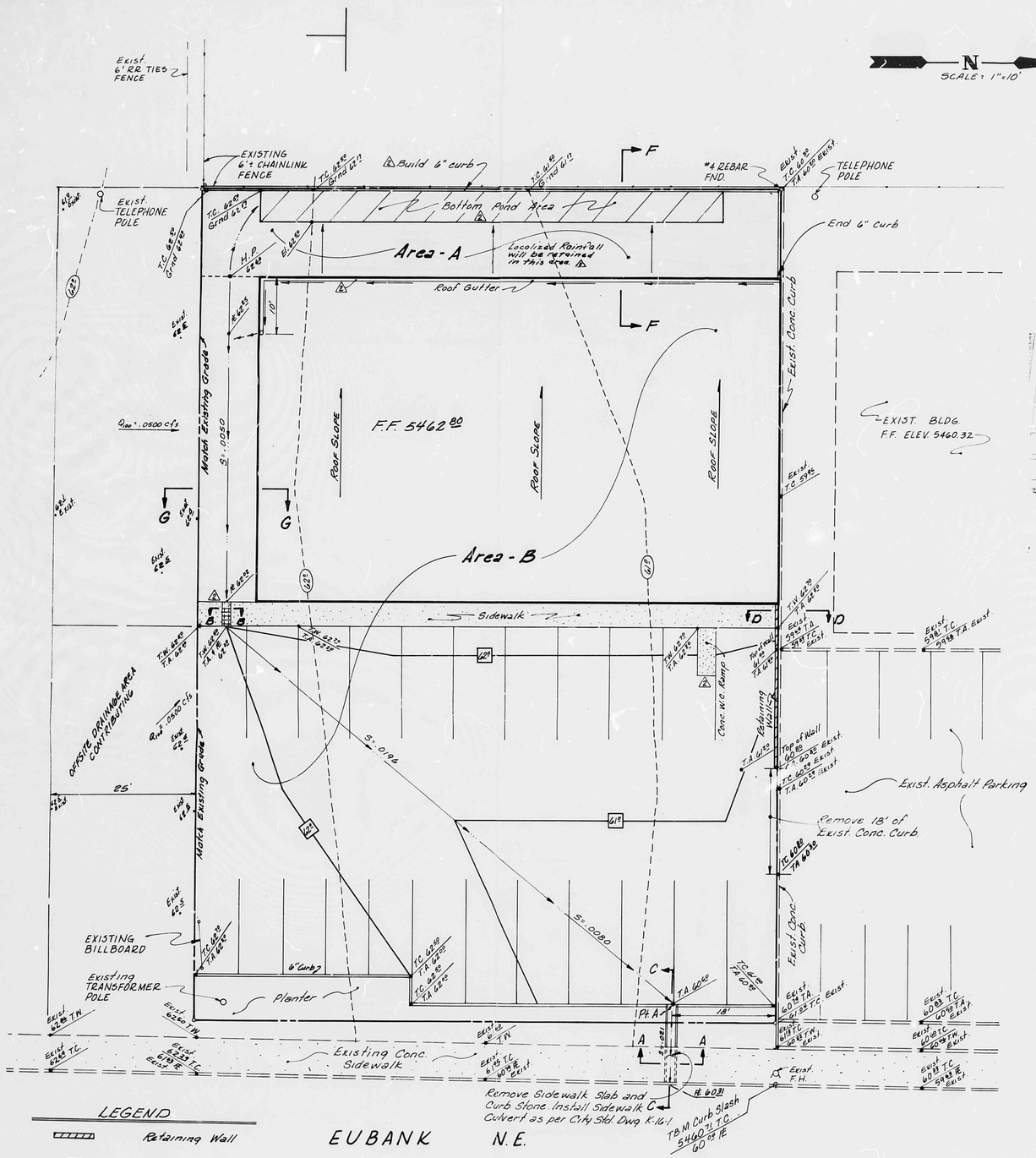
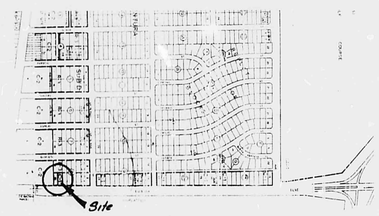
HYDROLOGY K20/D21 LAMP SHOP

K20/D21

LAMP SHOP

1 PLAN





Vicinity Map (K-20)

ONSITE DRAINAGE: 100 Year Storm Frequency

Area - A:

Area = 15 X 100 = 1500 SF

I = 5.07; C = 0.35 for Landscaping

Q_{100} = 0.35 x 5.07 x 1500/43560 = 0.61 cfs

Pond Volume Required to Retain Water for This

Area = 1500 x 0.35 x 2.4/12 = 105 CF

Pond Available = 5' x 0.33' x 70' = 116.5 > 105 CF

Area - B:

Area = 21760 SF

Find Composite 'C' Factor

Description	Area	Factor	F x A
Roof	4995	0.95	4745
Sidewalk	400	1.00	400
Landscaping	560	0.35	196
Pavement	6805	0.95	6465
	12760 SF		11806 SF

'C' Composite = $\frac{11806}{12760}$ = 0.925; I = 5.07;

Q_{100} = 0.925 x 5.07 x 12760/45360 = 1.40 cfs

OFFSITE DRAINAGE - 100 Year Storm Frequency (South Side of Property)

Total Area = 142.59 x 25 = 3565 SF = 0.082 AC

C = 0.30 existing condition; I = 5.07

Q_{100} = CIA = 0.30 x 5.07 x 3565/43560 = 0.1 cfs

TOTAL DRAINAGE CONTIRBUTING:

At Pt. A, total Q = $Q_{offsite}$ + Q_{onsite} = 1.4 + 0.1 = 1.5 cfs outletting to Eubank Blvd.

Design for minimum drain width of sidewalk culvert

The culvert will act as a weir

Q (outflow) = 2.6 LH 3/2; using H = 0.45', Q = 1.5 cfs

1.5 = 2.6 L (0.45) 3/2

L = 1.91', use 2' drain width

At Pt. B, determining the drain width:

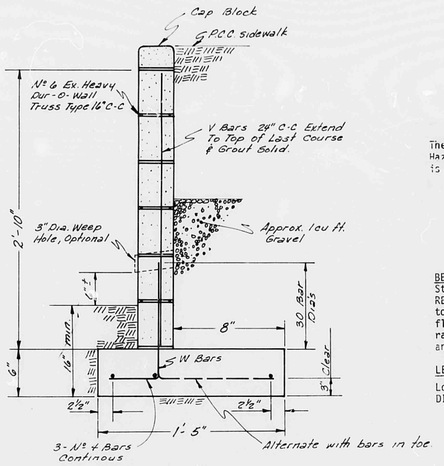
total area contributing = ½ offsite area + west ½ of property - Area A

Q_{100} = 0.05 + 0.35 x 5.07 x 550/43560 + 0.95 x 5.07 x 4995/43560

= 0.05 + 0.02 + .55

= 0.62 cfs

Q = 2.6 LH 3/2; using H = 0.40; Q = 0.62 L = 0.94'; use L = 12" drain width

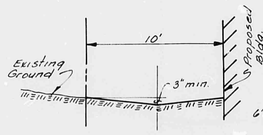


RETAINING WALL w/ FOOTING
6" CMU
SECTION D-D △2
No Scale

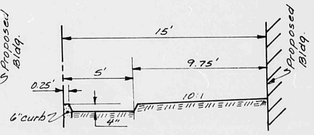
The proposed improvement is not in a Flood Hazard Zone Area. An Erosion Control Map is included with this submittal.

BENCH MARK:
Standard ACS Brass Tablet, stamped "5-L21 RESET 1974" cemented in a drill hole in top of the concrete curb at ESE return and flush with top of curb at the southeast quadrant of the intersection of Eubank Blvd. NE and Central Ave. Elevation=5466.535

LEGAL DESCRIPTION:
Lot 15 & 16, Block 8 of BUENA VENTURA SUBDIVISION in City of Albuquerque, New Mexico.



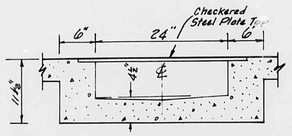
SECTION G-G △2
No Scale



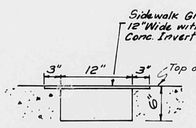
SECTION F-F △2
No Scale

LEGEND

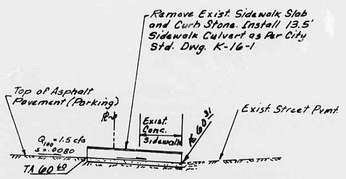
	Retaining Wall
6100	Proposed Contour
6100	Existing Contour
T.W	Top of Sidewalk
T.A.	Top of Asphalt
T.C.	Top of Curb
	6" Curb



SIDEWALK CULVERT
SECTION A-A
NO SCALE



SIDEWALK GRATE
SECTION B-B
NO SCALE



SECTION C-C
NO SCALE

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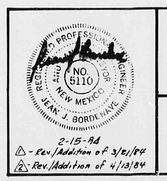

2-15-84
△1 - Rev./Addition of 3/21/84
△2 - Rev./Addition of 4/13/84

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GRADING & DRAINAGE PLAN
LAMP SHOP

Engineer's File No. 04620-05-01

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HYDROLOGY SECTION

K21/D21