Hydrology File No. D-21/D001

PLANS/PLATS ON FILE

FILE DESC: D-21 /D001

PLANS/PLATS 2

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D21/D1

October 4, 1984

OCT 9 1984

Mr. Clyde Vigil
Assistant Building Official
County of Bernalillo
1429 Central N.W.
Albuquerque, New Mexico 87104

RE: DRAINAGE PLAN FOR WALKER WELL NO. 1
(ZONE MAP NO. D-21) CITY DRAWING NO. 2213

Dear Mr. Vigil:

Enclosed are two (2) copies each of the following:

Walker Reservoir Ultimate Grading Plan - March, 1980
Drainage Report for Walker Reservoir - March, 1980
Layout and Grading Plan for Walker Well No. 1 - October, 1984
City Drawing No. 2213

The concrete reservoir built in 1981 and the site grading as shown on the Ultimate Grading Plan have been completed. The present project will include the well house and paving, a total of 4,000 square feet of impervious improvements. All of the runoff from these improvements will flow to the pond on the west side of the reservoir site not increasing the runoff from the site.

We seek your approval for our drainage plan. If there are any questions please phone me.

Thank you.

Doug May

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DRAINAGE REPORT

for

WALKER RESERVOIR

(Alameda Trunk Zone 4E Reservoir)

March 1980

Prepared by:

Gordon Herkenhoff and Associates

WAIN COOPER
NEW MEXICO
6832
& LAND SURVEYOR
REGISTERED PROFESSIONAL ENGINEER

1. INTRODUCTION: This reservoir facility will serve as equalizing storage for water trunk zone 4E. The total water storage capacity will be 13 million gallons. Construction is expected to begin on or about Sept. 15, 1980 This drainage report was prepared following the drainage policies established by the City of Albuquerque. The facility will consist of two 6.5 MG storage reservoirs, access road, well house and a pump station that will be constructed in the future.

2. SITING: The site is located in North Albuquerque Acres, lots 5, 6, 7 and 8, Block 2, Tract 3, Unit 2; Section 21, T11N, R4E; and Zone Atlas page D-21. The site is located immediately south of Los Angeles Blvd. and East of Eubank. The site topography prior to construction is shown on the enclosed map, along with the grading plan for the ultimate site development.

3. METHODOLOGY: The site was developed with ponding such that there would be no increased surface water run-off after development. There is a small drainage area located on the eastside of the site, and the accompanying arroyo that traverses through the northerly portion of the site. This configuration was not altered. A channel is included that conveys this off-site water through the site and then returns to the natural channel located at the west side of the site.

   Calculations are included, showing the results obtained. Runoff coefficients used in these calculations are 1.0 for asphalt and concrete roadways, 1.0 for reservoir surfaces, and 0.40 for remaining areas. A 2.4 inch rainfall was used for computing the ponding requirements. For the offsite runoff, rainfall intensity from a 100 year storm was used to calculate the channel requirements. Channel velocities were kept at 4 lps or less.

4. RESULTS: The runoff prior to development was calculated to be 0.51 acre feet, and after development to be 0.76 acre feet. This increase, or 403 cy, is the ponding volume required. The actual quantity retained by the ponds is 975 cy. Therefore, as a result of the reservoir development, there will be no increase in runoff.

   The arroyo located on the easterly side of the site will continue through the site after development. A soft lined channel will be provided, and is 18 feet wide at the bottom and will be constructed on a 4% slope. The expected velocity in the channel will be 3.2 fps. Calculations for the channel design are included.

PLAN/PLATS

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