

Drainage Plan

BRENTWOOD SOUTH 2ND ADDITION

Wichita, Sedgwick County, Kansas

$D_a = 1.5$ Acres
 $T_c = 15$ Minutes
 $C_2 = 0.50$
 $C_{100} = 0.76$
 $I_2 = 3.83$ "/hr.
 $I_{100} = 7.37$ "/hr.
 $Q_2 = 2.9$ cfs
 $Q_{100} = 8.4$ cfs

$D_a = 1.8$ Acres
 $T_c = 15$ Minutes
 $C_2 = 0.28$
 $C_{100} = 0.63$
 $I_2 = 3.83$ "/hr.
 $I_{100} = 7.37$ "/hr.
 $Q_2 = 1.9$ cfs
 $Q_{100} = 5.4$ cfs

$D_a = 1.5$ Acres
 $T_c = 15$ Minutes
 $C_2 = 0.50$
 $C_{100} = 0.76$
 $I_2 = 3.83$ "/hr.
 $I_{100} = 7.37$ "/hr.
 $Q_2 = 2.9$ cfs
 $Q_{100} = 8.4$ cfs

$D_a = 2.3$ Acres
 $T_c = 15$ Minutes
 $C_2 = 0.28$
 $C_{100} = 0.63$
 $I_2 = 3.83$ "/hr.
 $I_{100} = 7.37$ "/hr.
 $Q_2 = 2.5$ cfs
 $Q_{100} = 10.7$ cfs

OFFSITE AREA
 $D_a = 9.9$ Acres
 $T_c = 15$ Minutes
 $C_2 = 0.68$
 $C_{100} = 0.80$
 $I_2 = 3.83$ "/hr.
 $I_{100} = 7.37$ "/hr.
 $Q_2 = 25.7$ cfs
 $Q_{100} = 58.3$ cfs

NOTE: CULVERT TO BE RE-ALIGNED THROUGH BERM TO ALIGN WITH THE DRAINAGE EASEMENT ALONG WEST LINE.

OFFSITE AREA TO WEST (THROUGH ROAD DITCH)

$D_a = 7.0$ Acres
 $T_c = 15$ Minutes
 $C_2 = 0.69$
 $C_{100} = 0.80$
 $I_2 = 4.56$ "/hr.
 $I_{100} = 7.37$ "/hr.
 $Q_2 = 22.0$ cfs
 $Q_{100} = 41.2$ cfs

NOTE: A TEMPORARY DRAINAGE EASEMENT ACROSS LOT 1, BLOCK A SHALL BE PROVIDED WITHIN THE PLAT, TO EXPIRE UPON DEVELOPMENT OF LOT 1, BLOCK A.

$D_a = 5.7$ Acres
 $T_c = 15$ Minutes
 $C_2 = 0.69$
 $C_{100} = 0.80$
 $I_2 = 4.56$ "/hr.
 $I_{100} = 7.37$ "/hr.
 $Q_2 = 17.9$ cfs
 $Q_{100} = 33.6$ cfs

$D_a = 1.2$ Acres
 $T_c = 15$ Minutes
 $C_2 = 0.28$
 $C_{100} = 0.63$
 $I_2 = 3.83$ "/hr.
 $I_{100} = 7.37$ "/hr.
 $Q_2 = 1.3$ cfs
 $Q_{100} = 5.6$ cfs

OFFSITE AREA TO EAST (THROUGH ROAD DITCH)

$D_a = 1.3$ Acres
 $T_c = 15$ Minutes
 $C_2 = 0.50$
 $C_{100} = 0.76$
 $I_2 = 4.56$ "/hr.
 $I_{100} = 7.37$ "/hr.
 $Q_2 = 3.0$ cfs
 $Q_{100} = 7.3$ cfs

REGRADE NORTH DITCH AT 0.60% 5.0' BOTTOM AS INDICATED

UNDETAINED FULLY DEVELOPED 100 YEAR RUNOFF TO THE CULVERT UNDER PAWNEE = 140.4 CFS. WITH A HEADWATER DEPTH OF 4.5 FEET, THE 54" RCP CAN PASS 105 CFS (1 FOOT OF FREEBOARD BELOW ROADWAY SURFACE). THE COUNTY YARD 100 YEAR DISCHARGE WILL BE NATURALLY DETAINED BY THE BERM, FORMING A POND NORTH OF THE BERM. DETENTION ON LOT 1 IN THE FORM OF PARKING LOT STORAGE SHOULD BE IMPLEMENTED UPON DEVELOPMENT OF LOT 1. ALSO, THE COMMERCIAL PROPERTY TO THE WEST SHOULD IMPLEMENT PARKING LOT STORAGE UPON DEVELOPMENT OF THAT LAND.

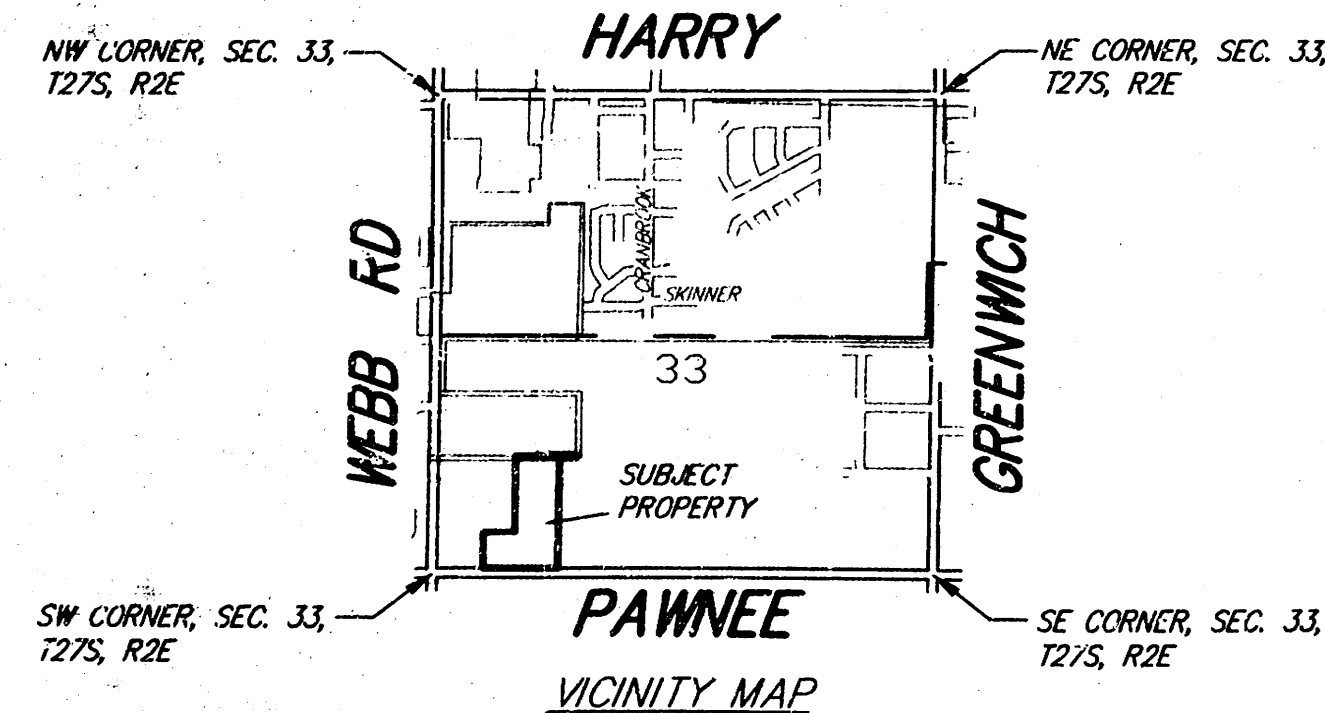
LEGAL DESCRIPTION:

That part of the SW 1/4 of Sec. 33, T27S, R2E of the 6th P.M., Sedgwick County, Kansas, described as beginning at the northwest corner of Lot 25, Block 2, Brentwood South Addition, Wichita, Sedgwick County, Kansas; thence S89°58'00"W, 345.64 feet; thence S00°00'00"W, 889.75 feet; thence S89°58'00"W, 319.15 feet; thence S00°00'00"W, 432.51 feet; thence N89°34'35"E, 668.70 feet; thence N00°10'10"W, 1317.70 feet to the place of beginning, EXCEPT the South 40.00 feet for right of way.

OWNER:
 Brentwood Development, Inc.
 527 N. Forestview
 Wichita, Kansas 67235

Attn: Steve Miller
 Ph. (316) 259-2377

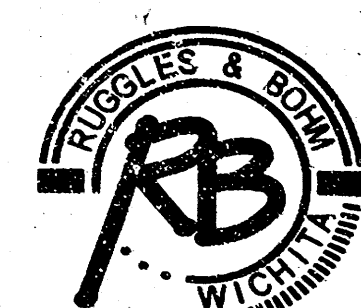
DATE OF TOPOGRAPHY:
 AUGUST 6, 2003



BENCH MARK: COW BENCHMARK AT THE SOUTHEAST CORNER OF THE INTERSECTION OF DRAINBROOK AND SKINNER ELEV.=1334.02 (M.S.L.)

ON SITE BENCH MARK: R.R. SPIKE ON EAST FACE OF POWER POLE 1,215 FEET EAST AND 40 FEET NORTH OF THE S.W. CORNER, SEC. 33, T27S, R2E ELEV.=1388.99 (M.S.L.)

DWG FILE: 2438P\Drainage Plan.dwg
 PROJECT NO: 2438P
 FEB 5, 2004



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