

This DRAINAGE EASEMENT made this 30 day of January, 1991, by and between Henry D. Deaton

_____, OWNER(S) of Lot 12, Block 1, Buena Ventura Subdivision, City of Albuquerque, County of Bernalillo, New Mexico as shown and designated on said plat thereof, filed in the office of the county clerk of Bernalillo County, New Mexico on September 11, 1941,

AND

Ron and Barbara Krise

_____, OWNER(S) of Lot 25, Block 1, Buena Ventura Subdivision, City of Albuquerque, County of Bernalillo, New Mexico as shown and designated on said plat thereof, filed in the office of the County Clerk of Bernalillo County, New Mexico on September 11, 1941.

The OWNER(S) (which term includes successors and assigns) of said Lot 12, Block 1 grant to the OWNER(S) of said Lot 25, Block 1 the right to convey storm water runoff, any excess water resulting from irrigation of landscaping, or any excess water from any other ordinary domestic use, across the boundary line separating the two said lots and across said Lot 12, Block 1 as may be required to discharge said waters to Moon Street.

This DRAINAGE EASEMENT is binding upon the OWNER(S) of said Lot 12 Block 1, his heirs and assigns and will continue to run with said property until an alternative drainage plan has been approved by the City of Albuquerque Design Hydrology Section allowing the release of this document.

OWNER(S) of Lot 12, Block 1, Buena Ventura Subdivision.

Henry O. Cleary
(Signature)

(Date)

(Signature)

ACKNOWLEDGEMENTS

STATE OF NEW MEXICO)) ss
BERNALILLO COUNTY)

The foregoing instrument was acknowledged before me this 30th day of January, 1991, by Henry D. Deaton

_____, OWNER(S) of said Lot 1, Block 1, Buena Ventura Subdivision.

(Notary Public)

My Commission Expires: April 9, 1994

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
EX CO FOR RECORD

1991 JAN 30 THU 10:05

BK BCR GLADYS H. DAVIS
CO CLERK RECORDER

9
91012942

ACCESS AND DRAINAGE EASEMENT

0004912

This ACCESS AND DRAINAGE EASEMENT made this 21 day of Feb, 1991, by and between Ron and Barbara Krise, OWNER(S) of Lot B, Block 1, Buena Ventura Subdivision, City of Albuquerque, County of Bernalillo, New Mexico as shown and designated on said plat thereof, filed in the office of the county clerk of Bernalillo County, New Mexico on September 11, 1941.

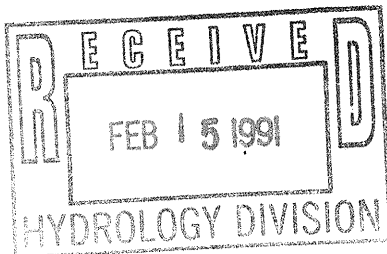
AND

Ron and Barbara Krise, OWNER(S) of Lots 8 through 11 and Lot 25, Block 1, Buena Ventura Subdivision, City of Albuquerque, County of Bernalillo, New Mexico as shown and designated on said plat thereof, filed in the office of the county clerk of Bernalillo County, New Mexico on September 11, 1941.

The OWNER(S) (which term includes successors and assigns) of said Lot B, Block 1 grant to the OWNER(S) of said Lots 8 through 11 and Lot 25, Block 1, the right of access to Erbbe Street and the right to convey storm water runoff, any excess water resulting from irrigation of landscaping, or any excess water from any other ordinary light-commercial use, across said Lot B, Block 1 as may be required to discharge said water to Moon Street.

This ACCESS AND DRAINAGE EASEMENT is binding upon the OWNER(S) of said Lot B, Block 1, his heirs and assigns and will continue to run with said property until an alternative drainage plan has been approved by the City of Albuquerque Design Hydrology Section, allowing the release of this document.

OWNER(S) of Lot B, Block 1, Buena Ventura Subdivision.



Ronald E. Krise

(Signature)

Barbara J. Krise

(Signature)

ACKNOWLEDGEMENTS

STATE OF NEW MEXICO)

) ss

BERNALILLO COUNTY)

The foregoing instrument was acknowledged before me this 21st day of February, 1991, by Ronald & Barbara Krise, OWNER(S) of said Lot B, Block 1, Buena Ventura Subdivision.

Margaret M. Farmer
(Notary Public)

My Commission Expires: 2-10-93

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

91 FEB 25 AM 10:46

BK BCR 91-3 PG 4912

GLADYS M. DAVIS
CLERK & RECORDER

DEPUTY

91012943

0004913

DRAINAGE EASEMENT

This DRAINAGE EASEMENT made this 20 day of Feb, 1991, by and between Henry D. Deaton

OWNER(S) of Lot A, Block 1, Buena Ventura Sub-division, City of Albuquerque, County of Bernalillo, New Mexico as shown and designated on said plat thereof, filed in the office of the county clerk of Bernalillo County, New Mexico on September 11, 1941,

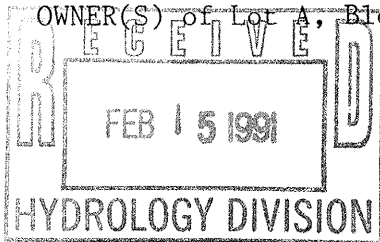
AND

Ron and Barbara Krise, OWNER(S) of Lot B, Block 1, Buena Ventura Subdivision, City of Albuquerque, County of Bernalillo, New Mexico as shown and designated on said plat thereof, filed in the office of the county clerk of Bernalillo County, New Mexico on September 11, 1941.

The OWNER(S) (which term includes successors and assigns) of said Lot A, Block 1 grant to the OWNER(S) of said Lot B, Block 1, the right to convey storm water runoff, any excess water resulting from irrigation of landscaping, or any excess water from any other ordinary light-commercial use, across the boundary line separating the two said lots and across said Lot A, Block 1 as may be required to discharge said waters to Moon Street.

This DRAINAGE EASEMENT is binding upon the OWNER(S) of said Lot A, Block 1, his heirs and assigns and will continue to run with said property until an alternative drainage plan has been approved by the City of Albuquerque Design Hydrology Section allowing the release of this document.

OWNER(S) of Lot A, Block 1, Buena Ventura Subdivision.



STATE OF NEW MEXICO)

) ss

BERNALILLO COUNTY)

Henry D. Deaton
(Signature)

ACKNOWLEDGEMENTS

The foregoing instrument was acknowledged before me this 20th day of February, 1991, by Henry D. Deaton, OWNER(S) of said Lot A, Block 1, Buena Ventura Subdivision.

Maria L. Reyes
(Notary Public)

My Commission Expires: April 9, 1994

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

91 FEB 25 AM 10:46

BK BOR 91-3 PG 4913
GLADYS M. DAVIS
CO CLERK & RECORDER

[Signature] DEPUTY

91012944

ACCESS AND DRAINAGE EASEMENT

0004914

This ACCESS AND DRAINAGE EASEMENT made this 20 day of Feb, 1991, by and between Henry D. Deaton, OWNER(S) of Lot A, Block 1, Buena Ventura Subdivision, City of Albuquerque, County of Bernalillo, New Mexico as shown and designated on said plat thereof, filed in the office of the county clerk of Bernalillo County, New Mexico on September 11, 1941,

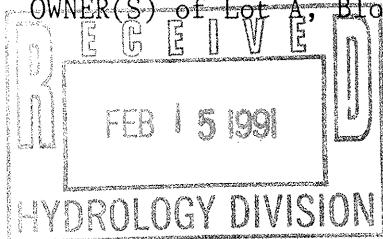
AND

Henry D. Deaton, OWNER(S) of Lots 1 through 7 and Lot 12, Block 1, Buena Ventura Subdivision, City of Albuquerque, County of Bernalillo, New Mexico as shown and designated on said plat thereof, filed in the office of the county clerk of Bernalillo County, New Mexico on September 11, 1941.

The OWNER(S) (which term includes successors and assigns) of said Lot A, Block 1, grant to the OWNER(S) [REDACTED] Lot 12, Block 1, the right of access to Moon Street and the right to convey storm water runoff, any excess water resulting from irrigation of landscaping, or any excess water from any other ordinary light-commercial use, across said Lot A, Block 1 as may be required to discharge said waters to Moon Street.

This ACCESS AND DRAINAGE EASEMENT is binding upon the OWNER(S) of said Lot A, Block 1, his heirs and assigns and will continue to run with said property until an alternative drainage plan has been approved by the City of Albuquerque Design Hydrology Section allowing the release of this document.

OWNER(S) of Lot A, Block 1, Buena Ventura Subdivision.



Henry D. Deaton
(Signature)

ACKNOWLEDGEMENTS

STATE OF NEW MEXICO)

) ss
BERNALILLO COUNTY)

The foregoing instrument was acknowledged before me this 20th day of February, 1991, by Henry D. Deaton, OWNER(S) of said Lot A, Block 1, Buena Ventura Subdivision.

[Signature]
(Notary Public)

My Commission Expires: April 9, 1994

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

91 FEB 25 AM 10:46
91-3 PG 4914

CLERK & RECORDER
GLADYS H. DAVIS
DEPUTY



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 5, 1991

Frank Lovelady
Lovelady & Associates
7408 Morrow, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR DEATON SALES/HIGH TECH AUTOMOTIVE, PHASE II
(K-20/D38) ENGINEER'S STAMP DATED AUGUST 27, 1991

Dear Mr. Lovelady:

Based on the information provided on your submittal of August 27, 1991, the above referenced plan is approved for Building Permit.

Please be advised that prior to Certificate of Occupancy release on both Phases I and II, Engineer's Certification per the DPM Checklist will be required.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya, C.E.
Engineering Assistant

xc: Alan Martinez

BJM/bsj
(WP+2470)

PUBLIC WORKS DEPARTMENT

DRAINAGE INFORMATION SHEET

PROJECT TITLE: DEATON SALES/HIGH TECH ZONE ATLAS/DRNG. FILE #: K-20/D38
AUTOMOTIVE

LEGAL DESCRIPTION: Lots 12 and 25, Buena Ventura Subdivision

CITY ADDRESS: 9609 AND 9609A CENTRAL AVE. N.E.

ENGINEERING FIRM: Lovelady & Associates CONTACT: Frank Lovelady

ADDRESS: 7408 Morrow Ave. NE 87110 PHONE: 883-7973

OWNER: HANK DEATON CONTACT: HANK DEATON

ADDRESS: 9609 Central Ave. N.E. PHONE: 268-4125

ARCHITECT: Larry Lewis CONTACT: Larry Lewis

ADDRESS: PHONE: 263-5759

SURVEYOR: Southwest Surveying Co. Inc. CONTACT: Dan Graney

ADDRESS: 333 Lomas Blvd. N.E. 87102 PHONE: 247-4444

CONTRACTOR: Larry Lewis CONTACT: Larry Lewis

ADDRESS: PHONE: 263-5759

PRE-DESIGN MEETING:

X YES

NO

X COPY OF CONFERENCE RECAP
SHEET PROVIDED

DRB NO.

EPC NO.

PROJECT NO.

TYPE OF SUBMITTAL:

DRAINAGE REPORT

X DRAINAGE PLAN

CONCEPTUAL GRADING & DRAIN. PLAN

GRADING PLAN

EROSION CONTROL PLAN

ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

SKETCH PLAT APPROVAL

PRELIMINARY PLAT APPROVAL

SITE DEVELOPMENT PLAN APPROVAL

FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

FOUNDATION PERMIT APPROVAL

CERTIFICATE OF OCCUPANCY APPROVAL

ROUGH GRADING PERMIT APPROVAL

GRADING/PAVING PERMIT APPROVAL

OTHER (SPECIFY)

DATE SUBMITTED: January 21, 1991

BY: Frank D. Lovelady
Frank D. Lovelady, P.E.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 26, 1991

Frank Lovelady, P.E.
Lovelady & Associates
7408 Morrow, NE
Albuquerque, New Mexico 87110

RE: REVISED DRAINAGE PLAN FOR DEATON SALES/HIGH TECH AUTOMOTIVE
PHASE I (K-20/D38) REVISION DATED FEBRUARY 14, 1991

Dear Mr. Lovelady:

Based on the information provided on your resubmittal of February 15, 1991, the above referenced plan is approved for Building Permit.

Please be advised that prior to Certificate of Occupancy release, Engineer's Certification per the DPM Checklist will be required.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

for Bernice J. Montoya
Fred J. Aguirre, P.E.
Hydrologist

xc: Alan Martinez

BJM:FJA/bsj
(WP+2470)

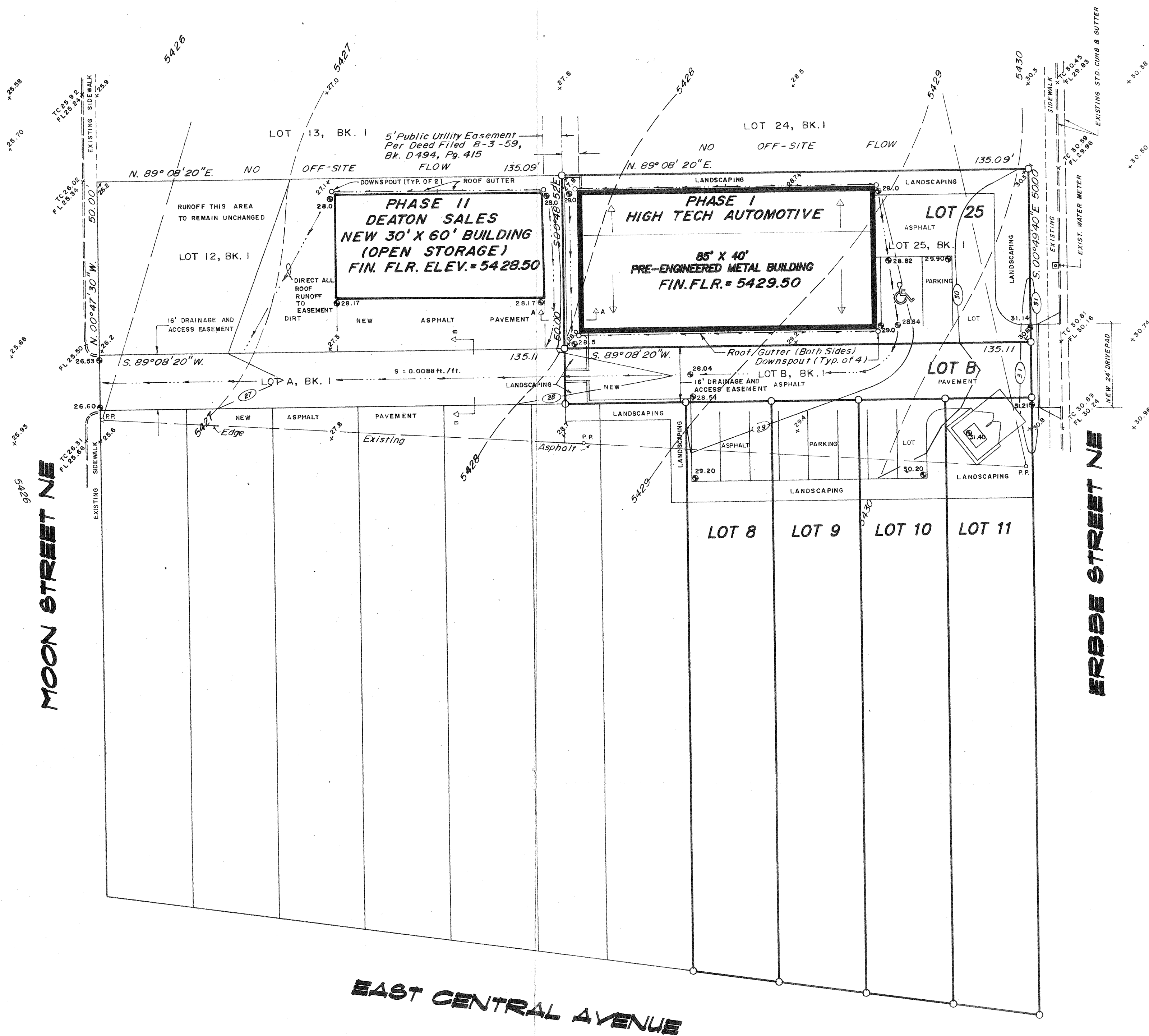
PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER

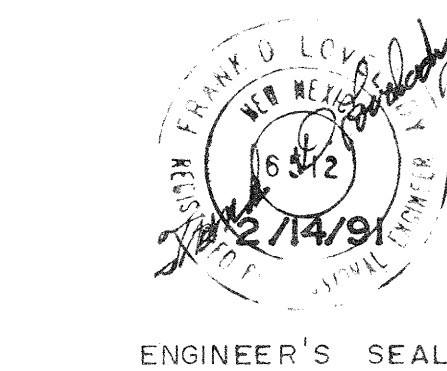
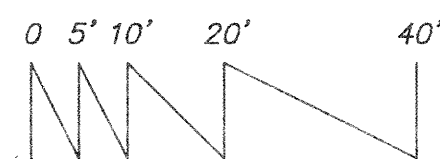


LEGAL DESCRIPTION: PHASE I
 LOTS 8 THRU 11, LOT 25 AND LOT B, BLOCK 1
 OF THE BUENA VENTURA SUBDIVISION, BERNALILLO
 COUNTY, NEW MEXICO.

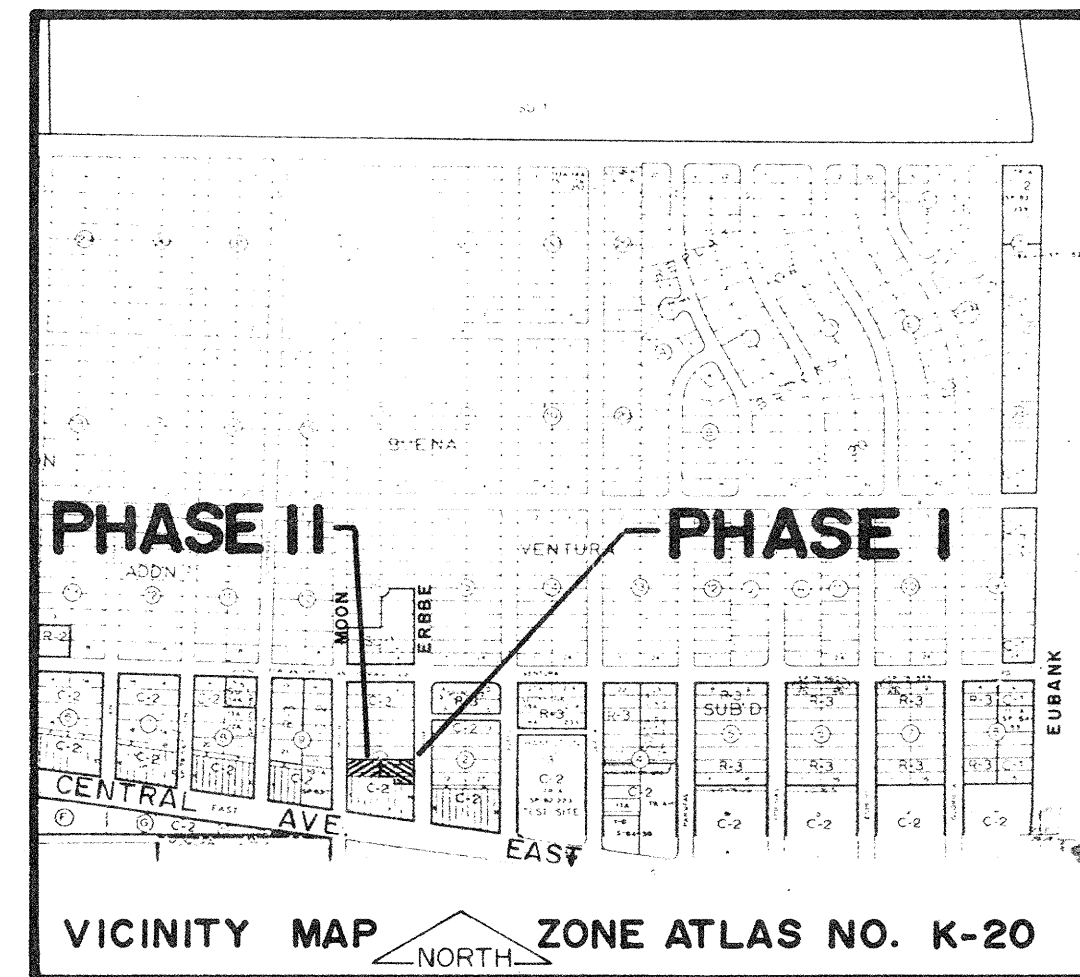
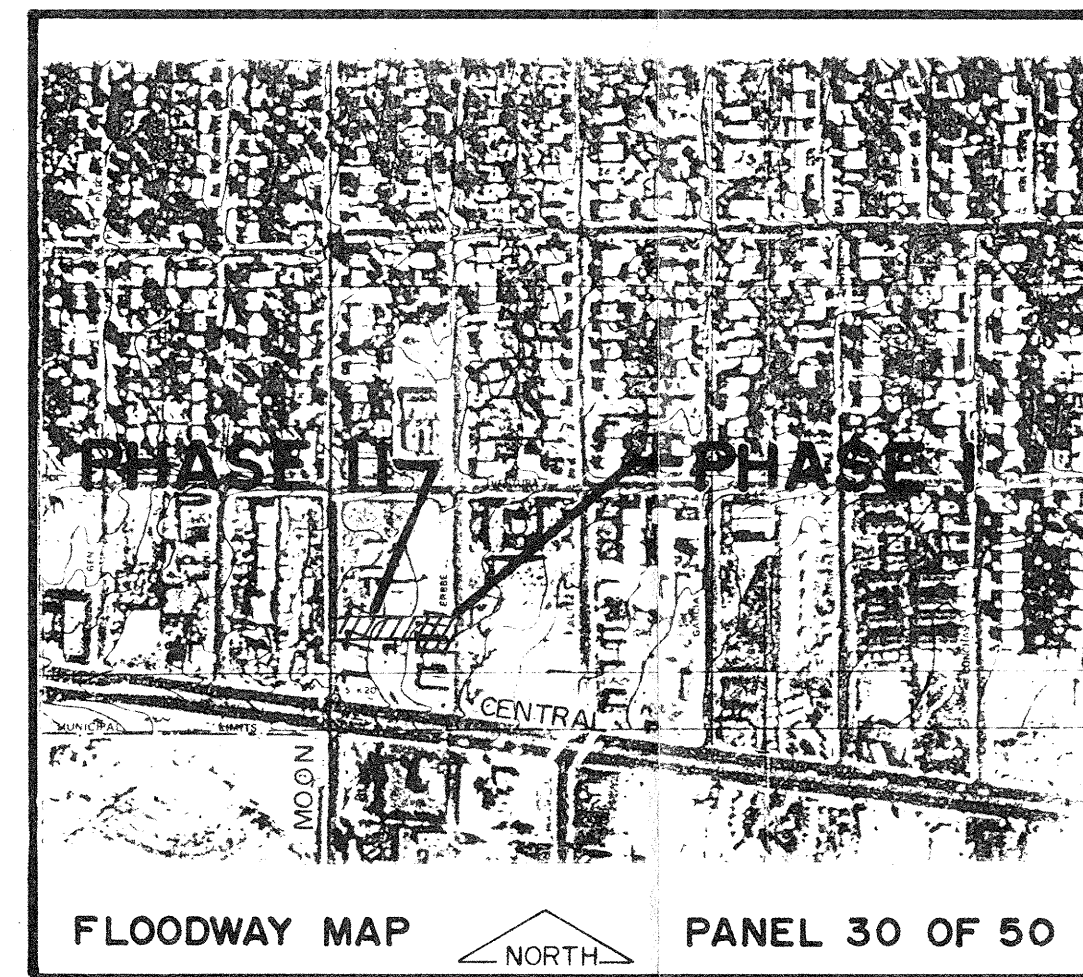
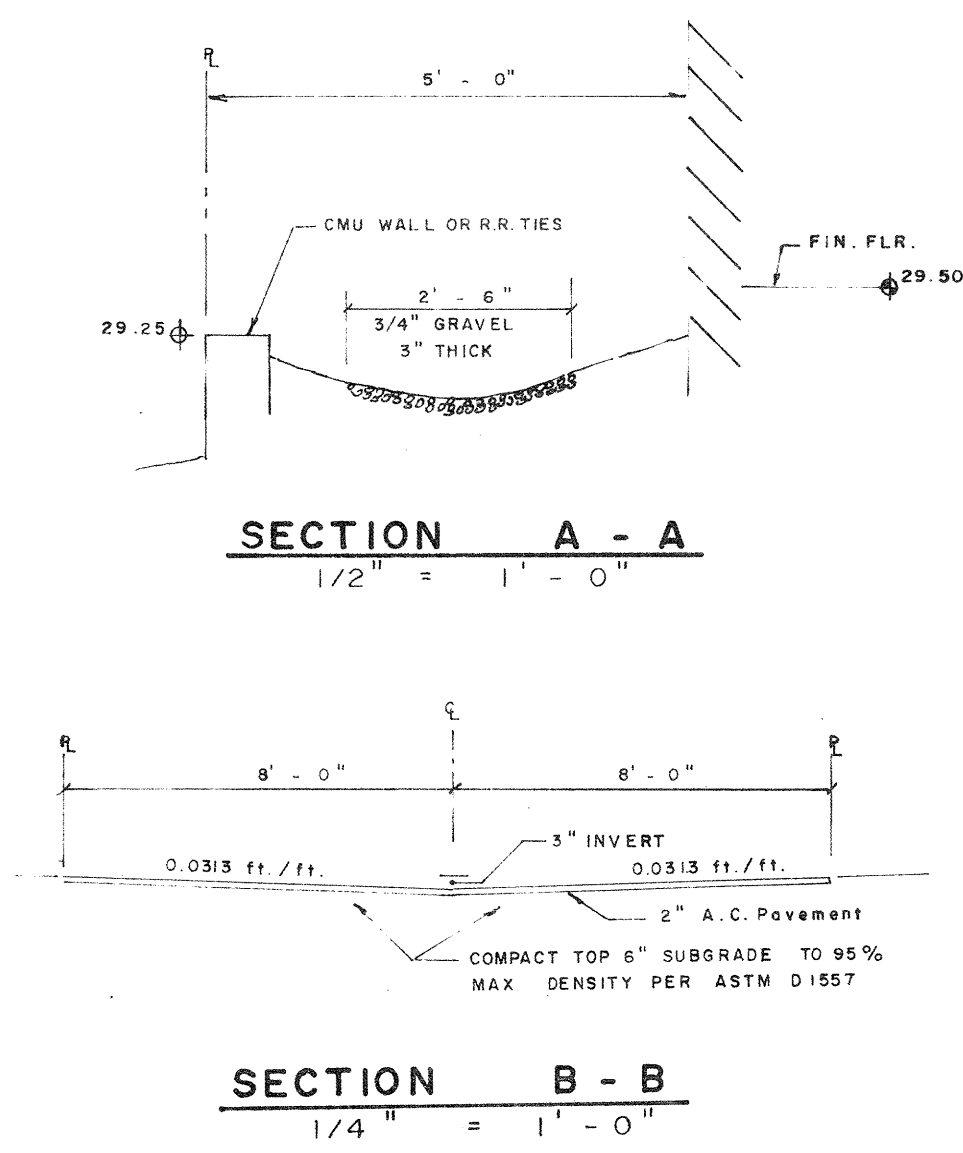
LEGAL DESCRIPTION - PHASE II:
 LOT NUMBERED TWELVE (12), LOT LETTERED "A", AND A PORTION OF LOTS ONE (1)
 THROUGH SEVEN (7) OF BLOCK NUMBERED ONE (1) OF BUENA VENTURA SUBDIVISION,
 A SUBDIVISION IN SCHOOL DISTRICT NO. 15, AS THE SAME IS SHOWN AND DESCRIBED
 ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO
 COUNTY, NEW MEXICO ON SEPTEMBER 11, 1941.

GRADING PLAN

SCALE: 1"=20.0'



ENGINEER'S SEAL



PRE-DESIGN CONFERENCE FINDINGS:

1. DRAINAGE PLAN PER D.P.M. GUIDELINES REQUIRED PRIOR TO BUILDING PERMIT APPLICATION.
2. CROWN-DRAINAGE WILL REQUIRE EITHER AN EASEMENT OR A REPLAT.
3. SURFACE FLOODING DOWNSTREAM FROM PROPOSED SITE. DOWNSTREAM CAPACITY MUST BE ANALYZED PRIOR TO FREE DISCHARGE.
4. LOCATE PHASE I AND PHASE II ON THE DRAINAGE PLAN.

BENCH MARK:

A.C.S. STATION 5420. STATION IS LOCATED 6.2 MILES EAST OF DOWNTOWN ALBUQUERQUE AT THE N.E. CORNER OF THE INTERSECTION OF MOON STREET NE AND CENTRAL AVENUE NE. STATION IS LOCATED 39.1 FEET EAST OF CENTERLINE OF MOON STREET AND 43.3 FEET NORTH OF THE CENTERLINE OF CENTRAL AVENUE. STATION IS A STANDARD A.C.S. BENCH SET IN A DRILLED HOLE ON TOP OF CURB. STATION IS STAMPED "5420" 302" ELEVATION = 5427.62 FEET.

TEMPORARY BENCH MARK:

SINCE THE BENCHMARK IS ONLY APPROXIMATELY 150 FEET FROM THE SITE, NO TEMPORARY BENCH MARK IS PROVIDED.

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FOLLOWING:
2. NO SEDIMENT-BEARING WATER SHALL BE ALLOWED TO DISCHARGE FROM THE SITE DURING CONSTRUCTION.
3. DURING GRADING OPERATIONS AND UNTIL THE PROJECT HAS BEEN COMPLETED, ALL ADJACENT PROPERTY, RIGHTS-OF-WAY, AND EASEMENTS SHALL BE PROTECTED FROM FLOODING BY RUNOFF FROM THE SITE.
4. SHOULD THE CONTRACTOR FAIL TO PREVENT SEDIMENT-BEARING WATER FROM ENTERING PUBLIC RIGHT-OF-WAY, HE SHALL PROMPTLY REMOVE FROM THE PUBLIC RIGHT-OF-WAY ANY AND ALL SEDIMENT ORIGINATING FROM THE SITE.
5. CATCHMENT OF SEDIMENT-BEARING WATERS WILL BE ACCOMPLISHED BY USE OF A CONSTRUCTED EARTH BERM OF ADEQUATE HEIGHT. THE BERM SHALL BE LOCATED ALONG THE DOWNSTREAM PERIMETER OF THE PROPERTY.

LEGEND:

EXISTING	NEW	DESCRIPTION
— 5430 —	— 30 —	CONTOUR
• 30.0	• 30.00	SPOT ELEVATION
←	←	ROOF DRAINAGE
←	←	SHEET FLOW
←	←	SWALE
TC	TC	TOP OF CURB
TA	TA	TOP OF ASPHALT
FL	FL	FLOW LINE

DRAINAGE CALCULATIONS

EXISTING DRAINAGE CONDITIONS:

THE EXISTING ON BLOCK 1 IS PRESENTLY UNDEVELOPED AND IS SMOOTHLY GRADED AND EXPANDED FOR THE NORTH END, MOST OF LOTS 1 THROUGH 11. THE NORTH EDGE OF EXISTING PAVEMENT IS APPROXIMATELY EVEN WITH THE EXISTING POWER LINE. AS SHOWN ON THE "TOWN" MAP, DRAINAGE IS FROM EAST TO WEST. MOON AND ERBE STRIPS BOTH DRAIN TOWARD THE NORTH AT THIS POINT.

DEVELOPED CONDITIONS:

PHASE I INCLUDES LOT 25, LOT B AND PORTIONS OF LOTS 8 THROUGH 11. PHASE II INCLUDES LOT 12, LOT A AND THE PORTIONS OF LOTS 1 THROUGH 7 THAT ARE NOT PRESENTLY PAVED. IT IS PROPOSED FOR LOT B TO SERVE AS AN ACCESS AND DRAINAGE EASEMENT. LOT A WILL BE AN ACCESS AND DRAINAGE EASEMENT FOR PHASE II BUT WILL BE DEDICATED AND PAVED AT THIS TIME. ALL RUNOFF FROM PHASE I AND PHASE II WILL BE DIRECTED TO MOON STREET VIA LOTS A AND B AND THE EXISTING DRIVEPAD.

SOIL INFORMATION:

(REFER TO SOIL SURVEY OF BERNALILLO COUNTY, JUNE 1977.) SOIL IS FMB, EMBUDO GRAVELLY FINE SANDY LOAM, 0 TO 5 PERCENT SLOPES, HYDROLOGIC SOIL GROUP "B".

RAINFALL, 100-YEAR, 6-HOUR:

(REFER TO D.P.M., PLATE 22.2 D-1). $R_p = 2.45$ INCHES.

TIME OF CONCENTRATION:

(USE TEN (10) MINUTES, MINIMUM TIME OF CONCENTRATION.)

RAINFALL INTENSITY:

$I = R_p \times 0.484 \times T_c^{-0.51} = 2.45 \times 6.84 \times 10^{-0.51} = 5.18$ INCHES PER HOUR.

SITE IMPERVIOUSNESS, PHASE I:

SURFACE TYPE	%	"CN"	DIRECT RUNOFF	EXISTING (SF)	DEVELOPED (SF)	AREA X "I"
BUILDING ROOF	0.90	98	2.30		3400	3060
ASPHALT	0.95	98	2.30		6336	6019
LANDSCAPING	0.25	61	0.25		2375	594
PAVED	0.20	82	0.90	12111		
GRAVEL				12111	12111	9673

WEIGHTED "CN" VALUES:

DEVELOPED $CN = 0.40$

PERVIOUSNESS $CN = 9673 / 12111 = 0.80$

PEAK RUNOFF - PHASE I:

EXISTING $Q_{PI} = 0.40 \times 5.18 \times 6.84 \times 0.47 = 0.98$ CFS

DEVELOPED $Q_{PI} = 0.80 \times 5.18 \times 6.84 \times 0.47 = 1.15$ CFS

$Q_{PI} = 0.987 \times 1.15 = 0.76$ CFS

6-HOUR VOLUME, PHASE I:

EXISTING $V_{PI} = 12111 \times 0.98 = 12000$ CU

$V_{PI} = 6.67 \times 968 = 6470$ CU

DEVELOPED $V_{PI} = (9736 \times 4.30 + 2375 \times 0.25) = 1915$ CU

$V_{PI} = 0.657 \times 1915 = 1258$ CU

ANALYSIS OF DOWNSTREAM CONDITIONS:

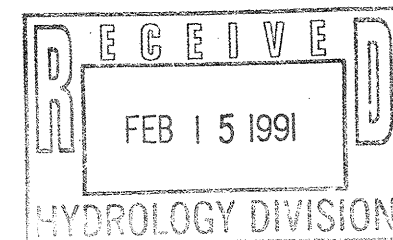
RUNOFF LEAVING THE SITE FLOWS NORTH ON MOON STREET TO BUENA VENTURA AVENUE, THEN WEST TO CENTRAL AVENUE WHERE IT ENTERS THE STORM SEWER. IT IS ROUGHLY 850' FROM THE SITE TO THE FIRST INLET AND IT IS ROUGHLY 3200' FROM THE UPPER END OF THE WATERSHED (EPIBANK BLVD.) TO THE SAME INLETS. THEREFORE, THE PEAK RUNOFF FROM THE SITE WILL ENTER THE STORM SEWER PRIOR TO THE PEAK RUNOFF FROM THE WATERSHED. ALSO, THE TOTAL INCREASE IN SITE RUNOFF CAUSED BY DEVELOPMENT OF PHASE I AND PHASE II IS ROUGHLY $2.30 - 1.26 = 1.04$ CFS WHICH IS AN INSIGNIFICANT INCREASE.

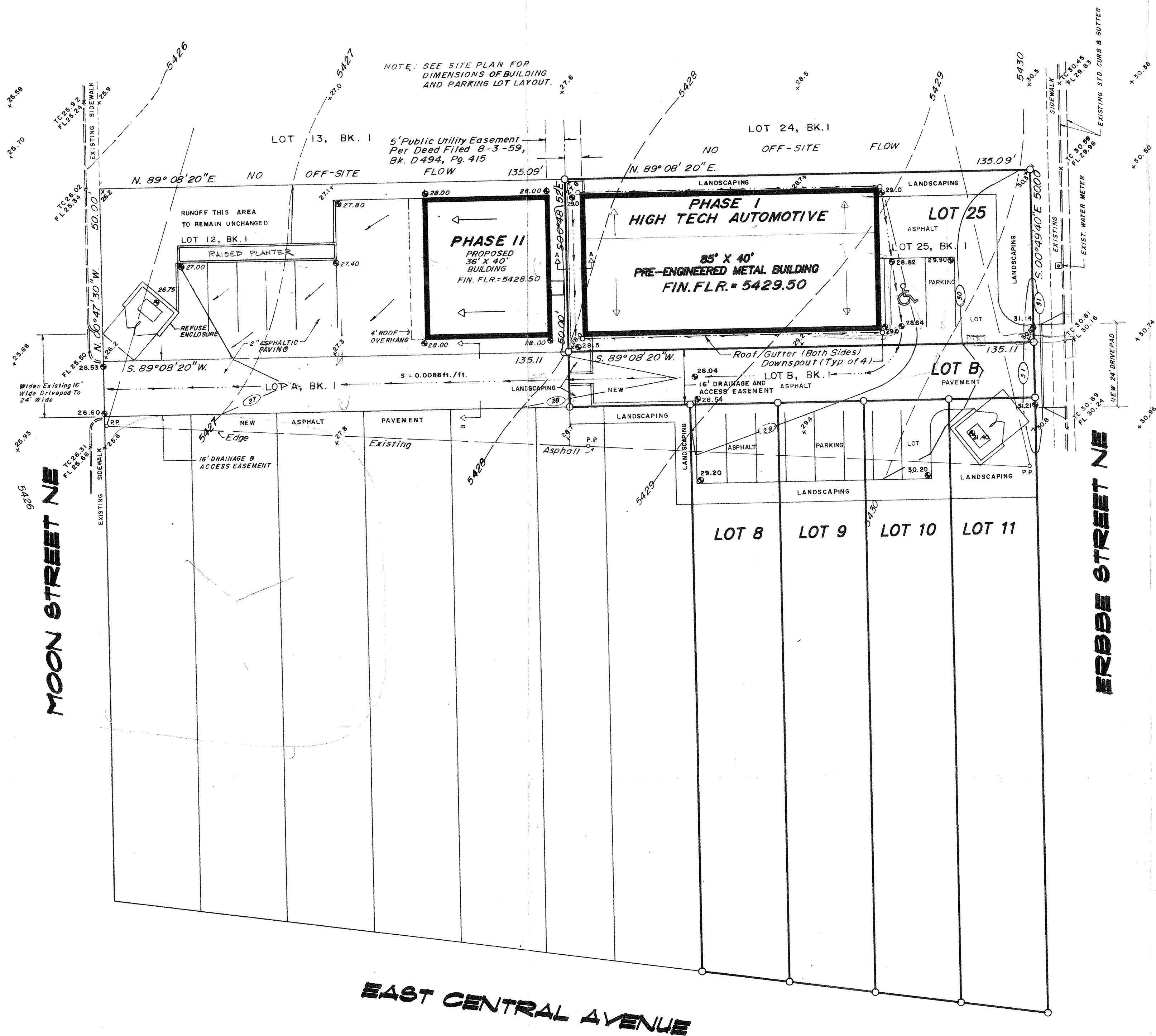
NOTE:

When phase II is initiated this plan will be resubmitted showing calculations for Phase II. For purposes of calculating flow in Lot A, assume Phase II runoff equals Phase I runoff. For Manning's $N=0.017$, $S=0.0088$ ft./ft. and a 3" invert on 16" of pavement, capacity = 4.1 cfs > 2 x 1.15 cfs (Adequate)

HYDROLOGY APPROVAL & INSPECTION

APPROVED FOR SUBMITTAL
 ENGINEER *B. Monroy* DATE *2/21/91*
 INSPECTOR *CHOWEN D. DALE*
 APPROVAL DATE _____ BY APPROVED
 2019 APPROVAL DATE _____
 SURVEY DATE _____
 HYDROLOGY BOOK NO./PAGE NO. _____
 SURVEYED BY _____
 COMMENTS _____





LEGAL DESCRIPTION: PHASE I

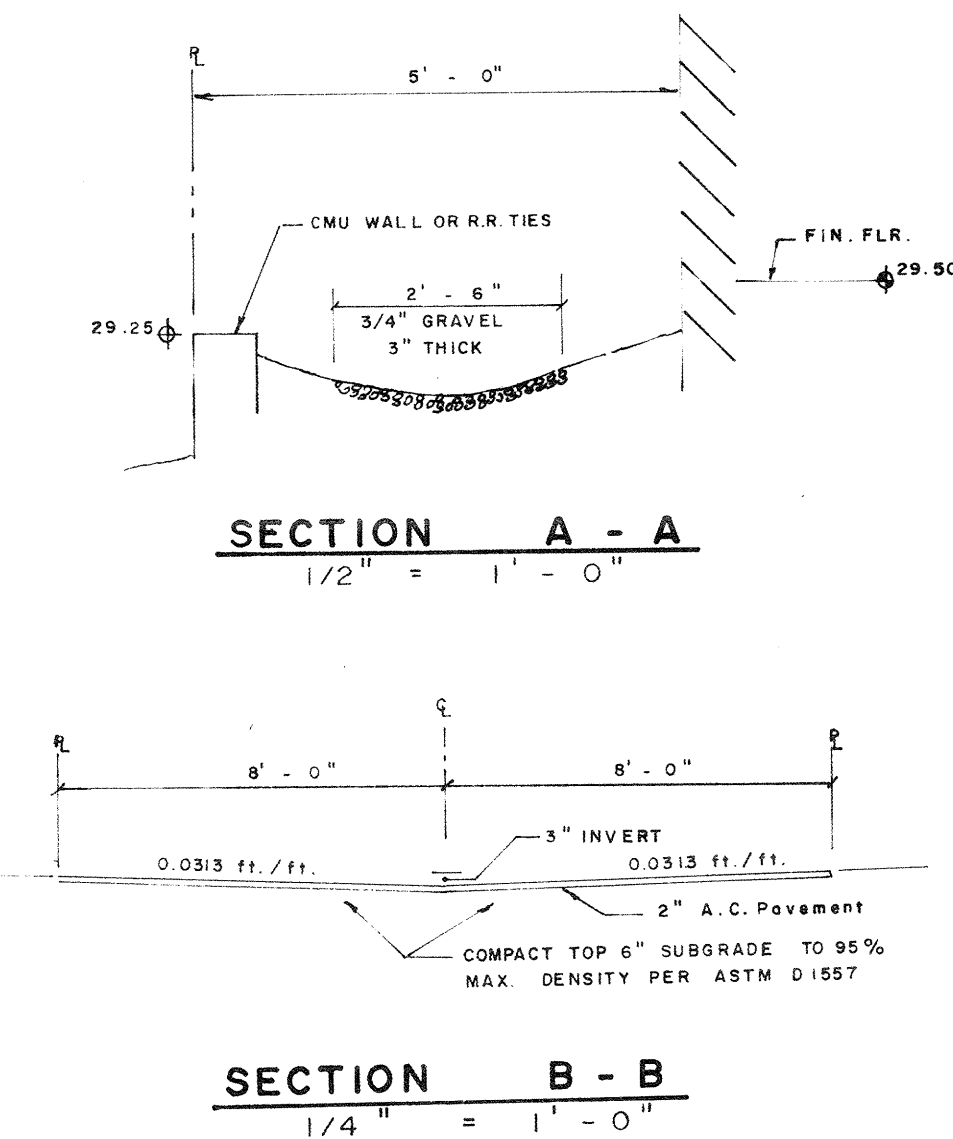
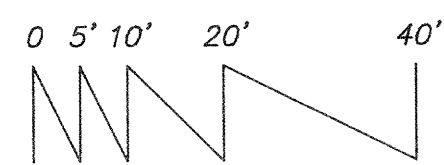
LOTS 8 THRU 11, LOT 25 AND LOT B, BLOCK 1 OF THE BUENA VENTURA SUBDIVISION, BERNALILLO COUNTY, NEW MEXICO.

LEGAL DESCRIPTION - PHASE II:

LOT NINETEEN (19), LOT LETTERED "A", AND A PORTION OF LOTS ONE (1) THROUGH SEVEN (7) OF BLOCK NINETEEN (19) OF BUENA VENTURA SUBDIVISION, A SUBDIVISION IN SCHOOL DISTRICT NO. 13, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON SEPTEMBER 11, 1941.

GRADING PLAN

SCALE: 1"=20.0'



PHASE II DRAINAGE CALCULATIONS

SURFACE TYPE	AREA "C"	"CN"	DIRECT RUNOFF
BUILDING	1440	0.90	98
ASPHALT & CONC	5343	0.95	98
LANDSCAPING	150	0.25	61
UNDEVELOPED	1954	0.40	82
TOTALS	8916 SF		0.2047 AC
WEIGHTED "C" = 0.81			
$Q_{100} = CIA = 0.81 \times 5.18 \times 0.2047 = 0.84 \text{ CFS}$			
$Q_{10} = 0.657 \times 0.86 = 0.57 \text{ CFS}$			
$V_{100} = \frac{(2.30 \times 6723 + 0.25 \times 180 + 0.90 \times 1954)}{12} = 1450 \text{ CF}$			
$V_{10} = 0.657 \times 1450 = 953 \text{ CF}$			

PRE-DESIGN CONFERENCE FINDINGS:

1. DRAINAGE PLAN PER D.P.M. GUIDELINES REQUIRED PRIOR TO BUILDING PERMIT RELEASE.
2. CROSS-LOT-LINE DRAINAGE WILL REQUIRE EITHER AN EASEMENT OR A REPLAT.
3. STREET FLOODING DOWNSTREAM FROM PROPOSED SITE. DOWNSTREAM CAPACITY MUST BE ANALYZED PRIOR TO FREE DISCHARGE.
4. INDICATE PHASE I AND PHASE II ON THE DRAINAGE PLAN.

BENCH MARK:

A.C.S. STATION 5-K20. STATION IS LOCATED 6.3 MILES EAST OF DOWNTOWN ALBUQUERQUE AT THE N.E. QUADRANT OF THE INTERSECTION OF MOON STREET AND CENTRAL AVENUE. STATION IS LOCATED 39.1 FEET EAST OF CENTERLINE OF MOON STREET AND 43.5 FEET NORTH OF THE CENTERLINE OF CENTRAL AVENUE. STATION IS A STANDARD A.C.S. DISC SET IN A DRILLED HOLE ON TOP OF CURB. STATION IS STAMPED "5-K20 A.C.S." ELEVATION = 5427.962 FEET.

TEMPORARY BENCH MARK:

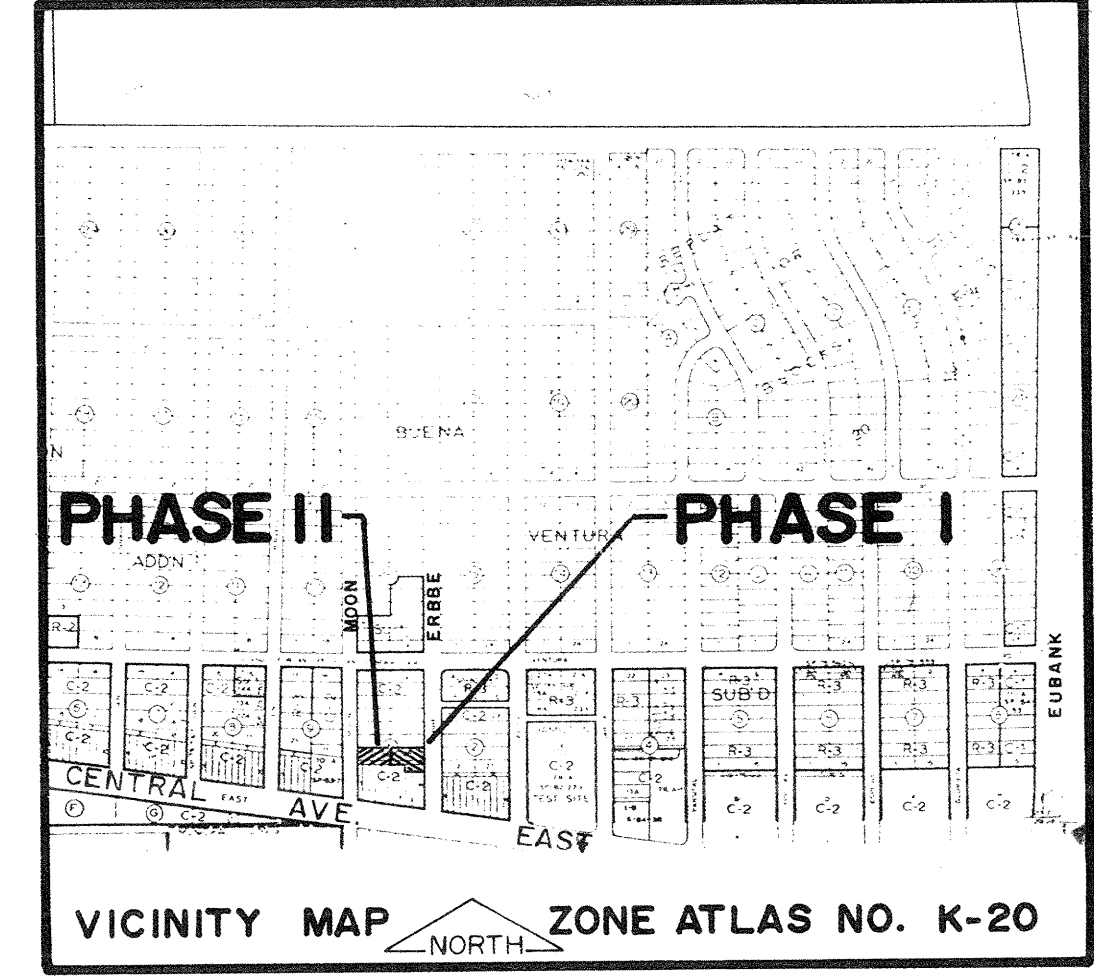
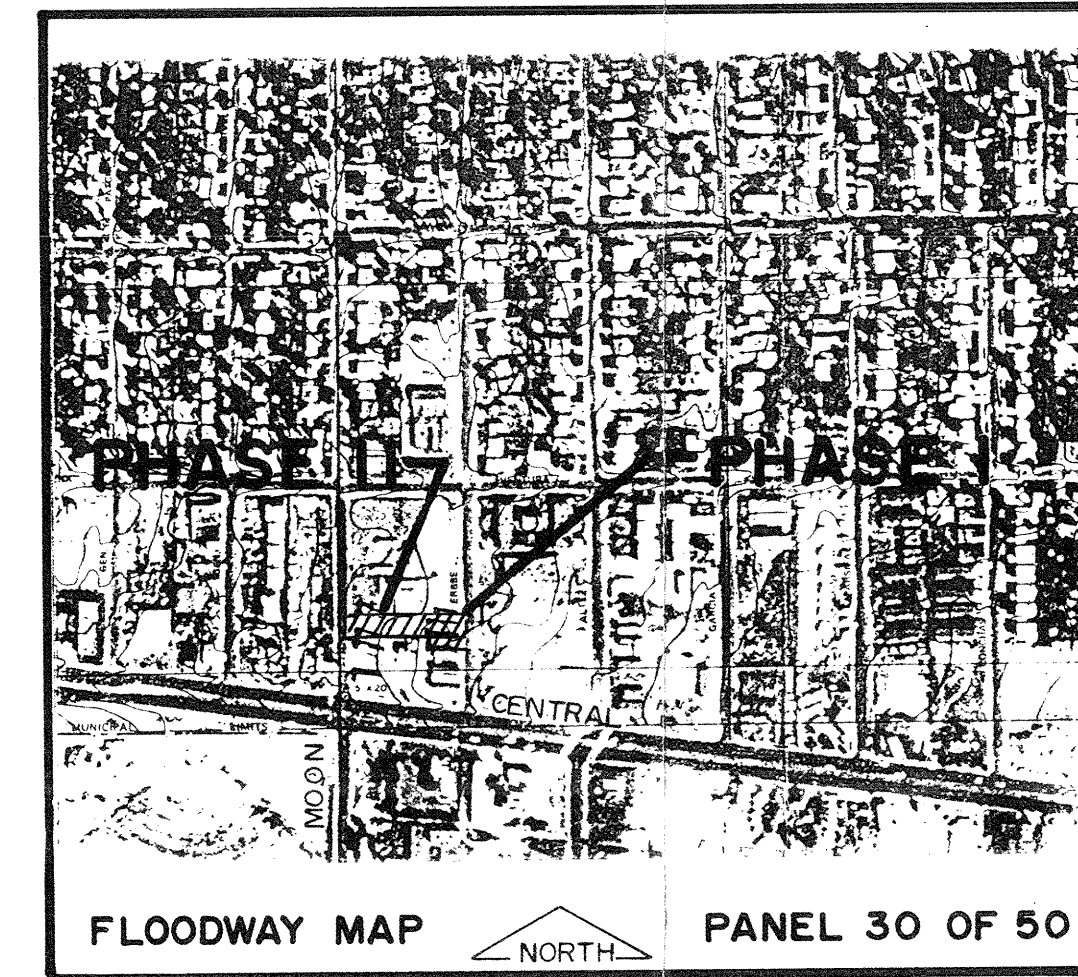
SINCE THE BENCHMARK IS ONLY APPROXIMATELY 150 FEET FROM THE SITE, NO TEMPORARY BENCH MARKS IS PROVIDED.

EROSION CONTROL NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FOLLOWING:
1. NO SEDIMENT-BEARING WATER SHALL BE ALLOWED TO DISCHARGE FROM THE SITE DURING CONSTRUCTION.
 2. DURING GRADING OPERATIONS AND UNTIL THE PROJECT HAS BEEN COMPLETED, ALL ADJACENT PROPERTY, RIGHTS-OF-WAY, AND EASEMENTS SHALL BE PROTECTED FROM FLOODING BY RUNOFF FROM THE SITE.
 3. SHOULD THE CONTRACTOR FAIL TO PREVENT SEDIMENT-BEARING WATER FROM ENTERING PUBLIC RIGHT-OF-WAY, HE SHALL PROMPTLY REMOVE FROM THE PUBLIC RIGHT-OF-WAY ANY AND ALL SEDIMENT ORIGINATING FROM THE SITE.
 4. CONTROL OF SEDIMENT-BEARING WATERS WILL BE ACCOMPLISHED BY USE OF A COMPACTED EARTH BERM OF ADEQUATE HEIGHT. THE BERM SHALL BE LOCATED ALONG THE DOWNSTREAM PERIMETER OF THE PROPERTY.

LEGEND:

EXISTING	NEW	DESCRIPTION
54.30	30	CONTOUR
30.0	30.00	SPOT ELEVATION
		ROOF DRAINAGE
		SHEET FLOW
		SWALE
		TC TOP OF CURB
		TA TOP OF ASPHALT
		FL FLOW LINE



DRAINAGE CALCULATIONS

EXISTING DRAINAGE CONDITIONS:

THE ENTIRETY OF BLOCK 1 IS PRESENTLY UNDEVELOPED AND IS SMOOTHLY GRADED AND UNPAVED EXCEPT FOR THE SOUTH END, MOST OF LOTS 1 THROUGH 11. THE NORTH EDGE OF EXISTING PAVEMENT IS APPROXIMATELY EVEN WITH THE EXISTING POKER LINE. AS SHOWN BY THE CONTOURS, DRAINAGE IS FROM EAST TO WEST. MOON AND ERBE STREETS BOTH DRAIN TOWARD THE NORTH AT THIS POINT.

DEVELOPED CONDITIONS:

PHASE I INCLUDES LOT 25, LOT B AND PORTIONS OF LOTS 8 THROUGH 11. PHASE II INCLUDES LOT 12, LOT A AND THE PORTIONS OF LOTS 1 THROUGH 7 THAT ARE NOT PRESENTLY PAVED. IT IS PROPOSED FOR LOT B TO SERVE AS AN ACCESS AND DRAINAGE EASEMENT. LOT A WILL BE AN ACCESS AND DRAINAGE EASEMENT FOR PHASE II BUT WILL BE DEDICATED AND PAVED AT THIS TIME. ALL RUNOFF FROM PHASE I AND PHASE II WILL BE DIRECTED TO MOON STREET VIA LOTS A AND B AND THE EXISTING DRIVEPAD.

SOIL INFORMATION:

(REFER TO SOIL SURVEY OF BERNALILLO COUNTY, JUNE 1977.) SOIL IS EMB, EMBUDO GRAVELLY FINE SANDY LOAM, 0 TO 5 PERCENT SLOPES, HYDROLOGIC SOIL GROUP "B".

RAINFALL, 100-YEAR, 6-HOUR:

(REFER TO D.P.M., PLATE 22.2 D-1). $R_6 = 2.45$ INCHES.

TIME OF CONCENTRATION:

(USE TEN (10) MINUTES, MINIMUM TIME OF CONCENTRATION.)

RAINFALL INTENSITY:

$I = R_6 \times 6.44 \times 10^{-0.51} = 2.45 \times 6.44 \times 10^{-0.51} = 5.18$ INCHES PER HOUR.

SITE IMPERVIOUSNESS, PHASE I:

SURFACE TYPE	"C"	"CN"	DIRECT RUNOFF	AREAS (SF)	DEVELOPED	AREA X "C"
BUILDING ROOF	0.90	98	2.30		3400	3060
ASPHALT	0.95	98	2.30		6336	6019
LANDSCAPING	0.25	61	0.25		2375	594
UNPAVED	0.40	82	0.90		12111	
TOTALS					12111	9673

WEIGHTED "C" VALUES:

UNDEVELOPED - $C_w = 0.40$

DEVELOPED - $C_w = 9673 / 12111 = 0.80$

PEAK RUNOFF - PHASE I:

EXISTING - $Q_{100} = CIA = 0.40 \times 5.18 \times 0.278 = 0.58 \text{ CFS}$

DEVELOPED - $Q_{100} = CIA = 0.80 \times 5.18 \times 0.278 = 1.15 \text{ CFS}$

$Q_{10} = 0.657 \times 1.15 = 0.76 \text{ CFS}$

6-HOUR VOLUME, PHASE I:

EXISTING - $V_{100} = \frac{(12111 \times 0.9) \times 12}{12} = 908 \text{ CF}$

$V_{10} = 0.657 \times 908 = 597 \text{ CF}$

DEVELOPED - $V_{100} = \frac{(9796 \times 2.30 + 2375 \times 0.25) \times 12}{12} = 1915 \text{ CF}$

$V_{10} = 0.657 \times 1915 = 1254 \text{ CF}$

ANALYSIS OF DOWNSTREAM CONDITIONS:

RUNOFF LEAVING THE SITE FLOWS NORTH ON MOON STREET TO BUENA VENTURA AVENUE, THEN WEST TO GENERAL PATCH WHERE IT ENTERS THE STORM SEWER. IT IS ROUGHLY 450' FROM THE SITE TO THE FIRST INLETS AND IT IS ROUGHLY 3200' FROM THE UPPER END OF THE WATERSHED (EUBANK BLVD.) TO THE SAME INLETS. THEREFORE, THE PEAK RUNOFF FROM THE SITE WILL ENTER THE STORM SEWER PRIOR TO THE PEAK RUNOFF FROM THE WATERSHED. ALSO, THE TOTAL INCREASE IN SITE RUNOFF CAUSED BY DEVELOPMENT OF PHASE I AND PHASE II IS ROUGHLY $2.30 - 1.26 = 1.04 \text{ CFS}$ WHICH IS AN INSIGNIFICANT INCREASE.

NOTE:

When phase II is initiated this plan will be resubmitted showing calculations for Phase II. For purposes of calculating flow in Lot A, assume Phase II runoff equals Phase I runoff. For Manning's $N=0.017$, $S=0.0088 \text{ ft./ft.}$ and a 3" invert on 16" of pavement, capacity = $4.1 \text{ cfs} > 2 \times 1.15 \text{ cfs}$ (Adequate)

