

I, RAYMOND E. HENSLEY, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS AND DO FURTHER CERTIFY THAT NO EARTHWORK OF ANY KIND, NOR ANY DISTURBANCE OF THE GROUND HAS OCCURED ON THIS SITE SINCE THE CONTOURS WERE DETERMINED.

Raymond E. Hensley  
RAYMOND E. HENSLEY, NMPE #7873

## LEGEND

ITEM	EXISTING	PROPOSED
STRUCTURES	---	---
PARKING	---	---
CONTOURS	---	---
FLOWLINES	---	---
SPOT ELEV.	×	×

## LEGAL DESCRIPTION

A CERTAIN PARCEL OF LAND BEING IDENTIFIED AS THE CRAIG SUBDIVISION, A SUBDIVISION, ALBUQUERQUE, NEW MEXICO, IN SECTION 30 TOWNSHIP 10 NORTH, RANGE 3 EAST, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT OF SAID SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON AUGUST 16, 1967.

## PROJECT ADDRESS

517 VIRGINIA NE

## THE PROPOSED PLAN SHOWS:

THE PROPOSED OFFICE ADDITION IS LOCATED IN THE SOUTHEAST QUADRANT OF ALBUQUERQUE. THE GRADING AND DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE CITY OF ALBUQUERQUE STORM DRAINAGE ORDINANCE (ART. IX, SECT. 7-9) AND FLOOD HAZARD ORD. #88-46. THE PLAN IS REQUIRED TO FACILITATE THE OWNER'S BUILDING PERMIT APPROVAL.

- EXISTING CONTOURS WITH EXISTING AND NEW SPOT ELEVATIONS.
- PRIVATE AND PAVED ACCESS DRIVES, NEW STRUCTURES, DRAINAGE FLOW AND NEW GRADE ELEVATIONS.
- CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
- QUANTIFICATION AND RESPECT TO HISTORICAL DRAINAGE PATTERNS, WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUN-OFF GENERATED BY THE PROPOSED IMPROVEMENTS, ESSENTIALLY ALLOWING HISTORIC DRAINAGE PATTERNS TO REMAIN UNCHANGED AFTER DEVELOPMENT. THE PLAN DETERMINES THE RUN-OFF RESULTING FROM THE 100-YEAR/6-HOUR DURATION STORMS FOR BOTH THE EXISTING AND DEVELOPED CONDITIONS.

THE PROPOSED DRAINAGE SCHEME ASSOCIATED WITH THE PROPERTY IS TO DRAIN ALL FLOWS TO THE PROPOSED POND IN THE NORTHWEST CORNER OF THE PROPERTY. A SUMP PUMP WILL THEN PUMP THE FLOW TO VIRGINIA STREET CONVEYED BY EXISTING CURB AND GUTTER TO THE EXISTING STORM SEWER SYSTEM. HYDROLOGIC PROCEDURES AND CALCULATIONS ARE IN ACCORDANCE WITH SECTION 22.2, HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA REVISED JANUARY 1993.

## I. DESIGN CRITERIA

PROPERTY AREA = A = 0.7823 ACRES

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL (DPM), REVISED JANUARY 1993 FOR THE CITY OF ALBUQUERQUE

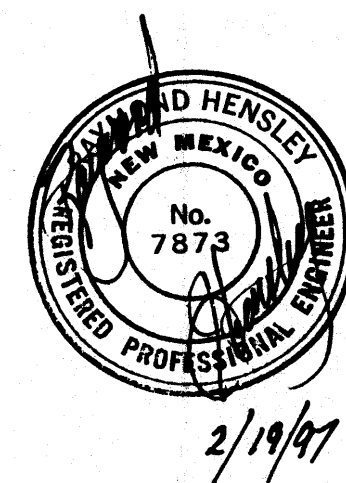
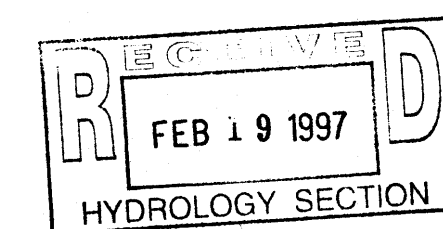
DISCHARGE RATE:  $Q = Q_{peak} \times AREA$  ... "PEAK DISCHARGE RATES FOR SMALL WATERSHEDS"

VOLUMETRIC DISCHARGE:  $VOLUME = E_{weighted} \times AREA$

ORIGIANL SOIL TYPE: 'A', SILT, SAND & DECOMPOSED GRANITE

DESIGN STORM: 100-year / 6-hour WHERE [ ] = 10 YEAR VALUES

II. CALCULATIONS	EXISTING	PROPOSED
(TABLE 4)	LAND TREATMENT "A", ZONE 3	LAND TREATMENT "C" & "D", ZONE 3
(TABLE 8)	$E_a = .66(.7823) = 0.52 [1.15]$	$E_b = 1.29(.456) + 2.36(.3263) = 1.36 [1.77]$
(TABLE 9)	$Q_p = 3.45(.7823) = 2.699 [1.56] cfs$	$Q_p = 3.45(.456) + 5.02(.3263) = 3.21 [2.02] cfs$
(INCREASED $Q_p$ )		$Q_{inc} = .511 [1.46] cfs$
(SUMP PUMP $V_{pmp}$ )		$V_{pmp} = .13 cfs \times 6 \text{ hours} = 2887.5 \text{ cf}$
(POND VOLUME $V_{pnd}$ )		$V_{pnd} = A(E_b - E_a) - Q_{pmp} = 2043.5 \text{ cf}$



4001 JUAN TABO NE - SUITE A  
ALBUQUERQUE, NEW MEXICO 87111  
(505) 298-3477

REV.	DATE	DESCRIPTION
PROJECT TITLE		
ENGINEERING CONSTRUCTORS		
517 VIRGINIA S.E.		
ALBUQUERQUE, NEW MEXICO		
SHEET TITLE		
DRAINAGE AND GRADING PLAN		
CAMI		
CONSTRUCTION ANALYSIS & MANAGEMENT, INC.		
DRAWN BY REH		DATE: 01/29/97
CHK'D BY REH		

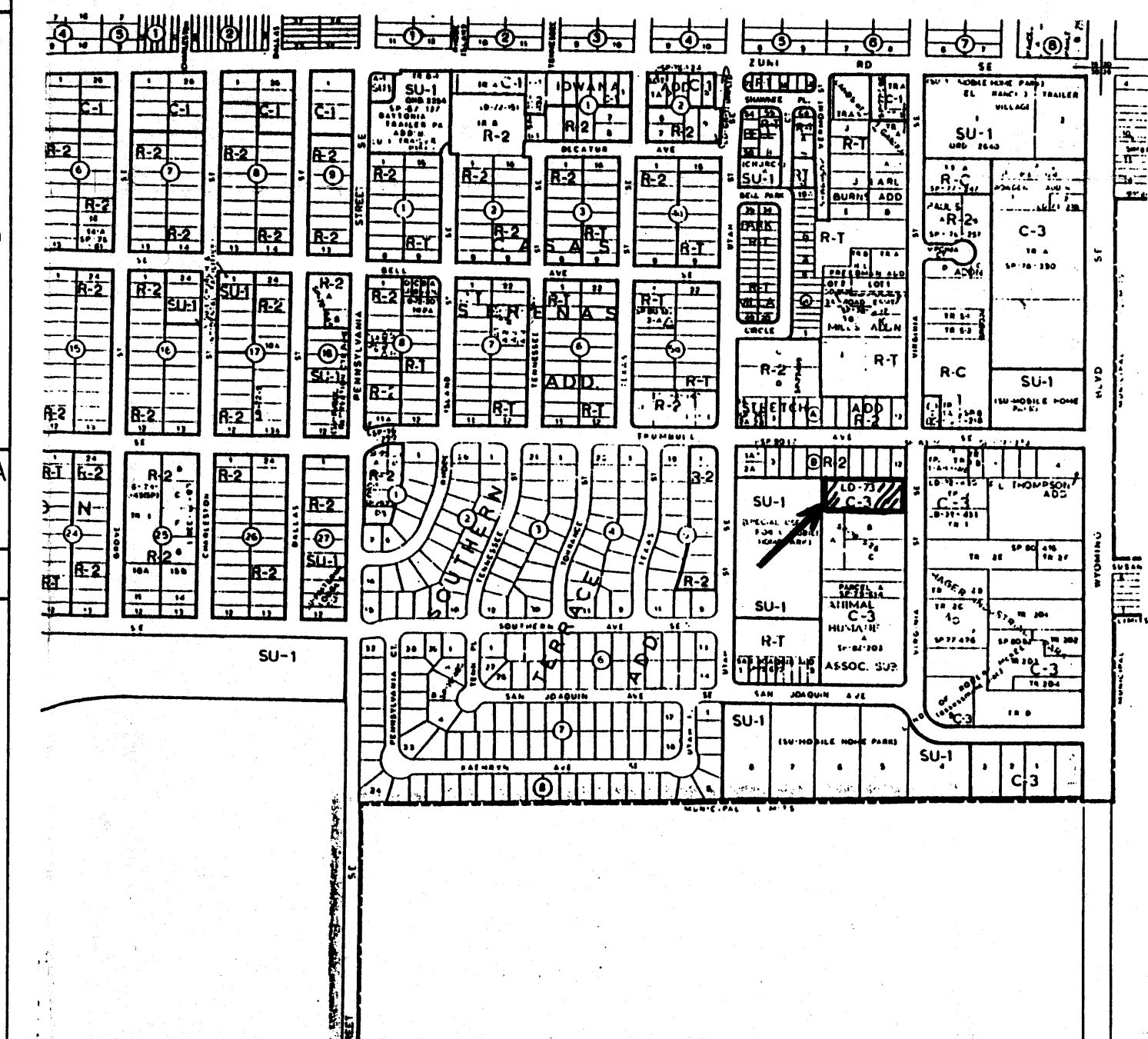


# DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

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5. Backfill compaction shall be according to commercial street use.
6. Maintenance of these facilities shall be the responsibility of the Owner of the property served.

APPROVALS	NAME	DATE	TITLE: ENGINEERING CONSTRUCTORS, 517 VIRGINIA
HYDROLOGY	<i>[Signature]</i>	3-7-97	SIDEWALK CULVERTS
INSPECTOR			PERMIT NO.
A.C.E./FIELD			MAP NO. L19



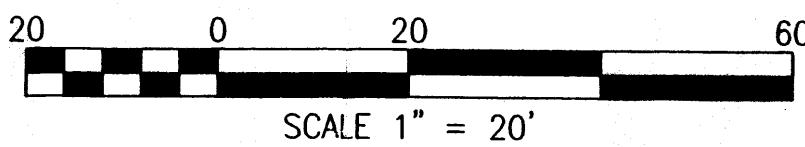
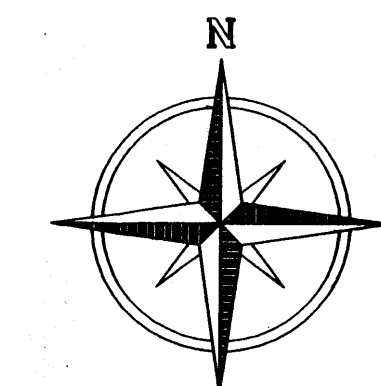
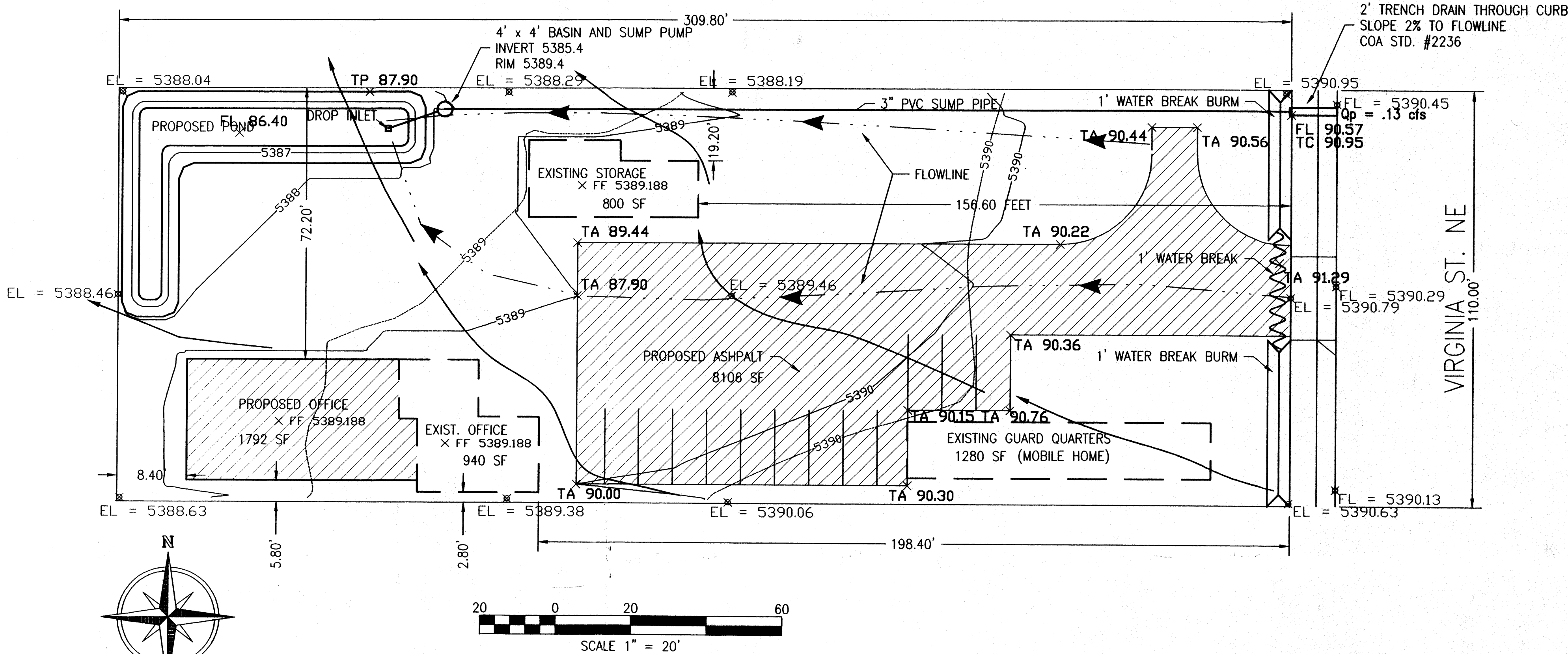
VICINITY MAP, ZONE L19

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RAYMOND E. HENSLEY, N.M.P.E. #7873 3/1/97

## LEGEND

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STRUCTURES		
PARKING		
CONTOURS		
FLOWLINES		
SPOT ELEV.		



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## PROJECT ADDRESS

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DISCHARGE RATE:  $Q = Q_{peak} \times AREA$  "PEAK DISCHARGE RATES FOR SMALL WATERSHEDS".

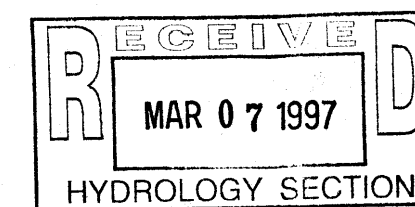
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DESIGN STORM: 100-year / 6-hour WHERE [ ] = 10 YEAR VALUES

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	EXISTING	PROPOSED
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(INCREASED $Q_p$ )		$Q_{inc} = .511 [46] cfs$
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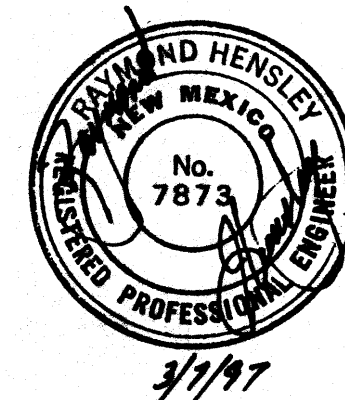
REV.	DATE	DESCRIPTION

PROJECT TITLE  
**ENGINEERING CONSTRUCTORS**  
517 VIRGINIA S.E.  
ALBUQUERQUE, NEW MEXICO

SHEET TITLE  
**DRAINAGE AND GRADING PLAN**

**CAMI**  
CONSTRUCTION ANALYSIS  
& MANAGEMENT, INC.

DRAWN BY  
REH  
CHK'D BY  
REH  
DATE:  
01/29/97



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(505)298-3477

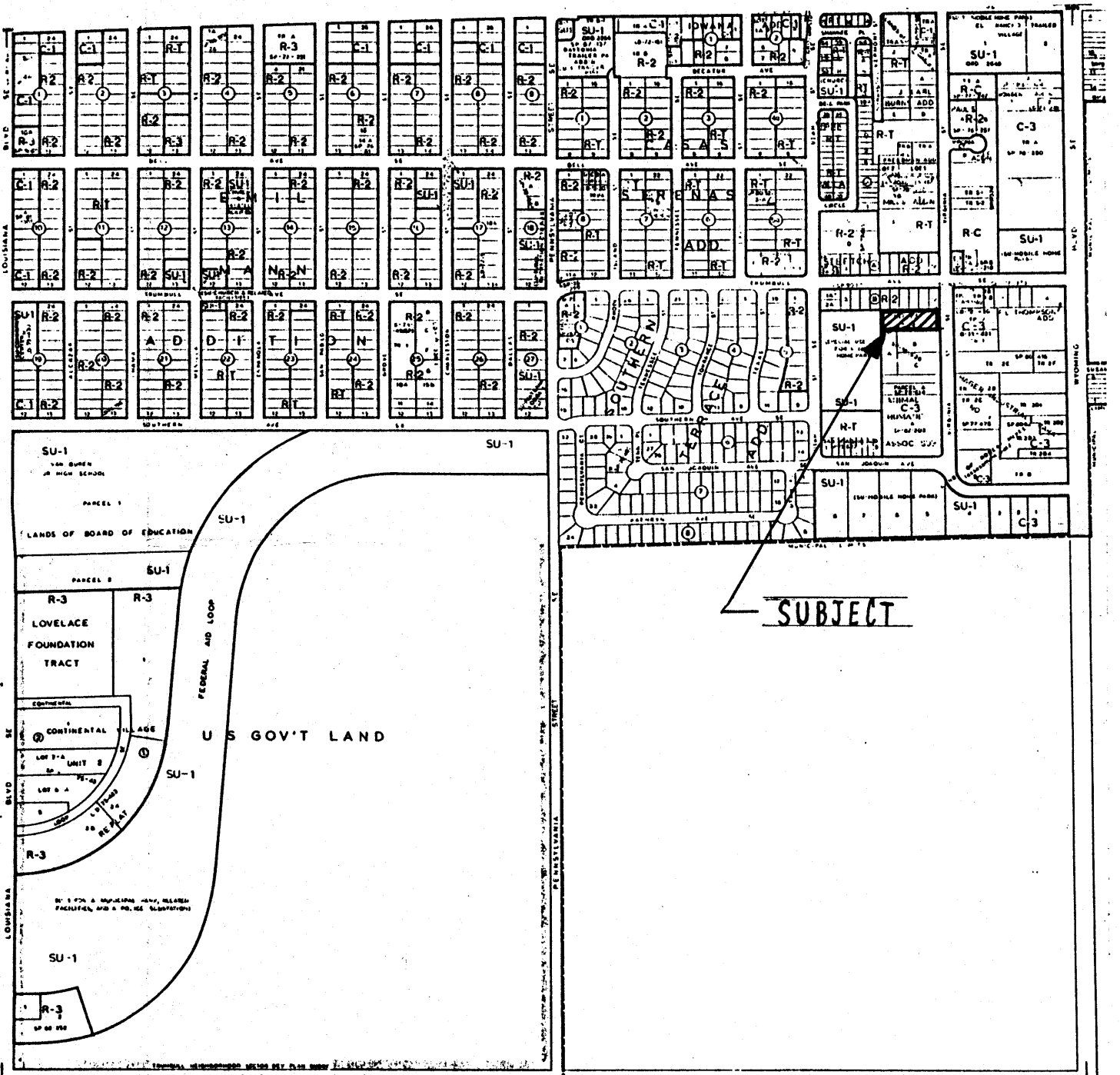


DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

NOTICE TO CONTRACTOR

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APPROVALS	NAME	DATE	TITLE: ENGINEERING CONSTRUCTORS, 517 VIRGINIA SIDEWALK CULVERTS
HYDROLOGY			
INSPECTOR			PERMIT NO.
A.C.E./FIELD			MAP NO. L19



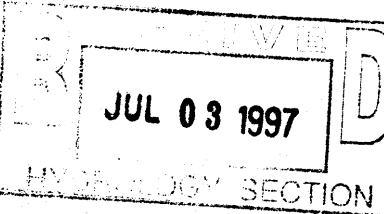
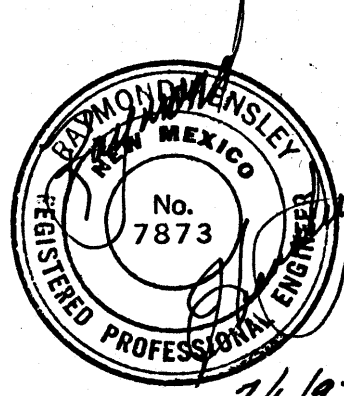
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*Raymond E. Hensley*  
RAYMOND E. HENSLEY, NMPE #7873 7/1/97

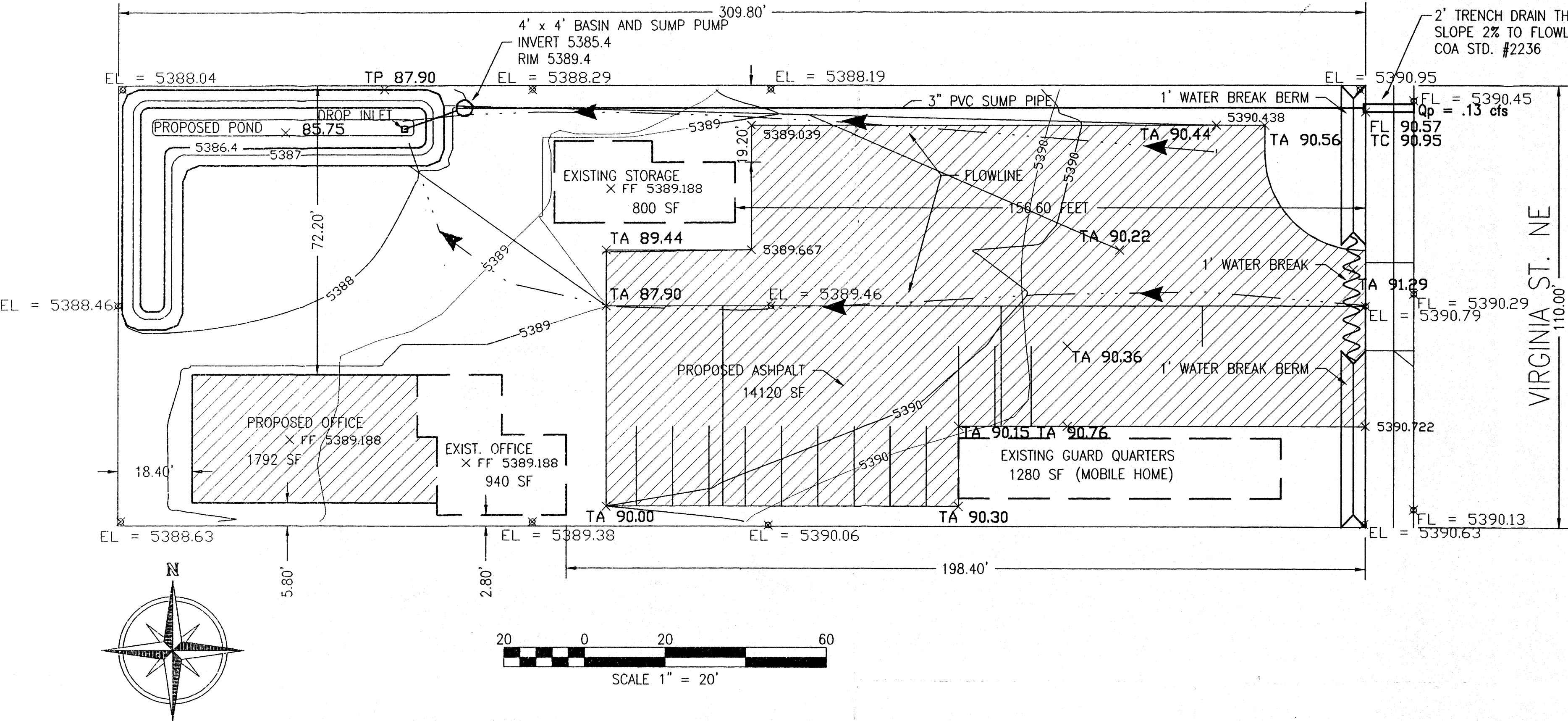
LEGEND

ITEM	EXISTING	PROPOSED
STRUCTURES		
PARKING		
CONTOURS		
FLOWLINES		
SPOT ELEV.	×	×



REV.	DATE	DESCRIPTION
PROJECT TITLE <b>ENGINEERING CONSTRUCTORS</b> 517 VIRGINIA S.E. ALBUQUERQUE, NEW MEXICO		
SHEET TITLE <b>DRAINAGE AND GRADING PLAN</b>		
<b>CAMI</b> CONSTRUCTION ANALYSIS & MANAGEMENT, INC.		
DRAWN BY REH		DATE: 07/1/97
CHK'D BY REH		

4001 JUAN TABO NE - SUITE A  
ALBUQUERQUE, NEW MEXICO 87111  
(505)298-3477



LEGAL DESCRIPTION

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(TABLE 9)	$Q_p = 1.87(.7823) = 1.463 [ .05 ] cfs$	$Q_p = 3.45(.343) + 5.02(.439) = 3.39 [ 2.17 ] cfs$
(INCREASED $Q_p$ )		$Q_{inc} = 1.927 [ .98 ] cfs$
(SUMP PUMP $V_{pmp}$ )		$V_{pmp} = .13 cfs \times 6 \text{ hours} = 2808.0 cf$
(POND VOLUME $V_{pnd}$ )		$REQUIRED V_{pnd} = A(E_b - E_o) = 2726.2 cf$ $PROPOSED V_{pnd} = 2843.58 cf > 2726.2 cf$ THEREFORE OK



# ENGINEER'S CERTIFICATION

I HAVE INSPECTED THE SITE DURING THE WEEK OF JULY 21, 1997. THE INSTALLATION OF THE SITE IMPROVEMENTS WERE SUBSTANTIALLY IN CONFORMANCE WITH THE DRAINAGE PLAN AND DRAINAGE REPORT.

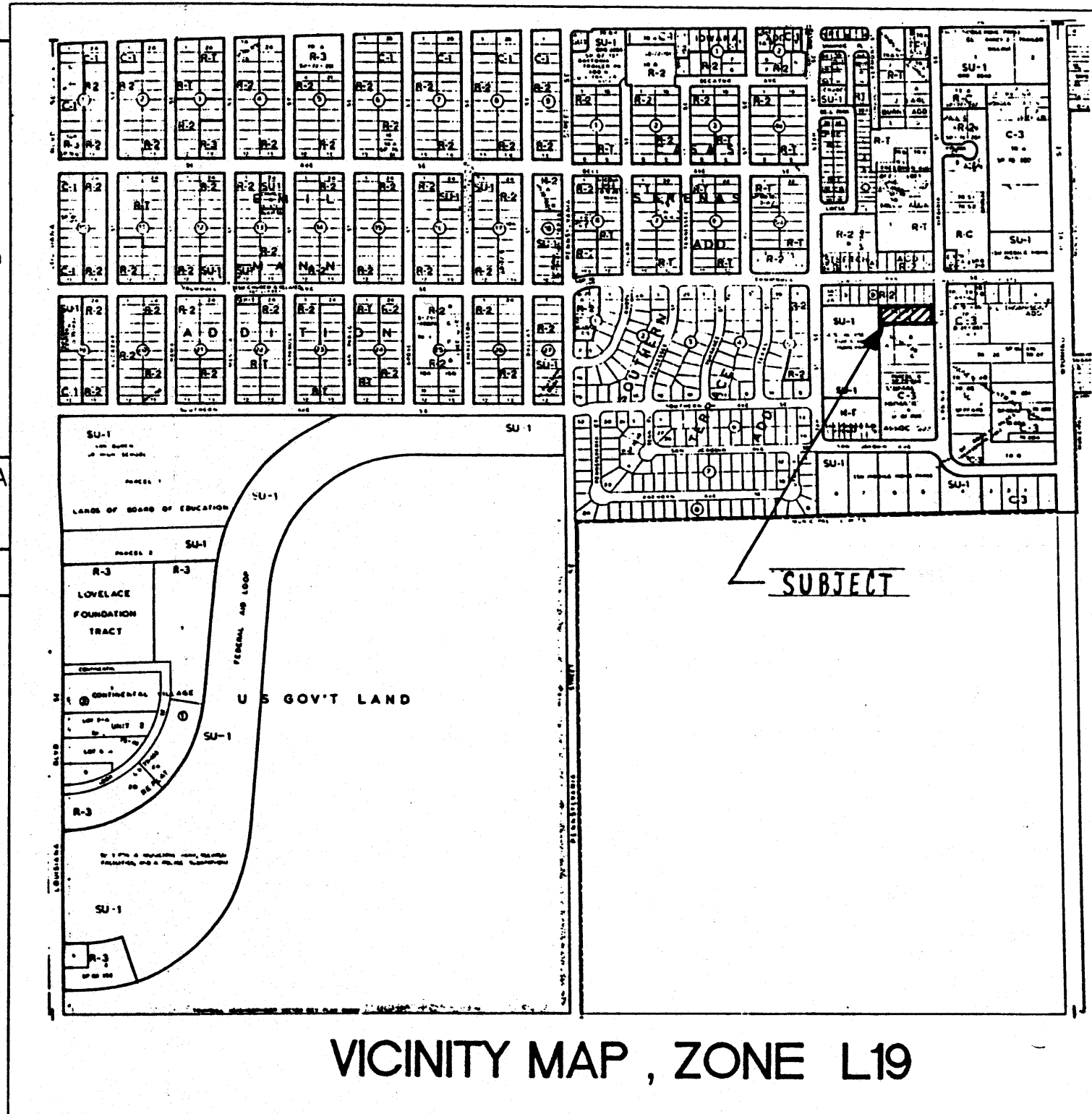
*Raymond E. Hensley*  
RAYMOND E. HENSLEY, P.E. 7/29/97

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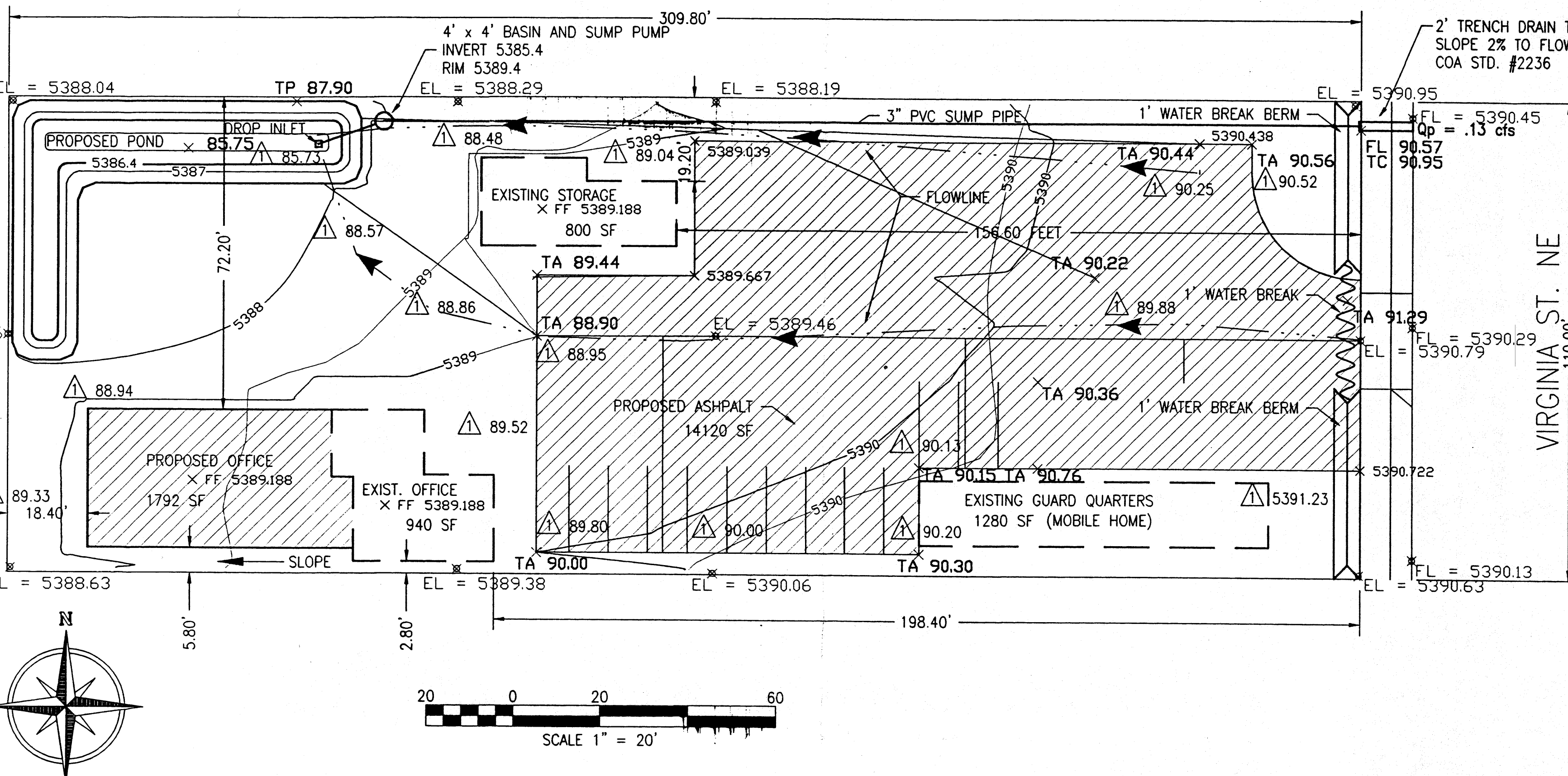
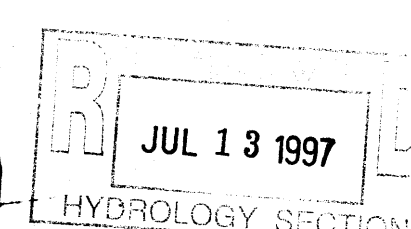
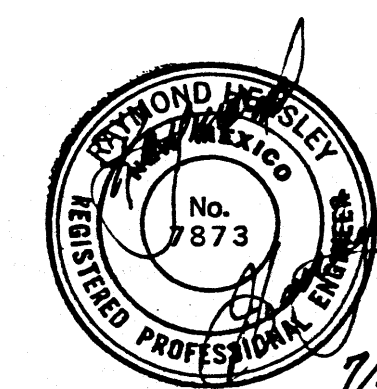


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(TABLE 8)	$E_o = .66(.7823) = 0.52 [15]$	$E_b = 1.29(.343) + 2.36(.439) = 1.48 [87]$
(TABLE 9)	$Q_p = 1.87(.7823) = 1.463 [05]cfs$	$Q_p = 3.45(.343) + 5.02(.439) = 3.39 [217]cfs$
(INCREASED $Q_p$ )		$Q_{inc} = 1.927 [98] cfs$
(SUMP PUMP $V_{pmp}$ )		$V_{pmp} = .13 cfs \times 6 \text{ hours} = 2808.0 cf$
(POND VOLUME $V_{pnd}$ )		REQUIRED $V_{pnd} = A(E_b - E_o) = 2726.2 cf$
		PROPOSED $V_{pnd} = 2843.58 cf > 2726.2 cf$ THEREFORE OK

4001 JUAN TABO NE - SUITE A  
ALBUQUERQUE, NEW MEXICO 87111  
(505)298-3477

REV.	DATE	DESCRIPTION
1.	07/30/97	ENGINEER'S CERT., & AS-BUILT ELEV.

PROJECT TITLE	ENGINEERING CONSTRUCTORS
	517 VIRGINIA S.E.
	ALBUQUERQUE, NEW MEXICO
SHEET TITLE	DRAINAGE AND GRADING PLAN

**CAMI**  
CONSTRUCTION ANALYSIS  
& MANAGEMENT, INC.

DRAWN BY  
REH  
CHK'D BY  
REH  
DATE:  
07/30/97



# ENGINEER'S CERTIFICATION

I HAVE INSPECTED THE SITE DURING THE WEEK OF JULY 21, 1997. THE INSTALLATION OF THE SITE IMPROVEMENTS WERE SUBSTANTIALLY IN CONFORMANCE WITH THE DRAINAGE PLAN AND DRAINAGE REPORT.

*Raymond E. Hensley*  
RAYMOND E. HENSLEY, P.E.

7/30/97

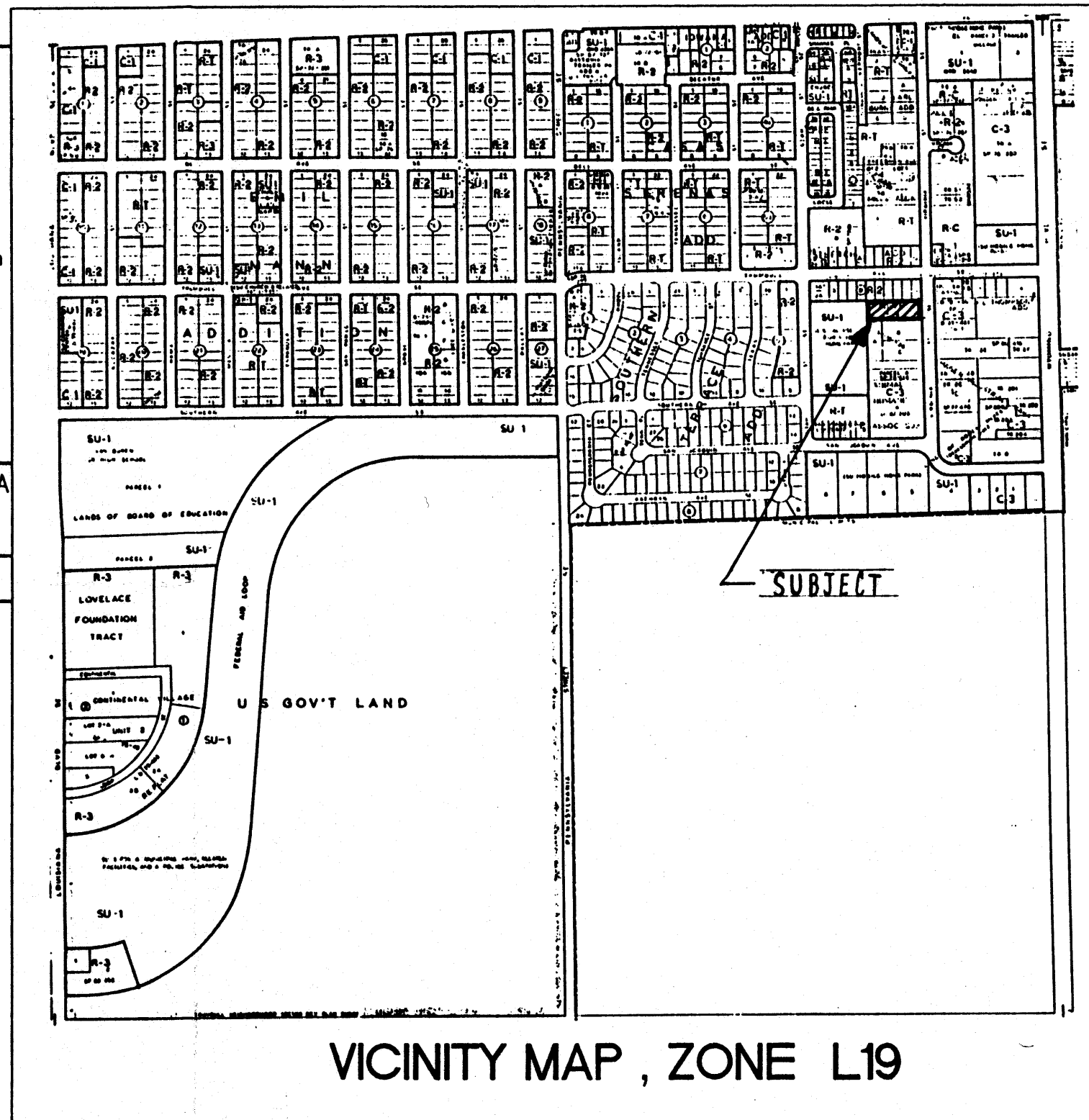
NMPE #7873

## DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

### NOTICE TO CONTRACTOR

- An excavation/construction 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.
- 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.
- Two working days prior to any excavation, contractor must contact Line Locating Service, 260-1990, for location of existing utilities.
- 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 with a minimum amount of delay.
- Backfill compaction shall be according to commercial street use.
- Maintenance of these facilities shall be the responsibility of the Owner of the property served.

APPROVALS	NAME	DATE	TITLE: ENGINEERING CONSTRUCTORS, 517 VIRGINIA SIDEWALK CULVERTS
HYDROLOGY			
INSPECTOR			PERMIT NO.
A.C.E./FIELD			MAP NO. L19



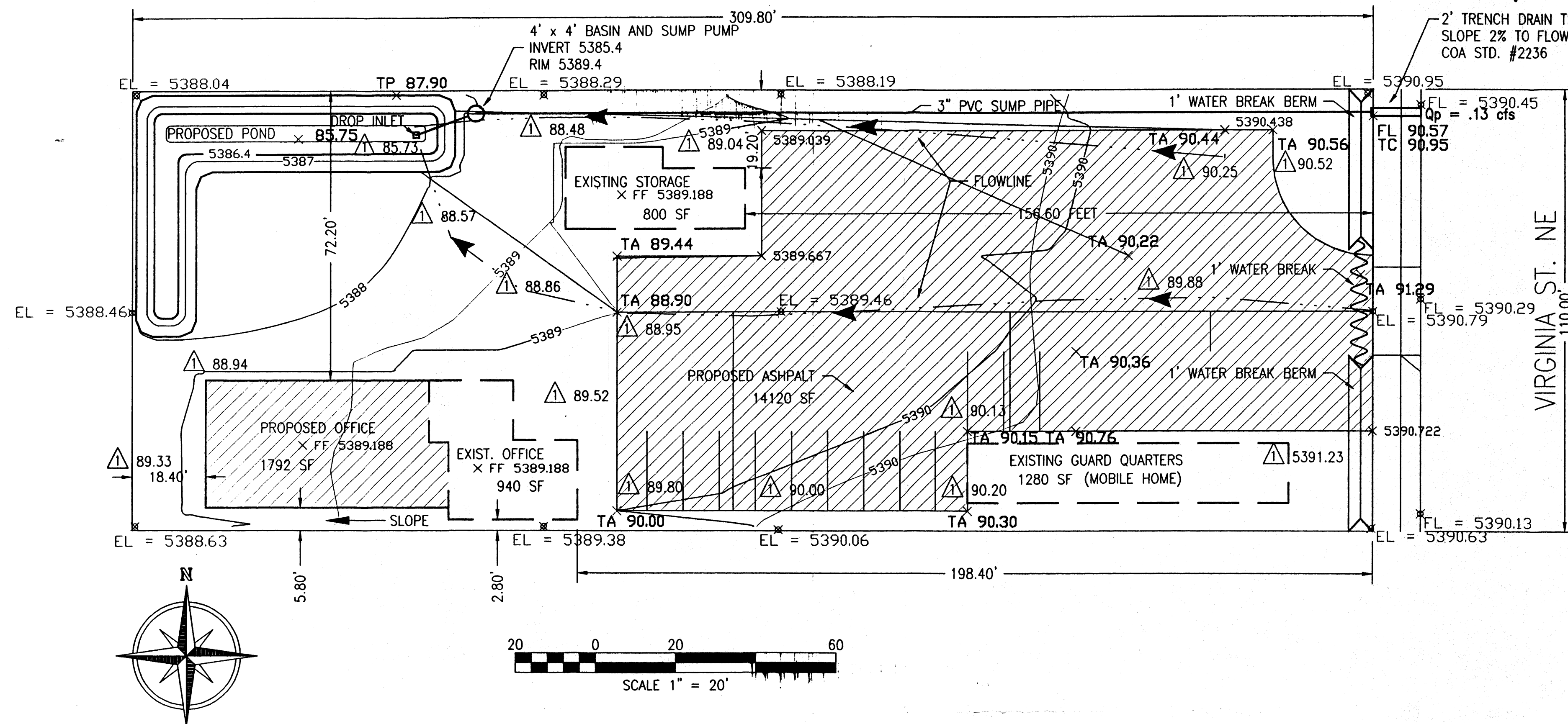
VICINITY MAP, ZONE L19

I, RAYMOND E. HENSLEY, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS AND DO FURTHER CERTIFY THAT NO EARTHWORK OF ANY KIND, NOR ANY DISTURBANCE OF THE GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE DETERMINED.

*Raymond E. Hensley*  
RAYMOND E. HENSLEY, NMPE #7873

### LEGEND

ITEM	EXISTING	PROPOSED
STRUCTURES		
PARKING		
CONTOURS		
FLOWLINES		
SPOT ELEV.		



### LEGAL DESCRIPTION

A CERTAIN PARCEL OF LAND BEING IDENTIFIED AS THE CRAIG SUBDIVISION, A SUBDIVISION, ALBUQUERQUE, NEW MEXICO, IN SECTION 30 TOWNSHIP 10 NORTH, RANGE 3 EAST, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT OF SAID SUBDIVISION, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO, ON AUGUST 16, 1967.

### PROJECT ADDRESS

517 VIRGINIA NE

### THE PROPOSED PLAN SHOWS:

THE PROPOSED OFFICE ADDITION IS LOCATED IN THE SOUTHEAST QUADRANT OF ALBUQUERQUE. THE GRADING AND DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE CITY OF ALBUQUERQUE STORM DRAINAGE ORDINANCE (ART. IX, SECT. 7-9) AND FLOOD HAZARD ORD. #88-46. THE PLAN IS REQUIRED TO FACILITATE THE OWNER'S BUILDING PERMIT APPROVAL.

- EXISTING CONTOURS WITH EXISTING AND NEW SPOT ELEVATIONS.
- PRIVATE AND PAVED ACCESS DRIVES, NEW STRUCTURES, DRAINAGE FLOW AND NEW GRADE ELEVATIONS.
- CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
- QUANTIFICATION AND RESPECT TO HISTORICAL DRAINAGE PATTERNS, WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUN-OFF GENERATED BY THE PROPOSED IMPROVEMENTS, ESSENTIALLY ALLOWING HISTORIC DRAINAGE PATTERNS TO REMAIN UNCHANGED AFTER DEVELOPMENT. THE PLAN DETERMINES THE RUN-OFF RESULTING FROM THE 100-YEAR/6-HOUR DURATION STORMS FOR BOTH THE EXISTING AND DEVELOPED CONDITIONS.

THE PROPOSED DRAINAGE SCHEME ASSOCIATED WITH THE PROPERTY IS TO DRAIN ALL FLOWS TO THE PROPOSED POND IN THE NORTHWEST CORNER OF THE PROPERTY. A SUMP PUMP WILL THEN PUMP THE FLOW TO VIRGINIA STREET CONVEYED BY EXISTING CURB AND GUTTER TO THE EXISTING STORM SEWER SYSTEM. HYDROLOGIC PROCEDURES AND CALCULATIONS ARE IN ACCORDANCE WITH SECTION 22.2, HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA REVISED JANUARY 1993.

### I. DESIGN CRITERIA

PROPERTY AREA = A = 0.7823 ACRES

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL (DPM), REVISED JANUARY 1993 FOR THE CITY OF ALBUQUERQUE

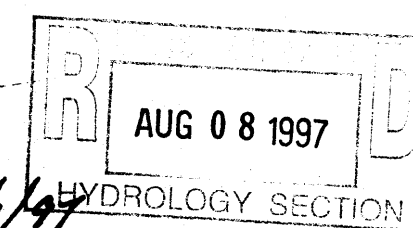
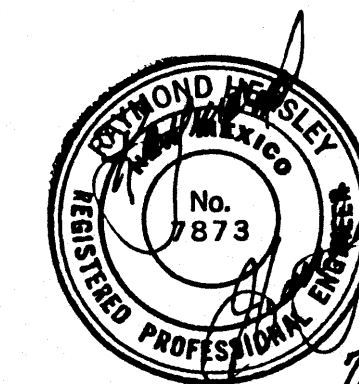
DISCHARGE RATE:  $Q = Q_{peak} \times AREA$  ... "PEAK DISCHARGE RATES FOR SMALL WATERSHEDS"

VOLUMETRIC DISCHARGE:  $VOLUME = E_{weighted} \times AREA$

ORIGIANL SOIL TYPE: 'A', SILT, SAND & DECOMPOSED GRANITE

DESIGN STORM: 100-year / 6-hour WHERE [ ] = 10 YEAR VALUES

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