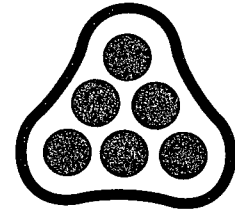


September 29, 1994

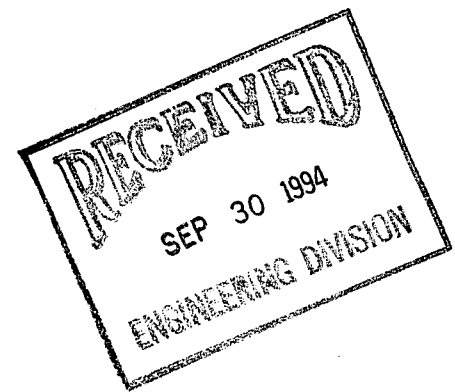


**P**ROFESSIONAL  
**E**NGINEERING  
**C**ONSULTANTS  
PROFESSIONAL ASSOCIATION

Kansas Department of Transportation  
3200 E. 45 N.  
Wichita, KS 67220

Attention: Ron Crowell  
Metro Utility Coordinator

Reference: K-96 Highway  
Kansas Surgery & Recovery Center  
Storm Water Drain #106  
PEC Project Nos. 36-92223-1-3097  
36-93627-2-042



Dear Mr. Crowell:

This letter is written as a summary of the design criteria for the detention facility currently under construction adjacent to Highway K-96 in the S 1/2 NW 1/4 Sec. 4, T27S, R2E, Sedgwick County. Please find enclosed re-prints of engineering analysis previously submitted to the City of Wichita.

The detention facility was initially sized in an analysis performed in 1989 for Tallgrass East 3rd Addition. The Existing Conditions analysis indicates that the peak 100-year discharge is 473 cubic feet per second for the undeveloped condition. The preliminary basin design provided sufficient storage to reduce the peak flow rate to 396 cfs.

During final design of the basin in June 1994, the pond was re-analyzed based on its final grading plan. The computed discharge for the 100-year storm is cfs, still below the natural conditions.

During design of K-96 by PEC, discharge from this site was incorporated into the design of the ditches, erosion control, etc. With construction of this basin and outlet structure, measures have been taken to minimize the impact of urbanization of the basin by reducing the peak flowrate from the 100-year design storm after urbanization to below the value for undeveloped conditions.

DIRECTORS: / D.E. MALTBIE, P.E. / W.H. KELTNER, P.E. / R.D. PLETCHER, P.E. / M.D. SCHOMAKER, P.E. / G.D. SCHOCK, P.E.  
J.H. BAILEY, P.E., PH.D. / D.I. NORTON, P.E. / B.E. REMSBERG, P.E. / G.K. GREENWOOD, P.E. / D.E. HAGER, P.E.  
ASSOCIATE DIRECTORS: / G.L. ADAMS, P.E.

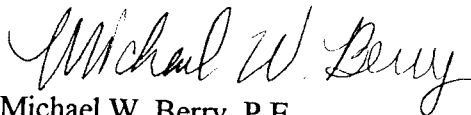
303 S. TOPEKA  
WICHITA, KANSAS 67202  
(316) 262-2691  
FAX (316) 262-3003

Mr. Ron Crowell  
September 29, 1994  
Page 2

We trust that this letter and accompanying data will meet your requirements. If there are further questions, please contact the undersigned.

Very truly yours,

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

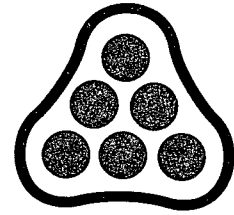


Michael W. Berry, P.E.  
Manager  
Land Development Division

MWB:ama

Encl: As noted

cc: Gene Rath, P.E., Asst. City Engineer, w/att.  
Vicky Huang, P.E. Subdivision Engineer  
File thru BER



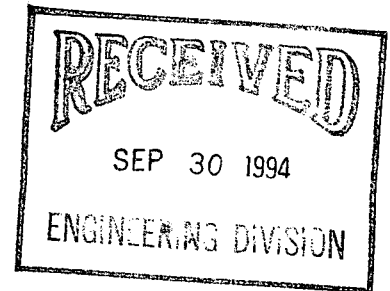
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During final design of the basin in June 1994, the pond was re-analyzed based on its final grading plan. The computed discharge for the 100-year storm is <sup>403</sup> cfs, still below the natural conditions.

During design of K-96 by PEC, discharge from this site was incorporated into the design of the ditches, erosion control, etc. With construction of this basin and outlet structure, measures have been taken to minimize the impact of urbanization of the basin by reducing the peak flowrate from the 100-year design storm after urbanization to below the value for undeveloped conditions.

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