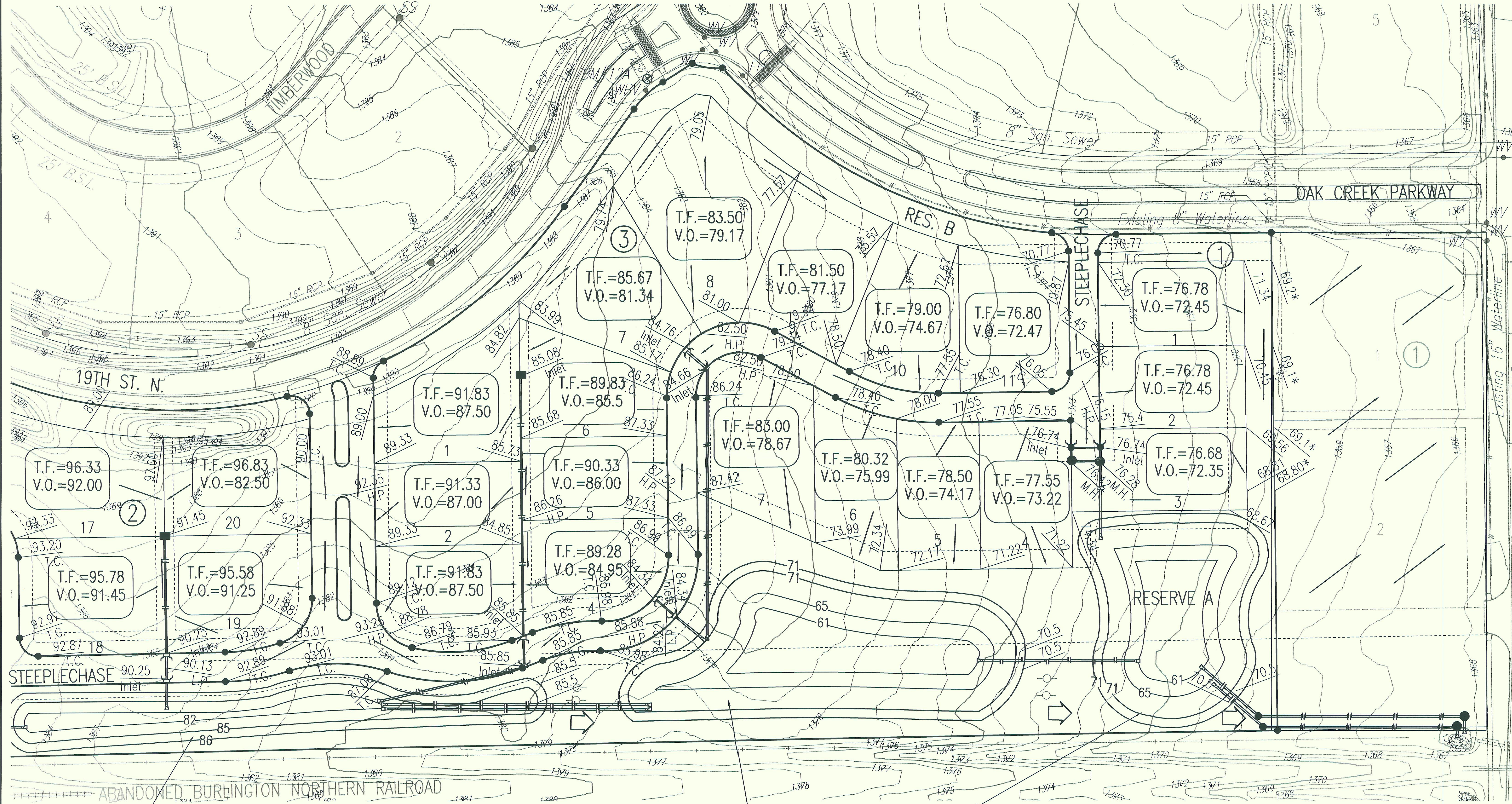


CARRIAGE OAKS - MASTER GRADING PLAN

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



POND 9C
 STATIC EL. = 1382.00
 100 YR. EL. = 1385.80

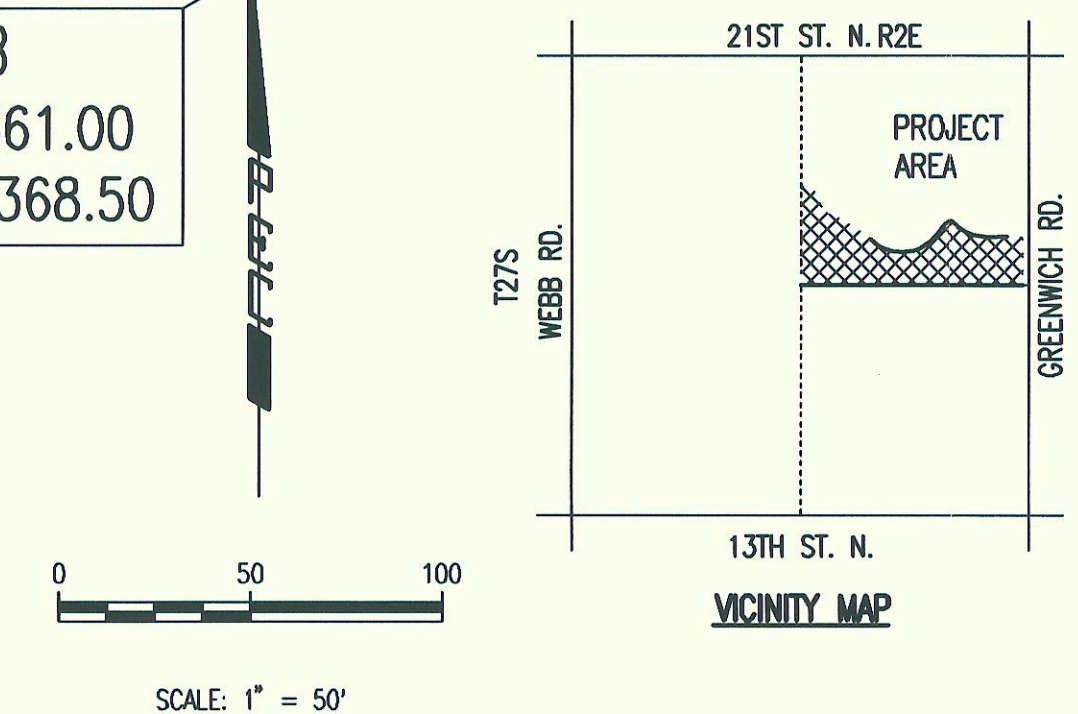
POND 10B
 STATIC EL. = 1361.00
 100 YR. EL. = 1368.50

POND 10A
 STATIC EL. = 1361.00
 100 YR. EL. = 1367.60

MINIMUM PAD ELEVATIONS (LOWEST OPENING) SHALL BE AS FOLLOWS:

BLOCK 1	CITY DATUM	NGVD29	NAVD88
LOT 3	183.10	1370.50	1370.99
LOT 4	182.20	1369.60	1370.99
LOT 5	182.20	1369.60	1370.09
LOT 6	182.20	1369.60	1370.09
LOT 7	182.20	1369.60	1370.09
LOT 8	201.50	1388.29	1389.39

- LEGEND**
- 88.1 SPOT ELEVATION
 - 90.1 HIGH POINT ELEVATION
 - 88.1* MATCH EXISTING ELEVATION
 - 96.5 TOP OF CURB ELEVATION
 - 96.5 L.P. LOW POINT ELEVATION
 - STORM SEWER AND INLET
 - STORM SEWER AND MANHOLE
 - 100 YEAR STORM FLOWS
 - 2 YEAR STORM FLOWS
 - - - EASEMENT



No.	Revision	By	Date
CITY OF WICHITA SEDGWICK COUNTY, KANSAS CARRIAGE OAKS AT OAK CREEK MASTER GRADING (EAST)			
Professional Engineering Consultants, P.A. 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	JEH	Job No.	09223
Drawn by	JAG	Date	July 2009
			Sht. 2 of 2

Served 07-30-2009 4:14:40 PM by JAG
 Plot Scale 1:100 07-31-2009 2:36:44 PM
 Q:\2009\09223\09223 Master Grading Plan (East)

DRAINAGE BASIN 9A = 7.75 AC.

NWL = N/A

T.O.B. (1390) = 0.604 AC.

Pre Tc = 26.3 Minutes
 Post Tc = 10.59 Minutes
 H.S.G. = D
 Pre CN = 84
 Post CN = 88
 100 Yr. - 24 Hr. Rainfall = 7.68 Inches
 POND DHM₁₀₀ = 1386.9

DISCHARGE RATES 9A					
YEAR	2	5	10	25	100
PRE CFS	15.5	22.0	26.9	33.5	43.4
POST CFS	26.7	35.5	42.6	52.0	66.0

Basin 11 drains to the Glen Meadows subdivision pond.

DRAINAGE BASIN 9B = 6.76 AC.

NWL = N/A

T.O.B. (1388) = 0.190 AC.

Pre Tc = 19.4 Minutes
 Post Tc = 10.69 Minutes
 H.S.G. = D
 Pre CN = 84
 Post CN = 88
 100 Yr. - 24 Hr. Rainfall = 7.68 Inches
 POND DHM₁₀₀ = 1387.6

DISCHARGE RATES 9B					
YEAR	2	5	10	25	100
PRE CFS	15.9	22.5	27.5	34.1	44.2
POST CFS	21.3	29.4	35.6	43.7	56.0

DRAINAGE BASIN 9C = 6.10 AC.

NWL = N/A

T.O.B. (1386) = 0.696 AC.

Pre Tc = 12.9 Minutes
 Post Tc = 12.14 Minutes
 H.S.G. = D
 Pre CN = 84
 Post CN = 88
 100 Yr. - 24 Hr. Rainfall = 7.68 Inches
 POND DHM₁₀₀ = 1385.8

DISCHARGE RATES 9C					
YEAR	2	5	10	25	100
PRE CFS	16.8	23.6	28.8	35.8	46.3
POST CFS	18.4	25.4	30.7	37.8	49.2

DRAINAGE BASIN 10A = 4.28 AC.

NWL = N/A

T.O.B. (1371) = 1.05 AC.

Pre Tc = 15.3 Minutes
 Post Tc = 10.17 Minutes
 H.S.G. = D
 Pre CN = 84
 Post CN = 88
 100 Yr. - 24 Hr. Rainfall = 7.68 Inches
 POND DHM₁₀₀ = 1367.6

DISCHARGE RATES 10A					
YEAR	2	5	10	25	100
PRE CFS	11.1	15.7	19.2	23.9	30.9
POST CFS	13.6	18.8	22.8	28.0	37.7

DRAINAGE BASIN 10B = 6.02 AC.

NWL = N/A

T.O.B. (1371) = 0.717 AC.

Pre Tc = 15.7 Minutes
 Post Tc = 10.69 Minutes
 H.S.G. = D
 Pre CN = 84
 Post CN = 88
 100 Yr. - 24 Hr. Rainfall = 7.68 Inches
 Pond Peak Discharge Q₁₀₀ = 48.7 CFS
 POND DHM₁₀₀ = 1368.5

DISCHARGE RATES 10B					
YEAR	2	5	10	25	100
PRE CFS	15.5	21.9	26.7	33.2	43.0
POST CFS	30.9	44.8	54.8	65.8	80.3
POND OUT CFS	22.6	28.2	32.8	39.8	48.7

DRAINAGE BASIN 10C = 2.74 AC.

NWL = N/A

T.O.B. (1371) = 0.717 AC.

Pre Tc = 15.3 Minutes
 Post Tc = 10.17 Minutes
 H.S.G. = D
 Pre CN = 84
 Post CN = 96
 100 Yr. - 24 Hr. Rainfall = 7.68 Inches

DISCHARGE RATES 10C					
YEAR	2	5	10	25	100
PRE CFS	6.3	8.9	10.9	13.6	17.6
POST CFS	11.3	14.6	17.0	20.3	25.1

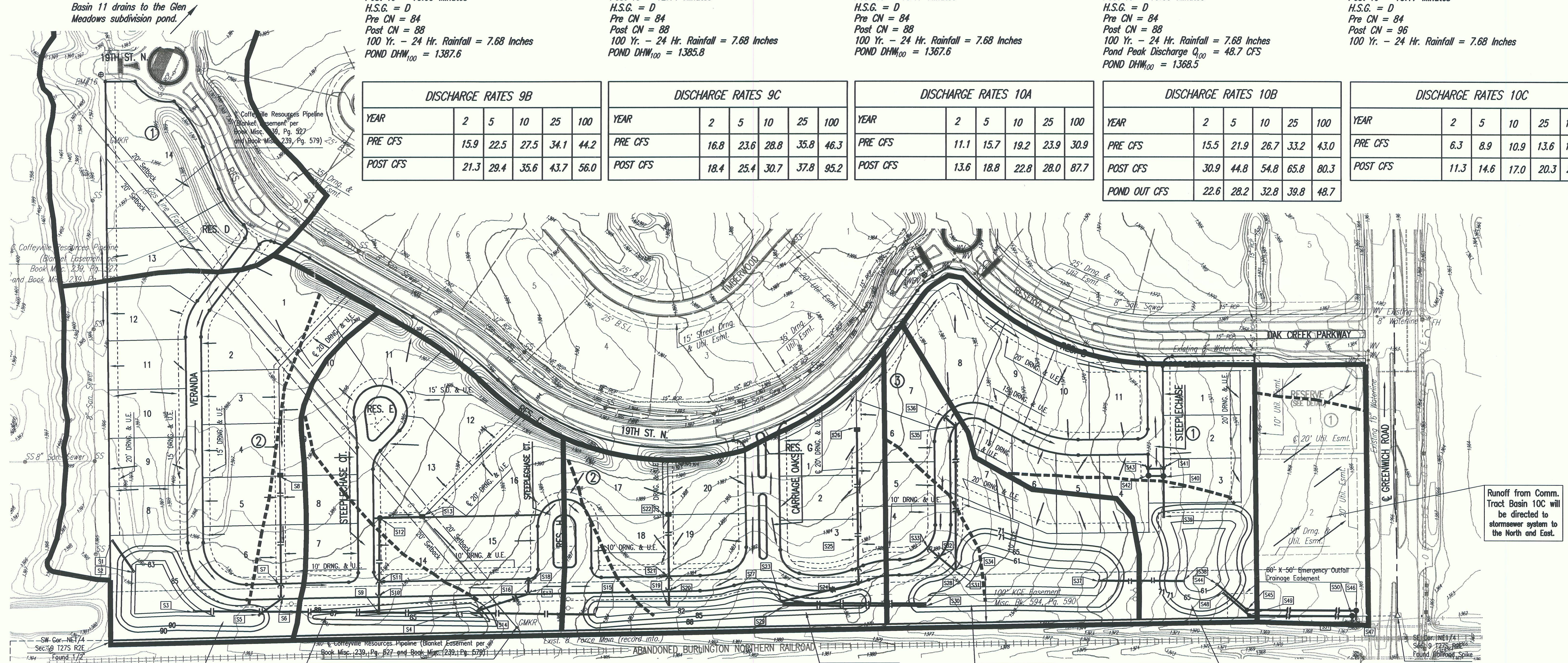
CARRIAGE OAKS - DRAINAGE PLAN

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

DRAINAGE CALCULATIONS

LEGEND

- BASIN BOUNDARY
- STORM WATER FLOW DIRECTION
- Tc DRAINAGE PATH



POND 9A
 STATIC EL. = 1383.00
 100 YR. EL. = 1386.90

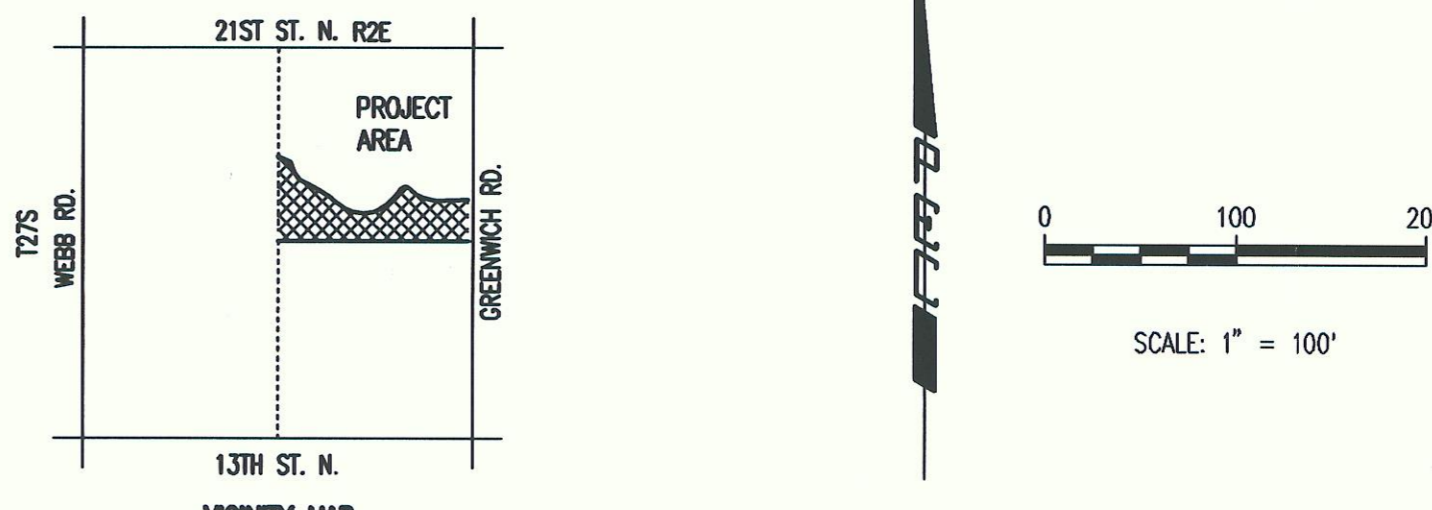
POND 9B
 STATIC EL. = 1383.00
 100 YR. EL. = 1387.60

POND 9C
 STATIC EL. = 1382.00
 100 YR. EL. = 1385.80

POND 10A
 STATIC EL. = 1361.00
 100 YR. EL. = 1367.60

POND 10B
 STATIC EL. = 1361.00
 100 YR. EL. = 1368.50

STRUCTURE	FL. ELEV.	STRUCTURE	FL. ELEV.	STRUCTURE	FL. ELEV.	STRUCTURE	FL. ELEV.
S1	1392.00'	S16	1386.00'	S31	1369.00'	S46	1362.00'
S2	1385.00'	S17	1387.39'	S32	1379.34'	S47	1362.00'
S3	1383.00'	S18	1388.39'	S33	1379.44'	S48	1366.60'
S4	1383.00'	S19	1383.50'	S34	1369.00'	S49	1364.55'
S5	1386.00'	S20	1383.58'	S35	1379.56'	S50	1362.75'
S6	1386.12'	S21	1383.70'	S36	1379.75'	S51	1362.00'
S7	1386.21'	S22	1384.53'	S37	1362.00'		
S8	1387.07'	S23	1382.00'	S38	1362.00'		
S9	1385.00'	S24	1382.48'	S39	1369.00'		
S10	1385.06'	S25	1382.58'	S40	1371.28'		
S11	1385.12'	S26	1383.64'	S41	1371.74'		
S12	1385.61'	S27	1382.00'	S42	1371.42'		
S13	1385.94'	S28	1369.00'	S43	1371.74'		
S14	1383.00'	S29	1382.00'	S44	1362.00'		
S15	1382.00'	S30	1369.00'	S45	1362.00'		



No.	Revision	By	Date

CITY OF WICHITA
 SEDGWICK COUNTY, KANSAS
CARRIAGE OAKS AT OAK CREEK
DRAINAGE PLAN

Professional Engineering Consultants, P.A.
 303 S. TOPEKA • WICHITA, KANSAS 67202
 316-262-2691 • FAX 316-262-3003

Designed by	JEH	Job No.	09223
Drawn by	JAG	Date	JULY 2009

Sh. 1 of 1

Scaled 07-30-2009 4:14:22 PM by JAG
 Plot Scale 1:100 07-31-2009 11:25:46 AM
 C:\2009\09223\09223 Updated Drainage Plan