INFORMATION SHEET

PROJECT TITLE Dominick's Centre TYPE OF SUBMITTAL Drainage plan

ZONE ATLAS PAGE NO. H-22 CITY ADDRESS 2444 Juan Tabo NE

LEGAL DESCRIPTION Lots 24-27 inclusive, Blk. 1, Enchanted Mesa addition

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DATE SUBMITTED SEP 15, 83

BY R T Williams

Use this Information Sheet when submitting the following:

Drainage report or plan, conceptual grading and drainage plan, engineer's certification plan, erosion plan and grading plan. Provide the information applicable to your submittal.

DRAINAGE CALCULATIONS - DOMINICK'S CLINIC

USE RATIONAL FORMULA - $Q = CIA$ (WATERSHED < 200 AC)

1. "C" FACTOR

SOIL SERIES - EtC (SOIL SURVEY of BERNALILLO COUNTY AND PARTS of SANDOVAL AND VALENCIA COUNTIES, NM - SCS, MAP #22)

HYDROLOGIC SOIL GROUP - B (op. cit., p. 77).

% IMPERVIOUS = 100

"C" FACTOR = 1.0 ✓ (DPM Vol 2, pg 22.2 C-1)

2. "I" FACTOR

$I = \text{6-hr rainfall} \times 6.84 \times t_c^{-0.51}$ (DPM Vol 2, pg 22.2 D-2)

6-hr rainfall = 2.5" ✓ (DPM Vol 2, pg 22.2 D-1)

ASSUME $t_c = 10$ min

$I = 2.5 (6.84)(10)^{-0.51} = 5.28$ ✓

3. "A" FACTOR

1. PORTION of LOT BEHIND BLDG = 100' × 40' = 4000 SF = 0.092 AC ✓

4. $Q_{100} = 1.0(5.28)(0.092) = 0.49$ cfs

$Q_{10} = 0.657(0.49) = 0.32$ CFS ✓

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DESIGN of curb to drain east of lot

$Q = \frac{1.486}{n} A r^{\frac{2}{3}} s^{\frac{1}{2}}$

$n = 0.017$ (STREET - DPM Vol 2, table 22.3 B-1)

3.07 - 0.50 = 2.57 /

$\Delta H = 3.08 - 2.57 = 0.52$ /

$L = 50'$

$s = \frac{0.52}{50} = 0.0104$ /

$Ar^{\frac{2}{3}}_{req} = \frac{Qn}{1.486 s^{\frac{1}{2}}} = \frac{0.49(0.017)}{1.486(0.0104)^{\frac{1}{2}}} = 0.055$ /

$A = wh$

$r = 2h + w$

USE 3" CURB WITH 0.3' FREEBOARD

$h = 0.67 - 0.3 = 0.37$ /

$Ar^{\frac{2}{3}} = (wh)(2h+w)^{\frac{2}{3}} > 0.055$

try $w = 3'$

$[3(0.37)][2(0.37)+3]^{\frac{2}{3}} = 2.69$ OK

try $w = 1.50'$

$[1.50(0.37)][2(0.37)+1.50]^{\frac{2}{3}} = 0.95$ / OK

check: $Q = \frac{1.486}{0.017}(0.95)(0.0104)^{\frac{1}{2}} = 9.17$ cfs / OK

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