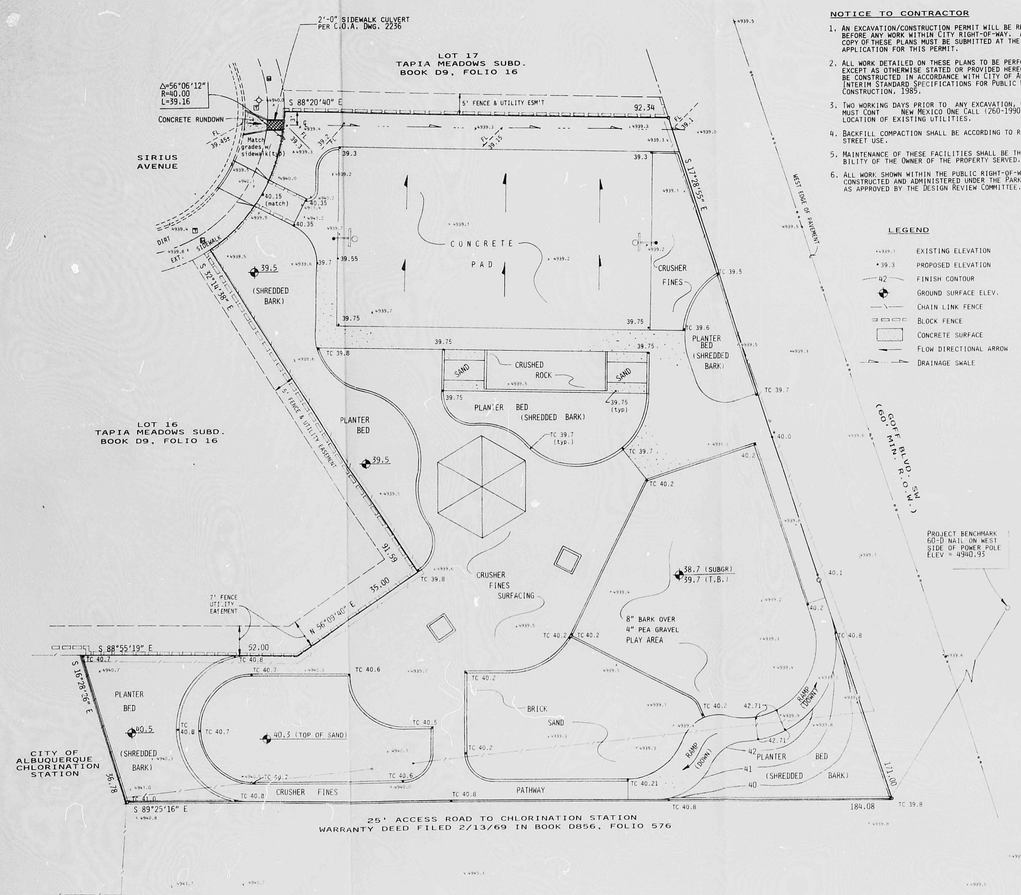
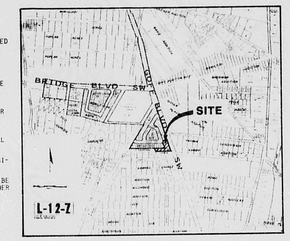
PUBLIC WORKS/HYDROLOGY

L12/D2A



NOTICE TO CONTRACTOR

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONT NEW MEXICO ONE CALL (260-1990), FOR LOCATION OF EXISTING UTILITIES.
4. BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
5. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
6. ALL WORK SHOWN WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED AND ADMINISTERED UNDER THE PARK WORK ORDER AS APPROVED BY THE DESIGN REVIEW COMMITTEE.



LEGEND

- EXISTING ELEVATION
- PROPOSED ELEVATION
- FINISH CONTOUR
- GROUND SURFACE ELEV.
- CHAIN LINK FENCE
- BLOCK FENCE
- CONCRETE SURFACE
- FLOW DIRECTIONAL ARROW
- DRAINAGE SWALE

GENERAL NOTES:

LEGAL DESCRIPTION: TAPIA MEADOWS PARK, TAPIA MEADOWS SUBDIVISION, ALBUQUERQUE, NEW MEXICO, BOOK D9, FOLIO 16, FILED NOVEMBER 1, 1978.

ENGINEER: ISAACSON & ARFMAN, P.A.
128 MONROE STREET, NE
ALBUQUERQUE, NM 87108
ATTN: FRED C. ARFMAN, P.E.

SURVEYOR: CITY SURVEYOR, PUBLIC WORKS DEPARTMENT

BENCHMARK: PROJECT BENCHMARK, 60-D NAIL ON WEST SIDE OF POWER POLE APPROXIMATELY 84 FEET NORTHEAST OF THE PARK'S SOUTHEAST PROPERTY CORNER. ELEVATION: 4940.93

ZONING: CITY PARK

AREA: 0.4657 ACRES, 20,286 SQUARE FEET

FLOOD HAZARD: THE NORTHEAST CORNER AND A STRIP OF LAND ALONG THE WEST RIGHT-OF-WAY LINE OF GOFF BLVD. ARE WITHIN THE LIMITS OF A 100-YEAR FLOOD HAZARD AREA AS DETERMINED BY PANEL NO. 350002 0034 OF THE DETERMINATION #4, 1983 EDITION OF THE F.E.M.A. MAPS.

EXISTING CONDITIONS & HYDROLOGICAL CHARACTERISTICS

THE SITE IS SITUATED AT THE SW END OF TAPIA MEADOWS SUBDIVISION BETWEEN LOTS 16 & 17 AND GOFF BLVD. TO THE WEST AND A CITY CONTROLLED 25-FOOT ACCESS ROAD TO THE SOUTH. THE AREA FLOODPLAIN EXISTS ALONG AND WITHIN GOFF BLVD. TAPIA MEADOWS PARK IS WITHIN THE BOUNDARIES OF PRECIPITATION ZONE NO. 1 (WEST OF RIO GRANDE BLVD.); AS SUCH THE P_{360} (6 HOUR, 100-YEAR STORM) HAS A DEPTH OF 2.2 INCHES.

DETERMINE TOTAL Q_P:

LAND TREATMENT C
TIME OF CONCENTRATION = 10 MINUTES
PEAK DISCHARGE (ZONE 1, TABLE 9) = 2.73 CFS/AC

$$Q_P = Q_{100} \cdot A_T = (2.73)(0.466)$$
$$= 1.27 \text{ CFS}$$

DETERMINE VOLUME OF RUNOFF:

$$V = E_1 \cdot A_T = (0.94)(0.466)(43560)(1/12)$$
$$= 1,590 \text{ CU. FT.}$$

PROPOSED IMPROVEMENTS

THE PLANNED IMPROVEMENTS ARE THOSE WHICH ARE TYPICAL OF POCKET NEIGHBORHOOD PARKS. THE ONLY AREAS PROGRAMMED FOR IMPERVIOUS SURFACING ARE THE BASKETBALL COURT AND A MINOR AREA OF CONCRETE WALKWAYS (REQUIRED FOR HANDICAP ACCESS). THE REMAINING LAND TREATMENTS ARE COMPRISED OF POROUS SANDS AND CRUSHER FINES WALKS AND SHREDDED BARK PLANTING BEDS. THOSE AREAS CONTAINED WITHIN A HARD CONCRETE EDGE SHALL RETAIN 100% OF THE STORM WATERS FALLING WITHIN THEIR LIMITS.

OFFSITE STORM WATERS PREVIOUSLY RETAINED WITHIN A LOW AREA WITHIN SIRIUS AVE. ADJACENT TO THE PARK SHALL NOW BE ACCEPTED BY THE PARK VIA A SIDEWALK CULVERT. STORM WATERS SHALL EITHER PASS THROUGH THE PARK AND ENTER ONTO THE RIGHT-OF-WAY OF GOFF BLVD. OR THEY WILL PERCOLATE INTO THE GROUND WITHIN THOSE AREAS OF THE PARK AND GOFF BLVD. THAT ARE COVERED BY THE 100-YEAR FLOOD HAZARD AREA.

DETERMINE TOTAL Q_P (DEVELOPED):

LAND TREATMENT	A = 9,150 SQ. FT.	(0.21 AC.)
" "	C = 6,536 SQ. FT.	(0.15 AC.)
" "	D = 4,650 SQ. FT.	(0.106 AC.)
		0.466 AC.

$$Q_P = Q_1 A_1 + Q_2 A_2 + Q_3 A_3 + Q_4 A_4$$
$$= (1.15)(0.21) + (2.73)(0.15) + (4.37)(0.106)$$
$$= 0.24 + 0.41 + 0.46$$
$$= 0.72 \text{ CFS}$$

(100% OF A_1 AND 50% OF A_2 IS RETAINED ONSITE)

DETERMINE VOLUME OF RUNOFF (V):

$$E_W = \frac{E_1 A_1 + E_2 A_2}{A_1 + A_2}$$
$$= \frac{(0.94)(0.21) + (1.93)(0.106)}{(0.21 + 0.106)}$$
$$= 1.27 \text{ INCHES}$$

$$\text{VOLUME} = (1.27/12)(0.316)(43560) = 1,459 \text{ CU. FT.}$$

THEREFORE, THE VOLUME ALLOWED TO RUNOFF HAS BEEN DECREASED BY 8% (131 CU. FT.) DUE TO THE CAPTURING AND RETAINAGE OF STORM WATERS WITHIN THE CONTAINED LAND TREATMENT AREAS OF THE PARK. THE REMAINING PARK AREA EXCEPTING THE CONCRETE SURFACES SHALL BE CAPABLE OF ACCEPTING STORM WATER VOLUMES VIA INFILTRATION.

RECEIVED
JUL 25 1991
HYDROLOGY SECTION

Date Drawn
Designed
Checked
Approved

Isaacson & Arfman, P.A.
CONSULTING ENGINEERING ASSOCIATES
Albuquerque, New Mexico

ARCHITECTURE

DRAINAGE PLAN

TAPIA MEADOWS PARK

Sheet 1 of 1

RL 27 DATE 3-24-92 OP ESP

CITY OF ALBUQUERQUE

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DIRECTOR

NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
MY COMMISSION EXPIRES 6/14/92

CITY OF ALBUQUERQUE
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PLANS/PLATS ON FILE

FILE DESC: L12/D2A

PLANS/PLATS 1

D24 C20 B16 A12

CITY OF ALBUQUERQUE

C D F