

**PROFESSIONAL  
ENGINEERING CONSULTANTS, PA**

1440 E. English  
WICHITA, KANSAS 67211

(316) 262-2691

**LETTER OF TRANSMITTAL**

DATE	Nov. 10, 1988	JOB NO.	36-88335-2051
ATTENTION	Ms. Vicky Huang, P.E.		
RE:	Expressway Center		

TO Mr. Michael E. Lindebak, P.E.  
City Engineer  
455 North Main  
Wichita, KS 67202

WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items:

- Shop drawings     Prints     Plans     Samples     Specifications  
 Copy of letter     Change order     \_\_\_\_\_

COPIES	DATE	NO.	DESCRIPTION
2	11.10.88		Revised Drainage Plan
2			Calculations for Storm Water Sewer

THESE ARE TRANSMITTED as checked below:

- For approval     Approved as submitted     Resubmit \_\_\_\_\_ copies for approval  
 For your use     Approved as noted     Submit \_\_\_\_\_ copies for distribution  
 As requested     Returned for corrections     Return \_\_\_\_\_ corrected prints  
 For review and comment     \_\_\_\_\_

FOR BIDS DUE \_\_\_\_\_ 19 \_\_\_\_\_  PRINTS RETURNED AFTER LOAN TO US

REMARKS As requested we have revised the proposed  
storm water sewer within Expressway  
center as follows:

1. Add manhole at Oliver
2. Add 36" stub (discharge line) north.

COPY TO File

SIGNED: Charles Brown

100 j, 178.5000 99 3 5 4

110 t, expressway center addition.

120 t, revised drainage plan

130 t, storm water sewer system analysis

140 i, 103 0.49 2.14 0.00 0.00 6.70 15.00 185.00

150 i, 102 0.69 3.43 0.00 0.00 10.00 15.00 182.00

160 i, 101 0.69 3.05 0.00 0.00 9.50 15.00 181.00

170 m, 100 179.00

180 m, 99 178.50

190 p, 103 102 350.00 18 0.013 0.00 0.00

200 p, 102 101 410.00 27 0.013 0.00 0.00

210 p, 101 100 220.00 36 0.013 50.00 0.00

220 p, 100 99 10.00 36 0.013 0.00 0.00

230 e

Input File: express

expressway center addition  
revised drainage plan  
storm water sewer system analysis

Storm Frequency = 5-Year

\*\*\* HYDROLOGY \*\*\*

Tributary Area		Hydrology Summation										Conduit Data					
Node to	C	Area	Slope	Length	TC(θ)	I(θ)	Q(θ)	TC	I	Q	Sum Q	Size	Velocity	Length	TT	TT+TC	
Node		(Ac)	(%)	(Ft)	(Min)	(In/Hr)	(CFS)	(Min)	(In/Hr)	(CFS)	(CFS)		(Ft/Sec)	(Ft)	(Min)	(Min)	
103	102	0.67	2.14	0.00	0.0	15.00	5.22	6.70	15.00	5.22	6.70	6.70	18"	3.79	350.00	1.54	16.54
102	101	0.65	3.43	0.00	0.0	15.00	5.22	10.80	16.54	5.02	10.40	17.10	27"	4.30	410.00	1.59	18.13
101	100	0.69	3.05	0.00	0.0	15.00	5.22	9.60	18.13	4.85	8.92	26.01	36"	3.68	220.00	1.00	19.12
100	99	0.00	0.00	0.00	0.0	0.00	0.00	0.00	19.12	4.75	0.00	26.01	36"	3.68	10.00	0.05	19.17

Input File: express

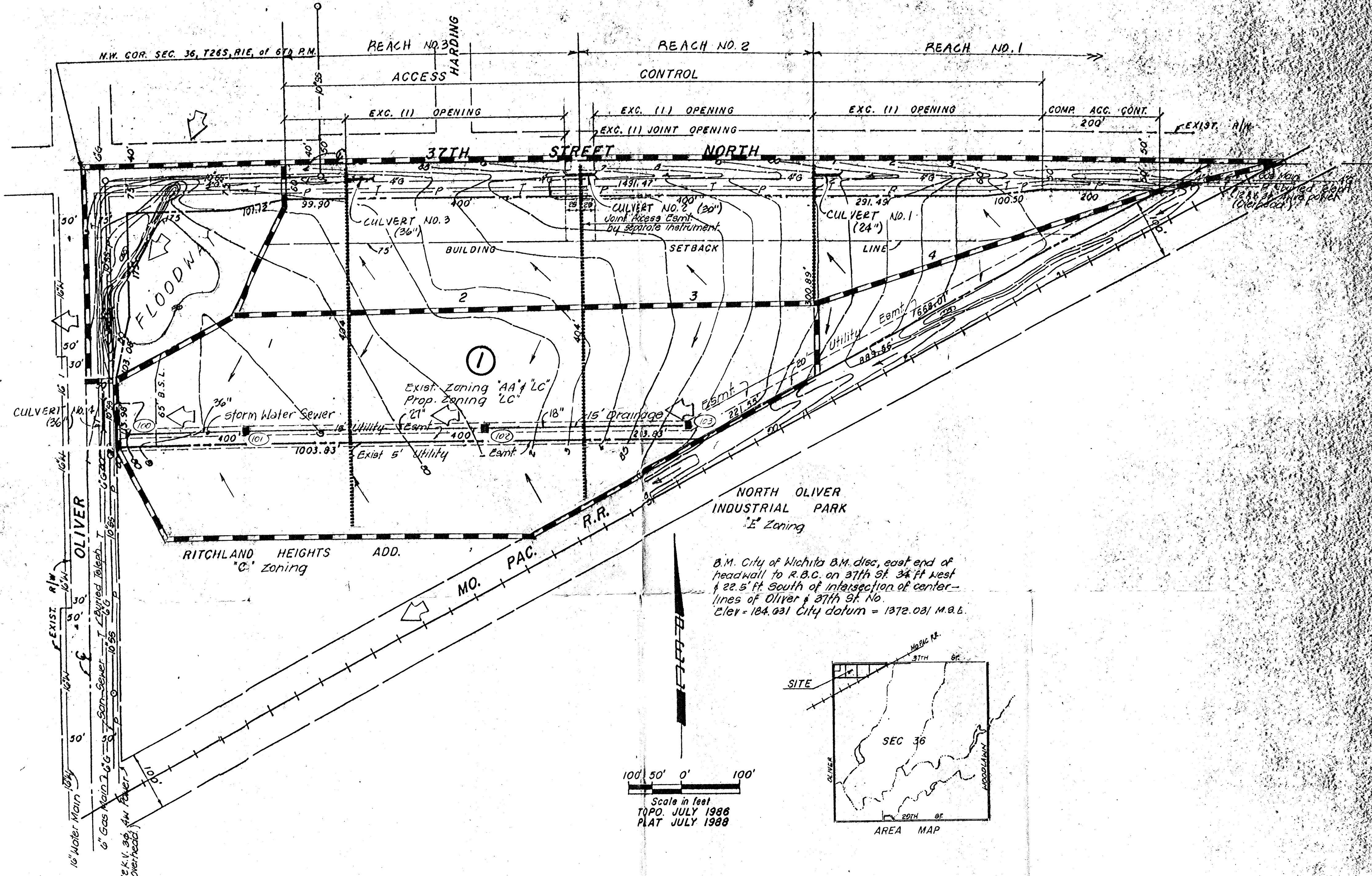
expressway center addition  
 revised drainage plan  
 storm water sewer system analysis

Storm Frequency = 5-Year

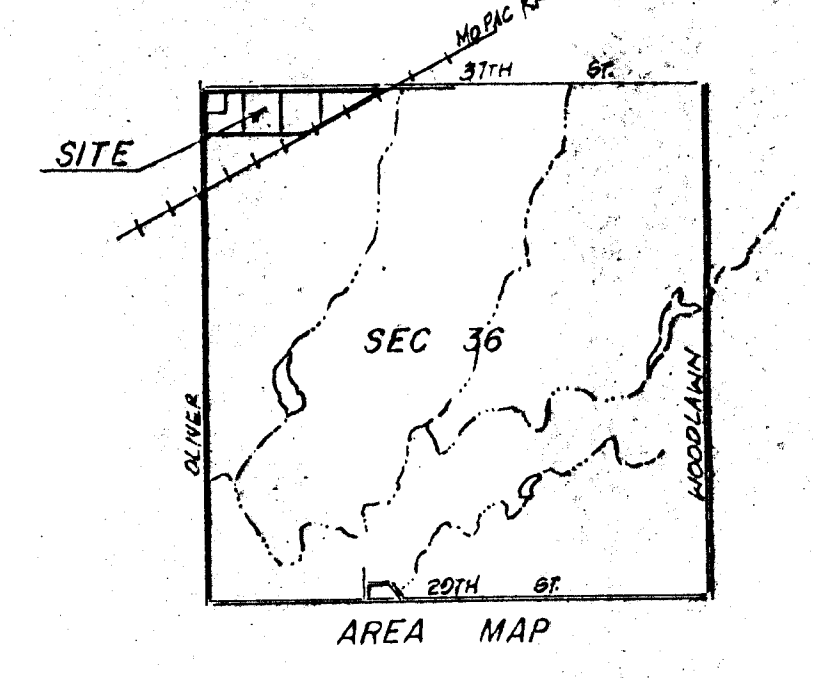
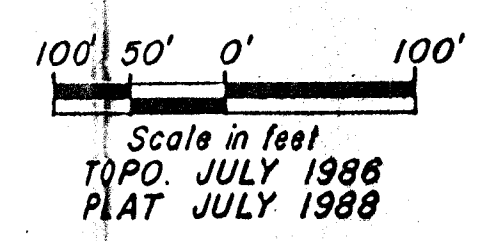
\* \* \* HYDRAULICS \* \* \*

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Node      Hyd-Slope  Friction   Bend      Transition  Manhole  Deflection  Junction  Total   Hyd-61   Desired   Diff.
          (Ft/Ft)   (Ft)      (Ft)      (Ft)        (Ft)     (Ft)       (Ft)     (Ft)    Elevation Elevation (Ft)
*****
103      0.00407   1.4239    0.0000    0.0000     0.0000   0.0000    0.0000   1.4239  182.3438  185.0000  2.66
102      0.00305   1.2494    0.0000    0.0064     0.0000   0.0000    0.3393   1.7948  180.9199  182.0000  1.08
101      0.00152   0.3346    0.0500    0.0154     0.0000   0.0000    0.1354   0.4866  179.1251  181.0000  1.87
100      0.00152   0.0152    0.0000    0.0000     0.0195   0.1051    0.0076   0.1385  178.6395  179.0000  0.36
99       0.00000   0.0000    0.0000    0.0000     0.0000   0.0000    0.0000   0.0000  178.5000  178.5000  0.00
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B.M. City of Wichita B.M. disc. east end of headwall to R.B.C. on 37th St 34 ft west & 22.5 ft south of intersection of centerlines of Oliver & 37th St. No. Elev = 184.031 City datum = 1372.081 M.S.L.



DRAINAGE PLAN 10-21-88

# EXPRESSWAY CENTER

Owner:  
**McArthur Beach Properties**  
 c/o Jack Ritchie  
 8100 E. 22nd St. No. Bldg. 500  
 Wichita, Ks. 67226

Engr. **P. E. C. p.a.**  
 1440 English  
 Wichita, Ks. 67211

**Note:**

Lots 1 through 4, Block 1 shall be graded to drain to existing ditches, streams, etc. via drives, flumes, private storm water sewers and/or other approved drainage facilities.

**LEGEND:**

- Drainage Direction - Minor Storm
- Drainage Direction - Major Storm
- Drainage Basin Boundary
- Proposed Storm Water Sewer & Inlet & Pipe Size
- Proposed Culvert
- Node Identification Point
- Drainage Sub-Basin Boundary



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