



VICINITY MAP
SCALE: 1" = 800'

J-14

BENCHMARK:

A.C.S. BENCHMARK 2-4-K, A SQUARE, ☒,
CHISELED ON TOP OF CONCRETE CURB AT
THE NINE CURB RETURN, LOCATED AT
THE INTERSECTION OF 4TH STREET NW
AND HAINES AVE. NW IN THE NORTHEAST
QUADRANT OF THE INTERSECTION.
ELEVATION: 4960.292 FEET (M.S.L.D.)

TEMPORARY BENCHMARK:

A "+" ON CURB, AS SHOWN
ELEVATION: 4959.98 FEET (M.B.L.P.)

• LEGEND •

-  EXISTING SPOT ELEVATION
 PROPOSED SPOT ELEVATION
 EXISTING CONTOUR
 PROPOSED CONTOUR
 PROPOSED CONCRETE
 EXISTING CHAINLINK FENCE
 SWALE
 PROPOSED ASPHALT
 EXISTING TOP OF CURB
 EXISTING FLOWLINE
 PROPERTY LINE
 DRAINAGE BASIN BOUNDARY

ALBRIGHT MOORE ADDITION
FILED 2-26-21
C00-143

LOT 2
ALBRIGHT MOORE ADDITION
FILED 2-26-21
D 00-143

LOT 4
ALBRIGHT MOORE ADDITION
FILED 2-26-21
D 00-143

EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO DIRT OR SOIL FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMES 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.

CONTRIBUTION 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.

GRADING & DRAINAGE PLAN
S TOMASES WAREHOUSE

DRAINAGE PLAZ

The following items concerning the Los Tomases Warehouse Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the west side of Los Tomases Drive N.W. between Bellamah Avenue N.W. and Aspen Avenue N.W. At present, the site is developed residentially.

As shown by Plate J-14 of the Albuquerque Master Drainage Study, the site does not lie within a designated Flood Hazard Zone; however, basement flooding is a concern. Because of this, runoff generated by this site will be controlled by ponding. Runoff generated by the refuse pad in Basin 1 will be routed through the rear yard by a depression with volume adequate to contain 100% of the runoff generated by that impervious area. Runoff generated by the building and the parking lot is captured in a storm drain system which flows southward along the east side of the property adjacent to Lot No. 6 as Basin 2 and is routed through a positive discharge pond. The pond will have a low water level that discharges Drive B.W. From that point, the runoff will flow in the same direction along the west edge of Los Tomases Drive B.W. From that point, the runoff will flow in the same direction along the west edge of Los Tomases Drive B.W. This shows how the runoff from the site can be directed away from the site and toward the Albuquerque Master Drainage Study, therefore there is no danger of basement flooding or early which serves this area. In general, a portion of the runoff generated by the adjoining parcel to the north may drain onto the rear yard of this site. That runoff will be accepted and will flow uninterrupted as it has prior to the proposed construction.

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, 3) the limit and character of the existing improvements, and 4) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements consist of the removal of an existing building and the construction of a new warehouse along with adjacent paving and landscaping. At present, the site drains from north to south and discharges onto private property. The proposed drainage pattern will improve the existing drainage pattern because it will eliminate the discharge of runoff onto the adjacent lot.

The Calculations which appear below 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. The analysis of the release rate is based upon the Orific Equation. The analysis of pond volume is based upon the Average End-Area Method. Offsite flows have also been quantified.

CALCULATIONS

Ground Cover Information
From SCS Bernalillo County Soil Survey, Plate 30:
GK - Glendale Loam
Hydrologic Soil Group B

Rational Method: $Q = C i A$
 Discharge: $Q = C i A$
 where C varies
 $i = P_6 (6.84) T^{-0.51} = 4.45 \text{ in/hr}$
 $P_6 = 2.2 \text{ in (DWM Plate 22.2 D-1)}$
 $T_C = 10 \text{ min (minutes)}$
 $A = \text{area, acres}$

Volume: $V = C P_6 A (1/12)$
 where C varies
 $P_6 = 2.2 \text{ in (DWM Plate 22.2 D-1)}$
 $A = \text{area, af}$

Printing Condition
 $A_{\text{total}} = 8586 \text{ sf} = 0.20 \text{ Ac}$
 $A_{\text{imp}} = 1314 \text{ sf}; \theta \text{ impervious} = 15\%$
 $C_{\text{imp}} = 0.41 \text{ (from Plate 22.2 C-1)}$
 $Q_{100} = C_{\text{IA}} = 0.41(4.65)(0.20) = 0.4 \text{ cfs}$
 $Q_{100} = C_{\text{PA}} = 0.41(2.2/12)(8586) = 650 \text{ cfs}$

Developed Condition

Basin 1:

$$\begin{aligned}A_{\text{total}} &= 4600 \text{ sf} = 0.11 \text{ ACF} \\A_{\text{imp}} &= 204 \text{ sf}; \text{ } \theta_{\text{Impervious}} = .48 \\C_{\text{imp}} &= 0.35 \text{ (ISW Plate 22.2 D-1)} \\C_{\text{road}} &= C_{\text{JA}} = 0.35(4.65)(0.10) = 0.2 \text{ cfs} \\V_{100} &= C_{\text{JA}} = 0.35(2.12)(3906) = 300 \text{ cf} \\V_{\text{required}} &= 1.0(12)(17) (2.2/12) = 40 \text{ cf} \\V_{\text{refuse Pad}} &= 4(20)(10) + (1.6)(0.3) \\V_{\text{depression}} &= 44 \text{ cf} = V_{\text{depression Pad}}\end{aligned}$$

Basin 2:

$$\begin{aligned}A_{\text{total}} &= 3906 \text{ sf} = 0.09 \text{ ACF} \\A_{\text{imp}} &= 3786 \text{ sf}; \text{ } \theta_{\text{Impervious}} = .95 \\C_{\text{imp}} &= 0.32 \text{ (ISW Plate 22.2 C-1)} \\C_{\text{road}} &= C_{\text{JA}} = 0.32(4.65)(0.09) = 0.4 \text{ cfs} \\V_{100} &= C_{\text{JA}} = 0.32(2.2/12)(3906) = 670 \text{ cf} \\V_{\text{required}} &= 40 \text{ cf (based upon Hydrograph Analysis)} \\V_{\text{pond}} &= 4(1(59.80) + A_{50.00})(60.44 - 59.80) + \\&\quad (A_{50.00} + A_{50.44})(60.44 - 60.001) \\&= 4(1(0 + 84)(0.20) + (84 + 868)(0.44))\end{aligned}$$

$Q_{\text{release}} = 220 \text{ cf} > V_{\text{required}}$
 $= CA \sqrt{2gh} = 0.3 \text{ cfs}$
 where $C = 0.75$
 $A = 0.0873 \text{ sf (4" dia. pipe)}$
 $g = 32.2 \text{ ft/sec}^2$
 $h = 0.41$

Comparison

Basin 1:

$\Delta Q_{100} = 0.4 - 0.20 = 0.2 \text{ cfs (decrease)}$
 $\Delta V_{100} = 650 - 300 = 350 \text{ cf (decrease)}$

Basin 2:

$\Delta Q_{100} = 0 - 0.4 = 0.4 \text{ cfs (increase)}$
 $\Delta V_{100} = 0 - 670 = 670 \text{ cfs (increase)}$

Offsite Paving

$A_{\text{total}} = 3000 \text{ sf} = 0.07 \text{ Ac}$
 $A_{\text{imp}} = 1120 \text{ sf}; \text{ \% impervious} = 27\%$
 $C = 0.49 \text{ (DEH Plate 22.2 C-1)}$
 $Q_{100} = CIA = 0.49(4.63)(.07) = 0.16 \text{ cfs}$
 $V_{100} = CP_1A = 0.49(2.2/12)(3000) = 270 \text{ cfs}$

retained
~~contained~~
in the rear yard

NOTES:

- ① REMOVE & REPLACE STANDARD CURB & GUTTER TO NEAREST JOINT. CONSTRUCT 4" P.V.C. 12" DIA. RISE CITY OF ALBUQUERQUE STD. DRAWING K-15. REMOVE & REPLACE 12" MIN. WIDTH ASPHALT PAVEMENT ADJACENT TO LIP OF NEW CUTTER.
- ② REMOVE & REPLACE EXIST. 4" THICK PORTLAND CEMENT IN NEAREST JOINT.

A circular stamp from the Library of Congress, Department of the Interior. The text around the perimeter reads "LIBRARY OF CONGRESS" at the top and "DEPARTMENT OF THE INTERIOR" at the bottom. In the center, there is a date stamp "MAY 1964" and a handwritten number "10". The stamp is heavily marked with large, dark, handwritten scribbles or signatures that obscure much of the original text and the central date.

J14/D41

JUN 25 1984

FILE NO.
SHEET