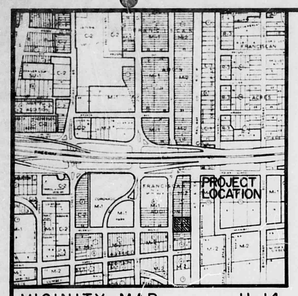
HYDROLOGY

H14/D44

H 14 / D 44

1900 1st NW

1 Plan



VICINITY MAP H-14
SCALE: 1" = 800

LEGEND

- 4985 — EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING CHAINLINK FENCE
- T & E — EXISTING OVERHEAD TELEPHONE & ELECTRIC LINES
- 65 — PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED CONCRETE
- PROPOSED ASPHALT PAVING
- SWALE

TEMPORARY BENCHMARK

TOP OF NO 5 REBAR WITH CAP, NMLS 6054, SET IN CONCRETE LOCATED @ THE SOUTH-WEST PROPERTY CORNER. ELEVATION = 4908.06 FEET (MSLD)

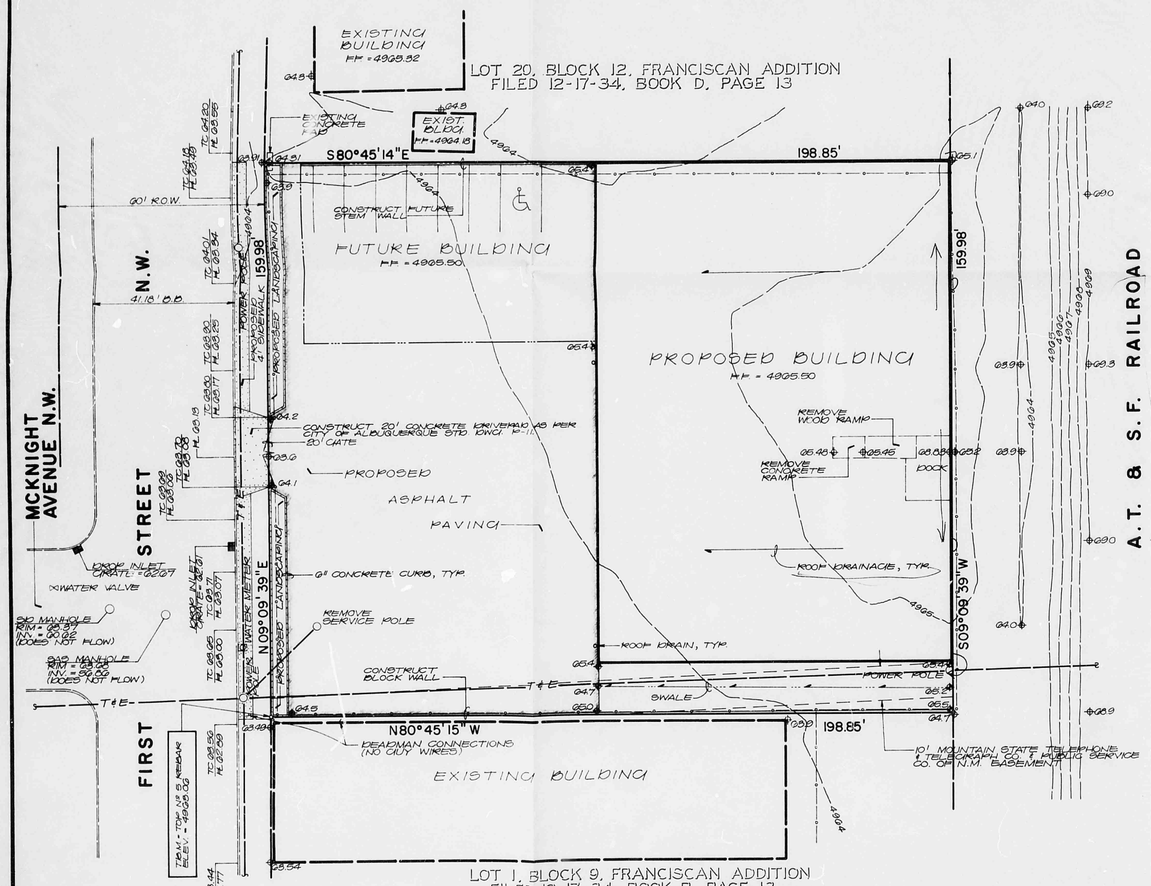
PROJECT BENCHMARK

ACS BENCHMARK B-H14. A SQUARE '2' CHISELED ON TOP OF CONCRETE CURB @ THE NNE CURB RETURN, LOCATED @ THE INTERSECTION OF 1ST ST NW & ARVADA AVE NW IN THE NORTHEAST QUADRANT OF THE INTERSECTION. ELEVATION = 4902.67 FEET (MSLD)

LEGAL DESCRIPTION

TRACT A-1, BLOCK 12, FRANCISCAN ADDITION.

SCALE 1"=20'



LOT 1, BLOCK 9, FRANCISCAN ADDITION
FILED 12-17-34, BOOK B, PAGE 13

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.

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.

DRAINAGE PLAN

The following items concerning the 1900 First Street N.W. 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 east side of First Street N.W. just south of Interstate Highway No. 40. At present, the site is being used as an open storage yard. The surrounding parcels are developed.

As shown by Plate H-14 of the Albuquerque Master Drainage Study, the street in front of the site does lies within a designated Flood Hazard Zone. There is an existing storm drain system in First Street. The site itself is not within a Flood Hazard Zone.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1'-0" intervals, 2) the continuity between existing and proposed elevations, 3) the limit and character of existing improvements, and 4) the limit and character of proposed improvements. As shown by this plan, the proposed improvements consist of the construction of a warehouse-type building with associated parking and landscaping. The plan also indicates that a future building will be constructed in the present parking area. At present, the site drains from east to west and discharges into First Street. The site has been used for numerous years as an open storage area, therefore, the ground is well compacted with a high rate of runoff. Since First Street is a designated Flood Hazard Zone, the building has been flood-proofed with the finished floor elevation raised 1' above the high water level. As designed, the roof will drain to the west into the parking lot. The parking lot will drain through the drivepad into First Street.

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, the proposed improvements will result in a very slight decrease of the runoff discharged from this site. This pattern of runoff is consistent with the pre-design conference recap which accompanies this submittal.

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CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 31:
Ge - Gila
Hydrologic Soil Group B

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6 (6.84) T_c^{-0.51} = 4.65$ in./hr
$P_6 = 2.2$ in (DPM Plate 22.2 D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$
where C varies
$P_6 = 2.2$ in (DPM Plate 22.2 D-1)
A = area, acres

Existing Condition

$A_{total} = 31,799$ sf $= 0.73$ Ac
$A_{imp} = 31,799$ sf; % impervious = 100%
'C' = 1.0 (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 1.0(4.65)(0.73) = 3.4$ cfs
$V_{100} = CP_6A = 1.0(2.2/12)(31,799) = 5,830$ cf

Developed Condition

$A_{total} = 31,799$ sf $= 0.73$ Ac
$A_{imp} = 30,209$ sf; % impervious = 95%
'C' = 0.91 (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.91(4.65)(0.73) = 3.1$ cfs
$V_{100} = CP_6A = 0.91(2.2/12)(31,799) = 5,305$ cf

Comparison

$\Delta Q_{100} = 3.4 - 3.1 = 0.3$ cfs (decrease)
$\Delta V_{100} = 5,830 - 5,305 = 525$ cf (decrease)

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR
THOMAS T. MANN JR.
3792

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

NO.	DATE	BY	REVISIONS

DESIGNED BY T.T.M.
DRAWN BY L.D.D.
APPROVED T.T.M.

JOB NO. 50712
DATE 9-85

GRADING & DRAINAGE PLAN
1900 FIRST STREET N.W.

H14/D44

FILE NO.
SHEET 1 OF 1