

STREET IMPROVEMENTS

FOR

NORTHWEST PARKWAY

From the Westerly Line of Northwest Parkway Ct. and the Easterly corner of Lot 23, Blk. 13, to the Westerly Line of Holland Ln.

HOLLAND LANE

From the North Line of 17th Street No. to the Southerly corner of Lot 19, Block 13, Westwood Heights Second Addn. and the Southerly Line of Emerson.

NORTHWEST PARKWAY COURT

From the Northerly Line of Northwest Parkway to and including Out to sec. serving lots 11 through 21 inclusive, Blk. 11 Westwood Heights Second Addn.

PROJECT NUMBER

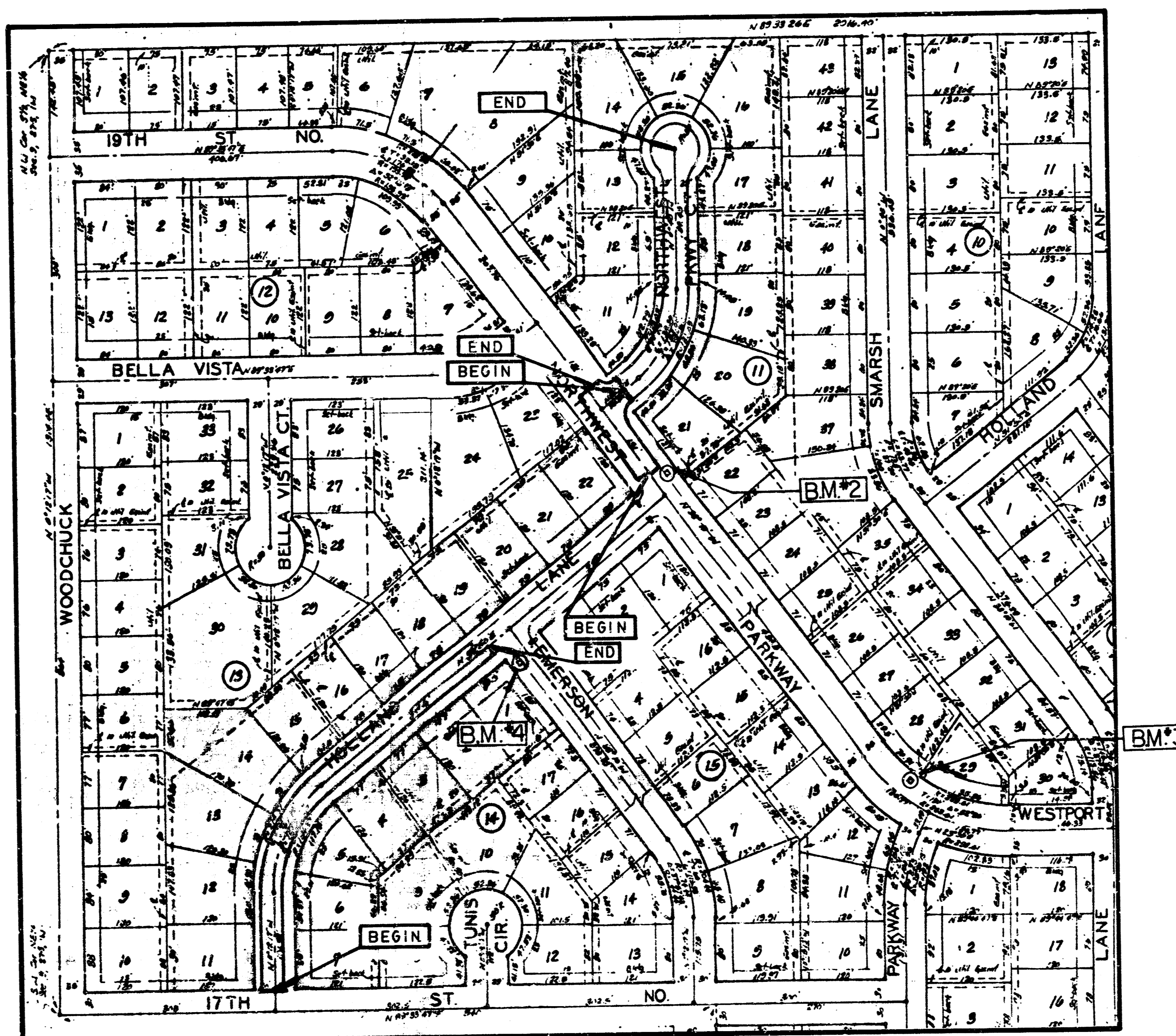
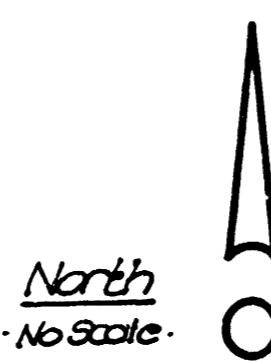
472-76-245-81640-000-000-001

CITY of WICHITA, KANSAS

MICHAEL E. LINDEBAK
CITY ENGINEER

GENERAL NOTES

1. 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 or a licensed professional engineer in accordance with state laws.
2. No more than 5 drives 20 feet in width, or the equivalent combinations thereof, are to be constructed with this project.
3. Roll type combined curb & gutter is to be constructed on Northwest Parkway Court.
4. Ditching is to be performed on Northwest Parkway to drain the streets to existing inlets. Cost of the ditching is to be incidental to the project.
5. Contractor shall contact the utility companies for location of any underground lines in the area prior to beginning construction of the streets.



INDEX of SHEETS

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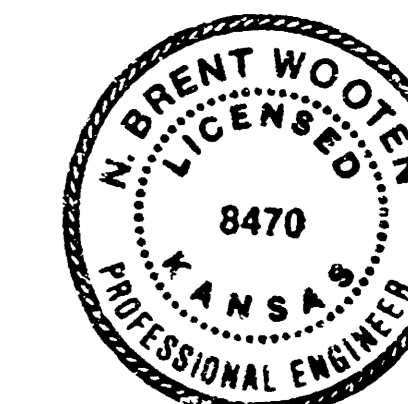
BENCHMARKS

1. City Disc. 42' no. and 38.5' east of 1/4 sec. cor., intersection of Ridge Road at 17th Street No.
Elev. = 142.81 city datum
2. 1' 0" cut in top of curb east side 22' north of intersection Holland Ln. at Northwest Parkway; on Northwest Parkway.
Elev. = 156.47 city datum
3. 1/2' cut in top of cb. approx. 30' West of E. Westport & Northwest Parkway intersection on North side of street.
Elev. = 164.82 city datum
4. 1/4' cut in top cb. at end of return West side Emerson; intersection Emerson at Holland Lane.
Elev. = 156.84 city datum.

WESTWOOD HEIGHTS SECOND ADDITION

BENEFIT DISTRICT

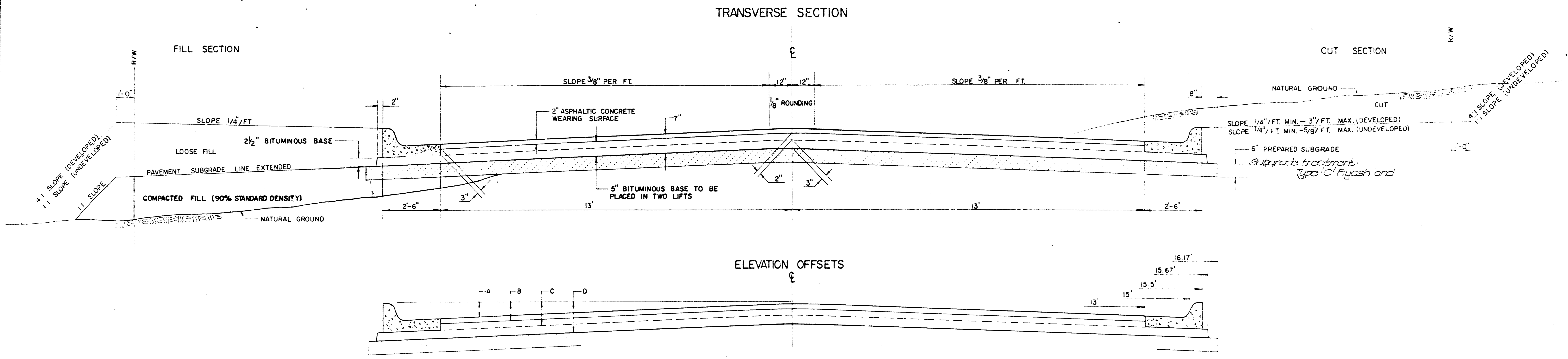
TITLE SHEET



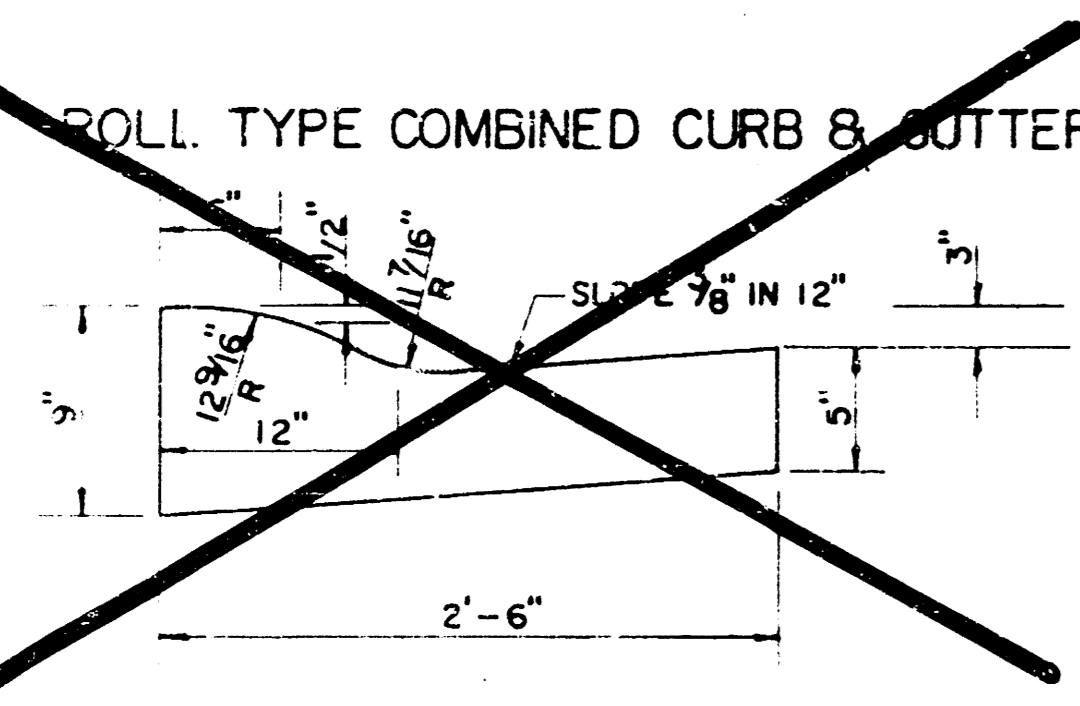
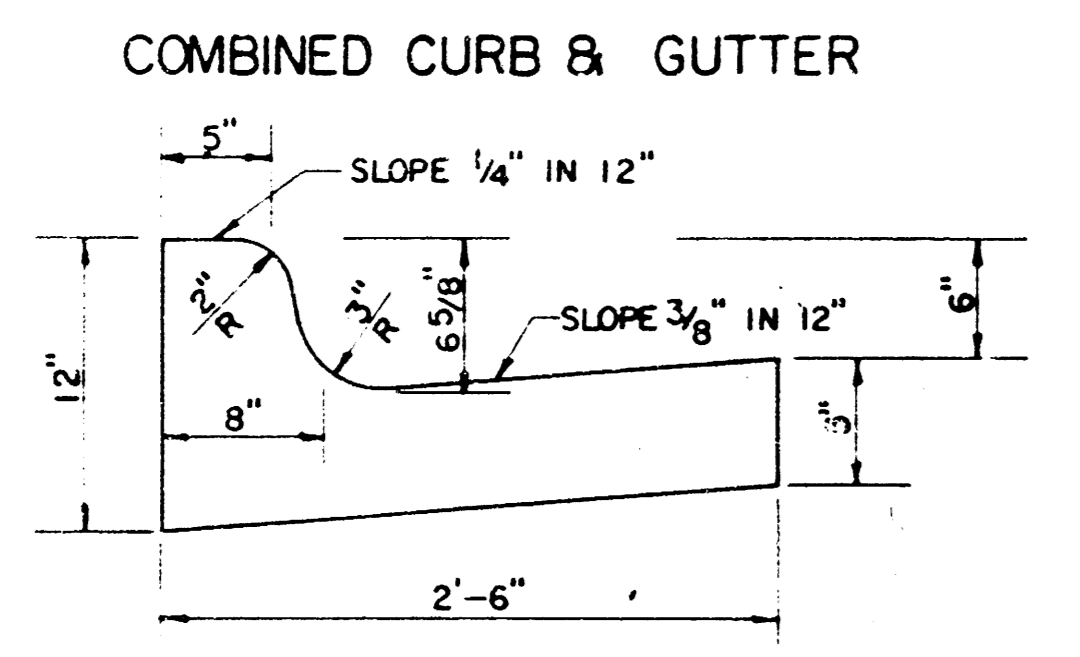
BAUGHMAN COMPANY, P.A.					
SURVEYING & ENGINEERING					
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211					
Drawn	Checked	Engineered	Date	Scale	Sheet
N.B. Neeson	Sec'd J.	Blu	April, 57		14

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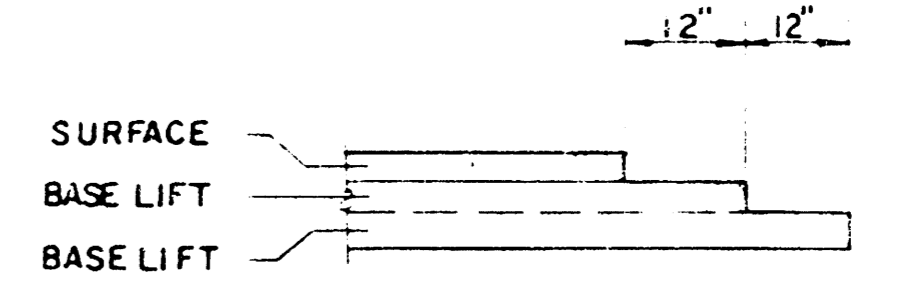
TYPICAL 3' PAVEMENT DETAILS



	DISTANCE FROM CENTERLINE (LT. & RT.)											
	0'	2'	4'	6'	7.5'	10'	12'	13'	15'	15.5'	15.67'	16.17'
A. TOP OF CURBS TO TOP OF SURFACE LIFT	0.10	0.14	0.21	0.27	0.32	0.39	0.46	0.49	—	—	—	—
B. TOP OF CURBS TO TOP OF UPPER BASE LIFT	0.27	0.31	0.38	0.44	0.49	0.56	0.63	0.66	—	—	—	—
C. TOP OF CURBS TO TOP OF LOWER BASE LIFT	0.44	0.49	0.57	0.64	0.70	0.79	0.87	0.90	0.98	1.00	1.00	—
D. TOP OF CURBS TO TOP OF SUBGRADE	0.69	0.73	0.80	0.87	0.93	1.01	1.08	1.12	1.19	1.21	1.21	1.23



TRANSVERSE CONSTRUCTION JOINTS



GENERAL NOTES

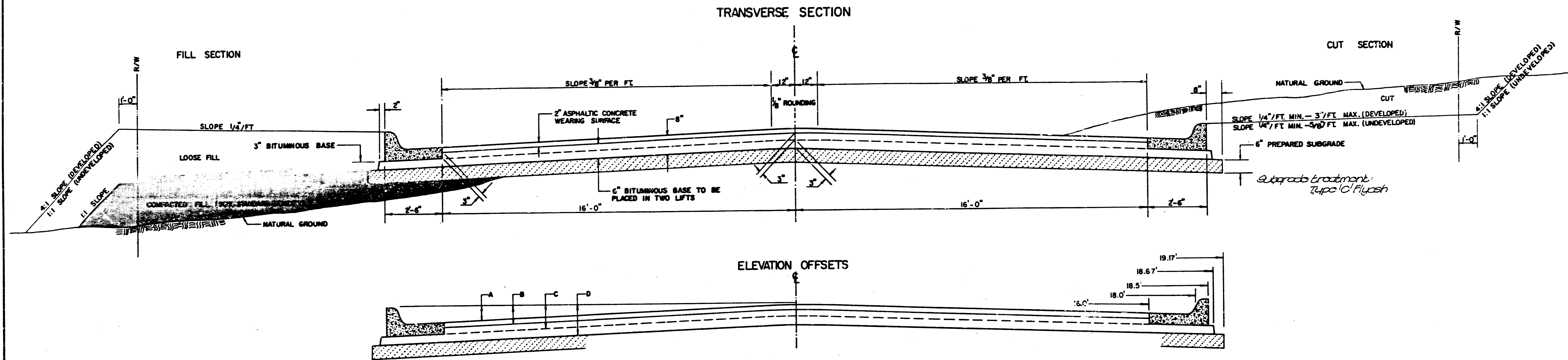
- 1) THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).
- 2) THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 2 1/2" BITUMINOUS BASE.
- 3) A TACK COAT OF EMULSIFIED 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.

SHEET 2 OF 14
 7 INCH RESIDENTIAL ASPHALTIC CONCRETE PAVEMENT WITH 5 INCH BITUMINOUS BASE
 CITY OF WICHITA, KANSAS
 472-76-245-81640-000-000-001

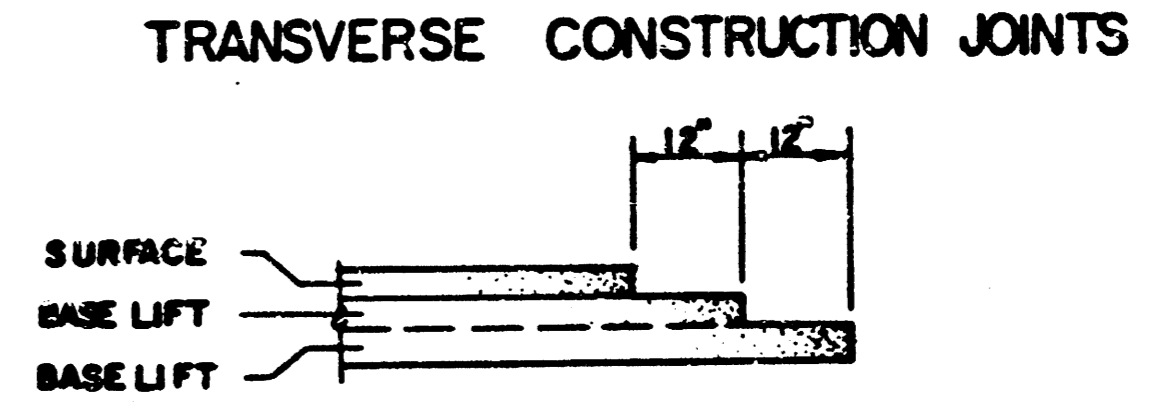
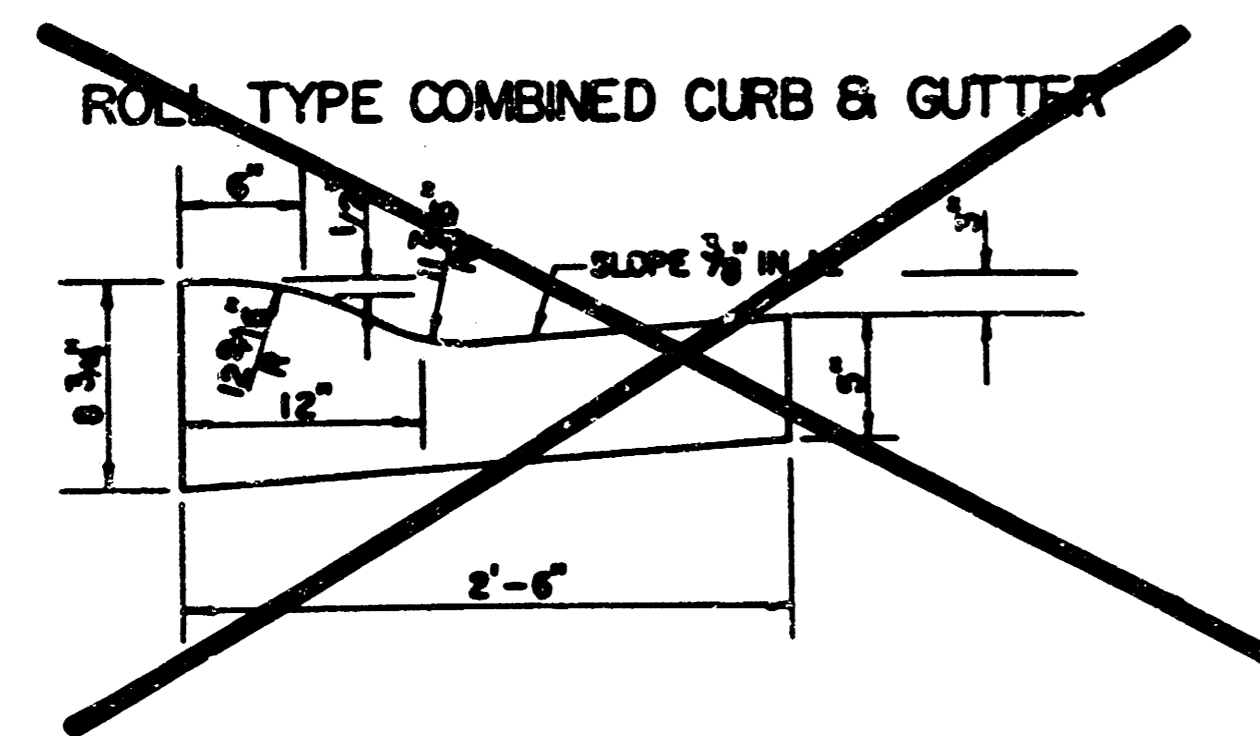
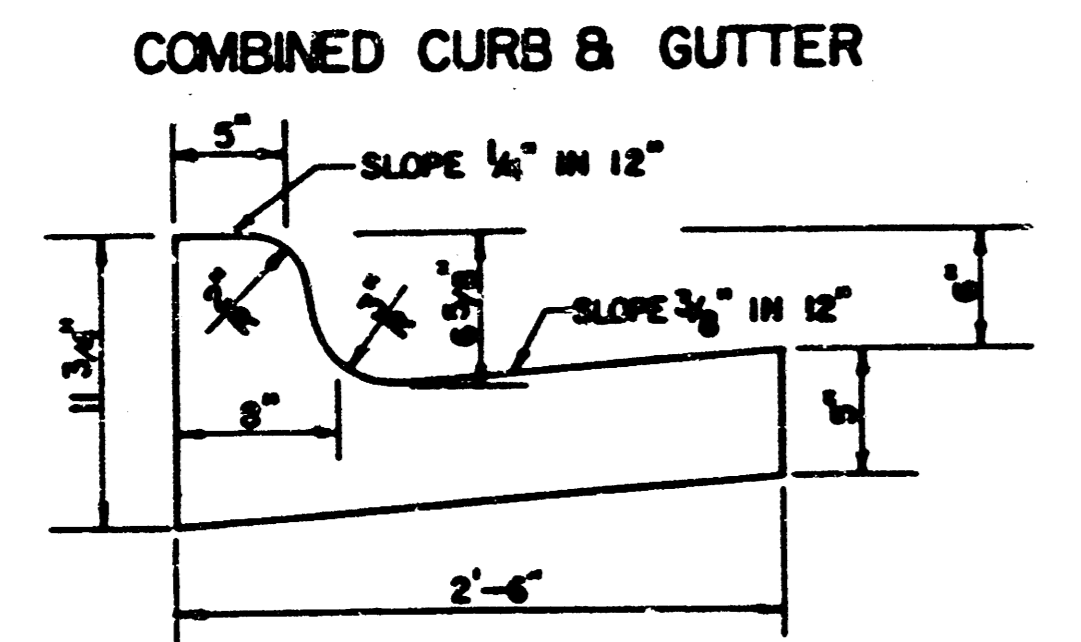
HOLLAND LANE

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TYPICAL 37' PAVEMENT DETAILS



	DISTANCE FROM CENTERLINE (LT. & RT.)												
	0	2	4	6	8	10	12	14	16	18	18.5	18.67	19.17
A: TOP OF CURBS TO TOP OF SURFACE LIFT	.01	.05	.11	.18	.24	.30	.36	.43	.49	—	—	—	—
B: TOP OF CURBS TO TOP OF UPPER BASE LIFT	.17	.22	.28	.34	.40	.47	.53	.59	.65	—	—	—	—
C: TOP OF CURBS TO TOP OF LOWER BASE LIFT	.42	.47	.53	.59	.65	.72	.78	.84	.90	.97	.98	.99	—
D: TOP OF CURBS TO TOP OF SUBGRADE	.67	.72	.78	.84	.90	.97	1.03	1.09	1.15	1.22	1.23	1.24	1.25



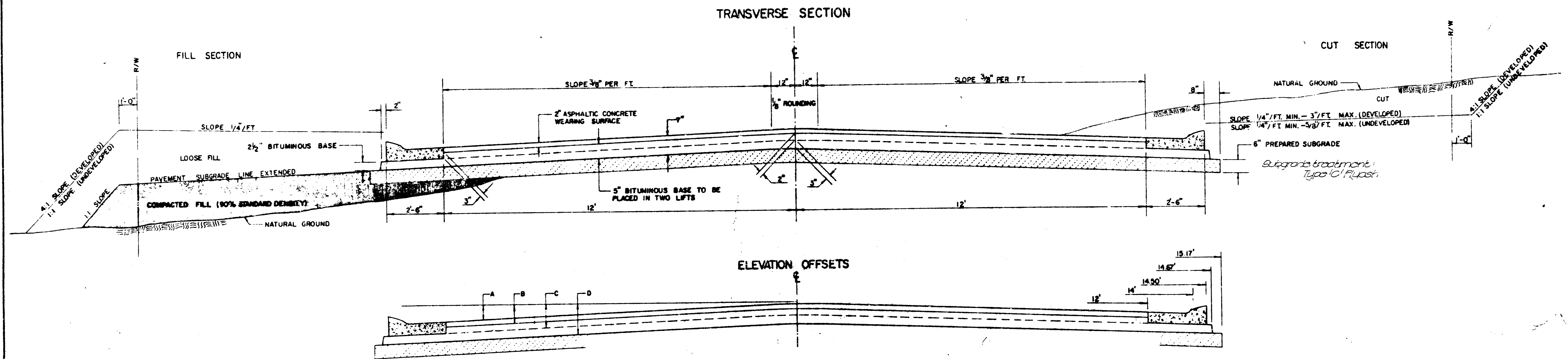
- GENERAL NOTES**
- 1) THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 8" ASPHALTIC CONCRETE (6" BITUMINOUS BASE).
 - 2) THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 3" BITUMINOUS BASE.
 - 3) A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CS-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 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 8" ASPHALTIC CONCRETE (6" BITUMINOUS BASE).

SHEET 3 OF 4
 8 INCH RESIDENTIAL ASPHALTIC CONCRETE PAVEMENT WITH 6 INCH BITUMINOUS BASE
 CITY OF WICHITA, KANSAS
 PROJECT NUMBER
 472-76-245-81640-000-001
 NORTHWEST PARKWAY

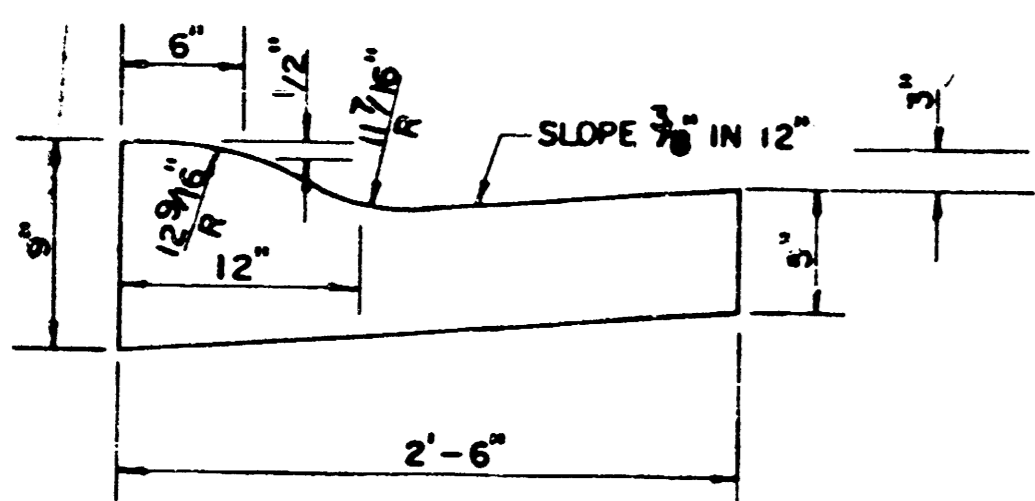
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TYPICAL 29' PAVEMENT DETAILS



	DISTANCE FROM CENTERLINE (L. & RT.)												
	0'	2'	4'	6'	7'	8'	10'	12'	14'	14.5'	14.67'	15.17'	
A: TOP OF CURBS TO TOP OF SURFACE LIFT	0.13	0.18	0.24	0.30	0.33	0.36	0.43	0.49	—	—	—	—	
B: TOP OF CURBS TO TOP OF UPPER BASE LIFT	0.30	0.35	0.41	0.47	0.50	0.53	0.60	0.66	—	—	—	—	
C: TOP OF CURBS TO TOP OF LOWER BASE LIFT	0.47	0.52	0.60	0.68	0.71	0.75	0.83	0.90	0.98	1.00	1.01	—	
D: TOP OF CURBS TO TOP OF SUBGRADE	0.72	0.77	0.84	0.91	0.94	0.98	1.05	1.12	1.19	1.21	1.21	1.23	

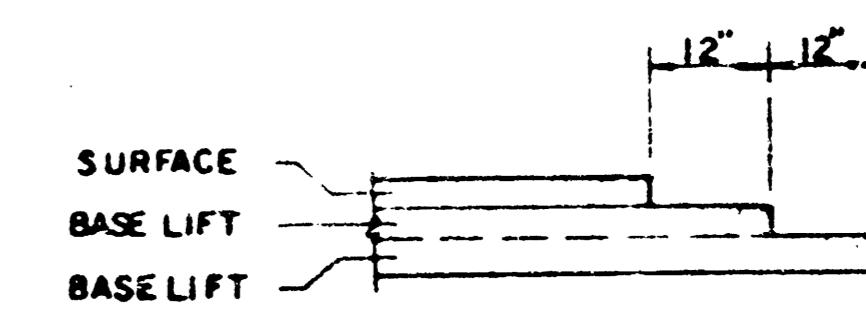
ROLL TYPE COMBINED CURB & GUTTER



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 0.15 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 TEMPORARILY ENDS AS SHOWN BY THE DETAIL. THE COST OF CONSTRUCTION JOINTS SHALL BE INCLUDED IN THE BID PRICE FOR SQUARE YARDS 7" ASPHALTIC CONCRETE (5" BITUMINOUS BASE).

SHEET 4 OF 14

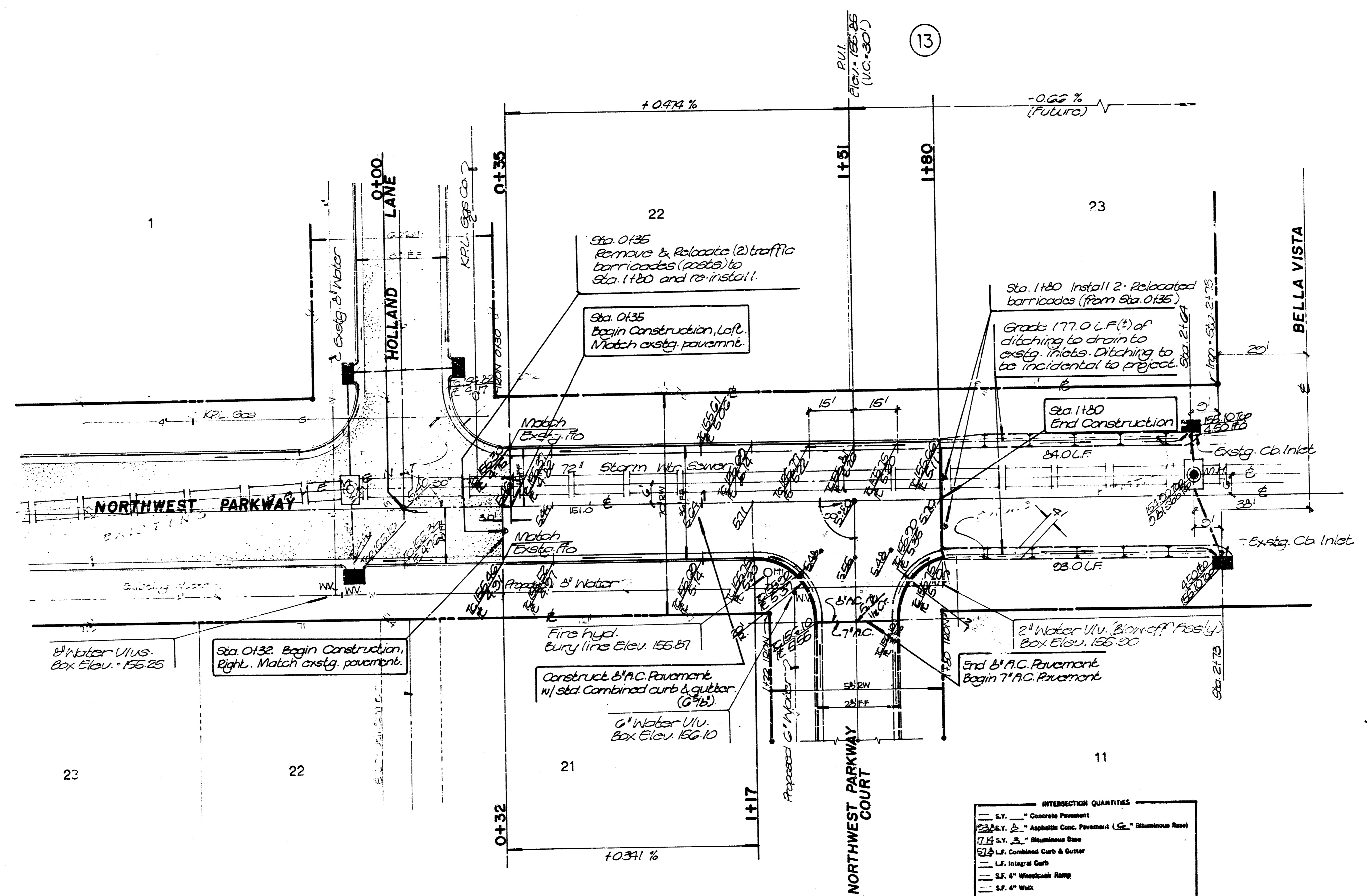
7 INCH RESIDENTIAL ASPHALTIC CONCRETE PAVEMENT WITH 5 INCH BITUMINOUS BASE

472-76-245-81640-000-000-001

NORTHWEST PARKWAY COURT

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WESTWOOD HEIGHTS SECOND ADDITION



Benchmarks:

1. City Desc. 42' no and 36.5' east of base cor. intersection of Ridge Road at 17th Street No. Elev. = 142.61 city datum
2. 1' cut in top of curb east side 22' north of intersection Holland Ln. at Northwest Parkway on Northwest Parkway. Elev. = 156.97 city datum
3. 1' cut in top of cb approx 30' west of E. Westport & Northwest Parkway on North side of street. Elev. = 159.88 city datum
4. 1' cut in top of cb at end of return West side Emerson; Intersection Emerson at Holland Lane. Elev. = 156.84 city datum

INTERSECTION QUANTITIES	
1.5 Y.	Concrete Pavement
23.5 Y. 2'	Asphaltic Conc. Pavement (C.G. Bituminous Base)
0.4 Y. 2'	Bituminous Base
57.6 L.F.	Combined Curb & Gutter
1.4 L.F.	Integral Curb
1.4 S.F.	4" Wheelchair Ramp
1.4 S.F.	4" Walk
0.1 Y.	Excavation
0.1 Y.	Compacted Fill
1.4 Lbs.	Reinforcing Steel
2.4 Y.	Manhole
1 Y.	Line of Cement
1.5 Y. V.G.	Concrete & Asphaltic Concrete Base

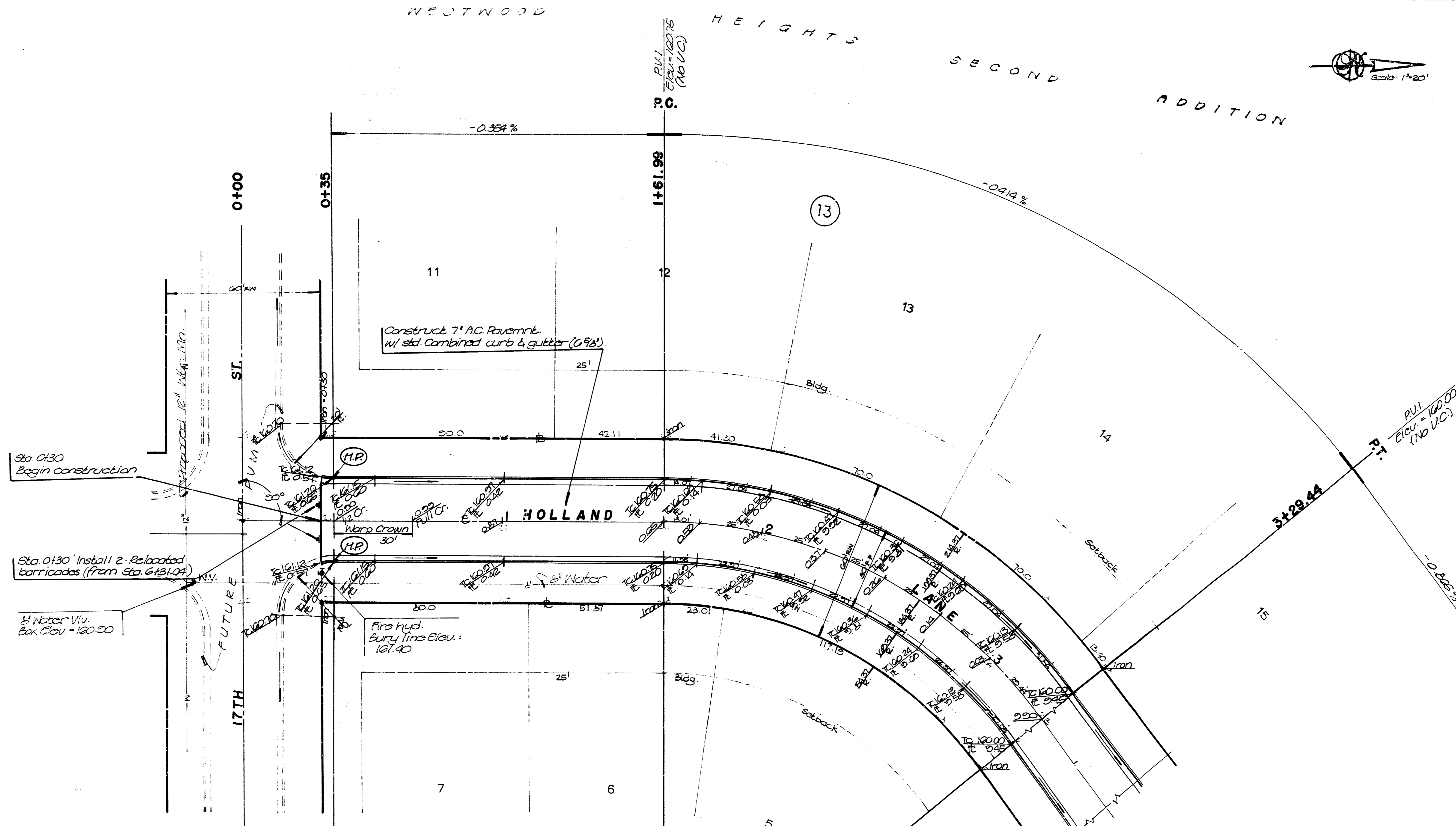
NORTHWEST PARKWAY
472-76-245-81640-000-000-001

BAUGHMAN COMPANY, P.A. SURVEYING & ENGINEERING 315-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211				
Design	Drawn	Approved	Date	Scale
N.B. Hobson	Scott J.		April, 07	1"=20'

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Benchmarks:

1. City Disc. #110 and 335' east of 11300' cor., intersection of Ridge Road at 17th Street No. Elev. = 152.81 city datum
2. 1/2" Out in top of curb, east side 22' north of intersection Holland Ln. at Northwest Parkway, on Northwest Parkway. Elev. = 155.97 city datum
3. 1/2" Out in top of cb. approx. 30' west of Westwood & Northwest Parkway on North side of street. Elev. = 151.68 city datum
4. 1/2" Out in top of end of return inlet 6100' Emerson, intersection Emerson at Holland Lane. Elev. = 155.84 city datum.



Curve data based on Center line

R=134.37' Δ=52°02'17" L=167.45' LChd=161.76' Tan=20.0' Def/ft.=0.3225/min					
Station	Arc Length	Chord Lengths		1/2 Δ=20°01'03"	
		1/2 Left of Face	1/2 Right of Face	Deflection angle	Deflection angle (Total)
1+61.00 (P.C.)	0	—	—	00°00'00"	00°00'00"
1+75	13.01'	14.63'	11.38'	02°01'17"	02°01'17"
2+00	25.01'	28.10'	21.87'	03°53'05"	05°54'22"
2+25	25.01'	28.10'	21.87'	03°53'04"	09°47'26"
2+50	25.01'	28.10'	21.87'	03°53'04"	13°40'30"
2+75	25.01'	28.10'	21.87'	03°53'05"	17°33'35"
3+00	25.01'	28.10'	21.87'	03°53'04"	21°26'39"
3+29.44 (P.T.)	20.44'	33.08'	25.74'	04°34'20"	26°01'03"

EARTHWORK QUANTITIES	
Excavation = 2831.4 C.Y.	Compacted Fill = 1197.0 C.Y.
+ 10% = 283.1	+ 10% = 119.7
Total = 3114.5 C.Y.	Total = 1316.7 C.Y.

Subgrade Manipulation = 1433.0 C.Y.
Borrow Mat'l. = 430.0 C.Y.
+ 10% = 43.0 C.Y.
Total = 482.9 C.Y.

HOLLAND LANE
472-76-245-81640-000-000-001

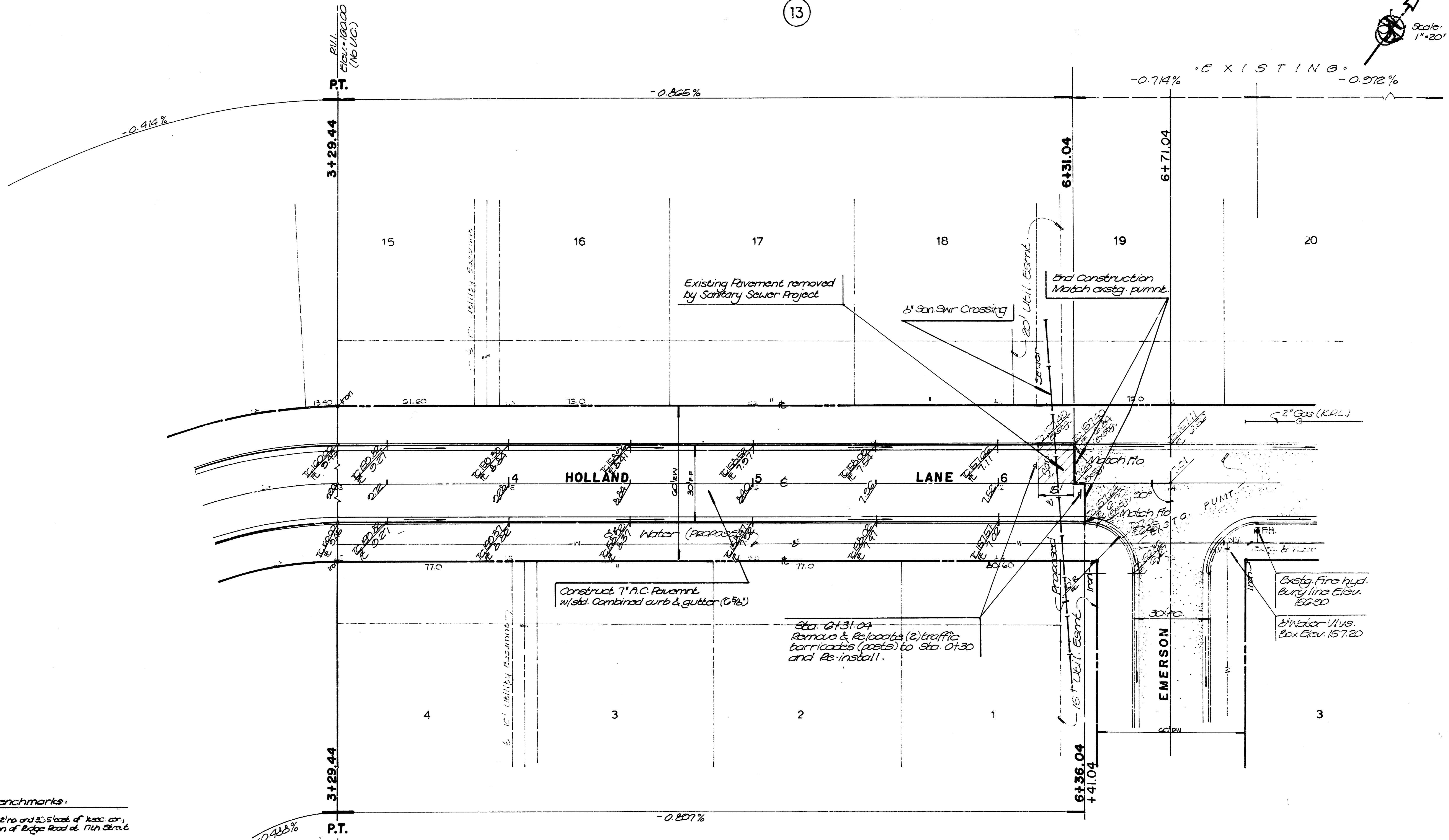
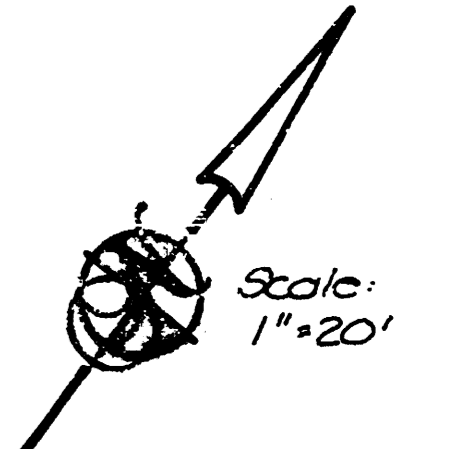
BAUGHMAN COMPANY, P.A.
SURVEYING & ENGINEERING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

Design	Drawn	Approved	Date	Scale
N.B. Hedden	Scal Jr.		April, 51	1"=20'

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WESTWOOD HEIGHTS SECOND ADDITION

13



- Benchmarks:**
- 1 City Desc. 42' to and 3.5' east of base cor., intersection of Ridge Road at 17th Street. No. Elev. = 112.81 city datum
 - 2 1/4" cut in top of curb, east side 22' north of intersection Holland Ln at Northwest Parkway, on Northwest Parkway. Elev. = 156.97 city datum
 - 3 1/2" cut in top of curb approx 30' west of E. Highway & Northwest Parkway on North side of street. Elev. = 154.88 city datum
 - 4 1/2" cut in top of curb at end of return West side Emerson, intersection Emerson at Holland Lane. Elev. = 156.84 city datum

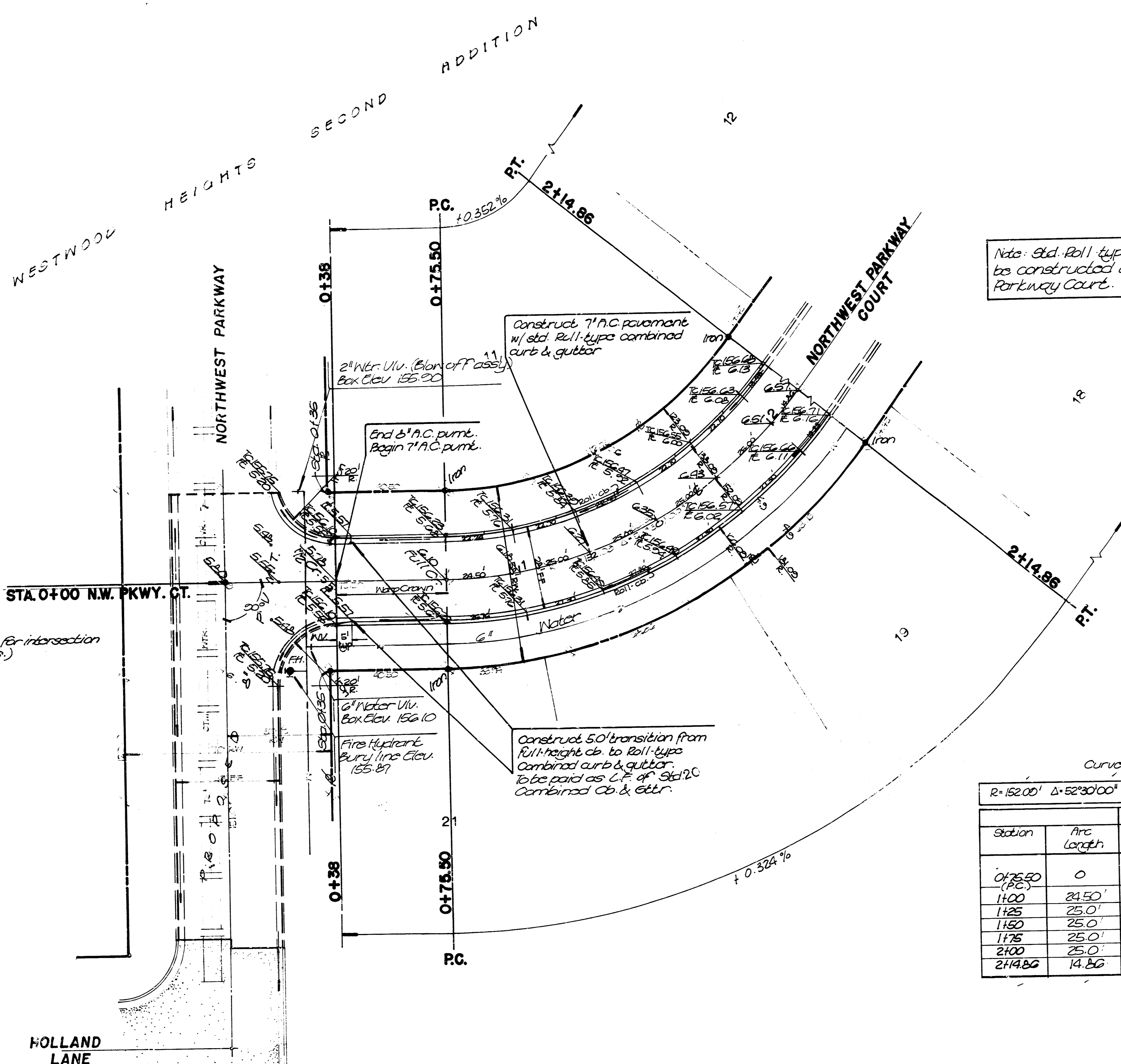
14

HOLLAND LANE
472-76-245-81640-000-000-001

ED BAUGHMAN COMPANY, P.A.				
SURVEYING & ENGINEERING				
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211				
Design	Drawn	Approved	Date	Scale
N.B. Webster	Scalyn		April, 87	1"=20'

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- Benchmarks:**
1. City Desc. 421 No. and 365' East of Mass. cor., Intersection of Bridge Road at 17th Street. Elev. = 152.81 city datum
 2. 1/2" O.C. in Top of curb, east side 22' north of Intersection Holland Ln. at Northwest Parkway, on Northwest Parkway. Elev. = 156.97 city datum
 3. 1/2" O.C. in top of cb approx 30' west of E. Westport & Northwest Parkway on North side of street. Elev. = 154.88 city datum
 4. 1/2" O.C. in top of cb at end of return West side Emerson; Intersection Emerson at Holland Lane. Elev. = 156.84 city datum

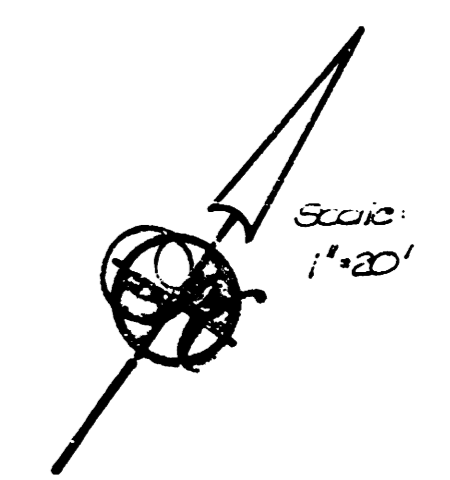


Note: Old Roll type curb & gutter to be constructed on Northwest Parkway Court.

Curve data based on Center line

$R=152.00'$ $\Delta=52^{\circ}30'00''$ $L=130.36'$ $LCrd=134.54'$ $Tan.=75.0'$ $Def/ft.=11.3016$ $min.$

Station	Arc Length	Chord Lengths		Deflection angle	
		Left of Face	Right of Face	Deflection angle	Deflection angle (Total)
0+75.50 (P.C.)	0	—	—	00°00'00"	00°00'00"
1+00	24.50'	20.03'	22.01'	04°36'53"	04°36'53"
1+25	25.0'	21.36'	22.55'	04°42'33"	09°19'26"
1+50	25.0'	21.36'	22.55'	04°42'33"	14°01'59"
1+75	25.0'	21.36'	22.55'	04°42'33"	18°44'31"
2+00	25.0'	21.36'	22.55'	04°42'33"	23°27'04"
2+14.86	14.86'	12.70'	17.00'	02°47'56"	26°15'00"



NORTHWEST PARKWAY COURT
472-76-245-81640-000-000-001

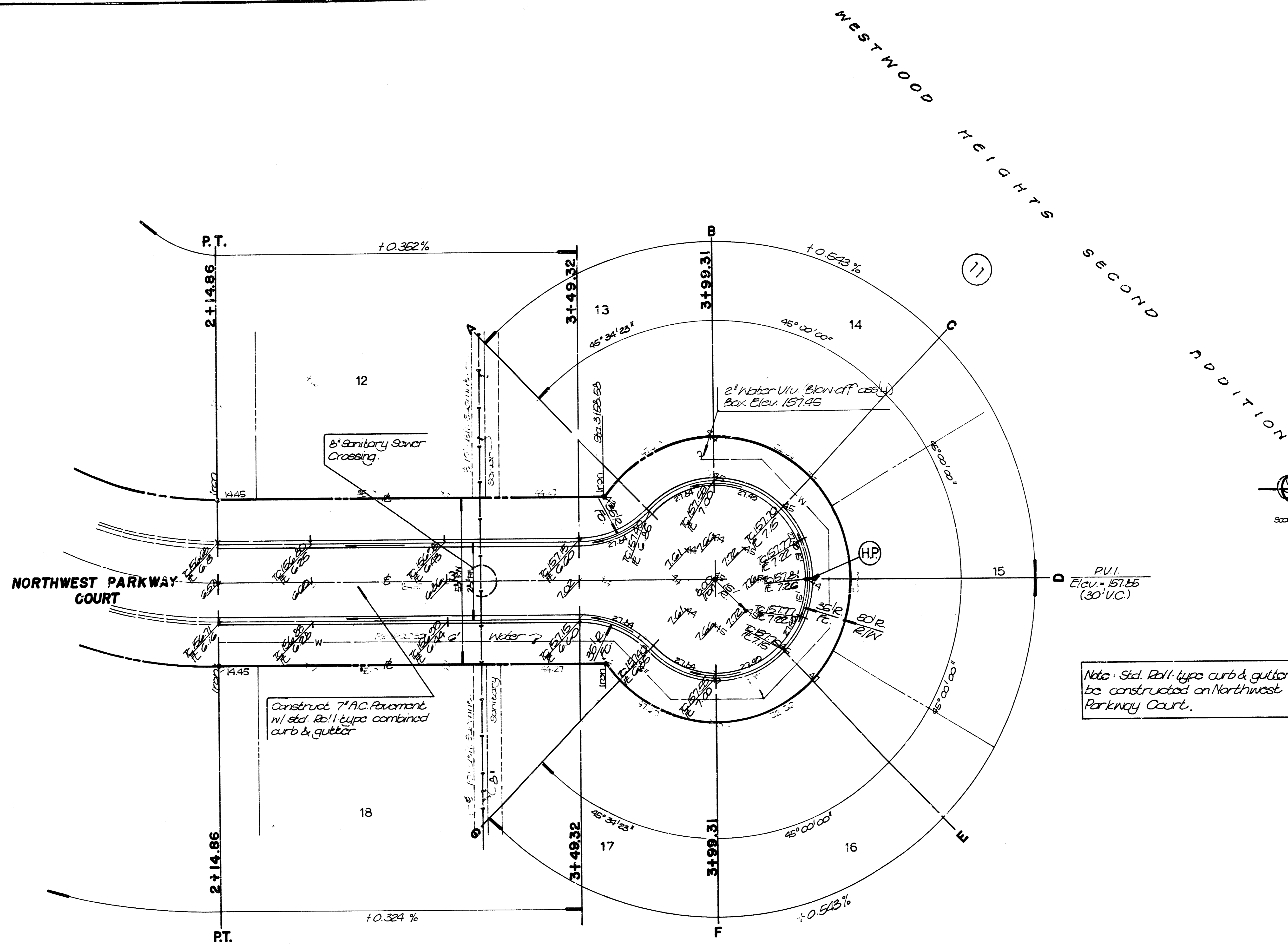
BAUGHMAN COMPANY, P.A.
SURVEYING & ENGINEERING
318-263-7271 • 315 ELLIS • WICHITA, KANSAS 67211

Scale: 1"=20'

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Benchmarks:

1. City Dwg. 42' no and 36.5' east of base cor., intersection of Ridge Road at 17th Street No. Elev. = 12.51 city datum
2. 1' cut in top of curb east side 22' north of intersection National Ln. at Northwest Parkway on Northwest Parkway. Elev. = 15.97 city datum
3. 1' cut in top of cb approx. 30' west of E. Westwood & Northwest Parkway on North side of street. Elev. = 15.62 city datum
4. 1' cut in top of cb at end of return West. 6'00' Emerson; intersection Emerson at National Lane. Elev. = 15.64 city datum.



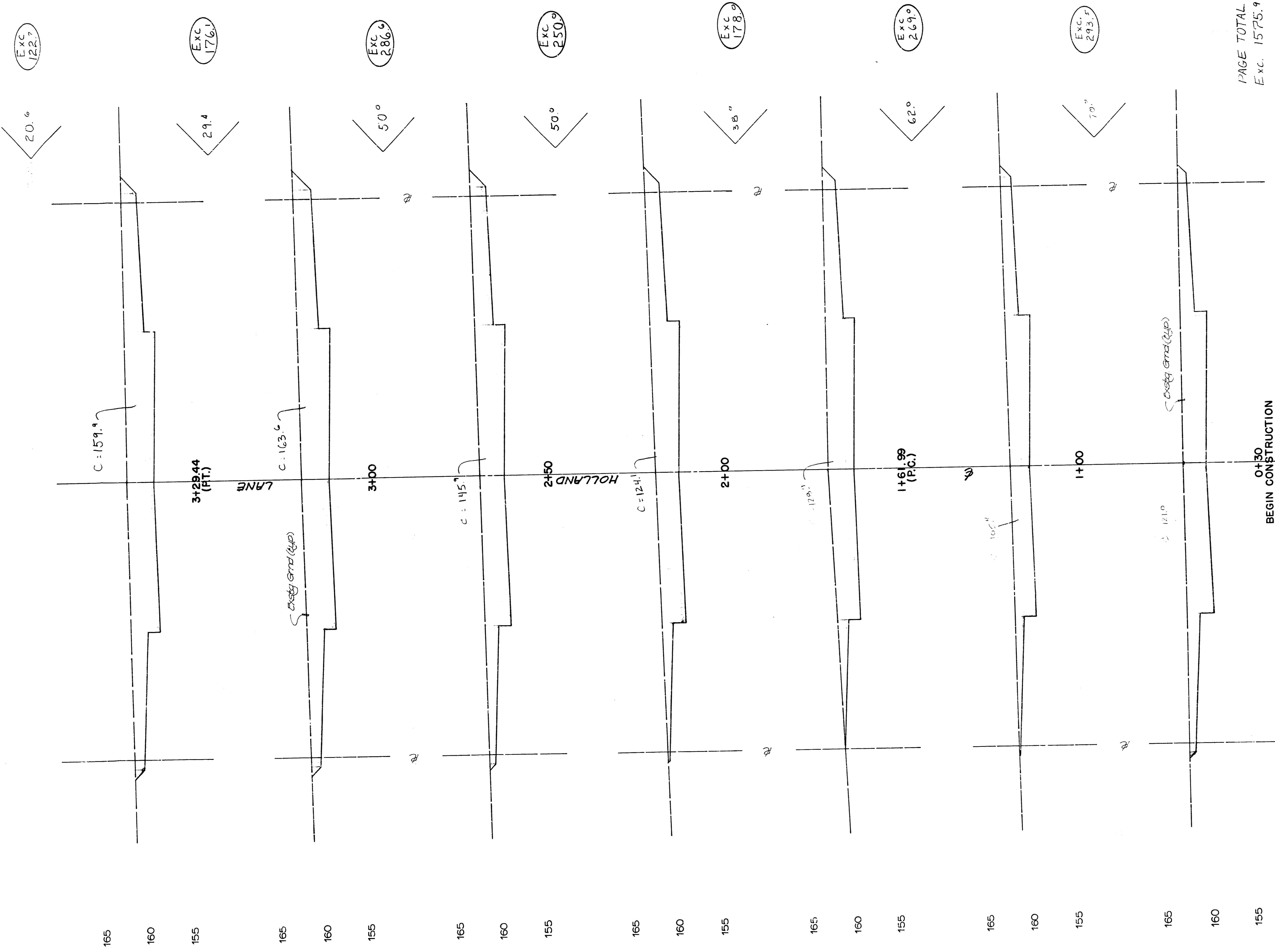
Note: Std. Roll type curb & gutter to be constructed on Northwest Parkway Court.

NORTHWEST PARKWAY COURT
472-76-245-81640-000-001

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

Design	Drawn	Approved	Date	Scale	Sheet
N.B. Weeber	Boal, Jr.		April, 51	1" = 20'	12 of 18

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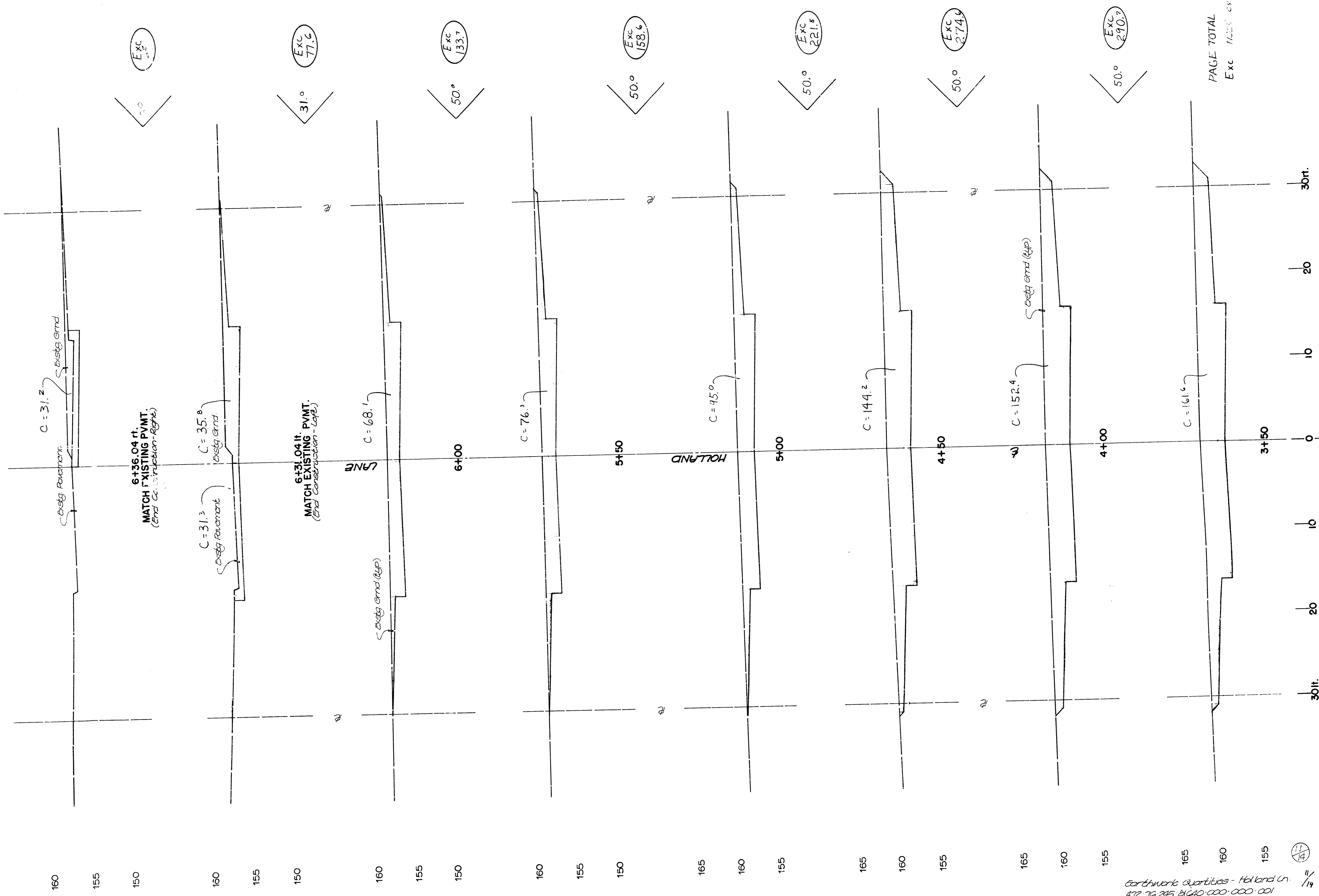


PAGE TOTAL
Exc. 15,755.9 cy.

Earthwork Quantities - Holland Ln.
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210/14

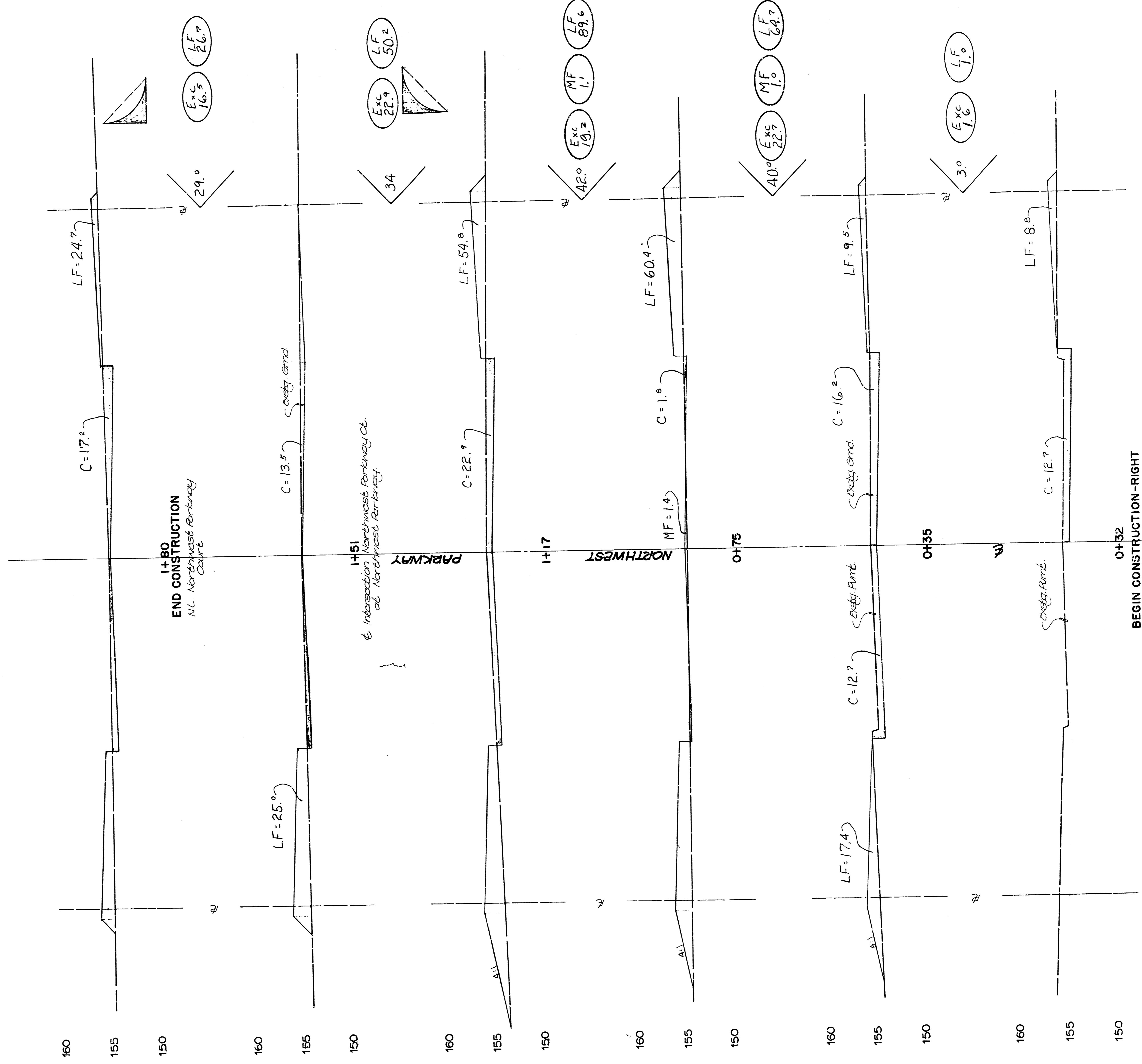


Earthwork Quantities - Holland Ln.
 472 76 245 81640 000 000 001

PAGE TOTAL
 Exc 11253.04

30ft. 20 10 0 10 20 30ft.

14

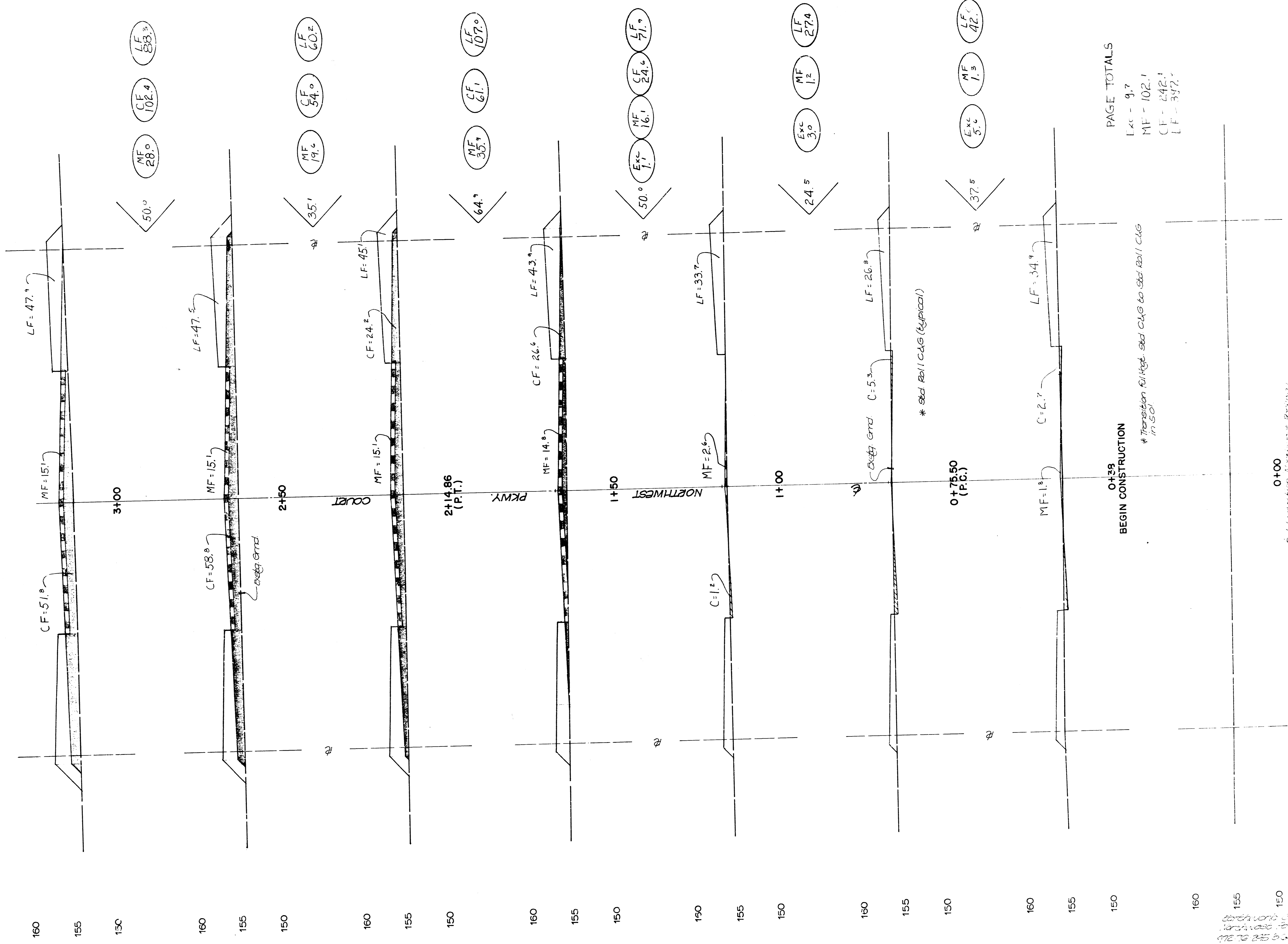


PAGE TOTALS
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 MF - 2.1
 LF - 232.2

Northwest Parkway
 Northwest Parkway
 412 76 215 41610 000 000 001

40ft. 30 20 10 0 10 20 30 40ft.

2/14

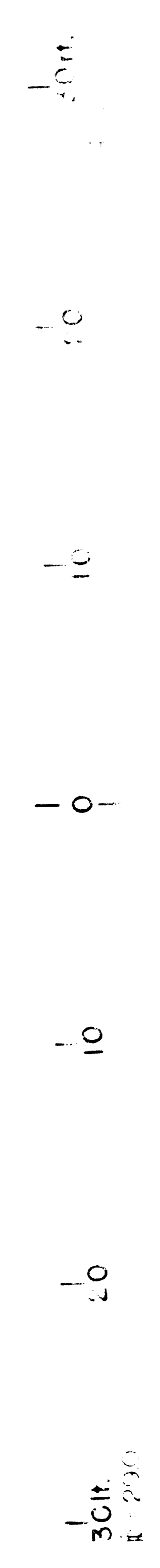


PAGE TOTALS
 Exc - 9.7
 MF - 102.1
 CF - 242.1
 LF - 392.7

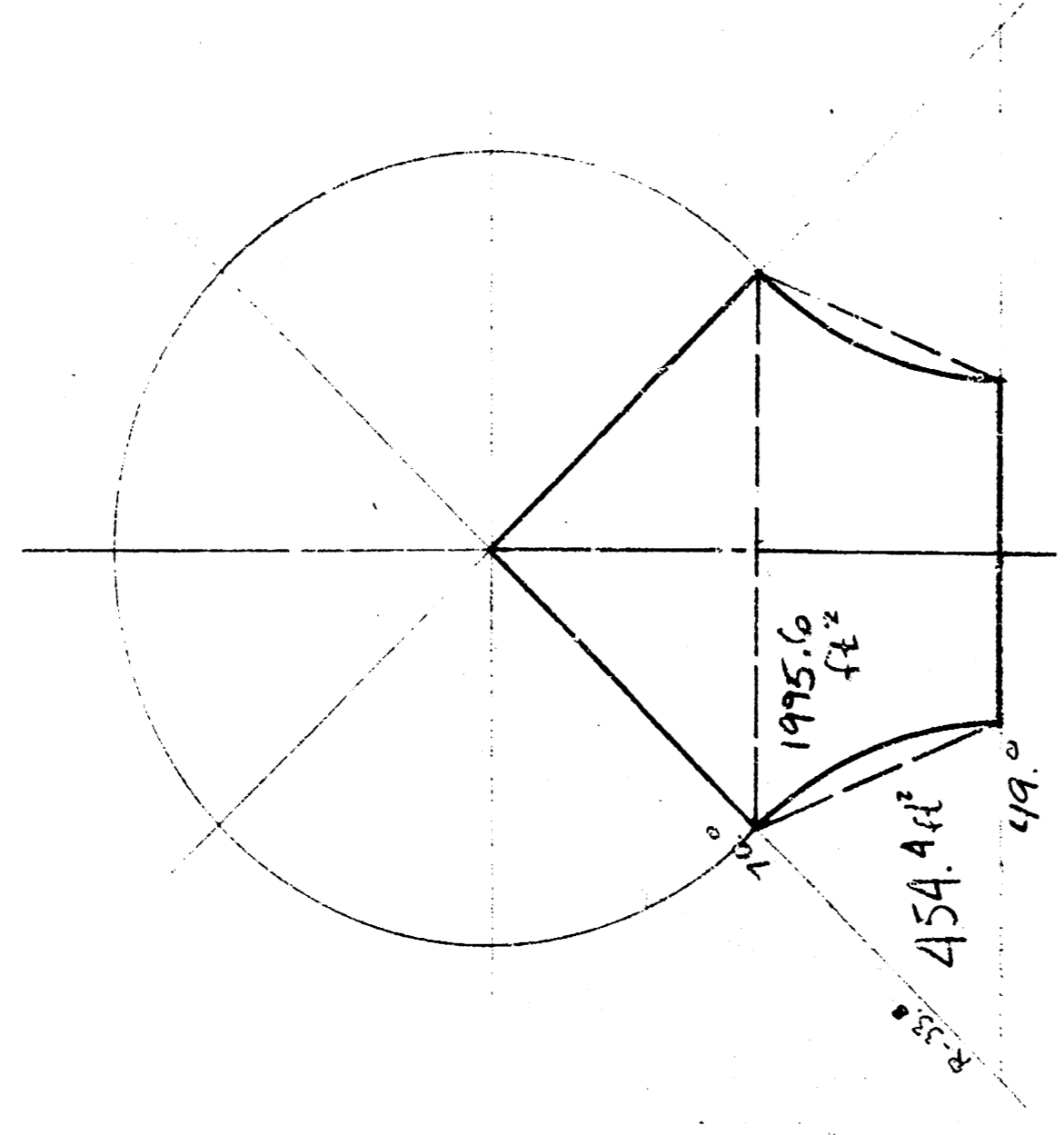
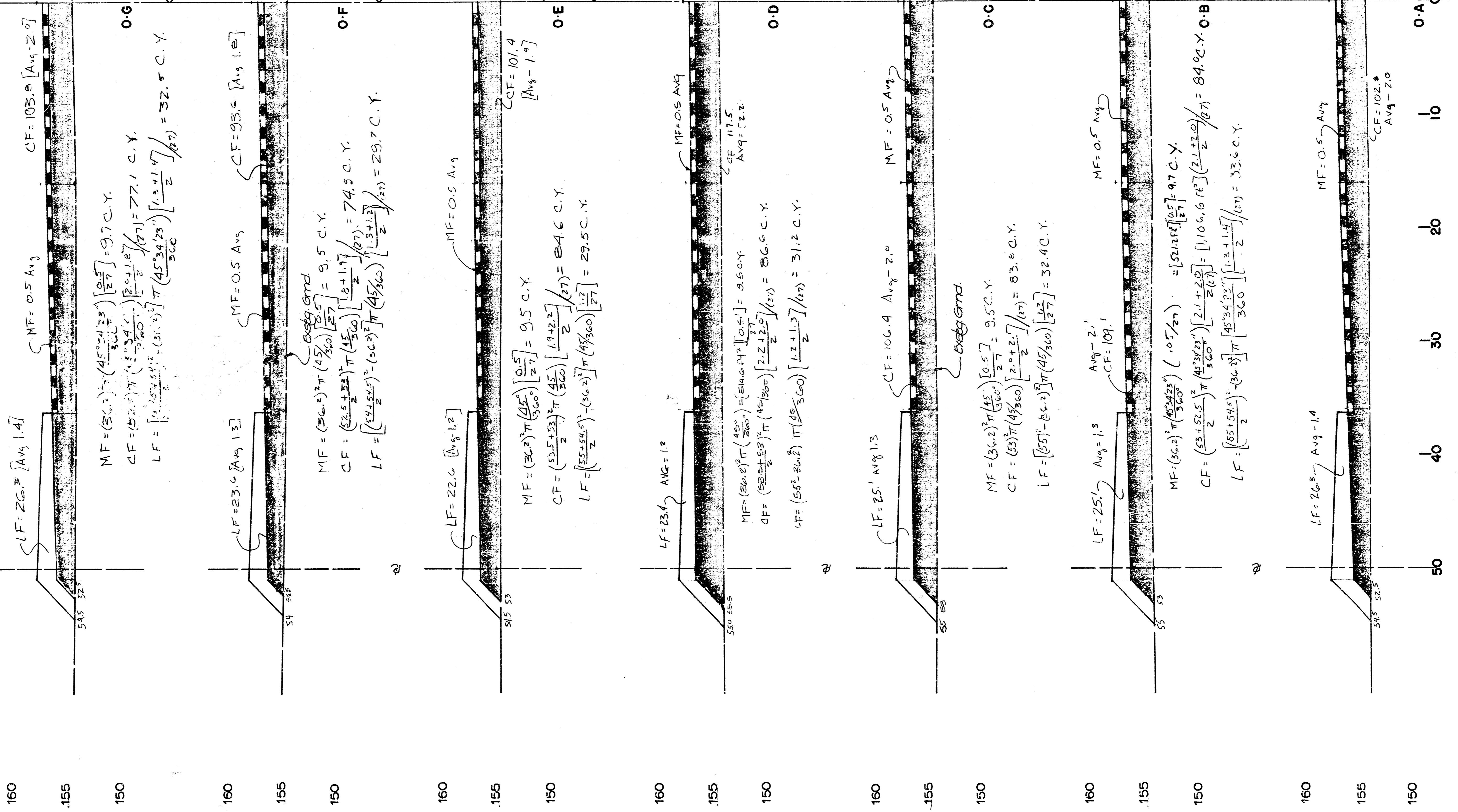
0+39.9
 BEGIN CONSTRUCTION

* Transition fill high std. c/s to std. Ball C/s in soil

0+00
 * Intersection of Centerline Property
 and North-South Property



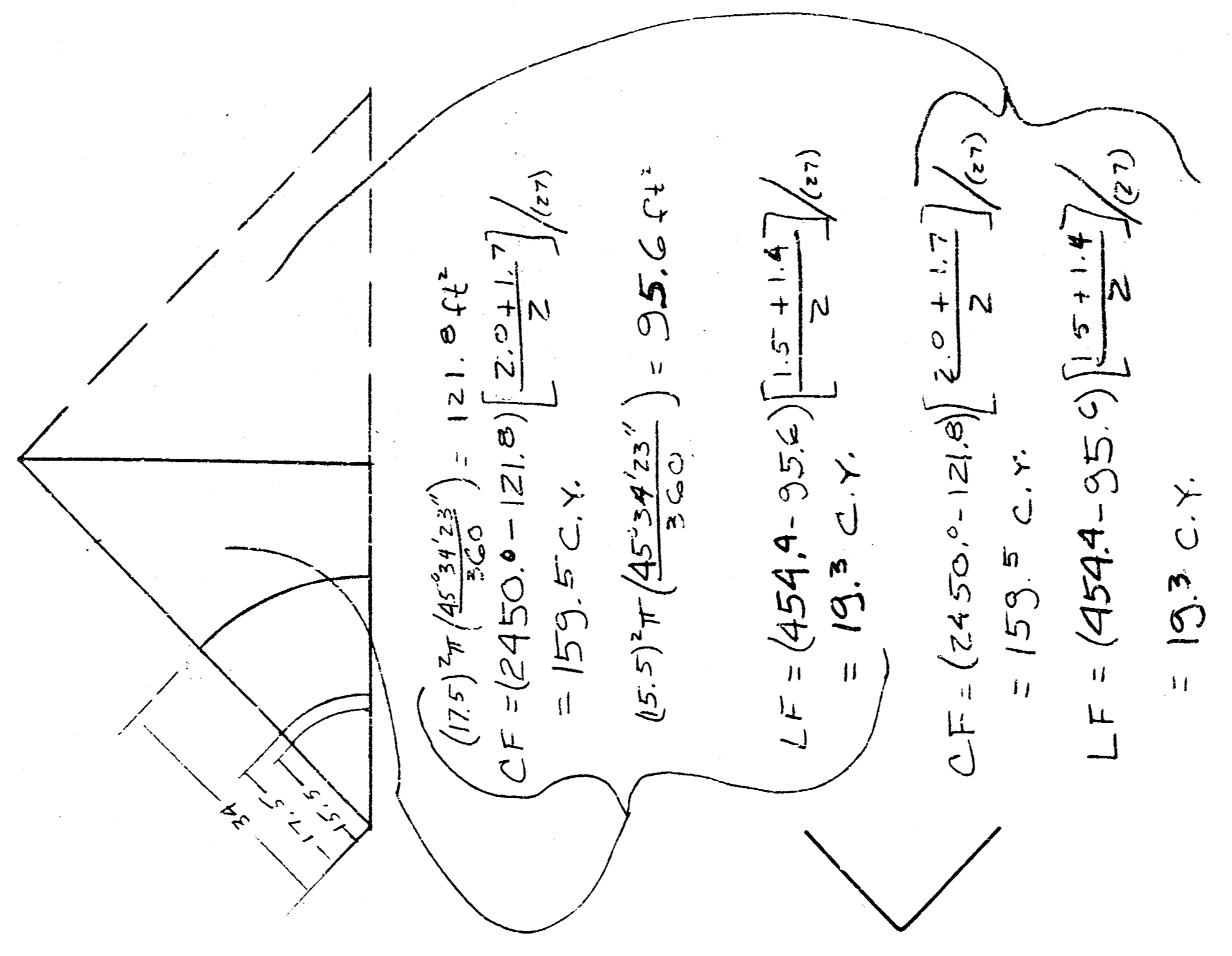
DATE: 10/20/00
 DRAWN BY: [illegible]
 CHECKED BY: [illegible]



$$(33.8) \pi \left(\frac{453.4 \times 23}{360} \right) = 454.4$$

$$\frac{(50) \times (49)}{2} \Rightarrow 2450.0 - 454.4 = 1995.6$$

$$MF = (0.5) \times (1995.6) \left[\frac{2}{27} \right] = 73.9 \text{ C.Y.}$$



$$(175) \pi \left(\frac{453.4 \times 23}{360} \right) = 121.0 \text{ ft}^2$$

$$CF = (2450.0 - 121.0) \left[\frac{2.0 + 1.7}{2} \right] \left(\frac{1}{27} \right) = 159.5 \text{ C.Y.}$$

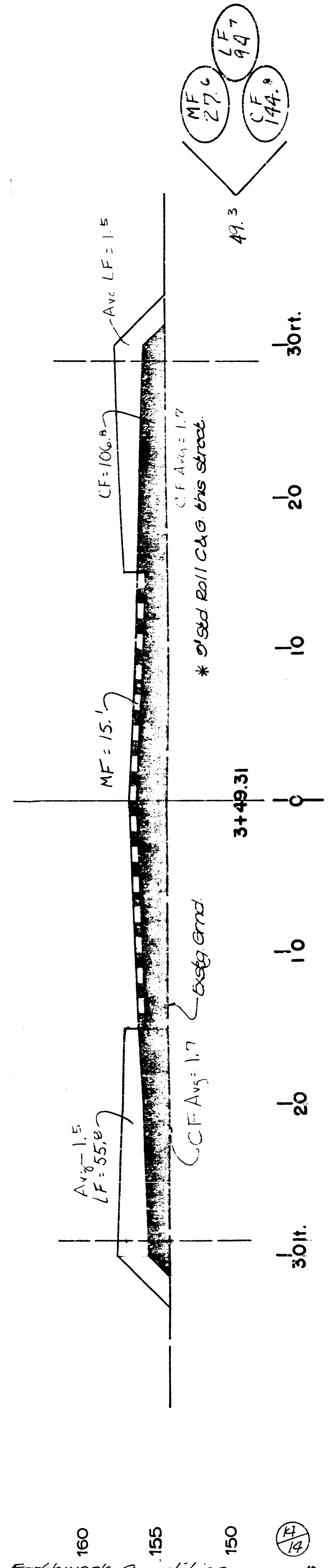
$$(15.5) \pi \left(\frac{453.4 \times 23}{360} \right) = 95.6 \text{ ft}^2$$

$$LF = (454.4 - 95.6) \left[\frac{1.5 + 1.4}{2} \right] \left(\frac{1}{27} \right) = 19.3 \text{ C.Y.}$$

$$CF = (2450.0 - 121.0) \left[\frac{2.0 + 1.7}{2} \right] \left(\frac{1}{27} \right) = 159.5 \text{ C.Y.}$$

$$LF = (454.4 - 95.6) \left[\frac{1.5 + 1.4}{2} \right] \left(\frac{1}{27} \right) = 19.3 \text{ C.Y.}$$

PAGE TOTALS
 MF - 158.9
 CF - 954.9
 LF - 322.2



Earthwork Quantities
 Northwest Parkway Ct.
 47276 285 8640 000 000 001