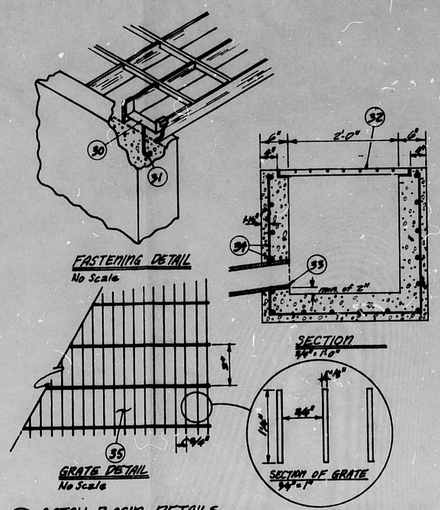
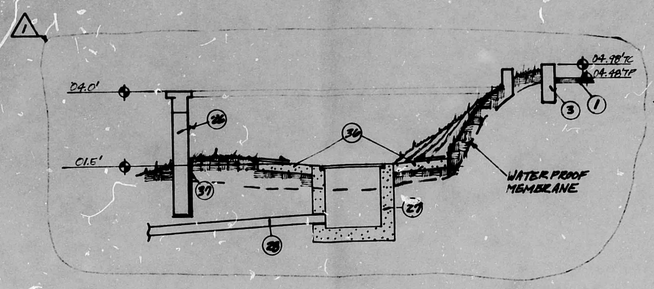
AS-BUILT
DRAINAGE REPORT
FOR
1416 JUAN TABO BLVD. N.E.
ALBUQ., NEW MEXICO

LEGAL DESCRIPTION
TRACT Z-2-A-1, DALE J. BELLAMAH'S UNIT 4, EASTRIDGE, ALBUQUERQUE, NEW MEXICO

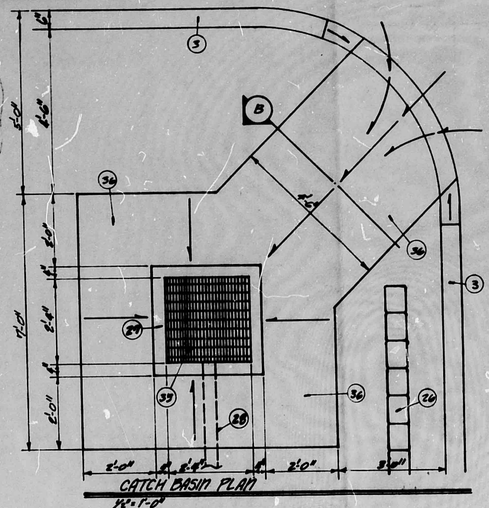


C CATCH BASIN DETAILS



A SECTION THRU CATCH BASIN

B CHANNEL



SITE DRAINAGE CRITERIA & DRAINAGE REPORT

I **PURPOSE:** THE PURPOSE OF THIS REPORT IS TO FORMULATE A COMPREHENSIVE STUDY OF DRAINAGE AFFECTING THE SITE DEVELOPMENT AND TO SHOW THAT THIS DEVELOPMENT DOES NOT INCREASE DRAINAGE IN A MANNER TO CONTRIBUTE TO EXISTING DOWNSTREAM DRAINAGE PROBLEMS OR TO ADJACENT LAND OWNERS.

II **SCOPE:** THIS REPORT IS LIMITED TO RUNOFF ORIGINATING WITHIN THE SITE AND INCLUDES REVIEW OF ADJAC. PT LANDS WHICH EFFECT RUNOFF OF THIS SITE. GENERAL ENGINEERING PROCEDURES ARE PRESENTED FOR THE CALCULATION OF STORM RUNOFF, STORAGE AND DISPERSMENT.

III **LOCATION:** THE SITE IS LOCATED ON THE EAST SIDE OF JUAN TABO BLVD. BETWEEN CONSTITUTION AVE. AND PRINCESS JEAN'S AVE. THE ADDRESS IS 1416 JUAN TABO BLVD. N.E. SEE VICINITY MAP AND LEGAL DISCRIPTION THIS SHEET.

IV **EXISTING DRAINAGE:** THE GENERAL SLOPE OF THE SITE IS FROM EAST TO WEST AT APPROXIMATELY 3.5% WITH NO SIGNIFICANT GEOLOGICAL OR TOPOGRAPHICAL FIXTURES. NO EXISTING DEVELOPMENT IS ON THE SITE. THE EXISTING RUNOFF SHEET FLOWS TO THE CURB AND GUTTER ON THE EAST SIDE OF JUAN TABO BLVD. WHICH SERVES AS A WATER CARRYING IMPROVEMENT, TO A DROP INLET APPROXIMATELY 100' SOUTH (DOWN STREAM) OF THE SITE. AN EXISTING 48"ϕ CONCRETE STORM DRAINAGE CARRYING WITH A 24"ϕ CARRIER CONNECTING THE DROP INLET WITH THE MAIN CARRIER, SERVES AS THE EXISTING STORM DRAINAGE SYSTEM.

V **ADJACENT LAND DRAINAGE:** THE SITE IS BORDERED ON THE EAST BY RESIDENTIAL DEVELOPMENT, ON THE NORTH BY COMMERCIAL DEVELOPMENT, ON THE WEST BY JUAN TABO BLVD. AND ON THE SOUTH BY UNDEVELOPED LAND. VIRTUALLY NO STORM RUNOFF IS DIRECTED TO OR ACROSS THIS SITE. THE RESIDENTIAL AREA TO THE EAST HAS A 6' HIGH CMU WALL ALONG THE EAST PROPERTY LINE OF THIS SITE AND ALL STORM RUN OFF OF THE RESIDENTIAL AREA IS DIRECTED TO THE EAST AWAY FROM THIS SITE. THE COMMERCIAL DEVELOPMENT TO THE NORTH IS DEVELOPED WITH PAVEMENT AND VIRTUALLY ALL STORM RUN OFF IS DIRECTED AWAY FROM THIS SITE AND FLOWS TO THE JUAN TABO BLVD. EAST GUTTER. THE UNDEVELOPED SITE SOUTH OF THIS SITE HAS NATURAL TOPOGRAPHY WHICH DIRECTS STORM RUN OFF TO THE SOUTHWEST, AWAY FROM THIS SITE.

VI **DOWN STREAM FLOOD HAZARD:** THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE AS IS INDICATED ON FLOOD HAZARD MAP #350002 0001.

APPROXIMATELY 1800' SOUTH (DOWN STREAM) A FLOOD HAZARD ZONE AO, 100 YR, SHALLOW FLOODING WITH AVERAGE DEPTH OF 1' OF INUNDATION IS SHOWN. THIS ZONE EXTENDS BETWEEN MOUNTAIN ROAD AND LOMAS BLVD. AND IS GENERALLY CONTAINED WITHIN THE R.O.W. OF JUAN TABO BLVD. AS INDICATED ON THE ABOVE FLOOD HAZARD MAP.

THE PROPOSED DRAINAGE DESIGN OF THIS SITE WILL PROVIDE FACILITIES TO DETAIN AND THEREFORE ASSIST IN LESSENING THE IMPACT ON THE INDICATED ZONE.

VII **PROPOSED DEVELOPMENT:** THE PROPOSED DEVELOPMENT WILL CONSIST OF A RETAIL STORE OF 4000 SQ. FT. WITH REQUIRED PARKING AND ACCESS. THE SIZE AND SHAPE OF THE BUILDING WILL REQUIRE TERRACING OF APPROXIMATELY 3' AT THE REAR AND PART OF THIS SITE TO ACCOMODATE THE SLOPE OF THE SITE.

VIII **PROPOSED DRAINAGE PLAN:** THE PROPOSED DRAINAGE PLAN IS TO CONTAIN AND DELAY THE PEAK DISCHARGE AFTER DEVELOPMENT TO LESS THAN THE PEAK DISCHARGE BEFORE DEVELOPMENT, BY USE OF LANDSCAPE PONDING AND A CATCH BASIN WITH A RESTRICTED DISCHARGE, TO ROUTE RUN OFF INTO THE EXISTING STORM DRAINAGE SYSTEM.

II SITE CRITERIA & CALCULATIONS

EXISTING

LAND SIZE = 0.4178 ACRES = 18,200 S.F.
EXISTING SLOPE = 5.5%

PROPOSED DEVELOPMENT

ROOF AREA	= 4000 S.F.
SIDEWALK, PAVING	= 11,620 S.F.
LANDSCAPING	= 2,580 S.F.

PROPOSED SLOPES MAX 2.2%

DESIGN CRITERIA

C_{10} EXIST	= .35
C_{10} DEV.	= .87
6 HR	= 2.46"
I	= 5.51"
Tc	= 10 min.

EXIST RUNOFF

$V_{6H} = \left(\frac{18,200}{12} \times 2.46''\right) \times .35 = 1500$ CU. FT.

$Q_p = CIA = .95(5.51'')(.4178) = 0.805$ C.F.S.

PROPOSED DEVELOPMENT

$V_{6H} = \frac{18,200 \times 2.46''}{12} \times .87 = 3235$ CU. FT.

$Q_p = .87(5.51'')(.4178) = 2.00$ C.F.S.

PROPOSED RETENTION

		AS-BUILT	
AREA "A" 15' x 67' x 1.5' =	1807.5 C.F.	10'x67'x2.5'+3'x67'x2½ =	1926 C.F.
AREA "B" 30' x 30' x .5' =	450 C.F.		-0- C.F.
AREA "C" 5' x 135' x 1' =	675 C.F.	5' x 135' x .5' =	337 C.F.
AREA "D" 7½ 100' x .5' (50%) =	175 C.F.	7' x 100' x .5' (50%) =	175 C.F.
TOTAL RETENTION =	2807 C.F.		2438 C.F.

DISCHARGE

$Q_p = CA\sqrt{2gh} = .618(.087)\sqrt{32.2(2)(3)} = 0.747$ C.F.S.

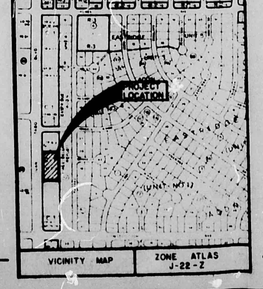
$C_{(coat'd)} = .618$
$A(4'' \phi) = .087$
$h = 3'$

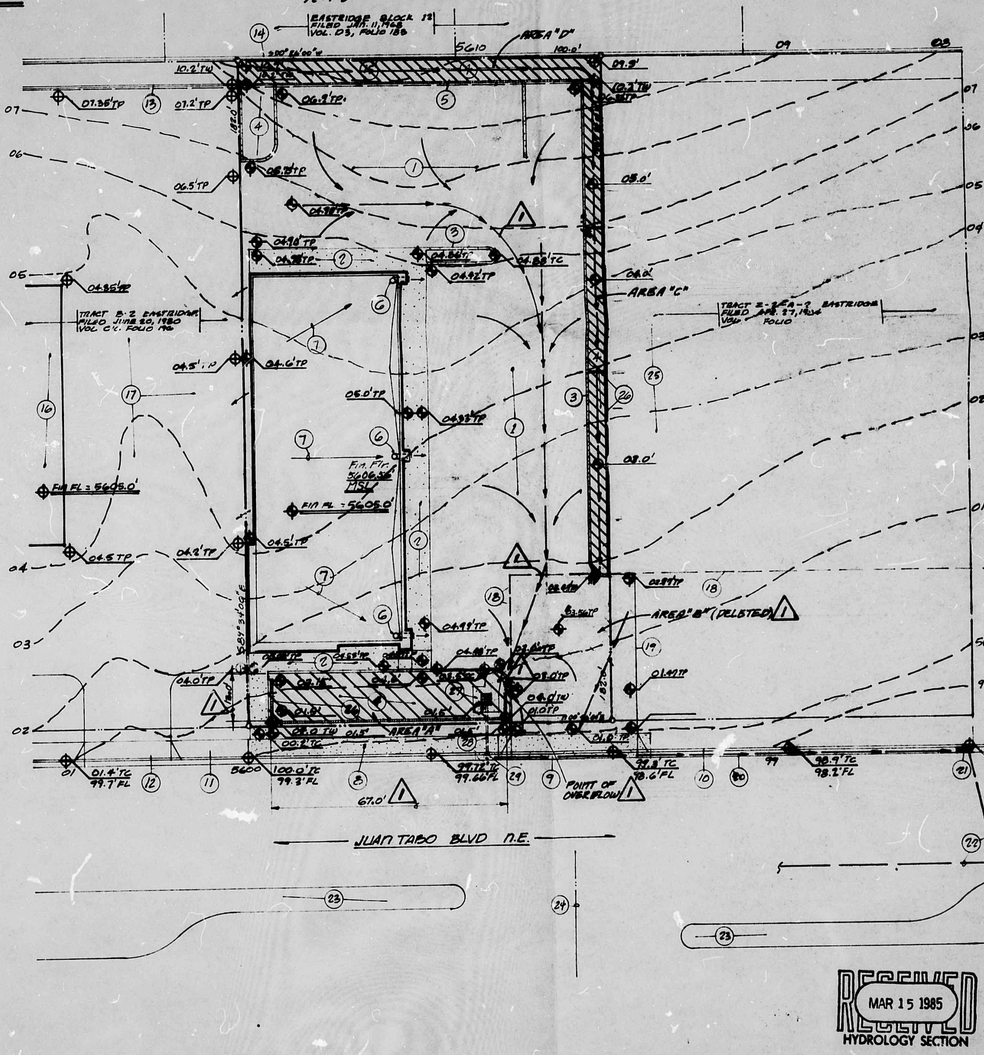
X **SOLUTION:**
THE INCREASED RUNOFF FROM DEVELOPMENT WILL BE STORED ALONG THE LANDSCAPED TERRACED AREA "C" AND DIRECTED TO THE LANDSCAPED RETENTION AREA "A". A CATCH BASIN WILL ALLOW DISCHARGE OF RUNOFF THROUGH A 9"ϕ PIPE TO THE EXISTING JUAN TABO GUTTER AND DROP INLET. RUNOFF WILL BE DISCHARGED THROUGH THE EXISTING STORM DRAINAGE SYSTEM.

XI **CONCLUSIONS:**
ON THE BASIS OF THIS REPORT, THE PROPERTY CAN BE DEVELOPED AS PROPOSED WITHOUT ANY MAJOR IMPACT TO THE OFFSITE DRAINAGE FACILITY. THE RESTRICTION OF THE DISCHARGE ALLOWS A REDUCTION OF .058 C.F.S. OF PEAK RUNOFF FROM THE EXISTING LAND.

KEYED NOTES:

1. Asphalt pavement
2. Concrete sidewalk
3. Concrete curb
4. Landscape Retention Area
5. CMU Retaining wall
6. Roof drain - 6"ϕ P.V.C. pipe to parking 2:1@2
7. Roof slope
8. 6' wide Conc. City sidewalk
9. 26' Wide Curb cut
10. Existing city of Albuq. Curb & gutter
11. Existing City of Albuq. Curb, gutter and 6' wide sidewalk
12. Existing curb cut
13. Existing CMU Retaining Wall
14. Existing 6' high CMU wall
15. 7' wide utility Easement
16. Existing Building
17. Existing pavement
18. Recorded Private Access Easement
19. Temporary
20. Gutter flow line - site drainage to existing drop inlet
21. Existing storm drainage drop inlet
22. Existing 24"ϕ storm culvert from drop inlet to 48"ϕ storm drainage line.
23. Street median
24. 60' wide median cut - centerline
25. UNDEVELOPED LAND
26. R.R. Tie Retaining Wall
27. Drainage Catch Basin
28. 4" P.V.C. drain pipe
29. 4" Drain line through curb to be constructed in accordance with city of Albuq. standard dwg. K-15, BLK-BLK No. 91.
30. Stainless steel saddle Clip. (on each corner of grate)
31. Anchor bolt (on each corner of grate)
32. Top of catch basin elev. = 01.5'
33. Invert elev. = 99.9'
34. #4 @ 6"o.c. each way
35. Double - Lok Grate w/ clamps & anchors
36. 4" Conc. pad
37. Water proof Membrane





GRADING AND DRAINAGE PLAN

1" = 20.0'

As-Built Feb. 15, 1985

THE DRAINAGE FACILITIES HAS BEEN PREPARED IN ACCORDANCE WITH THESE AS-BUILTS AND IS IN SUBSTANTIAL COMPLIANCE WITH THE ORIGINAL DRAINAGE REPORT AND/OR PLAN.

RICHARD BURTON
MARCH 8, 1985

RECEIVED
MAR 15 1985
HYDROLOGY SECTION

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J22/D34