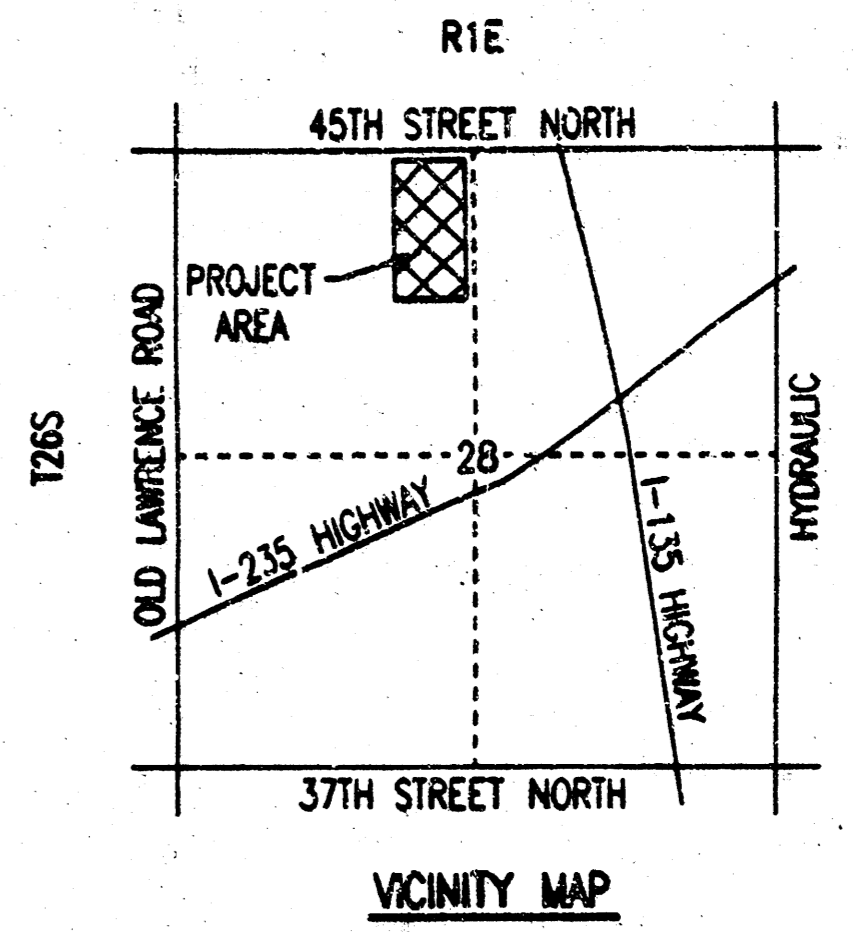
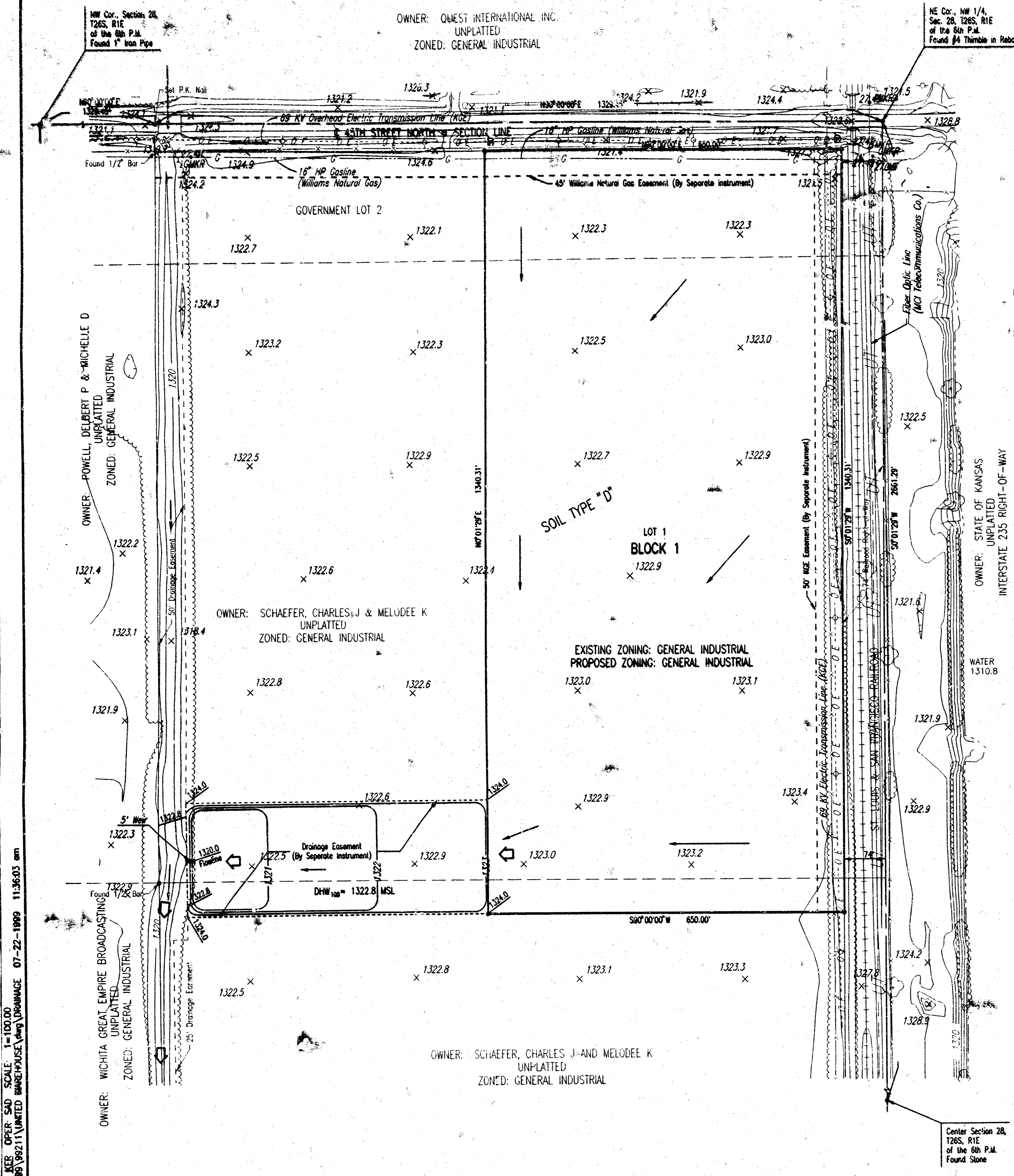


# DRAINAGE PLAN UNITED WAREHOUSE ADDITION TO SEDGWICK COUNTY, KANSAS



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



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

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

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)
- SPOT ELEVATION

**Existing Conditions**

Unimproved farmland  
Soil: Tabor Silty Clay Loam (Soil Type "D")  
Nearly level

Rational Method (Q-A-C)  
Area = 20 Acre  
L<sub>r</sub> = 25 Min  
(Drainage from northeast corner to southwest corner, 1500R at 1 Wsec)

C <sub>u</sub> = 0.3	I <sub>u</sub> = 2.93	Q <sub>u</sub> = 17.6 cfs
C <sub>100</sub> = 0.65	I <sub>100</sub> = 5.97	Q <sub>100</sub> = 77.6 cfs

**Developed Conditions**

Industrial Site  
70-80% impervious

Rational Method (Q-A-C)  
Area = 20 Acre  
L<sub>r</sub> = 15 Min  
(Drainage from northeast corner to southwest corner, 1500R at 2 Wsec)

C <sub>u</sub> = 0.68	I <sub>u</sub> = 3.80	Q <sub>u</sub> = 51.7 cfs
C <sub>100</sub> = 0.80	I <sub>100</sub> = 7.36	Q <sub>100</sub> = 117.8 cfs

**Pond Design**

Area = 200'x550' = 2.5 Acre  
Dry Detention Basin  
Wear Outfall  
Q = CL<sup>2</sup>  
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 <sub>out</sub> 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

DSMR: KJR OPER SAO SCALE: 1"=100.00  
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