Public Works, Engineering Division
Stormwater Management Subdivision Submittal Checklist

Reviewer:_____ Date:_____

Subdivision Name: Mount Carmel River Add. Location: 1972 N. Mt. Carmel

Total Land Area Of Ownership: 0.5 Acres

Type: X Residential _____Commercial _____Industrial _____Recreation _____Municipal _____Other

Applicant:_____ Contact: Curtis Harshfield Phone #: 945-2833

Engineer: K E Miller Eng. PA Contact: Kirk Miller Phone # 264-0242

Please check the appropriate box: I = Included; NA = Non-Applicable; R= Required prior to development

(If "NA" is checked, an explanation must be entered)

	Applicant			Engr	
Tab 1. Project Narrative	**I**	**NA**	**Explanation / Location in Plan**	**I**	**NA**
A. Site Location Map, using USGS Map	X				
B. Discussion of development, existing conditions, and proposed impacts on stormwater, wetland, riparian, and flood plain		X			
C. Discussion of offsite conditions	X				
D. Summary of runoff calculations (pre/post development) No increase in peak discharge for all storm series	X		no post development		
E. Narrative description of the type and function of the permanent best management practices that are incorporated into the site design		X			
F. Copy of the plat	X				
G. Prelim. four corner lot grading plan (The final grading plan shall be sealed, signed and dated prior to Engineering receiving the final paving and stormwater drain plans.One plan sheet and PDF shall be submitted to the Subdivision Engineer.)		X			
H. Professional Engineer seal, signature and date on cover of report	X				
I. CD of drainage plan in PDF format (one file) and one paper copy bound with this checklist included behind the cover	X				

	Applicant			Engr	
Tab 2. Existing Conditions Runoff Calculations	**I**	**NA**	**Explanation / Location in Plan**	**I**	**NA**
A. Copy of applicable orthophoto showing proposed project boundaries (preferable in color)	X				
B. Runoff Method (Rational, Hydrograph Method, or other approved methods by Engineering)	X				
C. Existing topography (no greater than 2-foot contours, 1-foot recommend)	X				
D. Total Site Area and Total Impervious Area (acres)	X				
E. Benchmarks used for site control	X				
F. Streams, creeks, and waterway labeled	X				
G. Predominant soils from USDA soil surveys, and/or on site soil borings	X				
H. Location and boundaries of natural features such as wetlands, lakes, and ponds with the normal water elevation noted	X				
I. Location of existing roads, buildings, parking lots and other impervious areas	X				

Consulting Engineer Initials KM

J. Location of existing utilities (e.g., water, sewer, gas, electric) and easements	X				
K. Location of existing conveyance systems such as storm drains, inlets, catch basins, channels, swales, and areas of overland flow		X			
L. Flow paths		X			
M. Location and dimensions of existing channels, bridges or culvert crossings		X			
N. Existing conditions hydrologic analysis for runoff rates, volumes and velocities showing methodologies used and supporting calculations (2, 5, 10, 25 & 100 year, 24-hour storm events) or Critical Duration	X				
O. Assumed pre-developed runoff curve numbers	X				
P. Existing time of concentrations used in calculations	X				
Q. Evaluate immediate downstream drainage capacity, not to exceed more than 0.25 miles downstream of site		X			
R. Existing structural elevations (e.g., invert of pipes, manholes, etc.)		X			
S. Cross-section data for open channels		X			
T. Ground water elevations, if applicable		X			

	Applicant			Engr	
Tab 3. Post-Development Hydrologic Analysis	**I**	**NA**	**Explanation / Location in Plan**	**I**	**NA**
A. Proposed (post-development) conditions hydrologic and hydraulic analysis for runoff rates, volumes, HGL, and velocities showing the methodologies used and supporting calculations for all applicable design storms (2, 5, 10, 25 & 100 year, 24-hour storm events)		X			
B. Proposed time of concentrations used in calculations		X			
C. Assumed post-developed runoff curve numbers		X			
D. Proposed contours for detention facilities (to equal area used in outlet rating curves)		X			
E. Preliminary sizing calculations for stormwater controls including contributing drainage area, storage, and outlet configuration		X			
F. Stage-storage-discharge or outlet rating curves and inflow and outflow hydrographs for storage facilities		X			
G. Final analysis of potential upstream/downstream impact/effects of project, where necessary		X			
H. Dam safety analysis, where necessary		X			
I. Existing and proposed structural elevations (e.g., invert of pipes, manholes, etc.)		X			
J. Design water surface elevations and normal pool elevation for ponds.		X			
K. Typical detail for outlet structures, embankments, spillways, grade control structures, conveyance channels, etc. To include height, width, elevation, and/or diameter.		X			
L. Proposed limits of clearing and grading		X			
M. Location of existing and proposed roads, buildings, parking lots and other impervious areas.		X			
N. Location of existing and proposed utilities (e.g., water, sewer) and easements		X			
O. Location of existing and proposed conveyance systems such as storm drains, inlets, catch basins, channels, swales, and areas of overland flow		X			
P. Preliminary location and dimensions of proposed channel modifications, such as bridge or culvert crossings		X			

Consulting Engineer Initials KM

Q. Preliminary selection and location of stormwater controls		X			
R. Emergency overflow structure's flow path		X			
S. Detention facility provides one-foot of freeboard above the HWL and emergency outfall shown (top of berm elevation shown)		X			
T. The 100-year 24-hour HWL delineated on the plan for detention pond		X			
U. Lowest opening elevations table on the plat for structures located adjacent to channels or ponds		X			
V. Stormwater Management Facilities located within a Reserve		X			
W. Maintenance of stormwater management facility specified in the platters text as the responsibility of the Homeowner or Business Association		X			
X. Off-site drainage easements or agreements required		X			

	Applicant			Engr	
Tab 4. Floodplain Submittal	**I**	**NA**	**Explanation / Location in Plan**	**I**	**NA**
A. Provide source of flood profile		X			
B. Nearest base flood elevations		X			
C. Delineation of pre-developed regulatory floodplain/floodway limits		X			
D. Delineation of post-developed regulatory floodplain and floodway limits		X			
E. Floodplain boundary determination per elevation (project limits shown)		X			
F. Provide source of floodway data table and discharges		X			
G. Provide all hydrologic and hydraulic study information for site-specific floodplain studies, unnumbered Zone A area elevation determinations and flood plain map revisions		X			
H. Provide regulatory floodway and four natural profile models (10,50,100, and 500-yr) for existing and future watershed conditions		X			
I. Location of floodplain/floodway limits and relationship of site to upstream/downstream properties (floodplain limits to be per elevation and scaled location)		X			
J. Flood plains and floodways located within a Reserve		X			

	Applicant			Engr	
Tab 5. Federal, State and Local Permits (to be provided prior to construction unless otherwise specified)	**I/R**	**NA** X	**Explanation / Location in Plan**	**I/R**	**NA**
A. US Army Corps of Engineers - Regulatory program permits (404 water quality certification)		X			
B. Kansas Department of Agriculture - Division of Water Resources Permits (Stream Obstruction, Channel Change, Flood Plain Fill, Levee, Water Appropriations, Dam safety permit, etc.)		X			
C. Federal Emergency Management Agency (FEMA) Letter of Map Changes (LOMA, LOMR, LOMR-f, CLOMR, etc.) CLOMR shall be included and approved for fill placed in the regulatory floodway		X			
D. Kansas Department of Transportation		X			
E. Sedgwick County Right-of-way Permit		X			

Consulting Engineer Initials KM