PLANS SYMBOLS

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
DRY RUN
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

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 HUB
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
OR 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

NOTE SECTION NUMBERS READ FROM THE SOUTH

CENTER SECTION 35 T.29N. R.22W.

SECTION 35 36 2 1 T.28N. R.22W. T.29N. R.22W.

PIT DATA

_____ PIT NO._____ Located in Dead Haul

_____ PIT NO._____ Located in Dead Haul

	FEET		MILES
GROSS LENGTH	3722	=	0.7049
BRIDGE LENGTH	0	=	0
EXCEPTION	27	=	0.0051
NET LENGTH	3695	=	0.6998

PLAN 10 30 50
PROFILE HORIZ. 10 20 30 40 50 / 20 40
PROFILE VERT. 5 10
CROSS SECTIONS 5 10
LAYOUT MAP 5,280'

BEGIN S.A.P. 62-628-04
STA. 8+33

END S.A.P. 62-628-04
STA. 45+55

STOPPING SIGHT DISTANCE BASED ON
3.5' HEIGHT OF EYE
0.5' HEIGHT OF OBJECT

DESIGN DESIGNATION

S.A.P. NO. 62-628-04

	ADELE ST. to ENGLISH ST.	ENGLISH ST. to BIRMINGHAM ST.
ADT (CURRENT YEAR) 1983	6,500	6,800
ADT (FUTURE YEAR) 2003	10,400	11,000
Σ, N20 20 YEAR	1,776,000	1,858,000
DESIGN LOAD	10 TON	10 TON
STABILOMETER "R" VALUE	30	22
DESIGN SPEED	40	40

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

RAMSEY COUNTY
DEPARTMENT OF PUBLIC WORKS
CONSTRUCTION PLAN: FOR GRADING, AGGREGATE BASE, BITUMINOUS BASE AND SURFACING, STORM SEWER, CONCRETE CURB & GUTTER

FROST AVENUE
BETWEEN: ADELE ST. AND; BIRMINGHAM ST.
S.A.P. 62-628-04

FROM: A POINT 226.72 FEET EAST OF THE CENTER OF SECTION 16, T29N, R22W.

TO: A POINT 1,343.72 FEET WEST OF THE CENTER OF SECTION 15, T29N, R22W.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITES
3-4	TYPICAL SECTIONS & DETAILS
5	REMOVAL CHARTS
6-8	DRAINAGE CHARTS
9-13	AERIAL PHOTOS
14-26	PLAN & PROFILE SHEETS
27-65	CROSS SECTIONS

DESIGN SQUAD R.J. Olson DATE 2-11-85
DRAWN BY _____ DATE _____
CHECKED BY _____ DATE _____

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 2-11-85 REG. NO 13501 ENGR. Larry K. Zilka

RECOMMENDED FOR APPROVAL PLK TRAFFIC ENGR. DATE 2-12-85
RECOMMENDED FOR APPROVAL DSA ENV ENGR DATE 2-11-85
RECOMMENDED FOR APPROVAL MDX MAINT ENGR DATE 2-12-85
RECOMMENDED FOR APPROVAL RHP CONST. ENGR. DATE 2-12-85
RECOMMENDED FOR APPROVAL LKF DESIGN ENGR DATE 2-12-85
RECOMMENDED FOR APPROVAL J.A.P. ENGR DATE 2-12-85
APPROVED _____ COORDINATING ENGR DATE 3-19-85

RECOMMENDED FOR APPROVAL Kenneth W. Haider COUNTY ENGINEER DATE 3-20-85
APPROVED Robert L. Peterson CHAIRMAN OF THE RAMSEY COUNTY BOARD DATE 5-20-85
APPROVED Kenneth D. Haider (CITY ENG.) CITY OF MAPLEWOOD DATE 2/26/85
APPROVED _____ DATE _____

MINNESOTA DEPARTMENT OF TRANSPORTATION
RECOMMENDED FOR APPROVAL Delwyn D. Oftedahl DATE 4-19-85
RECOMMENDED FOR APPROVAL _____ DISTRICT STATE AID ENGINEER DATE 4/5/85
APPROVAL _____ DIRECTOR, OFFICE OF STATE AID DATE 4/19/85

PLAN REVISIONS		
DATE	SHEET NO.	BY
3-28-85	Dist'g Revisions	LKF
5-2-85	SAT. 2 - ST. & SEWER	RSD

S.A.P. 138-104-03

S.A.P. No. 62-628-04 27-101 **Sheet No. 1 of 65 Sheets**

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO	ITEM	UNIT	ESTIMATED QUANTITIES	FINAL QUANTITIES
2021.501	MOBILIZATION	L.S.	1	
2101.502	CLEARING	TREE	118	
2101.507	GRUBBING	TREE	107	
2104.501	REMOVE CONCRETE SEWER PIPE	L.F.	64	
2104.501	REMOVE CONCRETE CURB	L.F.	76	
2104.501	REMOVE CONCRETE CURB & GUTTER	L.F.	45	
2104.501	REMOVE PIPE SEWER (METAL)	L.F.	301	
2104.503	REMOVE CONCRETE SIDEWALK	S.F.	1303	
2104.505	REMOVE CONCRETE PAVEMENT	S.Y.	8260	
2104.509	REMOVE CATCH BASINS	EACH	4	
2104.521	SALVAGE FENCE (CHAIN LINK)	L.F.	15	
2104.521	SALVAGE FENCE (WOOD RAIL)	L.F.	132	
2105.501	COMMON EXCAVATION (FROST AVE.)	C.Y.	41551 (P)(1)	
2105.501	COMMON EXCAVATION (GLOSTER POND)	C.Y.	32136 (P)(2)	
2105.525	TOPSOIL BORROW (LV)	C.Y.	2730	
2105.525	TOPSOIL BORROW (LV) (GLOSTER POND)	C.Y.	861 (2)	
2130.501	WATER	M.GAL.	150	
2211.501	AGG. BASE, CL. 6 (OR CL.5 100% CRSHD)	TON	14274	
2211.501	AGGREGATE BASE, CL.4	TON	8865	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	469	
2331.508	WEARING COURSE MIXTURE	TON	280	
2331.510	BINDER COURSE MIXTURE	TON	2433	
2331.514	BASE COURSE MIXTURE	TON	7331	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	3452	
2361.504	ASPHALT CEMENT	TON	92	
2361.508	WEARING COURSE MIXTURE (MOD.)	TON	1418	
2451.503	GRANULAR BACKFILL (LV) (UTILITIES INSULATION)	C.Y.	38	
2451.507	GRANULAR BEDDING CLASS B (CV)	C.Y.	182	
2501.515	15" R.C. PIPE APRONS	EACH	1	
2501.515	18" R.C. PIPE APRONS	EACH	2	
2501.515	21" R.C. PIPE APRONS	EACH	2	
2501.515	42" R.C. PIPE APRONS	EACH	1	
2503.541	21" R.C. PIPE SEWER, DESIGN 3006, CLASS II JACKED	L.F.	56	
2503.541	12" R.C. PIPE SEWER, DESIGN 3006, CLASS V	L.F.	270	
2503.541	15" R.C. PIPE SEWER, DESIGN 3006, CLASS V	L.F.	1616	
2503.541	18" R.C. PIPE SEWER, DESIGN 3006, CLASS V	L.F.	2001	
2503.541	21" R.C. PIPE SEWER, DESIGN 3006, CLASS II	L.F.	577	
2503.541	21" R.C. PIPE SEWER, DESIGN 3006, CLASS III	L.F.	446	
2503.541	21" R.C. PIPE SEWER, DESIGN 3006, CLASS IV	L.F.	1890	
2503.541	27" R.C. PIPE SEWER, DESIGN 3006, CLASS II	L.F.	48	
2503.541	42" R.C. PIPE SEWER, DESIGN 3006, CLASS II	L.F.	1258	
2506.509	CONSTRUCT SURF. DRAIN DESIGN A OR F	EACH	4	
2506.508	CONSTRUCT MANHOLE, DESIGN A OR F	EACH	16	
2506.509	CONSTRUCT CATCH BASIN, DES. LP-4	EACH	26	
2506.509	CONSTRUCT CATCH BASIN, DES. RC-2	EACH	6	
2506.511	RECONSTRUCT MANHOLES	L.F.	23.6	
2506.508	CONSTRUCT MANHOLE, DESIGN J	EACH	3	
2506.521	INSTALL CASTINGS	EACH	4	
2506.522	ADJUST FRAME & RING CASTINGS	EACH	12	
2506.508	CONSTRUCT MANHOLE, DESIGN 4019-66"	EACH	2	
2506.508	CONSTRUCT MANHOLE, DESIGN 4019-84"	EACH	1	
2521.501	4" CONCRETE WALK	S.F.	800	
2531.501	CONCRETE CURB & GUTTER DES. B624	L.F.	8246 *	
2531.501	CONCRETE CURB DESIGN B6	L.F.	1665	
2531.501	CONCRETE GUTTER DELINEATOR	L.F.	82	
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	S.Y.	1115	
2535.501	BITUMINOUS CURB	L.F.	150	
2573.502	SILT FENCE HEAVY DUTY	L.F.	914	
2575.502	SEED MIXTURE 3 (GLOSTER POND).	POUND	176 (2)	
2571.541	TRANSPLANT TREES	TREE	8	
2575.505	SODDING	S.Y.	32750	
2575.505	SODDING (GLOSTER POND)	S.Y.	10339 (2)	
2575.531	COMMERCIAL FERTILIZER ANALYSIS 12-12-12	TON	1.2	
2575.531	COMMERCIAL FERTILIZER ANAL. 12-12-12 (GLOSTER POND)	TON	0.7 (2)	
501.602	F & I TRASH GUARD FOR 15" R.C. PIPE APRON	EACH	1	
501.602	F & I TRASH GUARD FOR 18" R.C. PIPE APRON	EACH	1	
501.602	F & I TRASH GUARD FOR 21" R.C. PIPE APRON	EACH	2	
501.602	F & I TRASH GUARD FOR 42" R.C. PIPE APRON	EACH	1	
504.603	ADJUST 6" WATERMAIN (RAISE)	L.F.	20	
504.603	ADJUST 6" WATERMAIN (LOWER)	L.F.	365	
504.603	ADJUST 8" WATERMAIN (RAISE)	L.F.	75	
504.603	ADJUST 8" WATERMAIN (LOWER)	L.F.	50	
504.602	ADJUST VALVEBOX	EACH	29	
504.602	RELOCATE HYDRANTS	EACH	4	
504.602	ADJUST HYDRANTS	EACH	6	
504.605	3" INSULATION SANITARY	S.Y.	6	

* INCLUDES 1093 L.F. B624 C&G. (PLAN QUANTITY) FROM ADELE ST. TO FRANK ST. ON NORTH SIDE

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO	ITEM	UNIT	ESTIMATED QUANTITIES	FINAL QUANTITIES
504.605	3" INSULATION WATERMAIN	S.Y.	532	
504.602	LOWER WATER SERVICE	EACH	13	
557.603	INSTALL FENCE (CHAIN LINK)	L.F.	15	
557.603	INSTALL FENCE (WOOD RAIL)	L.F.	132	
301.604	SAWING CONCRETE PAVEMENT	L.F.	60	
331.603	SAWING BITUMINOUS PAVEMENT	L.F.	1881	

NON-PARTICIPATING STATE AID (COUNTY)

THESE NON-PARTICIPATING ITEMS ARE TO BE PAID FOR BY THE CITY OF MAPLEWOOD.

504.602	F&I VERTICAL OFFSET OF 6" WATERMAIN	EACH	1
504.602	F&I CONNECTION TO EXISTING 6" GATE VALVE	EACH	1
504.602	F&I 6" PIPE PLUG	EACH	1
504.603	F&I 6" CLASS 53 WATERMAIN	L.F.	85

STANDARD DETAIL PLATES

0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 K	REINFORCED CONCRETE PIPE
3006 D	GASKET JOINT FOR R.C. PIPE
3100 F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3145 D	CONCRETE PIPE TIES
4005 K	MANHOLE OR CATCH BASIN
4009 G	MANHOLE OR CATCH BASIN
4010 F	CONCRETE SHORT CONE & ADJUSTING RING
4011 D	PRECAST CONCRETE BASE
4019 E	MANHOLE OR CATCH BASIN
4021 C	PRECAST CURB OPENING CATCH BASIN
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4108 E	MANHOLE ADJUSTING RINGS
4110 D	COVER CASTING FOR MANHOLE
4140 D	SPECIAL GRATE CASTINGS FOR CATCH BASIN
4143 D	STOOL GRATE & CONCRETE FRAME
4180 H	MANHOLE OR CATCH BASIN STEP
7020 J	CONCRETE CURB
7036 C	PEDESTRIAN CURB RAMP
7065 C	BITUMINOUS CURB
7100 F	CONCRETE CURB & GUTTERS
8000 I	STANDARD BARRICADES
9102 C	SODDING AT PIPE CULVERT ENDS
9322 I	CHAIN LINK FENCE

NOTES

(P) DENOTES PLAN QUANTITIES.

(1) DOES NOT INCLUDE 1713 C.Y. CONCRETE PAVEMENT REMOVAL.

(2) SAP 138-104-03

HYDRANT CHART

REMOVE		INSTALL	
STATION	LOCATION	STATION	LOCATION
FROST AVE.			
9+45	RT. 33'	ADJUST VERTICAL	
12+64	RT. 36'	ADJUST VERTICAL	
15+83	RT. 35'	ADJUST VERTICAL	
20+48	RT. 30'	ADJUST VERTICAL	
23+47	RT. 30'	ADJUST VERTICAL	
26+48	RT. 30'	ADJUST VERTICAL	
39+38	LT. 36'	39+40	LT. 43
42+25	LT. 40'	42+23	LT. 43
45+51	LT. 32'	45+35	LT. 30
ENGLISH ST.			
32+20	LT. 38	3+50	LT. 32

LOWER WATER SERVICES

NOTE: LOWER THE FOLLOWING WATER SERVICES TO PROVIDE 7.5' OF COVER

1-INCH	1221 FROST AVENUE	1-INCH	1355 FROST AVENUE
1-INCH	1225 FROST AVENUE	1-INCH	1375 FROST AVENUE
1-INCH	1247 FROST AVENUE	1-INCH	1380 FROST AVENUE
1-INCH	1249 FROST AVENUE	1-INCH	1401 FROST AVENUE
1-INCH	1257 FROST AVENUE	1-INCH	1402 FROST AVENUE
1-INCH	1289 FROST AVENUE	1-1/2 INCH	1380 CLARENCE
1-INCH	1350 FROST AVENUE		

FIVE OF THE ABOVE WATER SERVICES, 1221 FROST THROUGH 1257 FROST, WERE INSTALLED AND GUARANTEED BY THE WATER UTILITY. SEE SPECIAL PROVISIONS

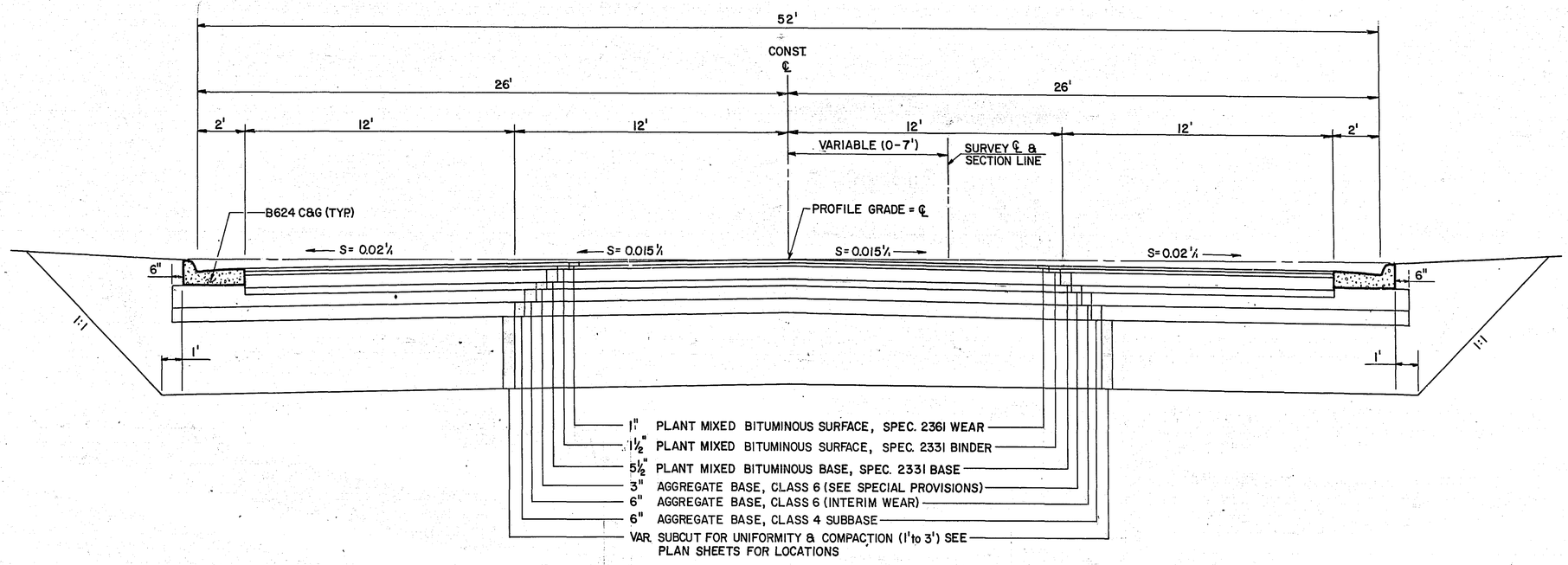
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Date 2-13-85 Reg. No. 13501

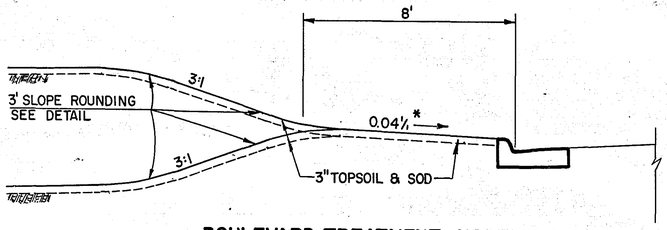
REVISIONS	DATE	BY	REVISIONS	DATE	BY
STORM SEWER GLOSTER POND	5-2	RJO			

SAP 138-104-03

S.A.P. No. 62-628-04 27-101 Sheet No. 2 of 65 Sheets

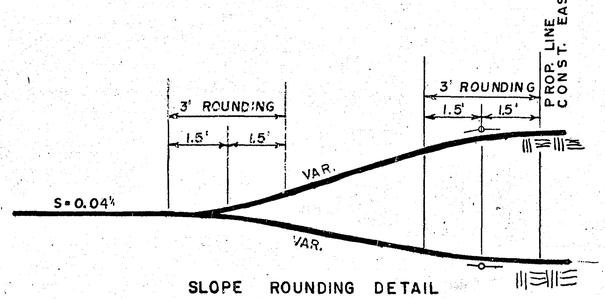


TYPICAL SECTION
FROST AVE. & ENGLISH ST.

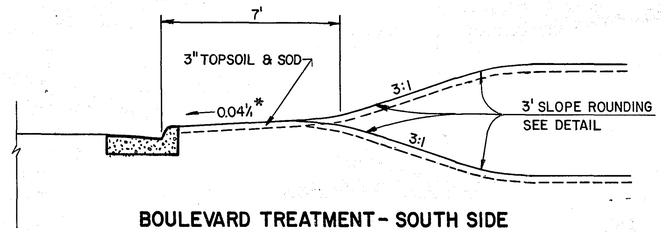


BOULEVARD TREATMENT- NORTH SIDE
STA. 8+33± to STA. 19+33±

* EXCEPT AS NOTED ON X-SECTION SHEETS.

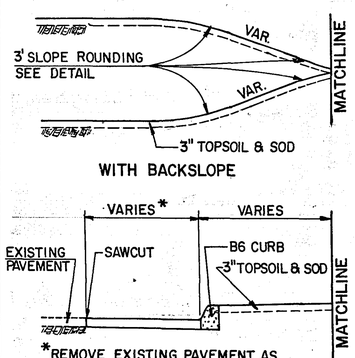


SLOPE ROUNDING DETAIL



BOULEVARD TREATMENT- SOUTH SIDE
STA. 8+33± to STA. 32+20±
STA. 42+60± to STA. 45+55±

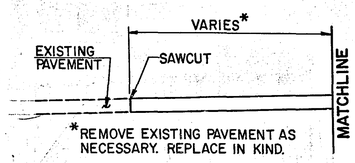
* EXCEPT AS NOTED ON X-SECTION SHEETS.



WITH BACKSLOPE

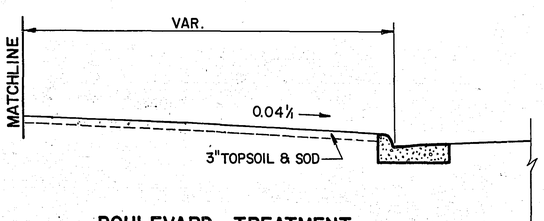
*REMOVE EXISTING PAVEMENT AS NECESSARY. REPLACE IN KIND.

WITH CONCRETE CURB



*REMOVE EXISTING PAVEMENT AS NECESSARY. REPLACE IN KIND.

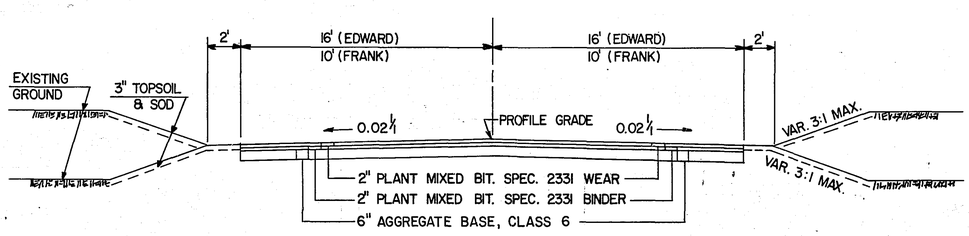
WITHOUT CONC. CURB



BOULEVARD TREATMENT
STA. 19+33± to STA. 45+55± (LEFT)
STA. 32+20± to STA. 42+60± (RIGHT)

SEE CROSS SECTIONS FOR ADDITIONAL INFORMATION

NOTE: DEPRESS CURB AT ALL INTERSECTIONS AS PER STANDARD PLATE 7036.



TYPICAL SECTION
FRANK ST. & EDWARD ST.

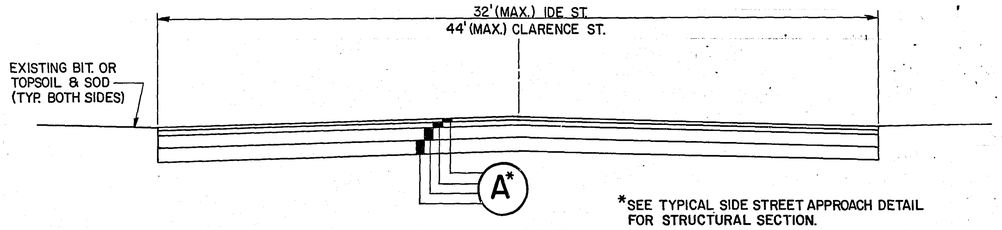
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Date 2-13-85 Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

TYPICAL SECTION & DETAILS

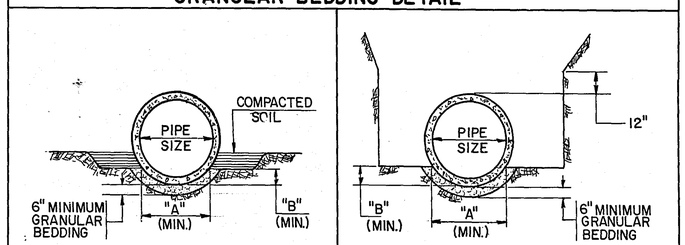
S.A.P. No. 62-628-04 27-101 Sheet No. 3 of 65 Sheets



*SEE TYPICAL SIDE STREET APPROACH DETAIL FOR STRUCTURAL SECTION.

TYPICAL SECTION
CLARENCE ST. & IDE ST.

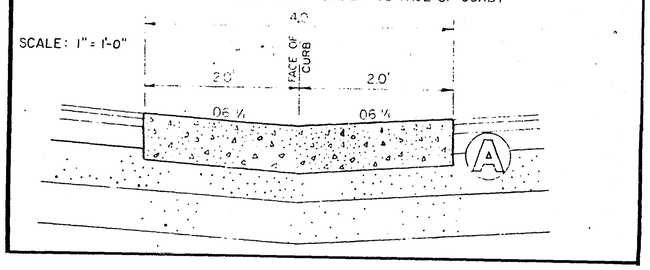
GRANULAR BEDDING DETAIL

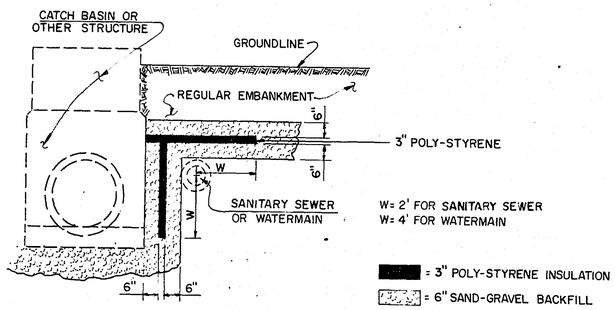


PIPE SIZE	"A"	"B"
21"	1.33'	0.33'
36"	2.20'	0.55'
42"	2.55'	0.64'

TYPE "V" DETAIL

CONCRETE GUTTER DELINEATOR THROUGH EDWARD STREET.
STA. 15+68± TO STA. 16+50± (RT. 26' TO FACE OF CURB)

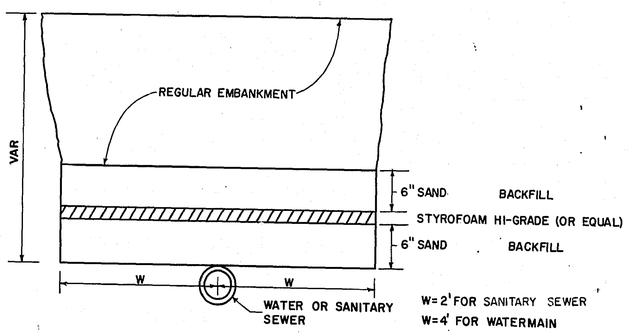




W= 2' FOR SANITARY SEWER
W= 4' FOR WATERMAIN

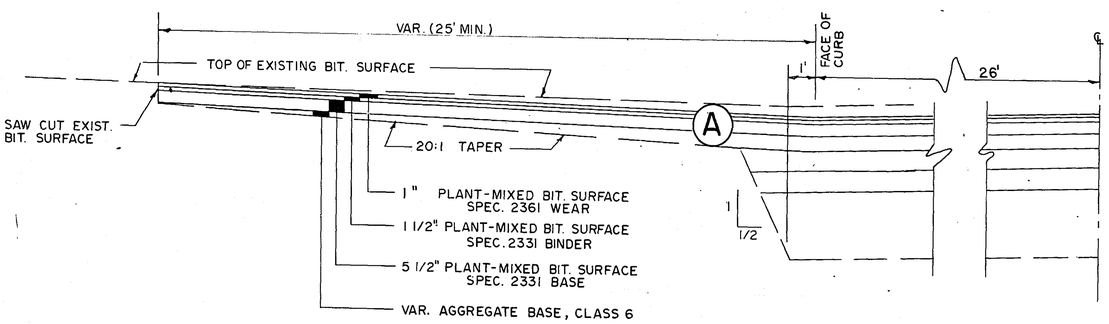
■ = 3" POLY-STYRENE INSULATION
▨ = 6" SAND-GRAVEL BACKFILL

WATER AND SANITARY SEWER INSULATION DETAIL



W=2' FOR SANITARY SEWER
W=4' FOR WATERMAIN

WATER AND SANITARY SEWER INSULATION DETAIL

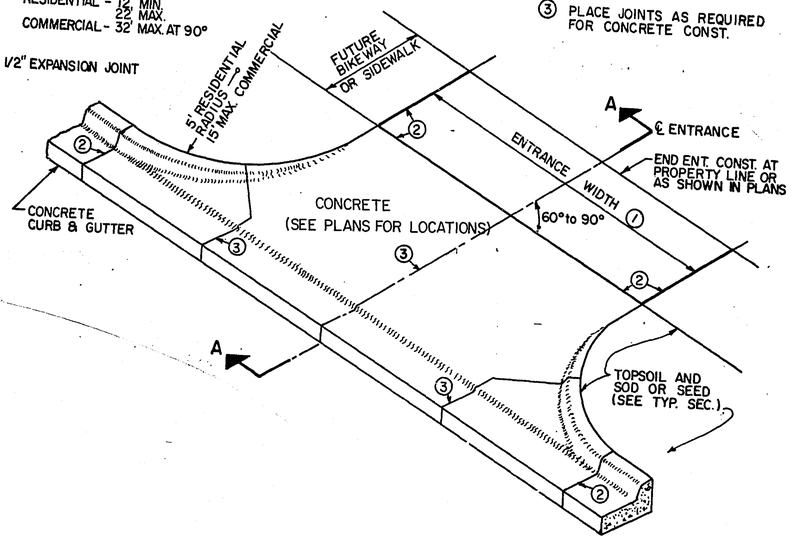


TYPICAL SIDE STREET APPROACH

① ENTRANCE WIDTHS
RESIDENTIAL - 12' MIN. 22' MAX.
COMMERCIAL - 32' MAX. AT 90°

② 1/2" EXPANSION JOINT

③ PLACE JOINTS AS REQUIRED FOR CONCRETE CONST.



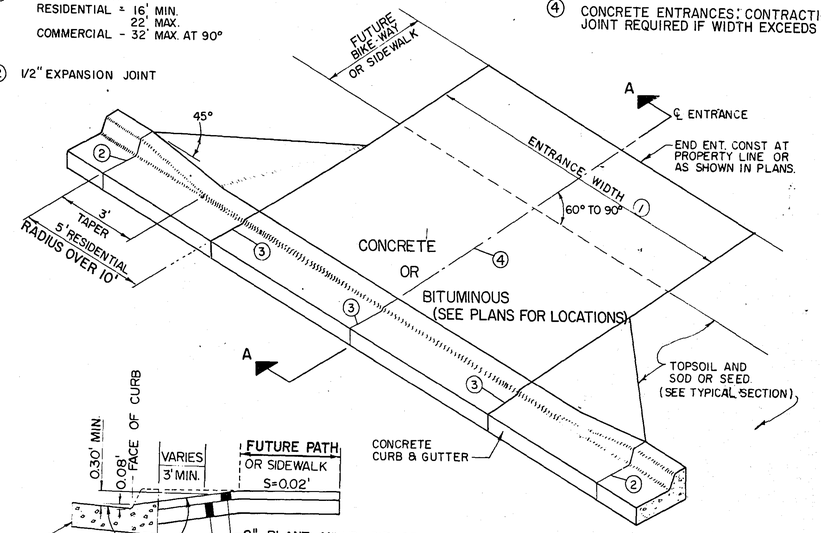
ENTRANCE DETAILS

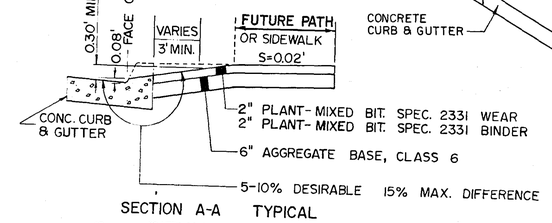
① ENTRANCE WIDTHS
RESIDENTIAL - 16' MIN. 22' MAX.
COMMERCIAL - 32' MAX. AT 90°

② 1/2" EXPANSION JOINT

③ PLACE JOINTS AS REQUIRED FOR CONC. CURB & GUTTER CONSTRUCTION.

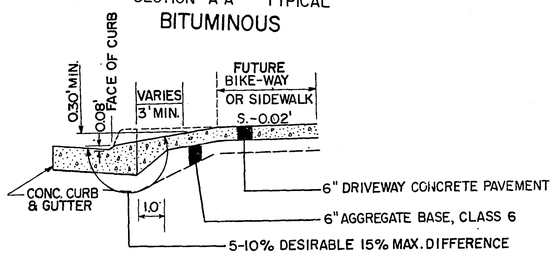
④ CONCRETE ENTRANCES: CONTRACTION JOINT REQUIRED IF WIDTH EXCEEDS 16'.





SECTION A-A TYPICAL

BITUMINOUS



CONCRETE

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.
Date 2-13-85 Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

TYPICAL SECTIONS & DETAILS

S.A.P. No. 62-628-04 27-101 Sheet No. 4 of 65 Sheets

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CLEAR, GRUB & TRANSPLANT CHART

STATION	LOCATION LT.	LOCATION RT.	DESCRIPTION	CLEAR	GRUB	TRANSPLANT	TRANSPLANT TO LT.	TRANSPLANT TO RT.
8+48	41'		8" ASH	1	1			
8+84		37'	STUMP		1			
9+84		40'-147'	27-4"+ COTTONWOODS	30	27			
10+03		32'	STUMP		1			
11+34	24'		10" ASH	1	1			
11+40	24'		TRIPLE ASH	3	1			
12+89	35'		10" COTTONWOOD	1	1			
12+94	34'		18" COTTONWOOD	1	1			
13+55	35'		15" COTTONWOOD	1	1			
14+56	33'		TWIN 12" ASH	2	1			
14+60	43'		14" ASH	1	1			
14+74	37'		20" ASH	1	1			
14+80	47'		10" ASH	1	1			
15+32	39'		12" MAPLE	1	1			
15+70	49'		STUMP		1			
17+64	48'		24" WILLOW	1	1			
18+32	27'		QUINT. 8" ASH	5	1			
19+07		52'	6" BIRCH	1	1			
19+61		61'	8" COTTONWOOD	1	1			
21+20		40'	TRIP 4" COTT.	3	1			
21+29		41'	TW. 5" COTT.	2	1			
21+53		35'	STUMP		1			
21+55		30'	STUMP		1			
21+57		30'	STUMP		1			
21+57		31'	STUMP		1			
21+69		35'	12" COTT.	1	1			
27+58	45'		4" MAPLE	1	1			
27+66	34'		STUMP		1			
FROST AVE 28+85	35'		4" MAPLE	1	1			
28+95	35'		4" CEDAR	1	1			
29+45	35'		4" PINE	1	1			
29+48	35'		4" APPLE	1	1			
FROST ST 29+61	35'		4" APPLE	1	1			
29+65	35'		4" CEDAR	1	1			
30+10	35'		4" APPLE	1	1			
30+25	35'		4" APPLE	1	1			
30+94	36'		4" APPLE	1	1			
31+65	34'		4" PINE	1	1			
33+05		30'	8" APPLE	1	1			
33+15		44'	4" PINE			1	AS DIRECTED	
33+27		38'	4" PINE			1	"	"
33+56		40'	2" PINE			1	"	"
34+10		35'	2" PINE	1	1			
34+21		31'	2" PINE	1	1			
34+28		35'	6" MAPLE	1	1			
34+37		34'	2" PINE	1	1			
34+77		37'	6" MAPLE	1	1			
34+87		35'	4" PINE	1	1			
39+66	44'		3" MAPLE			1	AS DIRECTED	
39+89	42'		3" MAPLE			1	"	"
40+15	44'		2" MAPLE			1	"	"
40+38	40'		2" MAPLE			1	"	"
40+61	44'		3" MAPLE			1	"	"
42+72	35'		16" ELM	1	1			
42+72	51'		30" ELM	1	1			
42+72	89'		COTTONWOOD	1	1			
42+72				1	1			
42+91	44'		15" ASH	1	1			
43+36		36'	28" ELM	1	1			
0+58	5'		4" OAK	1	1			
0+63	10'		8" OAK	1	1			
0+63	23'		6" OAK	1	1			
FRANK ST. 0+78		64'	8" ASH	1	1			
0+80		7'	4" OAK	1	1			
0+83		71'	6" ELM	1	1			
0+88		29'	TW. 4" ELM	2	1			
0+90	13'		20" OAK	1	1			
0+91		74'	TW. 4" OAK	2	1			
1+01		14'	4" OAK	1	1			
1+10	13'		14" OAK	1	1			
ENGLISH ST. 4+92	27'		4" APPLE	1	1			
3+96		19'	TW. 8" ELM	2	1			
4+15		19'	6" ELM	1	1			
RAILROAD R/W 4+36		17'	6" ELM	1	1			
4+41		14'	QUAD. 4" ELM	4	1			
4+64		19'	6" ELM	1	1			
7+35		15'-52'	8-4" ELM	8	8			
9+66	25'		4" MAPLE	1	1			
10+03	36'		8" MAPLE	1	1			
10+09	25'		4" OAK	1	1			
10+23	25'		6" MAPLE	1	1			
10+28	23'		4" OAK	1	1			
			TOTAL	118	107	8		

CONSTRUCTION NOTES

- PROVIDE DRAINAGE OUTLETS FOR ALL SUBCUTS DURING CONSTRUCTION. DITCHES SHOULD BE DEEPER THAN SUBCUT TO PROVIDE OUTLET DRAINAGE.
- TAPER ENDS OF SUBCUTS TO A 20:1 SLOPE UNLESS OTHERWISE RECOMMENDED.
- WHERE THE PROPOSED SUBCUT IS LOCATED UNDER INPLACE BASE AND BITUMINOUS SURFACING OR CONCRETE PAVEMENT, THE ENDS OF SUBCUT SHALL BE VERTICAL FOR THE DEPTH OF THE BITUMINOUS OR CONCRETE AND 2:1 IN AGGREGATE BASE.
- STRIP TOPSOIL FROM ALL AREAS TO BE DISTURBED BY CONSTRUCTION AND STOCKPILE (IF PRACTICAL) FOR REPLACEMENT LATER AS SLOPE DRESSING.
- PROVIDE FOR REMOVAL AND DISPOSAL OF (OUTSIDE THE CONSTRUCTION ZONE) ANY INPLACE SURFACING AND STRUCTURES THAT WILL INTERFERE WITH CONSTRUCTION.
- FROM A SOILS STANDPOINT, TRAFFIC SHOULD BE MAINTAINED NO CLOSER THAN AN IMAGINARY 2:1 LINE DRAWN FROM THE BOTTOM OF ANY SUBGRADE CORRECTION INTERSECTING THE SURFACE.
- THE ORDINARY COMPACTION METHOD SHALL BE USED ON THIS PROJECT.
- THE CONTRACTOR SHALL OBTAIN FROM THE UTILITY COMPANIES, THE EXACT LOCATION OF ANY UNDERGROUND UTILITIES WHICH HE MAY ENCOUNTER IN THE PERFORMANCE OF HIS WORK.
- TOP OF "GRADING GRADE" IS DEFINED AS THE TOP OF THE EMBANKMENT MATERIAL OR THE BOTTOM OF THE BITUMINOUS OR AGGREGATE BASE COURSE.

- NO PENETRATION PRIME IS REQUIRED ON THIS PROJECT.
- PROVIDE A TACK COAT, SPEC. 2357.2A, BETWEEN BITUMINOUS COURSES.
- 21" R.C.P. JACKED PIPE NOTE:
  DESIGN LENGTH OF STEEL CASING PIPE 58.1 L.F.
  EXAMPLES OF APPROVED GRADES OF STEEL ARE:
  (F_y = 35,000 p.s.i.)

BLACK STEEL	SCHEDULE 40
ASTM A106	GRADE B
ASTM A135	GRADE B
ASTM A139	GRADE B
ASTM A381	GRADE B
ANSI-B36-10	

- THE CONCRETE PAVEMENT, CONCRETE CURB, CONCRETE CURB AND GUTTER, CONCRETE PIPE, AND CONCRETE SIDEWALK REMOVED WILL BE DISPOSED OF OFF THE LIMITS OF THIS PROJECT. INCLUDE DISPOSAL WORK IN PRICE OF OTHER ITEMS.
  EXCESS EXCAVATION NOTE: INCLUDE DISPOSAL WORK IN PRICE OF OTHER ITEMS.
- UNSUITABLE GRADING MATERIAL SHALL CONSIST OF TOPSOIL, OTHER ORGANIC SOIL, DEBRIS, OR OTHER MATERIAL AS DETERMINED BY THE ENGINEER.
- SILT FENCE SHALL BE INSTALLED AT ALL CATCH BASINS AND AT OTHER DRAINAGE STRUCTURES AS INDICATED:

33 CATCH BASINS AT 21 L.F. EACH =	693 L.F.
APRON 116	90 L.F.
APRON 119	160 L.F.
APRON 162	70 L.F.
TOTAL:	1013 L.F.

SEE S.S. NO. 5 FOR INSTALLATION REQUIREMENTS.

REMOVALS & SALVAGES

STATION	LOCATION	CONC. CURB LF	CONC. C&G LF	CONC. PIPE LF	C.M. PIPE LF	SALVAGE FENCE WOOD LF	SALVAGE FENCE C-L LF	CONC. SIDEWALK SF	CONC. PAVEMENT SY	SALVAGE SIGNS
FROST AVE.										
8+33 TO 45+55	LT.-RT.								8,260	
9+98 TO 10+78	RT.					87'				
25+56	LT. 38'-53'						15'			
27+45	LT.-RT.			64'						
28+53 TO 28+69	LT.				17'					
29+58	LT. 40'									
30+80	LT. 40'									
32+00					20'					
32+19 TO 32+78	RT.				59'					
32+20 TO 32+19	LT.-RT.				58'					
32+20 TO 32+69	LT.				49'					
32+69	LT.				42'					
33+10	RT.	30'								
33+65	RT.	16'								
34+00	RT	16'								
38+25	LT. 38'									
40+79	LT.							65		
41+05	LT.							65		
41+08 TO 41+53	LT.		45'							
41+37	RT 42'									1 ①
41+49	RT.							105		
41+50	RT.				11'					
41+65 TO 42+31	LT.							330		
42+20 TO 42+65	RT.				45'					
43+88	RT. 29'-37'									
44+19	RT. 28'-45'									
44+38 TO 45+61	LT. 28'-34'							738		
ENGLISH AVE.										
1+50	RT.	14'								
4+10 TO 4+32	RT 32'					25'				
4+49 TO 4+69	RT. 32'					20'				
TOTALS		76'	45'	64'	301'	132'	15'	1303 SF	8260 SY	

① RELOCATE BY OTHERS

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.
Larry Feldhaus
Date 2-13-85 Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

CLEAR, GRUB & TRANSPLANT CHART
REMOVALS & SALVAGES CHART

S.A.P. No. 62-628-04 27-101 Sheet No. 5 of 65 Sheets

DRAINAGE CHART

STATION	LOCATION	NO.	TYPE	DESIGN	CONST. HEIGHT LIN. FT.	CASTING ASSEMBLY	ELEVATION: PROFILE	ELEVATION: ORIGNAL GRATE OR RING	ELEVATION: NEW GRATE OR RING	ELEVATION: C.B. or M.H. INVERT	ADJUST CASTING ASSEMBLY	RECONSTRUCT CATCH BASIN OR MANHOLE LIN. FT.	INSTALL CASTING ASSEMBLY	FURNISH AND INSTALL PIPE SEWER: REINFORCED CONCRETE PIPE 12"	15"	18"	21"	24"			CORRUGATED STEEL PIPE 12"	15"	18"			APRON	CLASS	DRAINS TO: STRUCTURE NO.	INVERT EL.	REMARKS
EXISTING STRUCTURES																													
FROST AVE. (1)																													
9+67	RT. 15	1	MH	SAN			903.82	902.18	903.44	891.00	1																		
12+87	RT. 15	2	MH	SAN			898.67	899.29	898.29	888.09		5.3	1																
16+07	RT 15	3	MH	SAN			895.79	895.39	895.41	887.08	1																		
19+27	RT. 15	4	MH	SAN			895.11	894.98	894.83	885.98	1																		
19+27	LT. 15	5	MH	SAN			895.11	895.15	894.91	885.38	1																		
22+57	LT. 18	6	MH	SAN			896.15	896.46	895.85	884.29		5.9	1																
25+87	LT. 18	7	MH	SAN			893.84	894.28	893.54	882.72	1																		
29+16	LT. 18	8	MH	SAN			893.02	893.49	892.72	880.94		7.2	1																
32+20	LT. 32	9	CB	STORM			895.46	894.39																					REMOVE
32+69	LT. 32	10	CB	STORM			895.85	895.22		893.10																			REMOVE
32+48	LT. 18	11	MH	SAN			895.68	895.34	895.38	868.34	1																		
32+19	RT. 27	12	CB	STORM			895.45	894.61																					REMOVE
32+78	RT. 30	13	CB	STORM			895.92	894.82		893.60																			REMOVE
35+23	LT. 19	14	MH	SAN			898.97	898.63	898.69	889.87	1																		
36+20	LT. 39	15	MH	WATER			899.89	899.91	900.39		1																		
37+68	LT. 18	16	MH	SAN			900.73	900.95	900.43	892.56	1																		
39+18	LT. 18	17	MH	SAN			901.58	901.69	901.28	890.04	1																		
42+47	LT. 17	18	MH	SAN			904.99	905.37	904.71	891.58	1																		
44+22	LT. 17	19	MH	SAN			907.36	907.38	907.08	899.03		5.2	1																
44+77	LT. 17	20	MH	SAN			908.09	908.04	907.81	901.96	1																		
45+75	LT. 17	21	MH	SAN			909.17	909.00	908.89	901.55																			OK LEAVE
ABANDONED R-R R/W (2)																													
0+70	RT. 45.5	22	S.D.	STORM																									
									TOTALS		12	23.6	4																

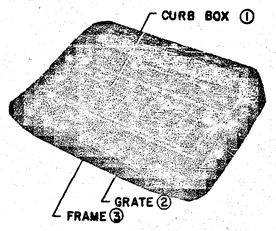
(1) DISTANCE (LEFT OR RIGHT) IS FROM CONST. ℄

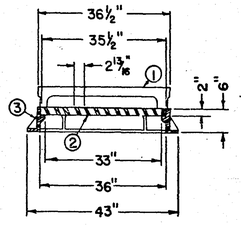
(2) DISTANCE (LEFT OR RIGHT) IS FROM R/W ℄.

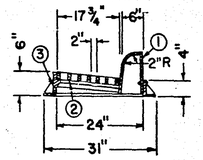
CASTING ASSEMBLY
(FOR DESIGN SPECIAL 2 CATCH BASIN)

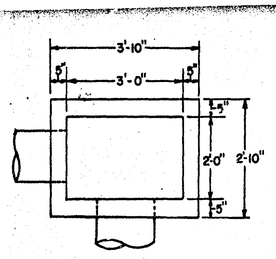
NOTES:

1. MATERIALS: CAST GRAY IRON, CLASS 30, MN/DOT SPEC. REFERENCE 3321
2. CURB BOX HEIGHT SHALL BE ADJUSTABLE 6" TO 9"
3. SEE CATCH BASIN-DESIGN SPECIAL 2 DETAIL FOR CASTING INSTALLATION DETAIL.

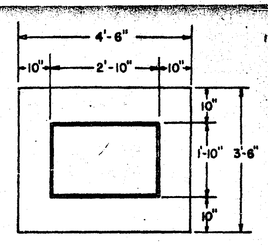




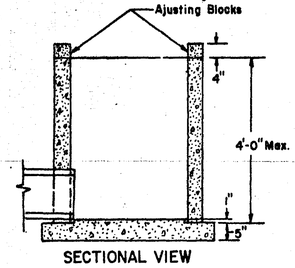




CATCH BASIN PLAN



BASE SLAB PLAN



SECTIONAL VIEW
CATCH BASIN & BASE SLAB

NOTES:

1. TO BE USED WITH NEENAH R-3067-L OR EQUAL.
2. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED.
3. ALTERNATE CAST-IN-PLACE BASE SLAB CAN BE USED.
4. INSTALL AS PER MN./DOT STD. PLATE NO. 7111E
5. REINFORCING: SINGLE LINE STEEL WIRE FABRIC,
   WALL = W3.5 x W3.0 HAVING A AREA OF NOT LESS THAN .21 SQ. IN. PER. FOOT OF HEIGHT.
   BASE = W4.0 X W4.0 HAVING A AREA OF NOT LESS THAN .16 SQ. IN. PER. FOOT OF HEIGHT

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.

Larry Feldhaus

Date 2-13-85 Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

EXISTING DRAINAGE CHART

S.A.P. NO. 62-628-04 27-101 Sheet No. 6 of 65 Sheets

DRAINAGE CHART

PROPOSED STRUCTURES

STATION	LOCATION	NO.	TYPE	DESIGN	CONST. HEIGHT LIN. FT	CASTING ASSEMBLY	ELEVATION: PROFILE	ELEVATION: ORIGINAL GRATE OR RING	ELEVATION: NEW GRATE OR RING	ELEVATION: C.B. or M.H. INVERT	ADJUST CASTING ASSEMBLY	RECONSTRUCT CATCH BASIN OR MANHOLE LIN. FT.	INSTALL CASTING ASSEMBLY	FURNISH AND INSTALL PIPE SEWER: REINFORCED CONCRETE PIPE 12"	15"	18"	21"	24"	27"	42"	CORRUGATED STEEL PIPE 12"	15"	18"			APRON	CLASS	DRAINS TO: STRUCTURE NO.	INVERT EL.	REMARKS
FROST AVENUE (1)																														
9+18	RT. 27.5'	101	CB	LP-4-5	5.11		904.67		904.63	899.85					60'											V	102	899.25	
9+18	LT. 27.5'	102	CB	LP-4-6	5.71		904.67		904.63	899.25					76'											V	105	898.49	
10+00	RT. 140'	103	AP				903.25	DET.	IN FIELD	896.01						12'														
9+84	RT. 140'	104	MH	A OR F		A	902.97	DET.	IN FIELD	895.98						140'										18"	V	104	895.98	
9+84	℄	105	MH	A OR F	9.71	A	903.53		903.51	893.94						250'											V	105	895.77	SEE NOTE (3)
13+03	RT. 54'	106	CB	RC-2	4.41±	B	898.52		899.72±	895.41					30'												V	109	891.44	
12+70	RT. 54'	107	CB	RC-2	5.81 ±	B	898.82		899.72±	894.11					45'												V	107	895.11	
12+35	RT. 27.5'	108	CB	LP-4-6	5.78		899.15		899.11	893.66					30'												V	108	893.66	
12+35	℄	109	MH	A CR F	7.81	A	899.15		899.13	891.44						30'											V	109	893.36	
12+35	LT. 27.5'	110	CB	LP-4-8	8.36		899.15		899.11	891.08						197'											V	110	891.08	
																											III	111	888.72	
14+30	LT. 55'	111	MH	A OR F		A	897.38	DET.	IN FIELD	877.79							300'										IV	158	876.92	
15+60	RT. 27.5'	112	CB	LP-4-5	4.79		896.21		896.17	891.71					60'												V	113	891.11	
15+60	LT. 27.5'	113	CB	LP-4-6	6.39		896.21		896.17	890.11					30'													114	889.87	
15+60	LT. 55'	114	MH	A OR F	10.74±	A	896.21		888.68±	878.06							130'										IV	111	877.79	
18+31	RT. 27.5'	115	CB	LP-4-4	3.68		893.91		893.87	890.41					60'												V	117	889.81	
19+40	RT. 85'	116	AP				895.33	DET.	IN FIELD	879.00							175'									21"	III	118	878.63	GLOSTER POND
18+31	LT. 27.5'	117	CB	LP-4-6	6.39		893.91		893.87	887.81					30'												V	118	887.57	
18+31	LT. 55'	118	MH	A OR F	13.04	A	893.45		891.55±	878.63							271'										III	114	878.06	
20+55	RT. 85'	119	AP				896.62	DET.	IN FIELD	879.67																42"				GLOSTER POND
20+55	RT. 38'	120	MH	4019-84"	15.55±	A	896.62		895.20±	879.77										42'							II	119	879.67	
24+35	LT. 27.5'	121	CB	LP-4-6	5.81		894.93		894.89	889.41					60'												V	122	888.81	
24+35	RT. 27.5'	122	CB	LP-4-6	6.38		894.93		894.89	888.81					8'												V	123	888.73	
24+35	RT. 38'	123	MH	J	13.21±	A	894.96		894.00	880.91										379'							II	120	879.77	
25+70	LT. 145'	124	S.D.	A OR F	4.0±	C	893.99		891.5 ±	887.64					30'												V	125	887.55	
26+00	LT. 145'	125	S.D.	A OR F	4.0±	C	893.78		891.5 ±	887.55					183'												V	126	887.00	
26+00	RT. 38'	126	MH	J	11.0±	A	893.78		892.36±	881.36										166'							II	123	880.91	
28+12	LT. 64'	127	S.D.	A OR F	3.95	C	892.51		891.00	887.00						30'											V	128	886.87	ATLANTIC POND
28+16.94	LT. 27.5'	128	CB	LP-4-6	6.20		892.51		892.47	886.87						60'											V	129	886.60	
28+16.94	RT. 27.5'	129	CB	LP-4-6	6.20		892.51		892.47	886.60						8'											V	130	886.56	
28+16.94	RT. 38'	130	MH	4019-66"	9.42±	A	892.51		891.16 ±	881.86										216'							II	126	881.36	
30+12	LT. 27.5'	131	CB	LP-4-6	5.77		893.77		893.73	888.29					60'												V	132	887.69	
30+12	RT. 27.5'	132	CB	LP-4-7	6.37		893.77		893.73	887.69					8'												V	133	887.61	
30+12	RT. 38'	133	MH	J	13.49±	A	893.77		895.67±	882.30										196'							II	130	881.86	
32+15	LT. 65'	134	CB	LP-4-5	5.37		895.41		895.37	890.93					60'												V	135	890.33	
32+78	LT. 65'	135	CB	LP-4-6	5.88		895.92		895.88	890.33						205'											V	141A	889.54	100 L.F. 18"-PLUG END
32+15	RT. 70'	136	CB	LP-4-5	4.90		895.41		895.37	890.80					60'												V	137	890.20	
32+78	RT. 70'	137	CB	LP-4-6	6.01		895.92		895.88	890.2					130'												V	141A	889.90	100 L.F. 15"-PLUG END
33+08	RT. 57'	138	S.D.	A OR F	4.94±	C	896.16		896.30±	891.31					40'												V	141A	890.91	
33+15	RT. 27.5'	139	CB	LP-4-5	4.96		896.23		896.19	891.56					25'												V	138	891.31	
33+03	LT. 27.5'	140	CB	LP-4-5	5.32		896.13		896.09	891.10					30'												V	141	890.80	
32+70	RT. 38'	141A	MH	4019-66"	12.48	A	895.86		895.20	882.84										259'							II	133	882.30	
33+00	℄	141	MH	A OR F	11.88	A	896.10		896.08	884.32									48'								II	141A	883.84	
37+17	RT. 180'	142	S.D.				900.58	DET.	IN FIELD	890.65 ±				90'														143	889.97	BEHIND RICHARD'S MARKET
36+27	RT. 180'	143	MH	A OR F		A	899.93	DET.	IN FIELD	889.97 ±				180'													V	146	888.62	
36+37	RT. 27.5'	144	CB	LP-4-4	4.46		899.99		899.95	895.49					32'												V	146	895.17	
36+27	LT. 27.5'	145	CB	LP-4-4	4.46		899.93		899.87	895.41					30'												V	146	895.11	
36+27	℄	146	MH	A OR F	11.41	A	899.93		899.91	888.62							269/56										II	141	884.72	56 L.F. CL. II JACKED-SEE PLANS
38+93	RT. 38'	147	CB	RC-2	3.54	B	901.48		901.22±	897.82					48'												V	148	897.34	
39+42	RT. 38'	148	CB	RC-2	3.98	B	901.74		901.22±	897.34					25'												V	149	897.09	
39+67	RT. 27.5'	149	CB	LP-4-5	5.10		901.90		901.86	897.09					45'												V	151	896.64	
39+67	LT. 27.5'	150	CB	LP-4-5	5.10		901.90		901.86	897.09					45'												V	151	896.64	

CASTINGS — A= RING CASTING M.H.D. NO. 700-7, COVER CASTING NO.712 (INCLUDE WITH STRUCTURE, NOT SEPARATE PAY ITEM).
B= NEENAH INLET FRAME, GRATE, & CURB BOX NO. R-3067 OR EQUAL (INCLUDE WITH STRUCTURE, NOT SEPARATE PAY ITEM).
C= CASTING M.H.D. NO. 731 AND FRAME (INCLUDE WITH STRUCTURE, NOT A SEPARATE PAY ITEM).

MANHOLES & CATCH BASINS — LP-4, DETAIL ON SHEET NO. 7
R.C.-2, DETAIL ON SHEET NO. 6
A. OR F., M.H.D. STD. PLATE NO. 4000 OR 4005

NOTES

(1) DISTANCE (RIGHT OR LEFT) IS FROM CONSTRUCTION ℄

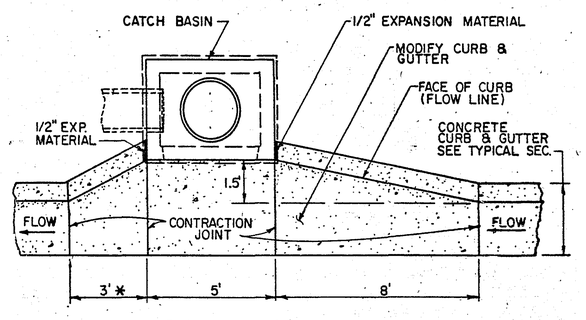
(2) DISTANCE (RIGHT OR LEFT) IS FROM RIGHT OF WAY ℄

GRANULAR BEDDING, CLASS B TO BE USED FOR:
21" R.C. PIPE, CLASS III & IV
36" R.C. PIPE, CLASS II
42" R.C. PIPE, CLASS II
SEE DETAIL, SHEET NO. 4

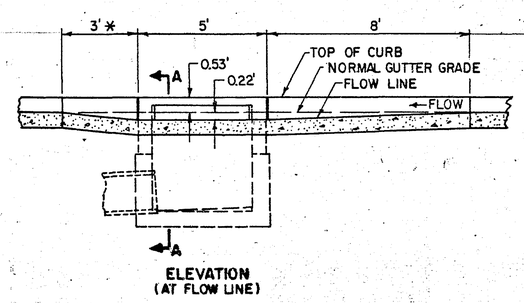
TRASH GUARDS ARE TO BE INSTALLED ON ALL APRONS

(3) INSTALL CASTING PER MAPLEWOOD FOR FUTURE 32' STREET. FURNISH MEXICAN HAT.

CURB OPENING CATCH BASIN, DESIGN L.P.- INSTALLATION DETAIL



PLAN VIEW



ELEVATION (AT FLOW LINE)

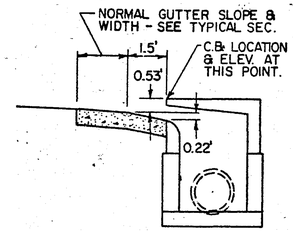
NOTES:

* DIMENSION SHALL BE 8' WHEN STRUCTURE INSTALLED AT LOW POINT IN GRADE

CATCH BASIN - DESIGN LP - SEE MN/DOT STD. PL. NO. 4021C.

TOP OF CATCH BASIN SHALL BE INSTALLED AT SAME SLOPE AS BLVD. GRADES AND TOP OF CURB GRADE EACH SIDE OF STRUCTURE.

ELEVATION OF STRUCTURE IS COMPUTED AT LOCATION SHOWN IN SEC. A-A AT ℄ OF C.B. OPENING.



SECTION A-A

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.
Date 2-13-85 Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

PROPOSED DRAINAGE CHART

S.A.P. NO. 62-628-04 27-101 Sheet No. 7 of 65 Sheets

DRAINAGE CHART

STATION (1)	LOCATION (1)	NO.	TYPE	DESIGN	CONST HEIGHT LIN. FT	CASTING ASSEMBLY	ELEVATION: PROFILE	ELEVATION: ORIGNAL GRATE OR RING	ELEVATION: NEW GRATE OR RING	ELEVATION: C.B. or M.H. INVERT	ADJUST CASTING ASSEMBLY	RECONSTRUCT CATCH BASIN OR MANHOLE LIN. FT.	INSTALL CASTING ASSEMBLY	FURNISH AND INSTALL PIPE SEWER: REINFORCED CONCRETE PIPE 12"	15"	18"	21"	24"	27"	42"	CORRUGATED STEEL PIPE 12"	15"	18"			APRON	CLASS	DRAINS TO: STRUCTURE NO.	DRAINS TO: INVERT EL.	REMARKS
FROST AVE. CONT.							**PROPOSED STRUCTURES**																							
39+35	℄	151	MH	A OR F	11.66	A	901.72		901.70	890.16							308'										II	146	888.62	
42+27	RT. 36'	152	CB	RC-2	3.30	B	904.78		905.00±	901.90					40'												V	153	901.50	
42+68	RT. 36'	153	CB	RC-2	4.10	B	905.18		905.00±	900.92					36'												V	157	900.56	
42+95	RT. 27.5'	154	CB	LP-4-6	6.38		905.63		905.59	899.54					40'												V	157	899.14	
42+95	LT. 27.5	155	CB	LP-4-6	5.71		905.63		905.59	900.21					40'												V	157	899.81	
42+68	LT. 120'	156	AP				905.27			898.00					120'											15"	V	157	897.42	
42+68	℄	157	MH	A OR F	11.52	A	905.27		905.25	893.85						334'											V	151	892.85	
ABANDONED RR RW (2)																														
24+07±	LT. 33±	158	MH	A OR F	~~14.88~~	A	891.80 ±			876.92							365'										IV	159	876.19	
20+42±	LT. 30±	159	MH	A OR F	~~11.23~~	A	887.42 ±			876.19							365'										IV	160	875.46	
16+78±	LT. 26±	160	MH	A OR F	~~12.54~~	A	888.00±			875.46							365'										IV	161	874.73	
13+13±	LT. 23±	161	MH	A OR F	~~12.23~~	A	886.96±			874.73							365'										IV	162	874.00	
9+55±	LT. 35±	162	AP							874.00																21"				OUTFALL
8+00±	LT. 30±	163	AP							874.00						350'										18"	V	164	869.24	
4+50±	RT. 23±	164	MH	A OR F	~~6.06~~	A	875.30±			869.24						385'											V	22	864.00	MAKE SUITABLE CONN.
TOTALS														270'	1616'	2001'	2969'	0	48'	1258'									

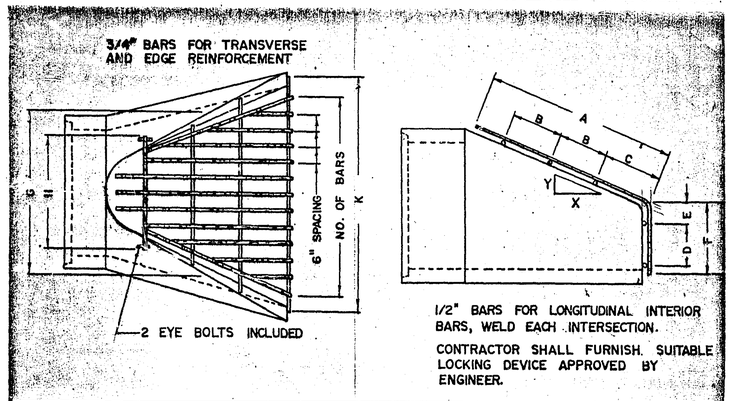
DESIGN LP-4	DESIGN A OR F	DESIGN RC-2	DESIGN "J"	DESIGN 4019	DESIGN-APRON
LP4-4 = 3	A OR F = 21	RC-2 = 6	"J" = 3	4019-66 = 2	15" APRON = 1
LP4-5 = 8				4019-84 = 1	18" APRON = 2
LP4-6 = 13					21" APRON = 2
LP4-7 = 1					42" APRON = 1
LP4-8 = 1					
TOTAL : 26	21	6	3	3	

CASTINGS — A = RING CASTING M.H.D. NO. 700-7, COVER CASTING NO. 712 (INCLUDE WITH STRUCTURE, NOT SEPARATE PAY ITEM).
B = NEENAH INLET FRAME, GRATE, & CURB BOX NO. R-3067 OR EQUAL (INCLUDE WITH STRUCTURE, NOT SEPARATE PAY ITEM).
C = CASTING M.H.D. NO. 731 AND FRAME (INCLUDE WITH STRUCTURE, NOT A SEPARATE PAY ITEM).

MANHOLES & CATCH BASINS — R.C.-2, DETAIL ON SHEET NO.
A. OR F, M.H.D. STD. PLATE NO. 4000 OR 4005

NOTES

(1) DISTANCE (RIGHT OR LEFT) IS FROM CONSTRUCTION ℄
(2) DISTANCE (RIGHT OR LEFT) IS FROM RIGHT OF WAY ℄
GRANULAR BEDDING, CLASS B, TO BE USED FOR 21" R.C. PIPE CLASS IV. (SEE DETAIL SHEET NO. 4)



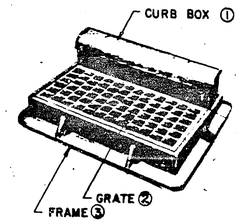
SIZE	NO. OF BARS	SLOPE	A	B	C	D	E	F	G	H	K
12"	5	3 to 1	24	10	10	5	2	8	24		30
15"	6	"	24	10	10	6	2	10	26		34
18"	7	"	24	10	10	6	3	12	28		40
21"	8	"	36	16	16	7	3	12	34		50
24"	9	"	44	20	20	10	4	16	36		52
27"	10	"	50	23	23	10	4	16	38		58
30"	11	"	56	26	26	12	4	18	42		64
36"	13	"	64	30	30	12	4	18	48		76
42"	15	"	68	32	32	16	8	26	60		88
48"	16	"	76	36	36	14	10	28	62		92
54"	17	24 to 1	76	36	36	16	12	32	68		96

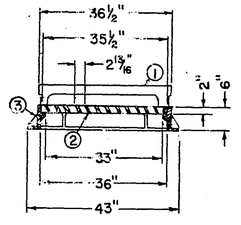
TRASH GUARD (GALVANIZED)
(FOR CONCRETE APRON)

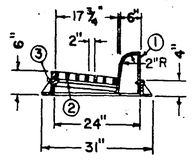
CASTING ASSEMBLY
FOR RC-2 CATCH BASINS

NOTES:

1. MATERIALS: CAST GRAY IRON, CLASS 30, MN/DOT SPEC. REFERENCE 3321
2. CURB BOX HEIGHT SHALL BE ADJUSTABLE 6" TO 9"
3. SEE CATCH BASIN-DESIGN SPECIAL 2 DETAIL FOR CASTING INSTALLATION DETAIL.







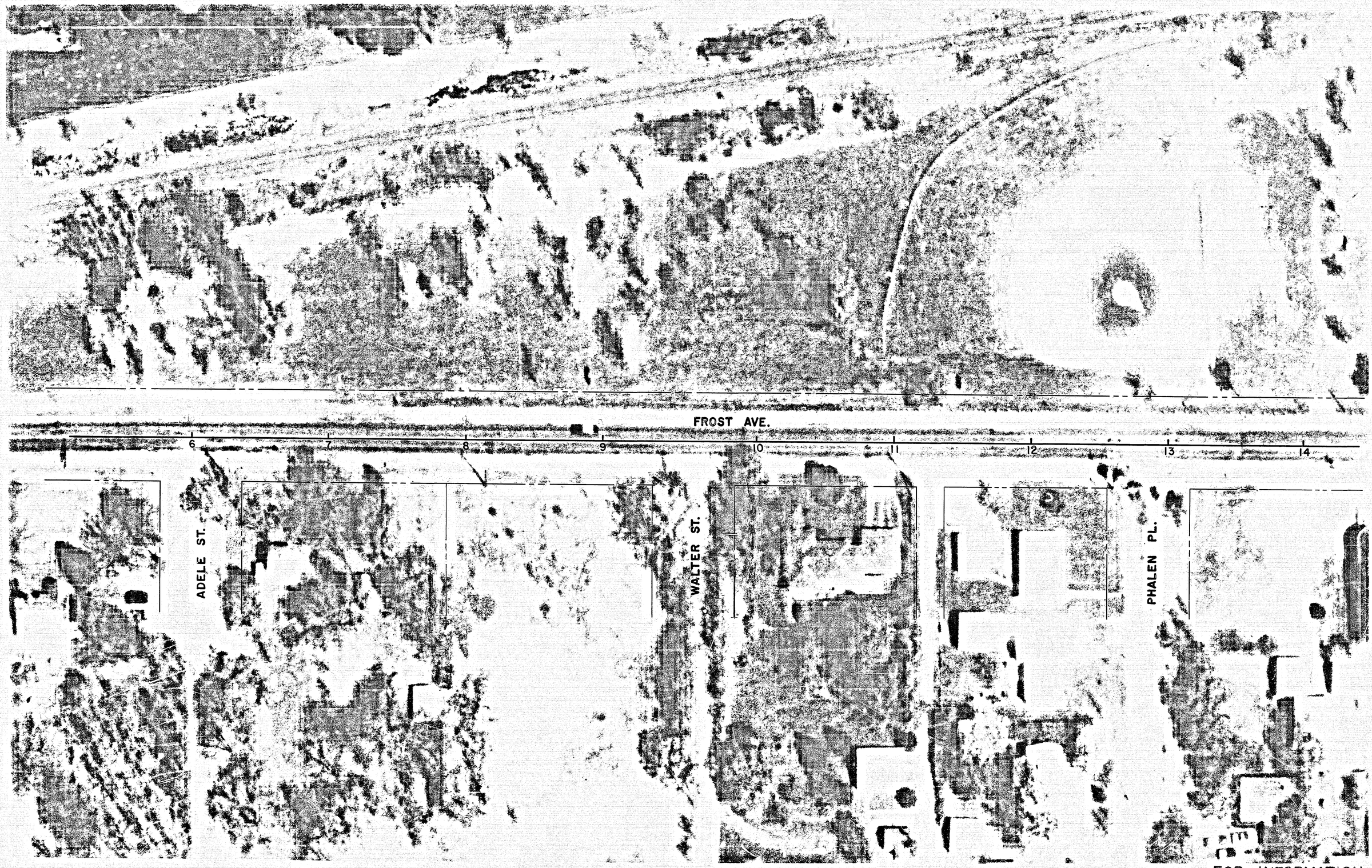
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date 2-13-85 Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

PROPOSED DRAINAGE CHART

S.A.P NO. 62-628-04 27-101 Sheet No. 8 of 65 Sheets

FROST AVE.



FOR INFORMATION ONLY

S.A.P No. 62-628-04 FROST AVENUE Sheet No. 9 of 65 Sheets

FROST AVE.

FROST AVE.
62-628-04

WEST AV.

FROST AVE.

FROST AVE.

FROST AVE.
62-628-04

SHEET No.

FRANK ST.

FROST AVE.

14 15 16 17 18 19 20 21 22 23

EDWARD ST.

FRANK ST.

FOR INFORMATION ONLY

S.A.P. No. 62-628-04 FROST AVENUE Sheet No. 10 of 65 Sheets

FROST AVE

FOR INFORMATION ONLY

S.A.P. No. 62-628-04 FROST AVENUE Sheet No. 11 of 65 Sheets

Frost Ave. 62-628-04

SHEET No.

FROST AVE

62-628-04
FROST AVE

SHEET NO.

FROST AVE.

ST.

RAIL ROAD

ST.

32 33 34 35 36 37 38 39 40 41

ENGLISH

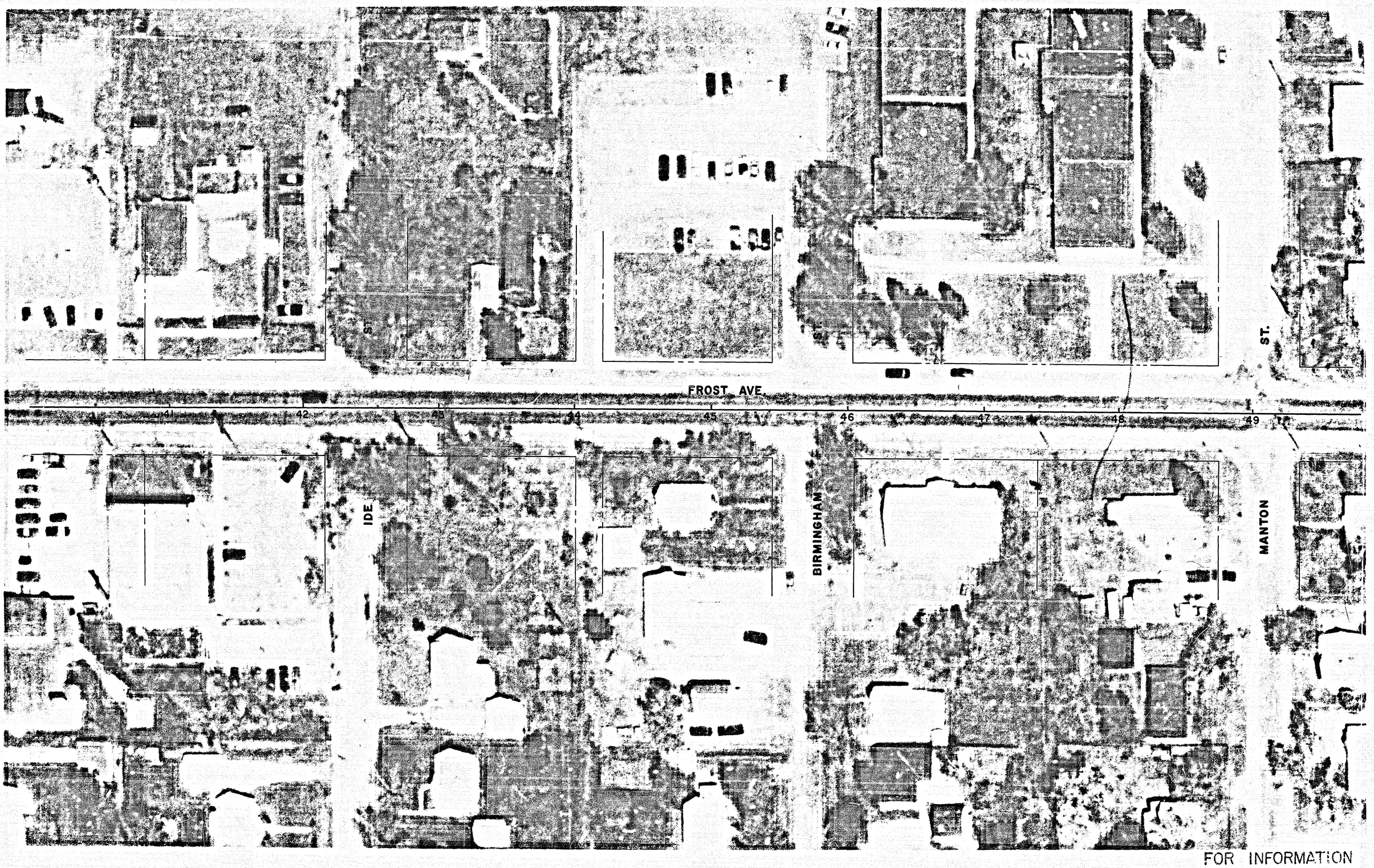
NORTHERN PACIFIC

CLARENCE

FOR INFORMATION ONLY

S.A.P. No. 62-628-04 FROST AVENUE 27-101 Sheet No. 12 of 65 Sheets

FROST AVE.



Frost Ave.
62-628-04

SHEET No.

FOR INFORMATION ONLY

S.A.P. No. 62-628-04 FROST AVENUE 27-101 Sheet No. 13 of 65 Sheets

TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE

SECTION 16 T28N R22W

STA. 6+06.28 FROST AVENUE

N

10 30 50
0 20 40

TEMPORARY CONSTRUCTION DONE 1981 S.A.P. 62-628-02

BEGIN PROJ. STA. 8+33
S.A.P. No. 62-628-04

OBLITERATE PATH CONNECTION TO ROADWAY

NOTE: DISPOSITION OF PARK EQUIPMENT TO BE DONE BY OTHERS.

EXISTING R/W — EXISTING BIT. PATH — ACQUIRE 10' ADDITIONAL R/W — EXISTING BIT. PATH — SIGN — PROPOSED R/W — CONST. LIMITS — TEMPORARY SLOPE EASEMENT — SCORE BOARD — SIGN — BIT PARKING LOT — 20' ST. SEWER EASEMENT

C.B.102 — C.B.110 — C.B.109

EXISTING B624 — 3"PE. — GRAVEL SHOULDER — REMOVE POSTS (96) — CONST. ℄ — M.H.105 — M.H.109

FROST

EXISTING 20' WIDE NON-REINFORCED CONCRETE PAVEMENT

SURVEY ℄ — M.H.1 — M.H. 2 — 8" SANITARY SEWER

M.H. — 8" SAN. SEWER — EXISTING B624 — BUR.TEL. — TE. PED. — C.B.101 — G.V. — W.S.O. — 2"GS

EXIST. 25'R. — EXIST. 25'R.

MATCH EXISTING B624 C&G

BEGIN CONCRETE PAVEMENT REMOVAL STA. 8+72±

CONSTRUCTION LIMITS

SALVAGE FENCE INSTALL FENCE — CONST. LIMITS (TEMPORARY SLOPE EASEMENT) — BIT. — BIT ENT. — BIT. SURF — ACQUIRE 30'x30' Δ — C.B.107 — C.B.106 25'R. — CONST. LIMITS (TEMP. SLOPE ESMT.) — TAPER BITUMINOUS TO MATCH EXISTING (10:1)

ADELE ST. — 8" SAN SEWER — 1068

WALTER ST. — 8" SANITARY SEWER — 1084

H0. 1100 — GAR. — H0. 1915 (PHALEN PL.) — 1130

PHALEN PLACE — 8" SANITARY SEWER

LOWER 20 L.F. 6" WATERMAIN AS DIRECTED

A.P. 103 — M.H.104 — 10'x20' ST. SEWER EASEMENT

NOTE: DEPRESS CURB AT ALL INTERSECTIONS AS PER STANDARD PLATE 7036.

NOTE: INSTALL SILT FENCE AT ALL CATCH BASIN LOCATIONS.

INSULATE UTILITIES

PROPOSED HIGHWAY EASEMENT

DRAINAGE EASEMENT

C.B.101 — C.B.102 — M.H.105 — M.H.104 — A.P. 103 — C.B.110 — M.H.109 — C.B.108 — C.B.107 — C.B.106

60 L.F 15"@1.0% — 72 76 L.F 15"@1.0% — 899.85 .80 — 899.28 .29 — 898.49 .45 — 895.77 .26 — 893.94

P.I. 10+00 EL. 903.25 — 140 L.F. 18"@ 0.15% — 11 12 L.F. 18"@0.15% + APRON — 895.98 .48 — 896.01 5.50

EL. 900.40 — 30 L.F 18" @1.2% — 30 L.F 15" @1.0% — 41 45 L.F 15"@1.0% — 31 30 L.F 15" @1.0% — 195 197 L.F 18" @1.2% — 891.08 .10 — 891.44 .47 — 893.66 .59 — 893.36 .31 — 894.11 .02 — 895.11 .10 — 895.41 .40 — EL. 897.65

P.I. STA 5+80.89
ELEV. 910.50

EXISTING GRADE

MATCH EXISTING ROADWAY AS DIRECTED BY THE ENGINEER

904.4 — -0.55% — EXISTING 7½" CONC. PVMT. — 20:1 TAPER — 76 L.F 15"@1.0% 72 — 899.23 .29 — 898.49 .45 — 893.94

PROFILE GRADE — -1.90% — -0.90% — 252 250 L.F 18"@1.0% — 195 197 L.F 18"@1.2% — 20:1 TAPER — 891.44 .47 — 891.08 .10

V.C.=100' M=0.1250'

V.C.=800' M = 6.73'

EXISTING 8" D.I.P. — EXISTING SAN SEWER — EXISTING 8" D.I.P. — EXISTING SAN SEWER

BEGIN SUBCUT STA. 8+32 — BEGIN CONCRETE PAVEMENT REMOVAL STA. 8+72± — P.T. 7+80.89 — P.C. 7+50 — P.I. 12+00 EL. 899.45 — P.T. 7+50 — P.O.T. 7+00

5 6 7 8 9 10 11 12 13 14

910 905 900 895

*INCLUDES 3' SUBCUT FOR UNIFORMITY & COMPACTION

**INCLUDES 1' SUBCUT FOR UNIFORMITY & COMPACTION

DONE BY: R.E.L
DATE: 4-22-87

REVISIONS	DATE	BY	REVISIONS	DATE	BY
CONST. LIM. 1084	5-29	RLD			

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.
Larry Feldhaus
DATE 2-13-85 REG. NO. 13501

LOWER 6" WATERMAIN AS DIRECTED — LOWER 8" WATERMAIN AS DIRECTED — FROST AVE.

S.A.P. No. 62-628-04 — 27-101 — Sheet No. 14 of 65 Sheets

TOPOGRAPHY	PLOTTED BY DATE	CHECKED BY DATE
UTILITIES	PLOTTED BY DATE	CHECKED BY DATE
PROFILE	PLOTTED BY DATE	CHECKED BY DATE

FROST AVE.

FROST AVE.
62-628-04

SHEET NO.

SEE SHEET NO.25

FLICEK PARK BASE LINE

300 L.F. 2@0.25%

CONST. LIMITS (TEMPORARY SLOPE EASEMENT)

BENCH

FLICEK PARK

BENCH

BENCH

M.H.111

M.H.114

M.H.116

BLEACHERS

ACQUIRE 10' ADD. R/W

P.O.T. (FROST) STA. 16+23 = P.O.T. (EDWARD) ST. 0+00

PROPOSED R/W

EXISTING R/W

REMOVE POSTS

REMOVE

C.B.113

C.B.117

NOTE: DISPOSITION OF PARK EQUIPMENT TO BE DONE BY OTHERS.

EXCESS EXCAVATION TO BE STOCKPILED IN THIS AREA AS DIRECTED BY THE CITY OF MAPLEWOOD

20' STORM SEWER EASEMENT

N

0 10 20 30 40 50

CONST. LIMITS

SEE SHEET 21

CURVE No. 2
P.I. STA. 20+00
Δ = 1°09'
D = 1°
L = 115'
T = 57.51'
R = 5729.58'

P.O.T. (FROST) STA. 19+42 = P.O.T. (FRANK) STA. 0+00

P.T. 20+57.49

FRANK ST.

10'R.

16'

DIRT CLOSE

BIT. CLOSE

BITUMINOUS SURFACE

20'R.

HO. 1867 FRANK ST.

Bldg.

HO. 1201

20'x20' AGG. PARKING AREA

REMOVE SIGN

PLANTER

CONST. LIMITS (TEMP. SLOPE EASEMENT)

TEL BOX

VACATED DULUTH ST.

DIRT

SIGN

BIT. PARKING LOT

SAWCUT BIT.

B624 C.&G.

M.H.5

M.H.6

90°

FROST AVENUE

CONST. "V" GUTTER

8" SAN SEWER

M.H.3

M.H.4

C.B.115

C.B.112

2" C.S. 8" D.I.P. BUR.TEL.

TEL PED

3" PE. 8" D.I.P.

EXISTING 4'x14' ESMT.

M.H.120

150'

15' STORM SEWER EASEMENT

CONST. LIMITS (TEMP. SLOPE EASEMENT)

SIGN TIRES SIGN

CONST. LIMITS

BLOCK WALL

DIRT CLOSE ENT.

BIT. SPILLWAY

25'R.

60'

BLDG. 1146

RAISE 20 L.F. 6" WATERMAIN AS DIRECTED

STA. 14+00 FROST AVE. SURVEY ℄ = STA. 0+00 FLICEK PARK BASE LINE

NOTE: DEPRESS CURB AT ALL INTERSECTIONS AS PER STANDARD PLATE 7036.

SEE SHEET 20

EDWARD ST.

CURVE No.1
P.I. STA. 16+50
Δ = 1°09'
D = 1°
L = 115'
T = 57.51'
R = 5729.58'

P.C. 15+92.49

P.T. 17+07.49

32'

BIT. SURF.

CONSTRUCT BIT. ENTRANCE

BLDG. 1160

1170

CONST. LIMITS (TEMPORARY SLOPE EASEMENT)

FRANK ST.

AP 116

AP 119

GLOSTER POND CONSTRUCTION SEE SHEET 26

EXCESS EXCAVATION TO BE STOCKPILED IN THIS AREA AS DIRECTED BY THE CITY OF MAPLEWOOD

INSULATE UTILITIES

PROPOSED HIGHWAY EASEMENT

DRAINAGE EASEMENT

NOTE: INSTALL SILT FENCE AT ALL CATCH BASINS AND AT APRONS 116 & 119.

CONTRACTOR SHALL PROVIDE SUPPORT FOR INPLACE 8" WATERMAIN DURING STORM SEWER CONSTRUCTION. INCLUDE IN PRICE OF OTHER ITEMS.

WATERMAIN SHALL NOT BE UNDERMINED. CONTRACTOR SHALL PROTECT INPLACE UTILITIES. INCLUDE IN PRICE OF OTHER ITEMS.

C.B.112 — 60 L.F. 15" @ 1.0% — C.B.113 — 30 L.F. 15" @ 1.0% — M.H.114

891.71 — 891.11 .11 — 890.11 — 889.87 5.30 — 878.06 .10

C.B.115 — 60 L.F. 15" @ 1.0% — C.B.117 — M.H.118

890.41 .38 — 889.81 .78 — 887.81 — 887.57 2.10 — 878.63 .60

M.H.120 — 41 42 L.F. 42" @ 0.27% + APRON — AP 119

879.77 .67 — 879.67 .57

EL. 894.05 — EL. 894.60 — EL. 896.56

PI. 20+50 EL. 897.60

V.C. = 100' M = 0.3625'

V.C. = 300' M = 1.0125'

PROFILE GRADE — EXISTING GRADE

-0.90% — +2.00% — -0.695%

20:1 TAPER — 20:1 TAPER

EXISTING 8" D.I.P. — EXISTING SAN. SEWER

195 197 L.F. 18" @ 1.2% — 888.72 — 877.79 .83

123 130 L.F. 21" @ 0.21% — 878.06 .10

276 271 L.F. 21" @ 0.21%

177 175 L.F. 21" @ 0.21% + APRON — 879.00 .03

379 L.F. 42" @ 0.30% 368

EXISTING 8" D.I.P. — EXISTING SAN. SEWER — EXISTING 8" D.I.P.

P.O.T. +00 — P.C. +00 — LOW POINT = 18+31 EL. 893.91 — PI. 18+50 EL. 893.60 — P.T. +00

* INCLUDES 3' SUBCUT FOR UNIFORMITY & COMPACTION

** INCLUDES 1' SUBCUT FOR UNIFORMITY & COMPACTION

RAISE 6" WATERMAIN AS DIRECTED

RAISE 8" WATERMAIN AS DIRECTED

AS-BUILT PLAN CONFORMING TO CONST. RECORDS
DONE BY: REK
DATE: 4-22-87

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.
Larry Feldt
DATE 2-13-85 REG. NO 13501

14 15 16 17 18 19 20 21 22 23

FROST AVE.

S.A.P. No. 62-628-04

27-101

Sheet No. 15 of 65 Sheets

TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE

FROST AVE

FROST AVE C2-628-04

SHEET NO.

FURNISH AND INSTALL:
85 L.F 6" D.I.P.
6" PLUG
6" OFFSET VERTICAL
PROVIDE VERT. OFFSET UNDER 8" SAN.

5.8 cfs mp1w'd. 10-05-84

S.D.124 S.D.125

FOR ADDITIONAL INFORMATION SEE SHEETS 18,36,37,58,59.

AP 125A

CONST. LIMITS (TEMPORARY SLOPE EASEMENT)

7.8 cfs mp1w'd. 10-05-84

POND ELEV. 885.00 7 APR 83

BLDG 1221

BUR.TEL.

BLDG 1225

TAPER BITUMINOUS TO MATCH EXISTING (10:1)

SALVAGE FENCE & INSTALL ON PRIVATE PROPERTY

SAWCUT AND REMOVE BIT. PAVEMENT AND REPLACE IN KIND.

LOWER 2 WATER SERVICES

RELOCATE SIGN

CONST. LIMITS (TEMP. SLOPE EASEMENT) LOT

ATLANTIC ST.

VACATED

8" V.C.P.

10:1 TAPER

BLDG. 1247

LOWER WATER SERVICE FOR ROADWAY

1249 CONC. BASE

CHAMBER ST.

REMOVE

END B6 CURB WITH 5' TAPER

20' ST. SEWER EASEMENT

BLDG. 1281

BLDG. 1291

ACQUIRE 22' X 22'Δ

PUMP ISLAND

B6 CURB

35' R.

ACQUIRE 15' X 15'Δ

BIT. PARKING

BIT. CURB

ELEC.

SIGN

C.B.121 C.B.122 C.B.123 C.B.128 C.B.129 C.B.131 C.B.132

M.H.123 M.H.126 M.H.130 M.H.133

S.D.127

FROST AVENUE

3" PE-MP

8" DIP

3" PE

B624 C&G

EXISTING 4'x14' EASEMENT

P.O.T. STA. 0+00 ATLANTIC ST. ℄ = P.O.T. STA. 25+87 FROST AVE.

15' STORM SEWER EASEMENT

AP 130A

CONST. LIMITS (TEMPORARY SLOPE EASEMENT)

BOTH FUTURE EXTENSIONS OF WATER SERVICE TO BE INSULATED NORTH & SOUTH OF MAIN AT FROST.

NOTE: INSTALL SILT FENCE AT ALL CATCH BASIN LOCATIONS.

INSULATE UTILITIES

PROPOSED HIGHWAY EASEMENT

DRAINAGE EASEMENT

NOTE: DEPRESS CURB AT ALL INTERSECTIONS AS PER STANDARD PLATE 7036.

60 L.F 15" @1.0%

12 / 8 L.F 15" @1.0%

183 L.F 15" @0.3%

24 / 30 L.F 15" @0.3%

95 L.F. 15" RCP + APRON

60 L.F 18" @0.45%

30 L.F 18" @0.45%

10 / 8 L.F. 18" @0.45%

58 L.F. 18" RCP + APRON

55 / 60 L.F 15" @1.0%

12 / 8 L.F 15" @1.0%

889.41 .35

888.81 .75

888.73 .63

880.91 .88

887.64 6.82

887.55 6.75

886.73

887.00

891.00

887.00 6.18

886.87 .91

881.36 .30

886.60 .64

886.56 .60

881.86 .80

888.29 .32

887.68 .72

887.61 .64

882.30

VC=150'
M=0.28

LOW POINT +16.94
EL. 892.51

PI. 28+22.67
EL. 892.23

892.75

892.84

EXISTING GRADE

PROFILE GRADE

-.695%

+0.81%

3'**

5'*

379 L.F. 42" @0.30%
368

168
166 L.F 42" @0.27%

216 L.F. 42" @0.23%
221

191
186 L.F 42" @0.22%

262
259 L.F 42" @0.21%

8" EXISTING D.I.P.

EXISTING SAN. SEWER

+47.67

+97.67

**INCLUDES 1' SUBCUT FOR UNIFORMITY & COMPACTION

*INCLUDES 3' SUBCUT FOR UNIFORMITY & COMPACTION

AS BUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: RCL
DATE: 4-22-87

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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 2-13-85 REG. NO 13501

FROST AVE.

S.A.P. No. 62-628-04 27-101 Sheet No. 16 of 65 Sheets

FROST AVE.

	PLOTTED BY	DATE	CHECKED BY	DATE
TOPOGRAPHY				
UTILITIES				
PROFILE				

NOTE: R.R. CROSSING CONSTRUCTION AND SIGNAL RELOCATION TO BE DONE BY OTHERS AS S.A.P. NO. 62-628-05 FROM STA. 35+80 TO STA. 36+07. PLACE TEMPORARY BITUMINOUS SURFACING WITHIN EXCEPTION IN THIS CONTRACT.

NOTE: DEPRESS CURB AT ALL INTERSECTIONS AS PER STANDARD PLATE 7036.

SEE SHEET 19

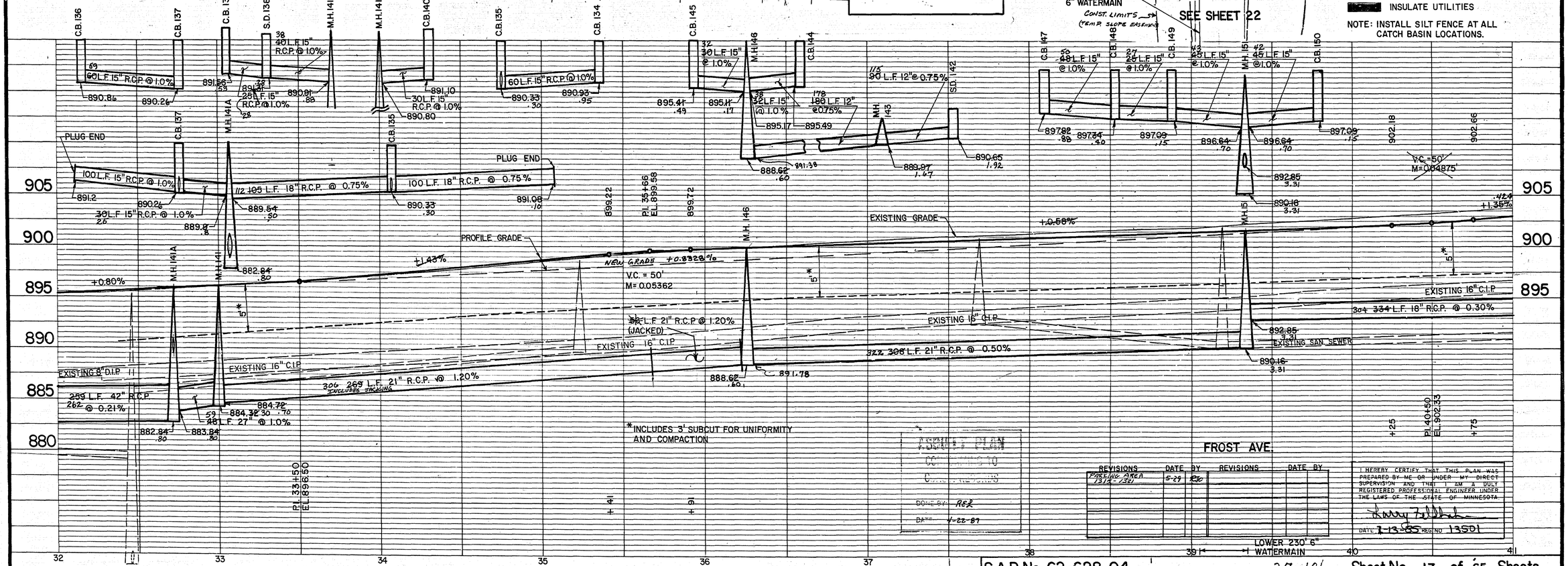
PLUG END

P.O.T. STA. 3+00 ENGLISH ST. ℄ =
P.O.T. STA. 32+48.42 FROST AVE. ℄

SAWCUT BIT.
B6 CURB
CONST. LIMITS
SAWCUT AND REMOVE BIT. PAVEMENT AND REPLACE IN KIND.
SAWCUT CONC.
BLDG. 1313
BLDG. 1315-1321
CONST. LIMITS (TEMP. SLOPE EASEMENT)
BIT. PARKING LOT
B6 CURB
REMOVED TRACKS @ TIME OF CONSTRUCTION
TAPER B624 C&G AND B6 CURB. (5' TAPER TYP. AT ALL CURB ENDS)
SCALE: 1"=30'
SIGN
RELOCATE HYDRANT 4' BEHIND FACE OF CURB
B624 C&G
NOTE: CONTRACTORS OPTION JACKING WITH SLEEVE SEE SPECIAL PROVISIONS
8" V.C.P. LOWER 6" WATERMAIN
B6 CURB-MATCH EXISTING
RELOCATE HYDRANT 4' BEHIND FACE OF CURB
LOWER WATER SERVICE
REMOVE SIDEWALK REPLACE IN KIND. CONSTRUCT PED. CURB RAMP.
MATCH EXISTING
SAWCUT AND REMOVE BIT. PAVEMENT AND REPLACE IN KIND.
FUTURE CONTROL CABINET
REMOVE SPILLWAY
SALVAGE AND REINSTALL SIGN AS DIRECTED BY THE ENGINEER AND THE PROPERTY OWNER.
FUTURE SIGNAL BASE
PROPOSED HIGHWAY EASEMENT
DRAINAGE EASEMENT
BLDG. 1344
REMOVE BIT. SURFACING AS REQUIRED FOR STORM SEWER CONST. REPLACE IN KIND.
BLDG. 1350
BLDG. 1355
BLDG. 1375
BLDG. 1380
TAPER ROADWAY TO MATCH EXISTING
SAWCUT AND REMOVE BIT. PAVEMENT AND REPLACE IN KIND.
LOWER 200 L.F 6" WATERMAIN
SEE SHEET 22
INSULATE UTILITIES
NOTE: INSTALL SILT FENCE AT ALL CATCH BASIN LOCATIONS.

FROST AVE. 62-628-04

SHEET NO.



*INCLUDES 3' SUBCUT FOR UNIFORMITY AND COMPACTION

DONE BY: RSL
DATE: 4-22-87

FROST AVE.

REVISIONS	DATE	BY	REVISIONS	DATE	BY
PARKING AREA 1315-1321	5-29	RSL			

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 7-13-88 REG. NO. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 17 of 65 Sheets

TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE

FROST AVE.

FROST AVE 62-628-04

SHEET No.

AP. 156

TAPER TO MATCH EXISTING

RELOCATE HYDRANT 4' BEHIND FACE OF CURB

LOWER WATER SERVICE

END PROJECT (LT. & RT.) STA. 45+55

TAPER TO MATCH EXISTING

LOWER WATER SERVICE

RELOCATE HYDRANT 4' BEHIND FACE OF CURB.

REMOVE SIDEWALK REPLACE IN KIND

1375 BLDG.

BIT. PARKING LOT

CONST. LIMITS (TEMPORARY SLOPE EASEMENT)

CONC. CURB

REMOVE SIDEWALK

SIGN

C.B. 155

Ga.

Ho. 1401

BIT. ENT.

CONST. LIMITS (TEMP. SLOPE EASMT.) REMOVE SIDEWALK REPLACE IN KIND

1419

1426

6" WMN.

M.H. 18

M.H. 19

M.H. 20

M.H. 21

FROST AVENUE

M.H. 157

M.H. 157A

SAWCUT BITUMINOUS AS DIRECTED

REMOVE

REMOVE SIDEWALK REPLACE IN KIND

C.B. 152

C.B. 153

C.B. 154

SIGN PLANTER

PARKING LOT

REMOVE CONC. STEPS INCIDENTAL TO COMMON EXCAVATION

CONST. LIMITS (TEMP. SLOPE EASEMENT)

FND. 1402

END CONCRETE PAVEMENT REMOVAL @ STA. 44+45±

SALVAGE FLAGSTONE SLOPE PAVING AND INSTALL IN KIND ON PRIVATE PROPERTY. PAYMENT SHALL BE INCIDENTAL.

Ho. 1927

GRAVEL ENT.

BIRMINGHAM AVENUE

BLDG. 1380

SALVAGE & RELOCATE BY OTHERS

SEE SHEET 22

TAPER ROADWAY TO MATCH EXISTING. SEE SHEET NO.63

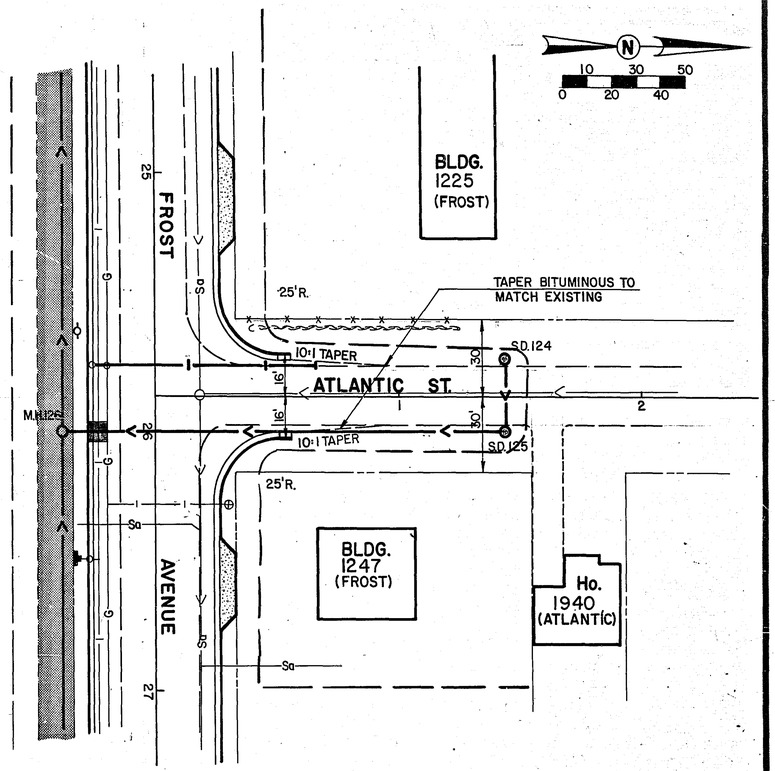
NOTE: INSTALL SILT FENCE AT ALL CATCH BASIN LOCATIONS.

INSULATE UTILITIES

PROPOSED HIGHWAY EASEMENT

DRAINAGE EASEMENT

NOTE: DEPRESS CURB AT ALL INTERSECTIONS AS PER STANDARD PLATE 7036.



40 L.F. 15" @ 1.0%

36 L.F. 15" @ 1.0%

40 L.F. 15" @ 1.0%

40 L.F. 15" @ 1.0%

120 L.F. 15" @ 0.30% & APRON

334 L.F. 18" @ 0.30%

28 L.F. 18" RCP

PROPOSED PROFILE

EXISTING GRADE

EXISTING 16" D.I.P.

EXISTING SAN. SEWER

EXISTING 7½" CONCRETE PVMT.

SUBCUT FOR WIDENING ONLY. ROAD CONSTRUCTED UNDER S.A.P. 62-628-03 IN 1983.

V.C. = 50'
M = 0.01625'

+1.09

0.50%

+1.25%

END CONCRETE PVMT. REMOVAL

STA. 44+45±

**INCLUDES 1' SUBCUT FOR UNIFORMITY AND COMPACTION

*INCLUDES 3' SUBCUT FOR UNIFORMITY AND COMPACTION

LOWER 115' OF 6" WATERMAIN. 40' TO NORTH OF 16" MAIN AND 75' TO SOUTH OF 16" MAIN.

AS-BUILT PLAN
CONFORMING TO CONSTRUCTION RECORDS
DONE BY: REL
DATE: 4-22-87

FROST AVE. AND ATLANTIC ST.

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Larry K. Feldhaus

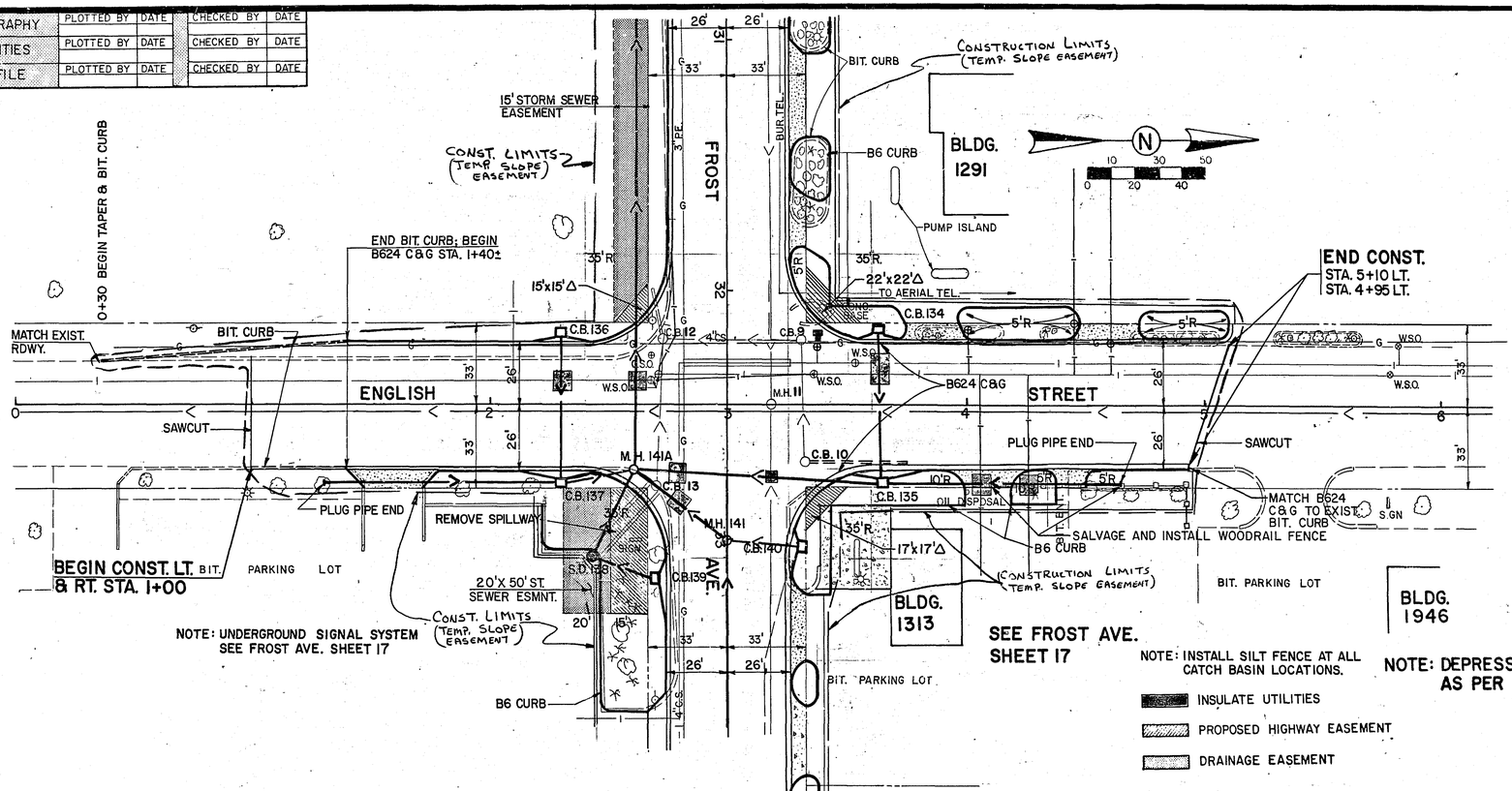
DATE 02-20-86 REG. NO. 13501

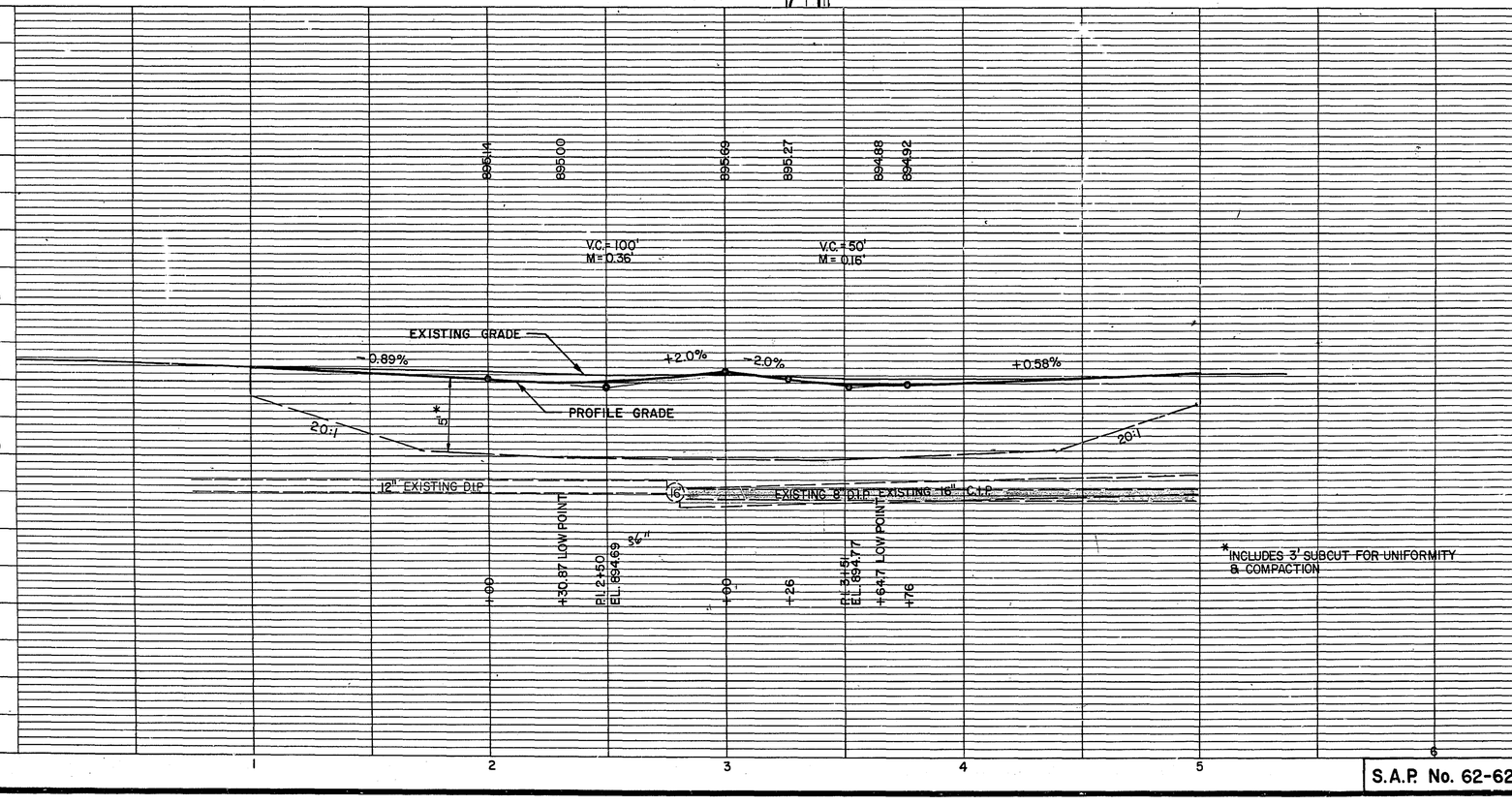
S.A.P. No. 62-628-04

27-101

Sheet No. 18 of 65 Sheets

TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE





AS-BUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: RAA
DATE: 4-22-87

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.
Date 2-13-85 Reg. No. 13501

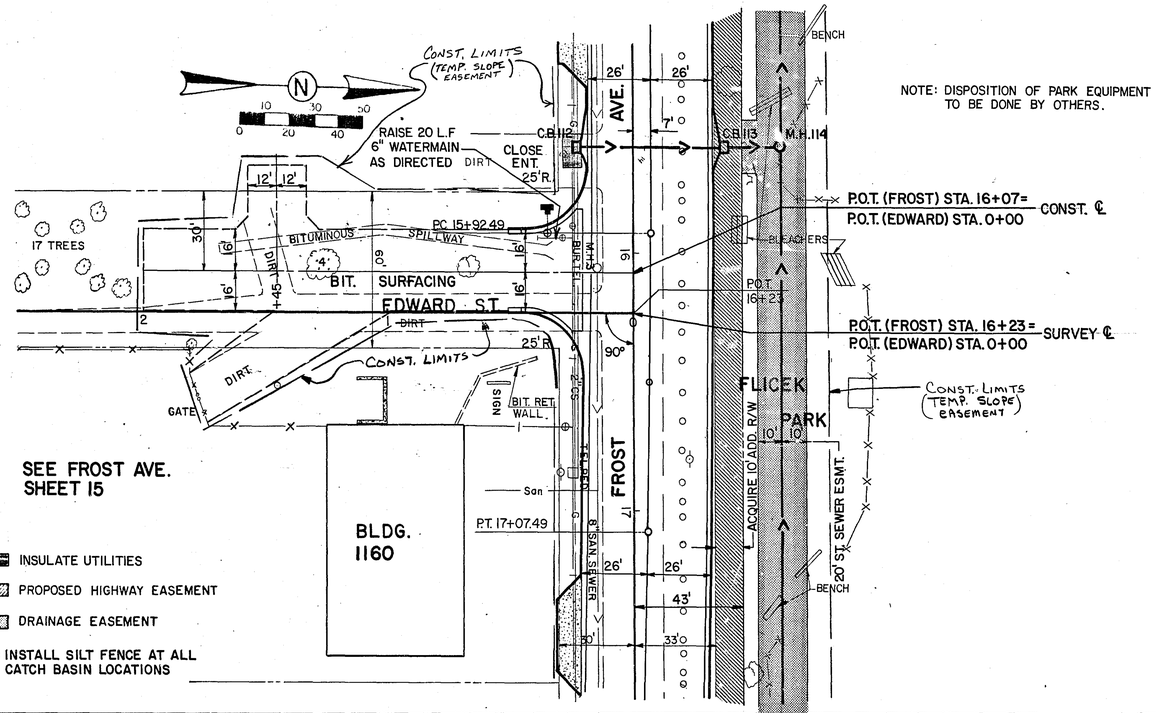
REVISIONS	DATE	BY	REVISIONS	DATE	BY

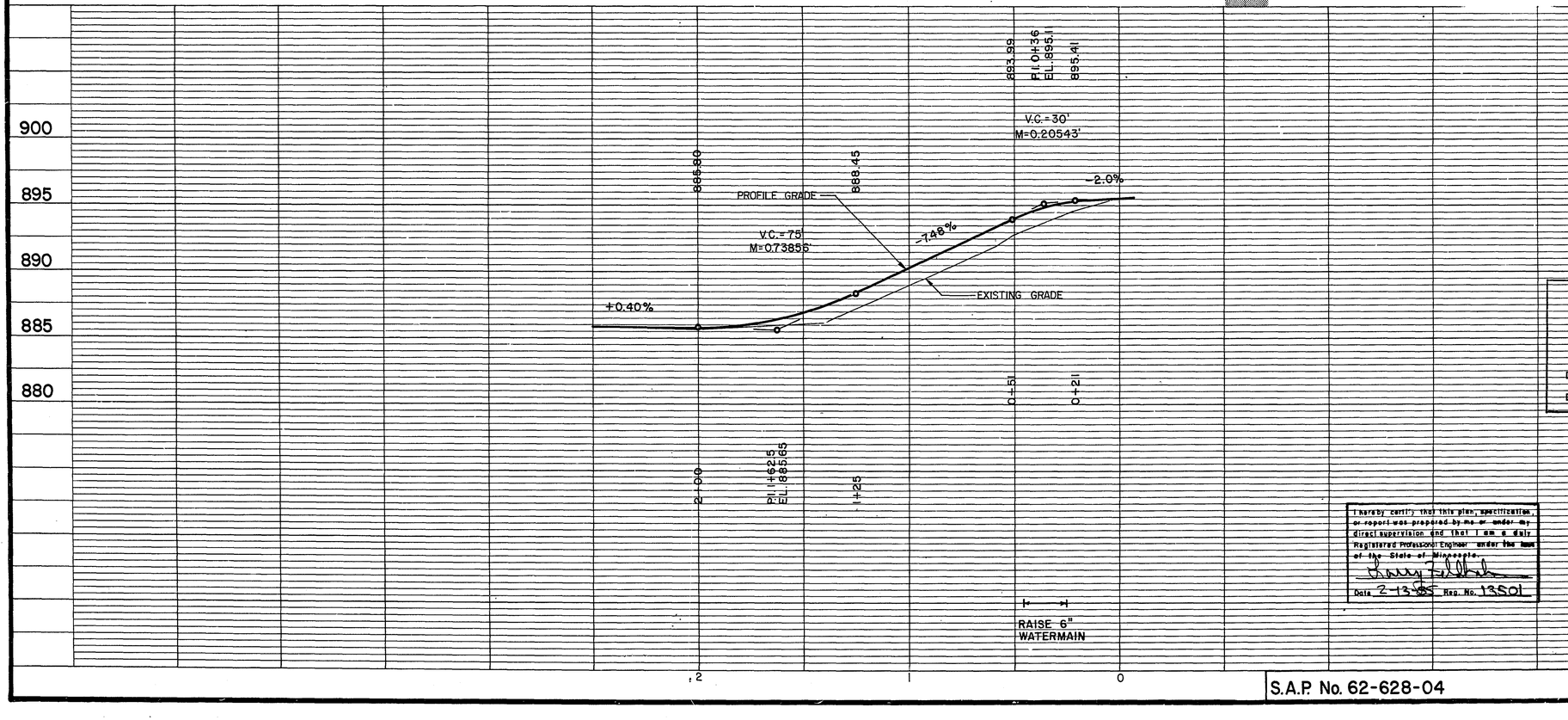
ENGLISH ST.

S.A.P. No. 62-628-04 27-101 Sheet No. 19 of 65 Sheets

ENGLISH ST.
FROST AVE 62-628-04
SHEET No.

TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE





AS BUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: REA
DATE: 4-22-87

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.
Date 2-13-85 Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

EDWARD ST.

S.A.P. No. 62-628-04 27-101 Sheet No. 20 of 65 Sheets

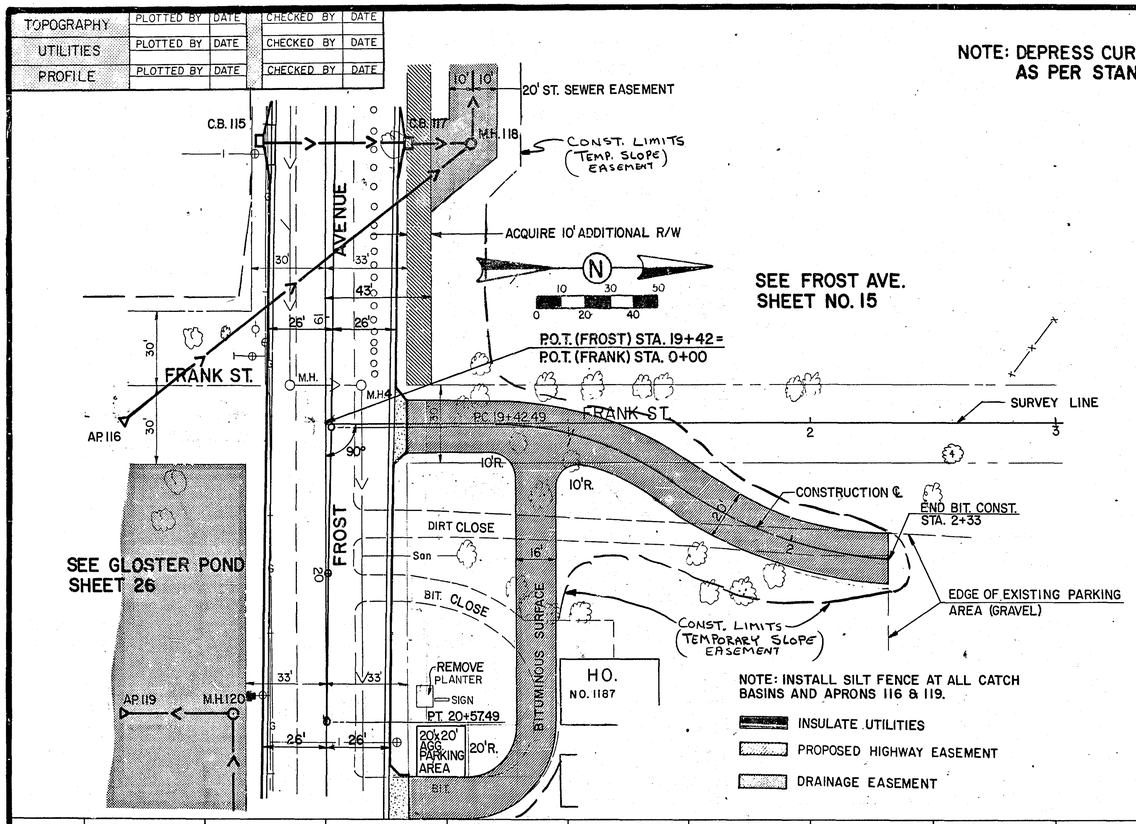
EDWARD ST.

FROST AVE 62-628-04

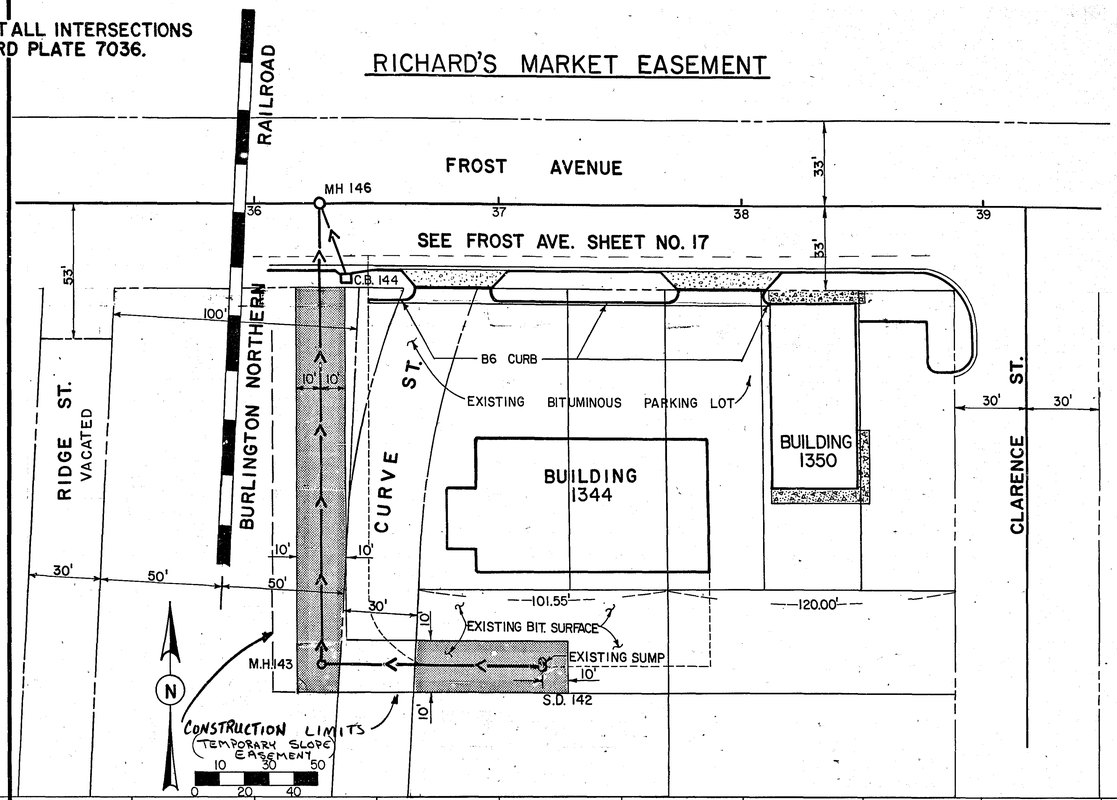
SHEET NO.

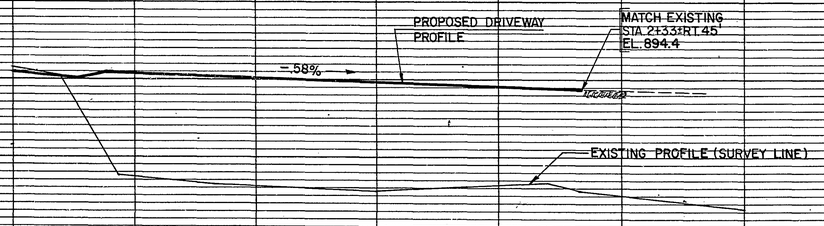
	PLOTTED BY	DATE	CHECKED BY	DATE
TOPOGRAPHY				
UTILITIES				
PROFILE				

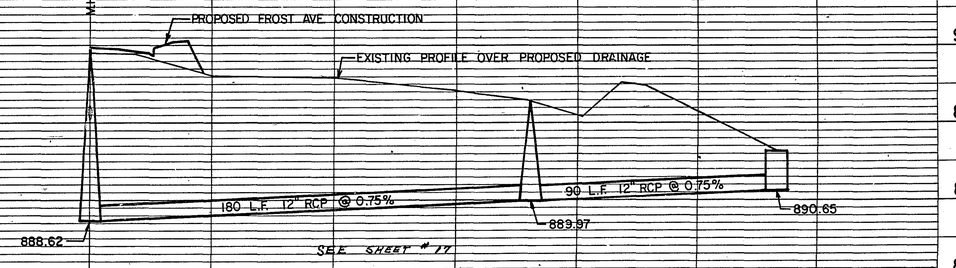
NOTE: DEPRESS CURB AT ALL INTERSECTIONS AS PER STANDARD PLATE 7036.



RICHARD'S MARKET EASEMENT







AS-BUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: R.E.L.
DATE: 4-22-89

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.
Date 2-13-85 Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

FRANK ST. & RICHARDS MARKET

S.A.P. No. 62-628-04

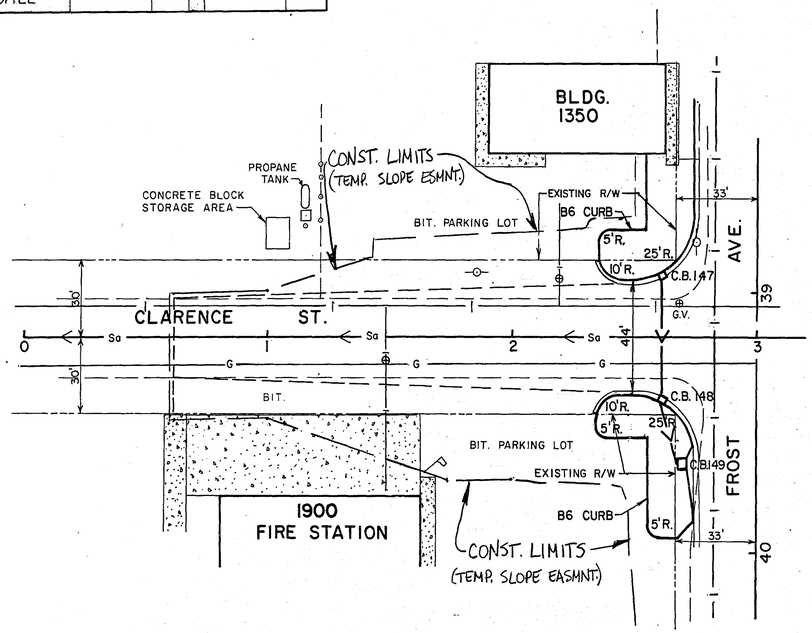
27-101 Sheet No. 21 of 65 Sheets

FRANK ST.

FROST AVE. 62-628-04

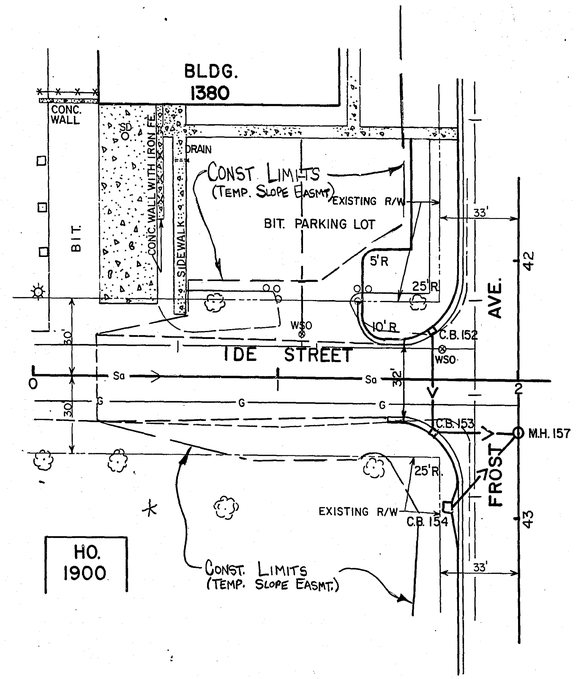
SHEET No.

	PLOTTED BY	DATE	CHECKED BY	DATE
TOPOGRAPHY				
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE



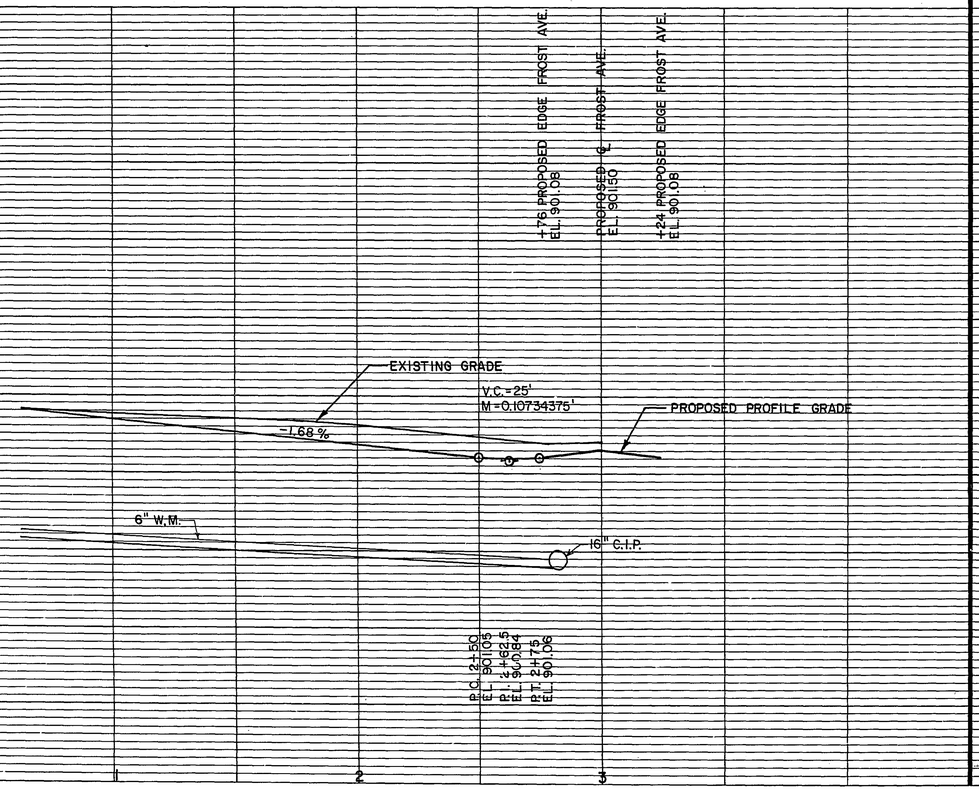
SEE FROST AVE. SHEET NO. 17

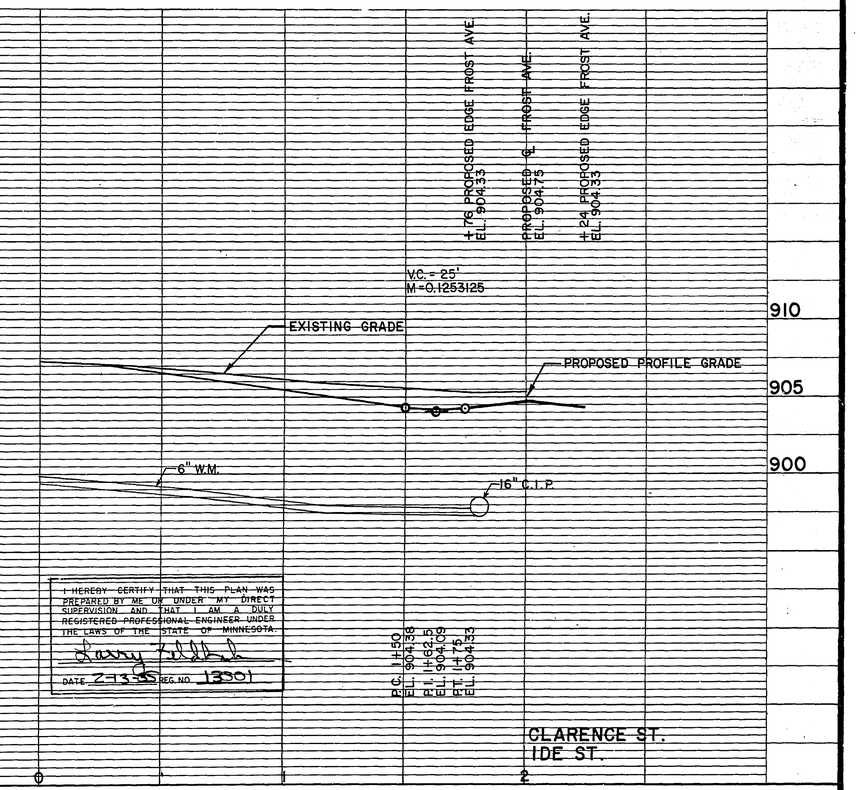
NOTE: DEPRESS CURB AT ALL INTERSECTIONS AS PER STANDARD PLATE 7036.



SEE FROST AVE. SHEET NO. 18

NOTE: INSTALL SILT FENCE AT ALL CATCH BASIN LOCATIONS.





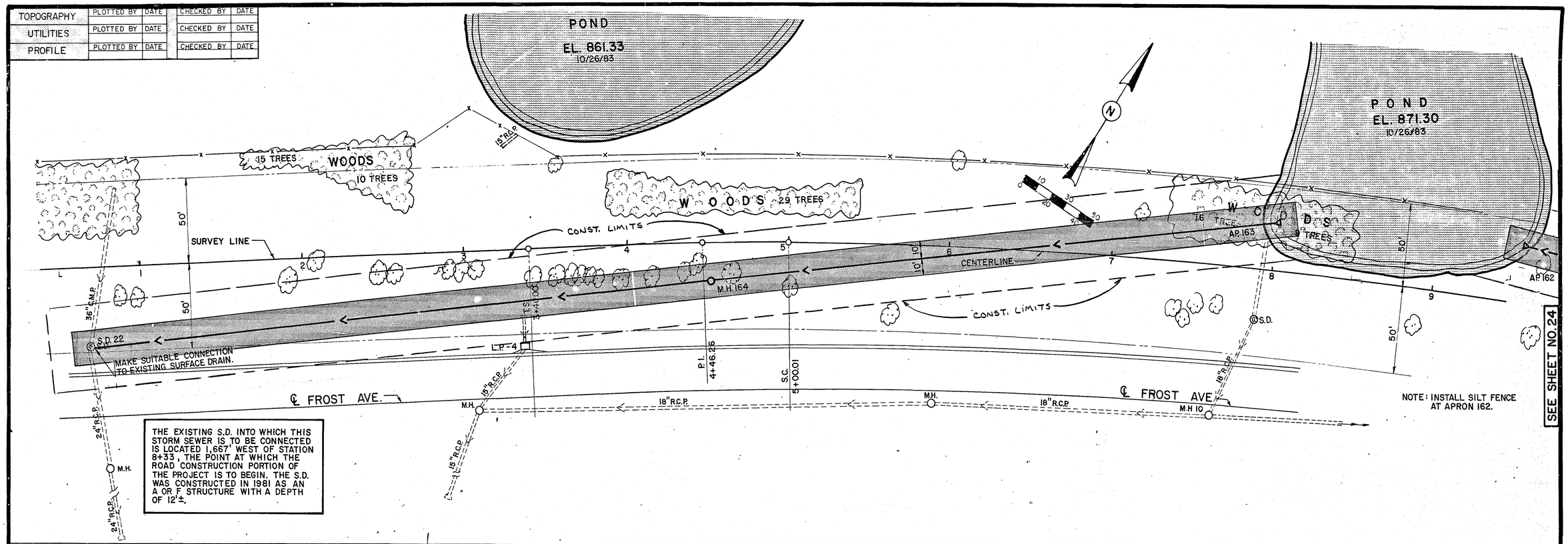
FROST AVE.

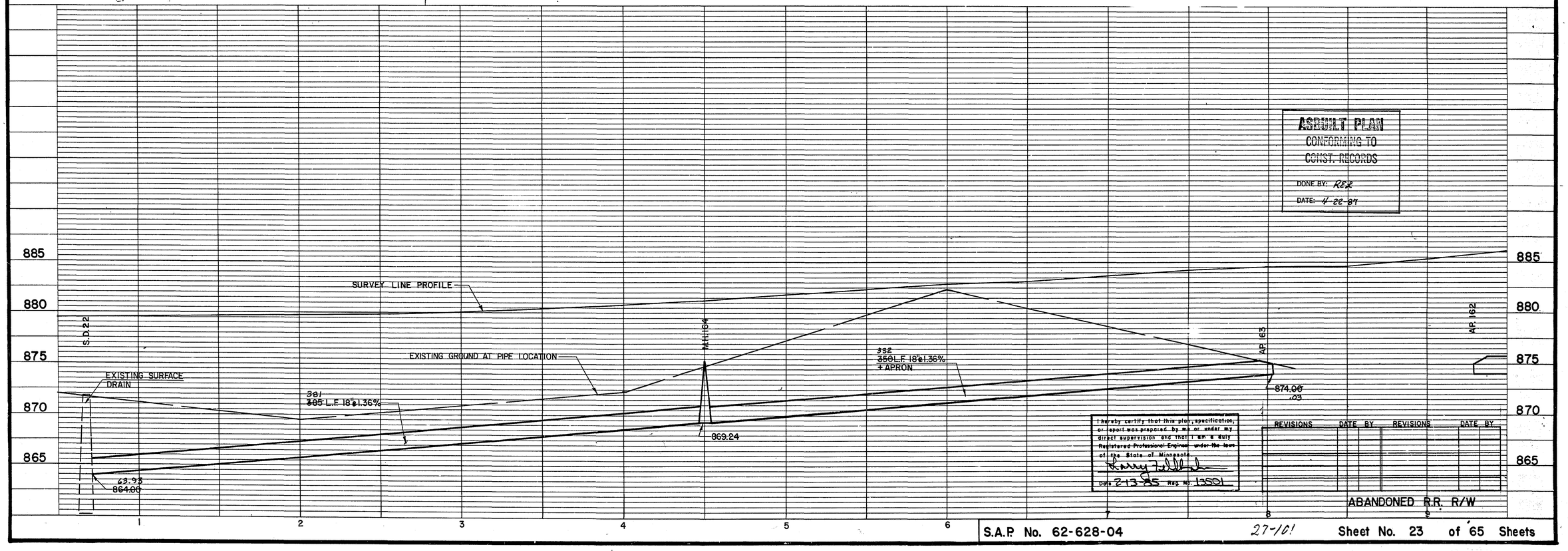
CLARENCE ST.
IDE ST.

ACCEPT PLAN CONFORMING TO CONST. RECORDS
DONE BY: RER
DATE: 4-22-87

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 2-13-87 REG. NO. 13501

	PLOTTED BY	DATE	CHECKED BY	DATE
TOPOGRAPHY				
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE





ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: RE2
DATE: 4-22-87

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.
Date 2-13-85 Reg No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

ABANDONED R.R. R/W

S.A.P. No. 62-628-04 27-101 Sheet No. 23 of 65 Sheets

R.E. - Rfw

FROST AVE
62-628-04

SHEET No.

	PLOTTED BY	DATE	CHECKED BY	DATE
TOPOGRAPHY				
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE

POND
EL. 871.30
10/26/83

NOTE: INSTALL SILT FENCE AT APRON 162.

CONST. LIMITS

AP 162

M.H. 161

M.H. 160

10' 10'

SURVEY LINE

CONST. LIMITS

W O O D S
19 TREES

W O O D S
10 TREES

25 TREES

W O O D S
15 TREES

45 TREES

SEE SHEET NO. 23

SEE SHEET NO. 25

EXISTING B624 CURB & GUTTER

TΔ = 21°37'30
D = 2°01'
R = 2841.26'
T = 460.14'
L = 912.36'
Φ_s = 1°36'48"
T_s = 622.715'
L.T. = 106.26'
S.T. = 53.75'

℄ FROST AVE.

C.S. 14+12.36

P.I. 14+66.61

T.C. 15+72.36

℄ ADELE ST. STA. 6+06.28

THE ROAD CONSTRUCTION PORTION OF S.A.P. 62-628-04 SHALL BEGIN AT STA. 8+33, WHICH IS 247' EAST OF ADELE ST.

EXISTING B624 CURB & GUTTER

SECTION LINE

℄ FROST AVE.

AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: RLL
DATE: 1-22-87

SURVEY LINE PROFILE

EXISTING GROUND AT PIPE LOCATION

AP 162

~~355~~ ~~368~~ L.F 21" 0.20% + APRON

874.00
.03

M.H. 161

874.73
.75

~~371~~ ~~385~~ L.F 21" 0.20%

M.H. 160

~~358~~ ~~368~~ L.F 21" 0.20%

875.46
.73

895
890
885
880
875

9 10 11 12 13 14 15 16 17 18

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Date 2-13-85 Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

ABANDONED R.R. R/W

S.A.P. No. 62-628-04 27-101 Sheet No. 24 of 65 Sheets

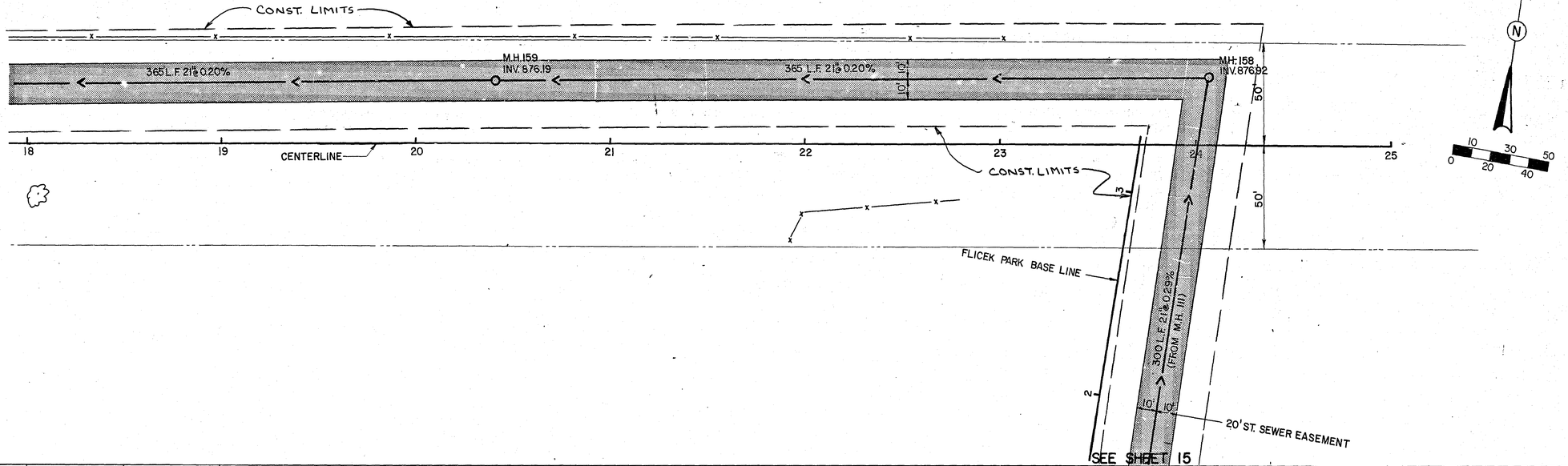
R.R. - Plan

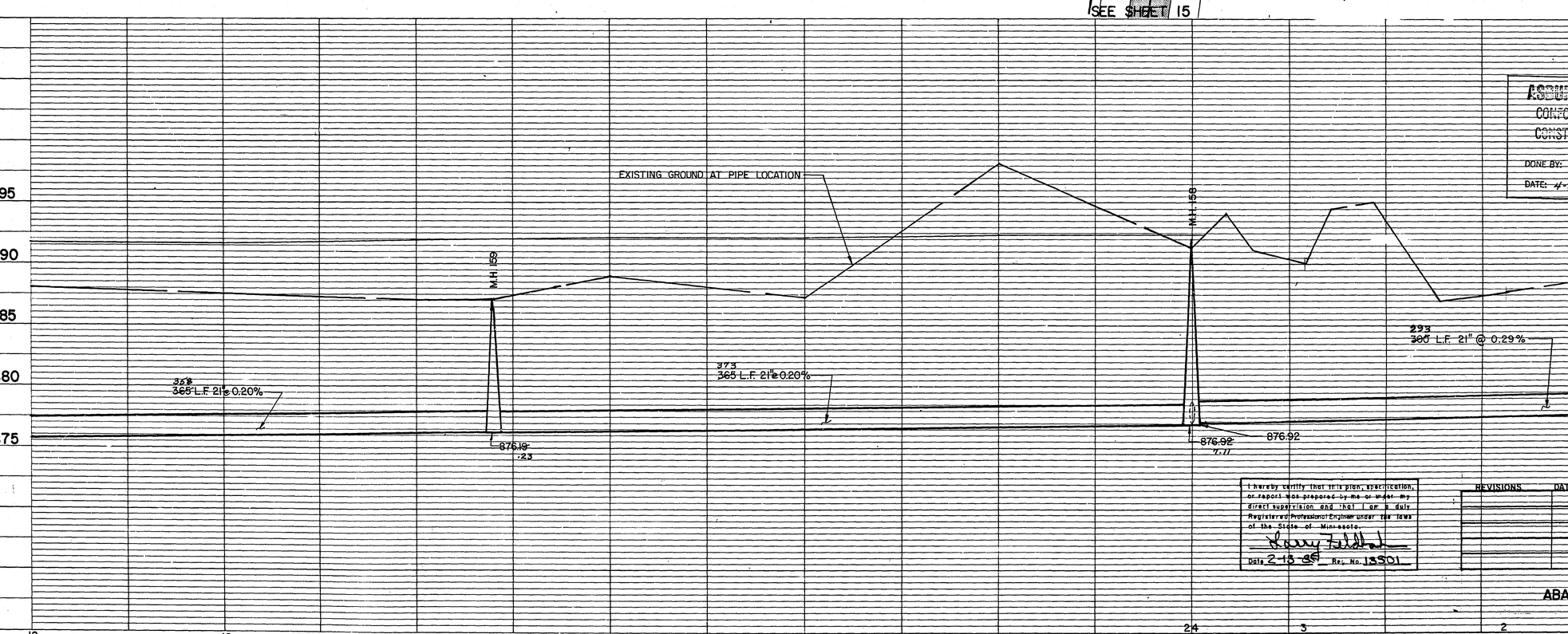
FROST AVE
62-628-04

SHEET No.

TOPOGRAPHY	PLOTTED BY	DATE	CHECKED BY	DATE
UTILITIES	PLOTTED BY	DATE	CHECKED BY	DATE
PROFILE	PLOTTED BY	DATE	CHECKED BY	DATE

SEE SHEET NO. 24





AS BUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: RRR
DATE: 4-22-87

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Date 2-13-87 Reg. No. 13301

REVISIONS	DATE	BY	REVISIONS	DATE	BY

ABANDONED R.R. R/W

S.A.P. No. 62-628-04 27-101 Sheet No. 25 of 65 Sheets

R.R. - R/W

FROST AVE
62-628-04

SHEET NO.

REVISIONS	DATE	BY	REVISIONS	DATE	BY

N

10 30 50
0 20 40
CONTOUR INTERVAL = 2FT.

RIPLEY AVE.

FENTON AVE.

EDWARD ST.

FROST AVE.

FRANK ST.

FRISBIE AVE.

RIPLEY AVE.

0+00

8+53

33'

#1190

#1829

#1839

CONSTRUCTION LIMITS

BERM TO 887.5

PROPERTY LINE

CONSTRUCTION LIMITS

AP 116
INV. 879.00

M.H. 118
INV. 878.60

NOTE: INSTALL SILT FENCE AT APRONS 116 & 119

AP 119

M.H. 120
INV. 879.67

33'

CURB

150'

EXCESS EXCAVATION TO BE STOCKPILED IN THIS AREA AS DIRECTED BY THE CITY OF MAPLEWOOD

AP 119
INV. 879.67

PERM. EASEMENT

CONSTRUCTION LIMITS

CONSTRUCTION LIMITS

PERMANENT DRAINAGE EASEMENT

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.

Barry Feldhaus

DATE 2-13-85 REG. NO. 13501

GLOSTER POND

SAP 138-104-03

S.A.P. No. 62-628-04 27-101 Sheet No. 26 of 65 Sheets

Fed. Proj. No.

STATION—ELEVATION

℄

PROPOSED R/W

EXISTING R/W

CONST. ℄

903.25

10+00 02.4

R/W

EXISTING 8" D.I.P (TYP.)

EXCAVATION SUB TOTALS	EXCAVATION CU. YDS.	EMBANKMENT CU. YDS.	EMBANKMENT SUB TOTALS
	453		207

903.42

+90 02.5

DITCH

903.77

+70 02.8

WALTER

3:1

	249		160

90498

9+00 03.8

2:1

	594		341

PROPOSED R/W

EXISTING R/W

R/W

905.84

8+50 904.4

2:1

	469		242
8+33 to 8+50	167		189

EXISTING 8" D.I.P (TYP.)

BEGIN PROJECT
STA. 8+33 LT. & RT.

STATION—ELEVATION

℄

FROST AVE.

REVISIONS	DATE BY	REVISIONS	DATE BY
SLOPES RT 8+50, 9+00	5-29 RJO		

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.

Larry K. Fiddlehan

Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 27 of 65 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

STATION–ELEVATION

℄

CONST. ℄

R/W

PROPOSED R/W

EXISTING R/W

EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS.	CU. YDS.	SUB TOTALS
179		60
	GARAGE	
	EXISTING 8" D.I.P. (TYP.)	
697		119
	GARAGE	
448		112
	Ho.	

900.23
+59 00.6
ENT.

900.78
11+30 01.0
ALLEY

901.45
+95 01.4
ENT.

902.30
10+50 901.9

EXISTING 8" D.I.P. (TYP.)

STATION–ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Date: Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 28 of 65 Sheets

70 60 50 40 30 20 10 20 30 40 50 60 70

COPY FOR PRINT RUN #1

Fed. Proj. No.

STATION–ELEVATION

℄

DRAINAGE EASEMENT | PROPOSED R/W | EXISTING R/W | CONST. ℄ | R/W

898.10

13+50 98.6

EXISTING 8" D.I.P. (TYP.)

DRAINAGE ESM'T.

898.67

+87 99.2

PHALEN PLACE

DRAINAGE EASEMENT

R/W

PROPOSED HIGHWAY EASEMENT

899.00

12+50 99.6

PROPOSED R/W | EXISTING R/W | R/W

899.58

12+00 900.2

EXISTING 8" D.I.P. (TYP.)

EXCAVATION SUB TOTALS CU. YDS.	EMBANKMENT CU. YDS.	EMBANKMENT SUB TOTALS
357		73
590		92
439		51
607		64
Ho.		

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Harry K. Feldhake

Date ____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 29 of 65 Sheets

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

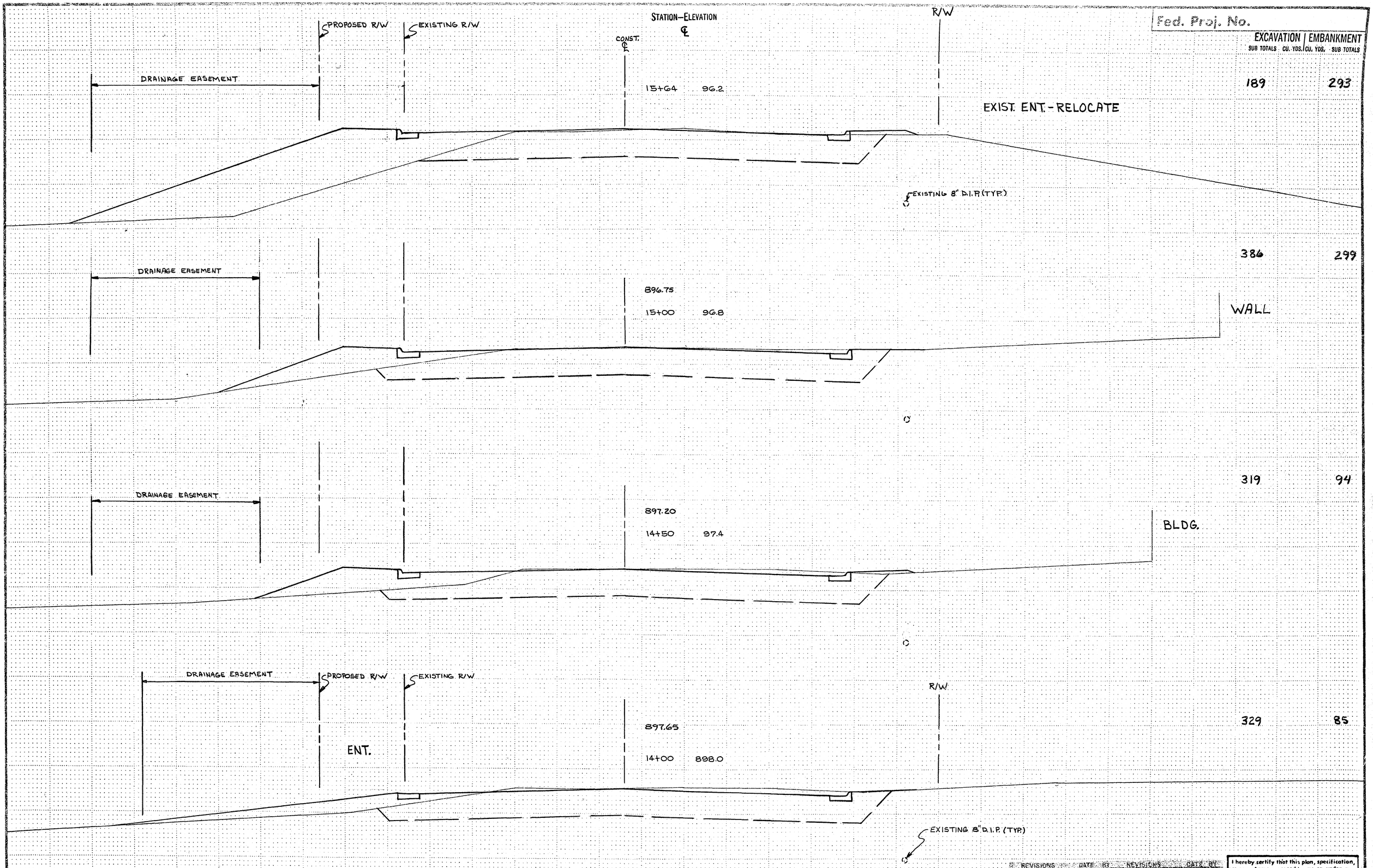
COPY - EQUIPMENT FURNISH

Fed. Proj. No.

STATION—ELEVATION

℄

	EXCAVATION	EMBANKMENT
SUB TOTALS	CU. YDS.	CU. YDS.



STATION—ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Larry K. Fiddelke

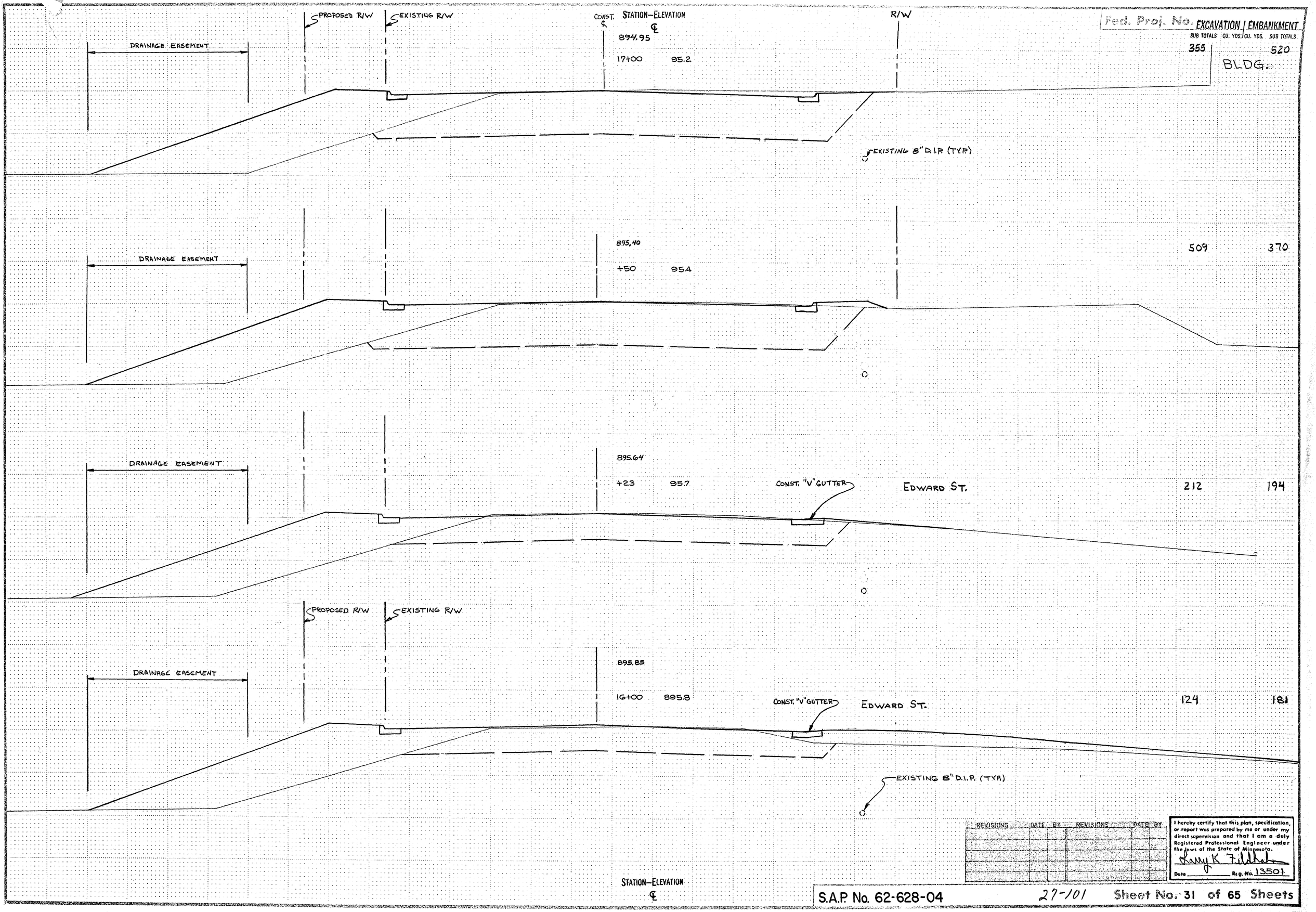
Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 30 of 65 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

STATION—ELEVATION ℄			EXCAVATION SUB TOTALS	EXCAVATION CU. YDS.	EMBANKMENT CU. YDS.	EMBANKMENT SUB TOTALS
894.95						
17+00	95.2		355			520
		BLDG.				
895.40				509	370	
+50	95.4					
895.64						
+23	95.7	CONST. "V" GUTTER EDWARD ST.		212	194	
895.85						
16+00	895.8	CONST. "V" GUTTER EDWARD ST.		124	181	



STATION—ELEVATION ℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Larry K. Fiddaken

Date _____ Reg. No. 13501

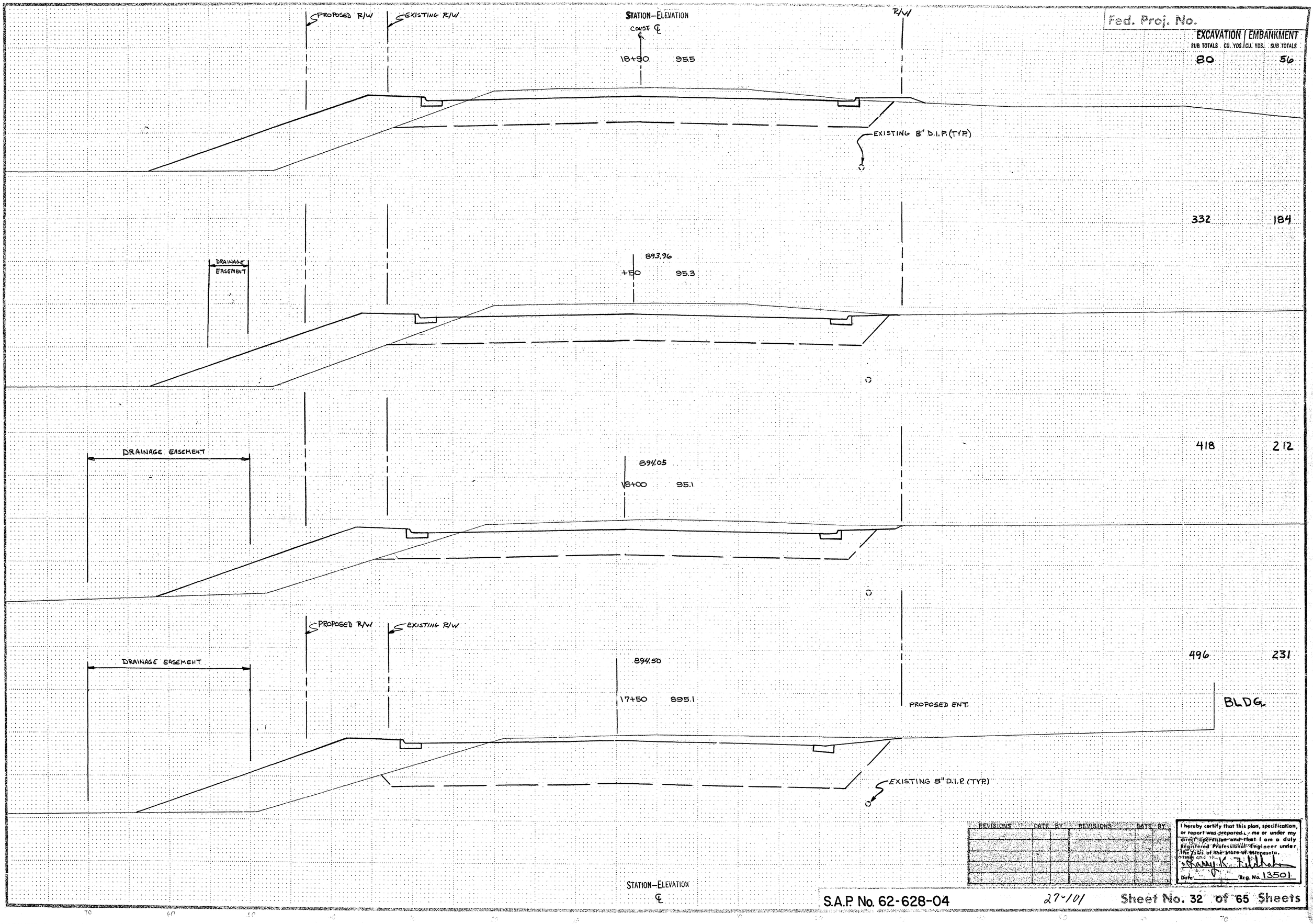
S.A.P. No. 62-628-04 27-101 Sheet No. 31 of 65 Sheets

COPY RIGHT 1 CENT #1

Fed. Proj. No.

EXCAVATION / EMBANKMENT

STATION—ELEVATION	SUB TOTALS CU. YDS.	CU. YDS. SUB TOTALS
	80	56
18+90 95.5	332	184
893.96		
+50 95.3	418	212
894.05		
18+00 95.1	496	231
894.50		
17+50 895.1		



STATION—ELEVATION
℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.
Harry K. Fieldhaber
Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 32 of 65 Sheets

CAD FILENAME: FORM #1

Fed. Proj. No.

STATION–ELEVATION

℄ CONST. ℄

EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS. | CU. YDS. SUB TOTALS

EXISTING R/W

R/W

ENT.-CLOSE

896.22

20+06 96.1

DRAINAGE EASEMENT

285 91

GLOSTER POND

EXISTING 8" D.I.P (TYP.)

DRAINAGE EASEMENT

895.91

+80 96.1

ENT.-CLOSE

GLOSTER POND

153 91

FRANK ST.
19+42

895.49

+50 95.7

178 250

PROPOSED R/W

EXISTING R/W

894.60

19+00 895.5

356 478

EXISTING 8" R.I.P. (TYP.)

STATION–ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Harry K. Fuldahl

Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 33 of 65 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

STATION—ELEVATION
℄

EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS.	SUB TOTALS CU. YDS.
156	29
406	78
460	104
241	55

ENT.

EXISTING R/W

DRAINAGE EASEMENT

896.50
22+08 96.3

EXISTING 8" D.I.P. (TYP.)

DRAINAGE EASEMENT

896.79
21+50 96.3

ENT.

3' MIN.

DRAINAGE EASEMENT

896.76
20+85 96.3

STA. 20+59 to 20+79
20'x 20' AGGREGATE PARKING AREA
① GRADE AS DIRECTED BY THE ENGINEER AND PROPERTY OWNER.
② SURFACE WITH 6" AGG. BASE CL. 6

GLOSTER POND

EXISTING R/W

R/W

DRAINAGE EASEMENT

896.59
20+50 896.2

GLOSTER POND

EXISTING 8" D.I.P. (TYP.)

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Date _____ Reg. No. 13501

STATION—ELEVATION
℄

S.A.P. No. 62-628-04 27-101 Sheet No. 34 of 65 Sheets

Fed. Proj. No.

STATION–ELEVATION

℄

EXCAVATION | EMBANKMENT

		SUB TOTALS CU. YDS.	CU. YDS.	SUB TOTALS
			632	29
894.82				
24+50	95.4			
			540	12
895.17				
24+00	95.7			
			421	4
895.52				
+50	96.0			
			398	11
895.87				
23+00	96.2			
			503	54
896.34				
22+31	896.3			

EXISTING R/W

SAWCUT BIT

EXISTING 8" D.I.P. (TYP.)

R/W

DRAINAGE EASEMENT

EXISTING R/W

R/W

DRAINAGE EASEMENT

EXISTING 8" D.I.P. (TYP.)

STATION–ELEVATION

℄

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Larry K. Fiddelke

Date _____ Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

S.A.P. No. 62-628-04 27-101 Sheet No. 35 of 65 Sheets

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

COPY EQUIPMENT FORM #1

MATCHLINE

POND EXCAVATION | EMBANKMENT
SUB TOTALS CU. YDS. | CU. YDS. SUB TOTALS

EXISTING R/W

STATION–ELEVATION
℄

R/W DRAINAGE EASEMENT

Fed. Proj. No.

EXCAVATION | EMBANKMENT
SUB TOTALS CU. YDS. | CU. YDS. SUB TOTALS

892.98
27+15 93.6

0 738

419 111

EXISTING 8" D.I.P. (TYP.)

893.18
+93 93.7

0 291

277 34

893.43
PROPOSEN ENT. 26+50 94.0

0 73

556 55

893.87
+87 94.4

ATLANTIC ST.

926 44

PROPOSED M.H.
STA. 26+00

12" R.C.P. @ 1.0%

894.13
+50 94.7

516 24

R/W
DRAINAGE EASEMENT

EXISTING R/W

894.48
25+00 895.1

611 40

EXISTING 8" D.I.P. (TYP.)

STATION–ELEVATION
℄

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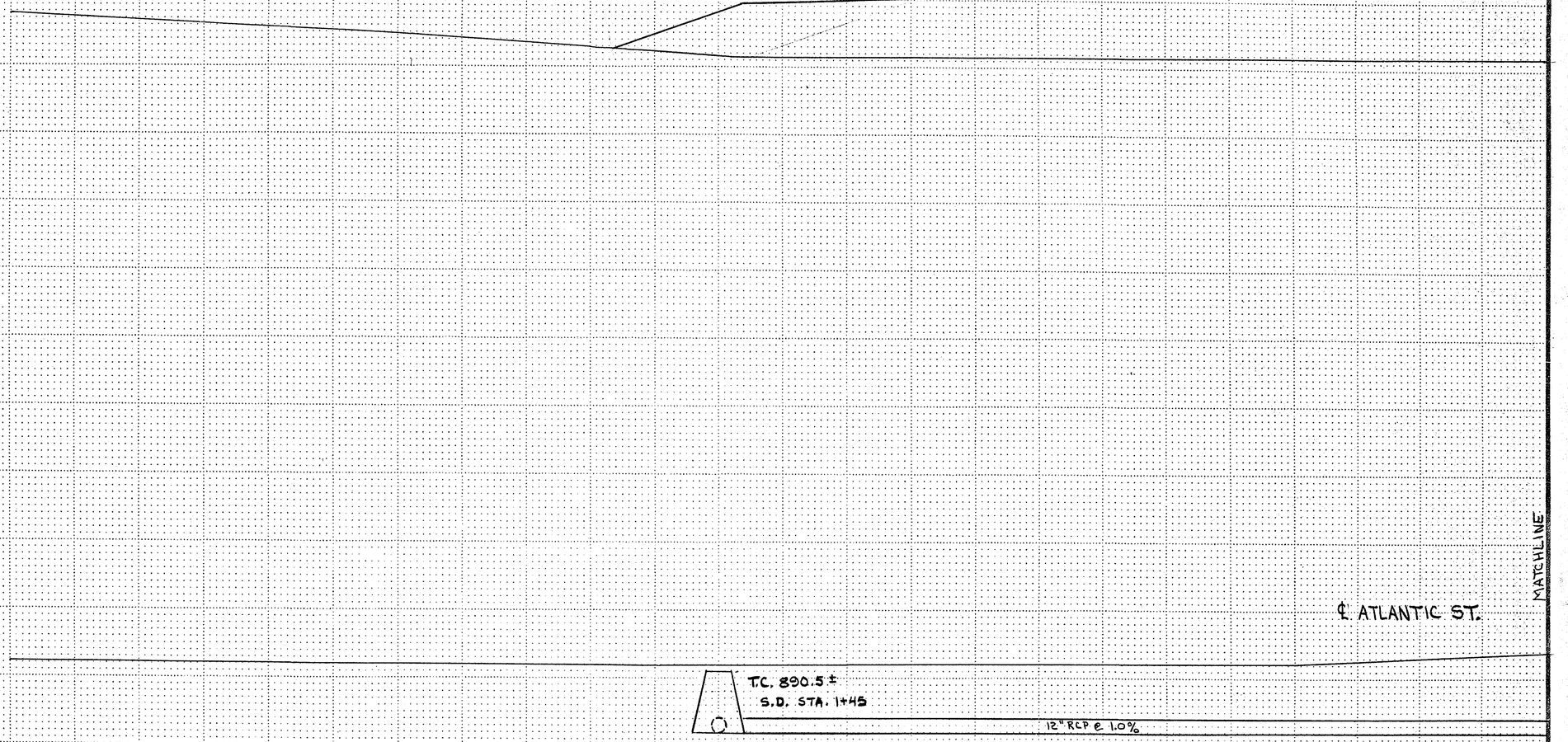
Larry K. Fiddelke
Date _____ Reg. No. 13501.

REVISIONS	DATE	BY	REVISIONS	DATE	BY

S.A.P. No. 62-628-04 27-101 Sheet No. 36 of 65 Sheets

Fed. Proj. No.



REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Larry K Feldhaus

Date _____ Reg. No. 13501

S.A.P. NO. 62-628-04 27-101 Sheet No. 37 of 65 Sheets

Fed. Proj. No.

STATION–ELEVATION

℄

EXISTING R/W

SAWCUT BIT.

893.70

30+00 94.4

EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS.	CU. YDS. SUB TOTALS
653	29

R/W

DRAINAGE EASEMENT

EXISTING 8" D.I.P. (TYP.)

893.26

29+50 94.1

632	30

SAWCUT BIT.

POND EXCAVATION | EMBANKMENT

SUB TOTALS	CU. YDS.	CU. YDS.	SUB TOTALS

892.72

+82 93.9

856	39

SAWCUT BIT.

0	369

892.56

+50 93.7

401	96

GRADE TO DRAIN

3:1

POND FILL

WATER

LIMITS OF FROST AVE. EMBANKMENT

0	1162

892.52

28+00 93.6

606	319

MATCH

SURF. DRAIN
STA 28+12 LT. 64'
T.C. 891.0

GRADE TO DRAIN

LIMITS OF FROST AVE. EMBANKMENT

WATER

0	1197

EXISTING R/W

892.73

27+50 893.5

R/W

DRAINAGE EASEMENT

584	286

3:1

EXISTING 8" D.I.P. (TYP.)

STATION–ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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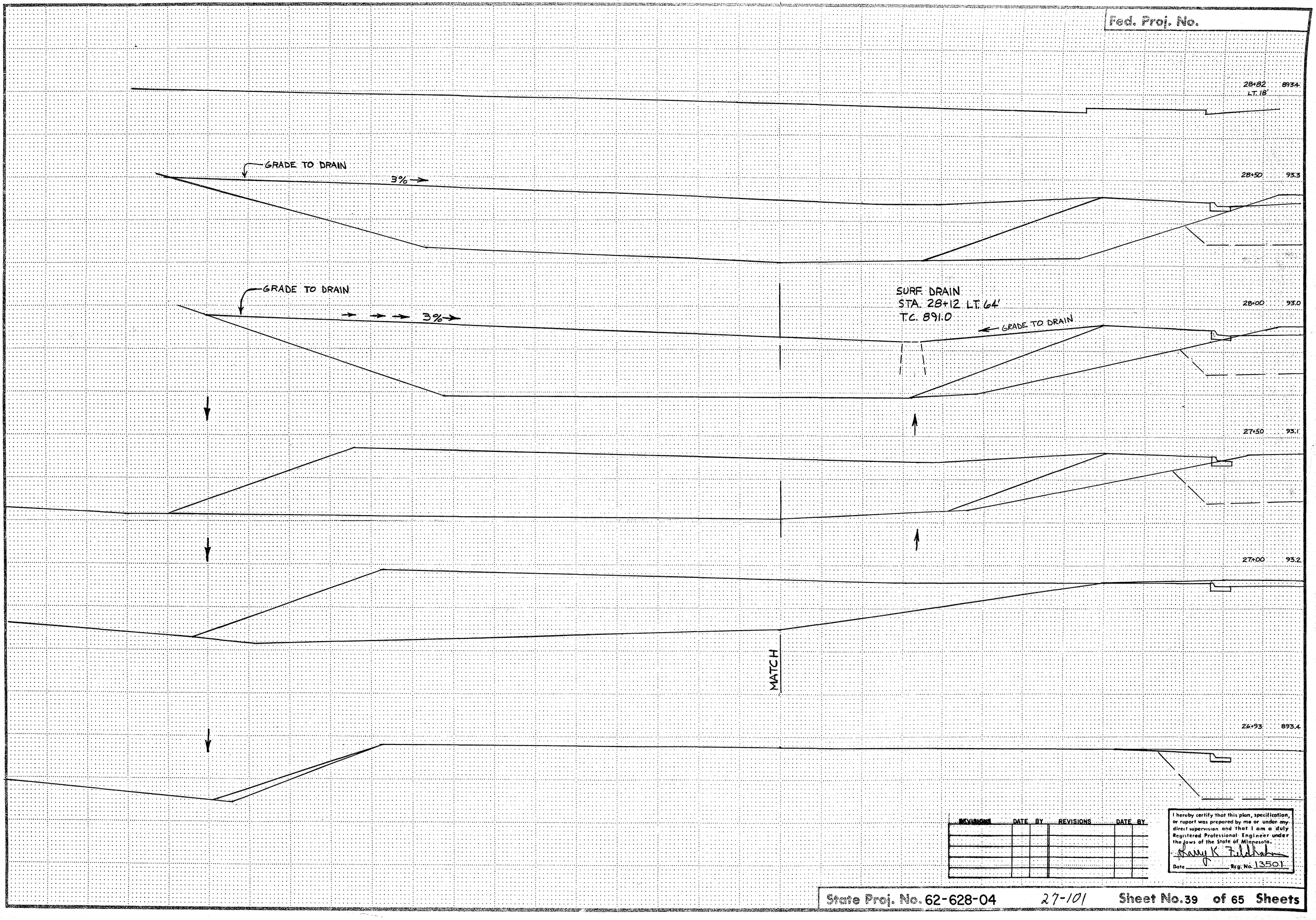
Harry K Fieldhake

Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 38 of 65 Sheets

Fed. Proj. No.



REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Harry K Fildahn

Date _____ Reg. No. 13501

State Proj. No. 62-628-04 27-101 Sheet No. 39 of 65 Sheets

STATION–ELEVATION
℄

Fed. Proj. No.

EXCAVATION / EMBANKMENT

STATION	℄	SUB TOTALS CU. YDS.	CU. YDS.	SUB TOTALS
			613	17
33+00	896.10 96.0			
			483	0
+70	895.86 95.7			
			811	0
32+27	895.52 95.5			
			1171	29
+50	894.90 95.1			
			604	51
31+00	894.50 94.9			
			631	44
30+50	894.10 894.6			

BLDG.

EXISTING R/W

CONC.

EXISTING 16" C.I.P.

ENGLISH ST.

EXISTING 16" C.I.P.

32' JACKED CROSSING

EXISTING 8" C.I.P.

12" C.I.P.

EXISTING 16" C.I.P.

DRAINAGE EASEMENT

SAWCUT BIT.

CONC.

EXISTING 8" D.I.P.

SAWCUT BIT.

EXISTING R/W

R/W

DRAINAGE EASEMENT

EXISTING 8" D.I.P.

SAWCUT BIT.

EXISTING 8" D.I.P.

STATION–ELEVATION
℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Larry K. Fiddelke

Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 40 of 65 Sheets

CONSTRUCTION PLANS

STATION–ELEVATION
℄

Fed. Proj. No.

EXCAVATION / EMBANKMENT

		SUB TOTALS CU. YDS.	SUB TOTALS CU. YDS.
		260	22
		532	68
		509	58
		539	32
		573	26

EXISTING R/W

5'

SAWCUT BIT.

899.34
+50 99.3

EXISTING R/W

EXISTING 16" C.I.P (TYP.)

5'

898.64
35+00 98.5

BLDG.

2'

897.93
+50 97.8

BLDG.

5'

897.21
34+00 97.2

EXISTING R/W

EXISTING R/W

5'

896.50
33+50 896.5

SAWCUT BIT.

CONC.

EXISTING 16" C.I.P. (TYP.)

STATION–ELEVATION
℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY
CURB 34+50 LT	5-29	BJD			

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Larry K. Fiddelke

Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 41 of 65 Sheets

Fed. Proj. No.

STATION–ELEVATION

℄

		EXCAVATION SUB TOTALS CU. YDS.	EMBANKMENT CU. YDS. SUB. TOTALS
+50	901.19 01.6		
		840	13
38+00	900.91 01.3	662	12
+50	900.63 01.0	659	19
37+00	900.34 99.5	596	39
36+50	900.06 00.0	581	35
35+96	899.71	363	0

EXISTING R/W

SAWCUT BIT.

BLDG.

EXISTING 16" C.I.P. (TYP.)

ENTRANCE

SAWCUT BIT.

5'

EXISTING 16" C.I.P. (TYP.)

EXISTING 16" C.I.P. (60' JACKED CROSSING - CARRIER PIPE OMITTED)

EAST RAIL

EAST RAIL

STATION–ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Larry K Fjeldstad

Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 42 of 65 Sheets

Fed. Proj. No.

STATION—ELEVATION

℄

EXCAVATION | EMBANKMENT

		SUB TOTALS CU. YDS.	CU. YDS.	SUB TOTALS
			623	8
BLDG.	903.67			
	+50 04.4			
EXISTING R/W	EXISTING R/W			
	EXISTING 12" C.I.P. TYP.)			
	903.00			
BLDG.	41+00 03.8		677	0
	902.37			
	+50 03.2		706	0
ENT.	SAWCUT BIT.			
EXISTING R/W	EXISTING R/W			
	892.05			
	40+00 02.8		713	5
ENT.	SAWCUT BIT.			
	901.66		1138	6
	+32 02.2			
CLARENCE ST.	901.50			
	39+04 902.0		522	0
CLARENCE ST.				
6" W.M.	6" W.M.			
	EXISTING 16" C.I.P. (TYP.)			

STATION—ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Larry K. Fiddick

Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 43 of 65 Sheets

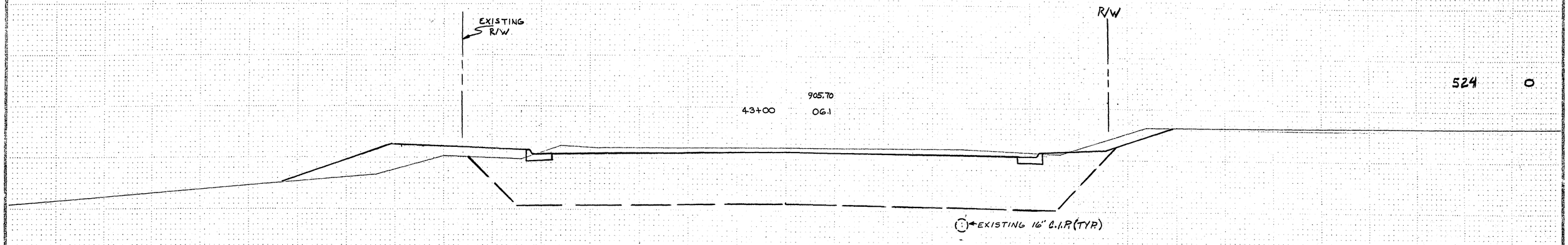
STATION–ELEVATION

℄

Fed. Proj. No.

EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS. | CU. YDS. SUB TOTALS



905.70

43+00 OG.1

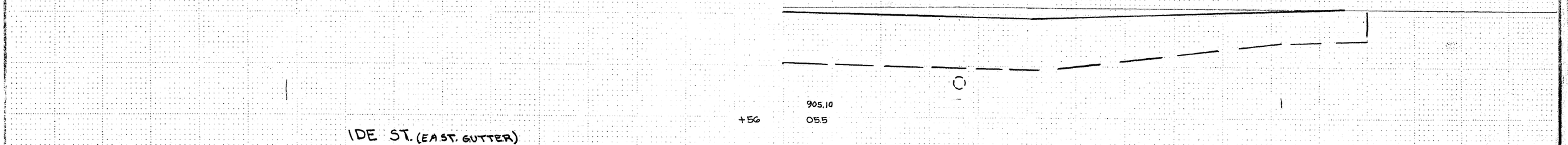
524 0

905.18

+62 OG.6

1243 29

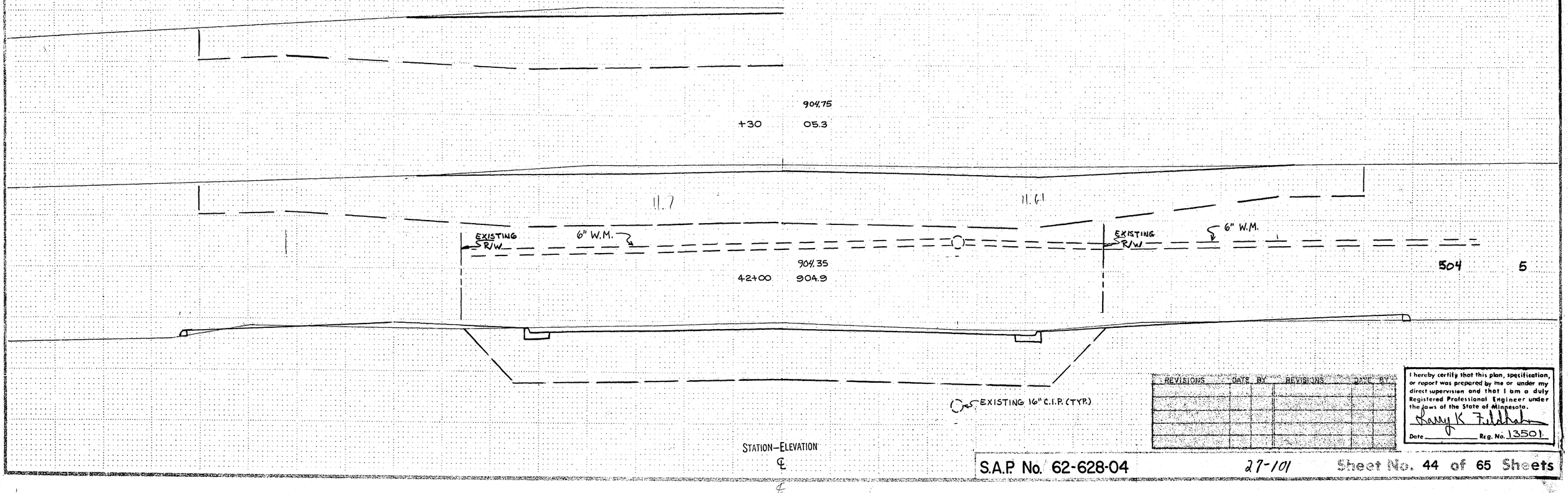
IDE ST. (EAST GUTTER)



905.10

+56 OG.5

IDE ST. (EAST. GUTTER)



904.75

+30 OG.3

11.7 11.61

EXISTING R/W 6" W.M. EXISTING R/W 6" W.M.

EXISTING 16" C.I.P. (TYP.)

904.35

42+00 904.9

504 5

STATION–ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Larry K Fiedler

Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 44 of 65 Sheets

Fed. Proj. No.

STATION—ELEVATION

℄

EXISTING R/W

R/W

EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS. | CU. YDS. SUB TOTALS

908.39

45+00 908.41

No.

370 0

EXISTING 16" C.I.P. (TYP.)

482 0

907.57

EXIST. GUTTERLINE B618

44+38 907.72

217 0

907.22

EXIST. GUTTER LINE B618

GRAVEL ENT.

+12 07.38

108 0

ENTRANCE

44+00 07.26

R/W

EXISTING R/W

697 0

906.23

GARAGE

B/T. ENT.

43+39 906.63

EXISTING 16" C.I.P. (TYP.)

STATION—ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

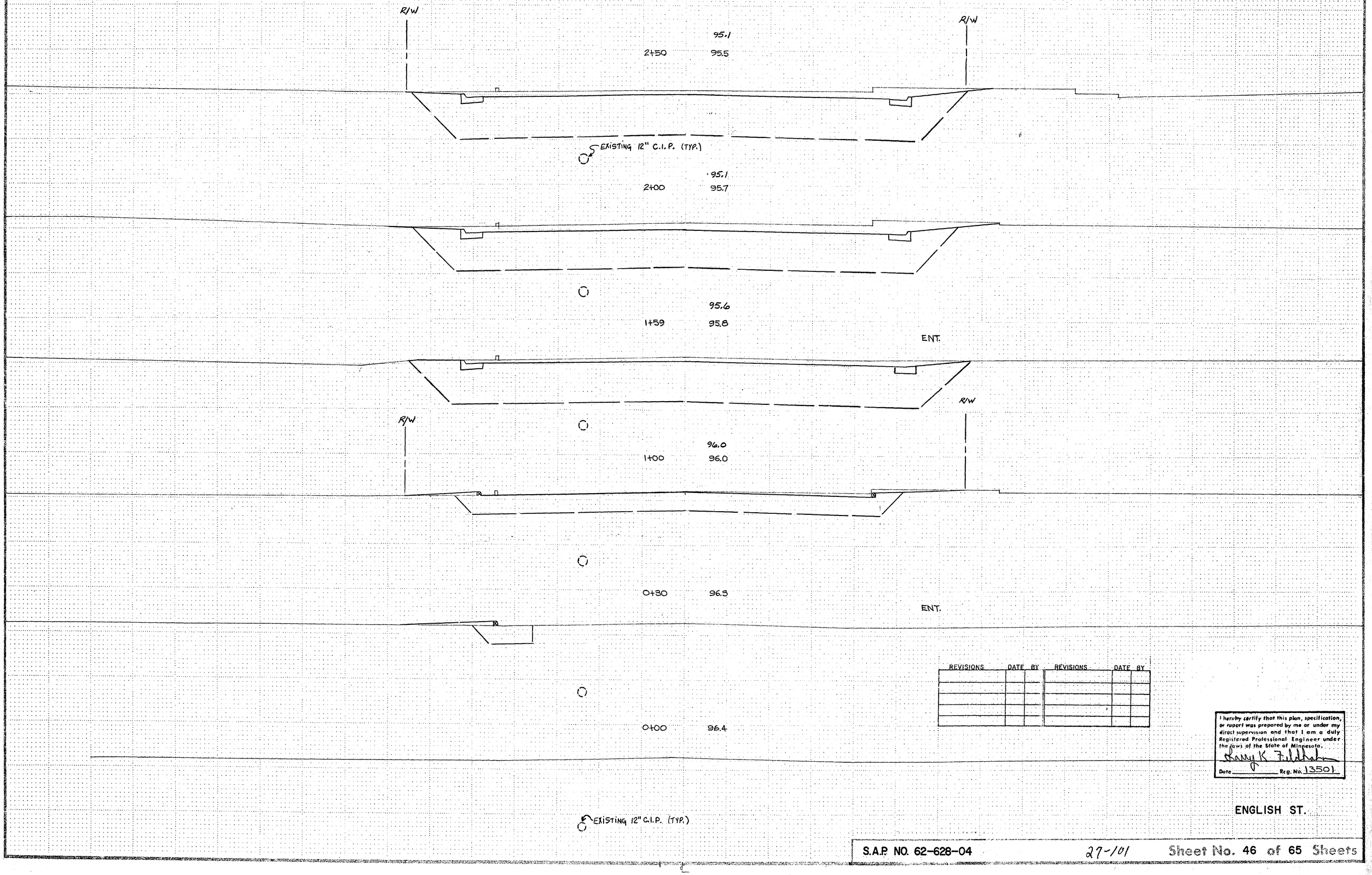
Larry K Fullerton

Date _____ Reg. No. 13501

S.A.P. No. 62-628-04 27-101 Sheet No. 45 of 65 Sheets

COPY ACUPMENT FORM 4

Fed. Proj. No.



REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Harry K. Fiddaman

Date _____ Reg. No. 13501

ENGLISH ST.

S.A.P. NO. 62-628-04 27-101 Sheet No. 46 of 65 Sheets

Fed. Proj. No.

R/W

95.6
4+91 95.6

EXISTING 16" D.I.P. (TYP.)

EXISTING 8" D.I.P. (TYP.)

95.4
4+50 95.4

95.3
4+38 95.4

ENT.

ENT.

95.1
4+00 95.3

ENT.

ENT.

R/W

R/W

94.9
3+50 95.3

ENT.-RELOCATE

ENT.-RELOCATE

3+00 95.6

EXISTING 16" D.I.P. (TYP.)

EXISTING 8" D.I.P. (TYP.)

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Larry K Fieldsa

Date _____ Reg. No. 13501

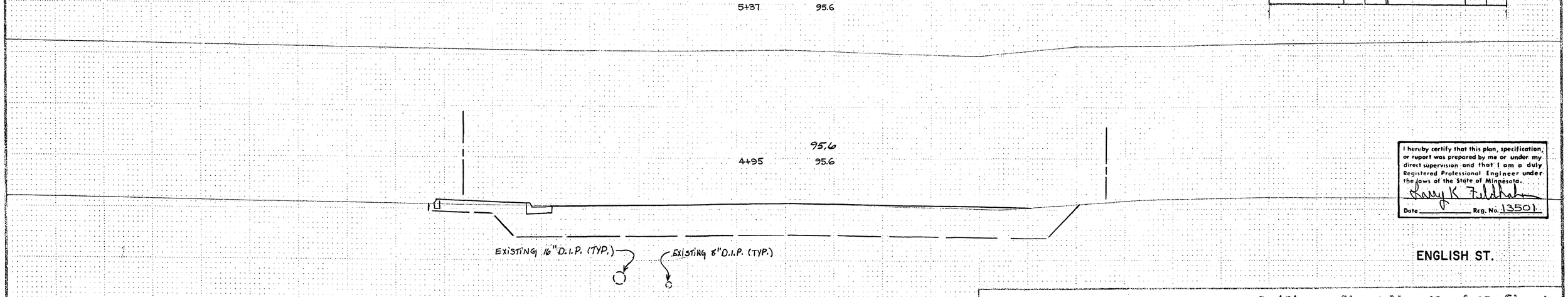
ENGLISH ST.

S.A.P. NO. 62-628-04 27-101 Sheet No. 47 of 65 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

REVISIONS	DATE	BY	REVISIONS	DATE	BY



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.

Larry K. Fuldahn

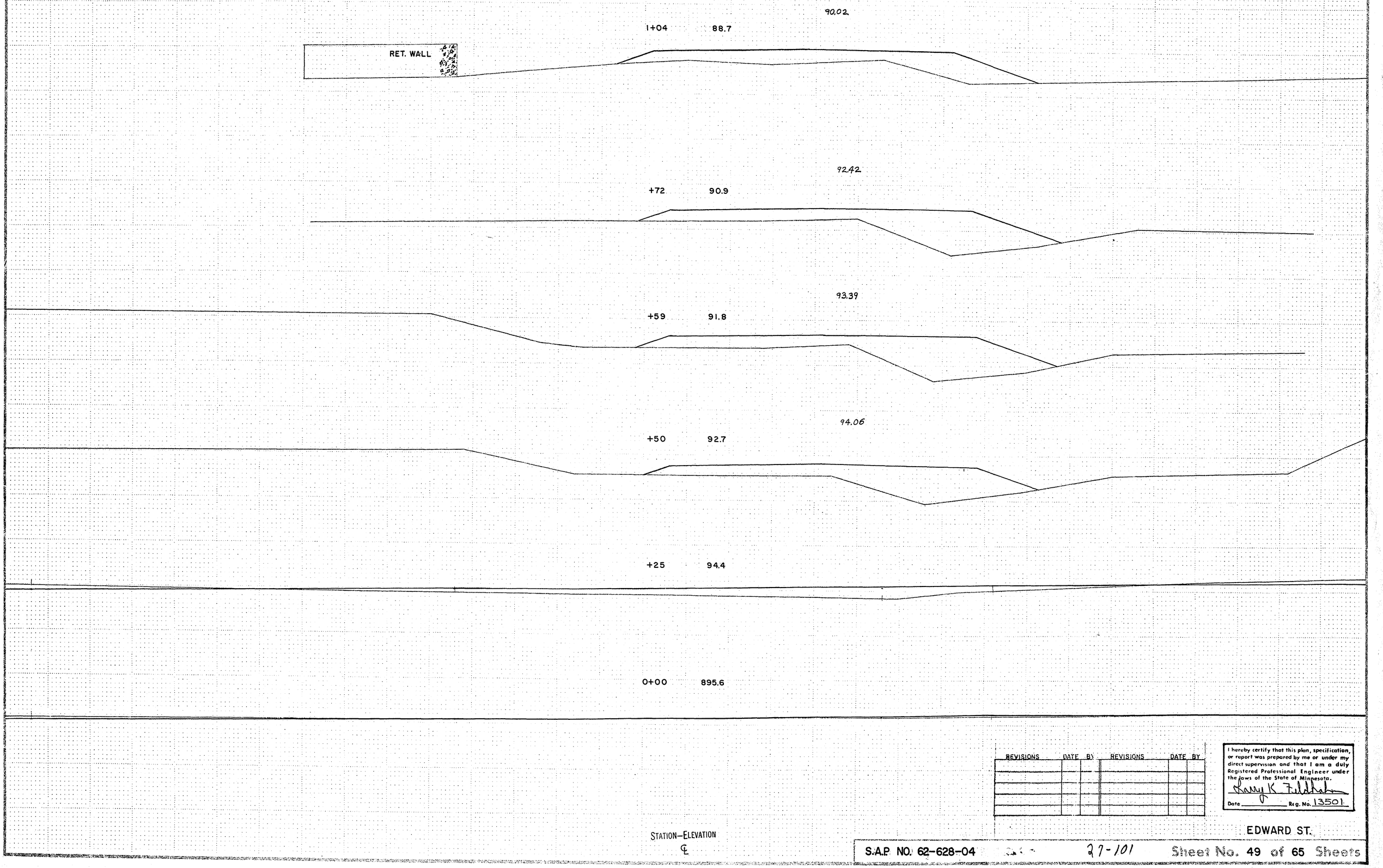
Date _____ Reg. No. 13501

ENGLISH ST.

S.A.P. NO. 62-628-04 27-101 Sheet No. 48 of 65 Sheets

STATION–ELEVATION
℄

Fed. Proj. No.



REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Harry K Tildahl

Date _____ Reg. No. 13501

STATION–ELEVATION
℄

EDWARD ST.

S.A.P. NO. 62-628-04 27-101 Sheet No. 49 of 65 Sheets

STATION–ELEVATION
℄

Fed. Proj. No.

+50 85.9

X Fe.

2+00 85.7 885.80

+68 85.9 886.20

887.45

X Fe.

1+40 886.2

CONST. BIT. ENT.

B.I.T. SPILLWAY

CONST. BIT. ENT.

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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Larry K Fildahl

Date _____ Reg. No. 13501

STATION–ELEVATION
℄

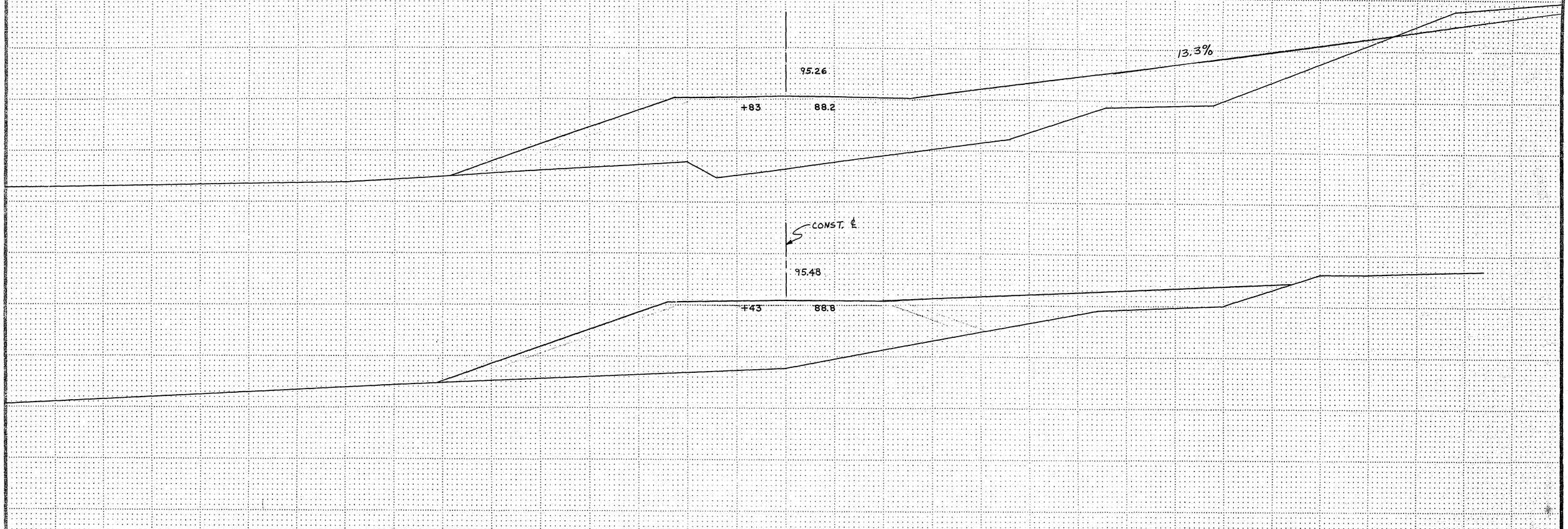
EDWARD ST.

S.A.P. NO. 62-628-04 27-101 Sheet No. 50 of 65 Sheets

STATION–ELEVATION

℄

Fed. Proj. No.



+20 95.2

0+00 895.7

STATION–ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Larry K. Fuldner

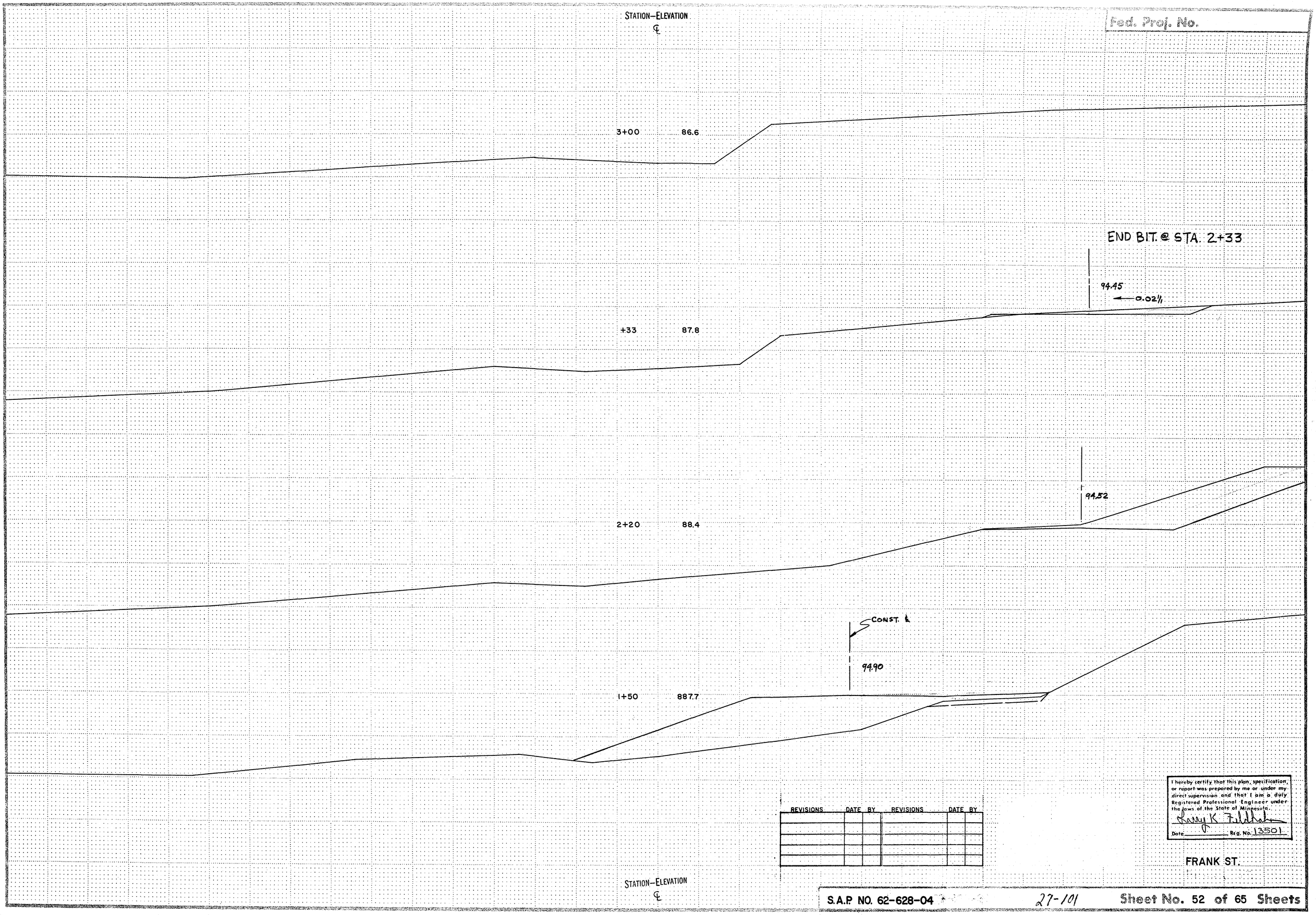
Date _____ Reg. No. 13501

FRANK ST.

S.A.P. NO. 62-628-04 27-101 Sheet No. 51 of 65 Sheets

Fed. Proj. No.

STATION—ELEVATION
℄



REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Larry K Fieldsa

Date _____ Reg. No. 13501

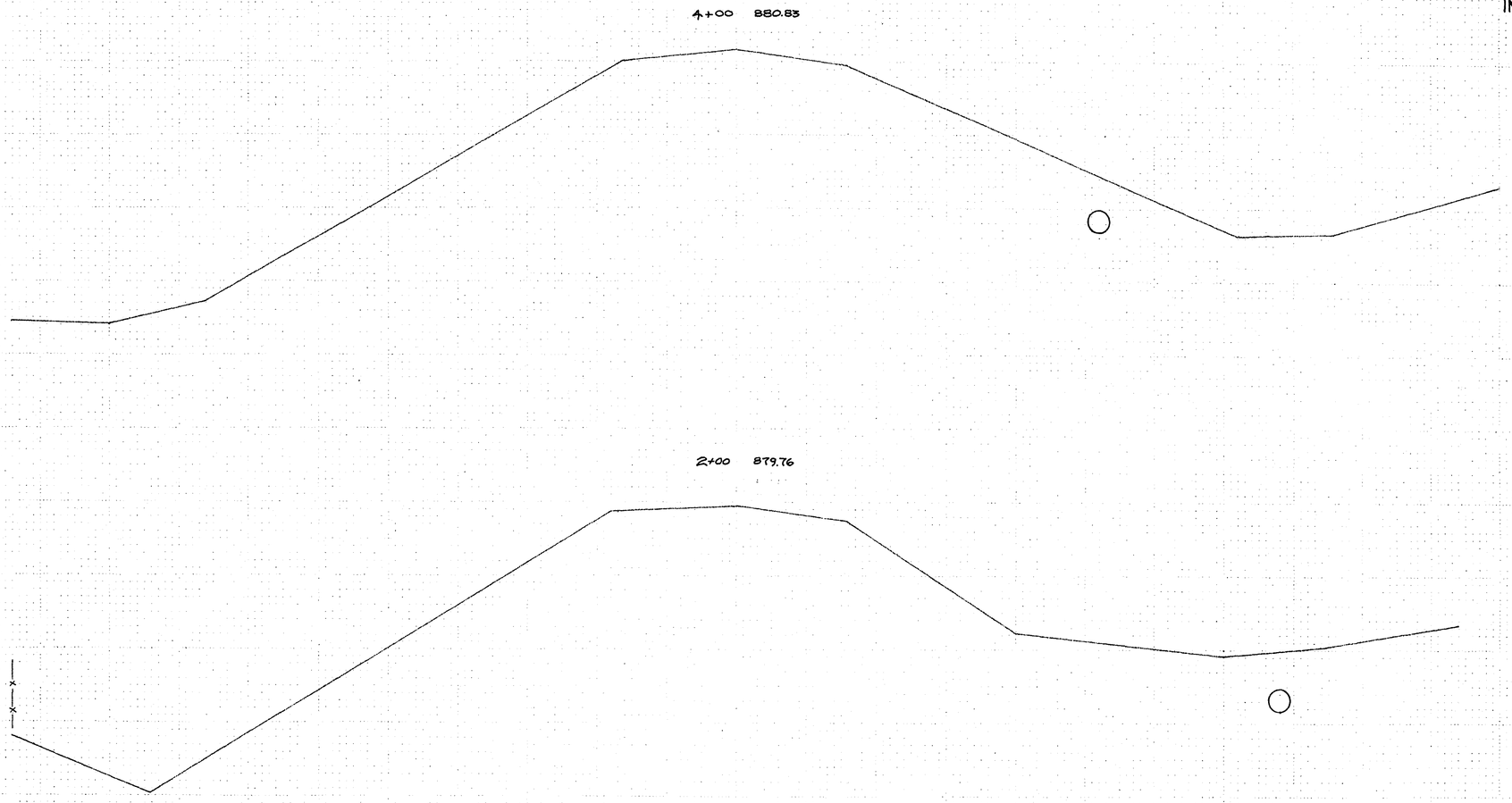
FRANK ST.

STATION—ELEVATION
℄

S.A.P. NO. 62-628-04 27-101 Sheet No. 52 of 65 Sheets

Fed. Proj. No.

4+50 MH 164
INV 869.24



0+32 SD. 22
INV. 864.00 18" RCP @ 1.36%

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Larry K Fildhahn

Date _____ Reg. No. 13501

ABANDONED R-R R/W

S.A.P. No. 62-628-04 27-101 Sheet No. 53 of 65 Sheets

Fed. Proj. No.

℄

13+13 M.H. 161
INV. 874.73

12+00 888.71

10+00 886.7

9+50 AP. 162
INV. 874.00 21" @ 0.20%

8+00 884.53

18" R.C. APRON
INV. 874.00

WATER

6+00 882.88

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Harry K Fuhlbohm

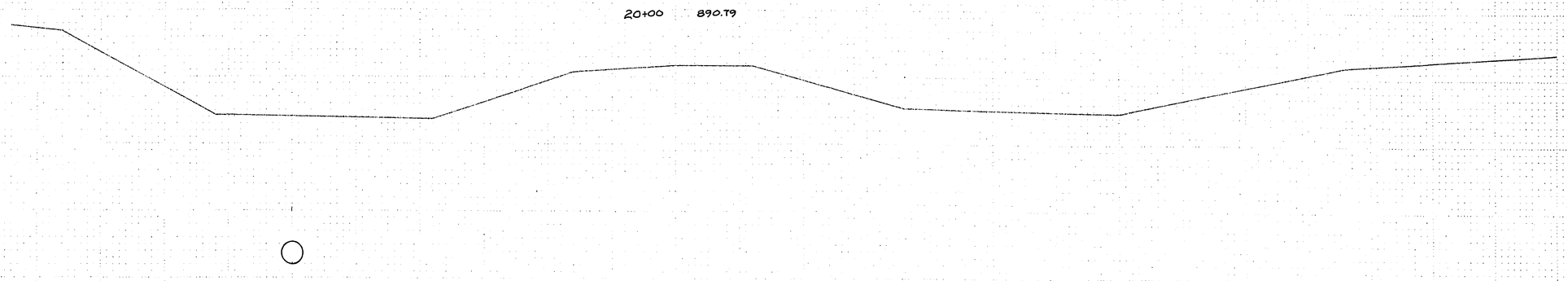
Date _____ Reg. No. 13501

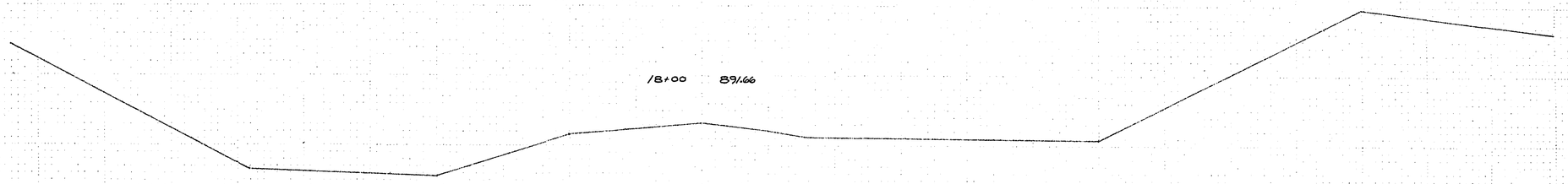
ABANDONED R.R. R/W

S.A.P. No. 62-628-04 27-101 Sheet No. 54 of 65 Sheets

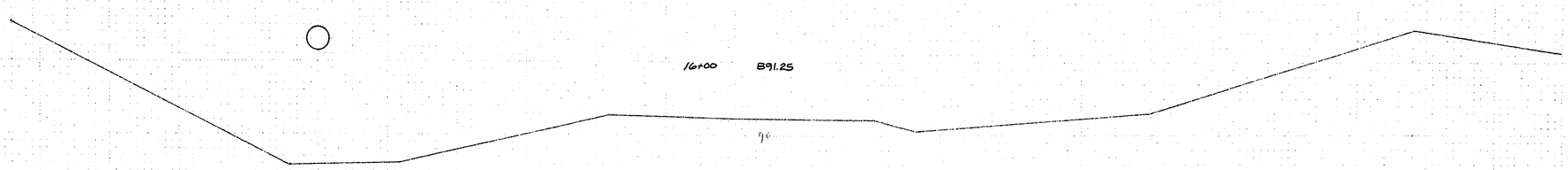
Fed. Proj. No.

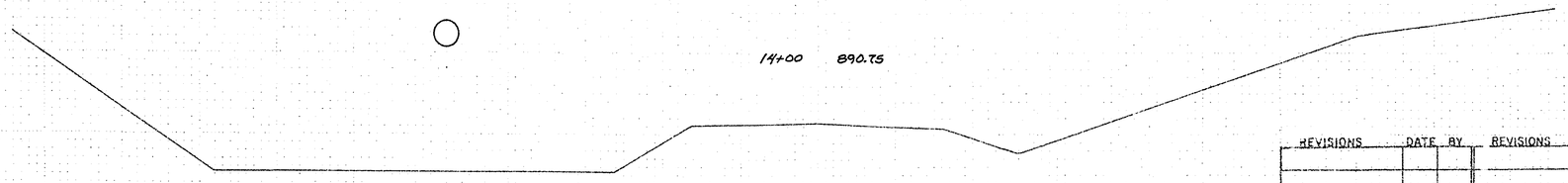
20+42 M.H. 159
INV. 876.19





16+78 M.H. 160
INV. 875.46





EL. 874.91

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.
Larry K Fiddler
Date _____ Reg. No. 13501

ABANDONED R.R. R/W

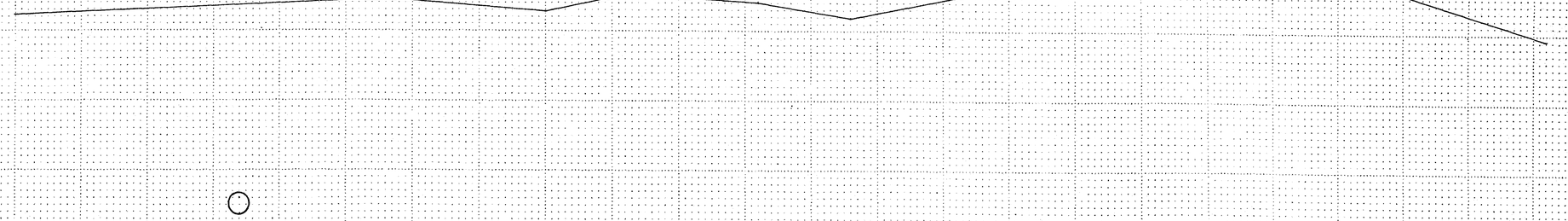
S.A.P. No. 62-628-04 27-101 Sheet No. 55 of 65 Sheets

℄

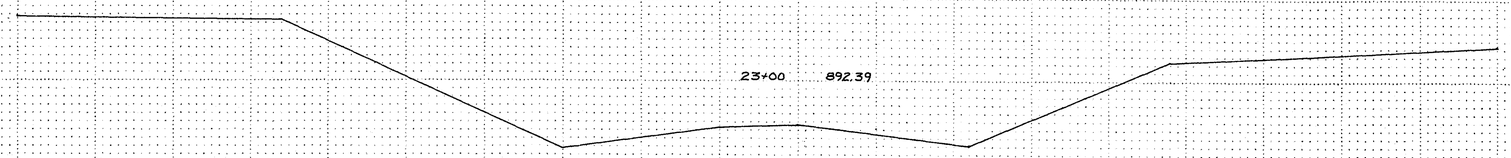
Fed. Proj. No.

24+05 MH 158
INV. 876.92

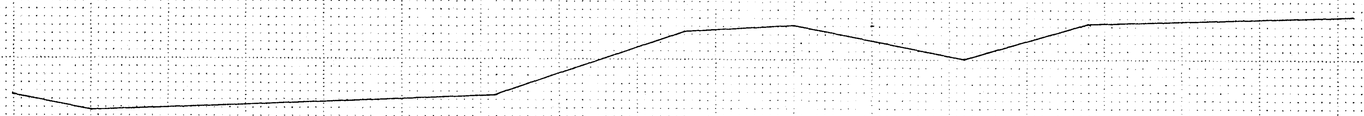
24+00 892.39



23+00 892.39



22+00 892.09



21+00 892.19

REVISIONS	DATE	BY	REVISIONS	DATE	BY

ABANDONED R-R R/W

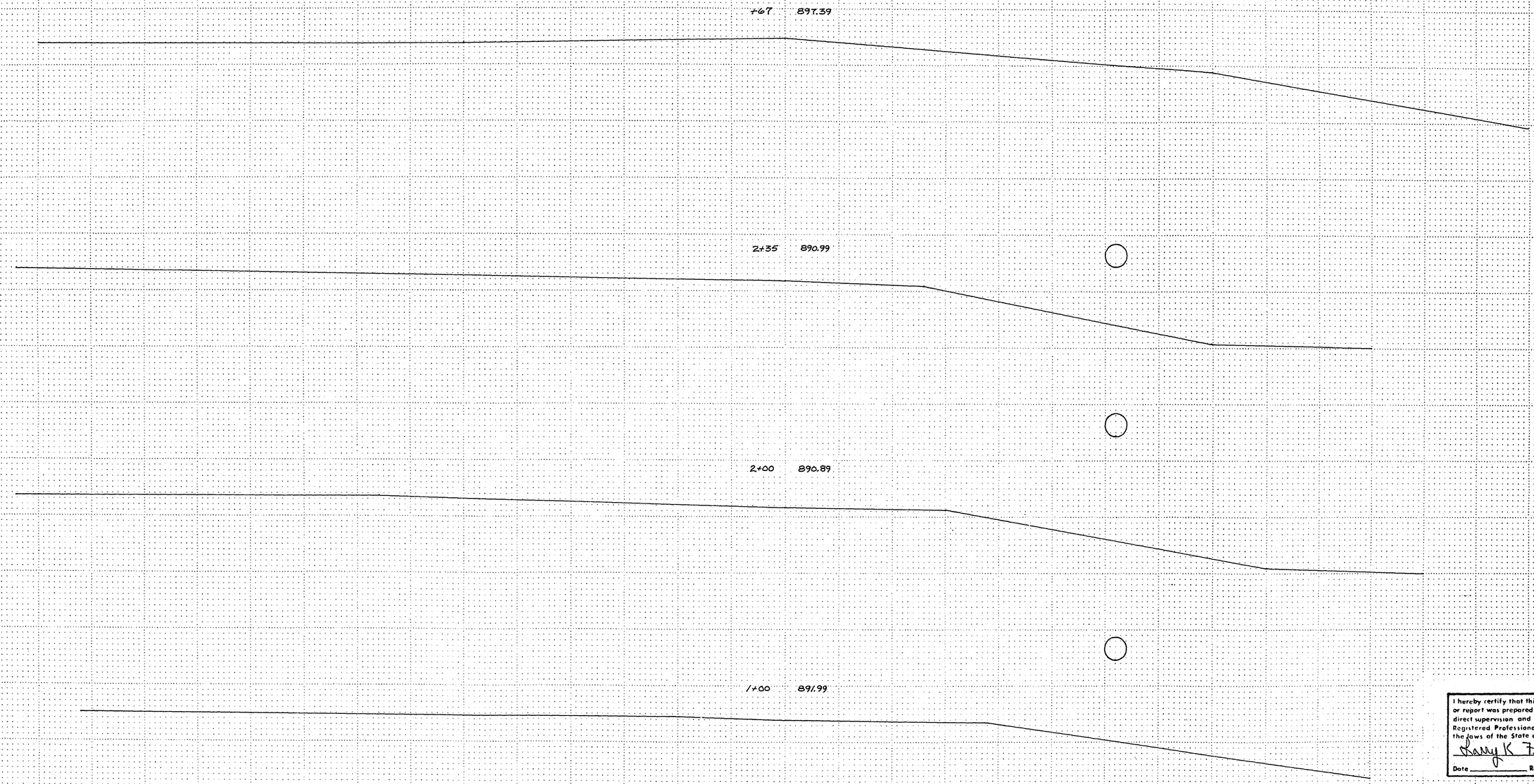
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Larry K. Fiddler

Date _____ Reg. No. 13501

S.A.P. NO. 62-628-04[illegible] 27-101 Sheet No. 56 of 65 Sheets

Fed. Proj. No.



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.

Harry K Fieldhahn

Date _____ Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

0+60 MH 111
INV. 877.79

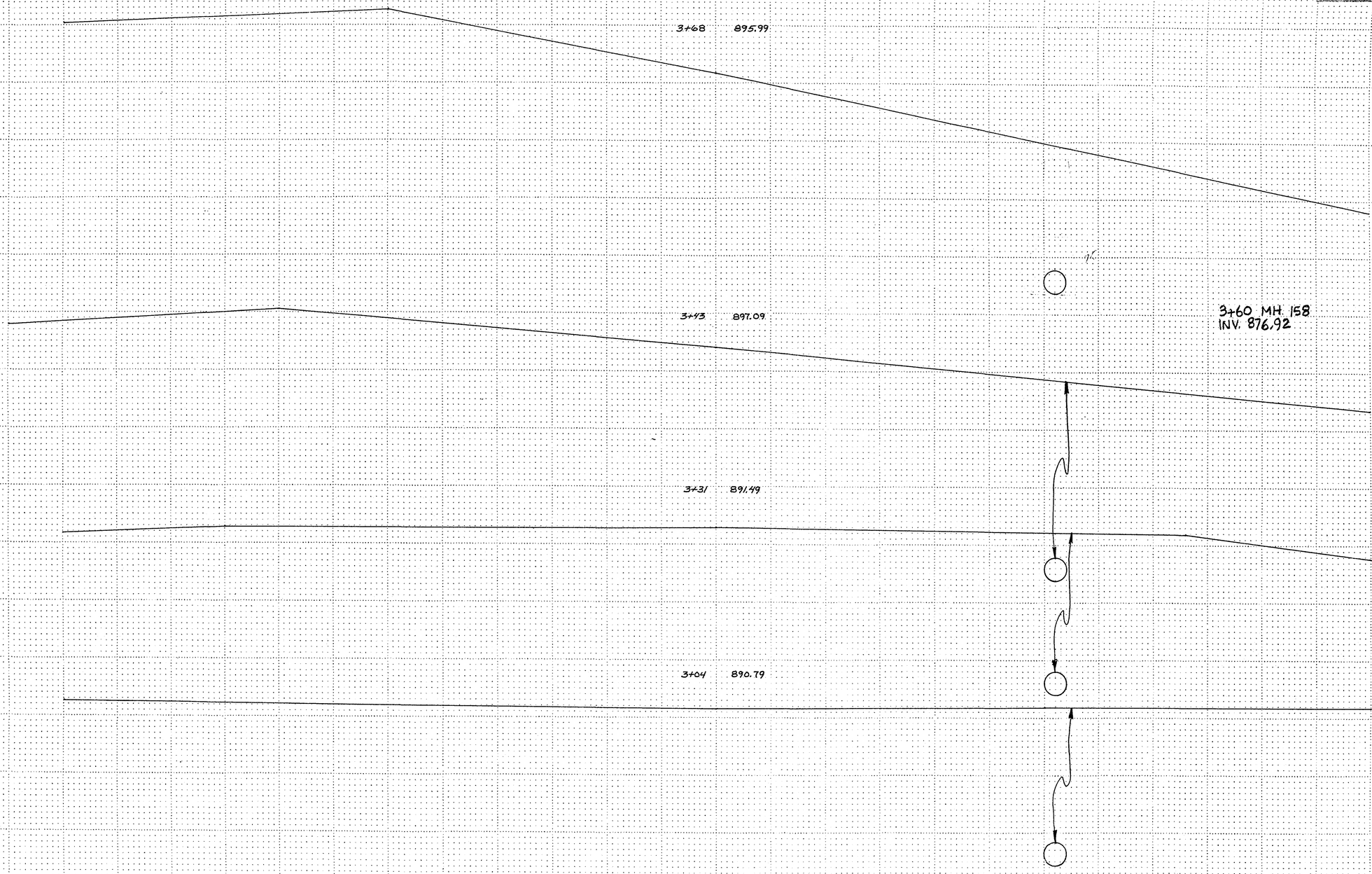
21" RCP @ 0.29%

FLICEK PARK STORM SEWER
STA. 14+00 LT.

0+00 = 14+00 FROST AVE.

S.A.P NO. 62-628-04 27-101 Sheet No. 57 of 65 Sheets

Fed. Proj. No.



REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Larry K Fildahl

Date _____ Reg. No. 13501

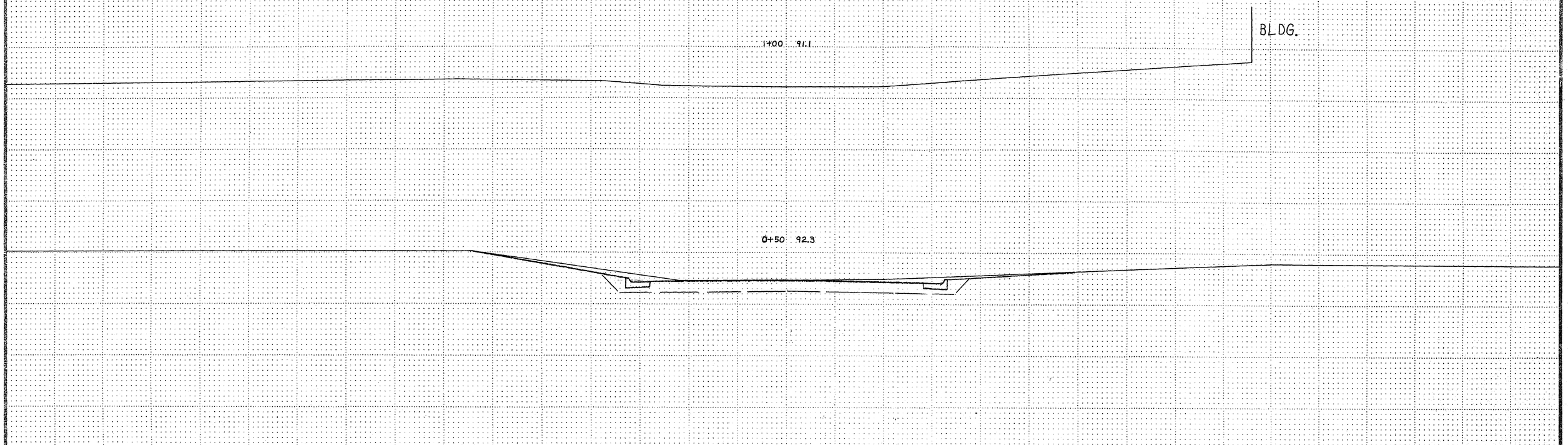
FLICEK PARK STORM SEWER
STA. 14+00 LT.

S.A.P. NO. 62-628-04 27-101 Sheet No. 58 of 65 Sheets

Fed. Proj. No.

STATION–ELEVATION

℄



STATION–ELEVATION

℄

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Larry K Fiddick

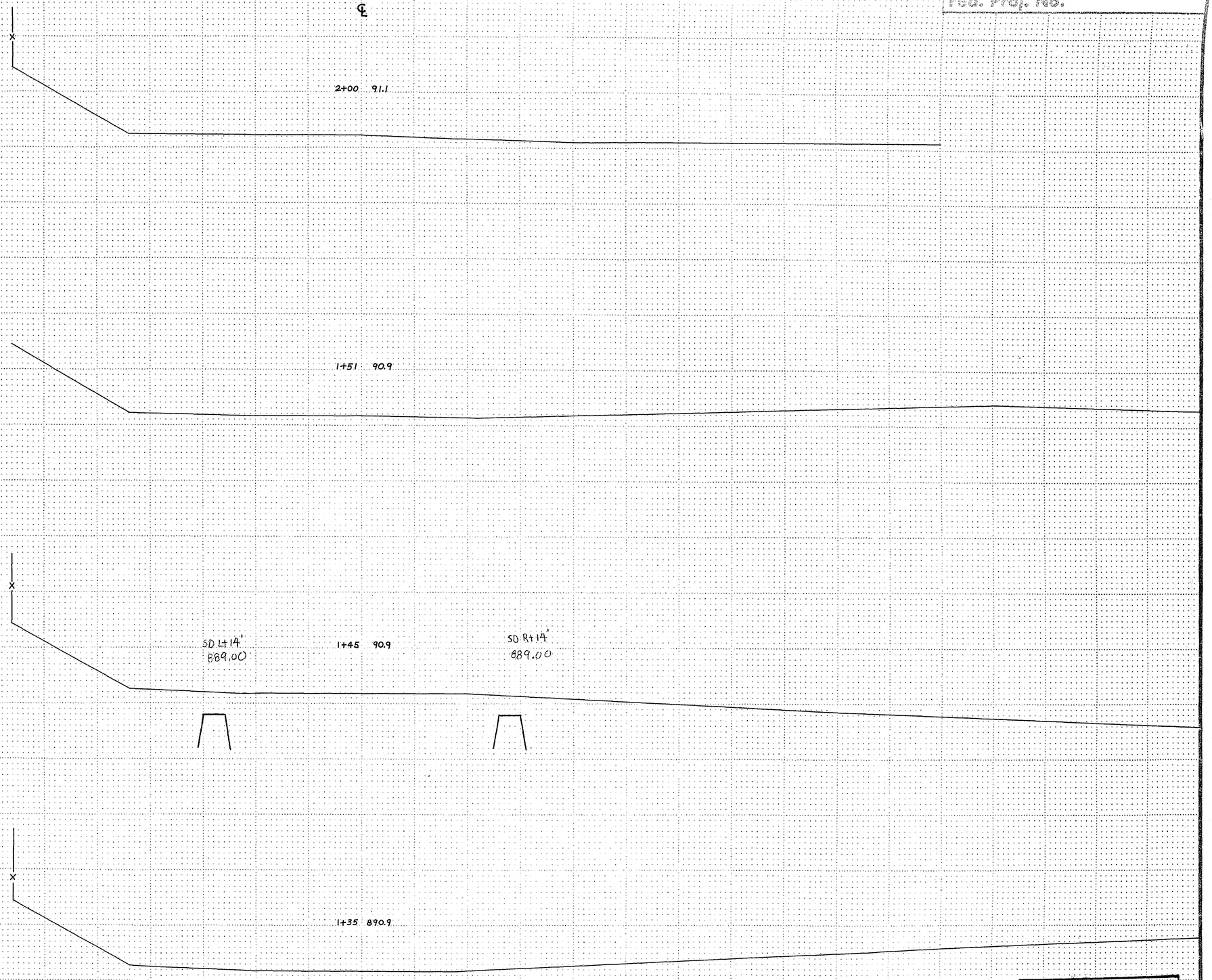
Date _____ Reg. No. 13501

ATLANTIC ST.

S.A.P NO. 62-628-04 27-101 Sheet No. 59 of 65 Sheets

STATION–ELEVATION
℄

Fed. Proj. No.



REVISIONS	DATE	BY	REVISIONS	DATE	BY

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:

Larry K Fiddick

Date _____ Reg. No. 13501

ATLANTIC ST.

STATION–ELEVATION
℄

S.A.P. NO. 62-628-04 [illegible] 27-101 Sheet No. 60 of 65 Sheets

Fed. Proj. No.

2+78 901.9

SOUTH GUTTER LINE FROST AVE.

SEE FROST AVENUE X-SECTIONS

BLDG. 1350

CONC. SW

R/W

901.89

2+00 903.2

BIT. LOT

R/W

BIT. LOT

R/W

6" WATERMAIN

R/W

902.33

1+74 903.4

BIT. LOT

R/W

BIT. LOT

6" WATERMAIN

1+00 903.9

903.57

R/W

R/W

FIRE STATION

CONC. PARKING LOT

6" WATERMAIN

0+62 904.2

MATCH EXISTING 0+62

R/W

R/W

℄ CONC. ENT.

6" WATERMAIN

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.

Larry K Fildahl

Date _____ Reg. No. 13501

CLARENCE ST.

S.A.P. 62-628-04 27-101 Sheet No. 61 of 65 Sheets

Fed. Proj. No.

R/W

FROST AVE. BLVD.

BIT.

RADIUS

1+63 905.5

904.22

RADIUS

R/W

FROST AVE. BLVD.

D

93 D

6" WATERMAIN

R/W

R/W

BIT. ENTRANCE

1+15 905.9

905.16

VAR.

C

93 C

6" WATERMAIN

R/W

R/W

+63 906.7

906.34

BIT.

B

93 B

6" WATERMAIN

R/W

R/W

+38 907.0

906.90

A

106 A

6" WATERMAIN

MATCH EXISTING STA. 0+26

R/W

R/W

0+00 907.3

HO.

6" WATERMAIN

IDE ST.

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.

Harry K. Fiddaman

Date _____ Reg. No. 13501

S.A.P. 62-628-04 27-101 Sheet No. 62 of 65 Sheets

Fed. Proj. No.

890
885
880

1+25
C= 932.3 F= 895.3

890
885
880

1+00
C= 1898.1 F= 1179.8

890
885
880

0+50
C= 868.5 F= 48.3

885

0+30
C= 495.4 F= 138.9

885

0+10
C= 6.9 F= 82.0

885

0+00
F= 27.2

885

0-10
F= 41.0

885

0-30

EDWARD ST.

FRANK ST.

FRANK ST.

890
885
880

2+50
C= 2076.1 F= 771.3

890
885
880

2+00
C= 1003.9 F= 425

890
885
880

1+75
C= 1092 F= 269.1

890
885
880

1+50
C= 1063.1 F= 398.8

EDWARD ST.

FRANK ST.

FRANK ST.

PERM. ESM'T.

REVISIONS	DATE	BY	REVISIONS	DATE	BY

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.

Harry K Fuldahn

Date _____ Reg. No. 13501

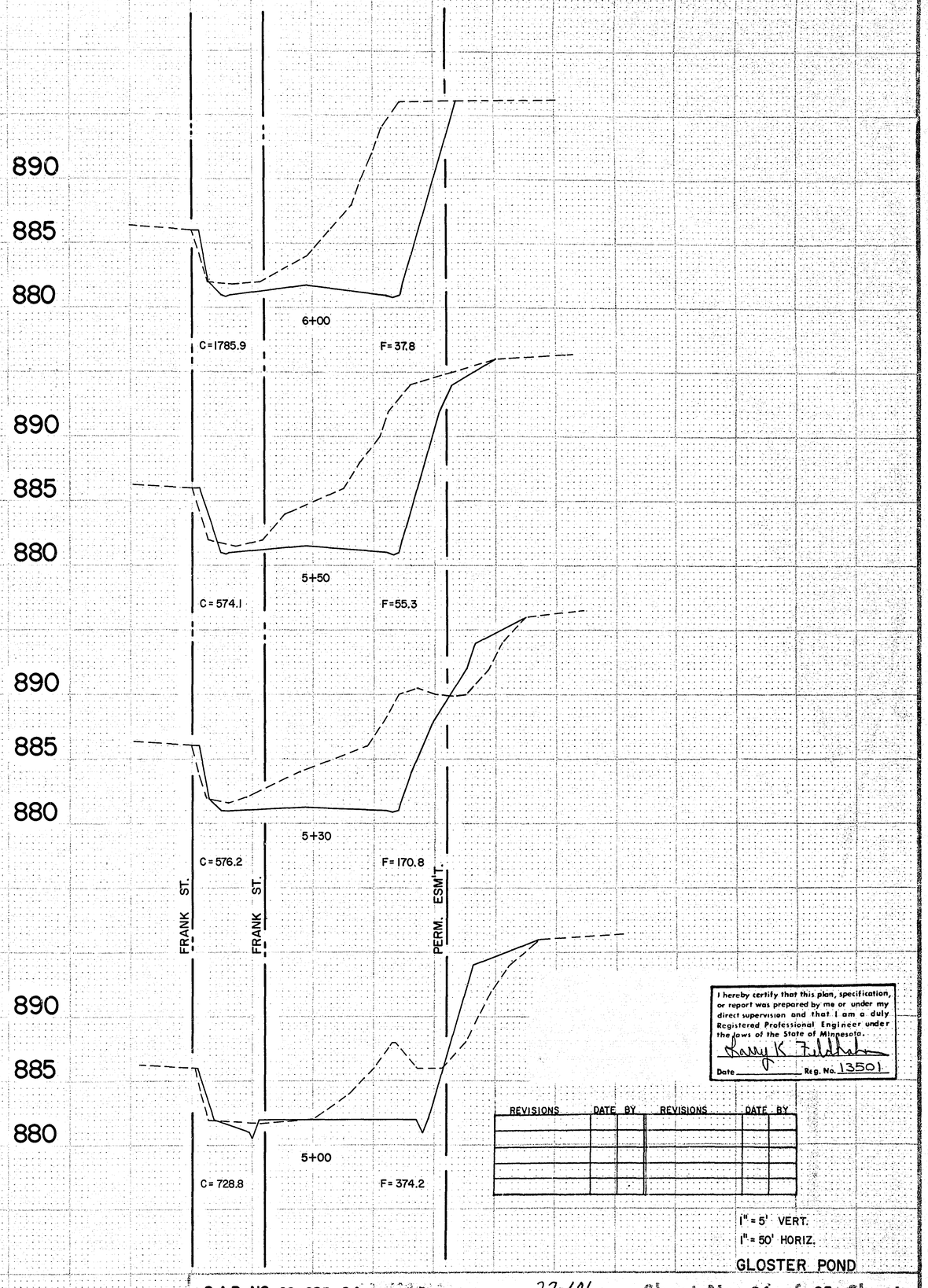
1" = 5' VERT.
1" = 50' HORIZ.

GLOSTER POND

S.A.P. NO. 62-628-04 27-101 Sheet No. 63 of 65 Sheets

FUNCTIONAL CROSS SECTION - OPEN DOTTED
H. A. ROGERS CO., MINNEAPOLIS - ST. PAUL

Fed. Proj. No.



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.

Larry K. Fullerton

Date _____ Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

1" = 5' VERT.

1" = 50' HORIZ.

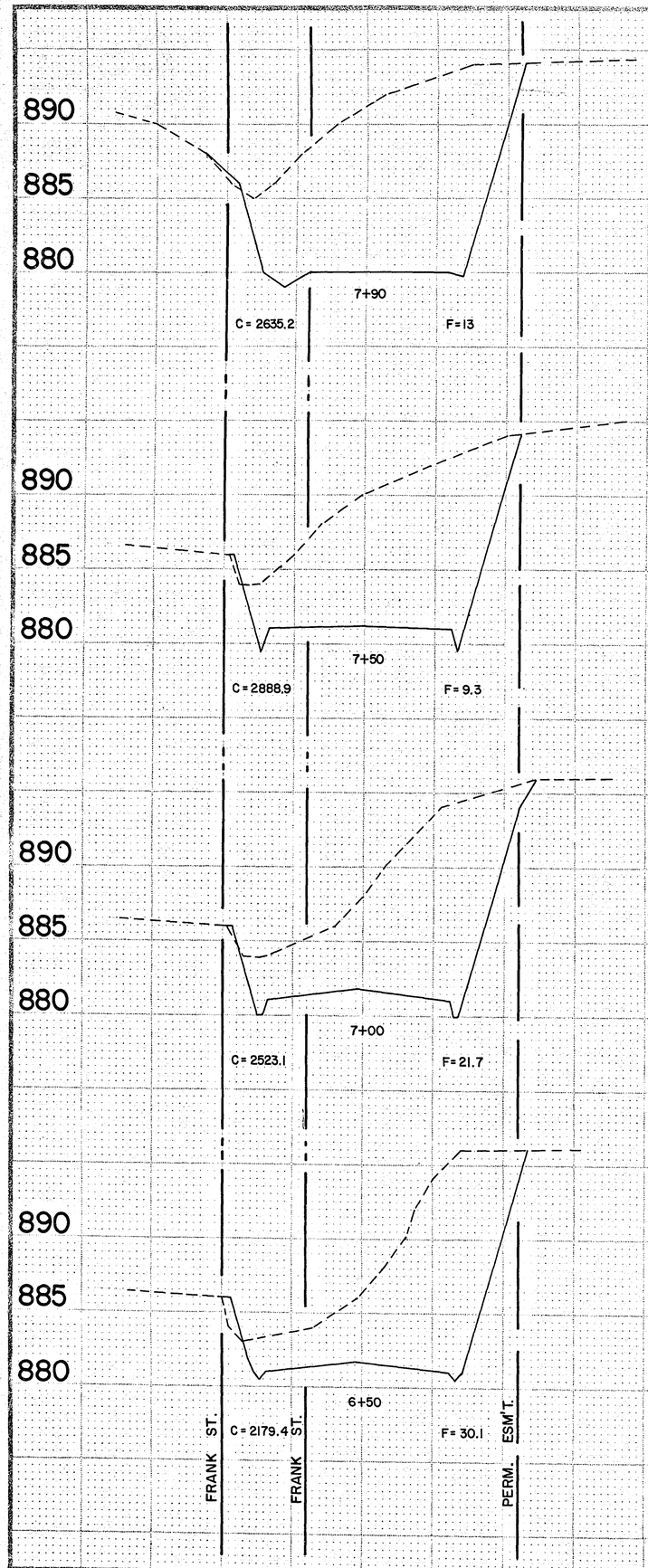
GLOSTER POND

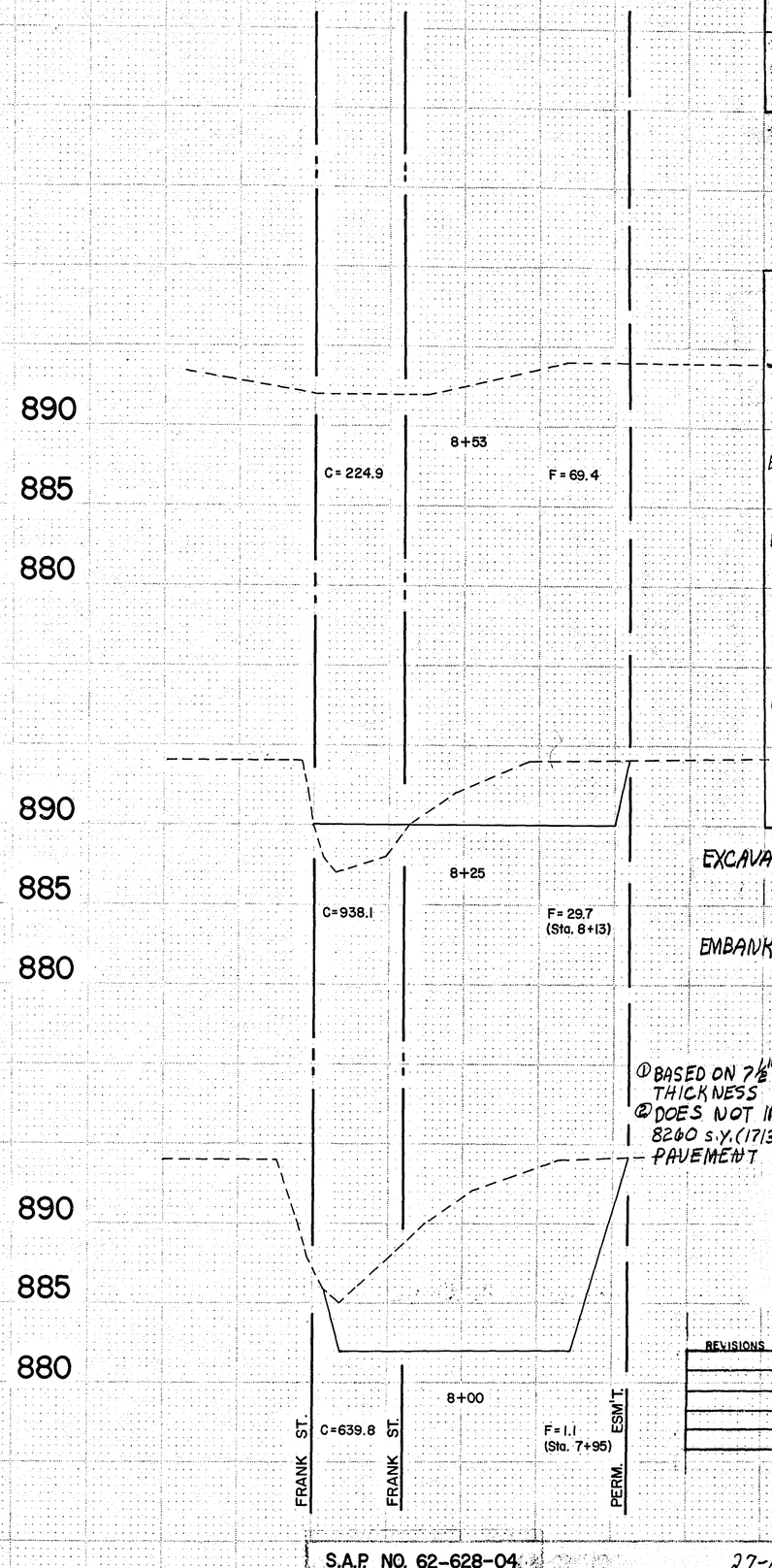
S.A.P NO. 62-628-04 27-101 Sheet No. 64 of 65 Sheets

FUNCTIONAL CROSS SECTION - OPEN DOTTED

H. A. ROGERS CO. - MINNEAPOLIS - ST. PAUL

Fed. Proj. No.





GLOSTER POND	
EXC.	EMB.
32,135.7	7,213
	x 140%
	10,098

FROST AVENUE

	CONC. REMOVAL (C.Y.)	EXC. (C.Y.)	EMB. (C.Y.)	SUBCUT BACKFILL (C.Y.)
	①	②		
FROST AVE.	1,713	38,002	7,340	18,806
ENGLISH AVE.		3,407		1,429
EDWARD ST.			193	
FRANK ST.		142	1,326	
ATLANTIC POND		3,830		
	1,713	41,551	12,689	20,235
			x 130%	x 130%
			16,496	26,306

SUMMARY

EXCAVATION:
- FROST AVE. = 41,551 c.y.
- GLOSTER POND = 32,136 c.y.
- TOTAL = 73,687 c.y.

EMBANKMENT:
- FROST AVE. = 16,496 c.y.
- GLOSTER POND = 10,098 c.y.
- = 26,594 c.y.
- SUBCUT BACKFILL = 26,306 c.y.
- TOTAL = 52,900 c.y.

① BASED ON 7½" AVE. THICKNESS

② DOES NOT INCLUDE 8260 s.y. (1713 c.y.) CONCRETE PAVEMENT REMOVAL

EXCAVATION 73,687 c.y.
EMBANKMENT -52,900 c.y.
EXCESS = 20,787 c.y.

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.

Larry K. Fiddick

Date _____ Reg. No. 13501

REVISIONS	DATE	BY	REVISIONS	DATE	BY

1" = 5' VERT.
1" = 50' HORIZ.

GLOSTER POND

S.A.P. NO. 62-628-04 27-101 Sheet No. 65 of 65 Sheets

FUNCTIONAL CROSS SECTION-OPEN ROTTED
H. A. ROSAN CO., MINNEAPOLIS, MINN.