

PROJECT BENCHMARK
 AN ACS BRASS CAP STAMPED "H-20, 1975 ACS"
 LOCATED 44.2' EAST OF THE E. OF WYOMING N.E.
 & 30.7' NORTH OF THE E. OF INDIAN SCHOOL N.E.
 ELEV. = 5371.08 FT (M.S.D.)

LEGAL DESCRIPTION
 PORTION OF LOT 12, BLOCK 14, SNOW HEIGHTS

LEGEND

- ◆ PROPOSED SPOT ELEVATION
- ◆ EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- EXISTING CONTOUR
- SWALE
- PROPERTY LINE
- CONCRETE
- PROPOSED ASPHALT
- PROPOSED FENCE
- EXISTING FENCE
- TOP OF CURB
- FLOW LINE
- AS-BUILT SPOT ELEVATION

TEMPORARY BENCHMARK
 TOP OF CURB ELEVATION AT THE
 EXTENSION OF NORTHEAST PROPERTY
 CORNER AS SHOWN ON DRAWING.
 ELEV. = 5380.30 FEET (M.S.D.)

CONSTRUCTION NOTES

- TWO (2) WORKING DAYS AFTER NO NEW ELEVATION, CONTRACTOR MUST CONFIRM EXISTING SPOTS 765-1234, FOR LOCATION OF EXISTING UTILITIES.
- 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.
- 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.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PRACTICES.

PROPOSED CONSTRUCTION MEASURES

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL EROSION FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR INTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BARRIERS AT THE PROPERTY LINES AND MAINTAINING THE SOIL TO KEEP IT FROM BLEEDING.
- THE CONTRACTOR SHALL PROPERLY CLEAN UP ANY MUD OR EXCAVATED MATERIALS THAT ARE EXCAVATED. MATERIALS ARE NOT SUCEPTIBLE TO BEING WASHED DOWN THE STREET.
- THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

GROUND COVER INFORMATION

From SCS Bernalillo County Soil Survey, Plate 31:
 Etc, Embudo-Tijeras complex; gravelly fine sandy loam
 Hydrologic Soil Group D

Rational Method

Discharge: $Q = CIA$
 where C varies
 $I = P_e (6.84) T_c^{-0.51} = 5.03 \text{ in/hr}$
 $P_e = 2.38 \text{ in (DPM Plate 22.2 D-1)}$
 $T_c = 10 \text{ min (minimum)}$
 $A = \text{area, acres}$

Volume: $V = CPA(1/12)$
 where C varies
 $P_e = 2.38 \text{ in (DPM Plate 22.2 D-1)}$
 $A = \text{area, sf}$

Existing Condition

$A_{\text{total}} = 26,250 \text{ sf} = 0.60 \text{ Ac}$
 $A_{\text{imp}} = 1,800 \text{ sf}; \% \text{ impervious} = 7\%$
 $C = 0.37 \text{ (DPM Plate 22.2 C-1)}$
 $Q_{100} = CIA = 0.37(5.03)(0.60) = 1.1 \text{ cfs}$
 $Q_{100} = CPA = 0.37(2.38/12)(26,250) = 1,925 \text{ cf}$

Developed Condition

$A_{\text{total}} = 26,250 \text{ sf} = 0.60 \text{ Ac}$
 $A_{\text{imp}} = 3,555 \text{ sf}; \% \text{ impervious} = 14\% 33\%$
 $C = 0.49$
 $Q_{100} = CIA = 0.49(5.03)(0.60) = 1.5 \text{ cfs}$
 $Q_{100} = CPA = 0.49(2.38/12)(26,250) = 2,550 \text{ cf}$

Comparison

$Q_{100} = 1.5 - 1.1 = 0.4 \text{ cfs (increase)}$
 $\Delta V_{100} = \frac{2,550 - 1,925}{2,550} = \frac{625}{2,550} \text{ cf (increase)}$

Sidewalk Culvert Capacity

$Q = 1.49/n R^{2/3} S^{1/2} A$ (Manning Equation)
 where $n = 0.013$ (concrete)
 $A = 0.5 \text{ sf}$
 $W.P. = 2.0 \text{ ft}$
 $R = A/W.P. = 0.5/2.0 = 0.25 \text{ ft}$
 $S = 0.0200 \text{ ft/ft}$
 $Q = 1.49/0.013(0.25)^{2/3}(0.0200)^{1/2}(0.5)$
 $Q = 3.2 \text{ cfs} > Q_{100}$

The following items concerning the First Interstate Bank Computer Building Annex Drainage Plan are contained hereon:

- Vicinity Map
- Grading Plan
- Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the south side of Northeastern Avenue N.E. between Wyoming Boulevard N.E. and Luthy Drive N.E. The site is presently undeveloped with the exception of a small area of asphalt paving. Much of the surrounding area is developed.

As shown by Plate H-20 of the Albuquerque Master Drainage Study (AMDS), the site does not lie within a designated Flood Hazard Zone. Further investigation of the AMDS reveals that potential downstream flooding does not appear to be a problem. Based upon this information, it appears that free discharge would be appropriate for this site. There are two existing drainage basins on the site. The first drainage basin consists of the asphalt paving located along the north property line. Runoff, mainly in the form of sheetflow, discharges from this area to Northeastern Avenue N.E. This runoff then flows west to Wyoming Boulevard and is collected by a series of catch basins connected to a storm drain system located in Wyoming Boulevard N.E. The second drainage basin consists of the undeveloped portion of the site. Runoff flows from north to south to a depression located at the southwest corner of the site where it eventually infiltrates and/or evaporates.

No offsite flows will enter the subject site from the east because an asphalt swale diverts those flows to Northeastern Avenue N.E. No offsite flows will enter the project site from the south since a building exists at the property line and its roof runoff is not in*cluded to the subject site. No offsite flows will enter the subject site from the adjacent site to the west since that site is topographically lower than the project site.

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 and proposed improvements, 3) the continuity between existing and proposed elevations, and 4) the limit of construction. As shown by this plan, the proposed improvements include a temporary building and gravel parking lot. The area being developed under this plan will drain from southeast to northwest to a proposed sidewalk culvert located at the northwest corner of the site. From this point, the runoff will discharge to Northeastern Avenue N.E. per the free discharge conditions previously mentioned. The remaining asphalt paving will continue to drain in the existing pattern. The south portion of the site will remain in the existing condition and will not be disturbed.

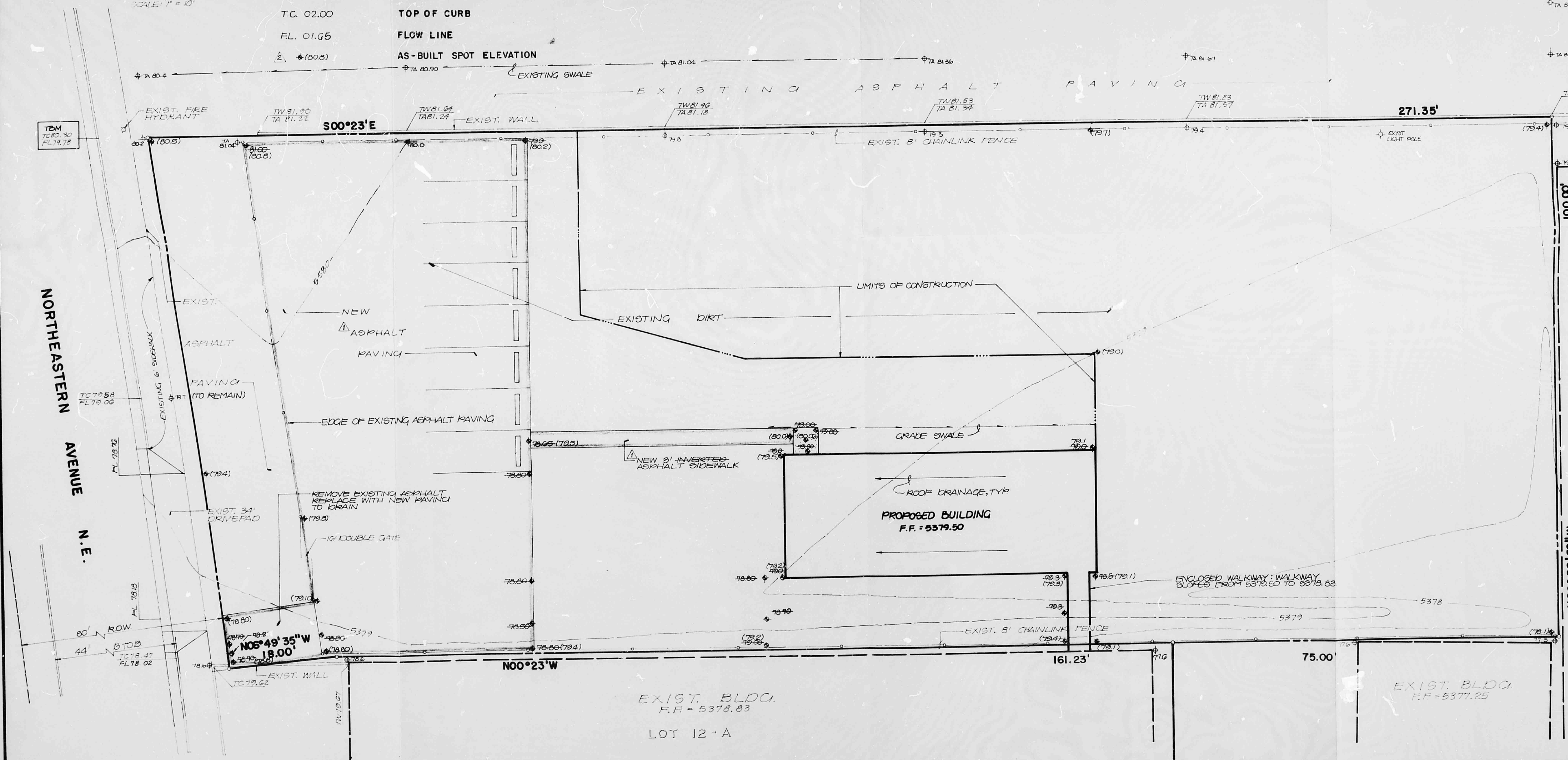
The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. The sidewalk culvert capacity has been determined based upon the Manning Equation. As shown by these calculations, the proposed improvements will increase the peak discharge from this site by a negligible amount.

This drawing reflects the "as-built" conditions of the project. All dimensions must be field verified prior to use on future projects.

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 N.M.P.E. & L.S. No. 3792
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 LAND SURVEYOR
 Date 11-8-85

RECEIVED
 NOV 13 1985
 HYDROLOGY SECTION

LETTER G. MONTGOMERY
 N.M.P.E. & L.S. No. 3792
 3792
 PROFESSIONAL ENGINEER
 05-07 11-8-85



	REVISIONS NO. DATE BY DESCRIPTION 1 5/85 JMT ADD ASPHALT PAVING; RECALC. & RECALC. SIDEWALK CULVERT NOT CONSTRUCTED 2 11/85 TM 100' BUILT CONDITIONS				DESIGNED BY: J.T.O. DRAWN BY: JMT. APPROVED: J.G.M.	JOB NO. 50272 DATE 4 / 85	GRADING AND DRAINAGE PLAN FIRST INTERSTATE BANK COMPUTER BUILDING ANNEX	H20/D16	SHEET 1 OF 1
	811 DALLAS N.E. • ALBUQUERQUE • NEW MEXICO • 87110 ENGINEERS								