HYDROLOGY

F21/D37H

TWO PLANS

OFFICE OF DENTISTRY

DRAINAGE PLAN

F21/D37H

2 PLANS

All private streets and maintenance responsibility

Not required by DPM

NOTE: IMPOUND AREA MIN. 15' FROM NEW BUILDING AND MIN. 15' FROM ADJ. LOT BUILDING SETBACK.

LOT 5

LOT 6

LOT 7

ROOF SHEET FLOW

NEW BUILDING FIN. FLOOR ELEV. 5665.0

4" PVC OUTLET INVERT ELEV. 5660.0

PLACE TEMP. BENCHMARK IN TOP OF CURB WITH 5665.5 M.S.L.D.

MONTGOMERY PARKWAY LOOP

LAGUNA DE ORO

CURB DETAIL - N.T.S.

GUTTER AT DRIVE ONLY

C-1

IMPROVEMENT AND SITE PLAN

SCALE 1" = [illegible]

LEGEND

- PROPERTY LINE
- SET BACK
- EASEMENTS
- EXISTING CONTOURS
- NEW CONTOURS
- SEWER
- WATER
- GAS
- ELECTRIC
- TELEPHONE
- FIRE HYDRANT
- NEW STRUCTURE
- NEW PAVEMENT

LEGAL DESCRIPTION:

LOT NUMBER SIX [illegible], OF MONTGOMERY BUSINESS PARK, ALBUQUERQUE, NEW MEXICO, AS THE SAME AS SHOWN AND DESIGNATED ON THE PLAT OF SAID SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON 5 JUNE, 1983. LOT SIX OF MONTGOMERY BUSINESS PARK BEING 15,[illegible]2 SQ. FT. ZONED SU-1.

PROPOSED STRUCTURE:

PROPOSED USE AS OFFICE OF DENTISTRY.

GROUND FLOOR TOTAL SQUARE FOOTAGE IS 1,950.

ALTERNATE BASEMENT SQUARE FOOTAGE IS 1,950.

IDENTIFICATION SIGN TO BE FASTENED ON STRUCTURE.

PROPOSED PARKING:

ONE DENTIST, BASEMENT UNDER 2,000 SQ. FT., AND ONE HANDICAPPED PARKING SPACE REQUIRES A TOTAL OF SIX (6) SPACES. THIS SITE PROPOSES [illegible] SPACES IN COMPLIANCE.

OVERLAND FLOW

Q = 2.00 x C x A

Q = 5.25 x .64 x .192

Q = 1.20 cfs

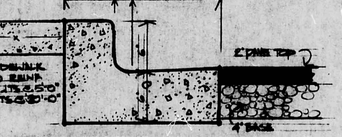
Q = C i H

C = 5.867

H = 2 (5660.0 - 5661.5)

L = 1.5/(5.867 x 2)

L = 2.6'



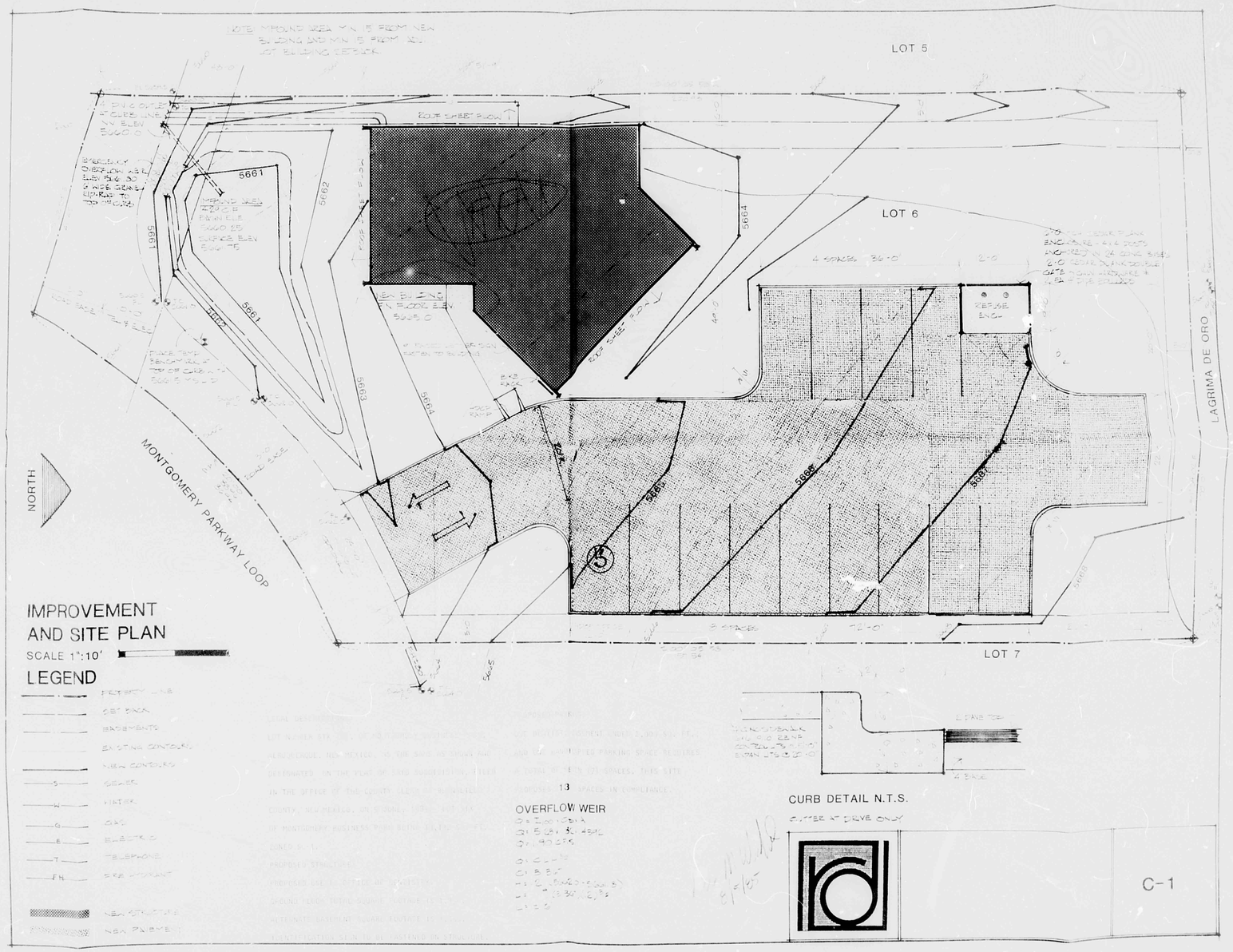
APPROVED FOR DRAINAGE
10/4/85
Billy J. Toolsby
SIGNATURE TITLE
ADVISE DRAINAGE INSPECTOR
WHEN GRADING EXECUTED

RECEIVED
AUG 05 1985
HYDROLOGY SECTION

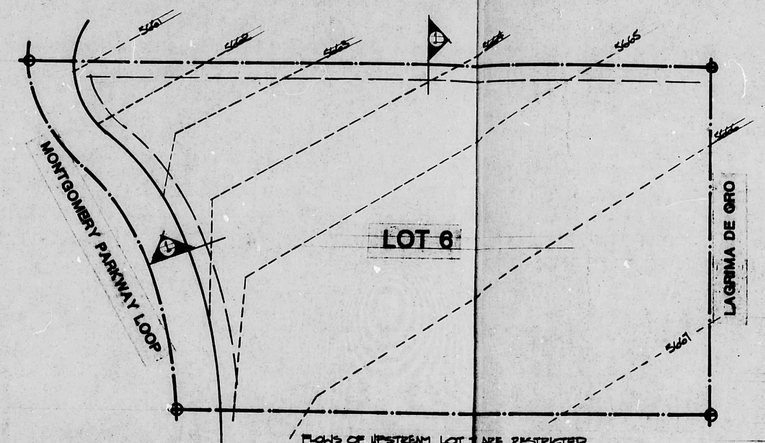
as-built elevations

City approved grades

F21/D37 H


LOT 5
LOT 6
LOT 7
LAGRIMA DE ORO
MONTGOMERY PARKWAY LOOP
NORTH
5661
5662
5663
5664
5665
5666
5667
5668
REFUSE ENCL.
IMPROVEMENT
AND SITE PLAN
SCALE 1":10'
LEGEND
OVERFLOW WEIR
CURB DETAIL N.T.S.
C-1

F21/D37 H



FLOWS OF UPSTREAM LOT 7 ARE RESTRICTED BY IMPLEMENTED EROSION CONTROL PLAN WITH DISCHARGE TO MONTGOMERY PARKWAY LOOP (PER DEVELOPMENT DRAIN. REPORT)

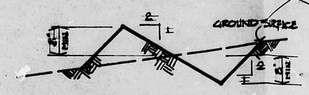
EROSION CONTROL PLAN

SCALE 1" = 20'-0"

UNDEVELOPED FLOW CONDITIONS

UNDEVELOPED RUNOFF COEFFICIENT
SOIL TYPE 'B' = C_u = 0.36
CN = 69 (PARTLY GRASSED
6 HR RAINFALL VOL = 2.5 IN (100 YR)
DIRECT RUNOFF = .45 IN

LOT 6 AREA = .4392 ACRES
RUNOFF VOL = DIR. RUNOFF x AREA x 43560/12
RUNOFF VOL = .45 x .4392 x 43560/12
RUNOFF VOL = 717.29 c.f (6 HOUR)
Q = .033 c.f.s. 0.79 cfs



1 WIND ROW SECTION
No Scale

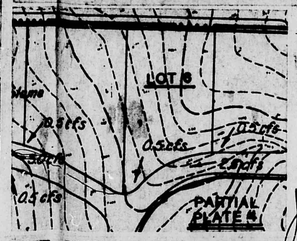
NOTE:
PROVIDED TEMPORARY PONDING VOLUME SHALL BE PROVIDED BY INCREASING THE HEIGHT OF WIND ROW OR EXCAVATION OF A PONDING AREA UPHILL OF THE WIND ROW. IN EITHER CASE, A MINIMUM OF 6" FREE BOARD SHALL BE PROVIDED ABOVE THE 10 YEAR SURFACE ELEVATION OF THE POND.
THIS CRITERIA IS OBTAINED FROM MONTGOMERY BUSINESS PARK DRAINAGE REPORT AS APPROVED 20 JAN. 1983.
THE EROSION CONTROL PLAN SHALL BE UTILIZED DURING ANY CONSTRUCTION OPERATIONS IN JULY, AUGUST, AND SEPTEMBER.

PARTIAL FLOODWAY MAP

PANEL 18

Since downstream capacity does not exist, ultimate development shall include on-site detention. "The Drainage Ordinance" (63-1982) requires, "except as necessary for the treatment of nuisance water, all ponds shall be designed and constructed to be emptied in twenty-four (24) hours or less." Therefore, each detention facility requires an outlet. The minimum size outlet recommended to minimize maintenance problems is a four-inch diameter pipe. The required pond volume (RPV) shall be provided according to the formula 5989.5 A + 79.9/A − 1383 = RPV (see Appendix, Sheet 5). This relationship assumes a discharge rate of 0.5 CFS for a four-inch outlet in an 18-inch deep pond. In order to ensure that the capacity of the internal street is not exceeded, it is recommended that only controlled discharge be permitted to the street.

This may be provided by individual lot ponding or by ponding runoff from an entire block in one location. If several lots pond at one location, the allowable discharge will be the equivalent of one four-inch outlet per lot. The allowable discharge for each block shall be the controlling factor for determining compliance as the lots are developed. An outlet will be required for each pond with a maximum of one outlet per lot. The discharge points from each lot shall be as indicated on Plate 4.



NOTE
THIS DATA OBTAINED FROM MONTGOMERY BUSINESS PARK DRAINAGE REPORT, AS APPROVED 20 JAN, 1983

OFF-SITE FLOW CONDITIONS

Soil Type "B"
Undeveloped Runoff Coefficient (C_u) = 0.36
Plate 22.2 C-1
85% Impervious
Developed Runoff Coefficient (C_d) = 0.82
Plate 22.2 C-1
CN = 92
Plate 22.2 C-2
6 hour Rainfall Volume = 2.5 in (100 yr storm)
Plate 22.2 D-1
Direct Runoff = 1.65 in
Plate 22.2 C-4
I = 6-hour Rainfall Volume × I/6
I/6 = 2.112 Plate 22.2 D-2
I_{100} = 5.28
$Q_p = I_{100} \times C_d \times A = 5.28 \times .82 \times A = 4.33 A = 1.90$ cfs
Q_{out} (use 4" outlet pipe) = $cA\sqrt{2gh} = .6\,(.785)\sqrt{2(32.2)(.33)}$ 0.0873
Q_{out} = 0.5 cfs (18" deep pond)
Runoff Volume = Direct Runoff × Area × 43560 / 12
= 5989.5 A (cf) DEVELOPED 3268 cf.

ON-SITE FLOW CONDITIONS

$V = \frac{6\text{ hr. Rain}}{12} \times \text{"C"} \times A_c \times 43560$

$V = \frac{2.5}{12} \times .82 \times (.4392)\,43560$

$V = 3268$ cf.

C-2

RECEIVED AUG 05 1985 HYDROLOGY SECTION

F21/D370H