



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 28, 1993

Richard K. Donnell
Cygnet Engineering
20th Street Suite B
Rio Rancho, NM 87124

RE: REVISED DRAINAGE PLAN FOR KAPNISON PROPERTY @ 8810 CENTRAL SE
(K18-D62) REVISION DATED 6/21/93.

Dear Mr. Donnell:

Based on the information provided on your June 22, 1993 resubmittal, the above referenced site is approved for Grading/Paving.

Please be advised that a separate permit is required for construction within City Right-of-Way. A copy of this approval letter must be on hand when applying for the excavation permit.

Also, after completion of the grading & paving your client must call for an inspection.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya, CE
Engineer Associate

BJM/dl/WPHYD/7791

xc: Alan Martinez
Darlene Saavedra
File

PUBLIC WORKS DEPARTMENT

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Kapnison Drainage ZONE ATLAS/DRNG. FILE #: K-18-7 562
DRB #: _____ EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Fairgrounds Addition, Block 3, Lots 3, 4, 19, 20, 21, 22
CITY ADDRESS: 6712 & 6714 Central Ave SE
ENGINEERING FIRM: Cygnat Engineering CONTACT: Richard K. Donnell
ADDRESS: #12, 20th Street Suite B Rio Rancho, NM PHONE: (505)891-1770
OWNER: Nick Kapnison CONTACT: _____
ADDRESS: 8810 Central Ave SE PHONE: 299-1986
ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
SURVEYOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

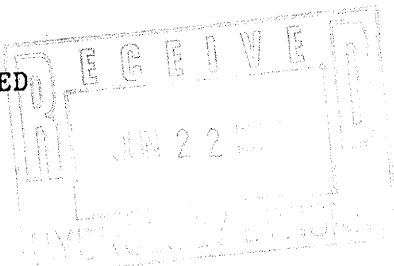
- ☒ DRAINAGE REPORT
☐ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ OTHER

PRE-DESIGN MEETING:

- ☒ YES
☐ NO
☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D. APPROVAL
☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☒ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER _____ (SPECIFY)



Re-submitted June 21, 1993
DATE SUBMITTED: June 01, 1993

BY: Richard K. Donnell

June 17, 1993

City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Attn: Bernie J. Montoya, CE
City Hydrology

Reference: Kapnison Drainage Plan; Project NK-19-20-21-22

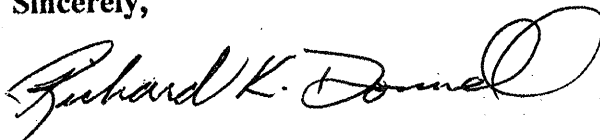
Dear Sir:

Included herewith is the final plat for the above referenced drainage project addressing the concerns listed on your letter of June 10, 1993.

Upon drainage plan approval, Mr. Kapnison reserves the right to make a final determination whether or not to proceed with the project based on his cost to benefit analysis.

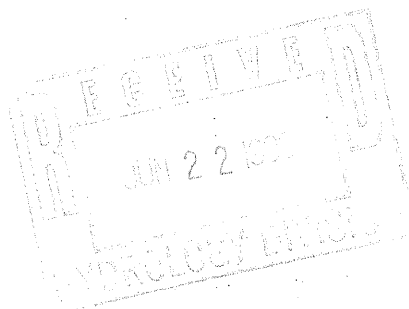
If you have any questions, please call.

Sincerely,



Richard K. Donnell, PE

pc: Nick Kapnison



June 01, 1993

**City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103**

Attn: City Hydrology

Reference: Kapnison Drainage Plan; Project NK-19-20-21-22

Dear Sir:

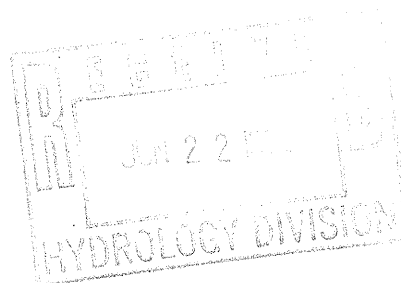
Included herewith is the drainage plan and plat for the above referenced project. The drawing sheets submitted herewith are blueline to afford you the opportunity to annotate. After your initial review, pick up, make additions/changes, and then resubmit on Mylar.

If you have any questions, please call.

Sincerely,



Richard K. Donnell, PE



CYGNET ENGINEERING
(505) 891-1770
4:00 PM 5/28/93

DRAINAGE PLAN

NICK KAPNISON PROPERTY PROJECT NK-19-20-21-22

Mr. Kapnison desires to pave his property for a parking lot which is known as Lots 19,20,21,&22; Block 3, of the Fairgrounds Subdivision. Each lot is 0.1677 Acres and totals 0.67 Acres. For this improvement, The City of Albuquerque requires drainage plan approval so that a grading and paving permit can be issued.

The lots are situated south of the East- West alley between Central Avenue and Cochiti and to the East of Florida Street. Central Avenue is prone to flooding as well as surrounding streets. The properties to the north drain into the alley and westerly into Florida Street. Existing drainage patterns indicate little, if any, outside drainage into the property. The lots presently drain by sheet flow into Cochiti and to Florida which also drains into Cochiti.

This drainage plan proposes to drain the property at the SW Corner of the property directly into Cochiti — but in a very controlled manner. It is planned to discharge no more than 0.50 CFS when the improvements are made. In the present condition, Q_p is $.67 \times 3.45 = 2.31$ CFS as per Table A-9 of DPM Section 22.2 - Hydrology.

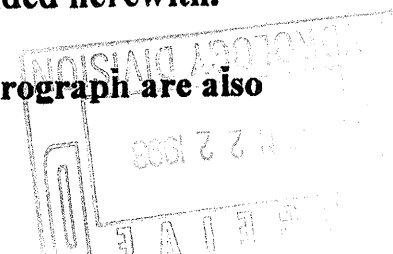
In times of moderate to low flooding, 0.50 CFS would be discharged. In the 100 year, 6 hour event, runoff from the property will be detained. Headwater and tailwater elevations are very close in this condition and thus very much less than 0.5 CFS would be released to Cochiti in the event.

There are no plans to pave the alleyway.

Landscaping requirements would be as per the City of Albuquerque requirements.

Flowline elevations are as shown on the plans as included herewith.

Discharge computations and the small watershed hydrograph are also included herewith.



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
UTILITY DEVELOPMENT DIVISION/HYDROLOGY SECTION

PRE-DESIGN CONFERENCE

891-1770

DRAINAGE FILE/ZONE ATLAS PAGE NO.: K-18 DATE: 4/27/93 @ 2:00 p.m.

EPC NO.: _____ DRB NO.: _____ ZONE: _____

SUBJECT: _____

STREET ADDRESS: 8810 CENTRAL AVE. S.E.

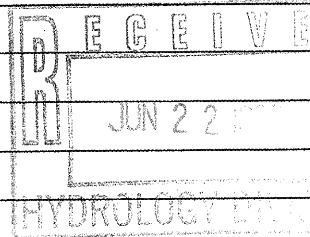
LEGAL DESCRIPTION: BLK 3, LOTS 3, 4, 19, 20, 21 & 22.

APPROVAL REQUESTED: _____ PRELIMINARY PLAT _____ FINAL PLAT
_____ SITE DEVELOPMENT PLAN _____ BUILDING PERMIT
☒ GRADING/PAVING PERMIT _____ OTHER _____

ATTENDANCE: WHO REPRESENTING
RICHARD DONNELL Cygnat Engineering
BERNIE MONTAÑA City - Hydrology

FINDINGS:

1. Drainage plan per D.P.M. guidelines required prior to Grading/Paving approval.
2. 100 year flood plain encroachment from Central Ave.
3. If you are proposing to drain to the alleyway, alley improvements must be constructed. Alley grade design & construction must go through D.R.C.
4. Downstream capacity must be evaluated to determine free discharge.
5. Lots 3 & 4 will be allowed to drain in their historical route.
6. Release rate will be held to .5 cfs. above .5 cfs will be ponded.



The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Richard K. Donnell SIGNED: Bernie J. Montaña
TITLE: Owner, Cygnat Engineering TITLE: C.O.A.
DATE: 4-27-93 DATE: 4/27/93

****NOTE**** PLEASE PROVIDE A COPY OF THIS PRE-DESIGN FORM WITH THE DRAINAGE SUBMITTAL.

May-93	PROJECT NK-19-20-21-22				
	KAPNISON PROPERTY				
	TOTAL AREA = 0.67 ACRES				
	LANDSCAPED AREA = 0.07 ACRES (BUILD TO RETAIN MAX RAINFALL)				
	DRAINAGE AREA = 0.60 ACRES				
I=	$0.726*(\text{LOG}10(24.6*0.2))*(1/0.2)*2.14$	5.375323311	5.38		
Qp=	$0.6*C7*0.95$	3.063934287	3.01		
E=		2.36	2.36		
tp=	$(0.7*0.2)+((1.6-(0.6/0.6))/12)$	0.19	0.19		
tB=	$(2.107*4.44*0.6/4.44)-(0.25*0.6/0.6)$	1.0142	1.0142		
DETENTION CAPACITY ANALYSIS		FREE OUTLET	SUBMERGED OUTLET		
	MIN. AFTER END OF Qp	NET CF IN	GROSS C.F.IN		
	1	3015	4009		
	2	3163	4187		
	3	3306	4360		
	4	3442	4526		
	5	3574	4688		
	6	3700	4844		
	7	3820	4994		
	8	3934	5138		
	9	4044	5278		
	10	4147	5411		
	11	4245	5539		
	12	4337	5661		
	13	4424	5778		
	14	4506	5890		
	15	4581	5995		
	16	4651	6095		
	17	4716	6190		
	18	4775	6279		
	19	4828	6362		
	20	4876	6440		
	21	4919	6513		
	22	4955	6579		
	23	4987	6641		
	24	5012	6696		
	25	5032	6746		
	26	5047	6791		
	27	5056	6830		
	28	5059	6863		
	29	5057	6891		
	30	5049	6913		
	31	5036	6930		
	32	5017	6941		
	33	4993	6947		
		FREE OUTLET	SUBMERGED		
		DETENTION	OUTLET DETENTION		
There is little difference between headwater and tailwater elevations at full flood; therefore,					
it is proposed to detain a minimum 7000 C.F. runoff					

A.8 HYDROGRAPH FOR SMALL WATERSHED

0.60 ACRE

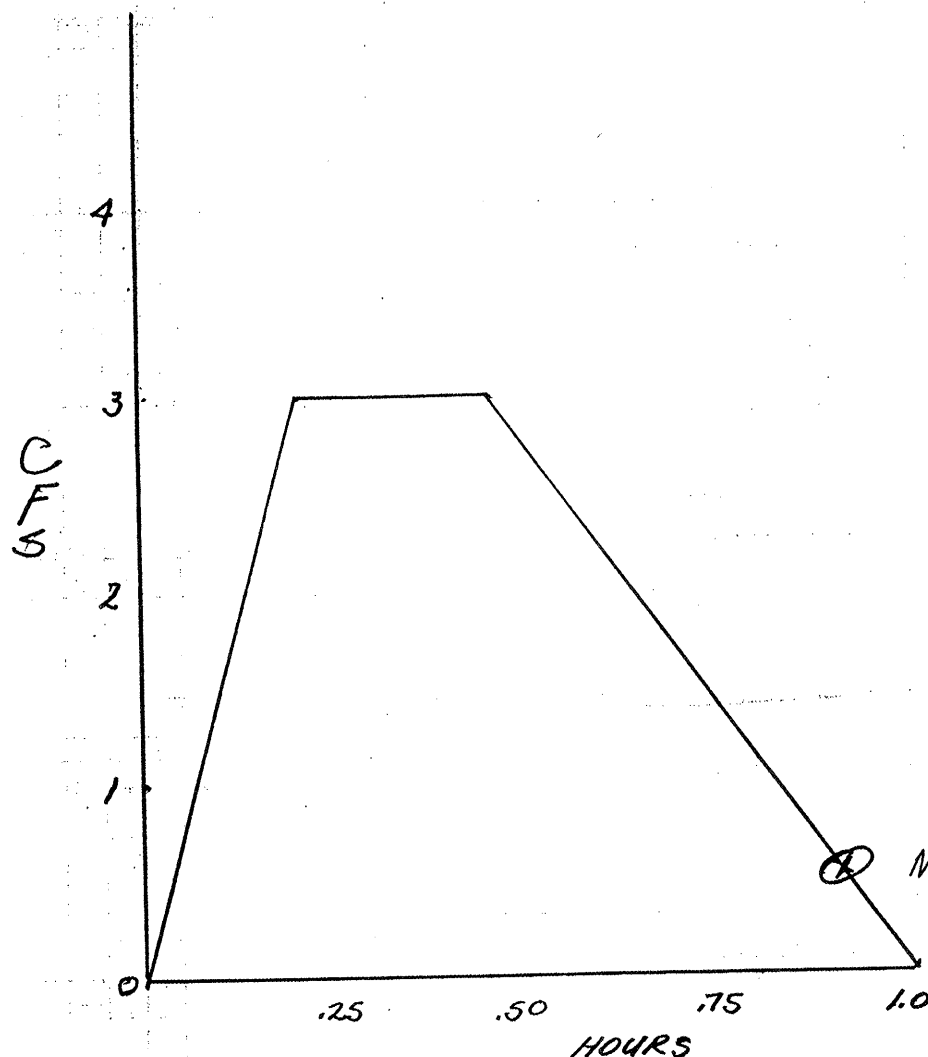
$$t_c = 0.2 \text{ HOURS} \quad t_B = 1.01 \text{ HOURS} \quad t_p = 0.19 \text{ HOURS}$$

$$A_T = 0.60 \text{ ACRES} \quad A_B = 0.60 \text{ ACRES} \quad L = 2.36 \text{ INCHES}$$

FROM TABLE A-8

$$I = 5.38 \text{ INCHES}$$

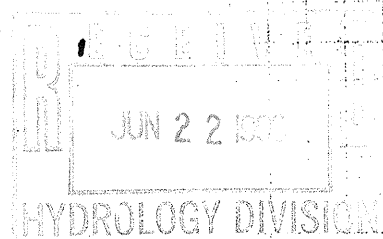
$$Q_p = (0.95 \times 5.38 \times 0.60) = 3.06 \text{ CFS}$$



⊙ MAX D = 5059 CF
FREE OUTLET

700 sec	900 sec	2016 sec
1071 CF	2754 CF	3085 CF

TOTAL CF = 6910



BASED ON ANALYSIS OF 0.306 TO 0 VARIABLE FLOW
RATES INTO D. BASIN VS. CONSTANT 0.50 CFS
FLOW OUT OF BASIN; 5059 CF DETENTION
CAPACITY WILL BE NEEDED AT 0.92 HOURS

USE 5500 C.F. PROPOSE TO DETAIN 7000 C.F.
ASSUMING SUBMERGED OUTLET.

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: KAPNISON

Comment: CONTROLLED DISCHARGE PARKING LOT DRAIN

Solve For Actual Discharge

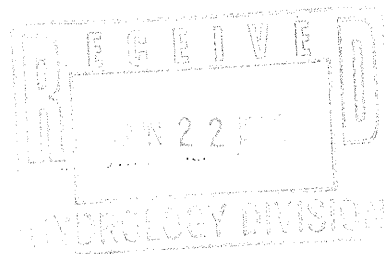
Given Input Data:

Diameter.....	0.50 ft
Slope.....	0.0070 ft/ft
Manning's n.....	0.013
Depth.....	0.50 ft

Computed Results:

Discharge.....	0.47 cfs
Velocity.....	2.39 fps
Flow Area.....	0.20 sf
Critical Depth....	0.35 ft
Critical Slope....	0.0100 ft/ft
Percent Full.....	100.00 %
Full Capacity.....	0.47 cfs
QMAX @.94D.....	0.50 cfs
Froude Number.....	FULL

Open Channel Flow Module, Version 3.41 (c) 1991
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708



Rectangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: KAPNISON 2

Comment: 1 - 8" X 3" X 12' METAL CHANNEL U/ SIDEWALK

Solve For Discharge

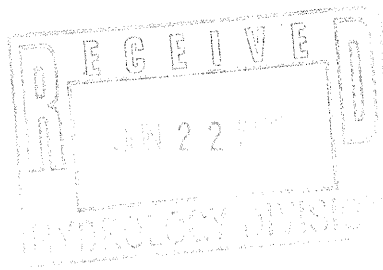
Given Input Data:

Bottom Width.....	0.67 ft
Manning's n.....	0.013
Channel Slope.....	0.0090 ft/ft
Depth.....	0.25 ft

Computed Results:

Discharge.....	0.50 cfs
Velocity.....	2.97 fps
Flow Area.....	0.17 sf
Flow Top Width...	0.67 ft
Wetted Perimeter...	1.17 ft
Critical Depth...	0.26 ft
Critical Slope...	0.0083 ft/ft
Froude Number....	FULL

Open Channel Flow Module, Version 3.41 (c) 1991
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708



KAPNISON DRAINAGE

SHEET NO.	DESCRIPTION
1-1	TITLE SHEET
1-1	VICINITY MAP
1-1	INDEX OF SHEETS
2-1	PLAN AND PROFILE SHEET
2-2	CONTOUR DRAINING PLAN SHEET

[illegible]

Fairgrounds Addition Blk. 3 Lots 19, 20, 21, 22

BENCH MARK: BM No. 7K19 Located in median, east of intersection of East Central Ave. and Louisiana Blvd. Elevation 5323.31

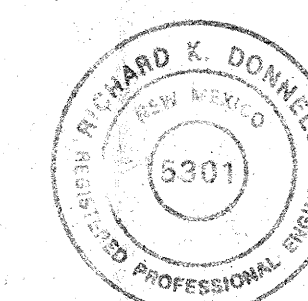
NOTICE TO CONTRACTOR

1. An excavation/contruction 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 Interim Standard Specifications for Public Works Construction 1985.
3. Two working days prior to any excavation contractor must contact line locating service _____ for location of existing utilities.
4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all constructions. 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 _____ street use.
6. Maintenance of these facilities shall be the responsibility of the Owner of the property served.

APPROVALS	NAME	DATE	TITLE:	
A.C.E./DESIGN	<i>Ernest Montoya</i>	<i>6/28/93</i>	KAPNISON DRAINAGE	
INSPECTOR				
A.C.E./FIELD			PERMIT NO.	MAP
			SHEET 1 OF 3	NO. K18

JUN 22 1965
HYDROLOGY

REV	SHEETS	CITY	ENGR	DATE	USER	DEPT	DATE	USER	DEPT	DATE
APPROVAL OF REVISIONS										

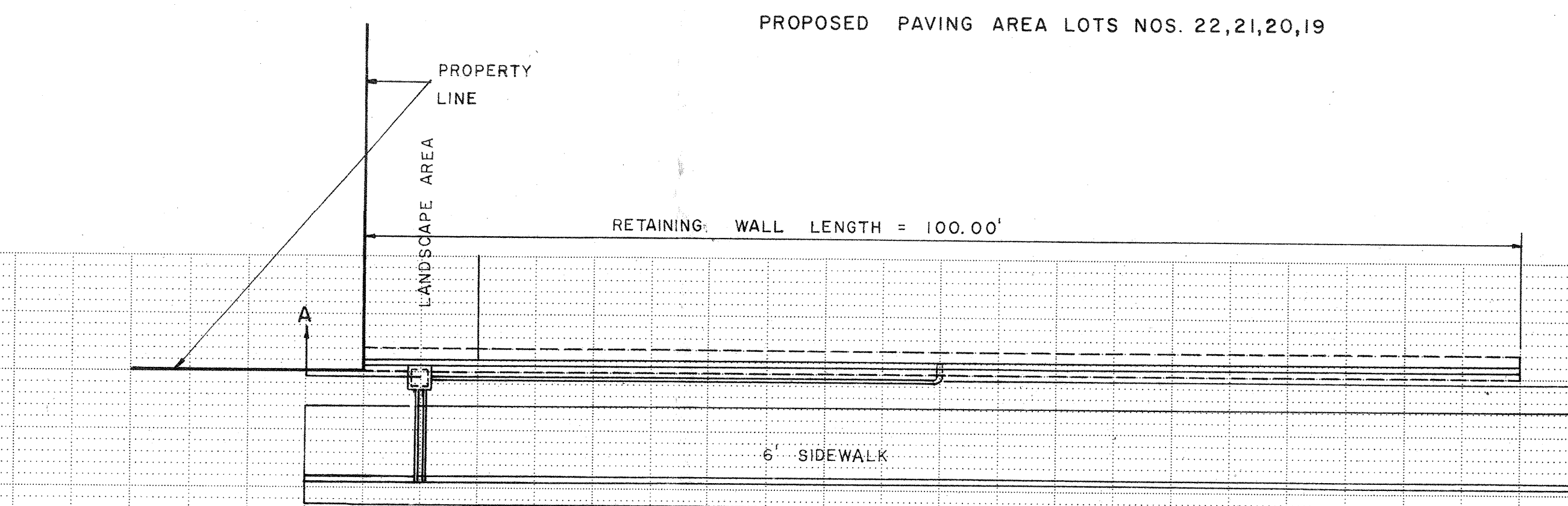


APPROVED FOR
CONSTRUCTION

C. E.

PROJECT
NO.
NK-19,20,21,22

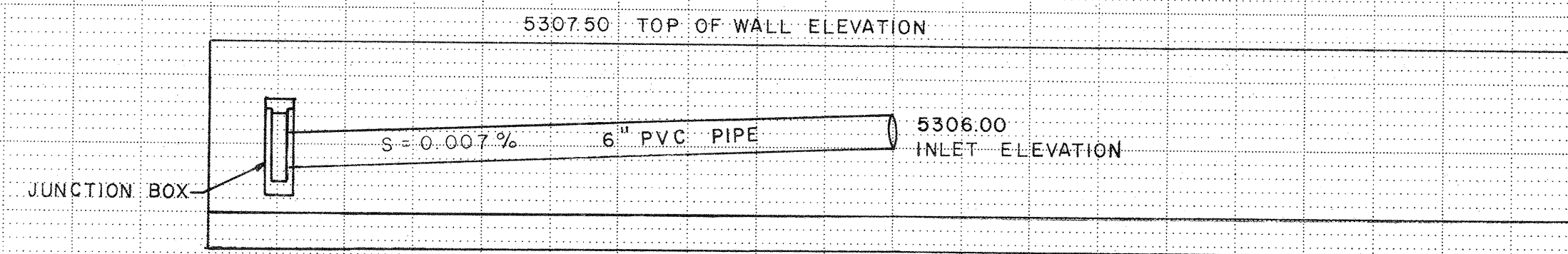
SHEET 1 OF 3



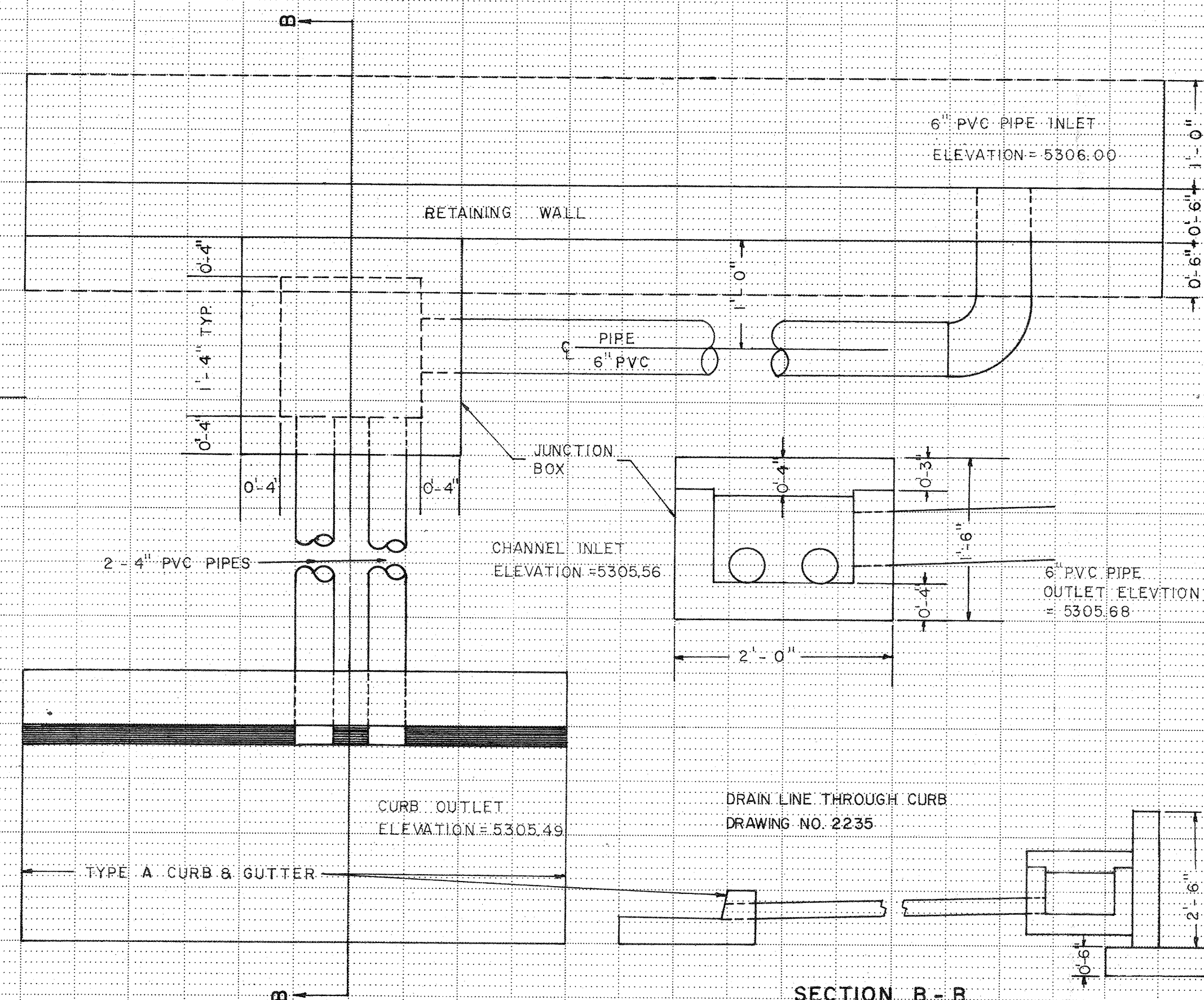
PLAN VIEW

COCHITI ROAD

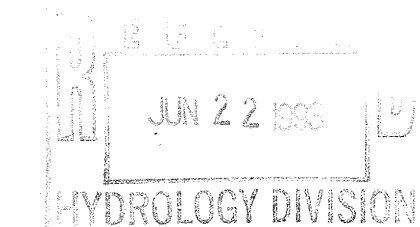
SCALE - 1"=10' HORIZONTAL
1"=2' VERTICAL



SECTION A - A



SECTION B - B



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE:
KAPNISON DRAINAGE

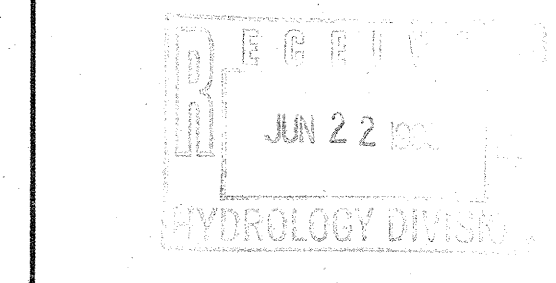
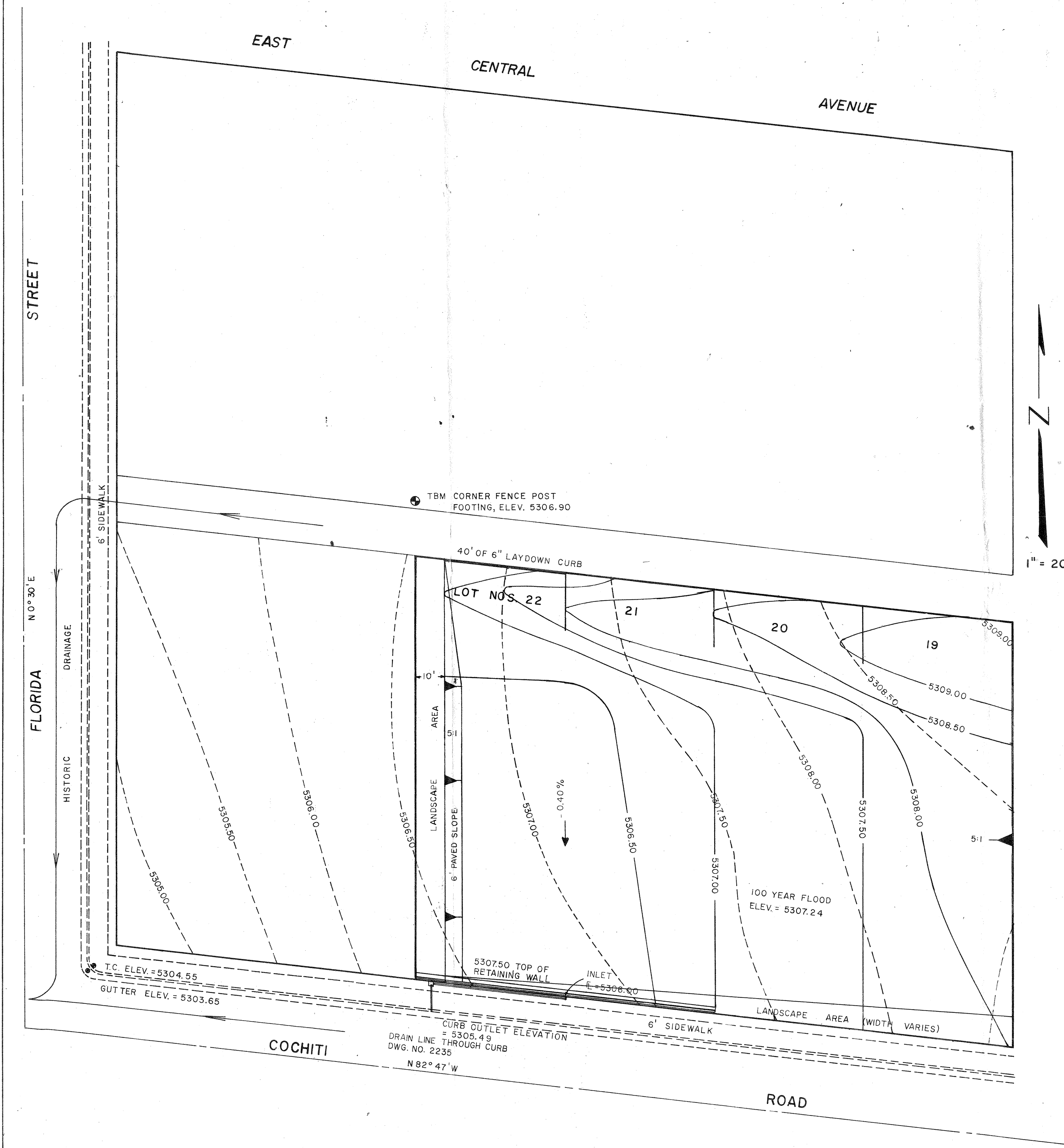
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY					

PROJECT NO. NK - 19,20,21,22 MAP NO. SHEET 2 - 1 OF

ENGINEER'S SEAL			SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
NO.	DATE	REMARKS	BY	DATE			CONTRACTOR	
							WORKED BY	DATE
							INSPECTED BY	DATE
							ACCEPTANCE BY	DATE
							VERIFICATION BY	DATE
							CORRECTED BY	DATE
							MICRO-FILM INFORMATION	
							RECORDED BY	DATE
							NO	

6-1-93 *[Signature]*

DESIGNED BY R. DONNELL DATE MAY 25, 1993
DRAWN BY J. NORVELL DATE MAY 27, 1993
CHECKED BY DATE



CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP					
TITLE: KAPNISON DRAINAGE					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY					
PROJECT NO. NK-19,20,21,22		MAP NO.		SHEET 2-2 OF	

ENGINEER'S SEAL			SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
			FIELD NOTES		BM NO. 74(19 Located in median, just east of intersection of East Central Avenue & Louisiana Blvd. ELEV. 5323.3)		CONTRACTOR	
			NO.	BY	DATE		WORK DONE BY	
							INSPECTOR'S	
							ACCEPTANCE BY	
							DATE	
							VERIFICATION BY	
							DATE	
							DRAWING	
							DORRANCE BY	
							DATE	
							MICRO-FILM INFORMATION	
							RECORDED BY	
							DATE	
							NO	