HYDROLOGY

L14/D8

ONE PLAN

I PLAN FOR

E. SAN JOSE ELEM.

SCHOOL

L14-D8

VICINITY MAP L·14

SCALE: 1" = 800'

SCALE: 1" = 20'

PROJECT BENCHMARK:

AN ACS BENCHMARK. A CHISELED SQUARE ON TOP OF THE N.W. CURB RETURN. LOCATED IN THE N.W. QUAD. @ THE INTERSECTION OF BROADWAY BLVD. SE & ANDERSON AVE. SE. ELEV. = 4962.91 FEET (MSLD)

TBM:

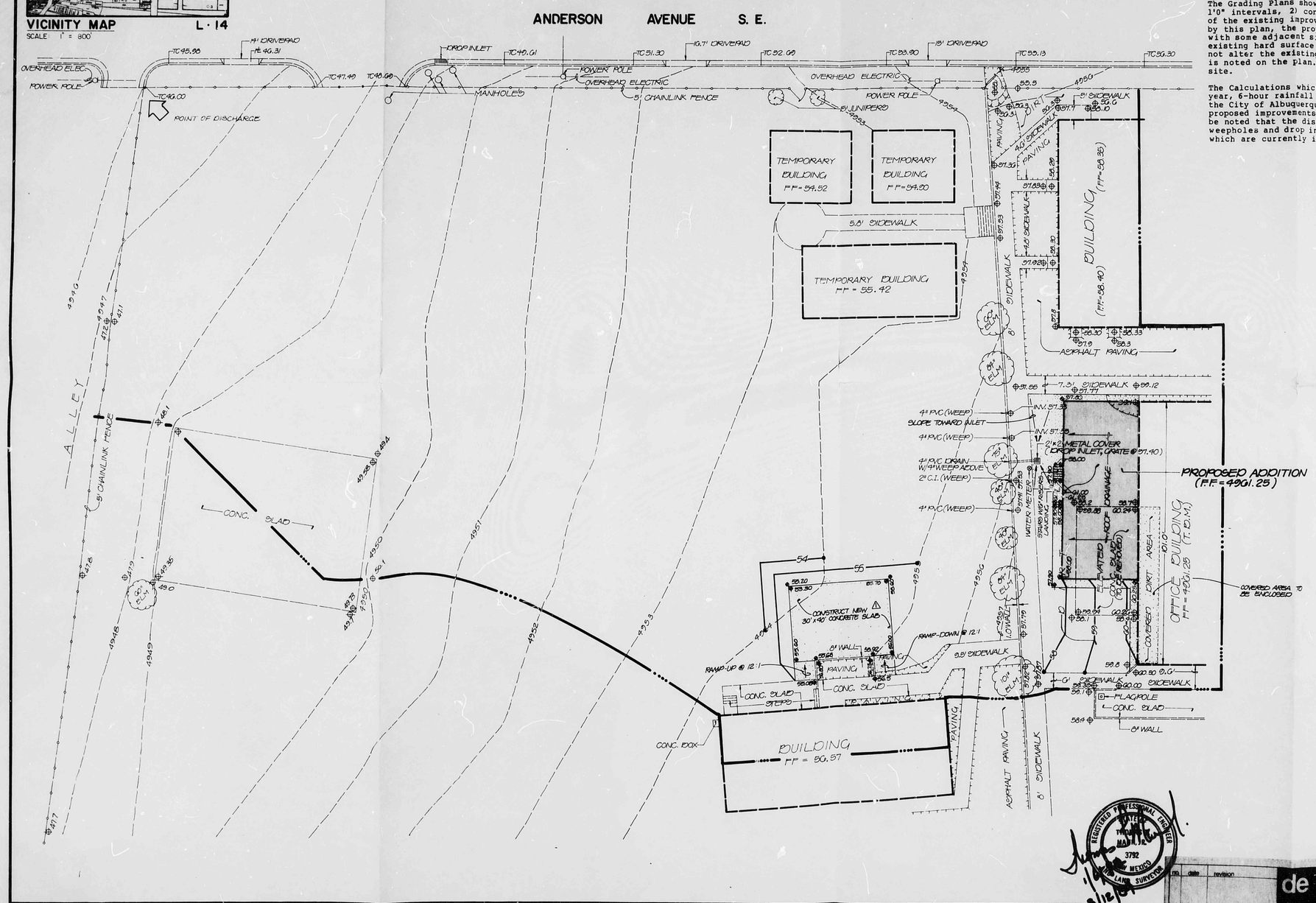
FINISH FLOOR OF EXISTING BUILDING AS SHOWN ELEV = 4961.25 FEET (MSLD)

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 LOCATIONS 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.

• LEGEND •

80.1	EXISTING SPOT ELEVATION
83.2	PROPOSED SPOT ELEVATION
3280	EXISTING CONTOUR
82	PROPOSED CONTOUR
	SWALE
T.C. 82.51	TOP OF CURB ELEVATION
F.E. 81.52	FLOW LINE ELEVATION
	CONCRETE
	BASIN BOUNDARY



DRAINAGE PLAN

The following items concerning the East San Jose Elementary School Addition Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

The proposed approvements, as shown by the Vincinity Map, are located west of Broadway Boulevard S.E. between Anderson Avenue S.E. and Thaxton Avenue S.E. At present, the site is developed as an Elementary School Campus.

Review of Plate L-14 of the Albuquerque Master Drainage Study reveals that the site does not lie within a designated flood hazard zone. Based upon the Pre-design Conference held November 23, 1983, with Mr. Fred J. Aguirre, the controlled discharge of runoff from the site is not required due to the small scale of the project. Further development however, may require a comprehensive Drainage Plan for the entire site, if deemed necessary by the City of Albuquerque Hydrology Section.

The Grading Plans shows 1) existing and proposed grades indicated by spot elevations and contours at 1'0" intervals, 2) continuity between existing and proposed elevations, 3) the limit and character of the existing improvements and 4) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements include the construction of a new classroom building along with some adjacent sidewalks. In addition to the proposed construction, the demolition of some existing hard surface area will be required. It should be noted that the proposed improvements will not alter the existing pattern of runoff present on the site; the point of discharge from the site is noted on the plan. Lastly, it should be noted that there are no offsite flows impacting this site.

The Calculations which appear below 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 these calculations, the proposed improvements will only have a negligible effect on the watershed. In addition, it should be noted that the discharge of runoff from the proposed addition will be controlled by the existing weepholes and drop inlet situated immediately west of the addition. These are existing features which are currently in operation.

RECEIVED MAR 1 1984 HYDROLOGY SECTION

CALCULATIONS

Ground Cover Information

1. From SCS Bernalillo County Soil Survey, Plate 30:

   CU Cut and Fill Land

   Hydrologic Soil Group A

2. Existing Condition

   A_{total} = 92,700 sf = 2.1 Ac

   A_{imp} = 17,500 sf

   % impervious = 19%

   'C' = 0.25 (DPM Plate 22.2C-1)

3. Developed Condition

   A_{total} = 92,700 sf = ~~2.1~~ Ac

   A_{imp} = ~~19,300~~ 20,500 sf △

   % impervious = ~~21%~~ 22% △

   'C' = ~~0.26~~ 0.27 (DPM Plate 22.2C-1 △

Rational Method

1. Discharge: Q = CiA

   where C varies

   $i = P_6 (6.84) T_c^{-0.51} = 4.65$ in/hr

   P_6 = 2.2 in (DPM Plate 22.2D-1)

   T_c = 10 min (minimum)

   A = area, acres

2. Volume: $V = CP_6A(1/12)$

   where C varies

   P_6 = 2.2 in (DPM Plate 22.2D-1)

   A = area, sf

Existing Condition

$Q_{100} = CiA = 0.25(4.65)(2.1) = 2.4$ cfs

$V_{100} = CP_6A = \cancel{0.26}\,0.25(2.2/12)(92,700) = \cancel{4420}\,4250$ cf △

Developed Condition

$Q_{100} = CiA = \cancel{0.26}\,0.27(4.65)(2.1) = \cancel{2.5}\,2.6$ cfs △

$V_{100} = CP_6A = \cancel{0.26}\,0.27(2.2/12)(92,700) = \cancel{4420}\,4590$ cf △

Comparison

$\Delta Q_{100} = 2.4 - \cancel{2.5}\,2.6 = \cancel{0.1}\,0.2$ cfs (increase) △

$\Delta V_{100} = 4250 - \cancel{4420}\,4590 = \cancel{170}\,340$ cf (increase) △

L14/D8

REGISTERED PROFESSIONAL ENGINEER — STATE OF NEW MEXICO — TIMOTHY M. MARTIN — 3792

NO.	DATE	BY	REVISIONS
△	3/84	JGM	ADD CONC. SLAB & ADJUST CALCS.

Tom Martin Associates, Inc.
811 DALLAS N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

DESIGNED BY JGM
DRAWN BY JM...
APPROVED TTM

JOB NO. 31451
DATE 11/83

GRADING AND DRAINAGE PLAN
EAST SAN JOSE ELEMENTARY SCHOOL

de ker & associates
architects engineers planners
FACILITIES IMPROVEMENTS & REPORTS

no.	date	revision

job no. 8329
drn. by T.M.A.
ckd by J.G.M.
issued

sheet A-10
of 68

N29563