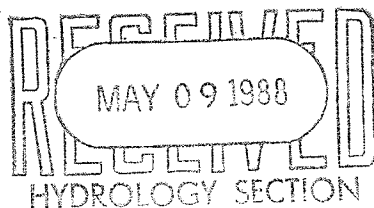


DRAINAGE INFORMATION SHEET

PROJECT TITLE: LEYENDECKER RESERVOIR ZONE ATLAS/DRNG. FILE #: F-18/D48
 LEGAL DESCRIPTION: TRACT H, BOYD'S ADDITION
 CITY ADDRESS: _____
 ENGINEERING FIRM: TOM MANN & ASSOCIATES CONTACT: PETER LUJAN
 ADDRESS: 811 DALLAS NE PHONE: 265-5611
 OWNER: CITY OF ALBUQUERQUE CONTACT: ART STEWART
 ADDRESS: P.O. Box 1293 PHONE: 768-2772
 ARCHITECT: CH2M HILL CONTACT: PETER JACOBSON
 ADDRESS: 6121 INDIAN SCH. RD. N.E. PHONE: 884-5600
 SURVEYOR: KOOGLE & POULS ENGINEERING CONTACT: ENGINEER
 ADDRESS: 8338 A COMANCHE, N.E. PHONE: _____
 CONTRACTOR: UNKNOWN CONTACT: _____
 ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

☒ YES
☐ NO
☒ COPY OF CONFERENCE RECAP
 SHEET PROVIDED



DRB NO. _____

EPC NO. _____

PROJ. NO. F-18/D48

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ SITE DEVELOPMENT PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY APPROVAL
☐ ROUGH GRADING PERMIT APPROVAL
☐ GRADING/PAVING PERMIT APPROVAL
☐ OTHER _____ (SPECIFY)

DATE SUBMITTED: May 3, 1988BY: Peter M. Lujan



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
KEN SCHULTZ

CHIEF
ADMINISTRATIVE OFFICER

GENE ROMO

DEPUTY CAO
PUBLIC SERVICES

FRANK MARTINEZ

DEPUTY CAO
PLANNING/DEVELOPMENT

BILL MUELLER

May 18, 1988

Jeff Mortensen, P.E.
Tom Mann & Associates, Inc.
811 Dallas, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR LEYENDECKER RESERVOIR
(F-18/D48) ENGINEER'S STAMP DATED MAY 3, 1988

Dear Mr. Mortensen:

Based on the information provided on your submittal of May 9, 1988, the above referenced plan is approved for Building Permit.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

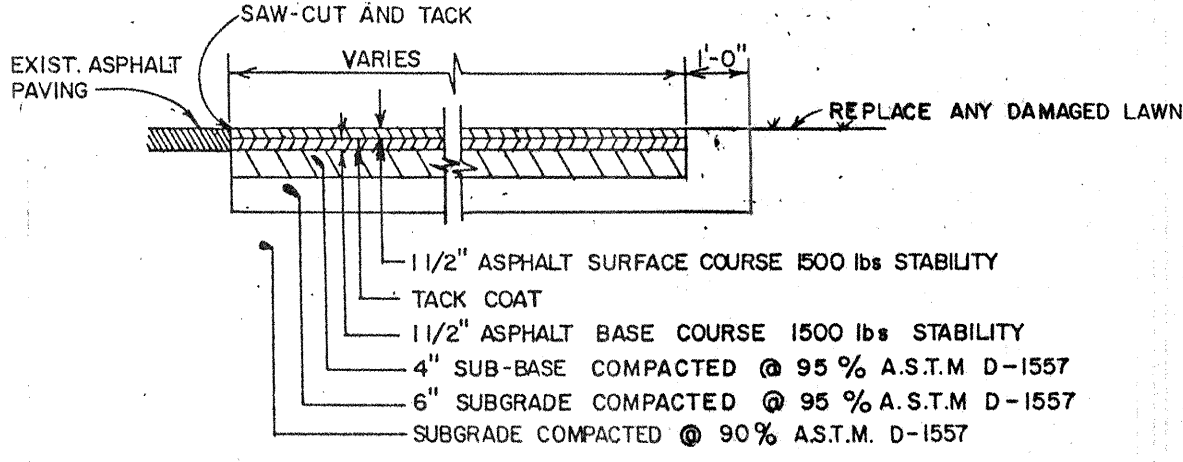
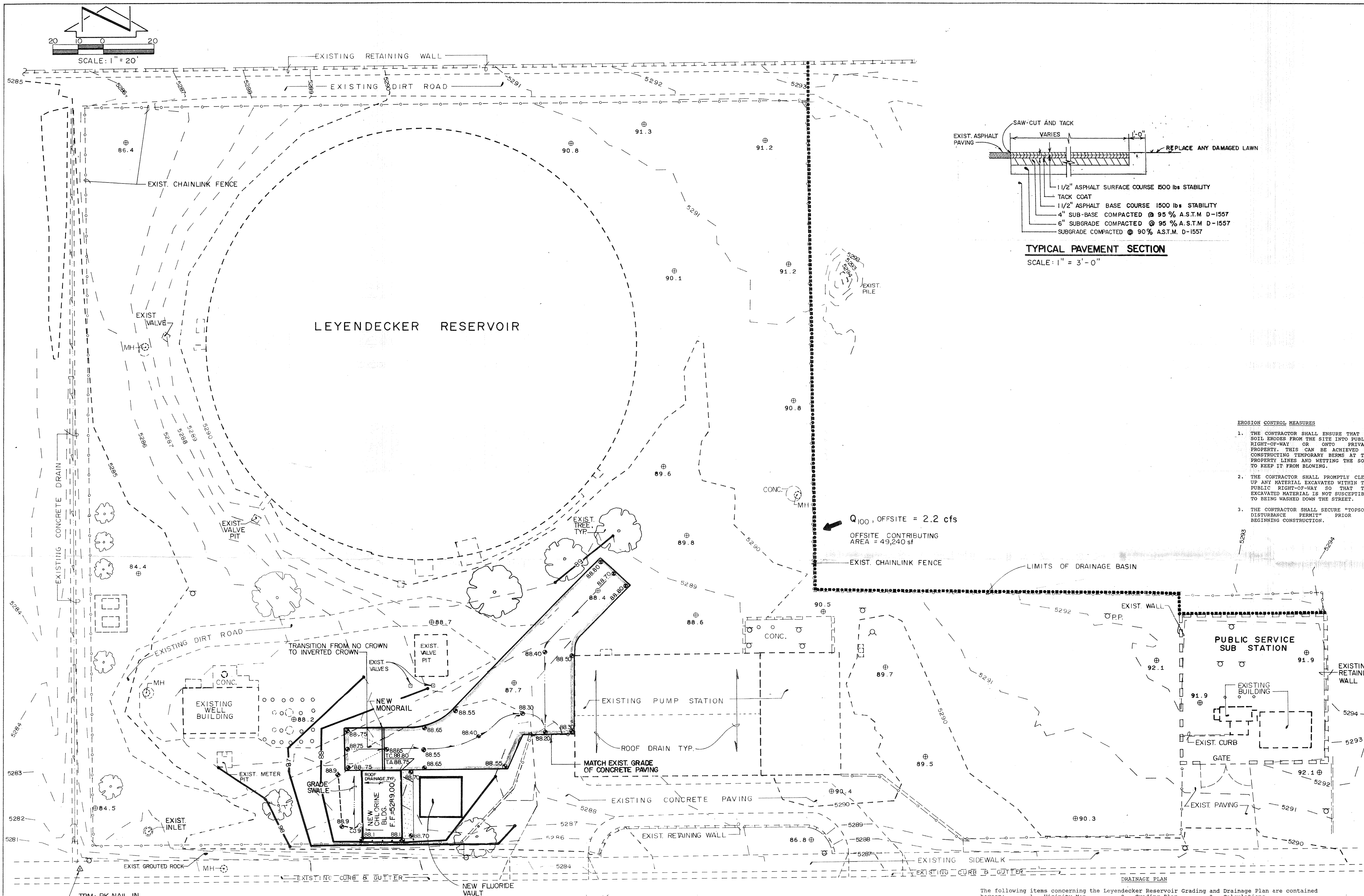
Also, we will need concurrence from the inspector in charge of this C.I.P. prior to Certificate of Occupancy release.

If I can be of further assistance, please feel free to call me at 768-2650.

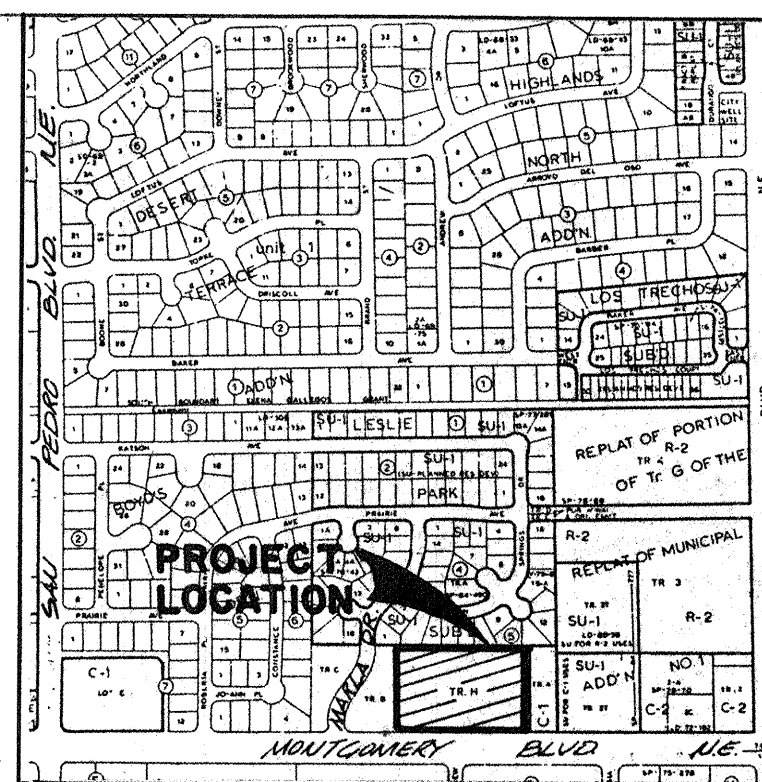
Cordially,

Bernie J. Montoya
Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj



- EROSION CONTROL MEASURES**
1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERM AT THE PROPERTY LINES AND MATTING THE SOIL TO KEEP IT FROM BLOWING.
 2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
 3. THE CONTRACTOR SHALL SECURE "TOPSOIL" DISTURBANCE PERMIT PRIOR TO BEGINNING CONSTRUCTION.



VICINITY MAP
SCALE: 1" = 800'

LEGAL DESCRIPTION
TRACT H, BOYD'S ADDITION

- LEGEND**
- 5430 — EXISTING CONTOUR
 - 5430 — NEW CONTOUR
 - — — — — EXISTING SWALE
 - — — — — NEW SWALE
 - ⊕ — EXISTING SPOT ELEVATION
 - ⊕ — NEW SPOT ELEVATION
 - — — — — EXISTING CHAIN LINK FENCE
 - — — — — NEW CHAIN LINK FENCE
 - — — — — EXISTING POWER / LIGHT POLE
 - — — — — NEW ASPHALT
 - — — — — NEW CONCRETE
 - — — — — EXISTING RETAINING WALL
 - — — — — WATER BLOCK

- CONSTRUCTION NOTES:**
1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
 2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
 3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
 4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
 5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITY LINES, PIPELINES, AND UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		DESIGN	
CONTRACTOR	DATE	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE
CONTRACTOR	DATE	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE
INSPECTOR'S	DATE	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE
ACCEPTANCE BY	DATE	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE
E.S.E. RETURN AT THE INTERSECTION OF	DATE	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE
MONTGOMERY BLVD. N.E. AND ANDREWS DR. N.E.	DATE	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE
ELEVATION = 5285.68 FEET (M.S.L.D.)	DATE	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE
TBM: PK NAIL IN SIDEWALK AT THE SOUTHWEST CORNER OF THE SITE.	DATE	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE
ELEVATION = 5280.01 FEET (M.S.L.D.)	DATE	PROJECT BENCHMARK	DATE	NO.	BY	NO.	BY	NO.	DATE	NO.	DATE

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 21: T98 - Tijeras Complex Hydrologic Soil Group B

Existing Pervious CN = 79 (DPM Plate 22.2 C-2)

Developed Pervious CN = 79 (DPM Plate 22.2 C-2)

Pasture or Range Land: poor condition)

Time of Concentration/Time to Peak

$T_c = 0.0078 \cdot 10.77 / 90.385$ (Kirpich Equation)

$T_p = T_c = 10$ min.

Point Rainfall

$P_g = 2.28$ in. (DPM Plate 22.2 D-1)

Rational Method

Discharge: $Q = C \cdot i \cdot A$

where C varies

$i = P_g \cdot (6.84) \cdot T_c^{-0.51} = 4.82$ in/hr

$P_g = 2.28$ in. (DPM Plate 22.2 D-1)

$T_c = 10$ min. (minimum)

$A =$ area, acres

SCS Method

Volume: $V = 3630$ (DRO) A

Where DRO = Direct runoff in inches

$A =$ area, acres

Existing Condition

Actual = 99,410 sf = 2.28 Ac

Roof area = 29,600 sf (0.10)

Paved area = 3,200 sf (0.04)

Landscaped area = 1,980 sf (0.02)

Undeveloped area = 65,050 sf (0.65)

$C = 0.56$ (Weighted average per Emergency Rule, 1/14/86)

$Q_{100} = C \cdot i \cdot A = 6.2$ cfs

$A_{imp} = 32,800$ sf & impervious = 33 %

Composite CN = 85 (DPM Plate 22.2 C-3)

DRO = 0.7 in. (DPM Plate 22.2 C-4)

$V_{100} = 3630$ (DRO) A = 9,280 cf

Developed Condition

Actual = 99,410 sf = 2.28 Ac

Roof area = 29,600 sf (0.10)

Paved area = 6,400 sf (0.06)

Landscaped area = 1,340 sf (0.02)

Undeveloped area = 62,070 sf (0.62)

$C = 0.59$ (Weighted average per Emergency Rule, 1/14/86)

$Q_{100} = C \cdot i \cdot A = 6.4$ cfs

$A_{imp} = 36,000$ sf & impervious = 36 %

Composite CN = 86 (DPM Plate 22.2 C-3)

DRO = 1.1 in. (DPM Plate 22.2 C-4)

$V_{100} = 3630$ (DRO) A = 9,100 cf

Offsite Contributing Area

Actual = 49,240 sf = 1.13 Ac

Roof area = 400 sf (0.01)

Undeveloped area = 48,840 sf (0.99)

$C = 0.40$ (Weighted average per Emergency Rule, 1/14/86)

$Q_{100} = C \cdot i \cdot A = 0.40(4.82)(1.13) = 2.2$ cfs

$A_{imp} = 400$ sf & impervious = 0.1 %

Composite CN = 79 (DPM Plate 22.2 C-3)

DRO = 0.7 in. (DPM Plate 22.2 C-4)

$V_{100} = 3630$ (DRO) A = 2,870 cf

Comparison

$\Delta Q_{100} = 6.4 - 6.2 = 0.2$ cfs (Increase)

$\Delta V_{100} = 9,100 - 8,280 = 820$ cf (Increase)

MONTGOMERY BOULEVARD N.E.

The following items concerning the Leyendecker Reservoir Grading and Drainage Plan are contained herein:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located adjacent to Montgomery Boulevard N.E. between Maria Drive N.E. and Louisiana Boulevard N.E. At present, the site is partially developed with City of Albuquerque "reservoir, pump station and associated appurtenances. Much of the surrounding area is currently developed, thereby making this a modification to an existing site within an infill area. The proposed improvements consist of the addition of a new chlorination facilities building, new underground fluoride tanks and paving.

As shown by Panel 17 of the Federal Emergency Management Agency Flood Boundary and Floodway Map, dated October 14, 1983, this site does not lie within a designated Flood Hazard Zone. Furthermore, the site does not appear to contribute runoff to an existing flood hazard area. There is an existing public storm drain system in Montgomery Boulevard N.E. which accepts runoff from the subject site. Due to the fact that this is an existing site, the fact that this site does not contribute runoff to an existing flooding problem, the negligible increase in runoff demonstrated by the calculations, the free discharge of runoff from this site is appropriate.

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 grades, and 3) the limit and character of the proposed improvements. Flows generally flow from east to west. Offsite flows from the north are contained within the adjacent development. Offsite flows from the south are contained in Montgomery Boulevard N.E. No offsite flows are anticipated from the west. Some offsite flows enter the site from the east and have been quantified in the calculations. Some of the offsite flows will be intercepted by the proposed asphalt paving, in which case, the runoff will be directed through the site to Montgomery Boulevard N.E. The remainder of the offsite flows will continue to flow historically. As shown by this plan, the runoff from the proposed improvements will be directed onto the existing concrete paving and exit the site via the existing driveway on Montgomery Boulevard N.E. The runoff will eventually enter the storm drain system in Montgomery Boulevard N.E. The 0.2 cfs net increase in peak runoff as a result of the development will not adversely affect downstream facilities.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used to quantify the peak rate of discharge and the SCS Method has been used to quantify the volume of runoff. Both Methods have been used in accordance with the City of Albuquerque Development Process Manual, Volume II, and the Mayor's Emergency Rule adopted January 14, 1986.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: CHLORINATION FACILITIES-1988
LEYENDECKER FACILITY
GRADING PLAN

APPROVALS: ENGINEER DATE APPROVALS ENGINEER DATE

DESIGNED BY: P.M.L.-J.G.M. DATE 1-88
DRAWN BY: T.M.A. DATE 1-88
CHECKED BY: J.G.M. DATE 1-88

DRAWING NO.: C-6
PROJECT NO.: 3458
MAP NO.: F-18
SHEET OF: 9
DATE: 05-03-88