

SCALE: 1" = 30'

CONST. 4" WIDE CONC. CHANNEL AT 2%
GRADE TO CONNECT TO DOUBLE WIDE SIDEWALK
GRATE PER CITY STD DWG. K-16 S.D. #19
DOCUMENTS PREPARED FOR SIDEWALK DRAIN
CONSTRUCT SILT FENCE - THIS AREA

INSTALL HANDICAPPED RAMPS AT 1:12 SLOPE TYP. EACH SIDE
CONST. VALLEY GUTTER ACROSS DRIVE ENTRANCES (TYP.)
MENAUL BOULEVARD N.E.

Q100 FOR 7-11 SITE (SHEET FLOW)
= (0.91)(1.17)(0.39AC) = 2 cfs

SOURCE

The proposed improvements, comprised of five auto-care buildings, related services for parking and access, landscaping, etc., forms the basic land use for a single commercial complex which serves the area, located on Menaul Boulevard, between Subank and 7th St. NW.

The present site is an undeveloped parcel, with the northeast corner of the overall area presently occupied by a 7-11 convenience store. The site lacks a residential area on the south, and has access from Morris Street on the east and Menaul Boulevard on the north. An existing commercial site borders the west side of the property.

The intent of this plan is to show:

- Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.
- The extent of proposed site improvements, including building, walks and pavement.
- The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet city requirements for drainage management.
- The relationship of onsite improvements with existing neighboring property to ensure an orderly transition between proposed and surrounding grades.

GENERAL NOTES

1. ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE, NM, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 1985 EDITION.

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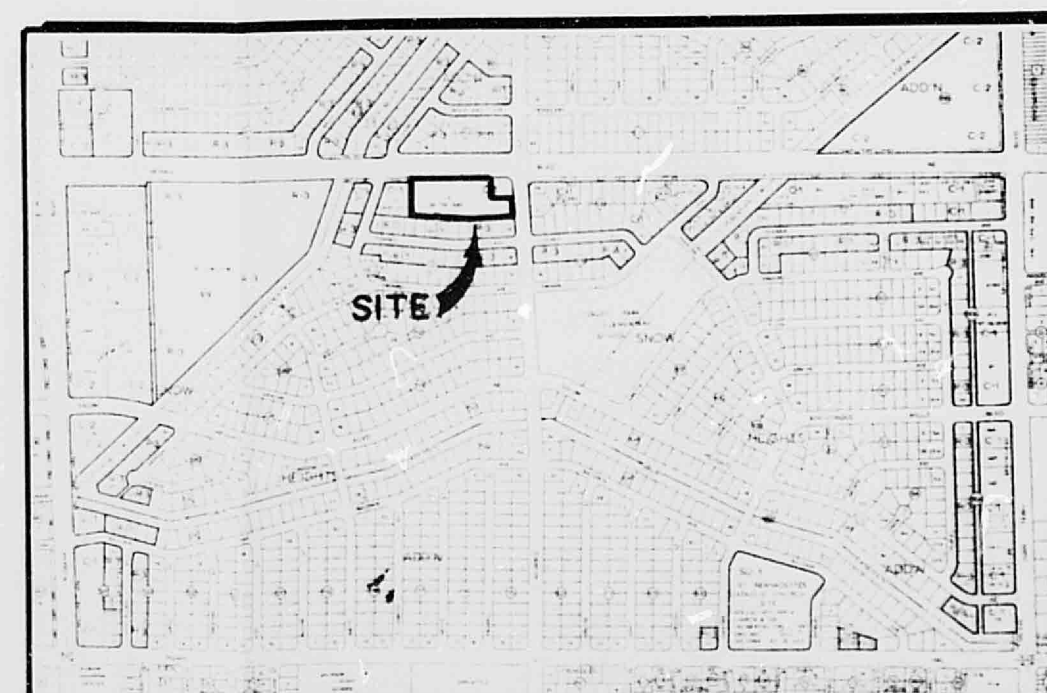
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LEGEND

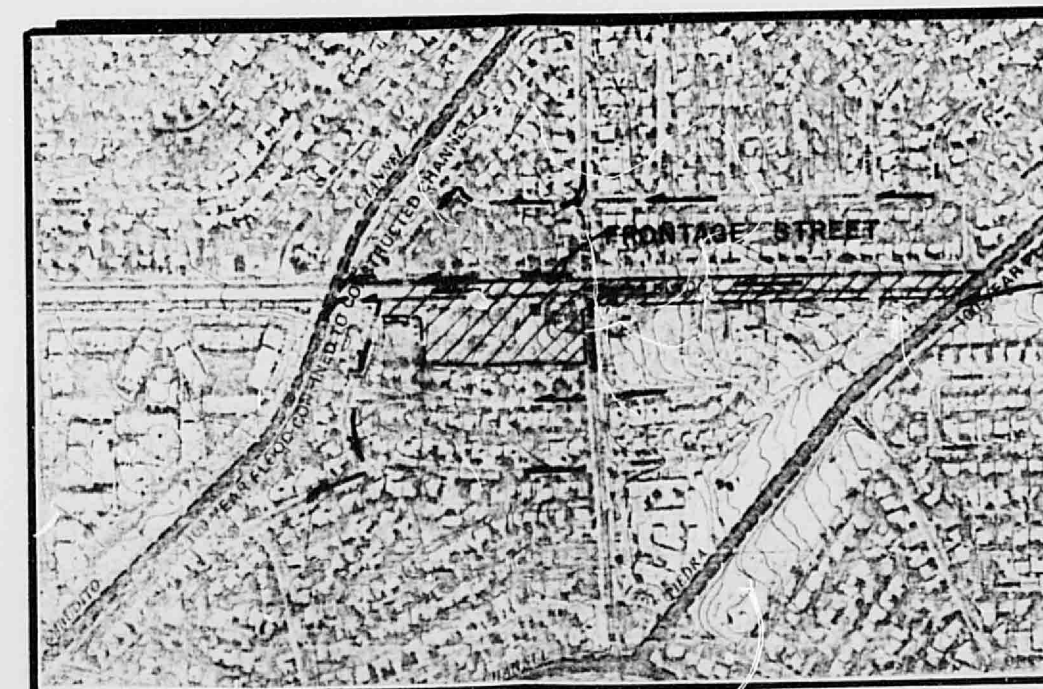
- SIDEWALK, CURB & GUTTER (EXISTING, PROPOSED)
- PROPOSED ASPHALT
- BUILDING (EXISTING, PROPOSED)
- PROPERTY LINE
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- SURFACE FLOW DIRECTION (EXISTING, PROPOSED)
- LANDSCAPED AREA
- TOP OF GRADE WALL (LESS THAN 18" HIGH)
- TOP OF RETAINING WALL (MORE THAN 18" HIGH)
- TOP OF ASPHALT
- TOP OF CURB
- FLOW LINE
- FINISHED FLOOR

CONSTRUCTION NOTES

- Before construction, the Contractor shall check and verify pertinent figures shown herein and shall make all appropriate field measurements. Should any conflict, error or discrepancy be discovered, the Contractor shall notify the Engineer as soon as possible. The Engineer shall then determine the proper course of action to resolve the problem. It is recommended that the Contractor meet with the Engineer for a pre-construction conference to discuss the scope of work and critical areas involved.
- The Contractor shall be responsible for following the plans using his best skill and attention. Any departure from the plans must be approved by the Engineer and the City Hydrology Department prior to construction.
- The Contractor shall check the site plan for location of existing utilities, within or adjacent to streets and shall take all necessary precautions and efforts to locate and protect these utilities. The site plan, 48" hours prior to site clearing, shall be filed with the City of Albuquerque, NM, and shall be made available to the City of Albuquerque, NM, for review and approval.



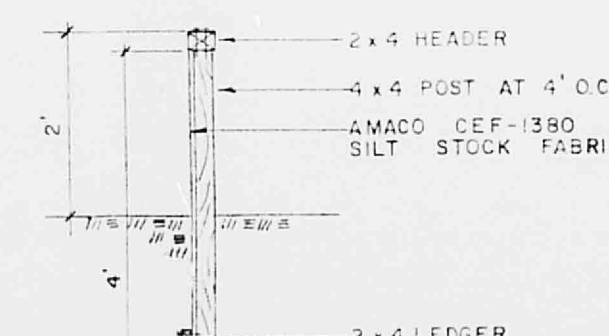
VICINITY MAP H-21



FLOOD HAZARD BOUNDARY MAP

SECTION A

DRAIN CAPACITY
A: 2 CF
P: 5.34
n: 0.015
S: 0.020
Q: 24 cfs, CAPACITY
OF 0.67' DEPTH



Silt Fence Detail

REVISED 8-28-85 TO SHOW DRIVEWAY CHANGES AS REQUIRED BY TRAFFIC DEPT. FINISHED GRADES NOT AFFECTED
CHRIS WEISS DATE

REVISED 10-21-85 GRADES CHANGED AT EAST END OF TRACT
CHRIS WEISS 10-21-85 DATE

REVISED 10-28-85 BUILDING ON MORRIS ST. MOVED 4' EAST & GRADES ADJUSTED ACCORDINGLY. BASIC DRAINAGE CONCEPT REMAINED THE SAME
CHRIS WEISS DATE

REVISED 12-16-85 REMOVED CONCRETE BETWEEN BUILDING ON MORRIS ST. AND EXISTING 7-11 STORE
CHRIS WEISS DATE

SUMMARY

Q100 = (51-111) * 4 cfs (increase)
Q100 = (7500)(16,500) = 9000 cu. ft. (increase)

The developed surface runoff from the site can follow the historic natural path to the west, where it can be routed to Menaul Boulevard for discharge. However, on Menaul, the flow will travel a short distance to two types of inlets draining into the Embudo Channel. It is a double curb inlet and 2' sidewalk slip section leading directly into the channel.

The proposed basin draining to the Embudo Channel is relatively small due to the following characteristics: A. The area bordering the north side of Menaul drains directly into the Embudo via a parallel residential "fringe" street. B. The area bordering the south side generally tends to fall off to the south, so a drain from this area flows to Menaul. C. The Embudo Channel of the Embudo Channel are intercepted at this intersection, thus reducing the basin impacting the Embudo Channel crossing. D. The fact shows the flood zone confined to the Embudo Channel for this area, further verifying that the Embudo Channel crossing is effective in intercepting drainage.

Off-site watershed = Area boundary Menaul Boulevard upstream from Embudo Channel.

Area = 8 Ac
To = 0.0078 (3000/0.77) = 14 min.
Q100 = 0.0078(16,500) = 128 cfs

Q100 = 0.0078(16,500) = 128 cfs (includes site in developed condition)

This flow rate will be reduced slightly at the intersections of Menaul and Morris due to a positive gradient south of Morris Street. Capacity for the south side of Menaul is 14.38 cfs at a velocity slightly greater than 6'/sec. (Plate 22.3 D-1). The velocity will slow down at the Embudo Channel crossing due to a flatter gradient at the channel entrance.

Therefore, due to following considerations of, at Albuquerque capacity in Menaul south side for upstream watershed and site, 14.38 cfs capacity will be reduced slightly at the intersection of the Embudo Channel and well defined, clean inlets into the site, should be allowed free discharge of its developed runoff to Menaul Boulevard.

RECEIVED
DEC 17 1985
HYDROLOGY SECTION

REVISED 8-22-85

- DRIVEWAY ADDED NORTH OF CENTRAL BUILDING
- CENTRAL BUILDING RELOCATED FURTHER EAST
- FINISHED CONTOURS ADJUSTED ACCORDINGLY - DRAINAGE PATTERNS REMAIN THE SAME AS PREVIOUS DESIGN

CHRIS WEISS DATE

H21/D28

WEISS-HINES ENGINEERING INC.
1100 ALVARADO N.E. SUITE 3
ALBUQUERQUE, NEW MEXICO 87110
(505) 266-3444

DATE
DESIGNED
DRAWN
CHECKED

DRAINAGE / GRADING PLAN AUTO CARE CENTER

H
ENGINEERING

SHEET 1 OF 1