HYDROLOGY K15/D3 3 PLANS

K15/D3

3 PLANS

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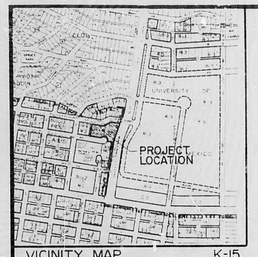


VICINITY MAP K-15

SCALE 1" = 800'

LEGEND

- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- GAS METER
- WATER METER
- POWER POLE
- LIGHT POLE
- FIRE HYDRANT
- EXISTING TREE
- CABLE TELEVISION RISER
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- SWALE
- BASIN BOUNDARY LINE

PROJECT BENCHMARK

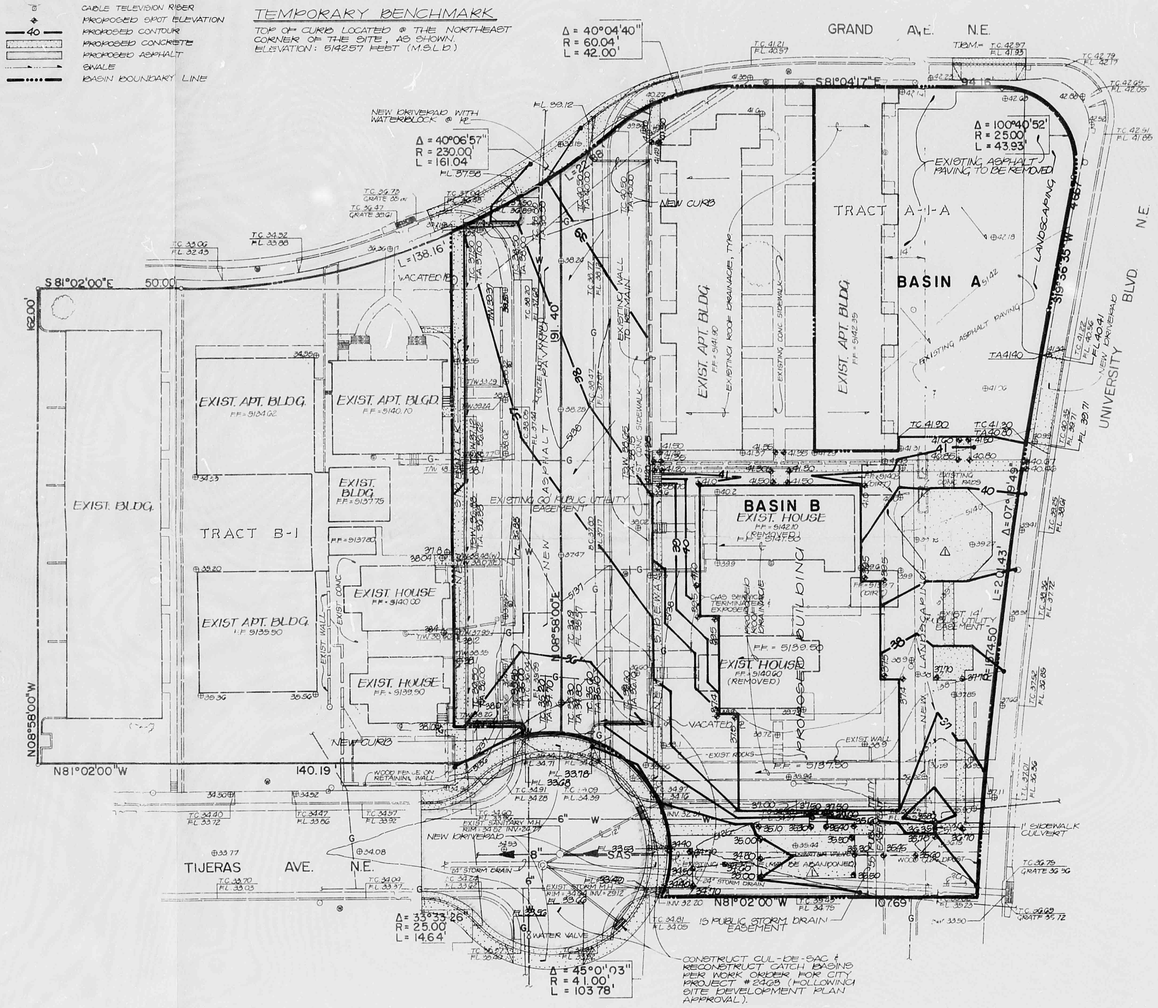
STANDARD ACS ALUMINUM CAP STAMPED 12-K15 1983" SET FLUSH WITH THE CURB, LOCATED 15 MILES EAST OF DOWNTOWN ALBUQUERQUE @ THE INTERSECTION OF CENTRAL AVENUE & UNIVERSITY BOULEVARD
ELEVATION = 5189.97 FEET (MSLD)

LEGAL DESCRIPTION

TRACT A-1-A, BLOCK 34, BROWNEWELL & LAIL'S HIGHLAND ADDITION

TEMPORARY BENCHMARK

TOP OF CURB LOCATED @ THE NORTHEAST CORNER OF THE SITE, AS SHOWN.
ELEVATION: 5142.57 FEET (MSLD)



SCALE: 1" = 20'

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.

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 BERMS AT THE PROPERTY LINES AND WETTING 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.

DRAINAGE PLAN

The following items concerning the Hufbauer Apartments Drainage Plan are contained hereon:

1. Vicinity Map 2. Grading Plan 3. Calculations

As shown by the Vicinity Map, this site is located at the southwest corner of the intersection of Grand Avenue N.E. and University Boulevard N.E. The southwest corner of the site coincides with a dedicated cul-de-sac at the east end of Tijeras Avenue N.E. at its intersection with the vacated Pine Street N.E. At present, the site is developed with rental units. These units are a combination of houses and apartment buildings. The proposed improvements consist of the removal of two existing houses and the construction of a new apartment building along with some new paving and landscaping.

As shown by Plate K-15 of the Albuquerque Master Drainage Study, this site does not lie within a designated Flood Hazard Zone. Furthermore, the controlled discharge of runoff from this site is not required in accordance with the pre-design conference recap. The free discharge of runoff from this site is appropriate due to the fact that this is an infill site, that it is an existing developed site, and the proposed infrastructure improvements of the construction of two catch basins will adequately handle the increase in runoff.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1'-0" intervals, 2) the limit and character of the existing improvements, 3) the limit and character of the proposed improvements, and 4) continuity between existing and proposed grades. As shown by this plan, the site consists of two drainage basins, Basin A and Basin B. Basin A will freely discharge to University Boulevard N.E. via a new drivepad to be constructed along this street. From this point, the runoff will flow to the south to an existing catch basin which coincides with the former alignment of Tijeras Avenue N.E. At this point, the runoff will enter a public storm drain system. Basin B drains to the cul-de-sac at the end of Tijeras Avenue N.E., as previously described. This runoff will exit the site via two drivepads which are proposed. From this point, the runoff will flow within the street gutter line and ultimately enter the public storm drain system which lies within Tijeras Avenue N.E. It is worthwhile to note that certain public improvements will be required prior to the construction of the private improvements. These public improvements will be performed by City work order and the appropriate easements will be granted and the appropriate rights-of-way dedicated to allow this work to proceed. Of course, this will be coordinated with the Development Review Board in conjunction with the replat of this site.

The Calculations which appear hereon analyze the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in a slight overall increase in the peak runoff generated by this site of 1.4 cfs.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 31:
Cu - Cut and fill land
Hydrologic Soil Group A

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6 (6.84)\ T_c^{-0.51} = 4.80$ in./hr
$P_6 = 2.27$ in (DPM Plate 22.2 D-1)
$T_c = 10$ min (minimum)
A = area, ac.es

Volume: $V = CP_6A(1/12)$
where C varies
$P_6 = 2.27$ in (DPM Plate 22.2 D-1)
A = area, acres

Existing Condition

$A_{total} = 49,190$ sf $= 1.13$ Ac
$A_{imp} = 16,550$ sf; % impervious = 34%
$C^{AVE} = 0.33$ (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.33(4.80)(1.13) = 1.8$ cfs
$V_{100} = CP_6A = 0.33(2.27/12)(49,190) = 3,070$ cf

Developed Condition

Basin A:

$A_{total} = 9,620$ sf $= 0.22$ Ac
$A_{imp} = 7,920$ sf; % impervious = 82%
$C^{AVE} = 0.66$ (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.66(4.80)(0.22) = 0.7$ cfs
$V_{100} = CP_6A = 0.66(2.27/12)(9,620) = 1,200$ cf

Basin B:

$A_{total} = 39,570$ sf $= 0.91$ Ac
$A_{imp} = 29,070$ sf; % impervious = 73%
$C^{AVE} = 0.58$ (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.58(4.80)(0.91) = 2.5$ cfs
$V_{100} = CP_6A = 0.58(2.27/12)(39,570) = 4,340$ cf

Comparison

$\Delta Q_{100} = 1.8 - (0.7 + 2.5) = 1.4$ cfs (increase)
$\Delta V_{100} = 3,070 - (1,200 + 4,340) = 2,470$ cf (increase)

RECEIVED DEC 17 1985 HYDROLOGY SECTION

JEFFREY C. MONTGOMERY NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER
11-20-85
12-18-85

CONRAD & ASSOCIATES, P.C.
81 DALLAS N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

NO.	DATE	BY	REVISIONS
1	11/85	LPU	REVISE LANDSCAPING & CALCULATIONS
2	12/85	LPU	REVISE DRAINAGE PLAN

DESIGNED BY JCM & LPU
DRAWN BY TMA
APPROVED JCM

JOB NO 40554
DATE 4-85

GRADING AND DRAINAGE PLAN
HUFBAUER APARTMENTS

FILE NO
SHEET 1 OF 1

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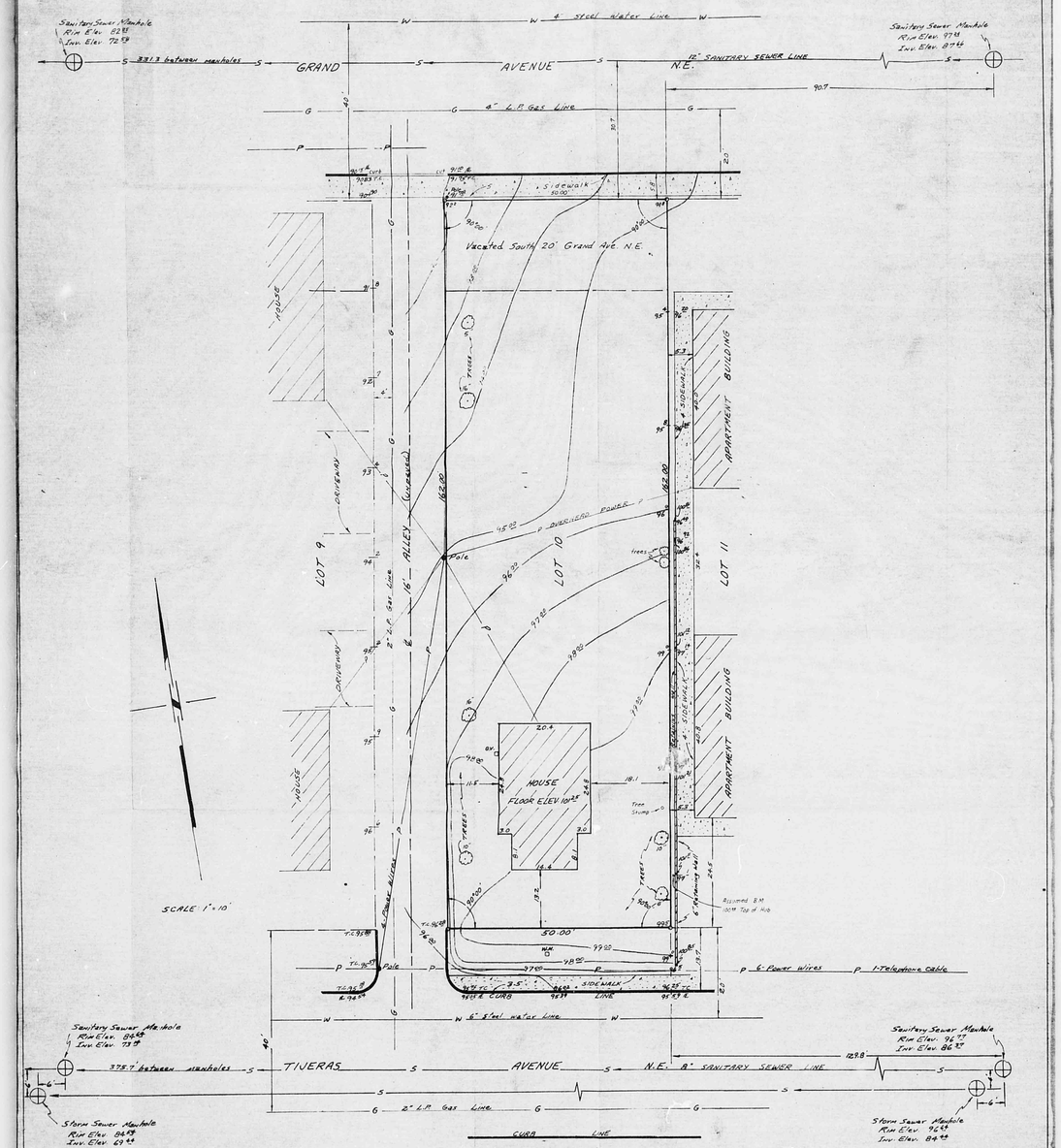

TOPOGRAPHIC SURVEY VACATED SOUTH 20' GRAND AVE. + LOT 10, BLOCK 33
BROWNWELL + LAIL'S HIGHLAND ADDITION
ALBUQUERQUE, NEW MEXICO

Charles Tim Scannell, Land Surveyor
8109 Candelaria Road N.E.
Albuquerque, New Mexico
May 8, 1978 L-20. Revised May 27, 1978.

HARVEY S. HOSHOUR ARCHITECT
201 CORL AVENUE S.W.
ALBUQUERQUE, NEW MEXICO

SHEET 2 OF 14

TOPOGRAPHICAL SURVEY
DRAINAGE REPORT
EXHIBIT 4

APARTMENTS
FOR
MR. & MRS. GARY HUFBAUER
1616 GRAND AVENUE N.E.
ALBUQUERQUE NEW MEXICO

HARVEY S. HOSHOUR, ARCHITECT-AIA
201 COAL AVENUE S.W.
ALBUQUERQUE, NEW MEXICO 87102
TELEPHONE: (505) 843-6900

STATE OF NEW MEXICO
HARVEY S. HOSHOUR
NO. 321
REGISTERED ARCHITECT

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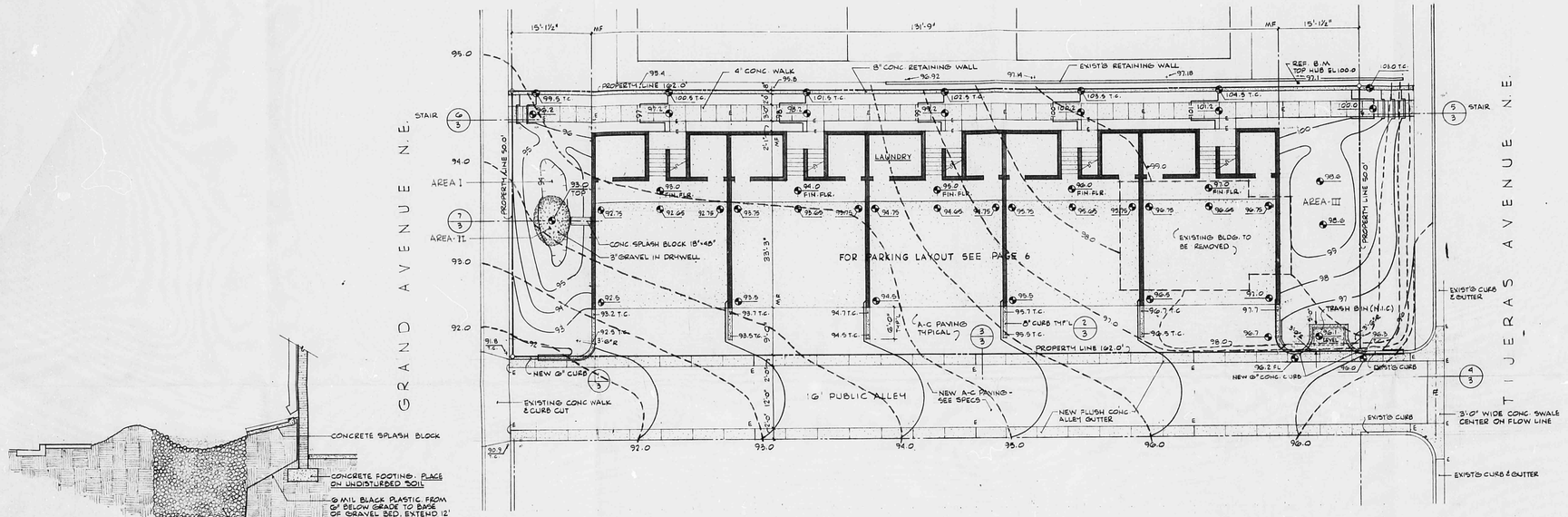


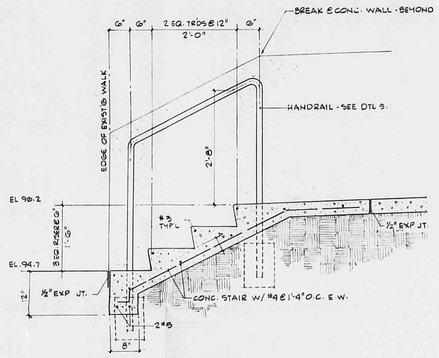
SECTION PONDING AREA (7)
1/4" = 1'-0"

NORTH

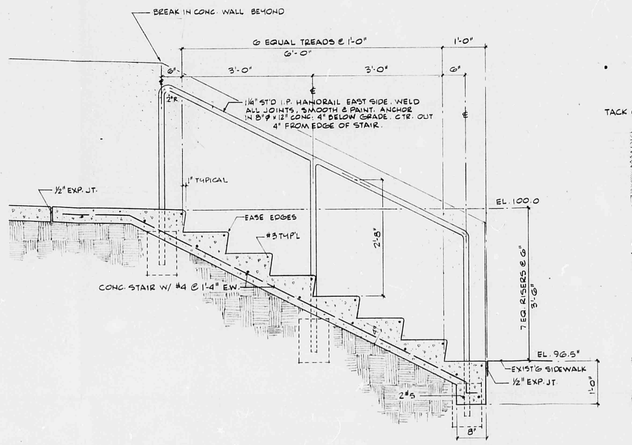
SITE PLAN
1" = 10'-0"

KEY TO SYMBOLS

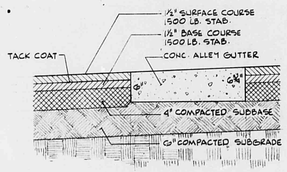
—97—	EXISTING CONTOUR	T.C.	TOP OF CONCRETE
+97.5	EXIST'G SPOT ELEV.	M.F.	MASONRY FACE
—97—	NEW CONTOUR	E	1/2" EXPANSION JOINT
⊕97.5	NEW SPOT ELEVATION		



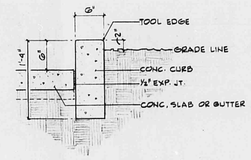
STAIR SECTION NORTH END (6)
3/4" = 1'-0"



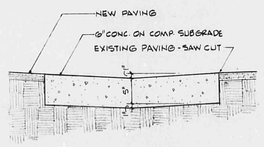
STAIR SECTION SOUTH END (5)
3/4" = 1'-0"



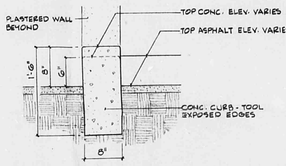
ALLEY & CURB (3)
1" = 1'-0"



CONCRETE CURB (1)
1" = 1'-0"



ALLEY SWALE (4)
1" = 1'-0"



CONCRETE CURB (2)
1" = 1'-0"

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SITE PLAN & DETAILS
DRAINAGE REPORT
EXHIBIT 5

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