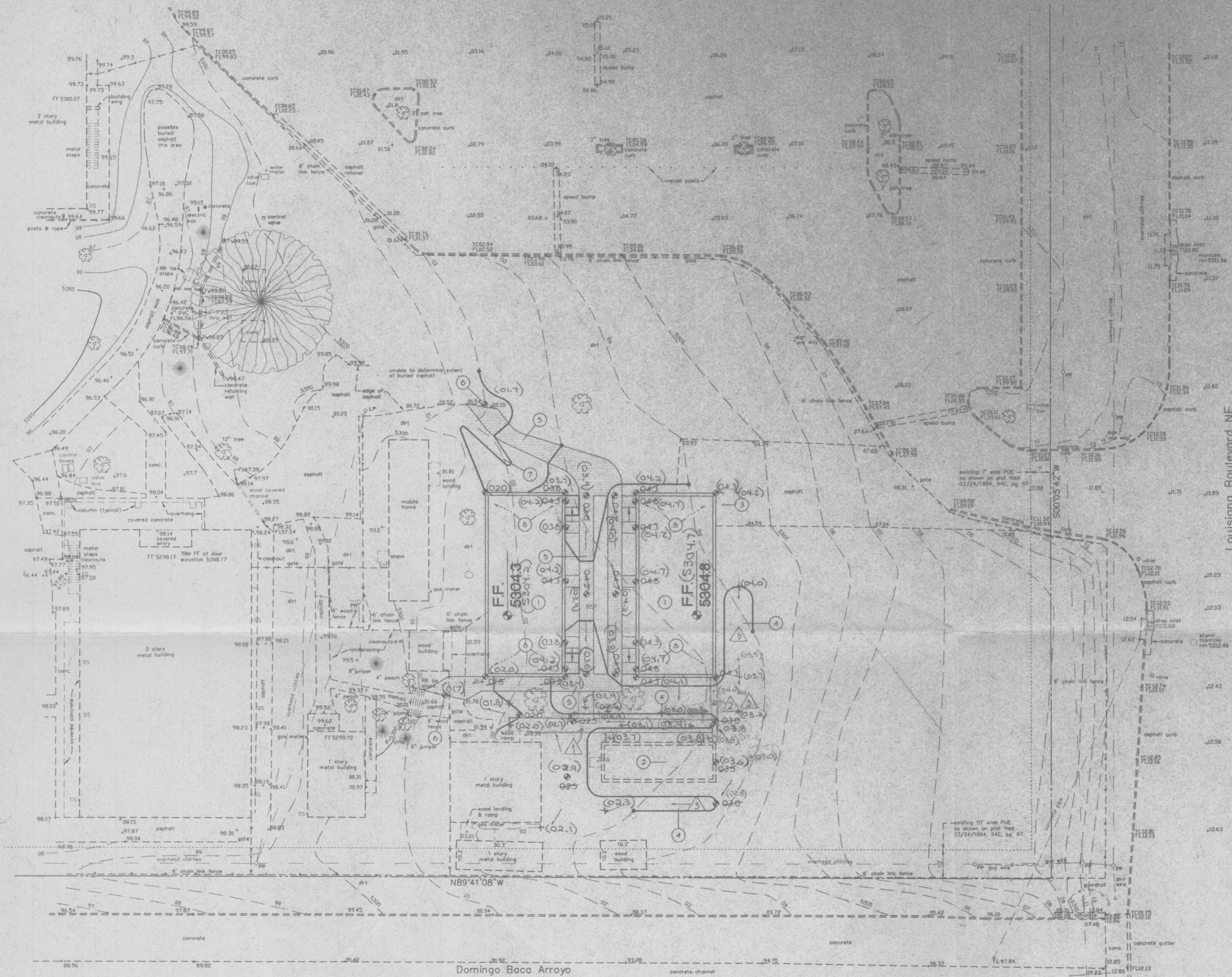




SCOPE
The proposed improvements include two new classroom buildings totaling approx. 3,500 SF (footprint), site walks, landscaping and the relocation of an existing mobile home.

The present site is a developed school campus property which slopes at approximately 3.5% to the west. The Domingo Baca Arroyo borders the building area to the south. Louisiana Blvd. NE borders the campus property to the east. Additional educational buildings border the building area to the north and west.

DRAINAGE PLAN CONCEPT
Per the Master Grading Plan prepared by Isaacson and Artman, P.A. stamp dated 03-25-93, all run-off is directed to the southwest corner of the overall site where an existing concrete side-slope drains into the concrete lined Domingo Baca Arroyo. See calculations (this sheet) for flowrate information due to the proposed development.

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.

GENERAL NOTES

LEGAL: Hope Christian School Block 12, Tract A, Unit A North Albuquerque Acres, Bernalillo County, New Mexico.

SURVEYOR: Forsbauer Surveying Co. - Ron Forsbauer - 268-2112

B.M.: Elevation = City of Albuquerque 10-D18 a brass cap located at the northwest corner of the intersection of Jade Park Avenue NE & Louisiana Boulevard NE. Elevation: 5319.15(M.S.L.D)

FLOOD HAZARD: Per Bernalillo County FIRM Map #137, the site is not located within a flood zone (100 year flood confined to constructed Domingo Baca Channel)

OFF-SITE DRAINAGE: No off-site flows affect this property.

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 and north property lines.

CALCULATIONS:
Calculations are based on the Drainage Design Criteria for Bernalillo County Section 22.2, DPM, Vol 2, dated Jan. 1993

ON-SITE

BUILDING AREA:		5990 SF		= 0.138 Ac.	
HISTORIC FLOWS:					
Historic Land Condition	Area a = 0 SF	Developed Land Condition	Area a = 0 SF	EXCESS PRECIPITATION:	
Area b = 300 SF		Area b = 630 SF		Precip. Zone = 3	
Area c = 5690 SF		Area c = 0 SF		Ea = 0.66	
Area d = 0 SF		Area d = 5360 SF		Eb = 0.92	
Total Area = 5990 SF		Total Area = 5990 SF		Ec = 1.29	
				Ed = 2.36	

Weighted Excess Precipitation (100-Year, 6-Hour Storm)
Weighted E = $\frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$

Historic E = 1.27 in. Developed E = 2.21 in.

Volume of Runoff: $V_{360} = \frac{E^*A}{12}$
Historic $V_{360} = 635$ CF Developed $V_{360} = 1102$ CF

Peak Discharge Rate: $Q_p = Q_{pa}Aa + Q_{pb}Ab + Q_{pc}Ac + Q_{pd}Ad$ 43.560

For Precipitation Zone = 3
 $Q_{pa} = 1.87$ $Q_{pb} = 3.45$
 $Q_{pc} = 2.60$ $Q_{pd} = 5.02$

Historic $Q_p = 0.5$ CFS Developed $Q_p = 0.7$ CFS

[These calculations refer specifically to the area to be developed as part of this plan-set (2 buildings, courtyard area and paved walks). The increase in site flows due to this proposal is 0.2 cfs. Flows will follow historic flow paths through the campus (split with approx. half in the north and half to the south) where they will be released into the Domingo Baca Arroyo at the southwest corner of the campus.]

AREAS OF MODIFICATION BETWEEN APPROVED DRAINAGE GRADING PLAN AND ACTUAL AS-BUILT

- Asphalt walkway extended to south this area. OKAY.
- Berm constructed between buildings to direct concentrated flows around southernmost building (eliminates concentrated flows in high foot traffic areas and reorients them to the low use area on the south side of the building) where they continue along historic flowpaths. OKAY.
- General Note: Due to the lack of native vegetation or other means of grade control, general grades (berm, swale, etc.) will be maintained by owner to preserve flowpaths and prevent birdbaths, etc.

I, Christopher L. Weiss, P.E. hereby certify that the as-built information shown, is in substantial compliance with the approved drainage / grading plan.

Christopher L. Weiss 3-19-99 Date
Christopher L. Weiss, P.E.
Base Survey info. provided by Ron Forsbauer - Forsbauer Surveying Co.
Additional data provided by Contractor

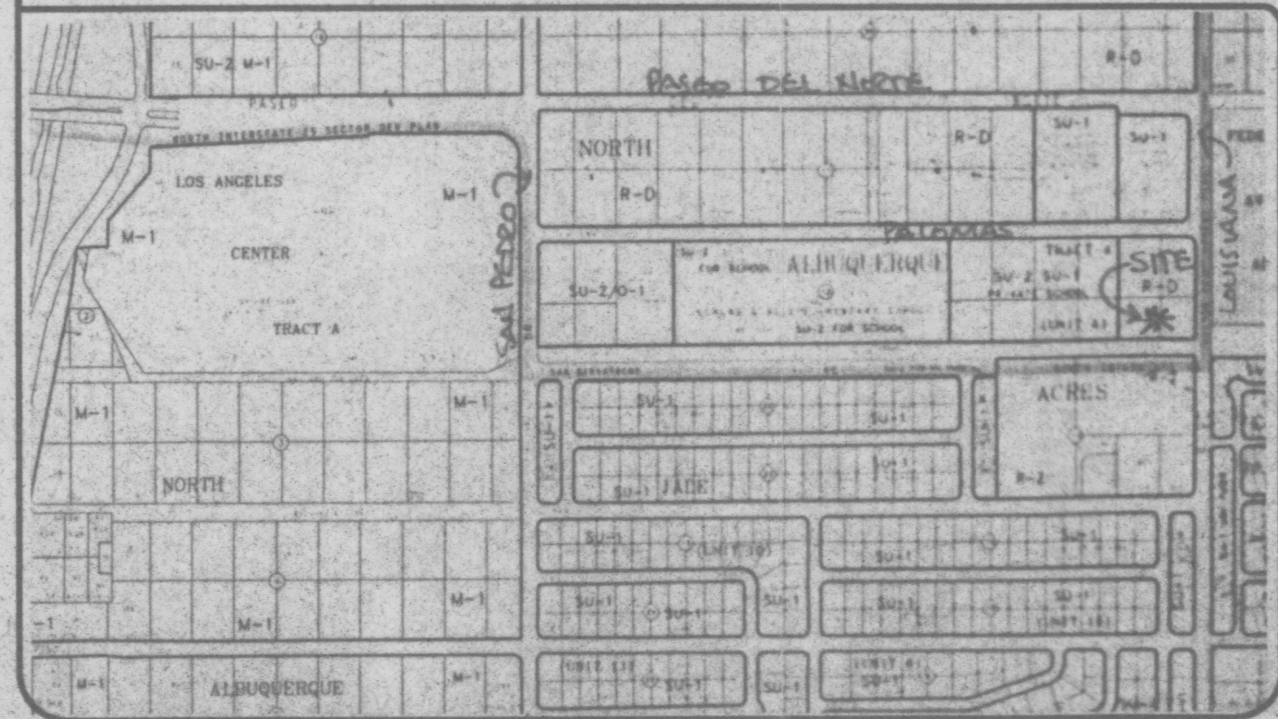
KEYNOTES

- NEW CLASSROOM FACILITY TO BE CONSTRUCTED AT ELEVATION SHOWN
- EXISTING MOBILE HOME TO BE RELOCATED TO THIS AREA. SEE ARCHITECTURAL FOR ADDITIONAL INFORMATION.
- SEE ARCHITECTURAL FOR DEMOLITION PLAN REGARDING ASPHALT PAVING, FENCE AND OTHER SITE FEATURES TO BE REMOVED AS PART OF THIS PROJECT.
- CONSTRUCT COMPACTED EARTH SWALE AT ELEVATIONS SHOWN TO DIVERT MINOR FLOWS AROUND THE PROPOSED STRUCTURES.
- CONSTRUCT PAVED WALKS / BUILDING ENTRANCE RAMPS AS SHOWN. SEE ARCHITECTURAL FOR ADDITIONAL INFORMATION.
- PROVIDE SMOOTH TRANSITION BETWEEN NEW AND EXISTING WALKS.
- CONSTRUCT SHALLOW SWALE THIS AREA TO DIVERT FLOWS AROUND THE EXISTING MOBILE HOME.
- DASHED ARROWS REPRESENT GUTTER DOWNSPOUT LOCATIONS. PROVIDE PRECAST CONCRETE SPLASH PAD AT OUTLET FOR EROSION PROTECTION. PROVIDE SURFACE SWALES AS REQUIRED TO ENSURE FLOWS ARE DIRECTED TOWARDS EXISTING / PROPOSED DRAINAGE PATHS AND NOT TOWARDS EXISTING / PROPOSED STRUCTURES.

LEGEND

- | | |
|---|-------------------------|
| --- SIDEWALK, CURB AND GUTTER (EXISTING, PROPOSED) | LA LANDSCAPED AREA |
| --- PROPOSED PAVING - SEE ARCHITECTURAL | → RAMP |
| --- BUILDING (EXISTING, PROPOSED) | TA TOP OF ASPHALT |
| --- PROPERTY LINE | TC TOP OF CURB |
| + 65.7 EXISTING SPOT ELEVATION | FL FLOW LINE |
| --- EXISTING CONTOUR | FF FINISHED FLOOR |
| PP PROPOSED SPOT ELEVATION | R/W RIGHT OF WAY |
| --- PROPOSED CONTOUR | PL PROPERTY LINE |
| --- SURFACE FLOW DIRECTION (EXISTING, PROPOSED, ROOF) | PP POWER POLE |
| | ▲ ENTRY / EXIT LOCATION |

VICINITY MAP #D-18



Revisions

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Hope Christian School Addition
6800 Palomas Ave. NE.

Scale: 1" = 20' Drawn By: DUB Checked By: CLW Job Number: Date: JUNE 1998

Drainage and Grading Plan

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Sheet 1 of 1