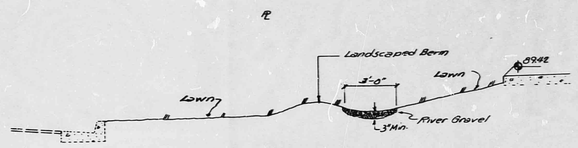
HYDROLOGY

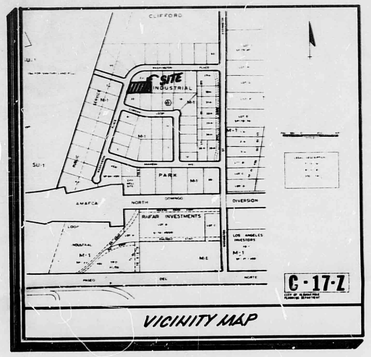
C17/D1CC
1 PLAN

C17/D1cc

1 Plan



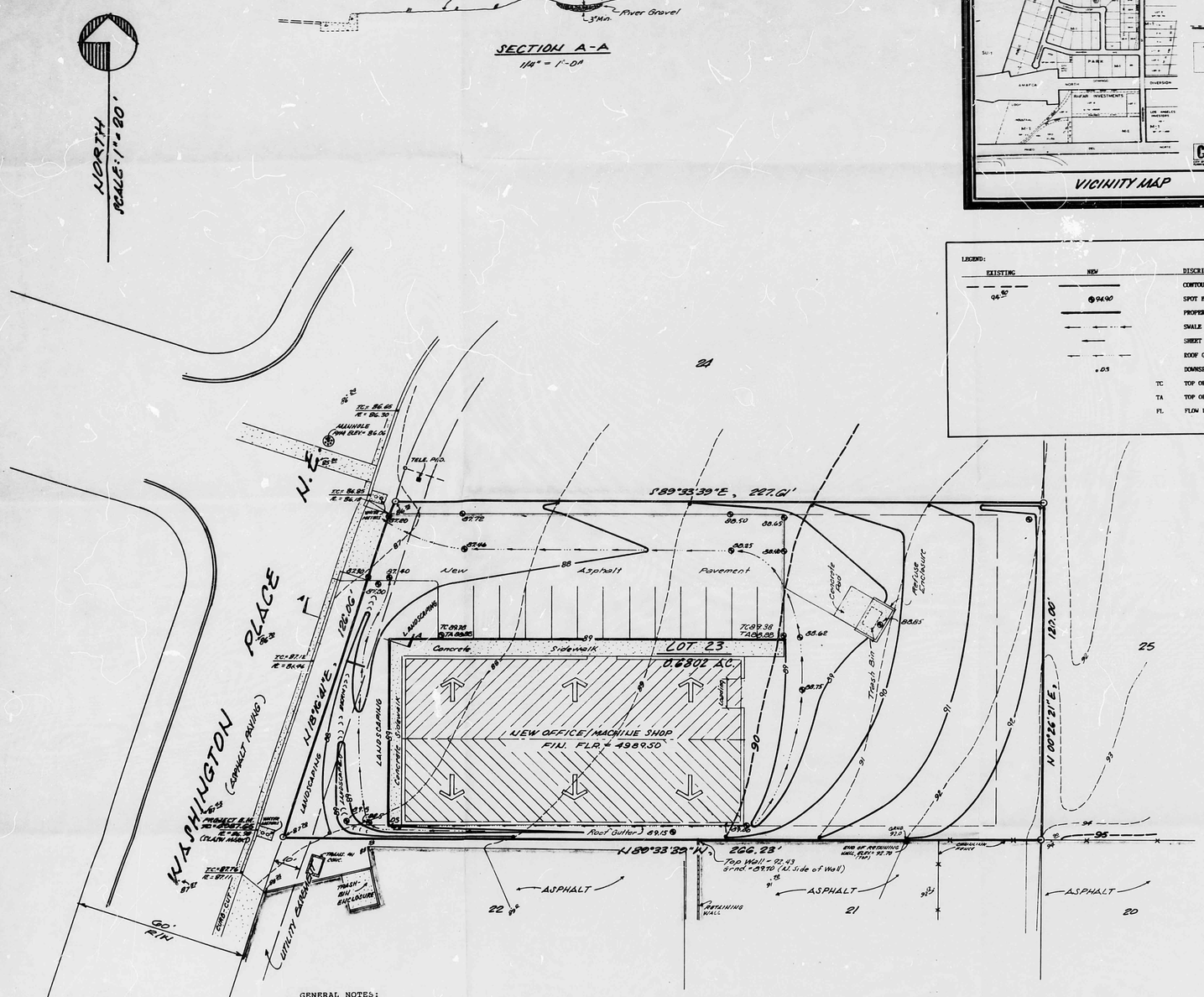
SECTION A-A
1/4" = 1'-0"



VICINITY MAP

LEGEND:

EXISTING	NEW	DISCRIPTION
94	94	CONTOUR
	⊕9490	SPOT ELEVATION
		PROPERTY LINE
		SWALE
		SHEET FLOW
		ROOF GUTTER
	•DS	DOWNSPOUT
		TC TOP OF CURB/CONCRETE
		TA TOP OF ASPHALT
		FL FLOW LINE



GENERAL NOTES:

1.) TOPOGRAPHY SURVEY OBTAINED BY "TRANSIT-STADIA" METHOD.

2.) NO SEARCH HAS BEEN MADE FOR EASEMENTS OF RECORD WITHIN THE SUBJECT PROPERTY OTHER THAN THOSE SHOWN ON THE PLAT OF RECORD.

3.) NO PROPERTY CORNERS HAVE BEEN SET PER THIS SURVEY.

LEGAL DESCRIPTION

LOT 23, CLIFFORD INDUSTRIAL PARK.

DRAINAGE CALCULATIONS

I. REFERENCES:

A. CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM) VOLUME 2, DESIGN CRITERIA, CHAPTER 22.

B. FLOODWAY MAP, PANEL 9 OF 50, (FEMA), OCTOBER 14, 1983.

C. SOIL SURVEY OF BERNALILLO COUNTY, NEW MEXICO, U.S. SOIL CONSERVATION SERVICE, JUNE, 1977.

II. ON-SITE RUNOFF CHARACTERISTICS:

A. UNDEVELOPED RUNOFF COEFFICIENT:

TYPE OF SURFACE	AREA	"C"VALUE	AREA("C")
STREETS, DRIVES, WALKS			
ROOFS			
LAWNS & LANDSCAPING			
UNDEVELOPED	29629		
TOTAL AREA	29630 SF=0.6802 AC		

WEIGHTED "C" VALUE = 0.40

PERCENT IMPERVIOUS = 0%

B. DEVELOPED RUNOFF COEFFICIENT:

TYPE OF SURFACE	AREA	"C"VALUE	AREA("C")
STREETS, DRIVES, WALKS	5900	0.95	5605
ROOFS	7000	0.90	6300
LAWNS & LANDSCAPING	2450	0.25	613
UNDEVELOPED	14280	0.40	5712
TOTAL AREA	29630	0.44	18230

WEIGHTED "C" VALUE = 18230/29630=0.62

PERCENT IMPERVIOUS = 44%

C. RAINFALL, 100-YR.,6-HR.:(REF. A., PLATE 22.2 D-1)
R_6 = 2.2 INCHES

D. TIME OF CONCENTRATION:Ten Minutes

E. RAINFALL INTENSITY,I (REF. A., PLATE 22.2 D-2)
$I=R_6 X 6.84 X (T_c)^{-0.51}=(2.2)6.84(10)^{-0.51}=4.65 IN/HR$

F. SOIL TYPE (REF. I.C., SHEET NO. 11)Soil is EMB, Embudo Gravelly fine sandy loam, or WEB, Wink Embudo Complex, Hydrologic Soil Group "B".

G. RUNOFF CURVE NUMBER (CN)-(REF.I.A., PLATE 22.2 C-2)
UNDEVELOPED LAND USE: Pasture or Range, Fair, CN=70

DEVELOPED LAND USE:Commercial, CN=81

H. DIRECT RUNOFF, Q_p, INCHES (REF. I.A., PL. 22.2 C-4)
UNDEVELOPED Q_p = 0.40 IN. DEVELOPED Q_p = 0.75 IN.

III. ON-SITE PEAK DISCHARGE BY RATIONAL EQUATION:

A. EXISTING CONDITIONS:
Q_{100} = 0.40 X 4.65 X 0.68 = 1.26 CFS
Q_{10} = 0.657 X 1.26 = 0.83 CFS

B. DEVELOPED CONDITIONS:
Q_{100} = 0.62 X 4.65 X 0.68 = 1.96 CFS
Q_{10} = 0.657 X 1.96 = 1.29 CFS

IV. ON-SITE VOLUME BY S.C.S. METHOD:

A. EXISTING CONDITIONS:
V_{100} = AREA (Q_p/12) = 29630 (0.40/12) = 988 CF
V_{10} = 0.657 X 988 = 649 CF

B. DEVELOPED CONDITIONS:
V_{100} = AREA (Q_p/12) = 29630(0.75/12)=1852(/12) = CF
V_{10} = 0.657 X 1852 = 1217 CF

PRE-DESIGN CONFERENCE FINDINGS:

1. DRAINAGE PLAN PER D.P.M.
2. FREE DISCHARGE ALLOWED PER THE CLIFFORD INDUSTRIAL PARK MASTER PLAN.

DRAINAGE COMMENTS:

1. DRAINAGE FOR THIS SITE IS IN ACCORDANCE WITH THE MASTER DRAINAGE PLAN FOR CLIFFORD INDUSTRIAL PARK.
2. THE SITE DOES NOT LIE WITHIN OR ADJACENT TO A DESIGNATED FLOOD HAZARD AREA.
3. ALL RUNOFF WILL LEAVE THE SITE VIA THE PROPOSED DRIVEPAD.
4. THERE IS NO OFF-SITE FLOW ENTERING THIS SITE FROM ADJACENT PROPERTY.

EROSION CONTROL PLAN:

DURING SITE GRADING AND CONSTRUCTION, ALL RUNOFF FROM THE SITE SHALL BE CONTAINED IN PONDS, DIKES, OR OTHER SUITABLE CONTAINMENT FACILITIES CAPABLE OF DETAINING THE 10 YEAR UNDEVELOPED RUNOFF VOLUME. (SEE DRAINAGE CALCULATIONS) TOTAL VOLUME MUST BE RELEASED AT A RATE SUFFICIENT TO DRAIN THE FACILITY WITHIN 24 HOURS. ONLY SILT-FREE WATER MAY BE RELEASED.

BENCH MARK:

A.C.S. STATION 8-C17, LOCATED 0.3 MILES NORTH OF THE INTERSECTION OF LOS ANGELES BLVD. AND WASHINGTON STREET. THE STATION MARK IS A STANDARD BRASS TABLET, STAMPED "8-C17, 1975", CEMENTED IN A DRILL HOLE IN TOP OF CONCRETE CURB. ELEVATION 5111.029 FEET.

TEMPORARY BENCH MARK (TBM) OR PROJECT B.M. IS LOCATED ON TOP OF CURB ADJACENT TO THE S.W. CORNER OF THE SITE. ELEVATION 4987.65 FEET.

RECEIVED
JUN 16 1987
HYDROLOGY SECTION

GERALD LOVELADY
NEW MEXICO
6-12
REGISTERED PROFESSIONAL ENGINEER
JUNE 15, 1987
ENGINEER'S SEAL

GRADING AND DRAINAGE PLAN OF LOT 23 - CLIFFORD INDUSTRIAL PARK ALBUQUERQUE, NEW MEXICO JUNE, 1987