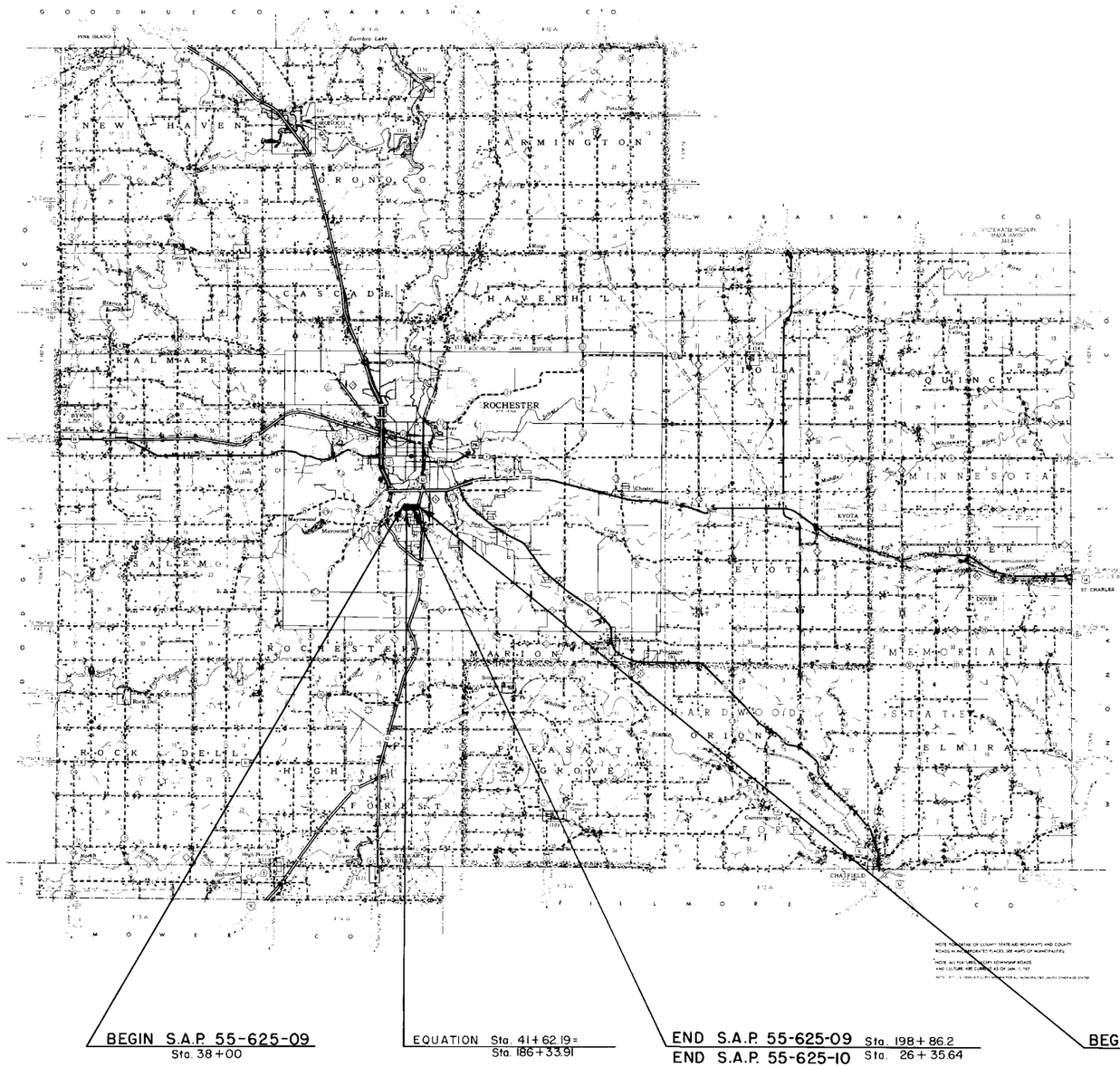
FORM 100-A '65

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 (NAME)
DRY RUN
DRAINAGE DITCH (SIZE)
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE (W)
CHAIN LINK FENCE (C-L)
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 (C.B.)
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 (G)
SAND PIT (S)
BORROW PIT (B)
ROCK QUARRY (Q)

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN (G)
WATER MAIN (W)
CONDUIT
TELEPHONE CABLE IN CONDUIT (T)
ELECTRIC CABLE IN CONDUIT (P)
TELEPHONE MANHOLE (T)
ELECTRIC MANHOLE (P)
BURIED TELEPHONE CABLE (T-BUR)
BURIED ELECTRIC CABLE (P-BUR)
AERIAL TELEPHONE CABLE (T-AE)
SEWER, (SANITARY OR STORM)
SEWER MANHOLE



Fed. Proj. No.

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR Grading, Aggregate Base, Storm Sewer, Sanitary Sewer, Concrete Surface

COUNTY STATE AID HIGHWAY NO. 25

BETWEEN C.R. 125 **AND** T.H. 63

From 30.66' North and 1,614.48' West of Center Sec. 11 T106N-R14W
(Give proper reference to Sections, Township and Range)

To 30.66' North and 1,049.82' East of Center Sec. 11 T106N-R14W

GROSS LENGTH	2,664.30	FEET 0.504	MILES
BRIDGES-LENGTH	0	FEET 0	MILES
EXCEPTIONS-LENGTH	0	FEET 0	MILES
NET LENGTH	2,664.30	FEET 0.504	MILES

INDEX OF SHEETS

Sheet No. 1	Title Sheet & Layout Map	
No. 2	Est. Quantities & Typical Sec	55-625-09 & 10
No. 3	Special Detail Plates	55-625-09 & 10
No. 4	Typical Sections	55-625-09
No. 5	Plan & Profile	55-625-09
No. 6-7	Storm & Sanitary Sewer	55-625-09
No. 8	Surfacing Plan	55-625-09
No. 9-13	X-Sections	55-625-09
No. 14-15	Typical Sections	55-625-10
No. 16	Retaining Wall Detail	55-625-10
No. 17-18	Curb & Gutter	55-625-10
No. 19-20	Storm Sewer	55-625-10
No. 21	Sanitary Sewer & Watermain	55-625-10
No. 22-23	Finished Lane Grades	55-625-10
No. 24-29	Intersection Grades	55-625-10
No. 30-45	X-Sections	55-625-10
NO. 16-A	RETAINING WALL	55-625-10

DESIGN SPEED 50 **M. P. H.**

PROJECTED A. D. T. 4,340

9 **TON DESIGN**

SOIL FACTOR 100

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

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.

Cle. Schildhammer COUNTY ENGINEER DATE 6/2/72

Olmsted COUNTY REG. NO 8284

L.O. Armstrong CITY ENGINEER DATE 6/2/72 REG. NO 1742

RECOMMENDED FOR APPROVAL Carl Reiter DISTRICT STATE AID ENGINEER 4/2, 1972

RECOMMENDED FOR APPROVAL L.F. Brady 6/6, 1972

APPROVED 6/20, 1972 Charles M. Gay STATE AID ENGINEER

REVISED : AUGUST, 1972

— SPECIFICATIONS —

STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION DATED JANUARY 1, 1972, SHALL GOVERN.

Minn. Project No. _____ S.A.P. 55-625-09 & 55-625-10 State Project No. _____

Olmsted County, Minnesota. County Proj. No. _____ Plan No. _____ Sheet 1 of 45 Sheets

ALBINSON, INC.

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	COUNTY 55-625-09	CITY 55-625-10	NON-PARTICIPATING	TOTAL ESTIMATED QUANTITIES
		GRADING & BASE					
	2101.502	CLEARING	TREE	11	67		78
	2101.507	GRUBBING	TREE	19	68		87
	2104.501	REMOVE PIPE CULVERTS	LIN.FT.		8		8
	2104.501	REMOVE CURB AND GUTTER	LIN.FT.		265		265
	2104.505	REMOVE CONCRETE PAVEMENT	SQ.YD.		35		35
(1)	2104.505	REMOVE CONCRETE SLABS	SQ.YD.		220		220
	2104.509	REMOVE MANHOLES AND CATCH BASINS	EACH		1		1
	2104.521	SALVAGE PIPE CULVERT	LIN.FT.	436	424		860
	2104.521	SALVAGE WOODBOARD FENCE	LIN.FT.		20		20
	2105.501	COMMON EXCAVATION	CU.YD.	2,881	6,095		8,976
	2105.507	SUBGRADE EXCAVATION	CU.YD.	500			500
	2105.523	COMMON BORROW (C.V.)	CU.YD.	1,744	650		2,394
	2131.501	CALCIUM CHLORIDE TYPE 2	TON		12		12
	2211.501	AGGREGATE BASE CLASS 2	TON	4,406	1,469		5,875
	0557.605	INSTALL WOOD FENCE	LIN.FT.		20		20
	2575.505	SODDING	SQ.YD.	1,477	4,888		6,365
	2130.501	WATER	M-GAL.	10			10
		CONCRETE					
(2)	2301.501	CONCRETE PAVEMENT	SQ.YD.	8,890	7,102		15,992
(3)	2301.511	STRUCTURAL CONCRETE	CU.YD.	1,976	1,586		3,562
(4)	2301.541	INTEGRANT CURB DESIGN "B6"	LIN.FT.	3,232	1,982		5,214
	2531.501	CONCRETE CURB AND GUTTER DESIGN B624	LIN.FT.		52		52
	2531.501	CONCRETE CURB AND GUTTER DESIGN V724	LIN.FT.		202		202
	2531.507	5" CONCRETE DRIVEWAY PAVEMENT	SQ.YD.	218	192		410
	2531.507	7" CONCRETE DRIVEWAY PAVEMENT	SQ.YD.	188	116		304
(5)	C700.5	CONSTRUCT 4" CONCRETE WALK	SQ.YD.		70	70	70
(5)	C700.5	CONSTRUCT 6" CONCRETE WALK	SQ.YD.		58	58	58
(5)	C700.5	CONSTRUCT 7" CONCRETE WALK	SQ.YD.		68	68	68
		SANITARY SEWER					
(5)	S100.501	TRENCH EXC. PIPE 24" & UNDER (6' to 10')	LIN.FT.	1,307	657	1,964	1,964
(5)	S100.501	TRENCH EXC. PIPE 24" & UNDER (10' to 13')	LIN.FT.	303		303	303
(5)	S100.506	GRANULAR MATERIAL FOR BACKFILL	CU.YD. (V.M.)	200		200	200
(5)	S100.507	AGGREGATE FOR PIPE FOUNDATION (GRADATION "B")	CU.YD. (V.M.)	200		200	200
(5)	S100.516	F&I 8" VITRIFIED CLAY PIPE	LIN.FT.	1,609	683	2,292	2,292
(5)	S100.526	F&I 8"X4" WYE BRANCH 2' LONG V.C. PIPE	WYE	13	7	20	20
(5)	S100.539	CONSTRUCT MANHOLE TYPE I (6' to 10' DEEP)	STRUCTURE	4	2	6	6
(5)	S100.539	CONSTRUCT MANHOLE TYPE I (10' to 13' DEEP)	STRUCTURE	1		1	1
(5)	S100.540	CONSTRUCT MANHOLE TYPE IA (10' to 13' DEEP)	STRUCTURE	1	1	2	2
(5)	S100.547	CONSTRUCT DROP INLET (0' to 3' DEEP)	UNIT		1	1	1
(5)	S100.578	ADJUST FRAME & RING GRATE	ASSEMBLY		2	2	2
(5)	S100.539	CONSTRUCT MANHOLE TYPE I (0' to 6' DEEP)	STRUCTURE		1	1	1
		STORM SEWER					
	2503.511	12" R.C. PIPE SEWER CLASS IV	LIN.FT.	237	260		497
	2503.511	18" R.C. PIPE SEWER CLASS II	LIN.FT.	44			44
	2503.511	18" R.C. PIPE SEWER CLASS III	LIN.FT.		285		285
	2503.511	24" R.C. PIPE SEWER CLASS II	LIN.FT.	425			425
(6)	2503.511	24" R.C. PIPE SEWER CLASS III	LIN.FT.		314		314
	2503.511	36" R.C. PIPE SEWER CLASS IV	LIN.FT.	57			57
	2503.511	42" R.C. PIPE SEWER CLASS II	LIN. FT.	571			571
	2503.511	48" R.C. PIPE SEWER CLASS II	LIN.FT.	327			327
	2506.508	CONSTRUCT MANHOLE DESIGN SPECIAL 1	EACH	5			5
(7)	2506.508	CONSTRUCT MANHOLE DESIGN SPECIAL 1	EACH		1		1
	2506.508	CONSTRUCT MANHOLE DESIGN SPECIAL 2	EACH		2		2
(8)	2506.509	CONSTRUCT CATCH BASIN DESIGN SPECIAL 3	EACH	12	9		21
	2506.509	CONSTRUCT CATCH BASIN DESIGN SPECIAL 4	EACH	2			2
(10)	2506.509	CONSTRUCT CATCH BASIN DESIGN SPECIAL 5	EACH	1			1
	2501.515	24" R.C. PIPE APRON	EACH	1	1		2
	2501.515	48" R.C. PIPE APRON	EACH	1			1
		WATER MAIN					
(5)	W200.501	TRENCH EXC. PIPE 14" & UNDER (0'-7' DEEP	LIN.FT.	279		279	279
(5)	W200.505	SELECT MATERIAL FOR BACKFILL	CU.YD. (V.M.)	100		100	100
(5)	W200.507	AGGREGATE FOR PIPE FOUNDATION (GRAD."B")	CU. YD. (V.M.)	100		100	100
(5)	W200.514	F&I 6" DUCTILE IRON PIPE WATERMAIN	LIN.FT.		54	54	54
(5)	W200.514	F&I 12" DUCTILE IRON PIPE WATERMAIN	LIN.FT.	210		210	210
(5)	W200.515	F&I 6" GATEVALVE & BOX	ASSEMBLY		1	1	1
(5)	W200.515	F&I 12" GATE VALVE & BOX	ASSEMBLY	1		1	1
(5)	W200.523	F&I 8"X6" MACHINE TAPPING ASSEMBLY (SLEEVE & VALVE)	ASSEMBLY		1	1	1
(5)	W200.525	F&I 12" BEND 11 1/4°	BEND	1		1	1
(5)	W200.531	F&I 12" PLUG	PLUG	1		1	1
(5)	W200.533	F&I 3/4" CORPORATION STOP	EACH (S.P.)	13		13	13
(5)	W200.550	REMOVE 6" PLUG	PLUG		1	1	1
(5)	W200.550	REMOVE 12" PLUG	PLUG	1		1	1
(5)	W290.551	INSTALL 6" PLUG	PLUG		1	1	1
(5)	W200.551	INSTALL 12" PLUG	PLUG	1		1	1
(9) (5)	W200.553	REMOVE 6" HYDRANT	ASSEMBLY		1	1	1
(9) (5)	W200.554	INSTALL 6" HYDRANT	ASSEMBLY		1	1	1
		RETAINING WALL					
	2411.501	CONCRETE MIX NO. 3Y43	CU.YD.		64		64
	2411.541	REINFORCEMENT BARS	LB.		3,296		3,296
		SERVICE CONNECTIONS					
(11) (5)	C150.701 A	SANITARY SEWER & WATER SERVICE STUBBED INTO BOULEVARD	EACH	13	7	20	20
		BITUMINOUS SURFACE					
	2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON		5	5	5
	2341.508	WEARING COURSE MIXTURE	TON		84	84	84
	2358.501	BITUMINOUS MATERIAL FOR PRIME COAT	GAL.		225	225	225
	2356.505	BITUMINOUS MATERIAL FOR SEAL COAT	GAL.		128	128	128
	2356.509	SEAL COAT AGGREGATE	CU. YD.		5	5	5

STANDARD DETAIL PLATES

PLATE NO.	DESCRIPTION
0001 A	SPECIFICATION REFERENCE TO STANDARD PLATES
1016 D	CONCRETE PAVEMENT NON-REINFORCED
1017 C	CONCRETE PAVEMENT WITH STEEL FABRIC REINFORCEMENT
1100 I	EXPANSION JOINTS
1108 F	DOWEL BAR ASSEMBLY TYPE "F"
1120 M	CONTRACTION JOINTS DESIGN "C"
1140 L	LONGITUDINAL JOINT
1141 B	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
1150 M	CONSTRUCTION OF HEADER JOINT
3000 F	REINFORCED CONCRETE PIPE
3100 F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
7035 G	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7100 D	CONCRETE CURB & GUTTERS
7110 E	CURB & GUTTER CONSTRUCTION AT CATCH BASINS
7111 D	INSTALLATION OF CATCH BASIN CASTINGS
8008 D	CONTRACTORS SIGN
8000 A	STANDARD BARRICADES
8000 C	STANDARD SECONDARY BARRICADE
7000 C	INTEGRANT CURBS
4101 B	RING CASTING FOR MANHOLE OR CATCH BASINS (CASTING NO. 700-7)
4142 D	BEEHIVE GRATE CASTINGS FOR CATCH BASINS (6" HEIGHT)
	CITY OF ROCHESTER DETAIL PLATES
S.D.P. 4-03	MANHOLE TYPE I
S.D.P. 4-04A	MANHOLE TYPE I-A DROP ONLY
S.D.P. 4-10	MANHOLE TYPE 4A-2
S.D.P. 1-01	CATCH BASIN TYPE 1-B
S.D.P. 1-05	CURB & GUTTER REINFORCING BARS AT CATCH BASINS
S.D.P. 6-01	DETAIL OF 12" OR 15" CONCRETE TEE CUT IN FOR REINF. CONC. PIPE (36")
S.D.P. 2-04	CURB RETURNS AT ENTRANCES & CURB SECTIONS
S.D.P. 4-01	MANHOLE ADJUSTING RINGS
S.D.P. 4-02	MANHOLE INVERT DETAIL
S.D.P. 2-02	DETAIL FOR ROLLED BITUMINOUS CURB
S.D.P. 8-01	WATER MAIN THRUST BLOCK. (HYD. BRANCH CONN.)

(1) Includes sidewalks and driveway slabs of variable thickness.
(2) Includes approximately 677 Sq. Yds. irregular pavement.
(3) Includes approximately 320 Cu. Yds. High Early Concrete.
(4) Includes transition from "B6" to "B7" integrant curb and 94 Lin. Feet of "B7" Integrant Curb.
(5) City of Rochester Specification Numbers.
(6) Includes 2 Tee Branch 24" X 12" 4' long RCP Class III.
(7) 5' to 7' deep with 3' Cone.
(8) Includes 10 D-L Grate Castings and 11 D-R Grate Castings.
(9) Includes trenching and 6" C.I.P.
(10) Castings shall be M.H.D. Frame Casting No. 700-7 and M.H.D. Grate Casting No. 730-6.

(11) Includes 4" Cast Iron Pipe, Sanitary Sewer and 3/4" K Copper Water Service Connections stubbed into Boulevard. 9 connections at zero feet R.O.W. and 4 connections at 7.33 feet R.O.W. and the 7 connections under S.A.P. 55-625-10 to be 2' from R.O.W. POLYSTYRENE plastic foam (2" Layers 1" X 4' X 8') to be placed over connections where less than 6.0' cover.

Proj. No. _____

S.A.P. 55-625-09 & 55-625-10
Project No. _____

OLMSTED County, Minn.

ALBINSON, INC. MINNEAPOLIS

NOTE ON MANHOLE WALL THICKNESS: 1 8" BRICK OR CONCRETE MASONRY UNITS, 0 TO 13' DEPTH. 2 12" BRICK OR CONCRETE MASONRY UNITS, OVER 13' DEPTH. 3 5" REINF. CONC. PRECAST SECTIONAL UNITS, 0'-6", ALL DEPTH

SEE DETAILS

BRICK OR CONCRETE RING ADJUSTER

5" MIN. 8" MAX. CEMENT MORTAR COVER ON BRICK OR CONC. MASONRY UNITS. (1/4" MIN. THICKNESS)

SPEC BRICK, CITY S100.206, S100.307C, A.S.T.M. C32-63-GRADE MA
& REF

CONC. MASONRY UNITS, CITY S100.207 (S100.307D, M.H.D. 3621 (RADIUS, DECHEASING RADIUS, & SLANTS AS REQUIRED)

SECTIONAL CONC. M.H. UNITS, CITY S100.208 S100.307E M.H.D. 3622

CAST IN PLACE CONC., CITY S100.205 S100.307B M.H.D. 2506.246(, MIX # 3842

(DOTTED LINES INDICATE ALTERNATE STEP CONSTRUCTION)

NOTE FOR STEP CASTINGS USE M.H.D. STANDARD PLATE 4180F

STEP SCHEDULE

	STD STEP CONST. TOP STEP	STD STEP CONST. OTHER STEPS	ALT. STEP CONST. TOP STEP	ALT. STEP CONST. OTHER STEPS
MASONRY OR POURED CONC	042	042	042	044
PRECAST	043	043	043	045

CONCRETE BASE, CAST IN PLACE
SPEC & REF CITY, S100.205, S100.307B M.H.D. 2506.246(, MIX # 3842 STD. OR H.E. STRENGTH

NOTE FRAME & GRATE TO BE NEENAH NO R-1090 W/TYPE 'B' NON-ROCKING LID OR EQUAL WT 300# COMPLETE W/LID.

SECT. A-A

PLACE STEPS IN CENTER OF UPSTREAM QUADRANT, NOT ON AXIS OF EITHER PIPE

PLAN

COVER

FRAME

DEPARTMENT OF CITY ENGINEER-ROCHESTER, MINNESOTA

MANHOLE TYPE I
PLAN & SECTION
SPECIAL 1

REVISED | SHT. OF SHTS. | C.A. ARMSTRONG CITY ENGINEER | DATE | PLATE NO. SDP 4-03

---

2 LINES 5/8" REINFORCING RODS AT 4" CENTER TO CENTER AROUND MANHOLE

(4300# M.H.D. MIX NO 3Y43

BRICK OR CONCRETE RING ADJUSTER

5/8" REINF RODS AT 4" C TO C

REINFORCING DETAIL

MINIMUM FLOOR SLOPE 1/4" PER FT

SECT A-A

CONCRETE BASE, CAST IN PLACE
SPEC & REF (CITY S100.205, S100.307B M.H.D. MIX # 3842

COVER

FRAME

8" WALL TO BE BRICK OR CONC MASONRY UNITS SPEC & REF (BRICK, CITY S100.206, S100.307C A.S.T.M. C32-63-GRADE MA / CONC MASONRY UNITS, CITY S100.207, S100.307D M.H.D. 3621)

5' WALL TO BE REINF CONC PRECAST SECTIONAL UNITS SPEC & REF (CITY S-100.208 M.H.D. 3622)

NOTE FRAME AND GRATE TO BE NEENAH NO R-1090 W/NON-ROCKING LID TYPE 'B', OR EQUAL

WT 300# COMP. W/LID

PLAN

NO SCALE

DEPARTMENT OF CITY ENGINEER-ROCHESTER, MINNESOTA

MANHOLE TYPE 4-A2 UNDER 5' IN HEIGHT WITH 8" REINFORCED SLAB TOP
SPECIAL 2

REVISED | SHT. OF SHTS. | C.A. ARMSTRONG CITY ENGINEER | DATE | PLATE NO. SDP 4-10

PLAN

NOTE: PLAN SHOWS PARALLEL GRATE TYPE 1-B-BD

FACE OF CURB | GUTTER

SECTION A-A

SECTION B-B

TOP OF CURB | GUTTER | 8" DEPRESSION | TOP OF SUBGRADE | INSTALL 6" VCP & PLUG END AS DIRECTED BY ENGINEER | BRICK, CONCRETE OR CONCRETE BLOCK AS PER SPECIFICATIONS | CONCRETE BASE, CAST IN PLACE (CITY S100.205, S100.307B, S100.307D OR M.H.D. 2506.246(MIX # 3842) | MINIMUM FLOOR SLOPE 1/4" PER FT | CURB EXP+2"

DIAGONAL GRATE DEFINITION

FLOW

DIAGONAL RIGHT
DESIGNATION: TYPE 1-B-DR

DIAGONAL LEFT
DESIGNATION: TYPE 1-B-DL

NOTE; FRAME, GRATE AND CURB BOX TO BE FOLLOWING NEENAH NUMBERS OR EQUALS:

FRAME	R-3290
CURB BOX	R-3246-C 9"/6" RAD.
PARALLEL GRATE	R-3246-BD
DIAGONAL GRATE RIGHT	R-3290-DR
DIAGONAL GRATE LEFT	R-3290-DL

DEPARTMENT OF CITY ENGINEER-ROCHESTER, MINNESOTA

CATCH BASIN TYPE 1-B
SPECIAL 3

REVISED 3-6-67 | SHT. OF SHTS. | L.A. Armstrong CITY ENGINEER 3-6-67 DATE | PLATE NO. SDP 1-01

NOTE:
ALIGNMENT - INLET PIPE SHALL BE CENTERED ON THE MID-POINT OF A LENGTH OF PIPE IN MAIN.
FLOWLINE OF INLET PIPE SHALL BE LEVEL WITH MID-POINT OF MAIN.
GRADE OF INLET PIPE - 1% MINIMUM.
CONCRETE - TYPE I GRADE E.
CONSTRUCTION - CONCRETE PLACED TO MID-POINT OF MAIN SHALL BE THOROUGLY HARDENED BEFORE OPENING IN MAIN IS CUT.
THE CUT SHALL BE CAREFULLY AND NEATLY MADE KEEPING THE SIZE OF THE OPENING TO A MINIMUM SO AS NOT TO DAMAGE THE BELL OF THE LENGTH CUT INTO OR THE ADJOINING LENGTHS.

INLET PIPE | STORM SEWER INPLACE | VARIABLE | WALLS 8" BRICK OR MASONRY UNITS

PLAN
WITHOUT LID INPLACE

6" PRECAST CONCRETE LID REINFORCED WITH 3/8" Φ BARS SPACED @ 8" CENTERS BOTH WAYS.

MID-POINT OF MAIN

SECTION A-A

MINIMUM GRADE-1%

VARIABLE INSIDE DIAMETER PLUS 12"

SECTION B-B

NOTE: THIS STRUCTURE IS TO BE USED ON ALL CONNECTIONS EXCEPT THOSE WHERE CITY ENGINEER DIRECTS THAT A MANHOLE IS REQUIRED.

DEPARTMENT OF CITY ENGINEER-ROCHESTER, MINNESOTA

DETAIL OF JUNCTION BOX
FOR CONNECTIONS INTO
STORM SEWER MAIN SPECIAL 4

REVISED | SHT. OF SHTS. | C.A. ARMSTRONG CITY ENGINEER | DATE | PLATE NO. SDP 6-02

FACE OF CURB | GUTTER | EXPANSION JOINT

NOTE- PLAN SHOWS PARALLEL GRATE TYPE 3-D

PLAN

SECTION A-A

SECTION B-B

DEPRESS LIP | DEPRESS GUTTER 2" | TOP OF CURB | CEMENT MORTAR COVER ON BRICK OR CONCRETE MASONRY UNITS (1/4" MIN. THICKNESS) | BRICK, CONCRETE, OR CONCRETE MASONRY UNITS (SEE NOTE DESIGNATING THICKNESS AND SLANTS AS REQUIRED) | CURB BOX ADJUSTABLE 5" TO 8" | 10" OR 8" | VARIABLE SLOPE 1/4" PER FT | CONCRETE BASE, CAST IN PLACE SPEC. (CITY S100.205, S100.307B4 REF. (M.H.D. 2506.246(MIX # 3811, STD. OR H.E. STR. | VARIABLE-4.0" MAX. DIAM. | VARIABLE-8.0" MAX. DIAM.

DIAGONAL GRATE DEFINITION

FLOW

DIAGONAL RIGHT
DESIGNATION: TYPE 3-DR

DIAGONAL LEFT
DESIGNATION: TYPE 3-DL

NOTE - FRAME, GRATE & CURB BOX TO BE FOLLOWING NEENAH NOS. OR EQUALS:

FRAME	R-3010
CURB BOX (7"x15" & 11"x25")	R-3010-10
PARALLEL GRATE (16"x25")	R-3010-D
DIAGONAL GRATE RIGHT	R-3010-DR
DIAGONAL GRATE LEFT	R-3010-DL

DEPARTMENT OF CITY ENGINEER-ROCHESTER, MINNESOTA

CATCH BASIN - TYPE 3
SPECIAL 5

REVISED | SHT. 2 OF 2 SHTS. | C.A. ARMSTRONG CITY ENGINEER | DATE | PLATE NO.

DEPTH OF CATCH BASIN (GRATE EL. TO OUTLET EL.)	INSIDE DIAMETER (AT BOTTOM OF CATCH BASIN)
1.60'	2.25'
1.75'	2.33'
2.00'	2.50'
2.25'	2.63'
2.50'	2.75'
2.75'	2.88'
3.00'	3.00'
3.25'	3.13'
3.50'	3.25'
3.75'	3.38'
4.00'	3.50'
4.25'	3.63'
4.50'	3.75'
4.75'	3.88'
5.10' & DEEPER	4.00'

DEPARTMENT OF CITY ENGINEER-ROCHESTER, MINNESOTA

DIMENSIONS FOR
TYPE 3 CATCH BASINS

REVISED | SHT. 2 OF 2 SHTS. | C.A. ARMSTRONG CITY ENGINEER | DATE | PLATE NO. SDP 1-03

CATCH BASIN TYPE 3

EXPANSION JOINT | FACE OF CURB | 3/4"x3'-0" SMOOTH ROUND | 3/4"x4'-0" SMOOTH ROUND | 1'-2" OIL | 3'-0"

CATCH BASIN TYPE 1-B

EXPANSION JOINT | FACE OF CURB | 3/4"x3'-0" SMOOTH ROUND | 3/4"x4'-6" SMOOTH ROUND | 1'-2" OIL | 2'-0" | 3'-0"

SECTION B-B

3/4" SMOOTH ROUND BARS

DEPARTMENT OF CITY ENGINEER-ROCHESTER, MINNESOTA

CURB AND GUTTER REINFORCING
AT CATCH BASINS

REVISED | SHT. OF SHTS. | C.A. ARMSTRONG CITY ENGINEER | DATE | PLATE NO. SDP 1-04

" CONCRETE WALK

1/2" EXP JT.

VARIABLE

AS BUILT

1/2" EXPANSION JOINT

MIN. W-10'

3/4"

VARIABLE

CONCRETE PAVEMENT

MAX GRADE 15%

" CONCRETE

AGGREGATE BASE PLACED CL

DEPARTMENT OF CITY ENGINEER ROCHESTER, MINN.

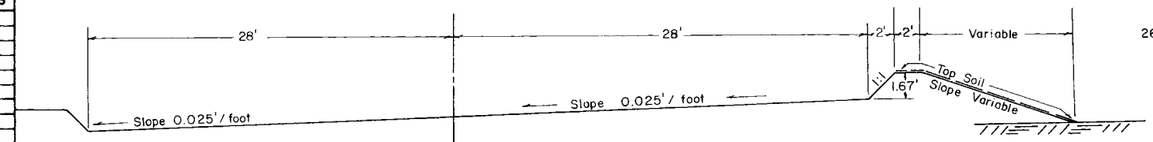
CONCRETE DRIVEWAY
FOR
INTEGRANT CURB

REVISED | SHT. OF SHTS. | C.A. ARMSTRONG CITY ENGINEER | PLATE NO. SDP 2-08

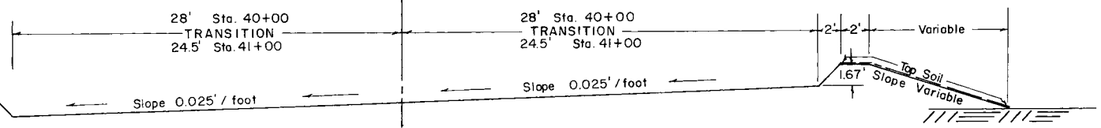
ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	MUNICIPAL	RURAL	TOTAL ESTIMATED QUANTITIES

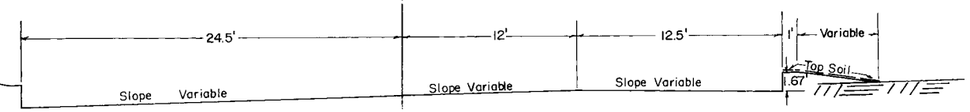
TYPICAL GRADING SECTIONS



Sta. 37+00 to Sta. 40+00

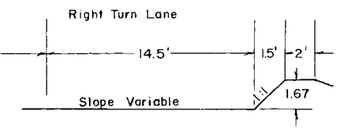


Sta. 40+00 to Sta. 41+00

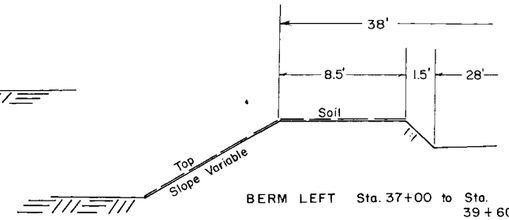


Sta. 41+00 to Sta. 198+86.2

SPECIAL DETAILS

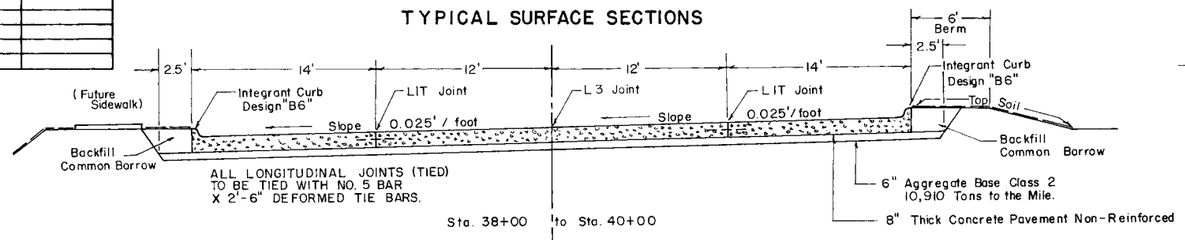


Sta. 38+00 to Sta. 39+00



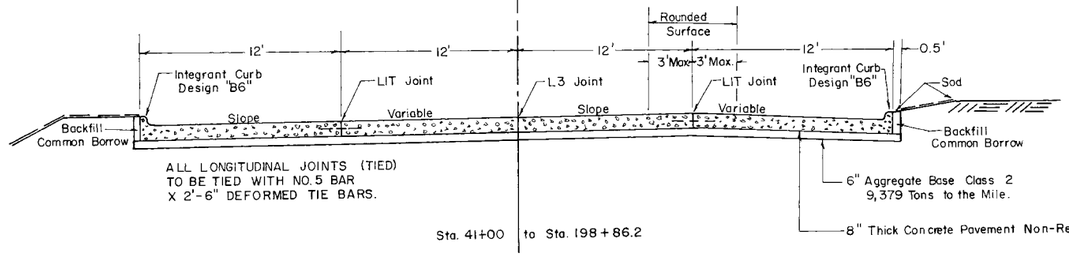
BERM LEFT Sta. 37+00 to Sta. 39+60

TYPICAL SURFACE SECTIONS

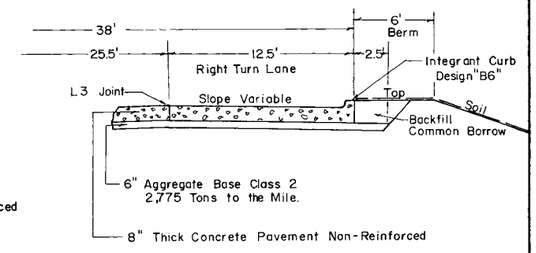


Sta. 38+00 to Sta. 40+00

NOTE: 100' TRANSITION FROM 52' PAVING WIDTH STA. 40+00 to 48' PAVING WIDTH AT STA. 41+00.



Sta. 41+00 to Sta. 198+86.2



Sta. 38+00 to Sta. 39+00

NOTE: Material from the upper 1.0' of the natural topsoil shall not be used in the upper 1.0' of the roadway. Part of this material shall be uniformly spread on berms and slopes to a depth of 3". No payment in addition to the contract price for "Common" excavation will be made for spreading the topsoil as above provided, nor will any undercutting made in excavation prior to placing the topsoil, be measured for payment.

NOTE: All dimensions and slopes shown on typical sections are approximate.

STANDARD DETAIL PLATES

THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION

Minn. Proj. No. _____

S.A.P. 55-625-09

State Project No. _____

OLMSTED County, Minn. Proj. No. _____ Plan No. _____ Sheet No. 4 of 45 Sheets

ALBINSON, INC. MINNEAPOLIS

P.I. 38+57.12
Δ Lt. 12°15'
D 2°00'
T 307.43'
L 612.50'
E 18.47'
R 2,864.79'

℄ Culv. 39+80
Inpl. 24" X 54' CMP
Remove & Salvage

Drive Lt. 39+60
Inpl. 24" X 34' CMP
Remove & Salvage
No Culv. Req'd.

F.E. Lt. 194+04
Inpl. 15" X 20' CMP
Remove & Salvage
No Culv. Req'd.

Ent Lt. 188+75
No Culv. Inpl.
No Culv. Req'd.

6th Ave. S.W. Lt. 190+76
No Culv. Inpl.
No Culv. Req'd.

5th. Ave. S.W. Lt. 194+06
No Culv. Inpl.
No Culv. Req'd.

Drive Lt. 197+25
Inpl. 15" X 26' CMP
Remove & Salvage
No Culv. Req'd.

Begin Grading Sta. 37+00

Begin Aggregate Base Sta. 37+50

Begin Concrete Surfacing Sta. 38+00

Begin Sod Left & Right
Sta. 40+00

End Sod Left & Right
Sta. 198+86.20 Lt. & R

END S.A.P. 55-625-08 Sta. 38+00
BEGIN S.A.P. 55-625-09 Sta. 38+00

END S.A.P. 55-625-09
Sta. 198+86.20

BEGIN S.A.P. 55-625-10
Sta. 198+86.20

P.I. 198+86.20 = City Sta. 26+35.64
Δ Rt. 0°13'30"

MAPLE LANE

TOOGOOD MEADOWS SUBDIVISION

TOOGOOD TERRACE

6th Ave. S.W.

5th. Ave. S.W.

P.O.T. 186+33.91
P.T. 41+62.19 =

P.C. 39+86.0

Integrant Curb Design B6

8" Concrete Pavement Non-Reinforced

Original Survey ℄

Construction ℄

ROCHESTER CORPORATE CITY LIMITS

Prop. Cor.

Transition

P.T. 184+47.0

P.C. 182+80.33

C.R. 125
P.I. 183+14.0
Δ Lt. 20°00'
D 30°
T 33.67'
L 66.67'
E 2.94'
R 190.98'

Begin Const. C.R. 125 Sta. 182+80

C. R. 125

F.E. Rt. 39+55
Inpl. 24" X 28' CMP
Remove & Salvage
No Ent. Req'd.

Drive Rt 186+95
Inpl. 15" X 26' CMP
Remove & Salvage
No Culv. Req'd.

Drive Rt 187+91
No Culv. Inpl.
No Culv. Req'd.

Walkway Rt 188+90
Inpl. 18" X 10' CMP
Remove & Salvage
No Culv. Req'd.

6th Ave. S.W. Rt 190+28
Inpl. 18" X 36' CMP
Remove & Salvage
No Culv. Req'd.

Drive Rt 190+82
Inpl. 15" X 25' CMP
Remove & Salvage
No Culv. Req'd.

Drive Rt 191+39
Inpl. 15" X 24' CMP
Remove & Salvage
No Culv. Req'd.

Drive Rt 191+82
Inpl. 15" X 26' CMP
Remove & Salvage
No Culv. Req'd.

Drive Rt 193+21
Inpl. 15" X 26' CMP
Remove & Salvage
No Culv. Req'd.

Drive Rt 194+38
Inpl. 15" X 26' CMP
Remove & Salvage
No Culv. Req'd.

Drive Rt 196+01
Inpl. 18" X 27' CMP
Remove & Salvage
No Culv. Req'd.

Drive Rt 198+77
Inpl. 24" X 48' CMP
Move Drive to 198+73
Remove & Salvage

CL. 11 GR. 19

B.M. Elev. 1015.85
Spk. in T.P. 24' Rt.
Sta. 181+03

B.M. Elev. 1018.47'
Spk. in TP 18' Lt.
Sta. 194+64

Finished Grade Elev.

Top Curb Lt.

Top Curb Rt.

P.I. +16.91578
Elev. 13.11318
400' V.C.
M = 0.95

Profile 30' Lt.
Profile 30' Rt.

P.I. +00
Elev. 15.18

P.I. +00
Elev. 18.78
200' V.C.
M=0.17235

P.I. +21.84
Elev. 22.93
100' V.C.
M=0.04254

-1.4%

+0.5%

+0.6%

+1.28946%

+0.94913%

P.V.T. +16.91578 Elev. 14.12317

P.V.C. +18.18 Elev. 20.67

P.V.T. +20.00 Elev. 20.67

P.V.C. +71.840 Elev. 22.28634

P.V.T. +71.840 Elev. 23.40273

Right Turn Lane

Note: COMMON BORROW ITEM INCLUDES APPROXIMATELY 120 CU. YDS. TO BE PLACED BEHIND CURBS AND ON BERMS AFTER CURB CONSTRUCTION. ALL COMMON BORROW WILL BE CROSS SECTION MEASURE OF THE MATERIAL AS PLACED IN THE WORK (COMPACTED VOLUME)

COMMON EXC.	2,881	Cu.Yds.
SUBGRADE EXC.	500	Cu.Yds.
COMMON BORROW	1,744	Cu.Yds.(CV)

EMB. 7,868 Cu. Yds.

Note: Approximately 6,000 Cu.Yds. of COMMON EXCAVATION from Sta. 15+85.8 to Sta. 26+35.6 (S.A.P. 55-625-10) to be used in EMBANKMENT Sta. 37+00 to Sta. 198+86.2 (S.A.P. 55-625-09).

K&E PLATE 1 PLAN-PROFILE
46 7012 IMPERIAL TRACING CLOTH

S.A.P. 55-625-09

Sheet 5 of 45 Sheets
REVISED : AUGUST, 1972

ST-2
STA. 37+00 80'LT. OF SEMI TANGENT.
F&I 48" R.C.P. APRON
OUT EL. 1000.28

SCALE: 1" = 50'

NORTH

P.I. 38+57.12
Δ LT. 12°-15'
D= 2°00'
T= 307.43'
L= 612.50'
E= 18.47'
R= 2,864.79'

ST-2

C.B.-1
STA. 38+00 24.3' LT. OF ℄
CONST. C.B. TYPE I-B
GRATE EL. 1013.79
OUT EL. S. 1009.79 (10 L.F. 12" R.C.P.)

P.T. 41+62.19*
P.O.T. 186+33.91

NOTE:
FOR M.H. TYPE STD.
SEE STD. PLATE NO. SDP 4-06
"STANDARD MANHOLE FOR
SEWERS OVER 36" DIAMETER"

END WATERMAIN
STA. 37+50±

CB-1

ST-4

ST-3

CB-2

P.C. 35+49.69

30

PROPOSED BRIDGE

W-6 W-7

35

F&I 12" D.I.P. WATERMAIN (FUTURE)

W-7A W-7B

W-8

W-9

40

LIMITS

ZUMBRO RIVER

ROCHESTER

CORPORATE

CITY C.R. 125

(FUTURE)
W-6
STA. 32+40 ℄
F&I 12" PLUG

(FUTURE)
W-7
STA. 32+60 ℄
F&I 12" GATE VALVE

W7-A
A PT. ON SEMI-TAN 200.31'
EAST OF STA. 35+49.69
F&I 12" PLUG

W-8
A PT. ON SEMI-TAN 307.43'
WEST OF STA. 41+62.19
F&I 11 1/4° BEND 12"

ST-3
STA 38+00 13' LT. OF ℄
CONST. M.H. TYPE STD.
RING EL. 1014.29
OUT EL. W. 1003.96 (48" R.C.P.)
INL. EL. E. 1004.10 (48" R.C.P.)
INL. EL. N. 1008.10 (12" R.C.P.)
INL. EL. S. 1008.10 (12" R.C.P.)

~~CB-2~~ *Not Req'd.*
~~STA. 38+00 24.3' RT. OF ℄~~
~~CONST. C.B. TYPE I-B~~
~~GRATE EL. 1013.79~~
~~OUT EL. N. 1010.39 (37 L.F. 12" R.C.P.)~~

NOTE:
SEE FOLLOWING SHEET
FOR INTERSECTION DETAILS

W-9
A PT. ON SEMI-TAN 204.59'
WEST OF STA. 41+62.19
REMOVE 12" PLUG AND CONNECT 12" D.I.P.

W-7B
A PT. ON SEMI-TAN 220.31'
EAST OF STA. 35+49.69
F&I 12" GATE VALVE

STORM SEWER GRADES

+15	1003.01	1003.16	1003.36	1003.56	1003.76	1003.96	1004.10	1004.27	1004.44	1004.62	1004.80	1004.97	1005.15	1005.32	1005.50	1005.58

1020
1010
1000
990

+0.5%
-1.4%
+0.5%

F&I 12" D.I.P. WATERMAIN

F&I 116 L.F. 48" R.C.P. AT 0.80% CL. II

F&I 212 L.F. 48" R.C.P. AT 0.70% CL. II

WATERMAIN GRADES

+40	1013.0	1013.0	1012.8	1012.5	1012.1	1011.5	1010.8	1010.0	1009.4	1008.7	1008.0	1007.4	1007.0	1006.6	1006.4

30 31 32 33 34 35 36 37 38 39 40 41

KIRKHAM MICHAEL
ARCHITECTS & ENGINEERS

revisions

ROCHESTER, MINNESOTA
16th STREET S.W.
4th AVE. S.W. TO U.S. 52

PLAN & PROFILE
WATERMAIN & STORM SEWER

date 6-2-72
designed M.J.K.
checked T.R.C.
drawing no. B720370

SHEET

OLMSTED COUNTY, MINN. S.A.P. 55-625-09 Sheet No. 6 of 45 Sheets

...ARD BLUE PRINT, OMAHA 911471

KIRKHAM MICHAEL — ARCHITECTS & ENGINEERS

ROCHESTER, MINNESOTA

16th STREET S.W.

4th AVE. S.W. TO U.S. 52

PLAN & PROFILE

SANITARY SEWER & SERVICE CONNECTIONS & STORM SEWER

SCALE: 1" = 50'

NOTE:
ALL SEWER ALIGNMENT, STATIONS AND DISTANCES REFERRED TO ORIGINAL SURVEY LINE.

C.B. 3
STA. 40+13 24.3' LT. ℄
CONST. C.B. TYPE I-B
GRATE EL. 1013.02
OUT. SO. 1009.00 (13 L.F. 12" R.C.P.)

ST. 6
STA. 187+72 13' LT. SURVEY LINE
CONST. M.H. TYPE STD.
RING EL. 1015.00
INL. EL. 1008.30
OUT EL. 1008.30

ST. 7
STA 190+55
CONST. M.H. TYPE STD.
RING EL 1016.80
OUT EL W. 1010.56 (42" R.C.P.)
INL. EL. E. 1011.50 (24" R.C.P.)
INL. EL. S. 1011.50 (36" R.C.P.)

C.B. 5
STA. 187+72 22.3 LT. ℄
CONST C.B. TYPE I-B
GRATE EL. 1014.50
OUT EL. S. 1010.50 (8 L.F. 12" R.C.P.)

C.B. 6
STA. 187+72 22.3' RT. ℄
CONST. C.B TYPE I-B
GRATE EL. 1014.50
OUT EL. N. 1010.50 (37 L.F. 12" R.C.P.)

C.B. 10
STA. 191+12.5 22.3 LT. ℄
CONST. C.B. TYPE I-B
GRATE EL. 1016.17
OUT EL. 1012.30 (61 L.F. 12" R.C.P.)
TO JCT BOX ON 24" R.C.P.
INL. EL. 1012.20

ST. 9
STA. 194+12.5 13' LT. SURVEY LINE
CONST. M.H. TYPE-I
RING EL. 1018.62
OUT EL. W. 1013.66
INL. EL. E. 1014.22 (12" R.C.P.)
INL. EL. S. 1014.80 (12" R.C.P.)

C.B. 11
STA. 194+41.5 22.3 LT. ℄
CONST. TYPE I-B
GRATE EL. 1018.49
OUT. EL. 1014.49 (27 LF 12" R.C.P.)

P.T. 41+62.19 = P.O.T. 186+33.91

P.I. 184+18.75
Δ Rt. 63° 22'
D = 29°00'
T = 121.94'
L = 218.51'
R = 197.57

P.C. 182+96.81

(AS BUILT) F&I 105 L.F. 8" V.C.P. AT 0.40%
EL. 1007.46

P.T. 185+15.32

Elev. 06.25 +45 — WS-1 — 40+55 — 8"X4" V.C.P. WYE
Elev. 06.74 41+58 — WS-2 — 186+40 — 8"X4" V.C.P. WYE
Elev. 07.55 187+96 — WS-4 — 186+06 — 8"X4" V.C.P. WYE
Elev. 15.62 197+68 78 — WS-13 — 8"X4" V.C.P. WYE

WS-2A 41+58 — 8"X4" V.C.P. WYE
WS-3 187+26 16 — 8"X4" V.C.P. WYE — Elev. 07.93
WS-5 188+35 25 — 8"X4" V.C.P. WYE — Elev. 08.50
WS-6 189+27 17 — 8"X4" V.C.P. WYE — Elev. 09.03
WS-7 191+16 21 — 8"X4" V.C.P. WYE — Elev. 10.30
WS-8 192+11 21 — 8"X4" V.C.P. WYE — Elev. 10.90
WS-9 193+65 76 — 8"X4" V.C.P. WYE — Elev. 11.91
WS-10 195+05 194+95 — 8"X4" V.C.P. WYE — Elev. 13.28
WS-11 197+21 41 — 8"X4" V.C.P. WYE — Elev. 15.08
WS-12 197+40 38 — 8"X4" V.C.P. WYE — Elev. 16.19

ST. 5
STA. 39+80 45' RT
F&I 24" CONC. APRON
INL. EL. 1009.50
(65 L.F. 24" R.C.P.)

ST. 4
13' LT. OF SEMI TANGENT 150' WEST OF P.T. 41+62.19
CONST M.H. TYPE STD.
EL. 1013.52
OUT EL. W. 1005.58 (48" R.C.P.)
INL. EL. E. 1006.00 (42" R.C.P.)
INL. EL. S.E. 1009.50 (12" R.C.P.)
INL. EL. N. 1008.50 (12" R.C.P.)
INL. EL. S.W. 1008.78 (24" R.C.P.)

C.B. 4
STA. 40+50 22.3' RT ℄
CONST C.B. TYPE I-B
GRATE EL. 1014.19
OUT EL. 1010.19 (51 L.F. 12" R.C.P.)

ST. 8
STA. 190+55 44' RT. SURVEY LINE
CONST. C.B. TYPE 3-S
RING EL. 1016.50
OUT EL. 1012.10
INL. EL. 1012.90
(5.7 L.F. 36" R.C.P. C.I. IV)

C.B. 7
STA. 190+11 44' RT. SURVEY LINE
CONST C.B. TYPE I-B
GRATE EL. 1017.00
OUT. EL. 1013.34 (34 LF 18" R.C.P.)

C.B. 8
STA. 190+45 44' RT. SURVEY LINE
CONST. C.B. TYPE I-B
GRATE EL. 1017.00
OUT EL. 1013.00
(10 L.F. 18" R.C.P.)
INL. EL. 1012.10

C.B. 9
STA. 190+645 22.3 RT. OF ℄
CONST. C.B. TYPE I-B
GRATE EL. 1016.59
OUT. EL. 1012.59 (9 L.F. 12" R.C.P.)
TO JCT. BOX ON 36" R.C.P.
INL. EL. 1012.60

C.B. 12
STA. 194+21 22.3' RT. ℄
CONST. C.B. TYPE I-B
GRATE EL. 1019.17
OUT EL. 1015.17 (37 L.F. 12" R.C.P.)

F&I 74 LF 8" V.C.P. AT 0.60%
F&I 40 LF 8" V.C.P. AT 0.40%
F&I 8" V.C.P. SAN. SEWER

ORIGINAL SURVEY LINE

16TH STREET S.W.

M.H. NO. 6
A PT. 282.46' WEST OF P.T. 41+62.19. 16' RT. SEMI. TAN.
CONST. M.H. TYPE I
RING EL. 1014.50
C. OUTL. E. ~~1006.78~~ 98.6, 9?
C. INV. S.W. ~~1000.88~~ 0?08.09

M.H. NO. 5
STA. 187+06 16' RT ℄
CONST. M.H. TYPE I
RING EL. 1015.00
C. INV. 1005.36

M.H. NO. 4
STA. 190+28 16' RT ℄
CONST. M.H. TYPE I
RING EL. 1016.84
C. INV. 1004.07
C. INL. S. 1004.17

M.H. NO. 1
STA. 190+76 16' RT ℄
CONST. M.H. TYPE IA
RING EL. 1017.13
C. OUTL. N. 100~~3.60~~
C. INL. W. 1003.88
C. INL. E. 1008.00

M.H. NO. 2
STA. 194+26 16' RT. ℄
CONST. M.H. TYPE I
RING EL. 1019.57
C. OUTL. W. 1010.80
C. INL. E. 1011.00

M.H. NO. 3
STA 197+76 16' RT ℄
CONST. M.H. TYPE I
RING EL. 1023.71
C. INV. 1014.50

NOTE:
C.B. TYPE 3-S SAME AS TYPE 3 SHOWN ON ROCHESTER SDP I-03 EXCEPT CASTINGS SHALL BE MHD FRAME CASTING NO. 700-7 AND MHD GRATE CASTING NO. 730-6

	WS-1	WS-2	WS-3	WS-4	WS-5	WS-6	WS-7	WS-8	WS-9	WS-10
	STA 40+69	STA 41+38	STA 187+16	STA 187+96	STA 188+25	STA 189+17	STA 191+25	STA 192+2(	STA 193+75	STA 195+05
	F&I 3/4" CORP STOP ℄	F&I 3/4" CORP STOP ℄	F&I 3/4" CORP STOP 0.40' RT.	F&I 3/4" CORP STOP 0.69' RT.	F&I 3/4" CORP STOP 0.79' RT.	F&I 3/4" CORP STOP 1.11' RT.	F&I 3/4" CORP STOP 1.84' RT.	F&I 3/4" CORP STOP 2.27' RT.	F&I 3/4" CORP STOP 2.71' RT.	F&I 3/4" CORP STOP 3.17' RT.
	F&I 3/4" CURB BOX 25.7' LT.	F&I 3/4" CURB BOX 25.7' LT.	F&I 3/4" CURB BOX 33' RT.	F&I 3/4" CURB BOX 25.7' LT.	F&I 3/4" CURB BOX 33' RT.	F&I 3/4" CURB BOX 33' RT.	F&I 3/4" CURB BOX 33' RT.	F&I 3/4" CURB BOX 33' RT.	F&I 3/4" CURB BOX 33' RT.	F&I 3/4" CURB BOX 33' RT.
	F&I 3/4" COPPER 25.7' LT.	F&I 3/4" COPPER 25.7' LT.	F&I 3/4" COPPER 33' RT.	F&I 3/4" COPPER 25.7' LT.	F&I 3/4" COPPER 33' RT.	F&I 3/4" COPPER 33' RT.	F&I 3/4" COPPER 33' RT.	F&I 3/4" COPPER 33' RT.	F&I 3/4" COPPER 33' RT.	F&I 3/4" COPPER 33' RT.

	WS-11	WS-12	WS-13
	STA 196+3	STA 197+38	STA 197+78
	F&I 3/4" CORP STOP 3.61' RT.	F&I 3/4" CORP STOP 4.05' RT.	F&I 3/4" CORP STOP 4.12' RT.
	F&I 3/4" CURB BOX 33' RT.	F&I 3/4" CURB BOX 33' RT.	F&I 3/4" CURB BOX 25.7' LT.
	F&I 3/4" COPPER 33' RT.	F&I 3/4" COPPER 33' RT.	F&I 3/4" COPPER 25.7' LT.

B.M. ELEV. 1018.47'
SPK. IN TP 18' LT. OF STA. 194+64

STORM SEWER GRADES

PROPOSED GRADE
+0.5%
F&I 283 L.F. 42" R.C.P. AT 0.80% CL. II
F&I 288 L.F. 42" R.C.P. AT 0.80% CL. II
354.58
F&I 322 L.F. 8" V.C.P. AT 0.40%
48" R.C.P. AT 0.70%
F&I 46 L.F. 8" V.C.P. AT 0.40%
+0.6%
F&I 360 L.F. 24" R.C.P. AT 0.60% CL. III
F&I 350 L.F. 8" V.C.P. AT 0.60%
+1.28946%

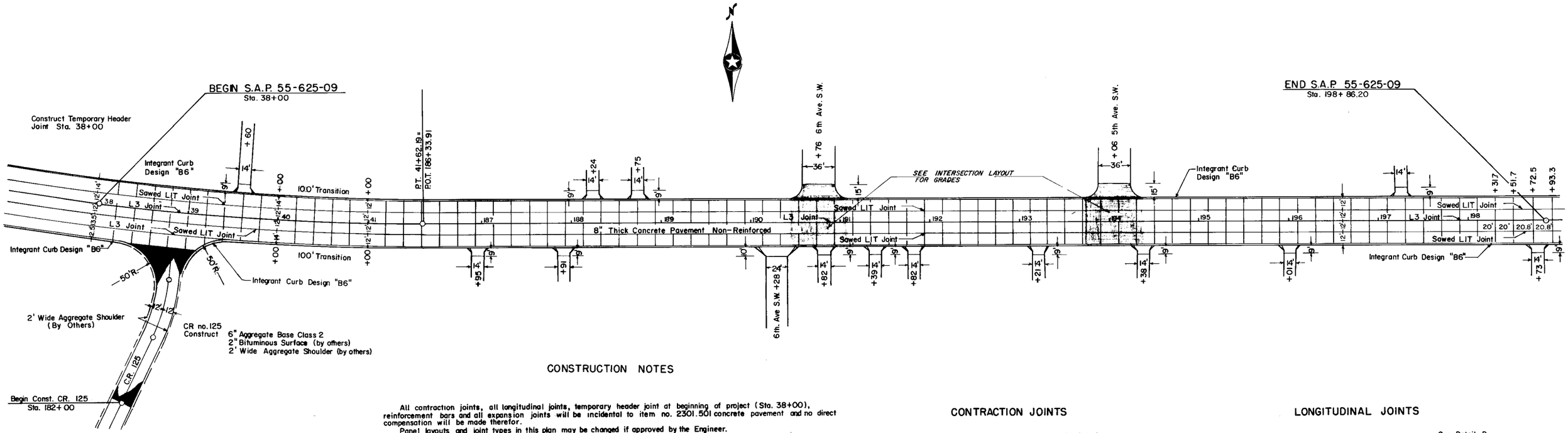
SAN. SEWER GRADES

EQUATION 41+62.19 = 186+33.91

M.H. NO. 6 STA. 38+97.8 OUTL. E. ~~1006.78~~ 98.6, 9? OUTL. S.W. ~~1000.88~~ 0?08.09
M.H. NO. 5 STA. 187+06 C. INV. 1005.36
M.H. NO. 4 STA. 190+28 C. INV. 1004.07
M.H. NO. 1 STA. 190+76 C. OUTL. N. 100~~3.60~~ C. INL. W. 1003.88 C. INL. E. 1008.00
M.H. NO. 2 STA. 194+26 C. OUTL. W. 1010.80 C. INL. E. 1011.00
M.H. NO. 3 STA. 197+76 C. INV. 1014.50

STATIONS: 39 40 41 187 188 189 190 191 192 193 194 195 196 197

State Proj. No. S.A.P. 55-625-09 [illegible] COUNTY, MINN. Sheet No. 7 of 45 Sheets



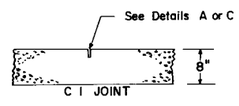
CONSTRUCTION NOTES

All contraction joints, all longitudinal joints, temporary header joint at beginning of project (Sta. 38+00), reinforcement bars and all expansion joints will be incidental to item no. 2301.501 concrete pavement and no direct compensation will be made therefor.

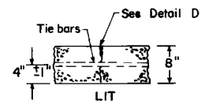
Panel layouts and joint types in this plan may be changed if approved by the Engineer.

Tranverse joints constructed in the pavement shall extended through the integrant curb. The expansion space in the curb section shall be one and one half times joint width in the pavement.

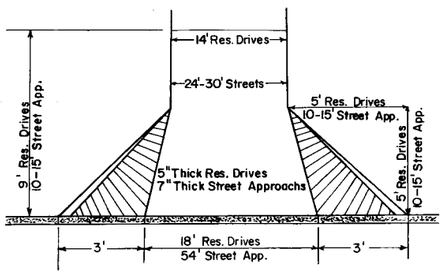
CONTRACTION JOINTS

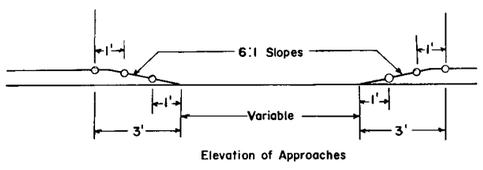


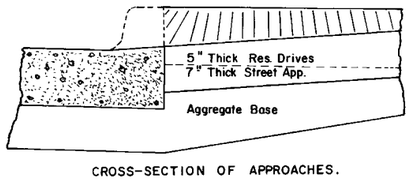
LONGITUDINAL JOINTS



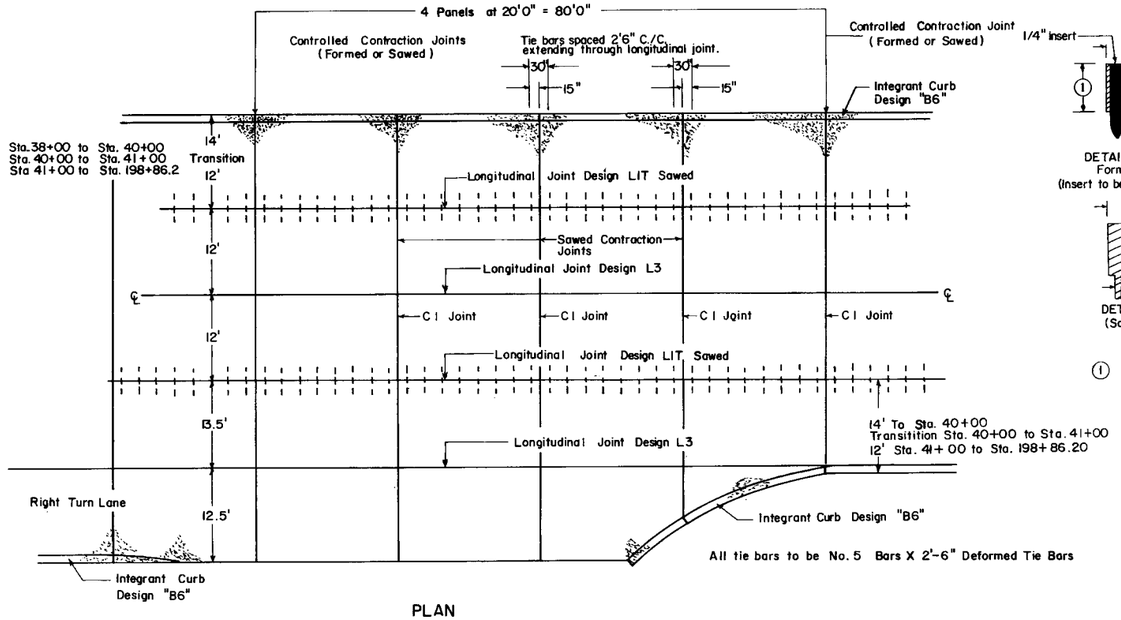
Details of Approaches and Curb Crossings





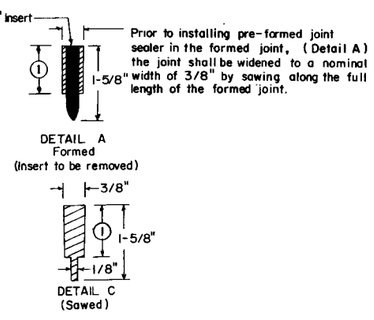


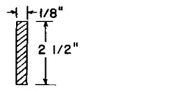
CROSS-SECTION OF APPROACHES.



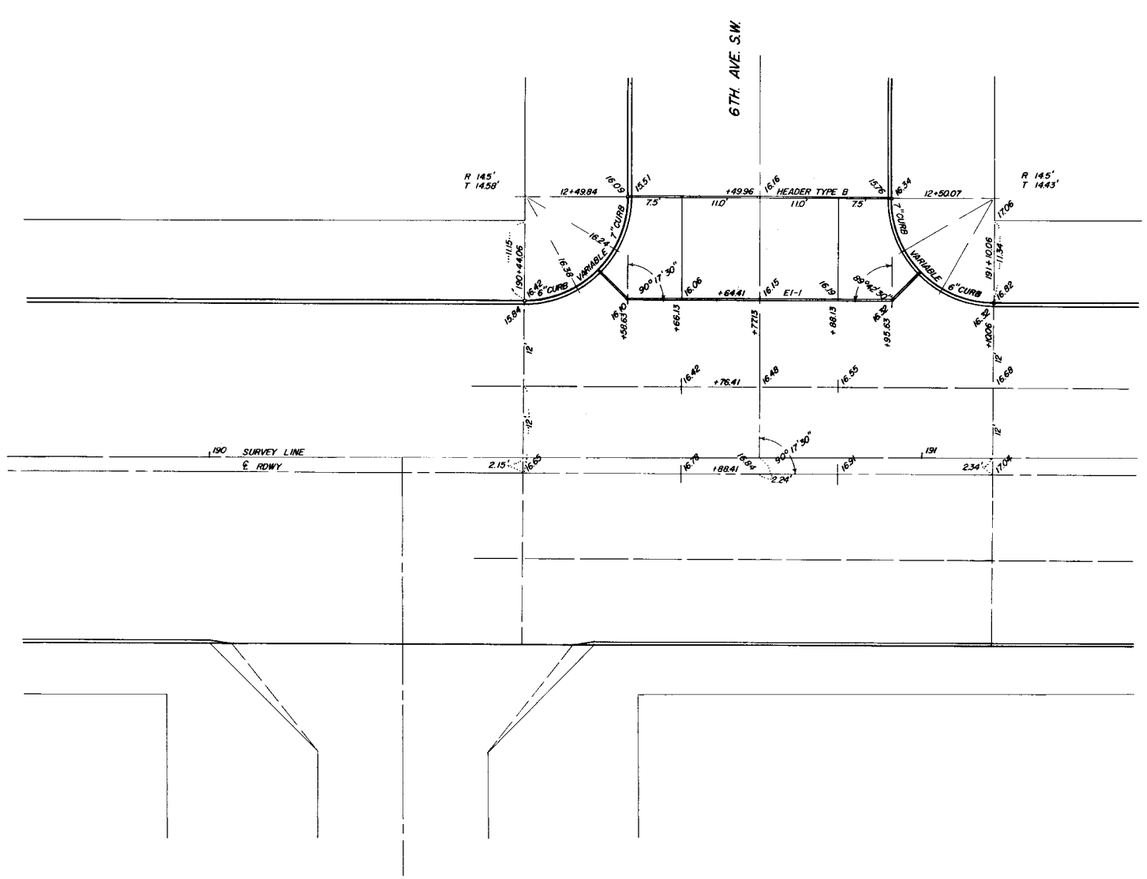
PLAN

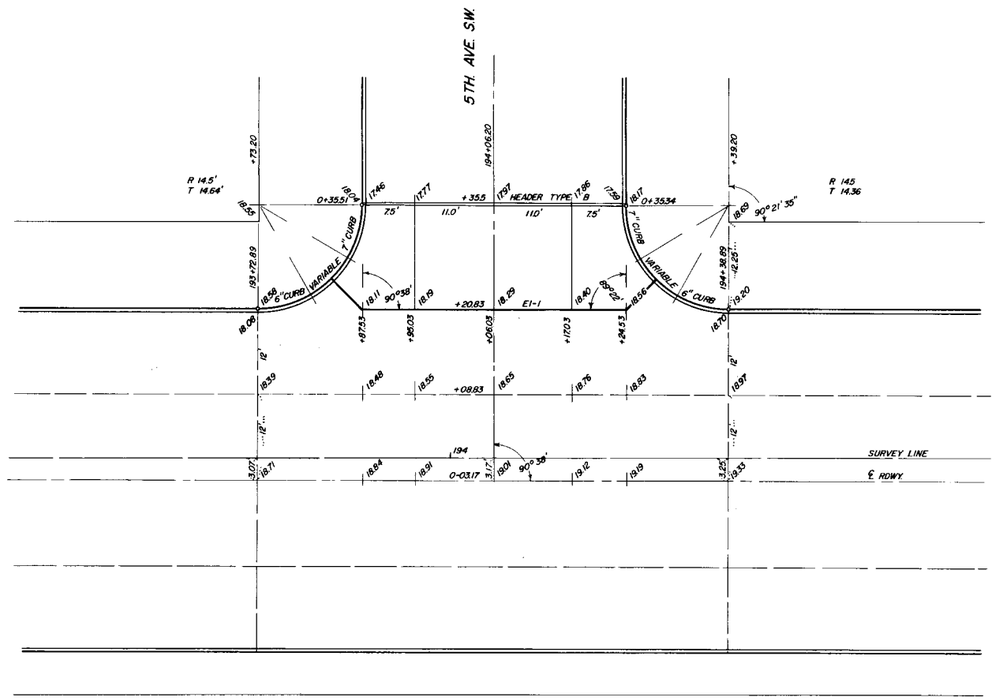
CONCRETE PAVEMENT NON-REINFORCED





SURFACING





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

INTERSECTION GRADES
ON
16TH ST. S.W.
AT
5TH & 6TH. AVE. S.W.

DRAWN BY _____ SCALE 1" = 10'

JOB NO. S.A.P. 55-625-09 & 55-625-10

SHEET 8-A OF 45 SHEETS