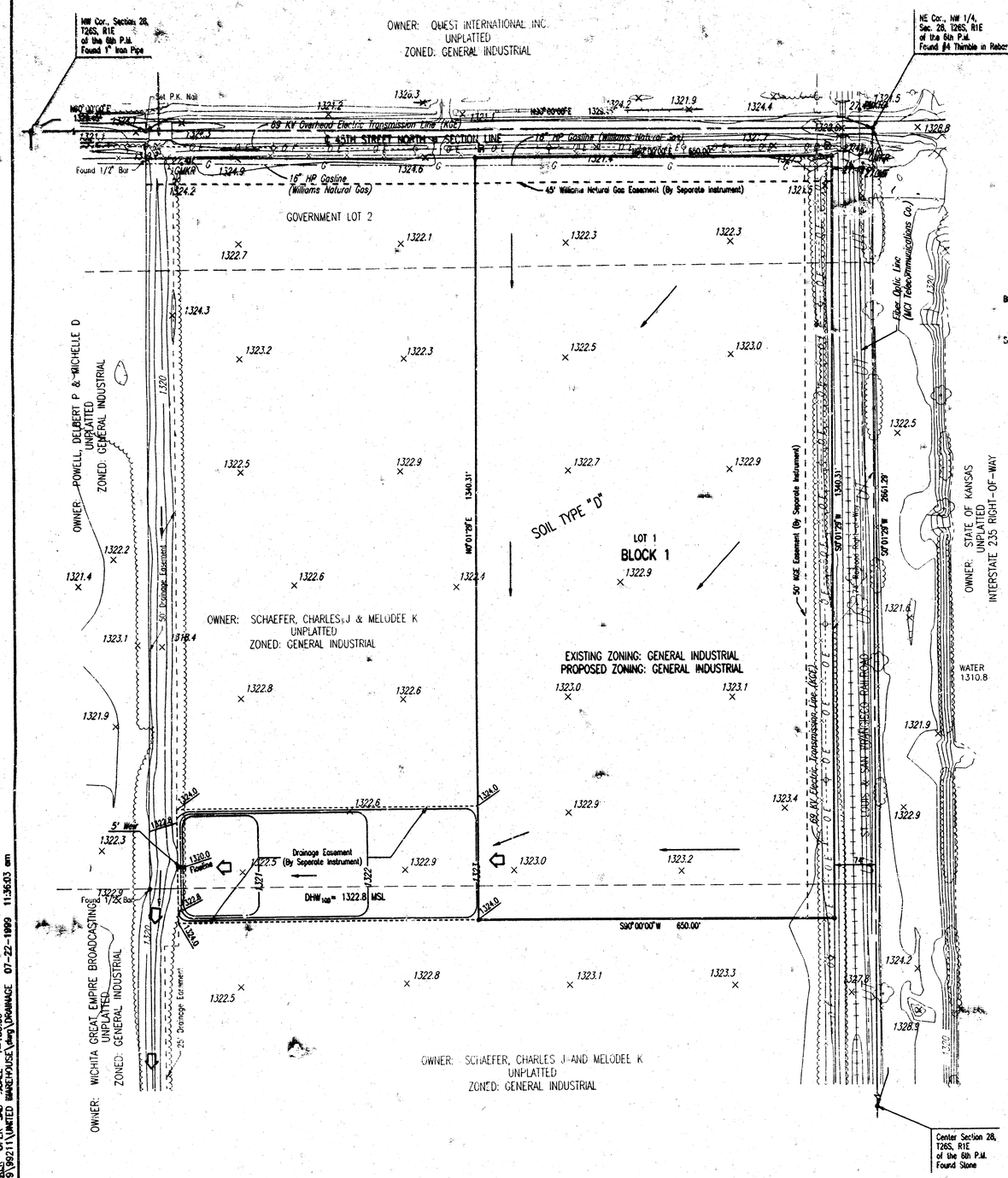
DRAINAGE PLAN
UNITED WAREHOUSE ADDITION
TO SEDGWICK COUNTY, KANSAS

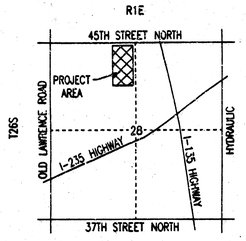


SCALE: 1" = 100'

● = 3/4" IRON PIPE W/PEC CAP UNLESS OTHERWISE NOTED

BM : RR SPIKE IN TOP WEST END, NORTH ABUTMENT OF RR BOX AT SOUTH SIDE OF 45TH STREET NORTH, APPROX. 60' WEST OF NE COR., NW 1/4, SEC. 28
ELEV. = 1327.95

Set : CHISELED " Δ " AT WEST END NORTH HUB GUARD OF A RCB 1/4 MILE EAST OF OLD LAWRENCE ROAD ON 45TH STREET NORTH.
ELEV. = 1327.94



VICINITY MAP

DRAINAGE TO BE CONVEYED TO THE DRAINAGE EASEMENT TO THE SOUTHWEST VIA DRIVES, FLUMES, PRIVATE STORM SEWERS, SWALES OR OTHER APPROVED DRAINAGE DEVICES.

MINIMUM OPENING FOR LOT 1, BLOCK 1 = 1325.0 M.S.L.

LEGEND

- 1322 — PROPOSED CONTOUR
- 1320 — EXISTING CONTOUR
- MAJOR STORM WATER OVERFLOW (Q100)
- MINOR STORM WATER FLOW (Q2)
- 1328.0 SPOT ELEVATION

Existing Conditions

Cultivated farmland
Soil - Tabler Silty Clay Loam (Soil Type "D")
Nearly level

Rational Method ($Q=AIC$)
Area = 20 Acres
t_c = 25 Min (Drainage from northeast corner to southwest corner, 1500ft at 1 ft/sec)

C_2= 0.3 i_2= 2.93 Q_2= 17.6 cfs
C_{100}= 0.65 i_{100}= 5.97 Q_{100}= 77.8 cfs

Developed Conditions

Industrial Site
70-80% Impervious

Rational Method ($Q=AIC$)
Area = 20 Acres
t_c = 15 Min (Drainage from northeast corner to southwest corner, 1500ft at 2 ft/sec)

C_2= 0.68 i_2= 3.86 Q_2= 51.7 cfs
C_{100}= 0.80 i_{100}= 7.36 Q_{100}= 117.8 cfs

Pond Design

Area= 200'x550'= 2.5 Acres
Dry Detension Basin
Weir Outfall
$Q=CLh^{3/2}$
L = 5 ft
C=3

Outfall Elevation = 1320.0
Designed High Water = 1322.8
Peak Outfall = 71 cfs (100-yr storm)

Elevation MSL	Pond Area Acres	Q_{out} cfs
1320	0	0.0
1321	0.5	15.0
1322	1.5	42.4
1322.8	2.22	71.0
1323	2.4	77.9
1324	2.5	120.0

DSNR: KER OPER: SAD SCALE: 1=100.00
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