STREET IMPROVEMENTS FOR

BRUSH CREEK ADDITION

35TH ST. NORTH: From the E.L. Rushwood to the E.L. Lot 31, Blk. 3
35TH ST. COURT: From the N.L. 35th St. N. Cir. to and Including Cul-De-Sac

Project No.

472-76-245-81412-000-000-001 INDEX # 602193

CITY OF WICHITA, KANSAS

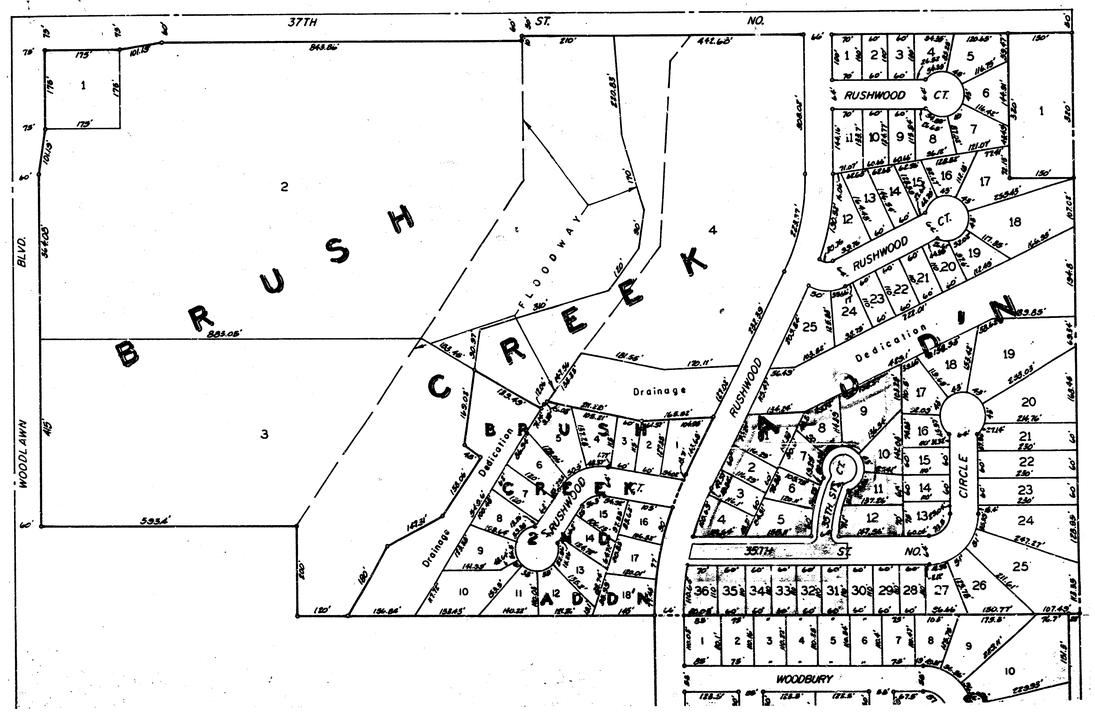
Michael E. Lindebak City Engineer

INDEX

BENCH MARKS

BENCH MARK #1: Square Cut In Back of Walk at Station 0+42, 35th St. North, 32 Feet Left. Elevation= 175.98 City Datum

BENCH MARK #2: Square Cut In Back of Walk at Station 0+27, 35th St. North, 32 Feet Right. Elevation= 175.94 City Datum



BENEFIT DISTRICT

GENERAL NOTES

1. Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

2. No more than 4 drives 18 feet in width, or equivalent combinations thereof, are to constructed with this project.

3. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.

N. BRENT WOOTEN LICENSED 8470 KANSAS PROFESSIONAL ENGINEER

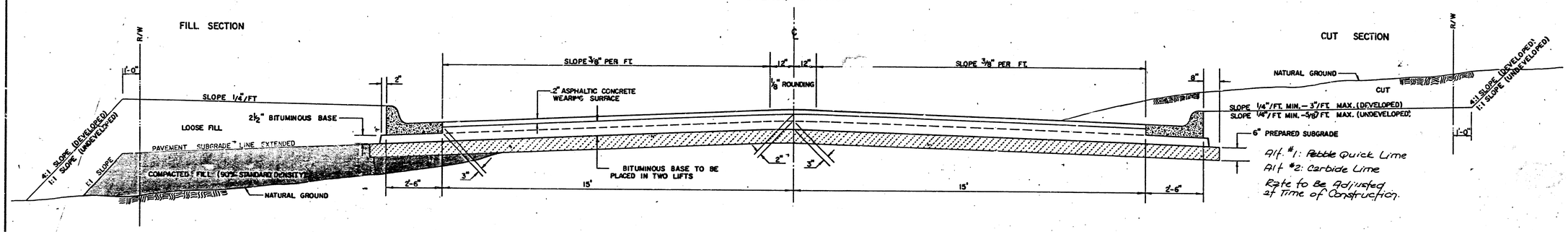
Nov. 10, 1988

BAUGHMAN COMPANY P. A.
SURVEYING & ENGINEERING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

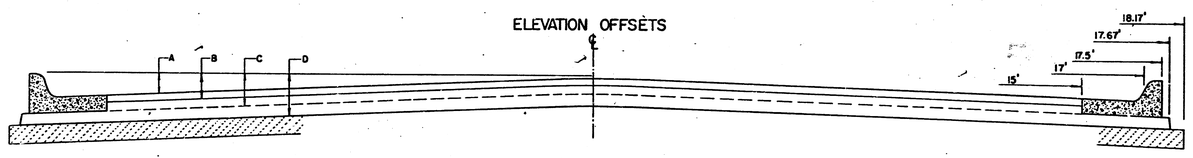
1/8

TYPICAL 35' PAVEMENT DETAILS

TRANSVERSE SECTION

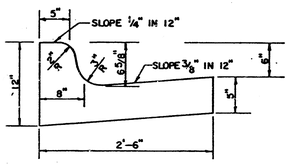


ELEVATION OFFSETS

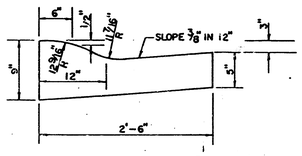


	DISTANCE FROM CENTERLINE (LT. & RT.)												
	0'	2'	4'	6'	8.5'	10'	12'	14'	15'	17'	17.5'	17.67'	18.17'
A: TOP OF CURBS TO TOP OF SURFACE LIFT	0.04	0.08	0.14	0.21	0.29	0.33	0.39	0.46	0.49	—	—	—	—
B: TOP OF CURBS TO TOP OF UPPER BASE LIFT	0.21	0.25	0.31	0.37	0.45	0.50	0.56	0.62	0.65	—	—	—	—
C: TOP OF CURBS TO TOP OF LOWER BASE LIFT	0.37	0.43	0.50	0.57	0.67	0.72	0.79	0.87	0.90	0.98	1.00	1.00	—
D: TOP OF CURBS TO TOP OF SUBGRADE	0.62	0.67	0.74	0.81	0.90	0.95	1.02	1.08	1.12	1.19	1.21	1.23	1.23

COMBINED CURB & GUTTER



ROLL TYPE COMBINED CURB & GUTTER



GENERAL NOTES

1) THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).

2) THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 2 1/2" BITUMINOUS BASE.

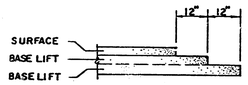
3) A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.

4) BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.

5) CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.

6) CONTRACTOR TO BID ONLY ONE SUBGRADE TREATMENT ALTERNATE WHEN ALTERNATES ARE PROVIDED IN THE PROPOSAL AND CONTRACT. THE ALTERNATE CHOSEN BY THE SUCCESSFUL BIDDER SHALL BE USED IN CONSTRUCTING THIS PROJECT.

TRANSVERSE CONSTRUCTION JOINTS



TRANSVERSE CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN FLEXIBLE BASE PAVEMENTS AT LOCATIONS WHERE PAVEMENT JOINS EXISTING FLEXIBLE BASE PAVEMENT AS SHOWN BY THE DETAIL. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF THE TRANSVERSE JOINT SHALL BE INCLUDED IN THE BID PRICE FOR SQUARE YARDS 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).

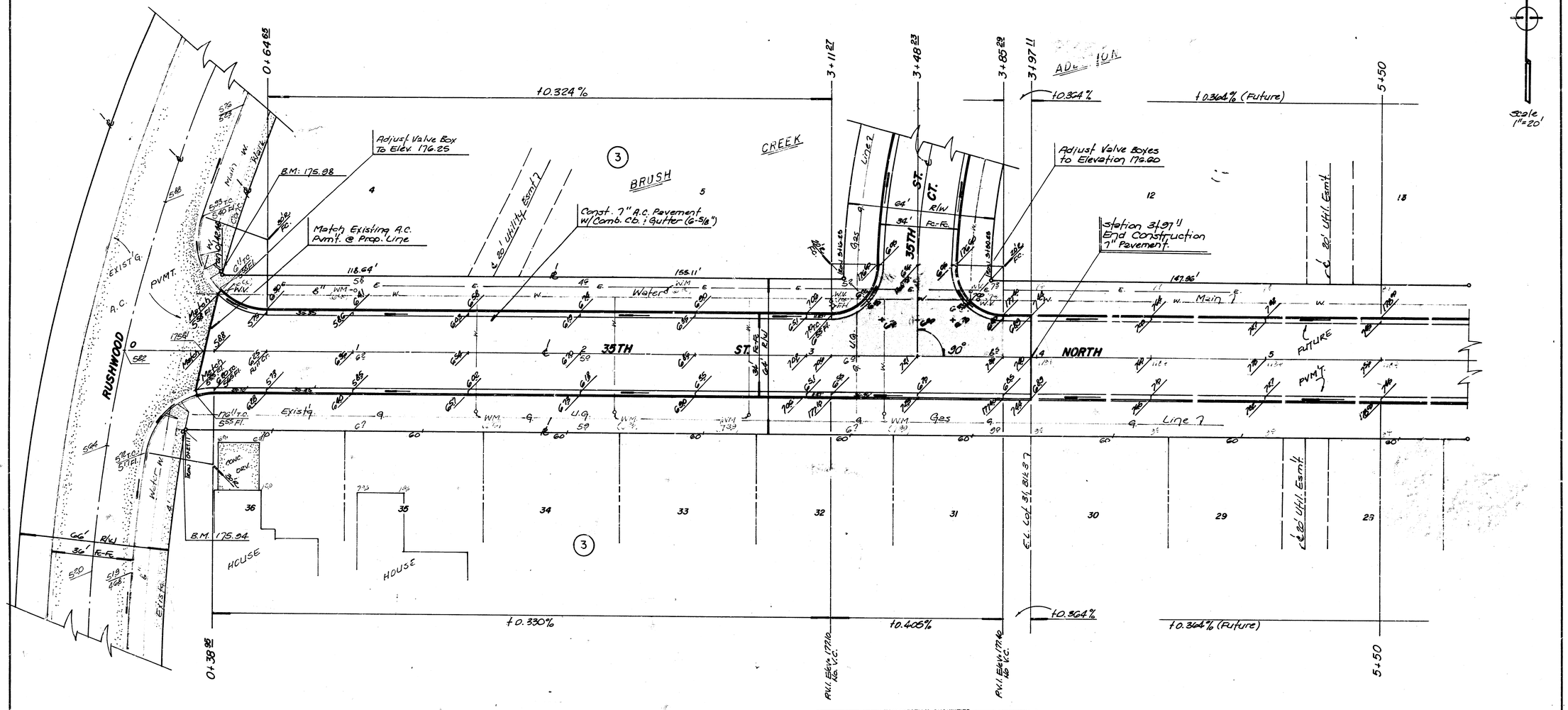
7 INCH RESIDENTIAL ASPHALTIC CONCRETE PAVEMENT WITH 5 INCH BITUMINOUS BASE

CITY OF WICHITA, KANSAS

PROJECT NUMBER 472-76-245-81412-000-000-001

BENCH MARK #1: Square Cut In Back of Walk at Station 0+42, 35th St. North, 32 Feet Left. Elevation= 175.98 City Datum

BENCH MARK #2: Square Cut In Back of Walk at Station 0+27, 35th St. North, 32 Feet Right, Elevation= 175.94 City Datum



INTERSECTION QUANTITIES

___	S.Y. ___" Concrete Pavement
221.5	S.Y. 7 " Asphaltic Conc. Pavement (5 " Bituminous Base)
18.6	S.Y. 3½" Bituminous Base
62.9	L.F. Combined Curb & Gutter
___	L.F. Integral Curb
___	S.F. 4" Wheelchair Ramp
___	S.F. 4" Walk
___	C.Y. Excavation
___	C.Y. Compacted Fill
___	Lbs. Reinforcing Steel
243	S.Y. Manipulation
___	Tons Lime or Cement
___	S.Y. V.G. ___" Concrete & ___" Asphaltic Concrete Base

Earthwork Summary

Excavation:	330.6 C.Y.	Compacted Fill:	88.1 C.Y.
+10%	33.1 C.Y.	+10%	8.8 C.Y.
Total	363.7 C.Y.	Total	96.9 C.Y.

Borrow: 589.6 C.Y. Subgrade Manipulation: 2494 S.Y.

35TH STREET NORTH

BAUGHMAN COMPANY P. A.
SURVEYING & ENGINEERING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

REV.

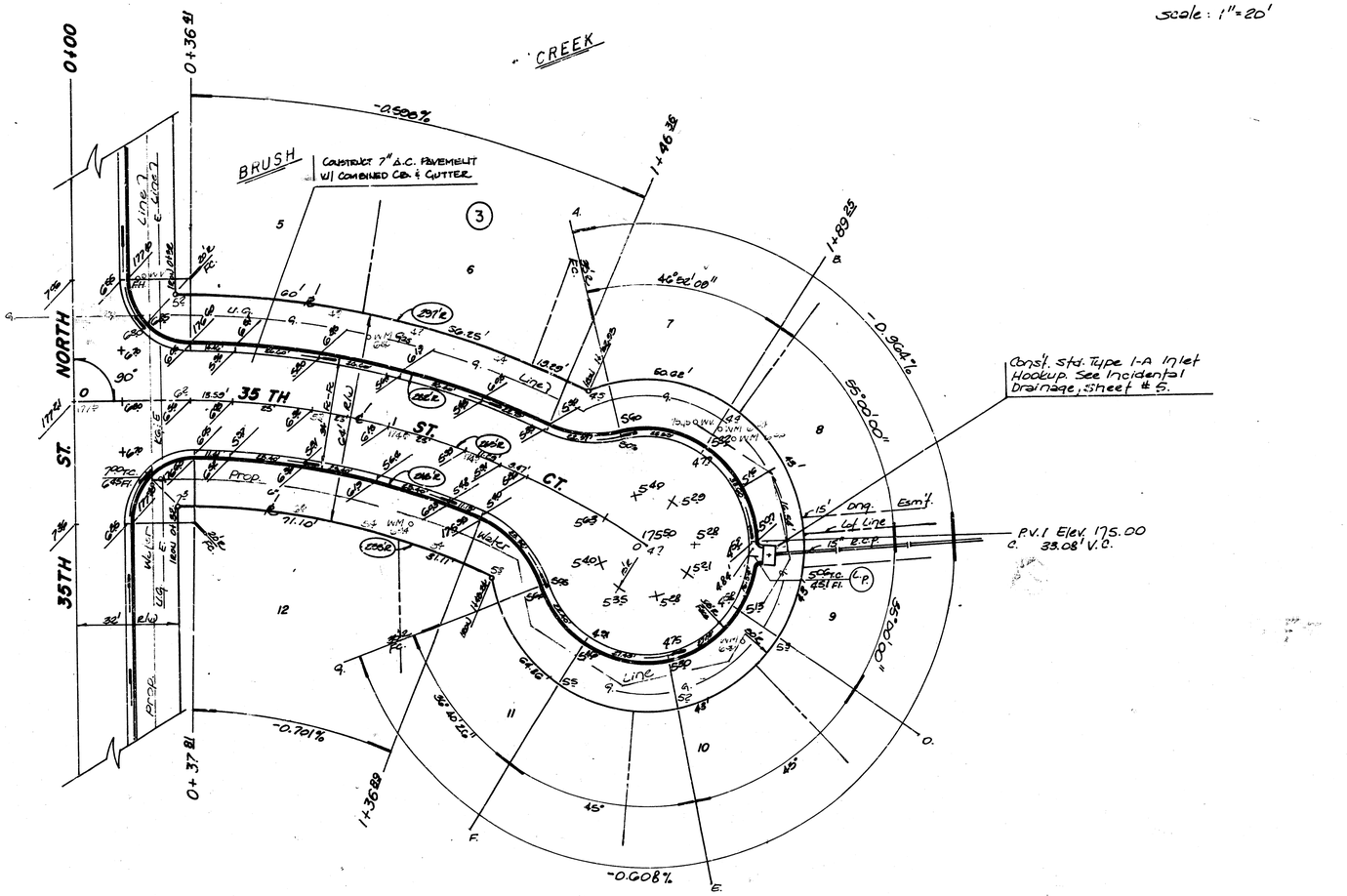
PROJECT NUMBER 472-76-245-81412-000-000-001

SHEET 3 3/8 OF 8

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	CB	NBW	11/10/88	Noted

BENCH MARK #1: Square Cut In Back of Walk at Station 0+42, 35th St. North, 32 Feet Left. Elevation= 175.98 City Datum

BENCH MARK #2: Square Cut In Back of Walk at Station 0+27, 35th St. North, 32 Feet Right. Elevation= 175.94 City Datum



CURVE DATA BASED ON ℄ R=265' Δ=34°00'00"
T=81.02 LC.=154.26' ARC= 157.25'

STATION	ARC	CHORD LENGTHS 8' LT. PC.	8' RT. PC.	DEF. Δ	TOTAL DEF. Δ
0+32 P.C.	—	—	—	—	—
0+36.41	4.41	4.85		0°26'34"	0°26'34"
0+37.81	1.40		5.26	0°05'05"	0°31'41"
0+50	12.19	13.34'	11.04	1°13'04"	1°44'45"
0+75	25	27.35	22.63	2°42'10"	4°26'55"
1+00	25	27.35	22.63	2°42'10"	7°21'05"
+25	25	27.35	22.63	2°42'10"	10°03'15"
1+36.80	11.80		10.77	1°17'07"	11°20'22"
1+46.36	9.47	23.37		1°01'26"	12°21'48"
1+89.25 P.T.	42.89	46.80	47.54	4°38'12"	17°00'00"

DEFLECTION/PT. = 6.48648 MINUTES.

35TH STREET COURT

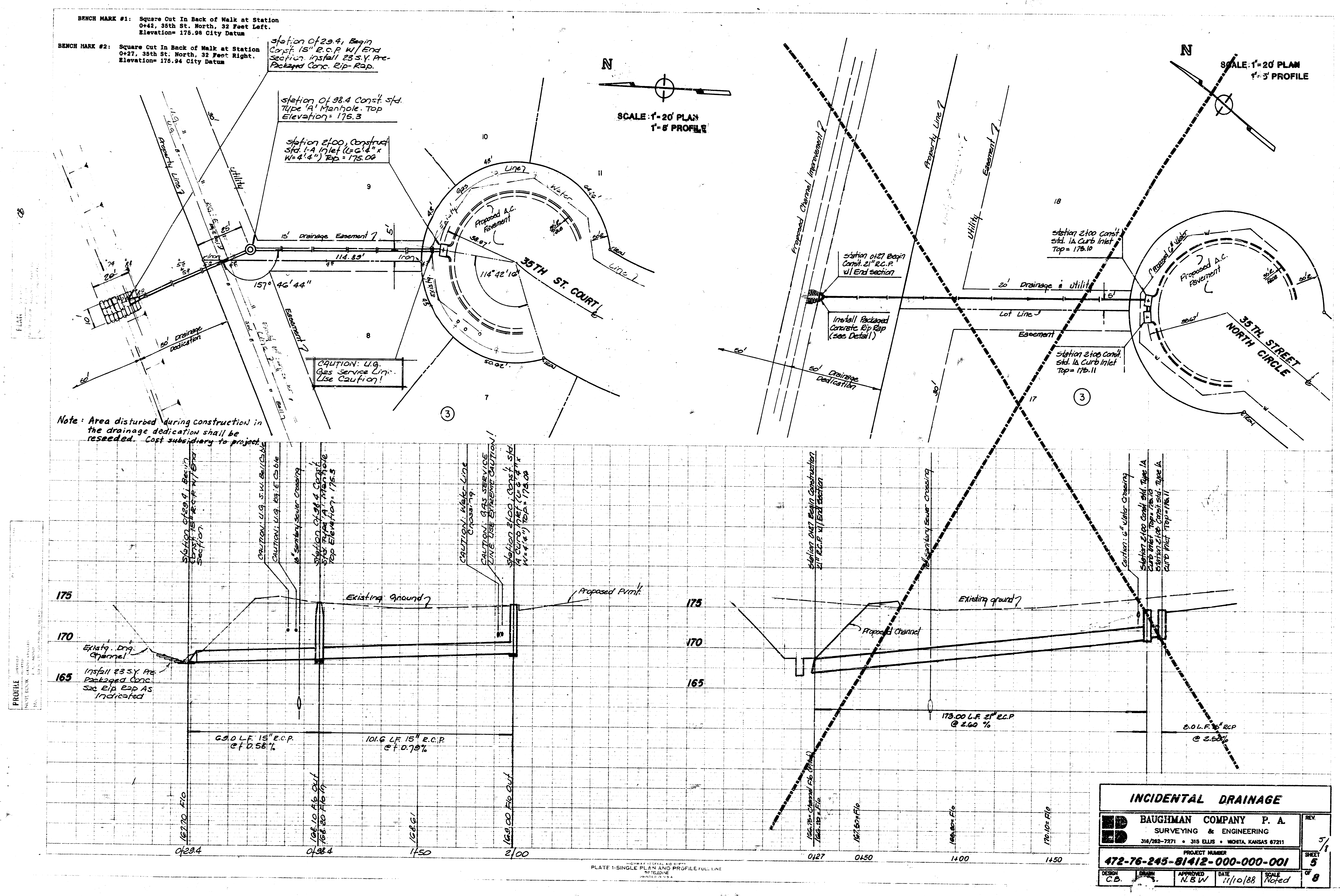
BAUGHMAN COMPANY P. A.
SURVEYING & ENGINEERING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

REV.

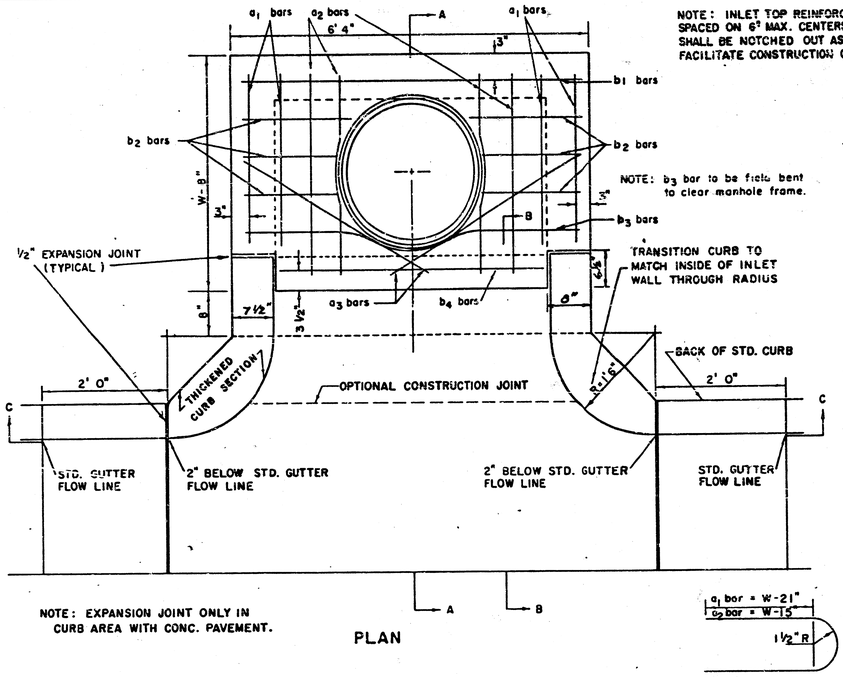
PROJECT NUMBER
472-76-245-81412-000-000-001

SHEET 4 OF 8

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	CB	NBW	11/10/88	Noted



BENCH MARK #1: Square Cut In Back of Walk at Station 0+42, 35th St. North, 32 Feet Left. Elevation= 175.98 City Datum
BENCH MARK #2: Square Cut In Back of Walk at Station 0+27, 35th St. North, 32 Feet Right. Elevation= 175.94 City Datum
Station 0+29.4, Begin Const. 15" R.C.P. W/ End Section. Install 23 S.Y. Pre-Packaged Conc. Rip-Rap.
Station 0+98.4 Const. Std. Type 'A' Manhole. Top Elevation= 175.3
Station 2+00, Construct Std. 1-A Inlet (L=6'4" x W=4'4") Top = 175.09
SCALE: 1"=20' PLAN
1"=5' PROFILE
N
35TH ST. COURT
Proposed A.C. Pavement
15' Drainage Easement
114.89'
157° 46' 44"
114° 42' 10"
50' Drainage Dedication
CAUTION: U.G. Gas Service Line. Use Caution!
Note: Area disturbed during construction in the drainage dedication shall be reseeded. Cost subsidiary to project.
Station 0+27 Begin Const. 21" R.C.P. W/ End Section
Install Packaged Concrete Rip Rap (see Detail)
Proposed Channel Improvement
Property Line
Utility
Easement
20' Drainage & Utility
Lot Line
Station 2+00 Const. Std. 1A Curb Inlet Top= 176.10
Station 2+08 Const. Std. 1A Curb Inlet Top= 176.11
35TH STREET NORTH CIRCLE
50' Drainage Dedication
Existing Ground
Proposed Pvmt.
Exist. Drg. Channel
Install 23 S.Y. Pre-Packaged Conc. Rip Rap As Indicated
69.0 L.F. 15" R.C.P. @ 0.58%
101.6 L.F. 15" R.C.P. @ 0.78%
Proposed Channel
173.00 L.F. 21" R.C.P. @ 2.60%
8.0 L.F. 15" RCP @ 2.50%
175
170
165
0+29.4
0+98.4
1+50
2+00
0+27
0+50
1+00
1+50
INCIDENTAL DRAINAGE
BAUGHMAN COMPANY P. A.
SURVEYING & ENGINEERING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211
PROJECT NUMBER
472-76-245-81412-000-000-001
SHEET 5 OF 8
DESIGN C.B.
APPROVED N.B.W.
DATE 11/10/88
SCALE Noted
PLATE 1-SINGLE PLAN AND PROFILE FULL LINE



NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

PLAN

NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6' MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.

NOTE: b_3 bar to be field bent to clear manhole frame.

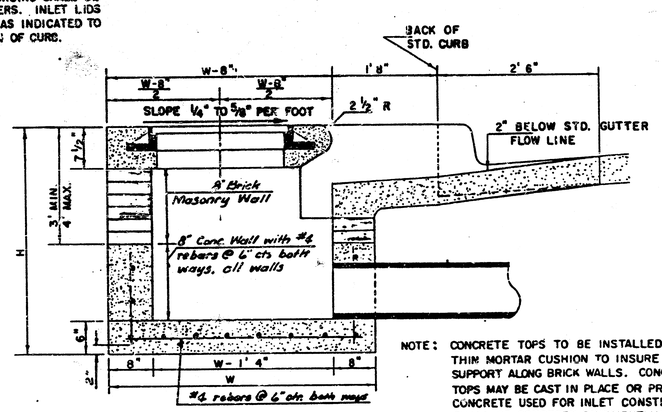
BENDING DIAGRAM

STEEL SCHEDULE

BAR		a_1	a_2	a_3*	b_1 W=4'4"	W=5'4"	W=6'4"	W=7'4"	W=8'4"	b_2	b_3	b_4	WT. LBS.
NUMBER		4	4	2	1	3	5	7	9	6	1	1	
SIZE		#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH	W=4'4"	5'7"	6'7"	4'0"	6'1"	–	–	–	–	1'9"	6'2"	4'8"	60±
	W=5'4"	7'7"	8'7"	5'0"	–	6'1"	–	–	–	1'9"	6'2"	4'8"	81±
	W=6'4"	9'7"	10'7"	6'0"	–	–	6'1"	–	–	1'9"	6'2"	4'8"	101±
	W=7'4"	11'7"	12'7"	7'0"	–	–	–	6'1"	–	1'9"	6'2"	4'8"	121±
	W=8'4"	13'7"	14'7"	8'0"	–	–	–	–	6'1"	1'9"	6'2"	4'8"	141±

* NOTE: a_3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

STANDARD CURB INLET PRE-CAST TOPS			
W	PRE-CAST TOP SIZE	[illegible]	CU. YD. CONC.
4' 4"	3'8"x 6'4" x7 1/2"	21" & SMALLER	0.38±
5' 4"	4'8"x 6'4" x7 1/2"	24" & 30"	0.51±
6' 4"	5'8"x 6'4" x7 1/2"	36" & 42"	0.64±
7' 4"	6'8"x 6'4" x7 1/2"	48" & 54"	0.77±
8' 4"	7'8"x 6'4" x7 1/2"	60" & 66"	0.90±



SECTION A-A

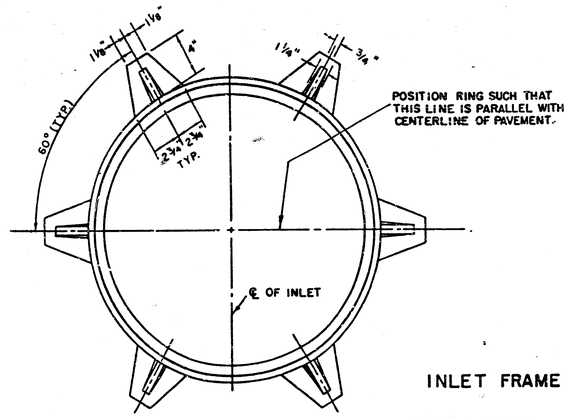
NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.

NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 6" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 6'4" AND H = 7'0" OR LESS.

ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

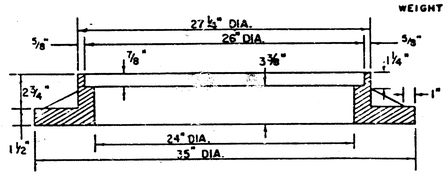
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.

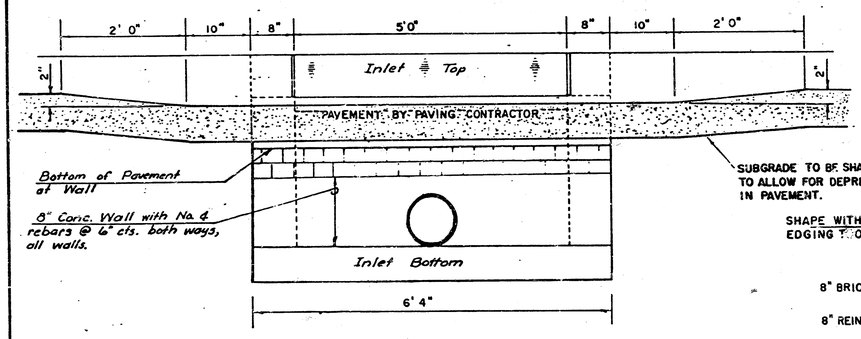


INLET FRAME

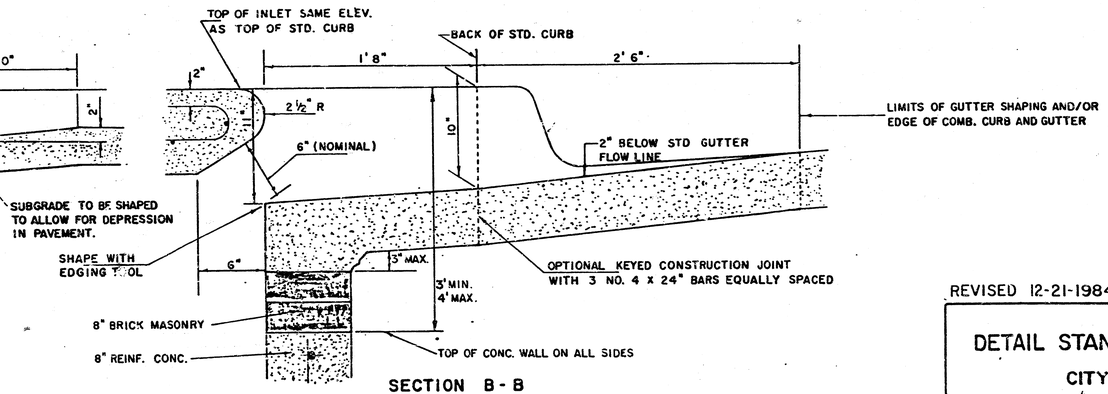
WEIGHT = 180 LBS.



SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.



SECTION C-C



SECTION B-B

REVISED 12-21-1984

DETAIL STANDARD TYPE IA CURB INLET

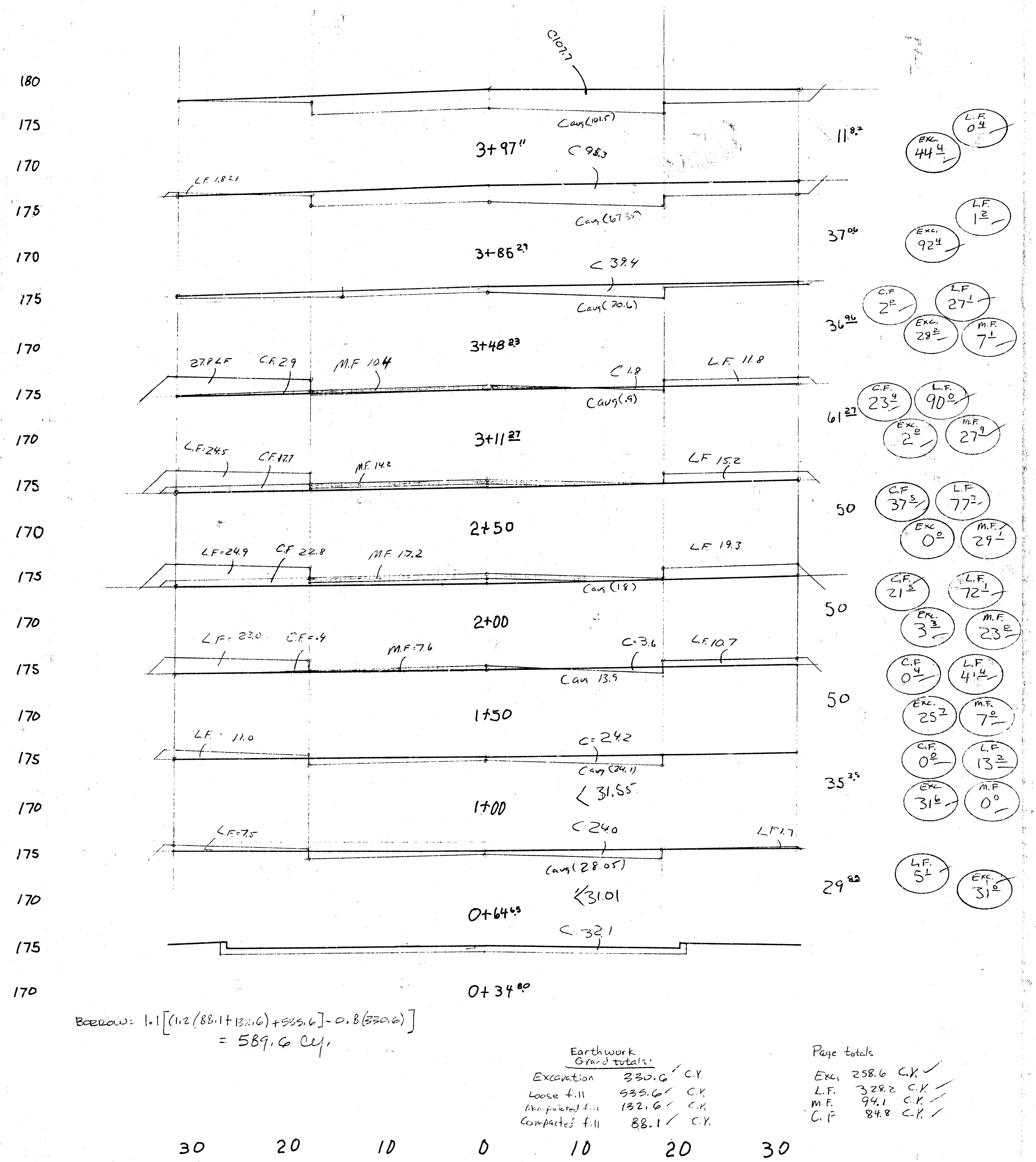
CITY OF WICHITA, KANSAS

INLET OPENING = 6" x 5' 0"

~~472-78-245-81418-000-000-901~~

JUNE 1984

6/8

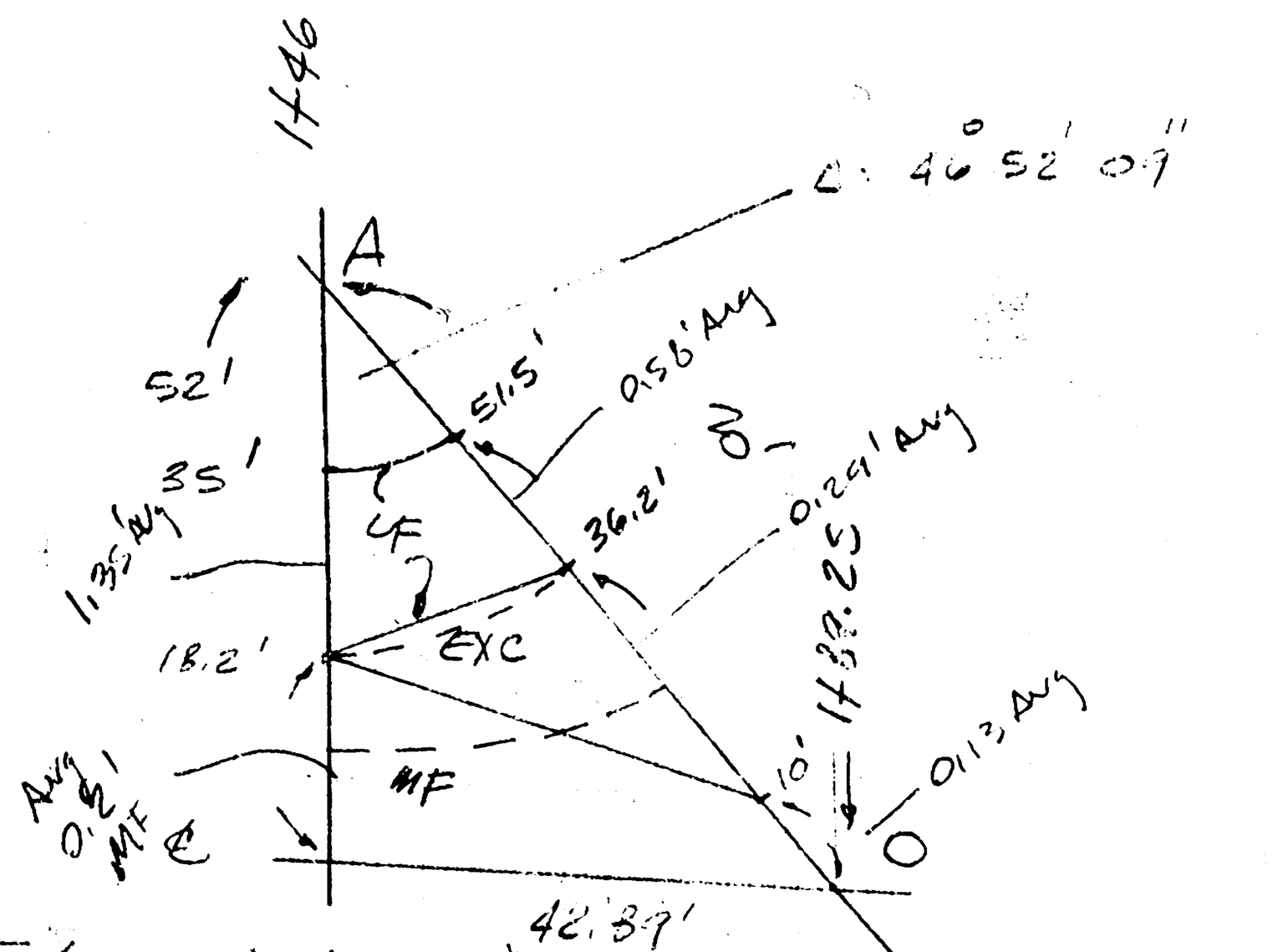


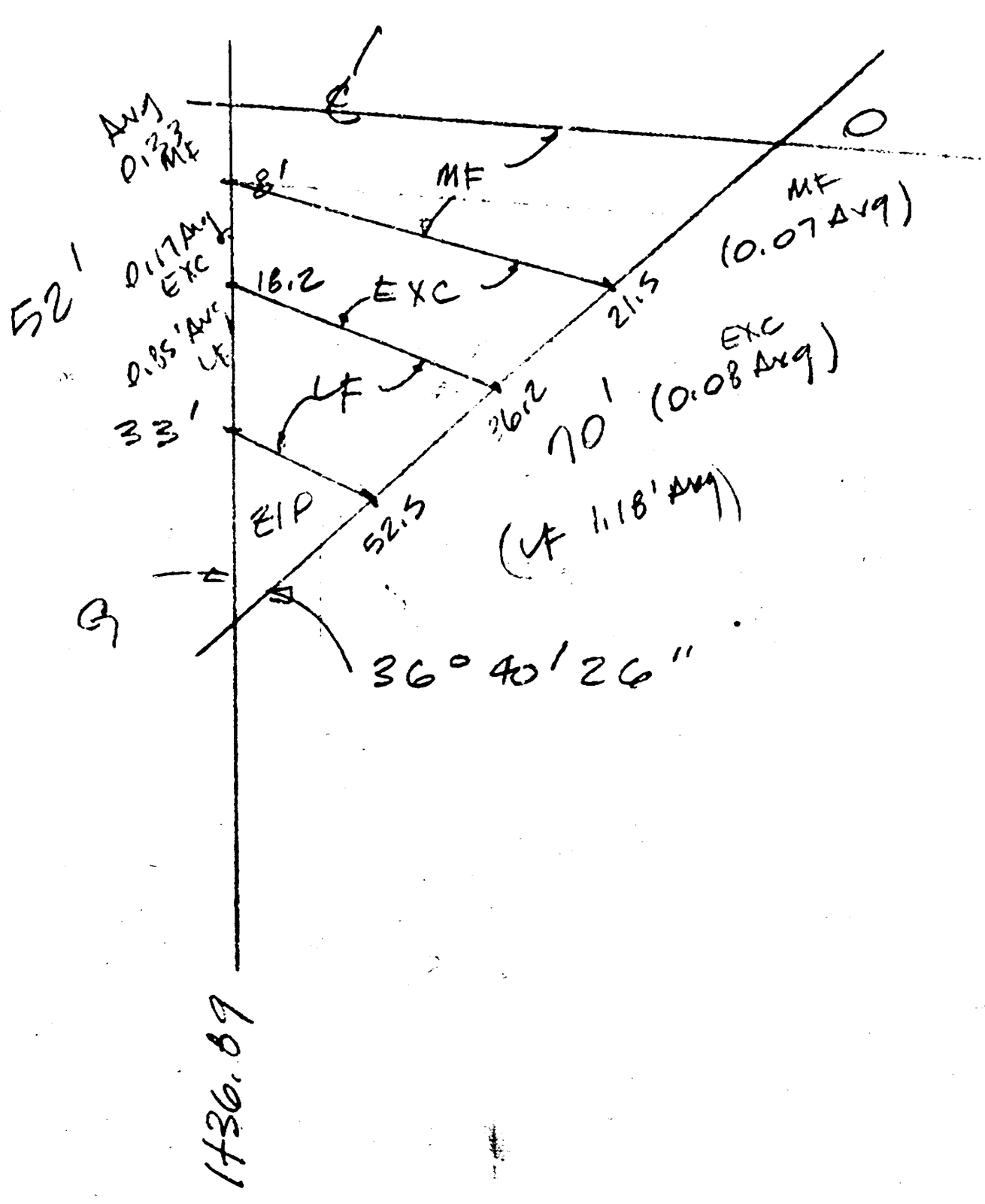
BORROW: $1.1[(1.2(88.1+132.6)+535.6]-0.8(330.6)]$
$= 589.6$ C.Y.

Earthwork Grand totals:		
Excavation	330.6	C.Y.
Loose fill	535.6	C.Y.
Manipulated fill	132.6	C.Y.
Compacted fill	88.1	C.Y.

Page totals		
Exc.	258.6	C.Y.
L.F.	328.2	C.Y.
M.F.	94.1	C.Y.
C.F.	84.8	C.Y.

TRIANGLE ASSUMED
1" = 20'





ALL DIGITIZED
LF 891.5 ft² ((1.18 + 0.35/2)/27 = 11.0 cy
MF 561.6 ft² ((0.07 + 0.37)/2)/27 = 4.2 cy
EXC 375.4 ft² ((0.08 + 0.17)/2)/27 = 1.7 cy

L.F. 22.8 | EXC 3.2 | M.F. 7.1

LOOSE FILL
Avg Outer Rad = (70 − 36.2) + (52 − 15.2) / 2 = 33.8'
Avg Inner Rad = (70 − 51.5) + (52 − 35) / 2 = 17.75'
LF = (33.8² − 17.75²) π 46°52'09" / 360 = 331.2 ft² ((1.35 + 0.52)/2)/27 = 11.8 cy LF
EXC (DIGITIZED AREA) = 277.4 ft² ((0 + 0.29)/2)/27 = 1.5 cy
MF (DIGITIZED AREA) = 511.2 ft² ((0.13 + 0.21)/2)/27 = 3.2 cy

GO
MF = ((21.5 + 20)/2)² π 36°40'26"/360
MF = 137.8 ft²
EXC = (36.2² − ((21.5 + 20)/2)²) 36 π/360
EXC = 281.6 ft²

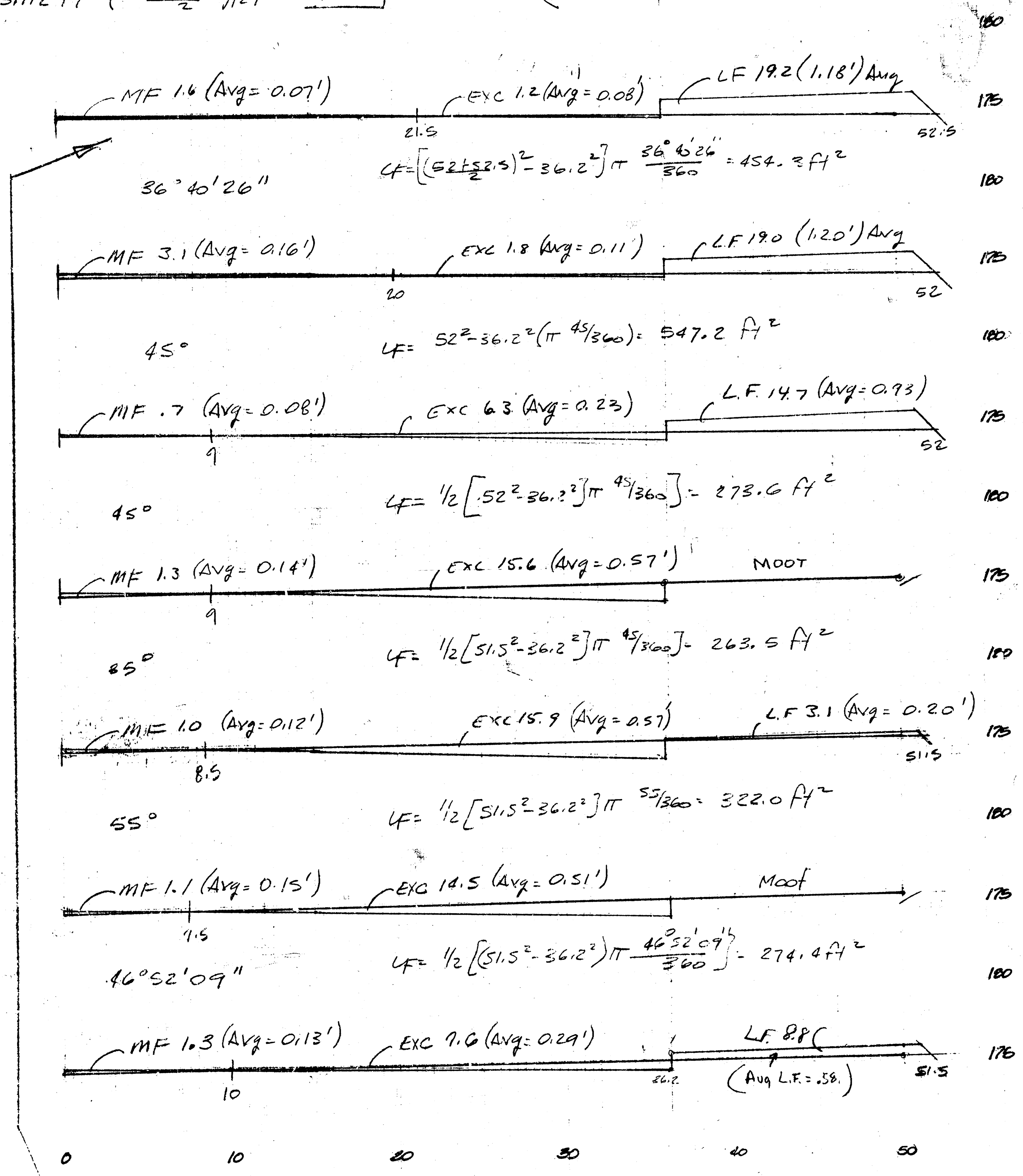
FO
MF = ((20 + 9)/2)² π 45/360
MF = 82.6 ft²
EXC = [36.2² − ((20 + 9)/2)²] 45π/360
EXC = 432.0 ft²

EO (QUARTER POINT)
MF = 9² π 45/360
MF = 31.8 ft²
EXC = (36.2² − 9²) π 45/360
EXC = 482.8 ft²

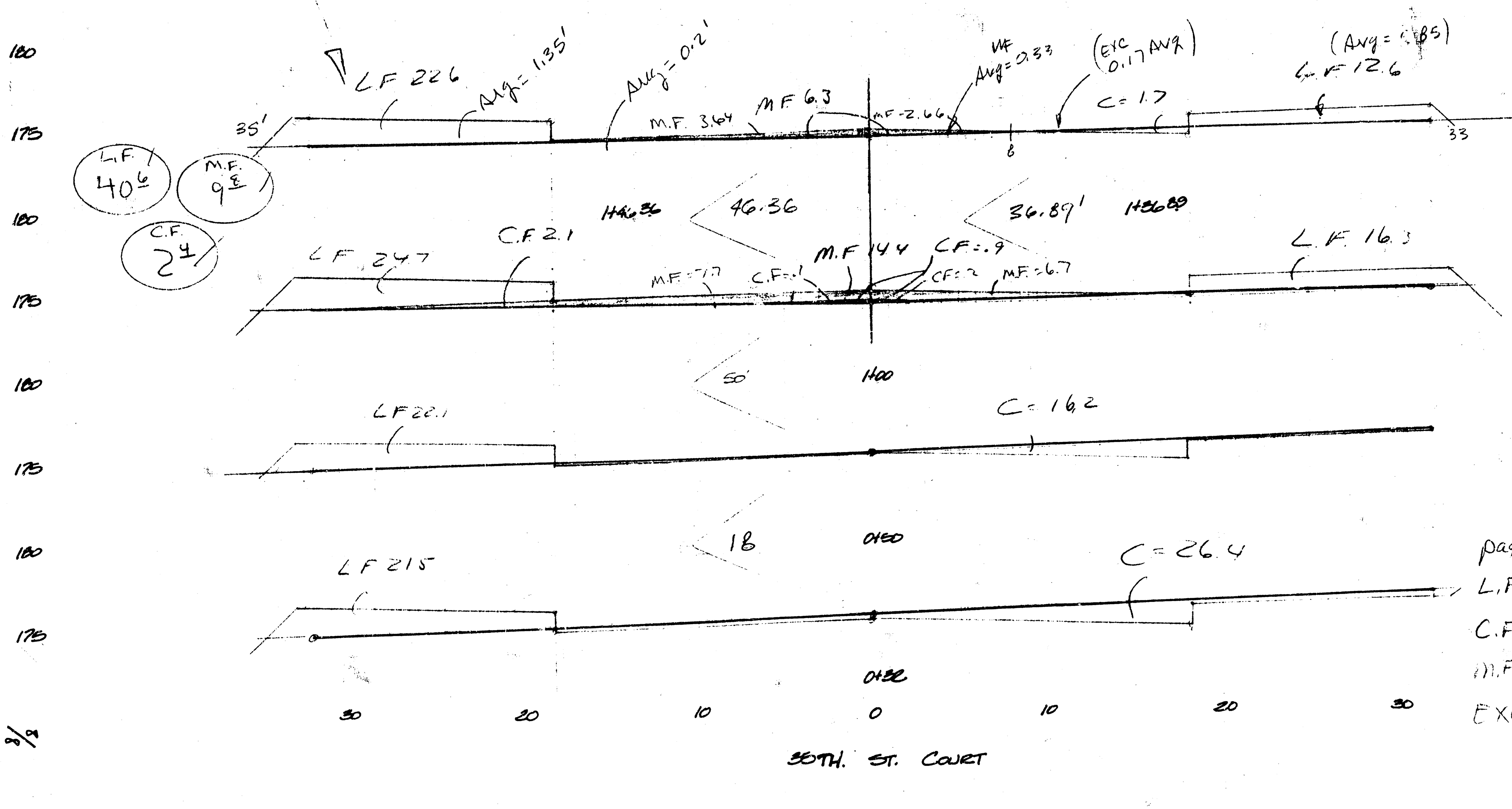
DO
MF = ((9 + 8.5)/2)² π 55/360
MF = 24.4 ft²
EXC = [36.2² − ((9 + 8.5)/2)²] π 55/360
EXC = 376.9 ft²

CC
MF = ((8.5 + 7.5)/2)² π 55/360
MF = 30.7 ft²
EXC = (36.2² − 8²) π 55/360
EXC = 598.2 ft²

BB
MF = ((7.5 + 10)/2)² π (46°52'09"/360)
MF = 31.3 ft²
EXC = [36.2² − ((7.5 + 10)/2)²] π Δ/360
EXC = 504.7 ft²



L.F. 20.0 | M.F. 0.6 | EXC. 1.6
L.F. 21.6 | M.F. 0.4 | EXC. 20.7
L.F. 4.7 | M.F. 0.1 | EXC. 7.2
L.F. 1.0 | M.F. 0.1 | EXC. 8.0
L.F. 4.2 | M.F. 0.2 | EXC. 12.0
M.F. 0.2 | L.F. 2.9 | EXC. 7.5



L.F. 40.6 | M.F. 9.8 | C.F. 2.4
L.F. 19.7 | M.F. 6.4 | EXC. 1.2 | C.F. 0.1
M.F. 13.3 | C.F. 0.8 | L.F. 58.4 | EXC. 15.2
L.F. 141.5 | EXC. 14.2

page totals
L.F. = 207.4 C.Y.
C.F. = 3.3 C.Y.
M.F. = 38.5 C.Y.
EXC. = 72.0 C.Y.

Earthwork Sections
35TH. Street Court