


- 5.4. CALCIUM CHLORIDE SHALL NOT BE USED IN CONCRETE MIX DESIGNS
- 5.5. AB AND ASB SHALL BE CAB OR CMB PER SSPWC 200-2. ALTERNATELY, PMB PER SSPWC 200-2 MAY BE USED FOR ASB.
- 5.6. FOR PUBLIC AND PRIVATE STREET AND PARKING LOT SECTIONS, INCLUDING CURBS AND GUTTERS, THE UPPER 6" OF SUBGRADE AND AB AND ASB SHALL BE COMPACTED TO 95% RELATIVE COMPACTION. FOR SIDEWALKS AND RESIDENTIAL DRIVEWAYS, SUBGRADE AND AB COMPACTION SHALL BE 90%.
- 6. DRAINAGE DESIGN
 - 6.1. HYDROLOGIC AND HYDRAULIC ANALYSES IN SUPPORT OF DRAINAGE SYSTEM DESIGN SHALL BE PERFORMED IN CONFORMANCE WITH VCWPD STANDARDS.
 - 6.2. ROAD CROSS-SECTIONS MAY BE USED TO CONVEY WATER ORIGINATING ON THE STREET, FROM ADJOINING LOTS, AND FROM ADJACENT UNIMPROVED AREAS, PROVIDED VEHICLE AND PEDESTRIAN USE OF THE ROADS IS NOT UNREASONABLY RESTRICTED, AND ROAD IMPROVEMENTS AND ADJACENT PROPERTIES WILL NOT BE DAMAGED. FLOW FROM UNIMPROVED AREAS SHALL HAVE FACILITIES TO REMOVE SILT AND DEBRIS BEFORE ENTERING THE STREET. THE HYDRAULIC DESIGN SHALL INCLUDE THE EFFECT OF NON-UNIFORM FLOW AT CHANGES IN GRADE, BENDS AND JUNCTIONS OF MULTIPLE STREAMS.
 - 6.3. PEAK STORM RUNOFF THAT HAS A 10% PROBABILITY OF OCCURRENCE (10-YEAR AVERAGE RETURN PERIOD) SHALL BE USED FOR CALCULATING THE CAPACITY OF ROAD DRAINAGE FACILITIES. PEAK STORM RUNOFF THAT HAS A 2% PROBABILITY OF OCCURRENCE 50-YEAR AVERAGE RETURN PERIOD) SHALL BE USED FOR CALCULATING THE CAPACITY OF SUMP AREA DRAINAGE FACILITIES. ALL DRAINAGE FACILITIES SHALL BE DESIGNED SUCH THAT ADJACENT LOT PADS WILL NOT BE FLOODED BY THE STORM RUNOFF THAT HAS A 1% PROBABILITY OF OCCURRENCE (100-YEAR AVERAGE RETURN PERIOD). CONSIDERATION SHALL ALSO BE GIVEN TO FLOODING CAUSED BY PLUGGING OF DRAINAGE FACILITIES.
 - 6.4. TO PREVENT UNDUE INTERFERENCE WITH TRAFFIC ON URBAN ROADS (ANY SECTION WITH CURBS), A PORTION OF THE ROADWAY SHALL BE KEPT FREE OF LONGITUDINALLY FLOWING DRAINAGE WATER DURING THE 10-YEAR STORM AS SHOWN ON THE STANDARD PLATES.
 - 6.5. CROSS-GUTTERS ARE NOT PERMITTED ACROSS PRIMARY AND SECONDARY ROADS. CROSS GUTTERS ARE PERMITTED ON LOCAL RESIDENTIAL STREETS AT CONTROLLED (STOP SIGNS) SIDE STREETS ONLY.
 - 6.6. CONCENTRATED RUNOFF MAY NOT FLOW ACROSS SIDEWALKS. PARKWAY CULVERTS SHALL BE USED.
 - 6.7. MINIMUM STORM DRAIN PIPE SIZE AND MATERIAL:
 - 6.7.1 MINIMUM PIPE SIZES FOR CITY-MAINTAINED STORM DRAINS SHALL BE 24" INSIDE DIAMETER FOR MAINS AND 18" INSIDE DIAMETER FOR LATERALS.
 - 6.7.2 PIPE MATERIAL FOR CITY-MAINTAINED STORM DRAINS SHALL BE RCP WITH A MINIMUM D-LOAD RATING OF 1350-D. DESIGN OF RCP SHALL BE IN ACCORDANCE WITH VCWPD STANDARDS.
 - 6.7.3 SMALLER DIAMETERS AND ALTERNATIVE PIPE MATERIALS FOR PRIVATELY-MAINTAINED DRAINAGE LATERALS MAY BE ALLOWED WITHIN THE PUBLIC R/W AT THE DISCRETION OF THE CITY ENGINEER.

CHANGE	DESCRIPTION	DATE	INITIAL	APPROVED: 	DATE: <u>5/21/18</u>
				CITY ENGINEER	