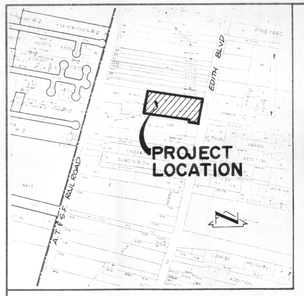


VICINITY MAP F-15

SCALE: 1" = 800'

LEGEND

- EXISTING SPOT ELEVATION
- 4975 EXISTING CONTOUR
- EXISTING SWALE
- EXISTING FENCE
- PROPOSED SPOT ELEVATION
- 79 PROPOSED CONTOUR

LEGAL DESCRIPTION

TRACT A-1, UNIT 2, KEY INDUSTRIAL PARK

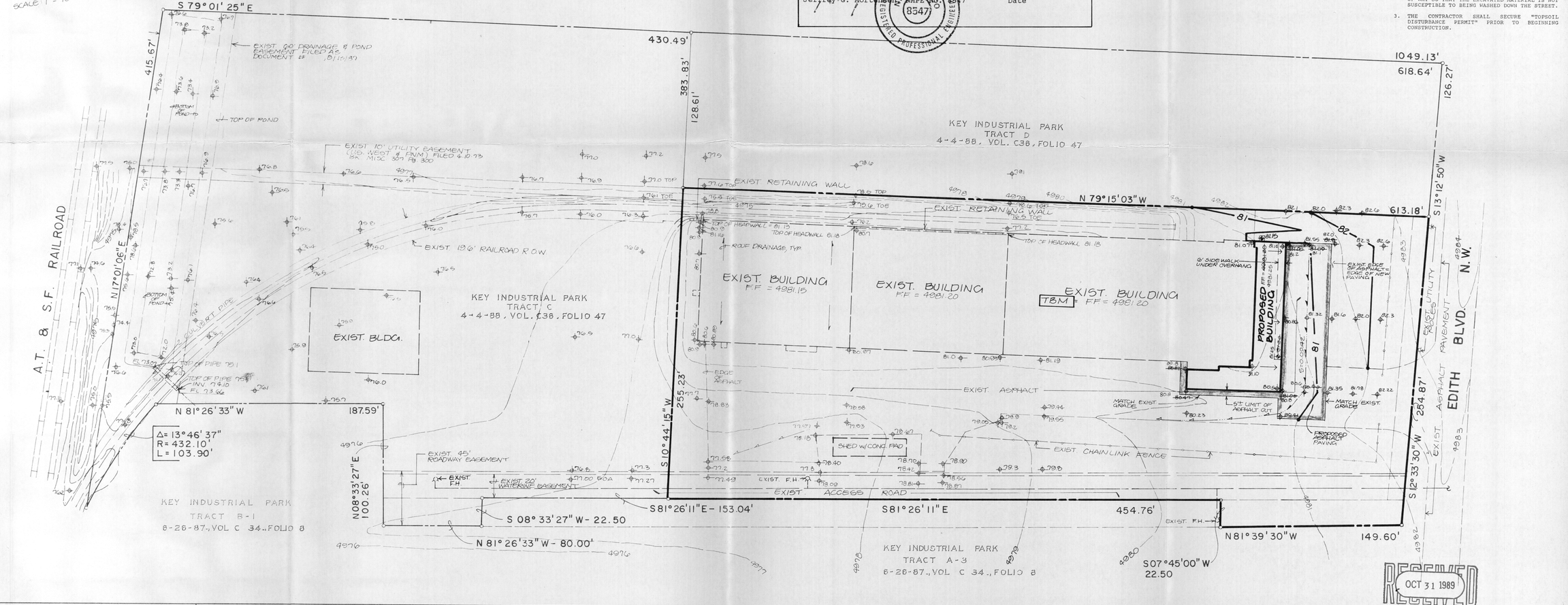
PROJECT BENCHMARK

A 40 PENNY NAIL IN POWER POLE LOCATED AT THE INTERSECTION OF EDITH AND NUSCATEL NE AT THE SOUTHEAST QUADRANT OF THE INTERSECTION.
ELEVATION: 4982.78 FT. (M.S.L.D.)

TBM

FINISH FLOOR ELEVATION OF EXISTING BLDG. LOCATED NEAR THE NORTH EAST CORNER OF TRACT A-1 AS SHOWN ON THE DRG. BELOW.
ELEVATION: 4981.20 FT. (M.S.L.D.)

SCALE: 1"=40'



CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey,
Plate 21: Gila Loam
Hydrologic Soil Group: B
Existing Pervious CN = 70 (DPM Plate 22.2 C-2
Pasture or Range Land: fair condition)

Existing Condition

Weighted Runoff Curve Number

A_{total} = 153,540 sf (3.5 Ac)
A_{imp} = 100,625 x 95 = 62.3
A_{tot} 153,540
$A_{natural}$ = 52,915 x 70 = 24.1
A_{tot} 153,540

Therefore, Use CN = 86

Time of Concentration

T_c = 10 min. = 0.167 hr.

100 year-24 hour rainfall = 3.0 in.
Unit Peak Discharge = 1.9 cfs/ac-in (Fig. 2-4)
Direct Runoff = 1.7 in (Fig 2-5)
Peak Runoff = Q_{100} = (UPD)(A_{tot}-Ac)(DRO)
= 11.3 cfs
Volume of Runoff = V_{100} = $\frac{DRO}{12}$ (A_{tot}-sf) = 21,750 cf

Developed Pervious CN = 70

Developed Condition

Weighted Runoff Curve Number

A_{total} = 153,540 sf (3.5 Ac)
A_{imp} = 100,625 x 95 = 62.3 (unchanged)
A_{tot} 15,340
$A_{natural}$ = 52,915 x 70 = 24.1 (unchanged)
A_{tot} 153,540

Therefore, Use CN = 86

Time of Concentration

T_c = 10 min. = 0.167 hr.

100 year-24 hour rainfall = 3.0 in.
Unit Peak Discharge = 1.9 cfs/ac-in (Fig. 2-4)
Direct Runoff = 1.7 in (Fig 2-5)
Peak Runoff = Q_{100} = (UPD)(A_{tot}-Ac)(DRO)
= 11.3 cfs
Volume of Runoff = V_{100} = $\frac{DRO}{12}$ (A_{tot}-sf) = 21,750 cf

ΔQ = 11.3 - 11.3 = 0 cfs (no change)
ΔV = 21,750 - 21,750 = 0 cf (no change)

Comparison

ΔQ_{100} = 11.3 - 11.3 = 0 cfs (no change)
ΔV_{100} = 21,750 - 21,750 = 0 cf (no change)

Required Pond Volume

$V_{Developed}$ = 21,750 cf

DRAINAGE PLAN

The following items concerning the Kitts Enterprises Building Addition are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, the site is located on the west side of Edith Boulevard N.E. within the North Valley. At present, the site is developed commercially. The existing improvements consist of buildings and asphalt paving. Presently, the site drains from east to west onto an adjacent property known as Tract C. An easement has been executed and filed between the owner of this property and the adjacent property, Tract C, to allow for this discharge of runoff. The easement agreement provides that the owner of Tract C accept and accommodate the discharge of developed runoff onto that property. A prior certification has indicated that ample volume has been provided in the pond which is situated on Tract C and shown on this plan.

The grading plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1'0" intervals, 2) the limit and character of the existing improvements, 3) the limit and character of the proposed improvements, and 4) continuity between existing and proposed grades. As shown by the Grading Plan, the proposed improvements consist of the construction of a building addition within an existing paved area. This construction will not disrupt the existing drainage pattern, nor will it create a drainage pattern which is inconsistent with the existing. The project will merely consist of the removal of asphalt paving and the construction of a building in its place. This will have a negligible affect on the hydrology of the site. Because the hydrology of the site is not affected by these improvements and the proposed improvements will not alter the existing drainage pattern of the site, no additional improvements are being made. As previously stated, adequate ponding has been provided on Tract C to accommodate the runoff from this site.

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 to quantify the peak rate of discharge and the SCS Method has been used to quantify the volume of runoff. Both Methods have been used in accordance with the City of Albuquerque Development Process Manual, Volume II, and the Mayor's Emergency Rule adopted January 14, 1986. As shown by these calculations, the proposed improvements will have a negligible impact on the runoff generated by this site.

DRAINAGE CERTIFICATION

As indicated by the spot elevations shown hereon, the proposed building addition and adjacent paving has been constructed in substantial compliance with the approved grading and drainage plan. The finished floor elevation of the addition is slightly higher than the existing building. All buildings lie outside of the designated flood hazard areas as defined by the National Flood Insurance Program Flood Boundary and Floodway Maps for the City of Albuquerque, New Mexico, Bernalillo County, dated October 14, 1983.

Jeffrey G. Mortensen, NMPE No. 8547 — 10-30-89 Date

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

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 IN WRITING 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.
5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.

EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-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.

RECEIVED OCT 31 1989 HYDROLOGY SECTION

JMA JEFF MORTENSEN & ASSOCIATES, INC.
811 DALLAS, N.E. - ALBUQUERQUE, NM 87110
ENGINEERS - TELEPHONE (505) 265-5611

GRADING AND DRAINAGE PLAN
KITT'S ADDITION

DESIGN BY	G.C.J.
DRAWN BY	R.A.R.
APPROVED BY	J.G.M.

No.	Date	By	Revision

JOB NO. 41534
DATE 03/89
SHEET 1 OF 1