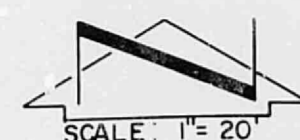


VICINITY MAP H-22
SCALE: 1" = 800'



SCALE: 1" = 20'

DRAINAGE PLAN

The following items concerning a Condominium Development for Albuquerque Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements as shown by the Vicinity Map are located on Candelaria Road, N.E., approximately 1000 ft. east of Juan Tabo Blvd., N.E. This site is more particularly described as the westerly portion of Tract 1, Block 102, Brentwood Hills Subdivision. At present, the site is undeveloped with adjacent sites to the east, west and south already developed.

As shown by Plate H-22 of the Albuquerque Master Drainage Study, this site does not lie within a designated Flood Hazard Zone. At present, lands to the east, west and south are developed and do not contribute offsite flows to the subject project site.

The Grading Plan shows: (1) existing and proposed grades indicated by spot elevations and contours at 1'-0" intervals (2) continuity between existing and proposed elevations (3) proposed buildings, sidewalks, parking areas, and landscaped areas (4) limit and character of the proposed improvements.

As shown by this plan the proposed improvements include the construction of apartment buildings with adjacent asphalt parking and required landscaping. The grading required by these improvements will route all storm runoff through detention ponds. All flows will exit the ponds through 4" PVC drain lines. The runoff will then be conveyed via Candelaria Road, N.E., where it will be picked up by existing storm conveyance systems located at the intersection of Candelaria Road, N.E. and Juan Tabo Blvd., N.E.

The calculations which appear below analyze both the existing and developed conditions for the 100 year and 10 year, 6 hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, runoff leaving the site under fully developed conditions will be less than that which currently leaves the site.

Calculations

Ground Cover Information

1. From SCS Bernalillo County Soil Survey, Plate 21, Etc, Embudo - Tijeras Hydrologic Soil Group B

Rational Method

1. Discharge: $Q = CIA$
Where: C varies
 $I = P_6(6.84)^{T_c^{0.78}}$ (DPM Plate 22.2 D-2)
 $P_6 = 2.48$ in (100 yr)
 $P_6 = 1.63$ in (10 yr)
 $T_c = 10$ min (minimum)
 $i_{100} = 5.24$ in/hr
 $i_{10} = 3.44$ in/hr
 $A =$ Area, Acres
2. Volume: $V = CI \cdot A(1/12)$
Where: C varies
 $I = P_6(6.84)^{T_c^{0.78}}$ (DPM Plate 22.2 D-2)
 $P_6 = 2.48$ in (100 yr)
 $P_6 = 1.63$ in (10 yr)
 $A =$ Area, Square Feet

Existing Condition

1. $A = 0.83$ Ac = 36,010 sf
 $A_{imp} = 0$ sf
 $C = 0.34$ (DPM Plate 22.2 C-1)
 $Q_{100} = 0.34(5.24)(0.83) = 1.48$ cfs
 $V_{100} = 0.34(2.48)(36,010)/12 = 2530$ cf
 $Q_{10} = 0.34(3.44)(0.83) = 0.97$ cfs
 $V_{10} = 0.34(1.63)(36,010)/12 = 1663$ cf

Developed Condition

- Total Site
- $A = 0.83$ Ac = 36,010 sf
 $A_{imp} = 29,792$ sf
 $\%$ impervious = 83%
 $C = 0.79$ (DPM Plate 22.2 C-1)
 $Q_{100} = 0.79(5.24)(0.83) = 3.44$ cfs
 $V_{100} = 0.79(2.48)(36,010)/12 = 5879$ cf
 $Q_{10} = 0.79(3.44)(0.83) = 2.26$ cfs
 $V_{10} = 0.79(1.63)(36,010)/12 = 3863$ cf
by Graphic Solution of Hydrograph, $V_{required} = 2738$ cf
2. Basin 1:
- $A = 0.63$ Ac = 27,365 sf
 $\%$ Total Acreage = 76%
 $V_{pond} REQ'D = 0.76(2738) = 2091$ cf

$Q_{release} = Q_4$ pipe

Q_4 pipe = $CA \sqrt{2gh}$ (Orifice Eqn)
Let $H = 1.0$ ft.
 $A = 0.086$ sf
 $C = 0.8$
 $g = 32.2$ ft/sec²
 Q_4 pipe = 0.55 cfs

Basin 11:

$A = 0.20$ Ac = 8645 sf
 $\%$ Total Acreage = 24%
 $V_{pond} REQ'D = 0.24(2738) = 657$ cf

$Q_{release} = Q_4$ pipe
 Q_4 pipe = 0.55 cfs (@ $H = 1.0'$)

4. Provided Ponding

Basin 1:

Pond 'A' = 1485 cf
Pond 'B' = 205 cf
Pond 'C' = 435 cf

Basin 11:

Pond 'd' = 660 cf
Total ponding volume provided = 2785 cf

Comparison

$Q = Q_{100}(\text{Existing}) - Q_{10} = 1.48 - 1.10 = 0.38$ cfs Decrease

PROPERTY ADDRESS

CANDELARIA ROAD N.E.

LEGAL DESCRIPTION

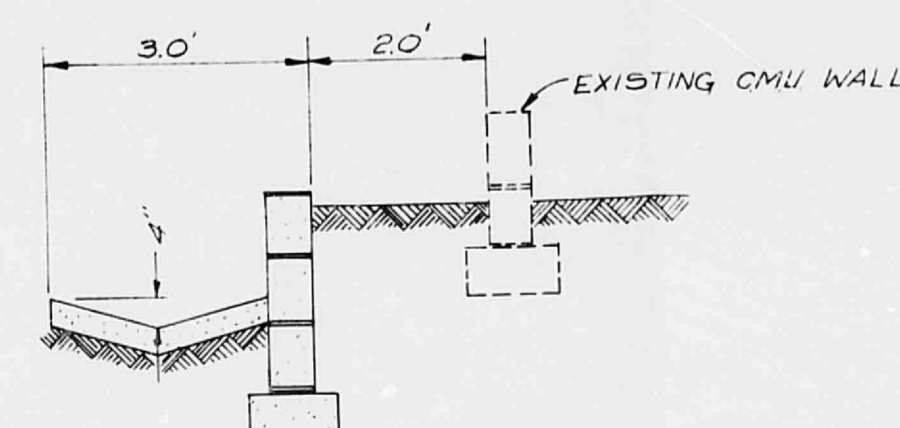
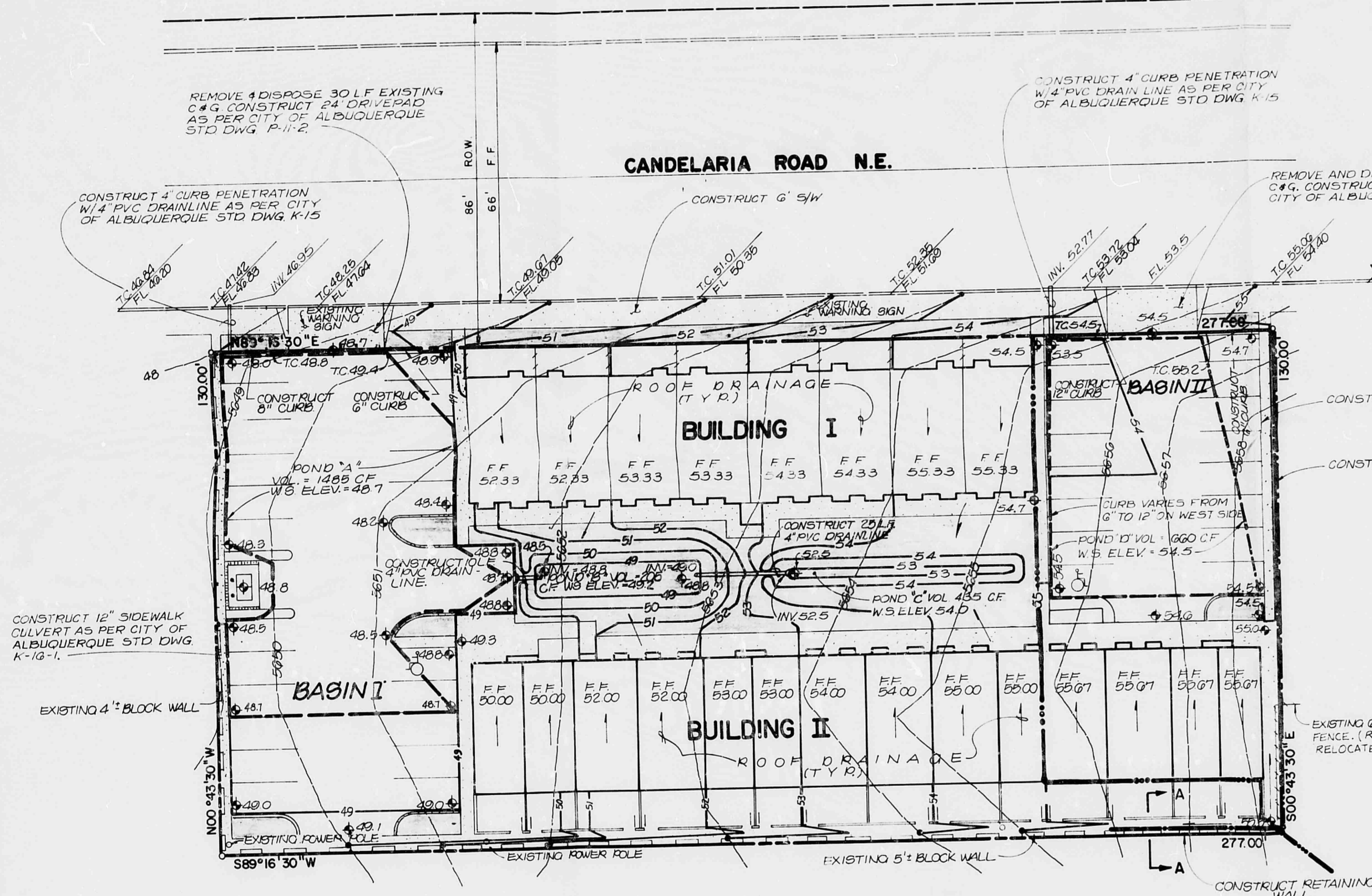
WESTERLY PORTION TRACT 1, BLOCK 102
BRENTWOOD HILLS SUBDIVISION

PROJECT BENCHMARK

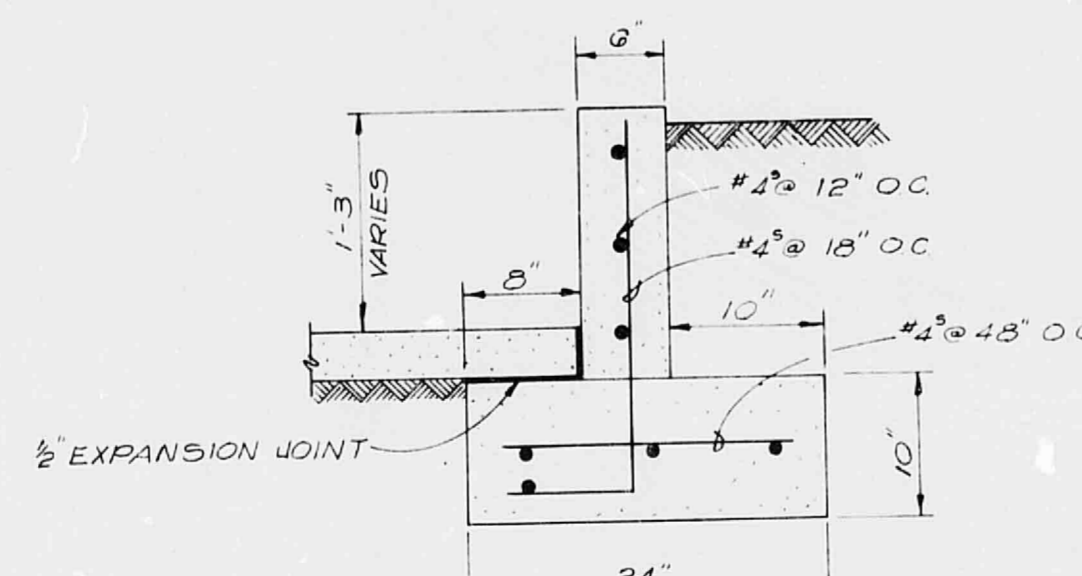
A STANDARD ACS BRASS TABLET STAMPED "JT-2-A, 1978"
SET IN A CONCRETE POST FLUSH WITH CURB, LOCATED
IN THE SOUTH MEDIAN NOSE, ON JUAN TABO BLVD. N.E.
54' SOUTH OF THE CENTERLINE OF CANDELARIA RD. N.E.
ELEVATION 5617.96 FEET.

LEGEND

- 66.90 EXISTING SPOT ELEVATION
- 66.90 PROPOSED SPOT ELEVATION
- 67.00 PROPOSED SPOT ELEVATION
- 66.57 EXISTING SPOT ELEVATION
- 49.25 EXISTING CONTOUR
- 49.03 PROPOSED CONTOUR
- SHALE FLOWLINE
- RETAINING WALL
- PROPERTY LINE
- LANDSCAPING
- DRAINAGE BASIN BOUNDARY



SECTION A-A
SCALE: 1" = 2'-0"



RETAINING WALL SECTION
SCALE: 1" = 1'-0"

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ENGINEERS

NO.	DATE	BY	REVISIONS
1	12/21/82	J.M.C.	REVISED SITE PLAN & GRADING PLAN

DESIGNED BY: D.A.L.	JOB NO. 30182
DRAWN BY: J.M.C.	DATE 2-83
APPROVED: T.T.M.	

DRAINAGE AND GRADING PLAN FOR A CONDOMINIUM DEVELOPMENT FOR ALBUQUERQUE



4/1/83
2/2/83
Date

FILE NO.

SHEET 2 OF 5