HYDROLOGY

G14/D29

ONE PLAN

NO DOCUMENTS

1204 CANDELARIA N.W.

DRAINAGE PLAN

1" = 20'-0"

Design - 100-year storm - 2.2" (0.184')

Rational Formula Q = CIA

Q = Storm runoff in feet per second

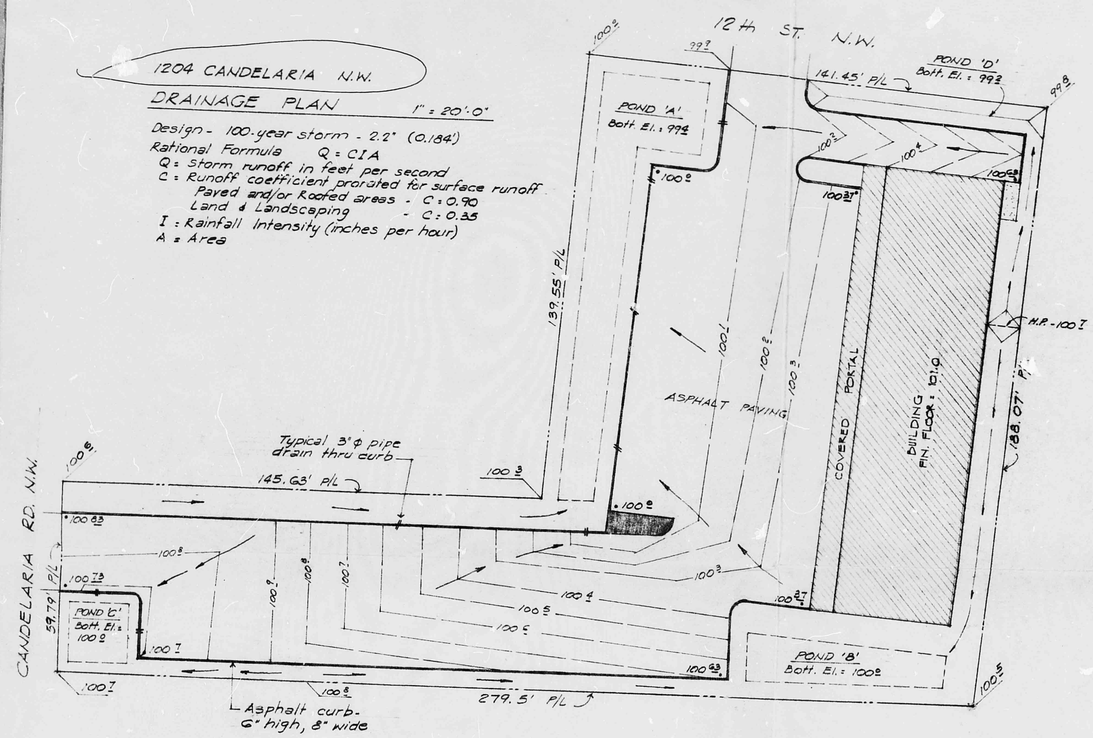
C = Runoff coefficient prorated for surface runoff

Paved and/or Roofed areas - C = 0.90

Land & Landscaping - C = 0.35

I = Rainfall Intensity (inches per hour)

A = Area



EXISTING CONDITIONS

Total Area of Site = 34,657 Sq. Ft.

34,657 × 0.35 × 0.184 = 2232 cu. ft. runoff

PROPOSED CONDITIONS

Total Area Buildings, Paving, Walks - 24,130 Sq. Ft.

24,130 × 0.90 × 0.184 = 3996 cu. ft. runoff

Total Area Landscaping & Ponds - 10,527 Sq. Ft.

10,527 × 0.35 × 0.184 = 678 cu. ft.

3996 + 678 = 4674 cu. ft. runoff

4674 - 2232 = 2442 cu. ft. additional runoff generated by bldgs, paving, etc.

Pond 'A' - Area = 1793 cu. ft.

Pond 'B' - Area = 588 cu. ft.

Pond 'C' - Area = 315 cu. ft.

Pond 'D' - Area = 197 cu. ft.

Total Ponding Area = 2893 cu. ft.

2893 cu. ft. ponding area provided for 2442 cu. ft. runoff after improvements.

POND 'A'

Pond 'A' to serve an area of 21,822 sq. ft.

Existing condition - unpaved (bare earth)

21,322 × 0.35 × 0.184 = 1405 cu. ft. runoff existing

Proposed:

Asphalt Paving & Portal - 16,359 sq. ft.

16,359 × 0.90 × 0.184 = 2709 cu. ft. runoff

Unpaved (Landscape & ponding) - 5,463 sq. ft.

5463 × 0.35 × 0.184 = 352 cu. ft. runoff

2709 + 352 = 3061 cu. ft. runoff

3061 - 1405 = 1656 cu. ft. runoff after improvements

POND 'B'

Pond 'B' to serve an area of 6,527 sq. ft.

Existing condition - unpaved (bare earth)

6,527 × 0.35 × 0.184 = 420 cu. ft. runoff existing

Proposed:

Building (95' × 36) 3420 sq. ft.

3420 × 0.90 × 0.184 = 566 cu. ft. runoff

Unpaved (Landscape & ponding) 3107 sq. ft.

3107 × 0.35 × 0.184 = 200 cu. ft. runoff

566 + 200 = 766 cu. ft. runoff

766 - 420 = 346 cu. ft. runoff after improvements

POND 'C'

Pond 'C' to serve an area of 3,581 sq. ft.

Existing condition - unpaved (bare earth)

3581 × 0.35 × 0.184 = 231 cu. ft. runoff

Proposed:

Asphalt Paving 2671 sq. ft.

2671 × 0.90 × 0.184 = 566 cu. ft. runoff

Unpaved (Landscape & ponding) 910 sq. ft.

910 × 0.35 × 0.184 = 59 cu. ft. runoff

442 + 59 = 501 cu. ft. runoff

501 - 231 = 270 cu. ft. runoff after improvements

POND 'D'

Pond 'D' to serve an area of 2,727 sq. ft.

Existing condition - unpaved (bare earth)

2727 × 0.35 × 0.184 = 176 cu. ft. runoff

Proposed:

Building (45' × 36) & conc. pad - 1680 sq. ft.

1680 × 0.90 × 0.184 = 278 cu. ft. runoff

Unpaved (Landscape & ponding) - 1047 sq. ft.

1047 × 0.35 × 0.184 = 68 cu. ft. runoff

278 + 68 = 346 cu. ft. runoff

346 - 176 = 170 cu. ft. runoff after improvements

6/4/029

C.A. COONCE

344-3431

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