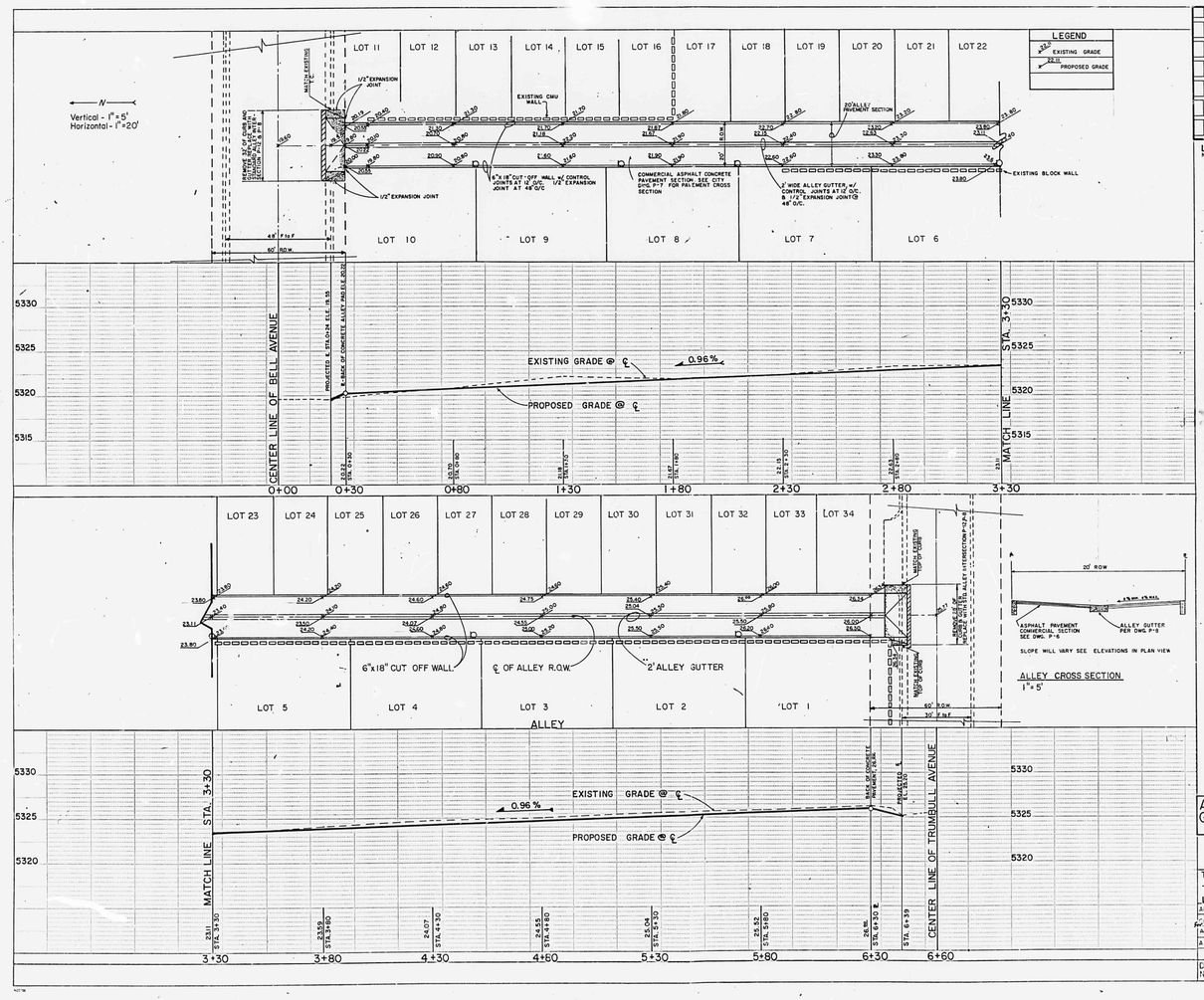
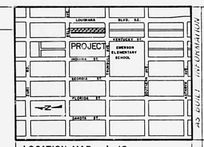
HYDROLOGY

L18/D32
TWO PLANS

L18-D32

2 PLANS





LOCATION MAP L-18
NO SCALE

GENERAL NOTES:

1. ALL WORK DONE ON ALLEY IS FOR GRADING ONLY.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS - PUBLIC WORKS CONSTRUCTION - 1985.
3. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO GRADING, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD ANY CONFLICTS EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION.
6. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
7. THE CONTRACTOR MUST SUBMIT A CONSTRUCTION SIGNING AND BARRICADING PLAN TO TRAFFIC ENGINEERING TO RECEIVE A BARRICADING PERMIT PRIOR TO CONSTRUCTION.
8. CONTRACTOR SHALL ADJUST TO GRADE ALL WATER METERS, VALVE BOXES AND MANHOLES ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS.
9. WHERE WATER METER BOXES ARE ENCOUNTERED WITHIN THE PROPOSED GRADING, THE METER BOX SHALL BE ADJUSTED TO GRADE AND THE COVER REPLACED WITH THE HEAVYWEIGHT COVER AND LID AS PER STANDARD DRAWING W-19.
10. SUBGRADE SHALL BE COMPACTED TO 95% ASTM D-1557.
11. TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE CITY ENGINEER.
12. IF CURB IS DEPRESSED FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.

RECEIVED
FEB 18 1986
HYDROLOGY SECTION

APPROVED FOR ALLEY GRADES ONLY.

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE: ALLEY BETWEEN BELL AVENUE S.E AND TRUMBULL AVENUE S.E. ONE BLOCK WEST OF LOUISIANA BLVD. S.E.

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer	R.C. Chase	1/24/86	Liquid Waste	N/A	
A.C.E.-Design	[illegible]	1/17/86	Traffic	W.D. Fleming	1-17-86
A.C.E.-Hydrology	[illegible]	1/17/86	Water	N/A	1-17-86

DRAWING NO	MAP NO	SHEET	OF
2676	L-18	1	1

AS BUILT INFORMATION
CONTRACTOR
DATE
INSPECTOR
DATE
ENGINEER
DATE
FIELD VERIFICATION BY
DATE
COMPUTED BY
MICRO-FILM INFORMATION
FILMED BY
DATE
INDEXED BY
DATE

BENCH MARKS
ACS BENCHMARK 6-L-18 A SQUARE CUT CHISELED ON TOP OF CONCRETE CURB AT THE SOUTHEAST CORNER OF THE INTERSECTION OF LOUISIANA BOULEVARD, S.E. AND TRUMBULL AVENUE, S.E. IN THE NORTHWEST QUADRANT OF THE INTERSECTION. ELEVATION=5327.68 FEET (MSL0)

SURVEY INFORMATION
FIELD NOTES

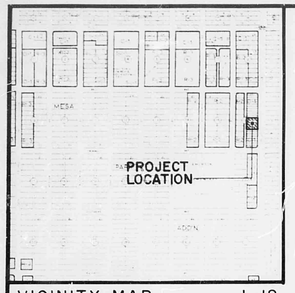
NO.	BY	DATE

ENGINEER'S SEAL
RICHARD C. CHASE
NEW MEXICO
5278
REGISTERED PROFESSIONAL ENGINEER
1/24/86

NO.	DATE	REMARKS	BY
		REVISIONS	

DESIGN
DESIGNED BY Louie Abeyta DATE 1/16/85
DRAWN BY M.A.G. DATE NOV. 19, 1985
CHECKED BY [illegible] DATE 1/23/85

L18/D32



VICINITY MAP L-18
SCALE: 1" = 800'

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING TREE
- EXISTING CACTUS
- EXISTING WALL
- NEW ASPHALT PAVING
- SWALE

TEMPORARY BENCHMARK

TOP OF REBAR @ THE PROJECTION OF THE SOUTHWEST PROPERTY CORNER OF LOT 26, AS SHOWN.
ELEVATION = 5824.56 FEET (MSL D)

PROJECT BENCHMARK

ACS BENCHMARK G-L18, A SQUARE, 1/2, CHISELED ON TOP OF CONCRETE CURB @ THE NW CURB RETURN @ THE INTERSECTION OF LOUISIANA BLVD SE & TRUMBULL AVE SE IN THE NORTHWEST QUADRANT OF THE INTERSECTION.
ELEVATION = 5827.38 FEET (MSL D)

LEGAL DESCRIPTION

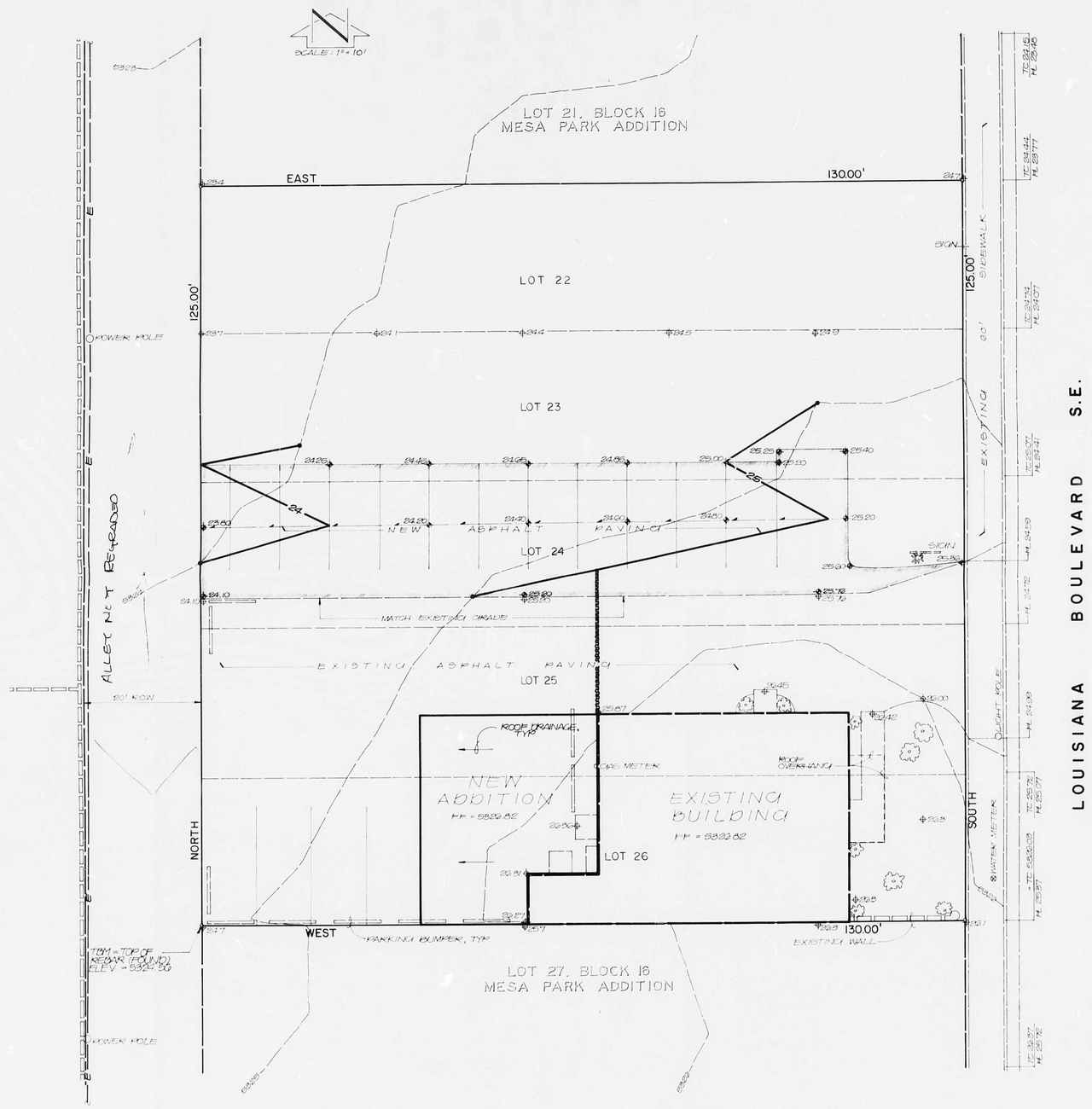
LOTS 22 - 27, BLOCK 16, MESA PARK ADDITION

EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHTS-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.



DRAINAGE PLAN

The following items concerning the 523 Louisiana Boulevard S.E. Building Drainage Plan are contained hereon:

1. Vicinity Map 2. Grading Plan 3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the west side of Louisiana Boulevard S.E. between Bell Avenue S.E. and Trumbull Avenue S.E. At present, the site is partially developed with much of the surrounding area currently developed thereby making this an infill site.

As shown by Plate L-18 of the Albuquerque Master Drainage Study, the site does lie within a designated Flood Hazard Zone, however, Storm Drain System 206-01A has been constructed and will prevent flooding in this area. Also, the finished floor elevation of the building and new addition are almost one foot above the top of curb elevation in Louisiana Boulevard S.E. At present, the majority of the runoff generated from this site flows from east to west onto the adjoining alley located west of the west property line. Based upon field observation, there does not appear to be an erosion problem associated with the existing alley; also, offsite flows do not enter the site. Because of this, combined with the fact that this site is an infill site and only a minor increase of runoff will be generated by the proposed improvements, the free discharge of runoff from this site is appropriate.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1'-0" intervals, 2) continuity between existing and proposed grades, and 3) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements consist of the construction of a addition to the existing building along with adjacent parking. Flows generated on site will be routed from east to west and discharged to the adjacent alley located west of the west property line. From that point, the runoff will flow north onto Bell Avenue S.E. which ties to Storm Drain System 206-01A which is the outfall for this site. This pattern of runoff is consistent with the existing site drainage.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by the calculations, the proposed improvements will result in a relatively minor increase in runoff generated by this site. The increase in runoff from this parcel due to the proposed improvements will be approximately 0.1 cfs. This minor increase will not have an adverse impact on the watershed in which this site is situated.

CALCULATIONS

Ground Cover Information

From Bernalillo County Soil Survey, Plate 31:
WeB - Wink-Embudo complex
Hydrologic Soil Group B

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6 (6.84)\, T_c^{-0.51} = 4.99$ in./hr
$P_6 = 2.36$ in (DPM Plate 22.2 D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$
where C varies
$P_6 = 2.36$ in (DPM Plate 22.2 D-1)
A = area, acres

Existing Condition

$A_{total} = 16{,}250$ sf $= 0.37$ Ac
$A_{imp} = 6{,}535$ sf; % impervious = 40%
$C = 0.52$ (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.52(4.99)(0.37) = 1.0$ cfs
$V_{100} = CP_6A = 0.52(2.36/12)(16{,}250) = 1{,}660$ cf

Developed Condition

$A_{total} = 16{,}250$ sf $= 0.37$ Ac
$A_{imp} = 9{,}060$ sf; % impervious = 56%
$C = 0.61$ (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.61(4.99)(0.37) = 1.1$ cfs
$V_{100} = CP_6A = 0.61(2.36/12)(16{,}250) = 1{,}950$ cf

Comparison

$\Delta Q_{100} = 1.1 - 1.0 = 0.1$ cfs (increase)
$\Delta V_{100} = 1{,}950 - 1{,}660 = 290$ cf (increase)

RECEIVED JUL 17 1985 HYDROLOGY SECTION

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER 07-01-85

TOM MAY ASSOCIATES, INC. 811 DALLAS, N.E. - ALBUQUERQUE - NEW MEXICO - 87110 ENGINEERS	NO. / DATE / BY / REVISIONS	DESIGNED BY LPU DRAWN BY LBB APPROVED JGM	JOB NO 50681 DATE 6-85	GRADING & DRAINAGE PLAN 523 LOUISIANA BOULEVARD S.E.	L18/D32	FILE NO. SHEET 1 OF 1