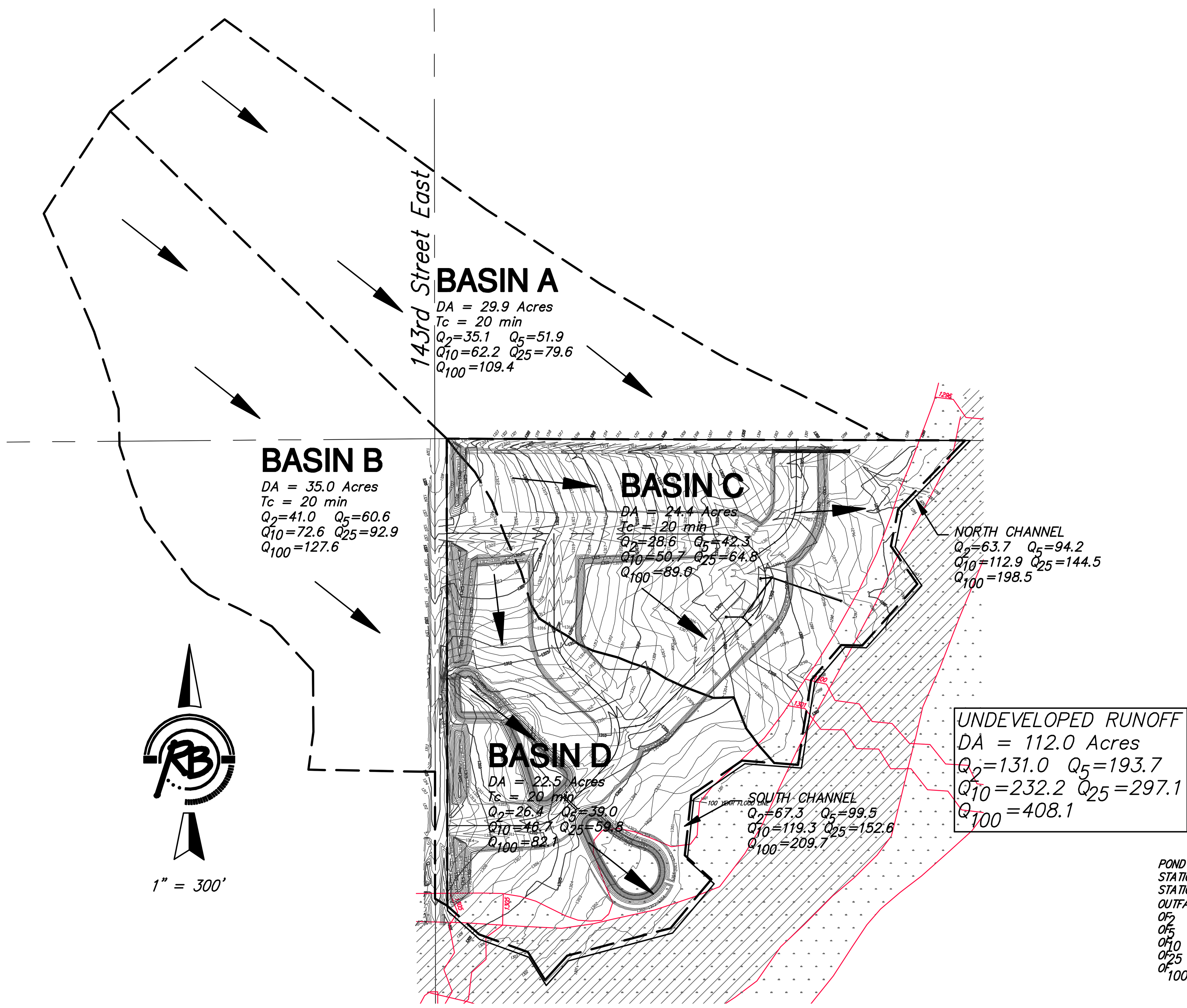
DRAINAGE PLAN FOR
CAMBRIA ADDITION
WICHITA, SEDGWICK COUNTY, KANSAS

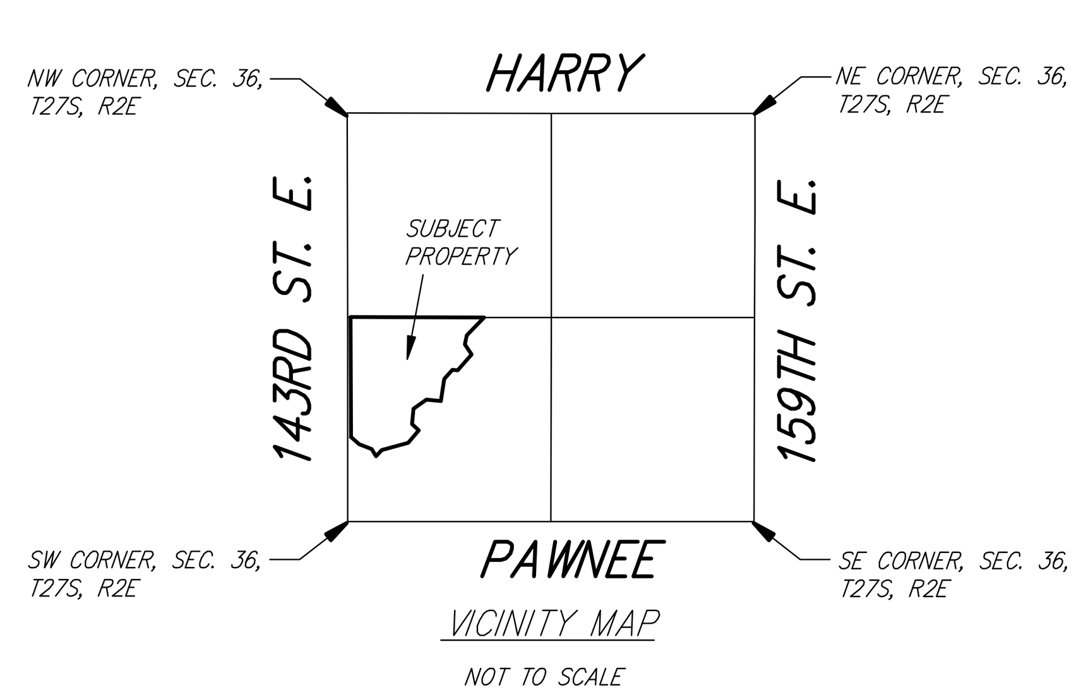


UNDEVELOPED DRAINAGE CONDITION

DRAINAGE DESIGN CALCULATIONS:
The existing drainage analysis was developed using the SCS Method and Rational Method, using the City of Wichita (COW) Drainage Standards for Intensity and Runoff Coefficients. These coefficients are list below for pre and post development in the table below. Detention/Retention Ponds were developed by using a HEC–HMS computer modeling for storm event runoff modeling. Pond One has been designed for a Outfall structure consisting of a 9'x3' RCB. Pond Two has been designed for a Weir outfall structure with 6' width.

Note: DA= Drainage Area, Q= Peak Runoff (cfs), OF=Outfall Flow(cfs), DV=Detention Volume(acre–ft), P=Peak Volume Elevation(usgs)

Undeveloped Time of Concentration equals 20 minutes. Developed Time of Concentration equals 15 minutes (COW std. minimum). Rain Intesity values per City of Wichita Sewer & Drainage Design Standard. Undeveloped and Developed Soil Coeficents per City of Wichita Sewer & Drainage Design Standards for soil classification group "D" with slope between 1%–4% and soil group "D" Residential Single Family ¾ Acre Lots.



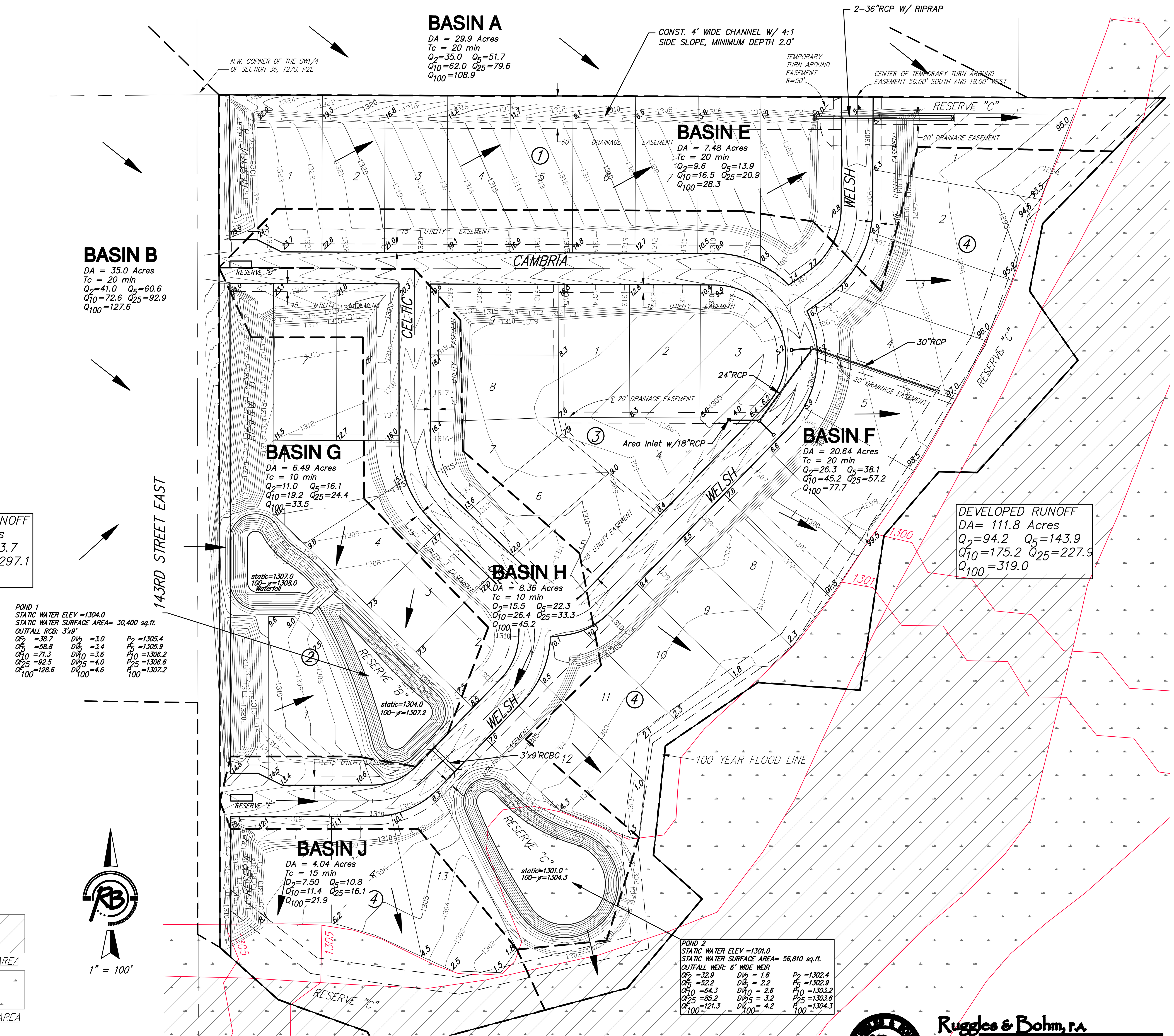
VICINITY MAP
NOT TO SCALE

BENCH MARK: R.R. SPIKE 32.39' E. & 40.87' N. OF THE CENTERLINE INTERSECTION PAWNEE AVENUE & 127TH STREET EAST ELEV.=1348.62 (NGVD) = 161.22 (CITY DATUM)

BENCH MARK: SRB BRASS DISC 1008.17' E. & 55.63' N. OF THE CENTERLINE INTERSECTION PAWNEE AVENUE & 127TH STREET EAST ELEV.=1336.63 (NGVD) = 149.23 (CITY DATUM)

FLOODWAY AREA

FLOODPLAIN AREA



DEVELOPED DRAINAGE CONDITION

Ruggles & Bohm, P.A.
Engineering, Surveying, Land Planning
924 North Main
Wichita, Kansas 67203
www.rbkansas.com
(316) 264-8008
(316) 264-4621 fax
E-mail: info@rbkansas.com