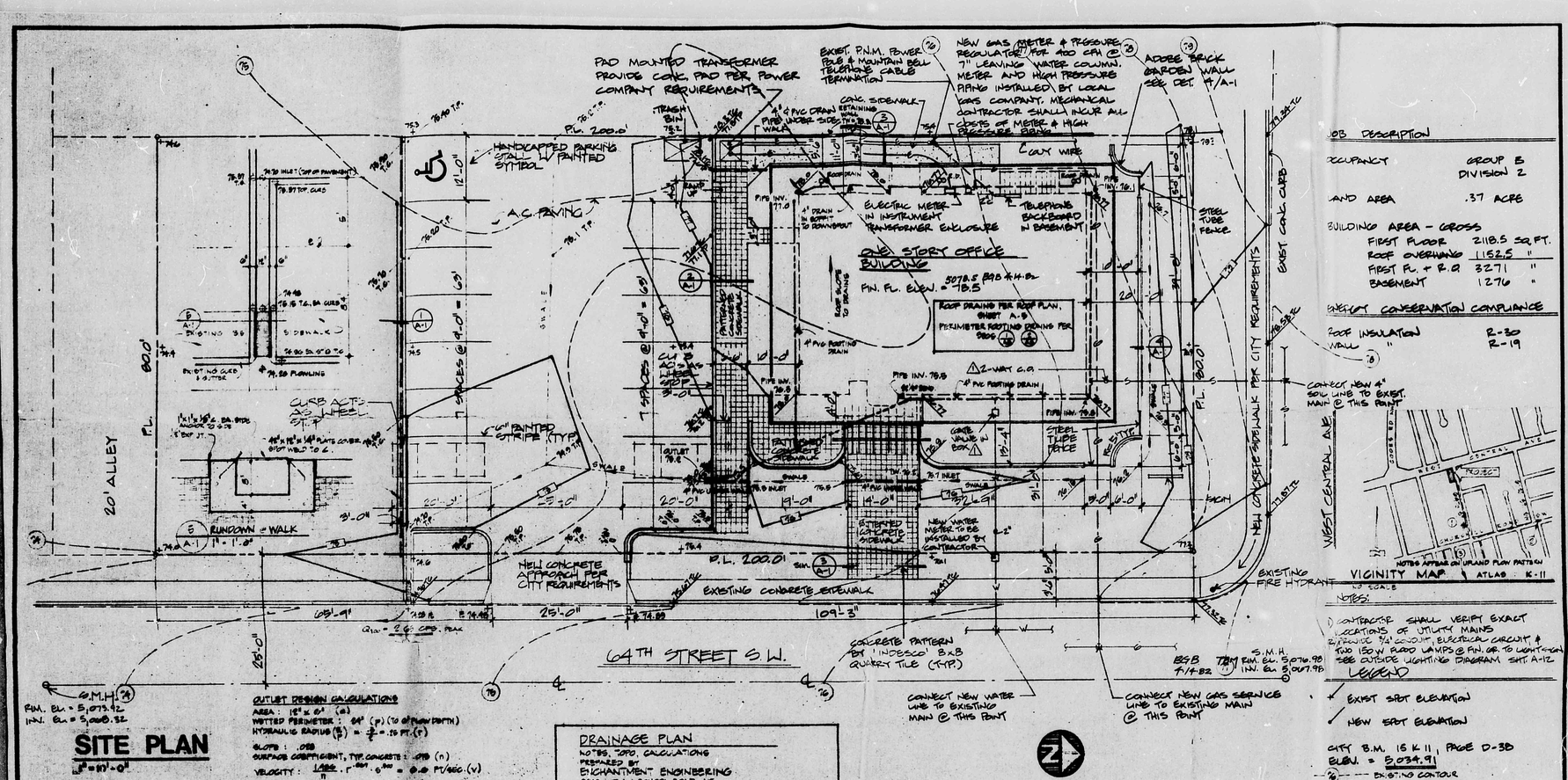


SITE PLAN

1" = 10'-0"

OUTLET DESIGN CALCULATIONS

AREA : 12" x 6" (a)
WETTED PERIMETER : 24" (p) (TO 6" FLOW DEPTH)
HYDRAULIC RADIUS $(\frac{a}{p})$ = $\frac{1}{2}$ = .50 FT. (r)
SLOPE : .020
SURFACE COEFFICIENT, TYP. CONCRETE : .013 (n)
VELOCITY : $\frac{1.486}{n} \cdot r^{2/3} \cdot s^{1/2}$ = 6.6 FT/SEC. (v)
Q (CAPACITY) = av = .5(6.6) = 3.3 CFS ≥ 2.05 CFS
(2.05 CFS ANTICIPATED Q_{100})

DRAINAGE PLAN

NOTES, TOPO, CALCULATIONS
PREPARED BY
ENCHANTMENT ENGINEERING
3510 INDIAN SCHOOL ROAD, NE
ALBUQUERQUE, NEW MEXICO
294-8899

JOB DESCRIPTION

OCCUPANCY	GROUP B DIVISION 2
LAND AREA	.37 ACRE
BUILDING AREA - GROSS	
FIRST FLOOR	2118.5 SQ. FT.
ROOF OVERHANG	1152.5 "
FIRST FL. + R.O.	3271 "
BASEMENT	1276 "

ENERGY CONSERVATION COMPLIANCE

ROOF INSULATION	R-30
WALL "	R-19

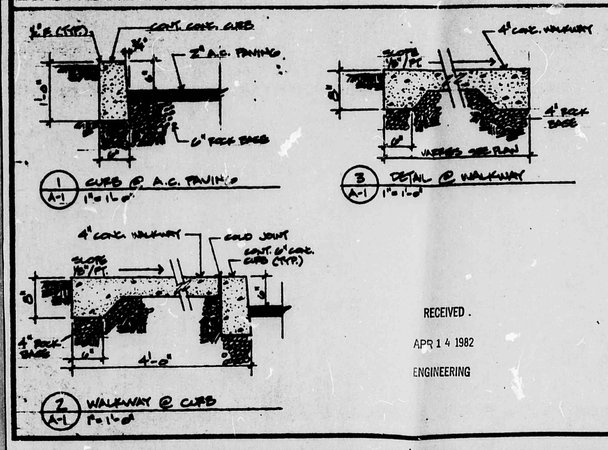
NOTES:

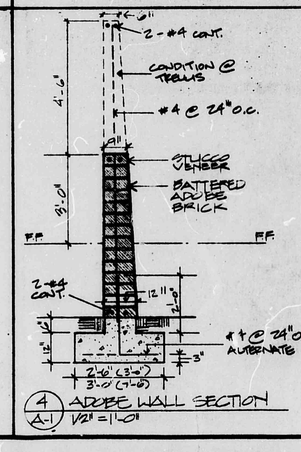
1) CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF UTILITY MAINS
2) PROVIDE 20A CIRCUIT, ELECTRICAL CIRCUIT & TWO 150 W FLOOD LAMPS @ FIN. GR. TO LIGHT SIGN. SEE OUTSIDE LIGHTING DIAGRAM SHT. A-12

LEGEND

- EXIST SRT ELEVATION
- NEW SRT ELEVATION
- CITY B.M. 15 K 11, PAGE D-30 ELEV. = 5,034.91
- EXISTING CONTOUR
- PROPOSED CONTOUR - TO FINISHED SURFACES.

SITE DETAILS





DATA:
TIME OF CONCENTRATION — 10 MINUTES, RUNOFF COEFFICIENT, .55 (NAT.)
$i_{10} = \frac{81}{10+26}$ = 2.07 IN/HR $i_{100} = \frac{129}{10+26}$ = 3.4 IN/HR

1) UPSTREAM FLOWS (CONTRIBUTING AREA - .99 AC)
Q_{10} = .99 x 2.07 x .55 = 1.00 CFS
Q_{100} = .99 x 3.4 x .55 = 1.80 CFS

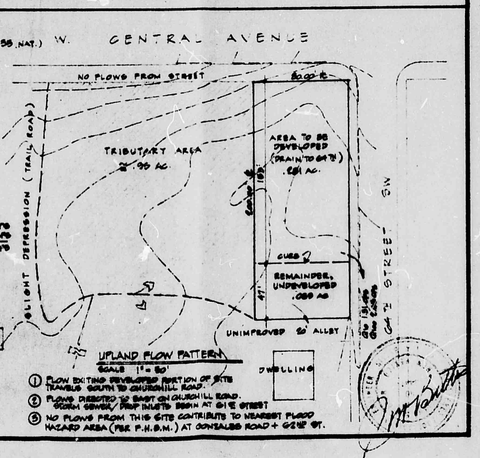
2) EXISTING SITE RUNOFF (AREA OF SITE -- .97 AC.)
Q_{10} = .97 x 2.07 x .55 = .94 CFS
Q_{100} = .97 x 3.4 x .55 = .09 CFS
• APPARENT DISCHARGE WOULD BE TOWARDS DWELLING TO SOUTH
$Q_{10(T)}$ = 1.29 CFS [1) + 2)]
$Q_{100(T)}$ = 2.49 CFS

3) PROPOSED SITE RUNOFF (DEVELOPED AREA)
IMPERVIOUS AREA .610 AC. (C = 1.0)
OPEN AREA .289 AC. (C = .50)
Q_{10} = .610 x 2.07 x 1.0 = 1.26 CFS Q_{100} = .610 x 3.4 x 1.0 = 1.17 CFS
+ .289 x 2.07 x .5 = .29 CFS + .289 x 3.4 x .5 = .10 CFS
.55 CFS 1.27 CFS

4) SITE RUNOFF (REMAINDER, UNDEVELOPED - .289 AC)
Q_{10} = .289 x 2.07 x .55 = .32 CFS
Q_{100} = .289 x 3.4 x .55 = .17 CFS

PROPOSED DISCHARGE TO STREET 1) + 3)
Q_{10} = .94 $(\frac{.94}{1.29})$ + .55 = 1.91 CFS (FLOWS FROM WEST PRORATED)
Q_{100} = 1.80 $(\frac{1.80}{2.49})$ + 1.27 = 2.69 CFS, PEAK, SEE OUTLET DESIGN

UNAFFECTED REMAINING DISCHARGE TO SOUTH 1) + 4)
Q_{10} = .94 $(\frac{.32}{1.29})$ + .55 = .59 CFS
Q_{100} = 1.80 $(\frac{.17}{2.49})$ + .17 = .50 CFS < 2.49 CFS, EXISTING PEAK Q.



UPLAND FLOW PATTERN
SCALE 1" = 50'

1) FLOW EXISTING DEVELOPED PORTION OF SITE TRAVELS SOUTH TO CHURCHILL ROAD.
2) FLOWS DIRECTED TO EAST ON CHURCHILL ROAD STORM SEWER. FIRST INLETS BEGIN AT 61st STREET
3) NO FLOWS FROM THIS SITE CONTRIBUTE TO NEAREST FLOOD HAZARD AREA (PER F.H.B.M.) AT GONZALES ROAD + 62nd ST.

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ENGINEERING

OFFICE FOR DR. CONTRERAS

64TH STREET AND CENTRAL AVENUE, S.W.
ALBUQUERQUE, NEW MEXICO

ISSUE RECORD		
1	ISSUED FOR PRICING	12/18/81
2	ISSUED FOR PERMIT	1-27-82

Revised Copies approved 4.14.82 by BSB

REVISIONS		
1	DRAINAGE	1-27-82

Dennis Meidinger & Associates AIA
1005 SANSOME ST. SUITE 240
SAN FRANCISCO, CALIFORNIA 94111 PHONE: (415) 397-7724

architect DENNIS H. MEDINGER
drawn by CAP W.H. EWK
checked by
date
job number

SITE PLAN A-1

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