HYDROLOGY

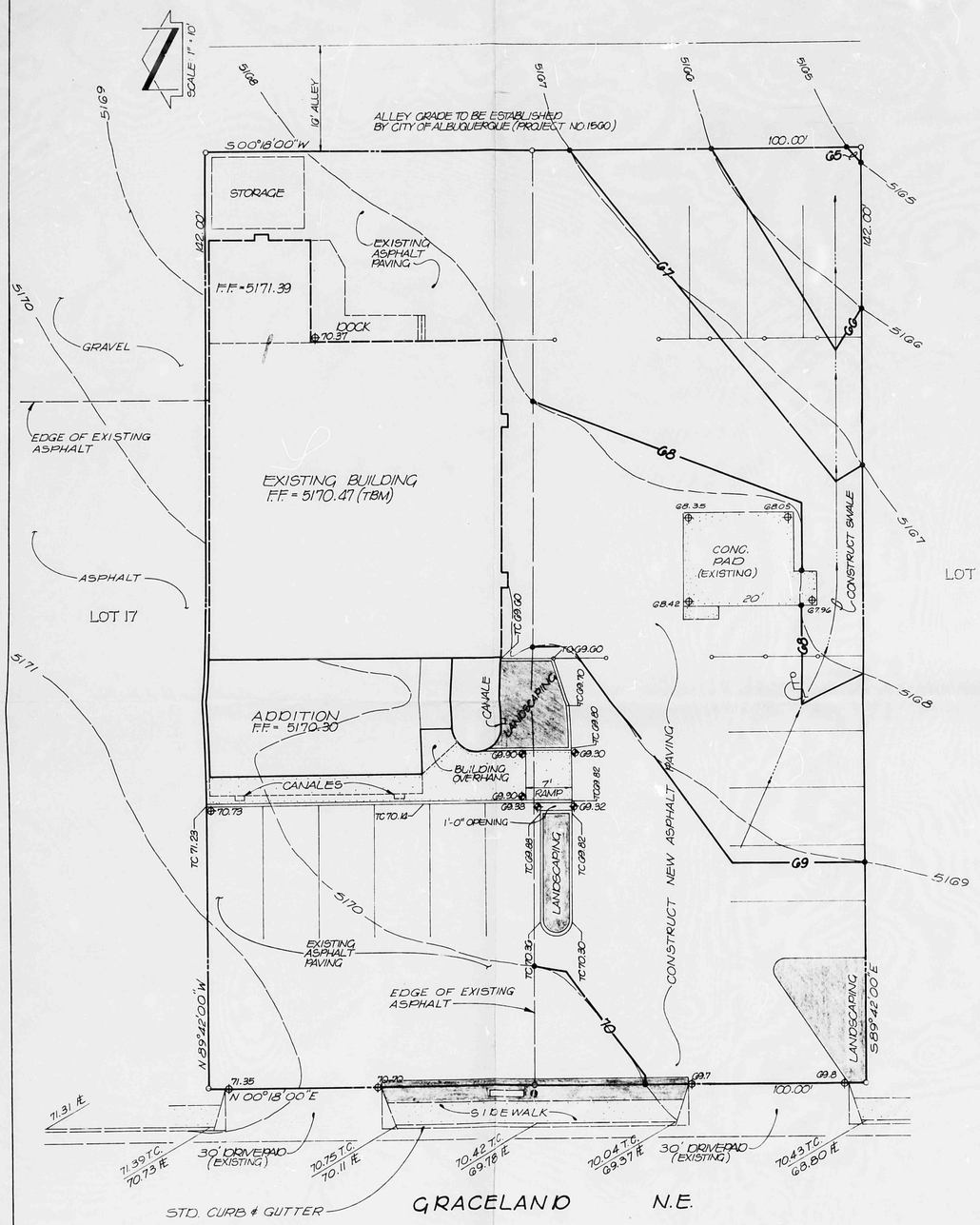
H17/D17

H17/D17

Bond Paint

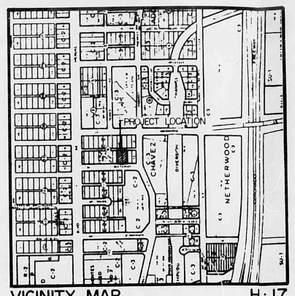
Co. Addition

1 Plan

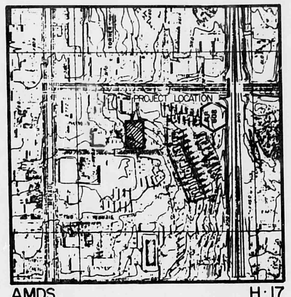


LEGEND

- 5171 — EXISTING CONTOUR
- ⊕ EXISTING SPOT ELEVATION
- G7 — PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED LANDSCAPING



VICINITY MAP H-17
SCALE 1" = 800'



AMDS H-17
SCALE 1" = 400'

CALCULATIONS

GROUND COVER INFORMATION

1. From SCS Bernalillo County Soil Survey, Plate 31:

   Cu Cut and Fill Land A Soil

2. From DPM Plate 22.2C-2

   $CN_{imp} = 95$
   $CN_{gravel} = 76$
   $CN_{perv} = 54$

3. Existing

   $A_{imp} = 50(142)+20(14) = 7380$ sf
   $A_{gravel} = 100(142)-A_{imp} = 6820$ sf
   $A_{Total} = 100(142) = 14,200$ sf

   From DPM Plate 22.2C-3, gravel is equivalent to 50% impervious.

   $\%\ \text{impervious} = \frac{7380}{14,200}(100\%)+\frac{6820}{14,200}(50\%) = 76\%$

   From DPM Plate 22.2C-1, C = 0.61

4. Developed

   $A_{imp} = 13,750$ sf±
   $A_{landscaped} = 450$ sf±
   $\%\ \text{impervious} = \frac{13,750}{14,200} = 97\%$

   From DPM Plate 22.2C-1, C = 0.89

RATIONAL METHOD

1. Discharge: $Q = CiA$

   C varies

   $i = P_6(6.84)T_c^{-0.51} = 4.73$ in/hr

   where $P_6 = 2.24$ in (DPM Plate 22.2D-1)
   $T_c = 10$ min (Minimum)

   A = 14,200 sf = 0.33 Ac

2. Volume: $V = CP_6A(\frac{1}{12})$

   C varies
   $P_6 = 2.24$ in (DPM Plate 22.2D-1)

   A = 14,200 sf

EXISTING CONDITION

$Q_{100} = CiA = 0.61(4.73)(0.33) = 0.95$ cfs

$V_{100} = CP_6A(\frac{1}{12}) = 0.61(\frac{2.24}{12})(14,200) = 1617$ cf

DEVELOPED CONDITION

$Q_{100} = CiA = 0.89(4.73)(0.33) = 1.39$ cfs

$V_{100} = CP_6A(\frac{1}{12}) = 0.89(\frac{2.24}{12})(14,200) = 2359$ cf

COMPARISON

$\Delta Q_{100} = 1.39 - 0.95 = 0.44$ cfs

$\Delta V_{100} = 2359 - 1617 = 742$ cf

DRAINAGE PLAN

The following items concerning the Bond Paint Company addition Drainage Plan are contained hereon:

1. Vicinity Map
2. Flood Hazard Plate
3. Grading Plan
4. Calculations

RECEIVED
OCT 05 1982
ENGINEERING

The proposed improvements, as shown by the Vicinity Map, are located on the east side of Graceland N.E. between Menaul N.E. and Prospect N.E. The site is more particularly described as Lots 15 and 16, Block 9, Timoteo Chavez Addition. At present, the site is developed. Adjacent lands are also developed.

As shown by Plate H-17 of the Albuquerque Master Drainage Study, the site does not lie within a designated flood hazard zone. Offsite flows are anticipated from Lot 17, which lies due north of the project site. The majority of these flows are deflected by the existing building and diverted to the east. The existing drainage pattern of the site is one in which runoff flows from west to east.

The Grading Plan shows (1) existing and proposed grades indicated by spot elevations and contours at 1'-0" intervals, (2) continuity between existing and proposed elevations and (3) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements include the construction of an addition to the existing building, the construction of additional asphalt parking, and required landscaping. The grading required by these improvements will not alter the existing drainage pattern. Runoff will continue to flow to the east into the existing 16 feet wide alley. Once the runoff enters the alley, it is believed that it turns to the south and flows to Prospect N.E. From Prospect, runoff flows from the east to Washington N.E., from whence it turns south again to outfall into the North Diversion Channel.

The calculations which appear below analyze both 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, only a minor increase in runoff is anticipated due to the proposed development.

AS BUILT INFORMATION
CONTRACTOR
WORK INSPECTED BY — DATE
ACCEPTANCE BY — DATE
FIELD VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE
MICRO-FILM INFORMATION
RECORDED BY — DATE
NO

BENCH MARKS
PROJECT BM: AC9 BM 5: H-17
ELEV. = 5174.25 (MSLD)
TBM: FINISHED FLOOR OF EXISTING BUILDING (SEE PLAN)
ELEV. = 5170.47 (MSLD)

SURVEY INFORMATION
FIELD NOTES
NO. — BY — DATE

REFERENCES
MAP NO. H-17
W.O. NO.
EST. NO.

NO. — DATE — REMARKS — BY

811 DALLAS N.E. - ALBUQUERQUE - NEW MEXICO - 87110
ENGINEERS

REGISTERED PROFESSIONAL ENGINEER — STATE OF NEW MEXICO — THOMAS T. MANN, JR. — 3708 — AND LAND SURVEYOR
10/4/82

APPROVED FOR CONSTRUCTION
CITY ENGINEER — DATE

JOB Nº 10712

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE: BOND PAINT COMPANY ADDITION
2512 GRACELAND N.E.
LOTS 15, & 16, BLK. 9, TIMOTEO CHAVEZ ADDITION

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Liquid Waste		
A.C.E.- Design			Traffic		
A.C.E.-Hydrology			Water		

DRAWING NO.
SHEET 1 OF 1

H17/D17