Hydrology File No. H-17/D005

VICINITY MAP H-17
SCALE: 1" = 800'

LEGAL DESCRIPTION

Tract A-1, Miramontes Subdivision

ADDRESS

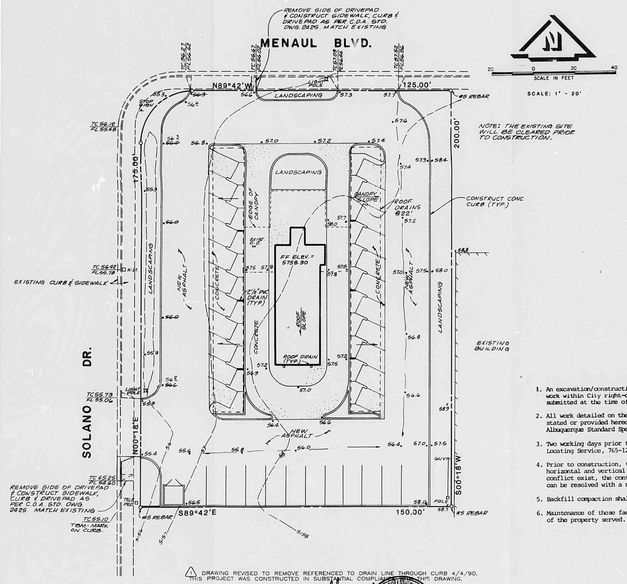
4700 Menaul Boulevard NE

BENCHMARK

City of Albuquerque Benchmark 5-H17 top of curb at ENE return of Menaul & Graceland. Elevation = 5,174.25 feet.

LEGEND

EXISTING	NEW	DESCRIPTION
		CURB & GUTTER
		CURB
456 +	448 +	SPOT ELEVATION
	45	CONTOUR
		BUILDING
		DRAINAGE PIPE
		PROPERTY LINE
		BASIN DIVISION LINE
	o	ROOF DRAINS
		RUNDOWN



△ DRAWING REVISED TO REMOVE REFERENCED TO DRAIN LINE THROUGH CURB 4/4/90. THIS PROJECT WAS CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THIS DRAWING.

THOMAS T. MANN, JR. NMPE&PS NO.3792

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 A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

CONSTRUCTION NOTES

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE 765-1234, FOR THE 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.

NOTICE TO CONTRACTOR

1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with City of Albuquerque Standard Specifications for Public Works Construction, 1986.
3. Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations 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.
5. Backfill compaction shall be according to Residential street use.
6. Maintenance of these facilities shall be the responsibility of the Owner of the property served.

DRAINAGE PLAN

The following items concerning the Sonic Drive-In Grading and 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 Menaul Boulevard NE at Solano Drive NE. The site is currently developed as a restaurant with associated parking. The adjoining sites are also developed. The site does not lie within a designated Flood Hazard Zone.

The site slopes from east to west. The developed sites to the east and south convey runoff away from the site. The site is higher than the streets to the north and west. Therefore, offsite flows are negligible.

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, 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 a building, canopies, concrete/asphalt parking and landscaping. Runoff from the roofs will be conveyed into the parking lot through downspouts and piping. Flows will be routed into a landscaped pond along Solano Drive or through the drivepad on Solano Drive. The landscaped area will be drained by a 4" PVC drain.

The Calculations, which appear below, analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational and SCS Methods have been used for this analysis in accordance with the City of Albuquerque Design Process Manual, Volume II. As shown by the calculations, the peak rate of runoff and volume of runoff will not change, because existing and developed conditions are similar.

CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate: 31
Hydrologic Soil Group: B Wink Web
Existing Pervious CN = 70 (DPM Plate 22.2 C-2 Pasture or Range Land: Fair condition)
Developed Pervious CN = 61 (DPM Plate 22.2 C-2)

Time of Concentration/Time to Peak

$T_c = 0.0078\ L^{0.77}/S^{0.385}$ (Kirpich Equation)

$T_p = T_c$ = 10 min.

Point Rainfall

P_6 = 2.3 in. (DPM Plate 22.2 D-1)

Rational Method

Discharge: Q = CiA

where C varies
$i = P_6\ (6.84)\ T_c^{-0.51} = 4.86$ in/hr
P_6 = 2.1 in (DPM Plate 22.2 D-1)
T_c = 10 min (minimum)
A = area, acres

SCS Method

Volume: V = 3630(DRO) A

Where DRO = Direct runoff in inches
A = area, acres

Existing Condition

A_{total} =	29,866	sf = 0.69	ac
Roof area =	2,695	sf = 0.06	ac
Paved area =	22,191	sf = 0.52	ac
Landscaped area =	4,980	sf = 0.11	ac

C = 0.81 (Weighted average per Emergency Rule, 01/14/86)

Q_{100} = CiA = 0.81(4.86)0.69 = 2.8 cfs
A_{imp} = 26,886 sf; % Impervious = 84 %
Composite CN = 93 (DPM Plate 22.2 C-3)
DRO = 1.6 in (DPM Plate 22.2 C-4)
V_{100} = 3630(DRO) A = 4,008 cf

Developed Condition

A_{total} =	29,866	sf = 0.69	ac
Roof area =	6,572	sf = 0.15	ac
Paved area =	18,840	sf = 0.44	ac
Landscaped area =	4,454	sf = 0.10	ac

C = 0.84 (Weighted average per Emergency Rule, 01/14/86)

Q_{100} = CiA = 0.84(4.86)0.69 = 2.8 cfs
A_{imp} = 25,412 sf; % Impervious = 85 %
Composite CN = 93 (DPM Plate 22.2 C-3)
DRO = 1.6 in (DPM Plate 22.2 C-4)
V_{100} = 3630(DRO) A = 4,008 cf

Comparison

Q_{100} = 2.8 - 2.8 = 0 cfs
V_{100} = 4,008 - 4,008 = 0 cf

Pond Volume

130 x 12 x 1/2 = 780 cf

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PLANS/PLATS ON FILE

FILE DESC: H-17/D005

PLANS/PLATS 1

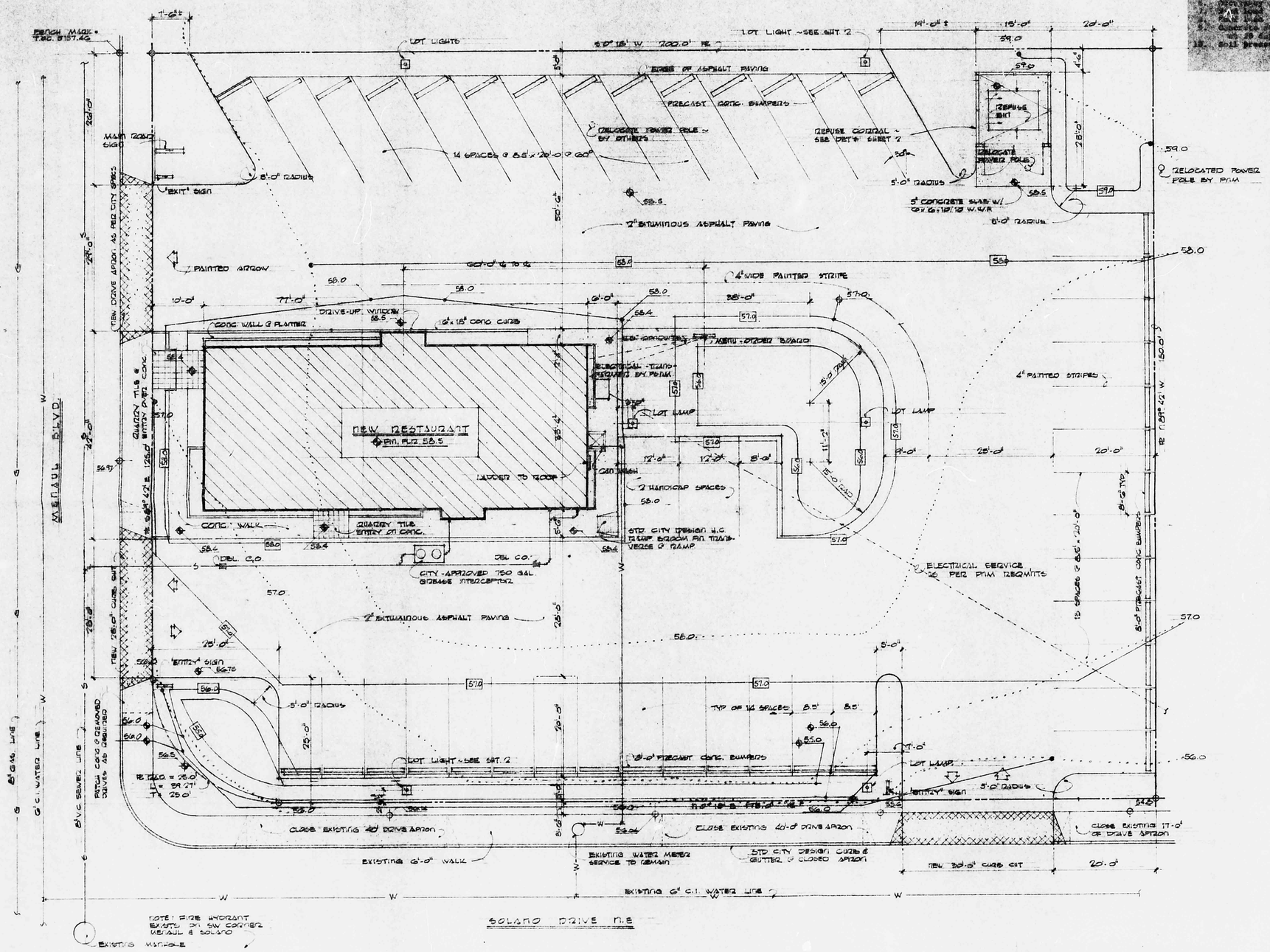
F 30 D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D F

HYDROLOGY

H17/D5
1 PLAN

H17/D5

1 Plan



SITE PLAN
1" = 10'-0"

NOTES

ELECTRICAL CONTRACTOR SHALL PROVIDE POWER TO SIGNS SHOWN
REMOVE ALL SURFACE & SUB-SURFACE STRUCTURES & RELATED ELEMENTS -B.O.
COMPACT AREAS WHERE EXCAVATIONS ARE REQ'D TO REQ'D BEARING
PAVING TO BE IN ACCORDANCE W/ STATE HIGHWAY SPECS
CONCRETE TO BE USED AT CURBS TO BE 2600 PSI @ 28 DAYS

LEGAL DESCRIPTION

TRACT A MIRAMONTES SUBDIVISION NO 2
ALBUQUERQUE, N.M.

SITE LEGEND

580 — EXISTING CONTOURS
570 — NEW CONTOUR
NEW SPOT ELEVATIONS
EXISTING SPOT ELEVATIONS

WOW'S RESTAURANT

SITE PLAN
SOLANO & MENAUL
Albuquerque, NM

1