

Project: STEWART BUILDING DEVELOPMENT ON-SITE CALCULATIONS

30-Nov-98

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January 1993 - basins < 40 acres".

Precipitation Zone = 2

Depth at 100-year, 6-hour storm: (Table A-2)

P = 2.35 inches

Land Treatments:

From Table 5 - Percent Treatment D

Single Family Residential =

$$7 * \text{SQR}((N * N) + (5 * N))$$

where N = units/acre

N = ----- = -----, ok < 6

N = 0.00

Therefore Percent Treatment D = 0.00%

(includes local streets)

| Areas: (acres) | Existing | Proposed |
|-----------------|----------|----------|
| Treatment A | 0.00 | 0.00 |
| Treatment B | 0.00 | 0.11 |
| Treatment C | 0.33 | 0.00 |
| Treatment D | 0.45 | 0.67 |
| Total (acres) = | 0.78 | 0.78 |

| Volume | 100 year Existing | 100 year Proposed | 10 year Existing | 10 year Proposed | 2 year Existing | 2 year Proposed |
|-----------------------|----------------------|----------------------|---------------------|---------------------|--------------------|--------------------|
| Volume (acre-feet) = | 0.11 | 0.13 | 0.06 | 0.08 | 0.03 | 0.04 |
| Volume (cubic feet) = | 4,817 | 5,468 | 2,812 | 3,371 | 1,470 | 1,929 |

| Total Q(p), cfs: | 100 year Existing Q(p)*A | 100 year Proposed Q(p)*A | 10 year Existing Q(p)*A | 10 year Proposed Q(p)*A | 2 year Existing Q(p)*A | 2 year Proposed Q(p)*A |
|------------------|--------------------------------|--------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|
| Treatment A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Treatment B | 0.00 | 0.25 | 0.00 | 0.10 | 0.00 | 0.01 |
| Treatment C | 1.04 | 0.00 | 0.56 | 0.00 | 0.20 | 0.00 |
| Treatment D | 2.12 | 3.15 | 1.41 | 2.10 | 0.84 | 1.25 |
| Total Q (cfs) = | 3.15 | 3.40 | 1.98 | 2.21 | 1.04 | 1.26 |

