DEPARTMENT OF PLANNING AND PERMITTING
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DEPUTY DIRECTOR

June 27, 2011

ENGINEERING AND POLICY MEMORANDUM NO. CEB-2-11

TO: ENGINEERS, DEVELOPERS, GOVERNMENT AGENCIES AND OTHER INTERESTED PARTIES

FROM: DAVID K. TANOUE, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: AMENDMENTS TO THE RULES RELATING TO STORM DRAINAGE STANDARDS

The purpose of this memorandum is to supersede the Engineering and Policy Memorandum No. CEB-1-11 dated April 6, 2011 with the correct the numerical sequence of the Engineering and Policy Memorandum issued by our office.

No changes have been made to the original implementation date of May 1, 2011 and its attached amendments, which replaced pages 5, 23 (Plate 1), 24 (Plate 2), and 27 (Plate 6) of the Rules and added of page 57. For your convenience, the Rules Related to Storm Drainage Standards including the amendments and other standards are posted on the following FTP site address:

ftp://gisftp.hicentral.com/Civil_Engineering_Branch_Design_Standards

If there are any questions, please contact Ms. Dawn Kimura of the Site Development Division at 768-8106.

DKT: ky
g:sp/ceb2003revrrsds

Department of Planning and Permitting
City and County of Honolulu

RULES RELATING TO

STORM DRAINAGE STANDARDS

Adopted October 4, 1999

Effective January 1, 2000

Amended Section 1-4 and
Plates 1, 2, and 6
November 27, 2010

Effective April 8, 2011

§1-4 SECTION I - STANDARDS FOR FLOOD CONTROL

Standards and regulations for flood control are adopted to protect life and property during intense storms. Small storms that occur frequently usually do not cause significant property damages or loss of life, therefore, peak runoff from large storms are regulated for flood control.

The data from *85* U.S. Geological Survey (USGS) *stream flow gauges on the Island of Oahu* form the basis for Plate 6, "Design Curves for Peak Discharge vs. Drainage Area". The rainfall data on Plates 1 and 2 are from the *National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Silver Spring, Maryland, 2009.* Rainfall data on Plates 1, 2 and 6 will be updated periodically and such updates will automatically be incorporated into these rules when the updates are adopted by the Department. *[Eff:* APR 0 8 2011 *] (Auth: Sec 14-12.31,ROH) (Imp: Sec 14-12.31.ROH)*

§1-4.1 PART I - HYDROLOGIC CRITERIA

A. RECURRENCE INTERVAL

1. For drainage areas of 100 acres or less, Tm (recurrence interval) = 10 years, unless otherwise specified.

2. For drainage areas of 100 acres or less with sump, or tailwater effect and for the design of roadway culverts and bridges, Tm (recurrence interval) = 50 years.

3. For drainage areas greater than 100 acres and all streams, design curves based upon the U.S. Geological Survey data on flood magnitude and frequency, Tm (recurrence interval) = 100 years.

4. Interim measures for areas where downstream facilities are inadequate shall be reviewed on a case-by-case basis.

B. RUNOFF QUANTITY

1. For drainage areas of 100 acres or less, the rational method shall be used.

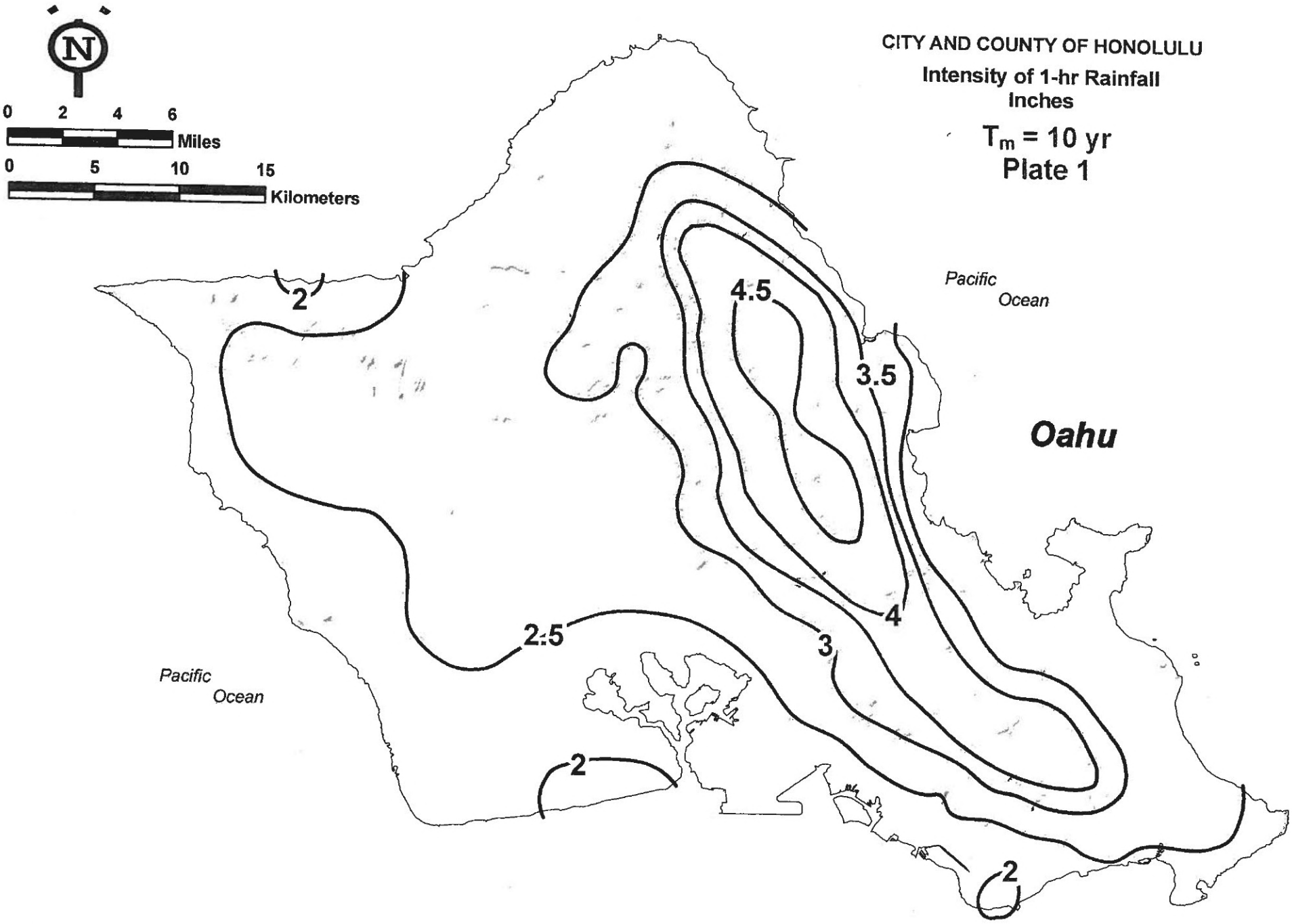
2. For drainage areas greater than 100 acres:

   a. Plate 6 titled, "Design Curves for Peak Discharge vs. Drainage Area" should be used to determine the 100-year peak discharge.

   b. Modifications from the Plate 6 peak discharge values may be used if the Design Engineer can justify more acceptable values and it is approved by the Director.

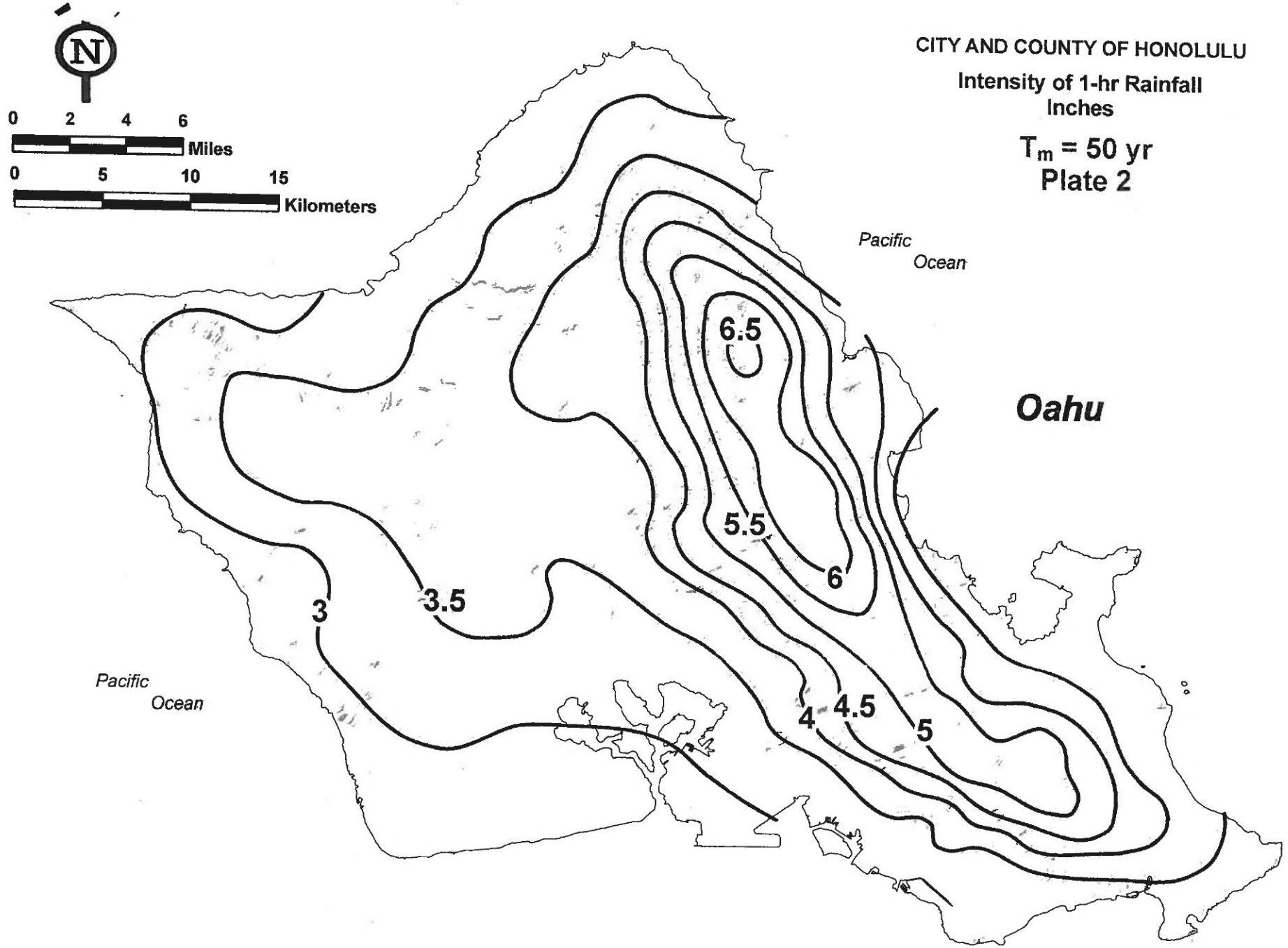
   [Eff: APR 0 8 2011 *] (Auth: Sec 14-12.31,ROH) (Imp: Sec 14-12.31.ROH)*

3. For drainage areas where downstream capacities are inadequate to accommodate runoff quantity identified above, runoff shall be limited to pre-development conditions or as specified in the General Conditions.



[Eff: APR 0 8 2011] (Auth: Sec 14-12.31, ROH) (Imp: Sec 14-12.31, ROH)

Source: National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Silver Spring, Maryland, 2009

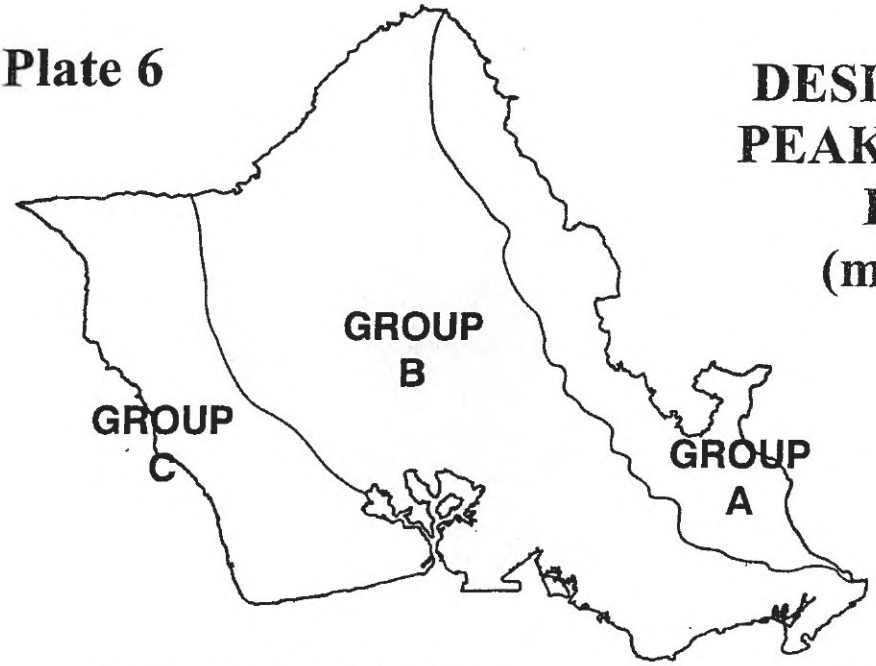


[Eff: APR 08 2011] (Auth: Sec 14-12.31, ROH) (Imp: Sec 14-12.31, ROH)

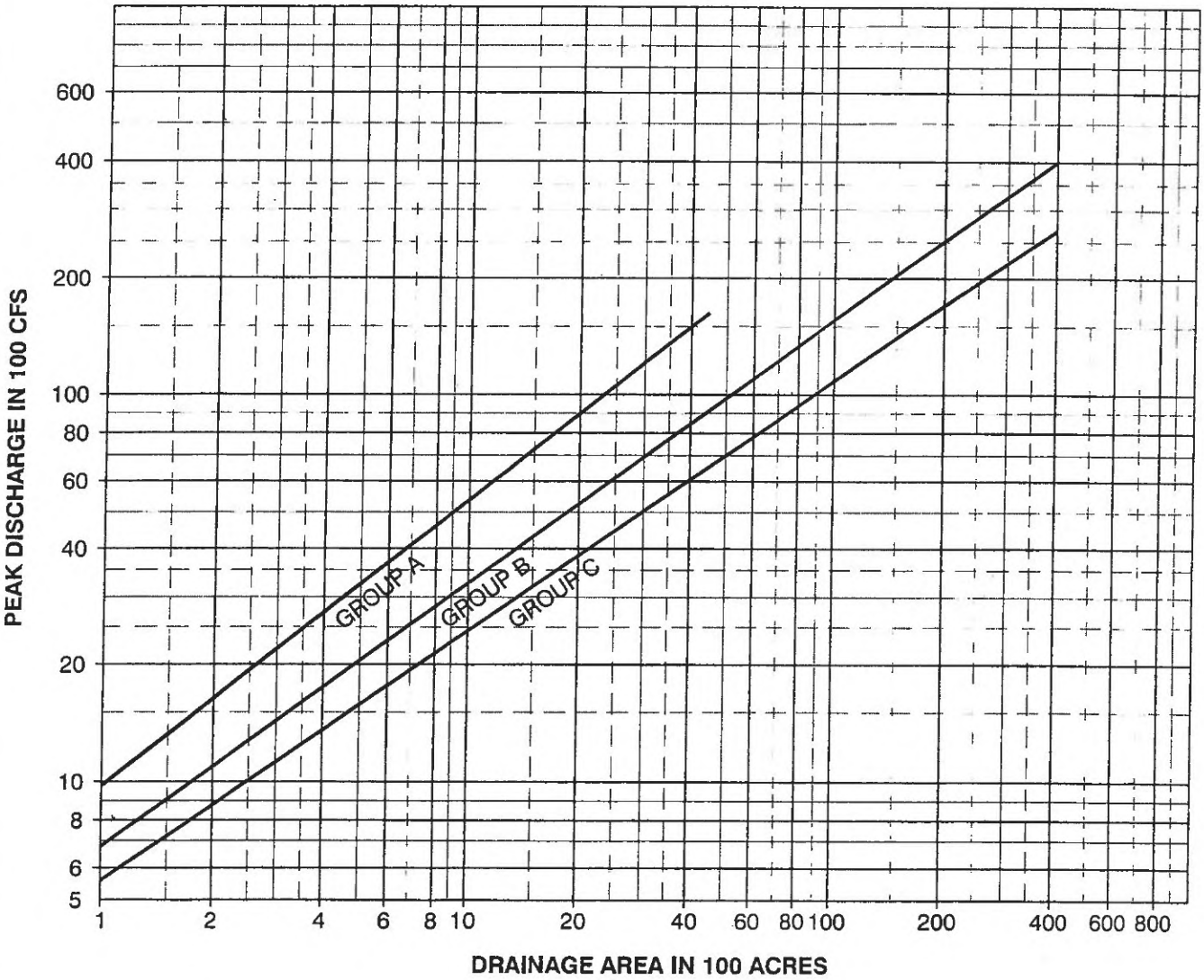
Source: National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Silver Spring, Maryland, 2009

Plate 6

DESIGN CURVES FOR PEAK DISCHARGE VS. DRAINAGE AREA (more than 100 acres)



● CURVES ARE FOR STREAM CHANNELS AND DRAINAGE STRUCTURES.



SOURCE: DATA FROM U.S. GEOLOGICAL SURVEY REV. FEB 2003.

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jsb -

[Eff: APR 0 8 2011] (Auth: Sec 14-12.31, ROH) (Imp: Sec 14-12.31, ROH)

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

These amendments to the rules were adopted on November 27, 2010, following a public hearing held on November 17, 2010, after public notice was given on October 14, 2010, in the Hawaii State and County Public Notices, Honolulu City and County.

These amendments to the rules shall take effect on May 1, 2011.

DAVID K. TANOUE
Director
Department of Planning and Permitting

APPROVED:

PETER B. CARLISLE
Mayor
City and County of Honolulu

Dated: MAR 16 2011

APPROVED AS TO FORM
AND LEGALITY:

Corporation Counsel

FILED

Given unto my hand and affixed with the
Seal of the City and County of Honolulu this
29 day of March, 2011.

BERNICE K. N. MAU, City Clerk