



Drainage Criteria Manual Atlas 14 Administrative Rules

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These rules add DCM 1.2.2.H, replaces the existing language in DCM Section 2, update Appendices B and D, and add Appendix F.

Overall: DCM Section 2 has been rewritten to incorporate changes in the extreme rainfall depths expressed in National Oceanographic and Atmospheric Administration (NOAA) Atlas 14. The change in DCM 1.2.2.H and the updates to the appendices are directly related to changes in Section 2.

DRAINAGE CRITERIA MANUAL Key Changes

Section 1 - Drainage Policy

- Added language to section 1.2.0 to emphasize that waterways and storm drain systems are considered when determining no adverse flooding impact. This is not new information or proposing additional rules.
- Added section 1.2.2.H to address phased developments that were initially permitted using rainfall depths pre-dating Atlas 14. These rules establish certain design criteria for storm drain systems and detention ponds for the current phase and the overall development.

Section 2 - Determination of Storm Runoff

- Added language in section 2.1.0 that the rational method may be used for drainage areas less than 100 acres and that NRCS methods may be used for all storm runoff analyses however, the NRCS (SCS) type III distribution is no longer used to determine storm runoff within the NRCS methods
- Added language to section 2.3 regarding design rainfall based on NOAA Atlas 14 published in 2018
 - The Austin jurisdictional area inclusive of the ETJ has been divided into two rainfall zones. Each zone will have its own set of design rainfall depths
 - Design rainfall is published in two ways:
 - Total depth for a given storm duration and frequency (Table 2.1A and 2.1B)
 - Intensity-Duration-Frequency curves which provide average rainfall intensity as a function of storm duration. Parameters for the IDF functional curves are provided in Tables 2.2A and 2.2B



- In section 2.4, the table of Runoff Coefficients (“C”) has been moved to the correct section.
 - The rational method example calculations have been updated and clarified
- In section 2.5, computations using the TR-20 software are no longer encouraged
 - The City no longer uses NRCS rainfall distributions to determine peak flows. For drainage areas greater than 100 acres, the “frequency storm distribution” as implemented in HEC-HMS is recommended.
 - Rainfall distributions are provided in Appendix B for those performing drainage calculations using software other than HEC-HMS.
 - Typographical errors in the Curve Number table have been corrected.

APPENDICES Key Changes

Appendix B - Depth Duration Frequency and Intensity Duration Frequency for this City of Austin and Travis County, Texas

- This appendix includes tabular versions of the Atlas 14-based frequency storm rainfall distribution data that replaces the NRCS Type III rainfall distribution tabular data previously included in Section 2. A brief discussion of the derivation of the Atlas 14-based rainfall criteria has been included in Section 2.3.

Appendix D-Figures and Diagrams

- This revised appendix deletes Figure 2-2; Figure 2-3.

Appendix F-Rainfall Criteria Pre-Dating Atlas 14

- The rainfall criteria in this Appendix is to be used to calculate the 100-year floodplain, 25-year floodplain, Base Flood, Design Flood, Flood Hazard Area, and Floodway for areas not yet amended to incorporate Atlas 14 data.