

VICINITY MAP
SCALE: 1"=800'

PROJECT BENCHMARK

THE STATION IS A 3/4" ALUMINUM TABLET SET FLUSH WITH THE CONCRETE PAVEMENT. STATION IS STAMPED "ACS, 1-M 10, 1984". THE STATION IS LOCATED 2.7 MILES SOUTHEAST OF DOWNTOWN ALBUQUERQUE IN THE INTERSECTION OF GIBSON BOULEVARD & YALE BOULEVARD. TO REACH THE STATION FROM T-29, TRAVEL EAST ON GIBSON BOULEVARD 1 MILE. ELEVATION = 5189.847 FEET (M.S.L.D.)

TBM

TOP OF CURB ELEVATION AT THE CURB RETURN AT THE SOUTHWEST CORNER OF LOT 7-B AS SHOWN ON THE DRAWING BELOW. ELEVATION = 5207.01 FEET (M.S.L.D.)

LEGAL DESCRIPTION

LOT 1B, AIRPORT INDUSTRIAL PARK

STREET ADDRESS

2200 RENARD PLACE, S.E.

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING CYCLONE FENCE
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE

DRAINAGE PLAN

The following items concerning the American International Rent-A-Car Drainage Plan are contained hereon:

- Vicinity Map
- Grading Plan
- Calculations

The proposed improvements, as shown by the Vicinity Map, are located at the northeast corner of Baylor Drive S.E. and Renard Place S.E. At present the site contains approximately 20% asphalt paving.

As shown by Plate M-16 of the Albuquerque Master Drainage Study, the site does not lie within a designated Flood Hazard Zone. At present, runoff generated by this site flows from east to west toward Renard Place S.E. Renard Place S.E. slopes southwest to Yale Boulevard S.E. The discharge then flows north to Gibson Boulevard S.E. and runs west to eventually reach the A.M.A.P.C.A. South Diversion Channel. Minor downstream flooding has been mapped on the Flood Insurance Maps, but is not shown on the Albuquerque Master Drainage Study, at the corner of Yale Boulevard S.E. and Renard Place S.E. This area is relatively minor and possibly caused by the change in slope in Yale Boulevard S.E. (Yale Boulevard flattens somewhat at this point).

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 grades, and 3) the limit and character of the existing and proposed improvements. As shown by this plan, the proposed improvements consist of the construction of a Rent-A-Car office along with adjacent paving and landscaping. Flows generated by Basin A, the southerly portion of the site, will flow west to a storm drain inlet to be constructed along the west property line. The storm drain inlet discharges to Renard Place S.E. From this point the runoff flows to Yale Boulevard S.E. as discussed above. Flows generated by the northern portion of the site, Basin B, will flow west and exit the site through the existing driveway on Renard Place S.E. This runoff also flows to Yale Boulevard S.E. as previously mentioned. Offsite flows are anticipated from the adjacent Lot 8 to the east. These flows, which have been quantified hereon, will be accepted and conveyed through the site. This offsite flow is present in the form of sheetflow.

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. As shown by these calculations, the proposed improvements will increase the peak discharge to Renard Place S.E. by only 0.2 cfs. In view of this negligible increase, the fact that this site was previously developed with a free discharge, the minor degree of proposed development of this infill site, and the close proximity of this site to the bottom of the watershed, the free discharge of runoff is appropriate.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 31:
wab - Wink fine sandy loam
Hydrologic Soil Group B

Rational Method

Discharge: $Q = C_i A$
where C varies
 $C_i = P_i (6.84) T_i^{-0.51} = 4.65 \text{ in./hr}$
 $P_i = 2.2 \text{ in. (DPM Plate 22.2 D-1)}$
 $T_i = 10 \text{ min (minimum)}$
 $A = \text{area, acres}$

Volume: $V = C_p A (1/12)$
where C varies
 $P_i = 2.2 \text{ in. (DPM Plate 22.2 D-1)}$
 $A = \text{area, acres}$

Existing Condition

$A_{\text{total}} = 28,530 \text{ sf} = 0.66 \text{ Ac}$
 $A_{\text{imp}} = 5,682 \text{ sf}; \% \text{ impervious} = 20\%$
 $C_i = 0.43 \text{ (DPM Plate 22.2 C-1)}$
 $Q_{100} = C_i A = 0.43(4.65)(0.66) = 1.3 \text{ cfs}$
 $V_{100} = C_p A = 0.43(2.2/12)(28,530) = 2,250 \text{ cf}$

Developed Condition

Basin A

$A_{\text{total}} = 9,975 \text{ sf} = 0.21 \text{ Ac}$
 $A_{\text{imp}} = 5,130 \text{ sf}; \% \text{ impervious} = 57\%$
 $C_i = 0.62 \text{ (DPM Plate 22.2 C-1)}$
 $Q_{100} = C_i A = 0.62(4.65)(0.21) = 0.6 \text{ cfs}$
 $V_{100} = C_p A = 0.62(2.2/12)(9,975) = 1,020 \text{ cf}$

Basin B

$A_{\text{total}} = 19,555 \text{ sf} = 0.45 \text{ Ac}$
 $A_{\text{imp}} = 12,900 \text{ sf}; \% \text{ impervious} = 66\%$
 $C_i = 0.41 \text{ (DPM Plate 22.2 C-1)}$
 $Q_{100} = C_i A = 0.41(4.65)(0.45) = 0.9 \text{ cfs}$
 $V_{100} = C_p A = 0.41(2.2/12)(19,555) = 1,470 \text{ cf}$
 $0.51(2.2/12)(20,060) = 1,875 \text{ cf}$

6" Inlet Capacity

Capacity Provided by Orifice Equation

$Q = A \sqrt{2gh} = 1.3 \text{ cfs}$

For 6" pipe,

$A = \pi r^2 = \pi (3/12)^2 = 0.1964 \text{ sf}$

$h = 10.67 - 10.00 = 0.67'$

0.6 cfs = capacity needed due to runoff generated by Basin A.

Comparison

$\Delta Q_{100} = (0.6 + 0.9) - 1.3 = 0.2 \text{ cfs (increase)}$
 $\Delta V_{100} = (1,020 + 1,470) - 2,250 = 240 \text{ cfs (increase)}$
 $1,000 \quad 1,875 \quad 725$

Offsite Flows (Lot 8)

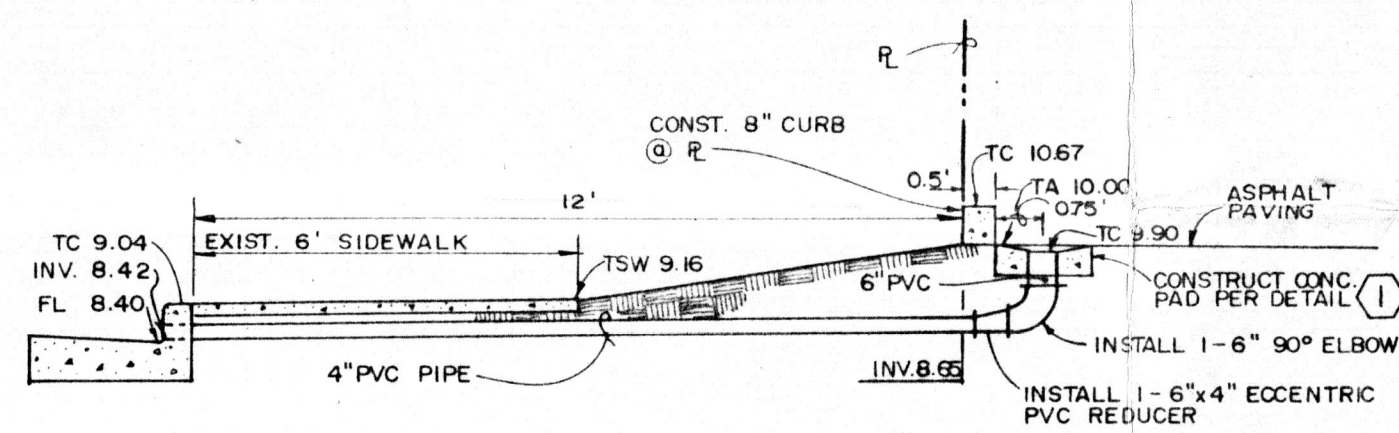
0.361 Ac = 15,725 sf
 $C_i = 0.34 \text{ Undeveloped (DPM Plate 22.2 C-1)}$
 $Q = C_i A = 0.34(4.65)(0.361) = 0.6 \text{ cfs (sheetflow)}$

EROSION CONTROL MEASURES

- 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.
- 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.
- THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

CONSTRUCTION NOTES:

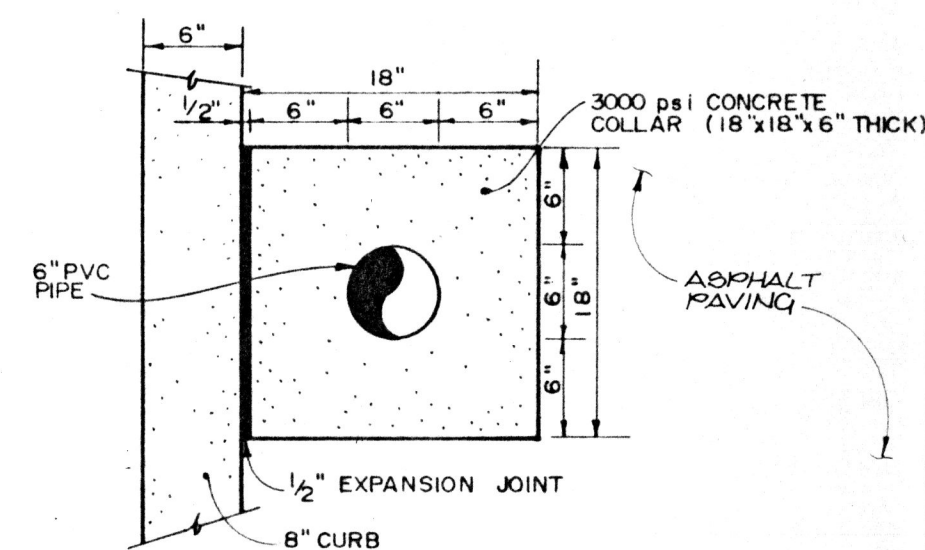
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE 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 PROCEDURES.



SECTION A-A

SCALE: 1"=3'

NOTE: DRIVEPAD (ELEV 10.50) TO BE USED AS EMERGENCY OVERFLOW



DETAIL

SCALE: 1"=1'



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

NO.	DATE	BY	REVISIONS
1	1/7/85	T.M.	REVISED BUILDING LOCATION

DESIGNED BY: J.G.M.
DRAWN BY: S.G.H.
APPROVED: J.G.M.

JOB NO.
51042
DATE
9-85

GRADING AND DRAINAGE PLAN AMERICAN INTERNATIONAL RENT-A-CAR

FILE NO.

SHEET 1 OF 1