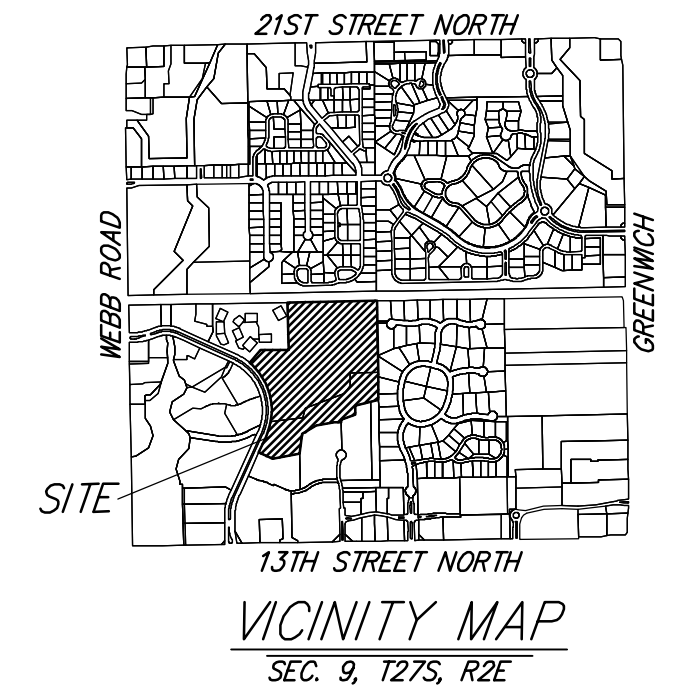
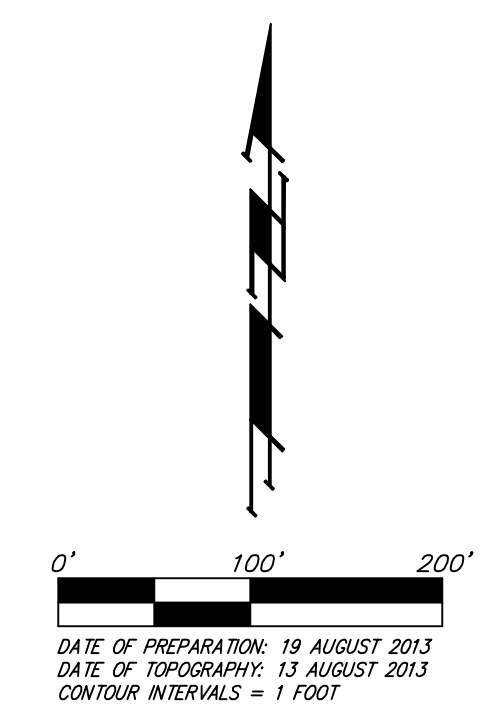
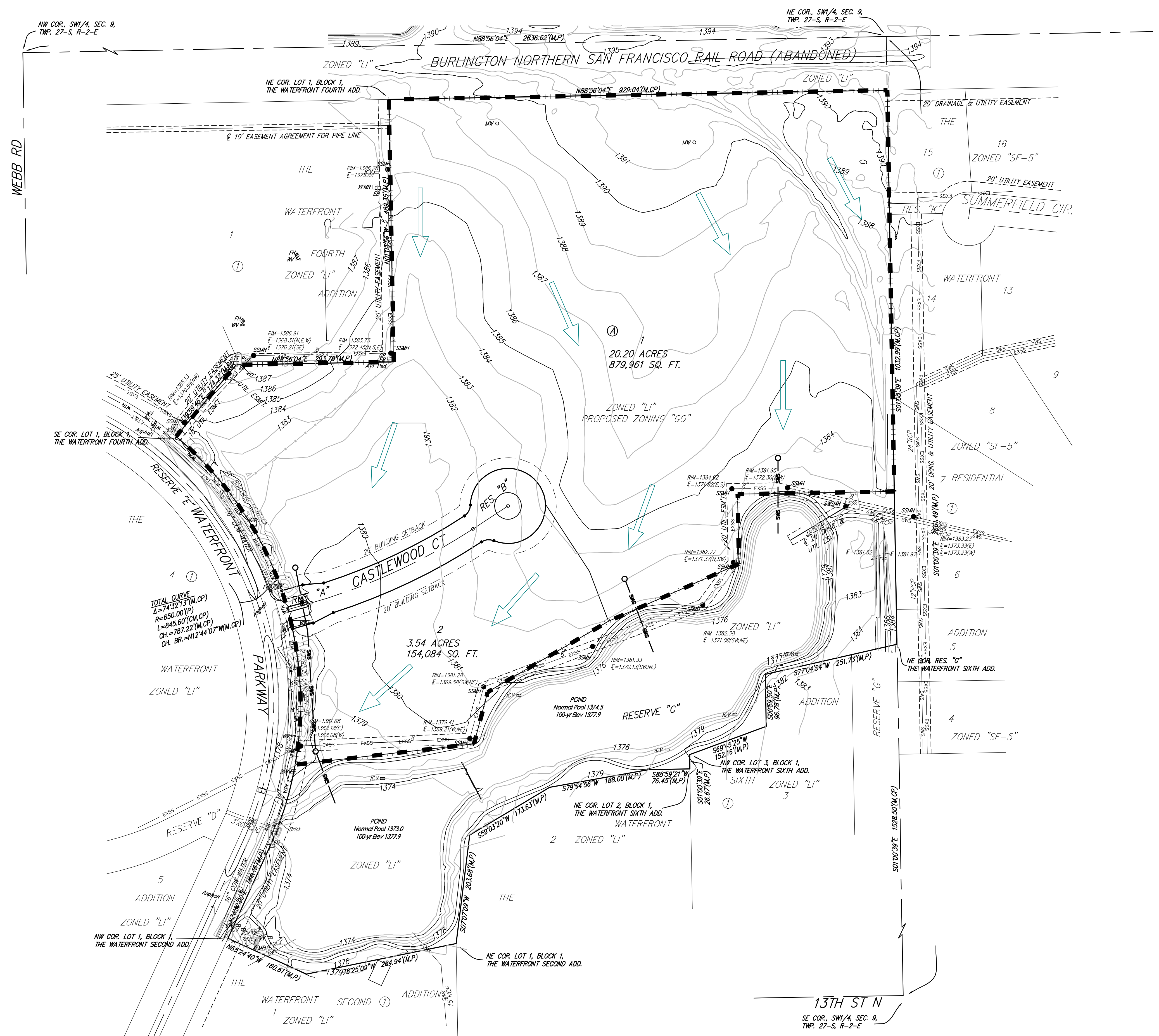


DRAINAGE PLAN

THE WATERFRONT SEVENTH ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS



TOTAL SITE FLOWS	
EXISTING <i>(pre detention)</i>	DEVELOPED <i>(pre detention)</i>
Area = 24.6 acres	Area = 24.6 acres
CN = 84	CN = 91
Tc = 50 min	Tc = 36 min
Q 2 = 31 cfs	Q 2 = 49 cfs
Q 5 = 44 cfs	Q 5 = 67 cfs
Q 10 = 54 cfs	Q 10 = 79 cfs
Q 100 = 92 cfs	Q 100 = 124 cfs

CN's and Tc's used are to match the approved Waterfront 7th Drainage Plan by MKEC to correspond to the original pond design.

SWS Pipes as shown will be sized and final location determined upon site development. The location shown herein are arbitrary and portray all stormwater entering the existing pond facilities will be via SWS.

Ponds located in Reserve C were sized and constructed in previous phases of Waterfront Additions. The ponds currently provide detention and water quality treatment. Downstream Channel Protection is provided by the Waterfront complex pond system (per approved Waterfront 7th Drainage Plan, MKEC 2012).

Stormwater Quality Management
Appendix 3.3 contains the WQv calculations for the site, and for the remaining undeveloped tributary area to the south. Although some open areas are planned for the site, the calculations proceeded with the assumption that these would not be any post-developed wooded areas. For the area south of the Hotel Pond, this area will develop completely as commercial. Approximately 1.1-acre-ft of treatment volume is required for the site, and 1.0-acre-ft for the undeveloped tributary area to the south. Consequently, a total 2.1-acre-ft of WQv is needed. This treatment volume is obtained below the normal pool of the upper portion of the Hotel Pond. Table 3.2 below contains the volumetric calculations for the upper part of the Hotel Pond.

Table 3.2 - Normal Pool Volume

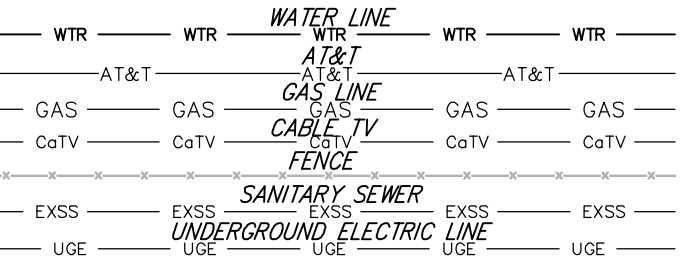
Elev. (ft)	Elev. Diff. (ft)	Area (sq.ft)	Inc. Vol. (cu.ft)	Cum. Vol. (cu.ft)	Cum. Vol. (ac.ft)
1361		17,380	0	0	0.0
1364	3	26,137	66,276	66,276	1.5
1365	1	54,888	40,503	106,779	2.4
1374.5	9.5	763,653	763,653	870,432	20.0

At the normal pool elevation of 1374.5 a permanent water quality pool volume of 20-acre-ft is provided. This pool will remove the required 80% of post-developed total suspended solids (TSS) load from the site and the remaining undeveloped area to the south. The upper pool of the Hotel Pond will act as a standard wet pond, with 100% of the WQv contained within the permanent pool volume.

- (M) = MEASURED
- (D) = DESCRIBED
- (P) = PLATTED
- (CP) = CALCULATED PER PLATTED INFO.
- (CM) = CALCULATED PER MEASURE

- CB = Catch Basin
- CP = Cable TV Pedestal
- EB = Electric Box
- FH = Fire Hydrant
- GM = Gas Meter
- ICV = Irrigation Control Valve - Valve Box
- LP = Light Pole
- MW = Monitoring Well
- SSMH = Sanitary Sewer Manhole
- ATT Ped = ATT Pedestal
- SSSMH = Stormwater Sewer Manhole

- Well = Cased Well
- WM = Water Meter
- WV = Water Valve
- XSMR = Transformer



DRAINAGE PLAN

THE WATERFRONT SEVENTH ADDITION