



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 13, 1994

Christopher Weiss
C.L. Weiss Engineering
1100 Alvarado Dr. NE
Albuquerque, NM 87110

RE: REVISED DRAINAGE PLAN FOR 245 VERMONT NE (K19-D106)
REVISION DATED 9/29/94.

Dear Mr. Weiss:

Based on the information provided on your September 30, 1994 resubmittal, the above referenced site is approved for Building Permit.

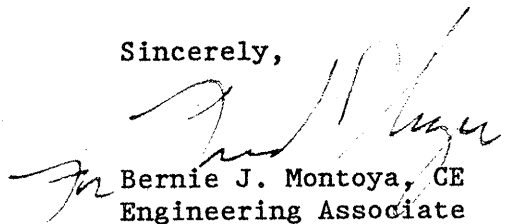
Please be advised that a separate permit is required for construction within City Right-of-Way. A copy of this approval letter must be on hand when applying for the excavation permit.

Also, prior to Certificate of Occupancy release, Engineer Certification per the D.P.M. Checklist will be required.

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

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

Sincerely,



Bernie J. Montoya, CE
Engineering Associate

BJM/d1/WPHYD/8826

c: Andrew Garcia
Arlene Portillo
File

DRAINAGE INFORMATION SHEET

PROJECT TITLE: 245 Vermont N.E. ZONE ATLAS / DRNG. FILE #: K-19/D186
LEGAL DESCRIPTION: Lot 25A, Block 12, Mesa Verde Heights, Albuquerque, New Mexico
CITY ADDRESS: 245 Vermont Street N.E.

ENGINEERING FIRM: C. L. Weiss Engineering CONTACT: Bryan Bobrick

ADDRESS: 1100 Alvarado Dr. NE - 87110 PHONE: 266-3444

OWNER: Lee Davis CONTACT: _____

ADDRESS: 245 - B Vermont St. N.E. PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: Forstbauer Surveying Co. CONTACT: Ron Forstbauer

ADDRESS: 1100 Alvarado Dr. NE - 87110 PHONE: _____

CONTRACTOR FIRM: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

☐ YES

☒ NO

☐ COPY OF CONFERENCE RECAP
SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT

☒ DRAINAGE PLAN

☐ CONCEPTUAL GRADING & DRAINAGE PLAN

☒ GRADING PLAN

☐ EROSION CONTROL PLAN

☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT

☐ PRELIMINARY PLAT

☐ SITE DEVELOPMENT PLAN

☐ FINAL PLAT

☒ BUILDING PERMIT

☐ FOUNDATION PERMIT

☐ CERT. OF OCCUPANCY

☐ ROUGH GRADING PERMIT

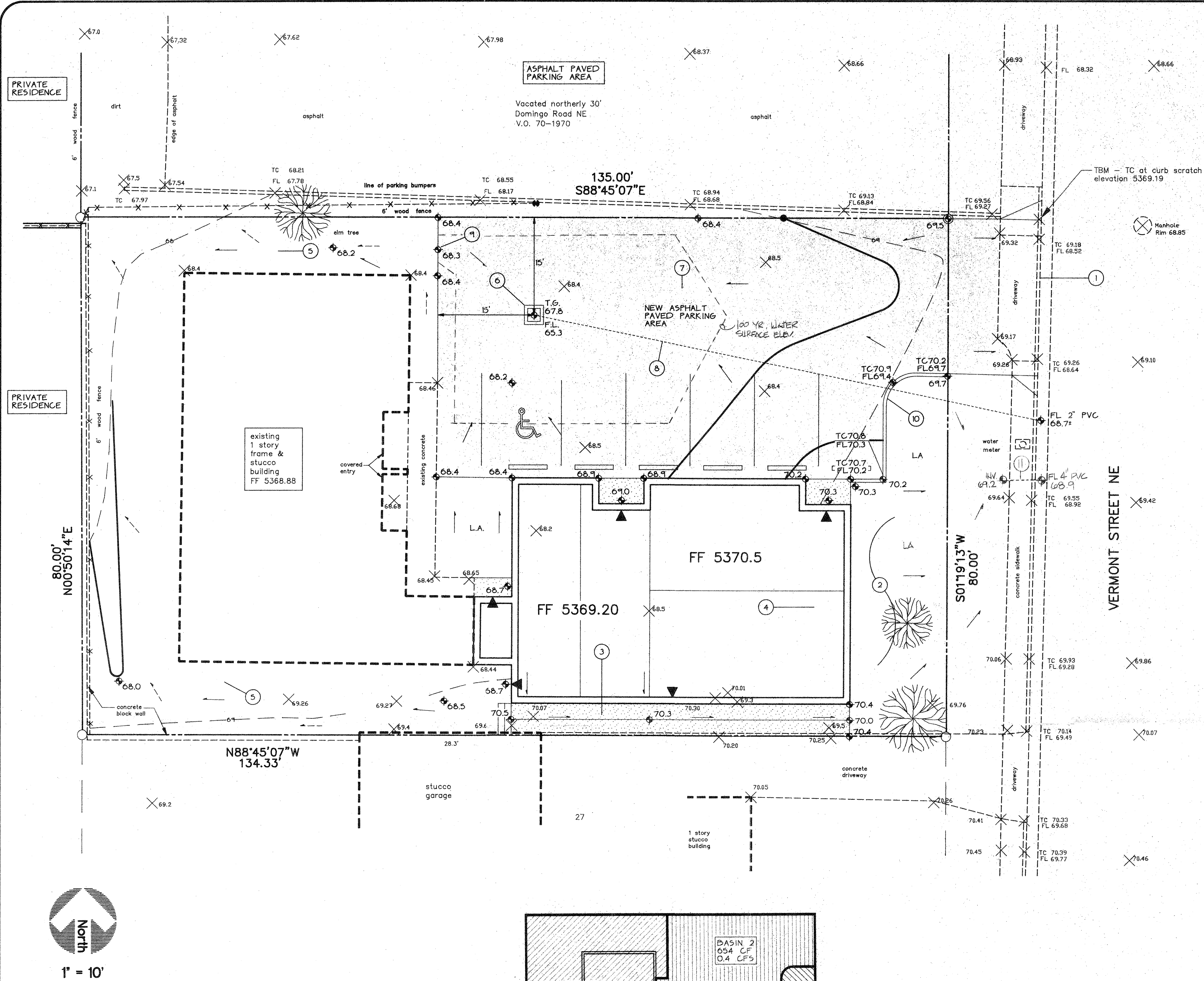
☐ GRADING / PAVING PERMIT

☐ OTHER _____

DATE SUBMITTED: September 29, 1994

BY: Bryan J. Bobrick - C.L. Weiss Engineering, Inc.

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NOTICE TO CONTRACTOR

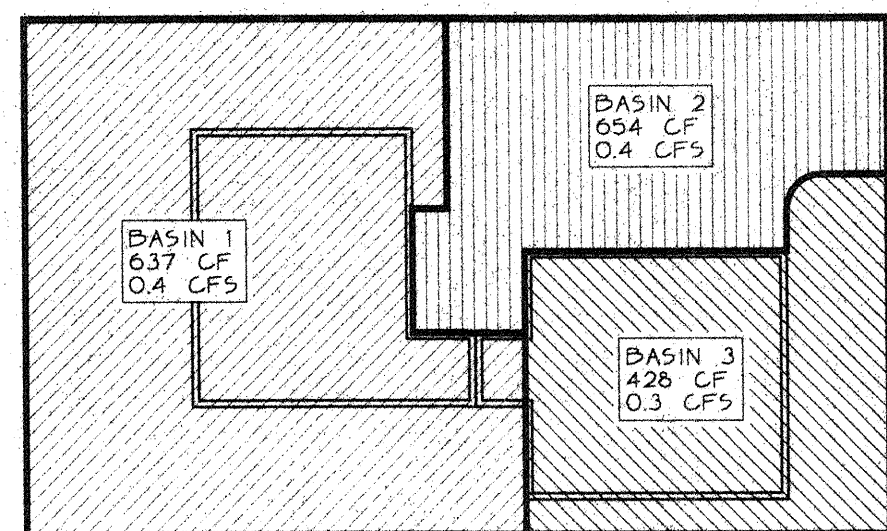
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITHIN A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXCAVATION PERMIT FOR SIDEWALK CULVERT/DRAIN.
- PROOF OF ACCEPTANCE WILL BE REQUIRED PRIOR TO SIGN OFF FOR CERTIFICATE OF OCCUPANCY (C.O.).

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

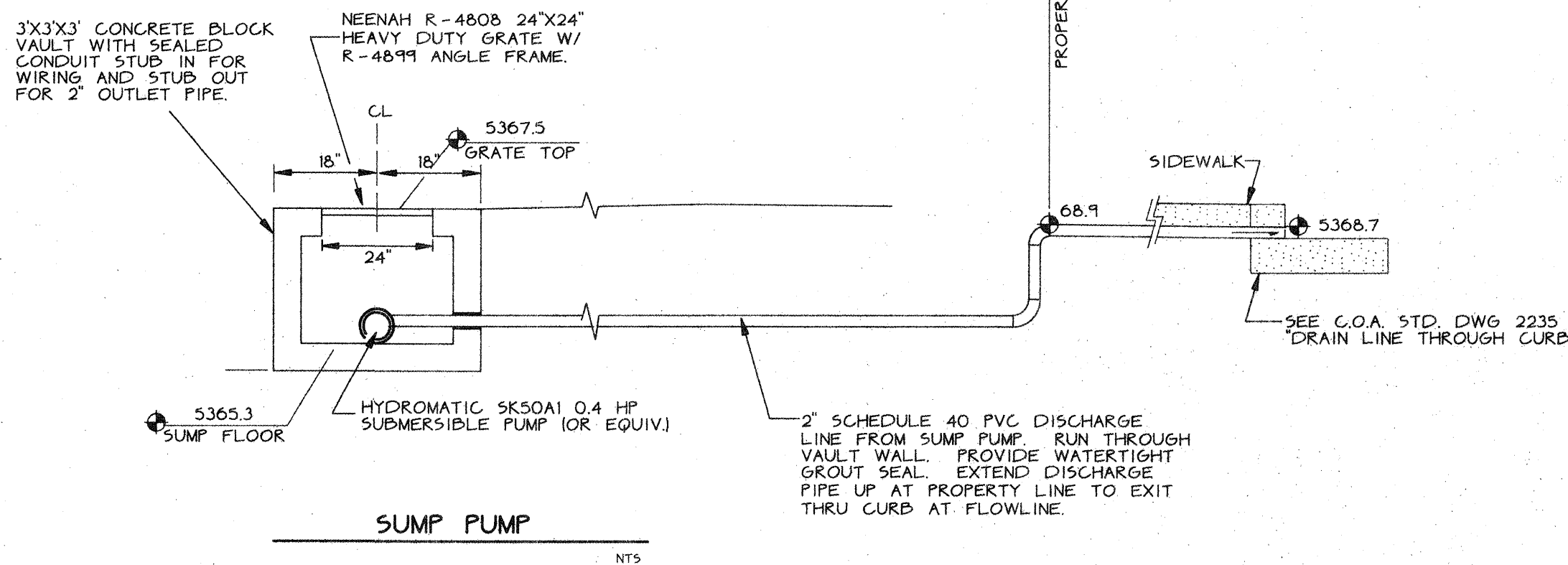
DESIGN APPROVAL: *Deanna Montoya* 10/14/94 DATE

INSPECTION APPROVAL: _____ DATE

ACCEPTANCE: _____ DATE



BASIN KEY



CALCULATIONS:

Calculations are based on the Drainage Design Criteria for Albuquerque, New Mexico, Section 22.2, DPM, Vol 2, dated Jan., 1993.

AREA OF SITE: 10773 SF = 0.25 Ac.

ON-SITE		
DEVELOPED FLOWS:	HISTORIC FLOWS:	EXCESS PRECIPITATION:
On-Site Land Condition	On-Site Historic Flow Rate	Precip. Zone 3
Area a = 0 SF	Area a = 0 SF	Ea = 0.66
Area b = 1603 SF	Area b = 1603 SF	Eb = 0.92
Area c = 1100 SF	Area c = 6420 SF	Ec = 1.29
Area d = 8070 SF	Area d = 2750 SF	Ed = 2.36
Total Area = 10773 SF	Total Area = 10773 SF	

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

Weighted E = $EaAa + EbAb + EcAc + EdAd / Aa + Ab + Ac + Ad$

Proposed E = 2.04 in. Historic E = 1.51 in.

On-Site Volume of Runoff: V360 = EaA

Proposed V360 = 1828 CF Historic V360 = 1354 CF

On-Site Peak Discharge Rate: $Qp = QpaAa + QpbAb + QpcAc + QpdAd / 43,560$

For Precipitation Zone 3

Qpa = 1.87 Qpb = 3.45 Qpc = 5.02 Qpd = 5.02

Proposed Qp = 1.1 CFS Historic Qp = 0.9 CFS

Note: The developed flows are divided as follows:
Flows continuing to West: 637 CF : 0.4 cfs
Flows to Sump Pump: 654 CF : 0.4 cfs
Flows to East (Vermont St.): 426 CF : 0.3 cfs

Note: The historic flows are as follows:
Flows continuing to West: 1354 CF : 0.9 cfs

SUMP PUMP CALCULATIONS

Area of flows to pump = 3440 SF = 0.1 Ac.

The following calculations are based on Treatment areas as shown in table to the right

Weighted Excess Precipitation (see formula above)		TREATMENT
Weighted E = 2.28 in.		
Volume of Runoff (see formula above)		A = 0% B = 5% C = 0% D = 95%
V360 = 654 CF		
V (gallons) = 4908 gal		
Peak Discharge Rate: (see formula above)		
Qp = 0.4 cfs		

Based on Manufacturer's pump curves for specified pump, pump volume rate: 75-100 gpm < 1 hour to pump peak volume. Volume of parking lot area = 450 CF < 654 CF for 100 yr. storm. In case of pump failure, excess flows will exit parking area at northwest corner and flow historically to the west (maximum flows to west in case of pump failure = 637 CF (0.4 cfs) from existing building and grade + 204 CF (0.1 cfs) from parking area = 841 CF (0.5 cfs) < 1354 CF (0.9 cfs) historically.

4" DIA. PIPE THRU SIDEWALK (EAST LA DRAIN)

Flows to East LA area = 0.3 cfs see calculations above

$Q = CA(2gh)^{1/2}$
 $A = (0.3) / ((0.6)(2'16.2''))$
 $A (required) = 0.09 sf$
use a 4" dia. pipe thru curb (A = 0.09 sf) OK

SCOPE:

The proposed improvements include a 1,680 SF (footprint) building area with adjacent concrete and asphalt paved walkways / parking areas, general site work and site regrading.

The present site is a developed residential property which grades at appx. 1% to the west. Vermont St. NE borders the site on the east.

The intent of this plan is to show:

- Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.
- The extent of proposed site improvements, including buildings, walks and pavement.
- The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City of Albuquerque requirements for drainage management.
- The relationship of on-site improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

DRAINAGE PLAN CONCEPT: Due to the fact that the property slopes away from Vermont St. NE, the owner chose to allow flows to continue west (to minimize fill and to maintain grades at existing 1 story building) where they will be collected by a sump pump which will empty them via a 2" PVC line through the gutter directly into Vermont St. as shown. The site run-off is divided into three basins. Basin 1 collects existing building flows and allows them to continue along their historical path to the northwest. Basin 2 collects the flows from the newly paved area and directs them to the sump pump. Basin 3 collects all new roof flows and directs them to the landscaped area east of the proposed building where they will enter Vermont street (see calculations for flowrate and volume information to each area).

GENERAL NOTES:

LEGAL: Lot 25A, Block 12, Mesa Verde Heights, Albuquerque, New Mexico.

SURVEYOR: Forstbauer Surveying Co. - Ron Forstbauer, 1100 Alvarado Dr. NE, Albuquerque, NM 87110 - August 1994

B.M.: City of Albuquerque brass cap 6-K20 (R), located at the southwest corner of the intersection of Central Avenue and Wyoming Boulevard SE. Elevation 5390.74 (M.S.L.D.)

I.R.M.: Top of curb at curb scratch located perpendicular to the Northeast property corner. ELEVATION = 5369.19 feet (M.S.L.D.)

SOILS: SCS Soil Survey of Bernalillo County indicates that the soil is Tijeras (TgB): Hydrologic Soil Group 'B'.

FLOOD HAZARD: Per FEMA Boundary Map #30, the property does not lie within a flood zone.

OFF-SITE DRAINAGE: There is no off-site drainage onto this site.

EROSION CONTROL: The contractor is responsible for retaining on-site all sediment generated during construction by means of temporary earth berms or silt fences at the low points on the west property line.

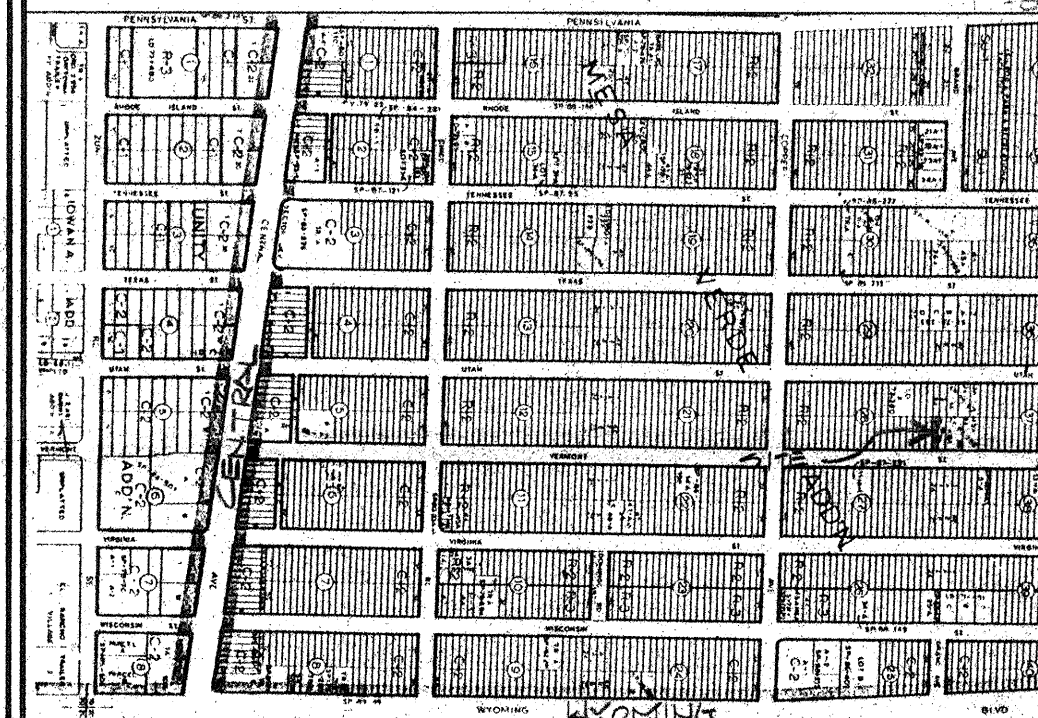
KEYNOTES

- MODIFY DRIVE ENTRANCE TO 24' WIDE. PROVIDE SMOOTH RIDING TRANSITION. SEE ARCHITECTURAL FOR DETAILS.
- FINE GRADE THIS AREA TO DRAIN TO VERMONT ST. (MIN 10% SLOPE)
- WEST ROOF AREA TO DRAIN VIA GUTTERS TO CONC. VALLEY GUTTER TO BE CARRIED EAST TO ENTER VERMONT ST.
- EAST ROOF AREA TO DRAIN VIA GUTTERS TO LANDSCAPED AREA EAST OF PROPOSED BUILDING WHERE IT WILL ENTER VERMONT ST.
- GRADE SHALLOW SWALE (MIN. SLOPE = 10%) AROUND EXISTING BUILDING. HISTORICAL FLOWS CONTINUE TO NORTHWEST.
- INSTALL SUMP PUMP PER DETAILS (SEE CALCULATIONS AND DETAILS THIS SHEET)
- NEW ASPHALT PAVED PARKING AREA. SLOPE TO TOP OF SUMP PUMP VAULT GRATE ALL DIRECTIONS AS SHOWN.
- INSTALL 2" PVC DISCHARGE LINE FROM SUMP PUMP TO VERMONT ST. GUTTER. SEE DETAILS THIS SHEET.
- CREATE LOW POINT IN ASPHALT PAVING TO ACT AS A SPILLWAY FOR EXCESS FLOWS (SEE CALCULATIONS)
- CONSTRUCT 6" HIGH HEADER CURB THIS AREA.
- INSTALL 4" PVC DRAIN LINE THRU CURB TO DRAIN EAST LANDSCAPED AREA. FINE GRADE L.A. TO ACCESS PIPE ALL DIRECTIONS (C.O.A. STD. DWG 2235)

LEGEND

---	SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED)	LA	LANDSCAPED AREA
---	PROPOSED ASPHALT	TA	TOP OF ASPHALT
---	BUILDING (EXISTING, PROPOSED)	TC	TOP OF CURB
---	PROPERTY LINE	FL	FLOW LINE
---	EXISTING SPOT ELEVATION	FF	FINISHED FLOOR
---	PROPOSED SPOT ELEVATION	R/W	RIGHT OF WAY
---	PROPOSED CONTOUR	PL	PROPERTY LINE
---	SURFACE FLOW DIRECTION (EXISTING, PROPOSED)	T.G.	TOP OF GRATE
---		▲	ENTRY / EXIT

VICINITY MAP #K-19-Z



FEMA MAP # 30



C.L. WEISS ENGINEERING, INC.	
	SANDIA PARK OFFICE
	POST OFFICE BOX 17 SANDIA PARK, NM 87047 (505) 261-1800
	ALVARADO OFFICE
	1100 ALVARADO DR. NE ALBUQUERQUE, NM 87110 (505) 266-3444

Revisions				

245 VERMONT N.E. DRAINAGE / GRADING PLAN

Scale: 1" = 10' Drawn By: BJB Checked By: CLW Job Number: _____ Date: AUGUST 1994

DRAINAGE AND
GRADING PLAN

C-1
SH. 1 OF 1