HYDROLOGY K16/D6 1 PLAN

K16/D6

1 PLAN

CITY OF ALBUQUERQUE

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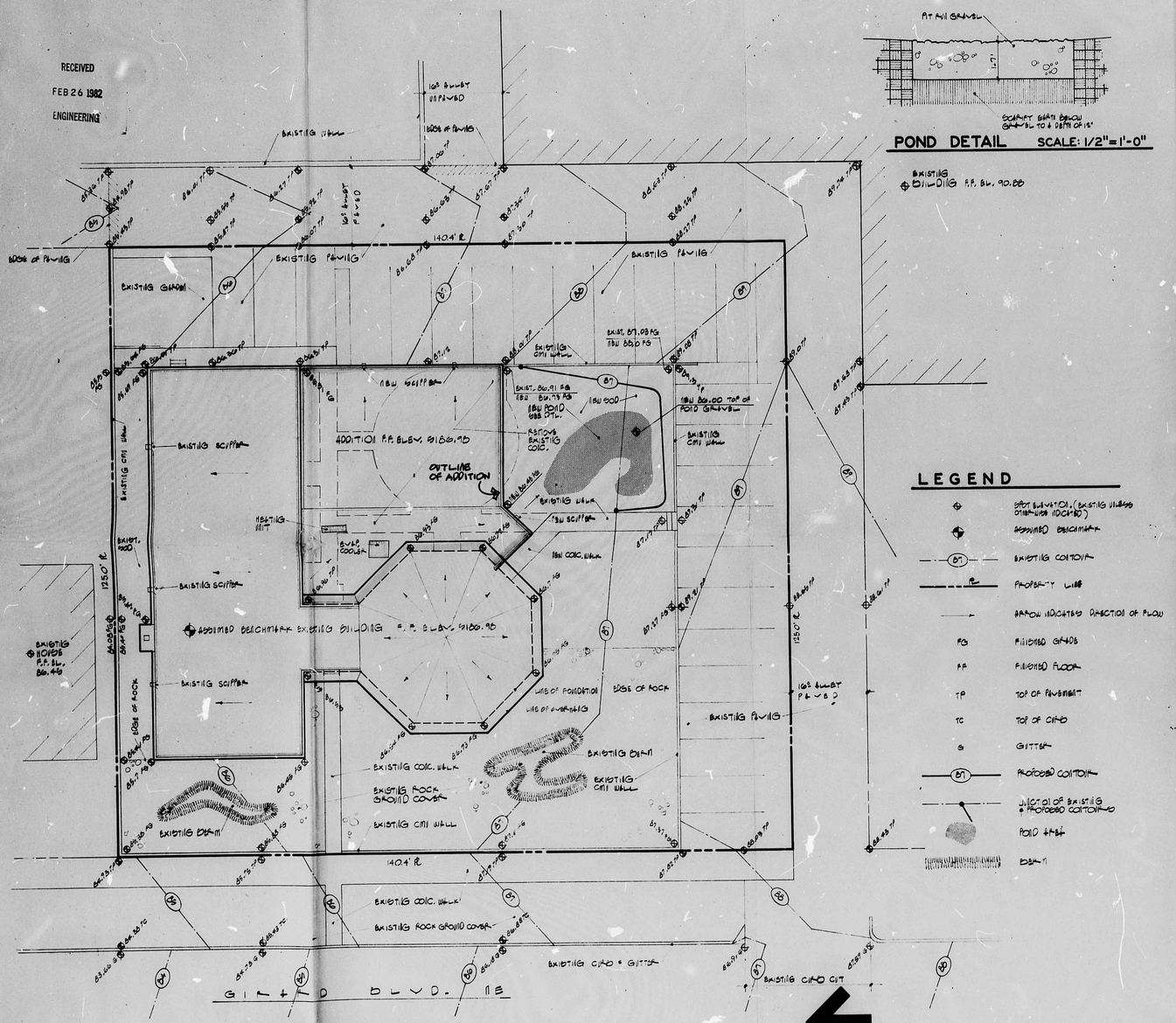
ENGINEERING



DRAINAGE / ROOF PLAN SCALE: 1"=10.0'

POND DETAIL SCALE: 1/2"=1'-0"

LEGEND

- SPOT ELEVATION (EXISTING UNLESS OTHERWISE INDICATED)
- ASSUMED BENCHMARK
- EXISTING CONTOUR
- PROPERTY LINE
- ARROW INDICATES DIRECTION OF FLOW
- FG FINISHED GRADE
- FF FINISHED FLOOR
- TP TOP OF PARAPET
- TC TOP OF CURB
- G GUTTER
- PROPOSED CONTOUR
- LIMIT OF EXISTING & PROPOSED CONTOURS
- POND BOTTOM
- BERM

NK

Grading & Drainage Only

STATE of NEW MEXICO
ken hovey
no. 1055
REGISTERED ARCHITECT

LOCATION AND TERRAIN:

The tract is located in the northeast quadrant of the City of Albuquerque and is situated on the east side of Girard Boulevard, north of Central Avenue. See Plate I for exact location.

The site is more particularly described as Lots 4,5 & 6 of Block 12, Monte Vista Addition, City of Albuquerque, Bernalillo County, New Mexico.

The site slopes to the north at approximately 3%. The site is presently in a developed condition with an existing building, paved parking and landscaping.

UPLAND DRAINAGE:

The site receives flows from the area immediately south of the subject property. The flows are directed into Girard via an existing curb cut prior to entering the building site.

INTERNAL DRAINAGE:

PERVIOUS SURFACES BEFORE ADDITION : 2720 SQ. FT.
$\frac{2.4}{12}$ x 0.4 x 2720 = 218 CU. FT.

IMPERVIOUS SURFACES BEFORE ADDITION : 14,780 SQ. FT.
2.4 x 0.9 x 14,780 = 2660 CU. FT.

RUN-OFF BEFORE ADDITION : 2878 CU. FT.

PERVIOUS SURFACES AFTER ADDITION : 2447 SQ. FT.
2.4 x 0.4 x 2447 = 196 CU. FT.

IMPERVIOUS SURFACES AFTER ADDITION : 15,053 SQ. FT.
2.4 x 0.9 x 15,053 = 2710 CU. FT.

RUN-OFF AFTER ADDITION : 2906 CU. FT.

DIFFERENCE IN VOLUME OF RUN-OFF BEFORE AND AFTER DEVELOPMENT : 28 CU. FT.

REQUIRED POND:

RUN-OFF CONTRIBUTING TO POND:

ITEM	AREA-SQ.FT.	RUN-OFF COEFF.	EFF. AREA
Roof	840	0.95	798
Sod	165	0.30	50
Pond	885	1.00	885
			1733

100 YEAR, 6 HOUR RUN-OFF VOLUME:
1733 x 2.4 / 12 - 350 CU.FT.

2 YEAR, 6 HOUR RUN- OFF VOLUME
1733 x 1.05 / 12 = 152 CU.FT.

POND PROVIDED:

Approximate gravel surface area = 260 SQ. FT.
Provide underground storage for 2 year storm, therefore, place gravel (152/0.35)/260 = 1.7 ft. thick

Below surface = 152 CU.FT.
Above surface 238 = [(260+714)/2]0.5
Total volume 390 CU.FT.

CONCLUSION:

The site is located near the upper end of the basin with an alley serving as a diversion immediately upstream. Therefore, upland flows pose no threat to the project. Though ponding is not required by policy or ordinance of governing agencies, it is necessary due to physical constraints imposed by existing improvements. The pond required from this standpoint is several time's the volume difference caused by this project. The pond is placed to eliminate saturation of foundations and is planned in such a manner to eliminate surface water which would attract mosquitoes.

DRAINAGE, GRADING PLAN

the ken hovey design group
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ADDITION TO THE
CHRISTIAN STUDENT CENTER
130 GIRARD BOULEVARD N.E.
ALBUQUERQUE, NEW MEXICO

PROJECT #58
DATE 19 FEB. 1982
DRAWN KHW
CHECKED
REVISIONS

2

CITY OF ALBUQUERQUE