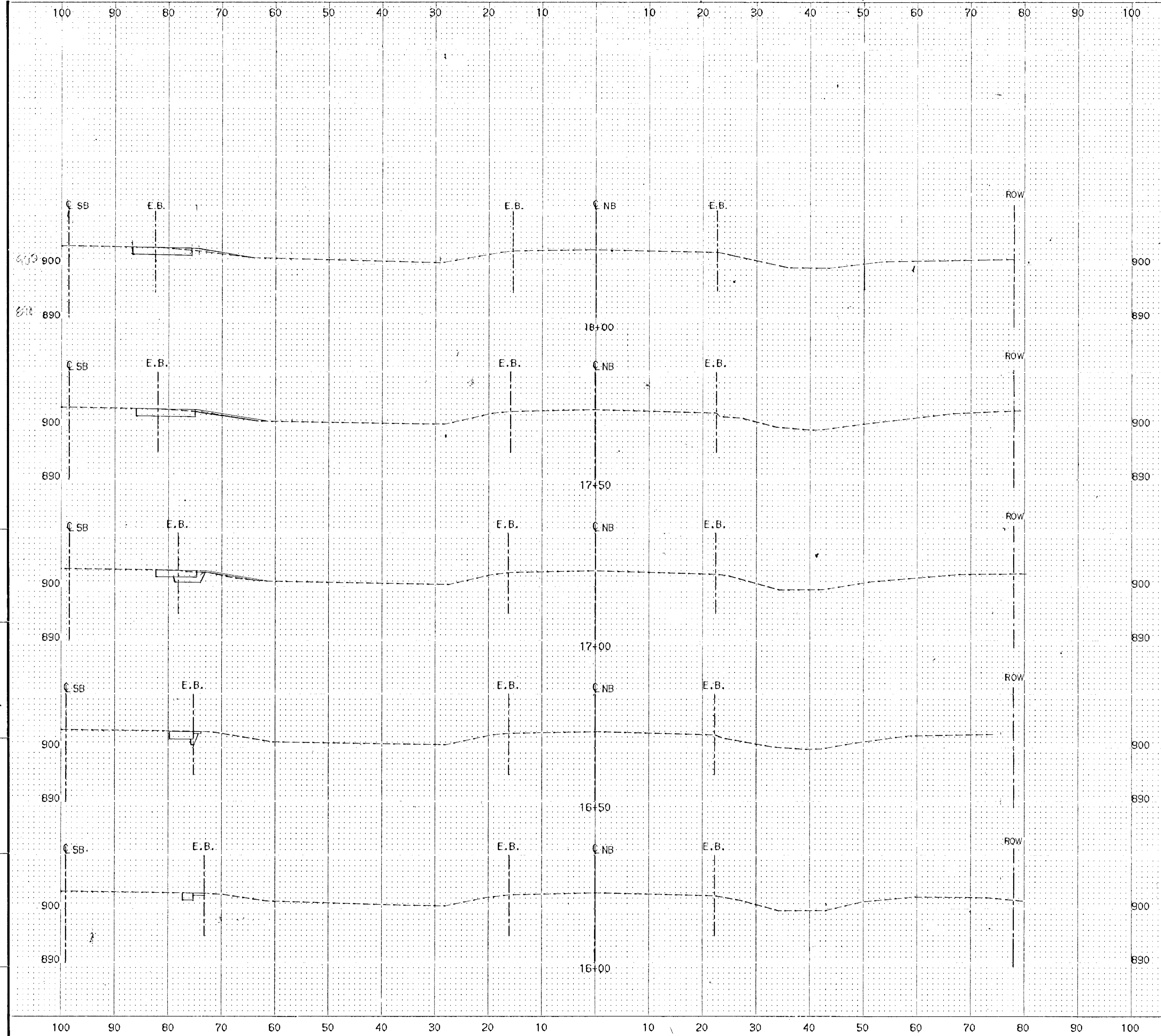
DESIGNED DRAWN
RCL TV
CHECKED
RCL

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
Ronald C. King
DATE 8/1/89 REG. NO. 9092

T K A
ENGINEERS ARCHITECTS PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
COMMISSION NO. 9326
CROSS SECTIONS TH65
13+00 TO 15+50
SHEET NO. 42 OF 43 SHEETS



COMMON EXC.	SUBGRADE EXC.	GRANULAR BOR.
47	0	0
27	0	0
21	15	15
14	7	7
8	1	1
5	0	0

NO.	DATE	BY	DESCRIPTION

DESIGNED DRAWN
RCL TV
CHECKED
RCL

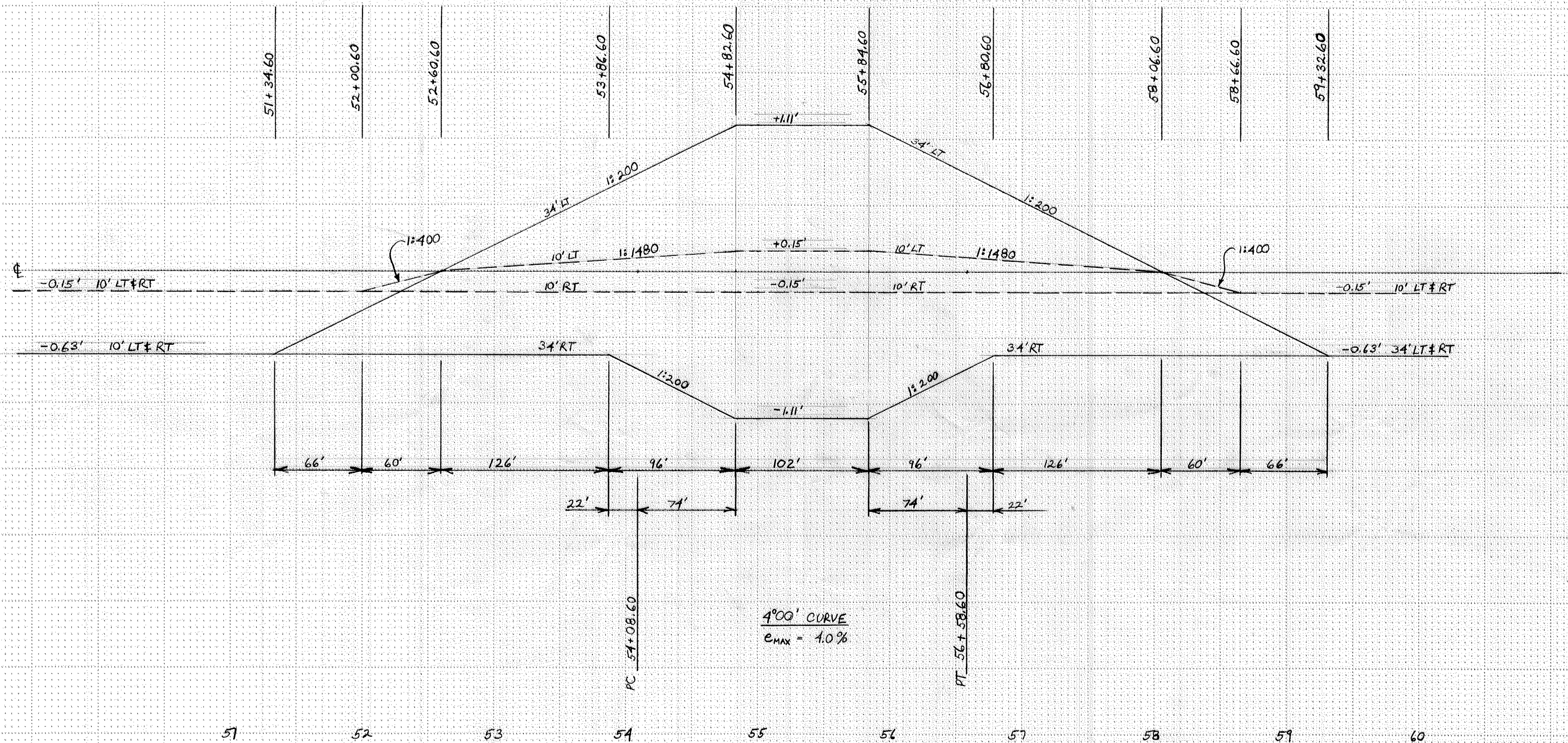
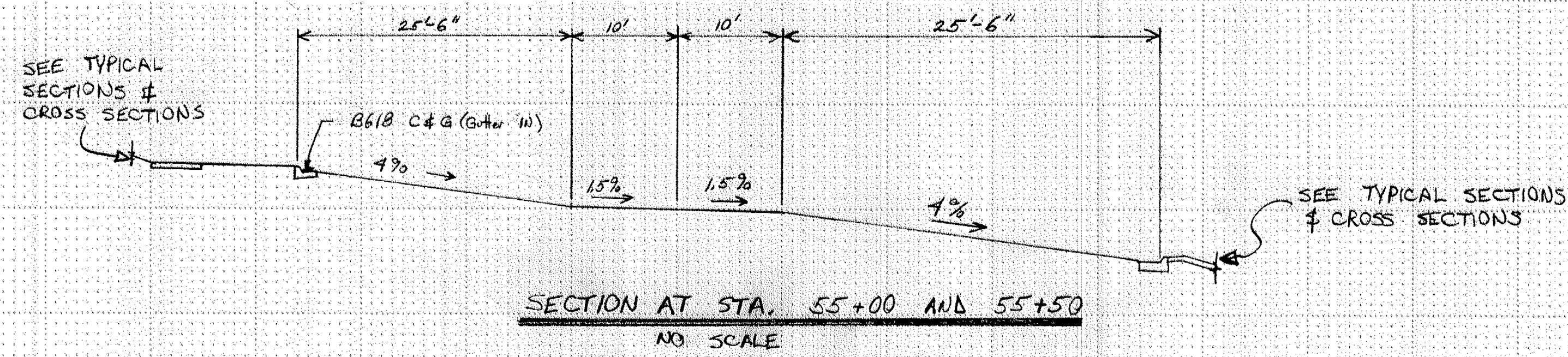
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Ronald King
DATE 8/1/89 REG. NO. 9092

TKDA
ENGINEERS ARCHITECTS PLANNERS
TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES INCORPORATED
SAINT PAUL, MINNESOTA

ANOKA COUNTY
105TH AVE. N.E.

CO. PROJ. NO. 88-22-87
CROSS SECTIONS TH65
16+00 TO 18+00
SHEET NO. 43 OF 43 SHEETS

COMMISSION NO.
9326



SUPERELEVATION CHART

ANOKA COUNTY
105 TH AVE. N.E.

CO. PROJ. NO. 88-22-87

State Proj. No.

Sheet No. of Sheets

COMM. NO. 932