HYDROLOGY K13/D14 1 PLAN

K13/D14

1 PLAN

CITY OF ALBUQUERQUE
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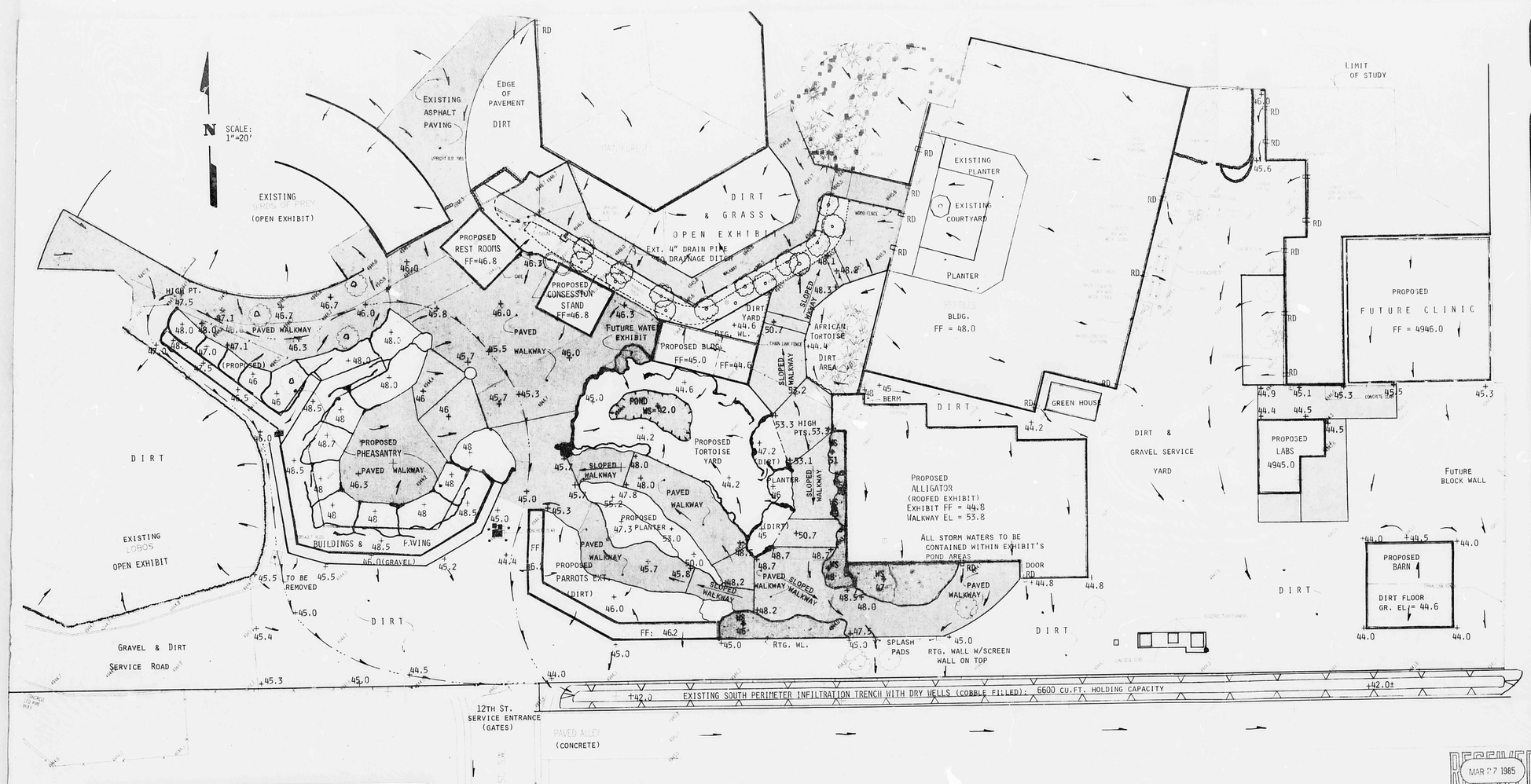
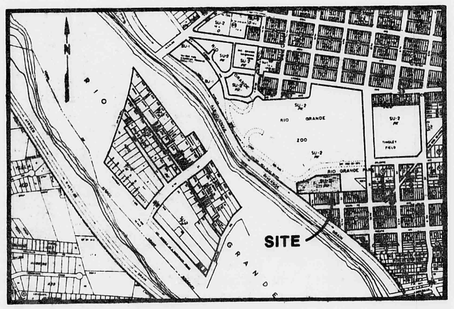
CITY OF ALBUQUERQUE





VICINITY MAP

Zone Atlas Map No. K-13

LEGEND

(HALF TONED #S @ 45° ∠)	EXISTING SPOT ELEVATIONS
	EXISITNG TREE OR BUSH
# RD	ROOF DRAIN
FF: 46.2	FINISH FLOOR ELEVATION
- 46.0	PROPOSED SPOT ELEVATION
	FLOW DIRECTIONAL ARROW
	DRAINAGE SWALE
	EXISTING INFILTRATION TRENCH FACILITY
WS	WATER SURFACE
	PAVED WALKWAYS
	LIMIT OF STUDY
	EXISTING BUILDING
	PROPOSED BUILDING

NOTES

1. ALL PROPOSED FINISH FLOOR ELEVATIONS ARE SET AS THE LOWEST PERMISSIBLE ELEVATIONS. FINAL ELEV. MAY BE GREATER THAN INDICATED.
2. SPOT ELEVATIONS ALONG THE PAVED WALKWAY MAY VARY, BUT THE DRAINAGE PATTERN WILL BE MAINTAINED.
3. ALL OPEN EXHIBITS MUST RETAIN THOSE STORM WATERS WHICH FALL WITHIN THEIR LIMITS. THOSE STORM WATERS WOULD BE CONTAMINATED BY THE ANIMALS' WASTE AND MUST BE TREATED THROUGH THE SANITARY SEWER SYSTEM.
4. ALL STORM WATER RUNOFF (EXCLUDING THOSE FALLING INTO THE OPEN EXHIBITS) IS DIRECTED OR SHALL BE DIRECTED TO EITHER THE INTERIOR DRAINAGE INFILTRATION DITCH LOCATED TO THE SOUTH OF THE EXISTING RAIN FOREST EXHIBIT OR TO THE EXISTING SOUTH PERIMETER INFILTRATION TRENCH. THESE FACILITIES HAVE BEEN PREVIOUSLY DESIGNED AND CONSTRUCTED TO CAPTURE THOSE STORM WATERS AND ALLOW THEM TO PERCOLATE INTO THE AQUIFER VIA THE NATURAL SOILS OR BY DRYWELLS.
5. SOILS - THE SITE CONSISTS OF BRAZITO (BS) SOILS HAVING A UNIFIED SOIL CLASSIFICATION OF SOIL GROUP 'A'. THE TOP FOOT OF SILTY CLAY HAS BEEN REMOVED FROM THOSE INFILTRATION TRENCH FACILITIES AND THE REMAINING SAND HAS A PERMEABILITY RATE OF 6.0 - 20.0 INCHES/HOUR.

DRAINAGE

1. TOTAL AREA OF STUDY = 3.25 Ac. = 141,600 s.F.
   AREA OF OPEN EXH. = 13,600 s.F.
   AREA TO RUNOFF = 2.94 Ac. 128,000 s.F.
2. EXISTING DRAINAGE DITCH SOUTH OF RAIN FOREST
   STORAGE VOLUME CAPACITY = 2,000 CU.FT.
   POND SURFACE AREA = 2,400 SQ.FT.
   ASSUME 12" PERCOLATION/HR = 2,400 CU.FT/HR
   FIRST HOUR ULTIMATE CAPACITY = 4,400 CU.FT.
   AREA CONTRIBUTING TO POND = 17,000 S.F.
   DEPTH OF RAINFALL FOR THE FIRST HOUR (85%X0.183) = 0.156 FT.
   C-VALUE = 0.85
   RUNOFF VOLUME = 2,251 CU.FT. < 4,400 CU.FT. --- O.K.
3. EXISTING SO. PERIMETER INFILTRATION TRENCH
   STORAGE VOLUME CAPACITY = 6,600 CU.FT.
   POND SURFACE AREA = 4,200 SQ.FT.
   ASSUME 12" PERC./HOUR = 4,200 CU.FT./HR
   FIRST HOUR ULTIMATE CAPACITY = 10,800 CU.FT.
   AREA CONTRIBUTING TO FACILITY = 111,000 SQ.FT.
   DEPTH OF RAINFALL (1ST HOUR) = 0.156 FT.
   C-VALUE 0.65
   RUNOFF VOLUME 11,255 C.F. > 10,800 C.F. BUT DUE TO THE DRY WELLS AND THE CONSERVATIVE PERCOLATION RATE, THEY SHALL BE CONSIDERED EQUAL.

RECEIVED MAR 27 1985 HYDROLOGY SECTION

3-27-85

Date
Designed
Checked

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Albuquerque, New Mexico

SOUTH AREA DRAINAGE PLAN

CITY OF ALBUQUERQUE
RIO GRANDE ZOOLOGICAL PARK

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