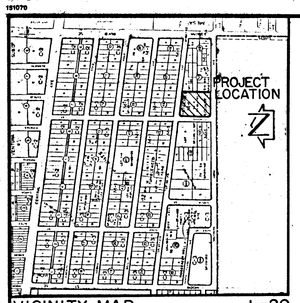
191070



VICINITY MAP L-20

SCALE: 1" = 800'

TEMPORARY BENCHMARK

SET ON THE TOP OF CURB ADJACENT TO THE NORTHEAST PROPERTY CORNER AS SHOWN ON THE DRAWING.
ELEVATION = 5460.82 FEET

LEGAL DESCRIPTION

TRACT A, HENDERSON SQUARE, FILED MARCH 14, 1986
BOOK C29, PAGE 180

PROJECT BENCHMARK

THE STATION IS A STANDARD USC & GS BRASS TABLE STAMPED "SUSAN 1969", SET IN TOP OF A CONCRETE POST FLUSH WITH THE GROUND, LOCATED INSIDE THE FENCED AREA OF A CITY-OWNED RESERVOIR JUST N.W. OF THE INTERSECTION OF SOUTHERN AVE. S.E. & GARCIA ST. S.E.
ELEVATION = 5444.49 FEET (M.S.L.D.)

ENGINEER'S CERTIFICATION

As indicated by the as-built information shown hereon, the Henderson Construction new manufacturing building has been constructed in substantial conformance with the approved Grading and Drainage Plan. The building and certain associated grades are approximately 0.4 feet higher than designed. Because of this, I have personally visited the subject project site and did not observe any adverse conditions created by raising those grades. It is based upon the above observations that issuance of a permanent Certificate of Occupancy is recommended.

Jeffrey G. Mortensen, NMPE 8547 — 01-12-94
Date

JEFFREY G. MORTENSEN — NEW MEXICO — 8547 — REGISTERED PROFESSIONAL ENGINEER

EROSION CONTROL MEASURES

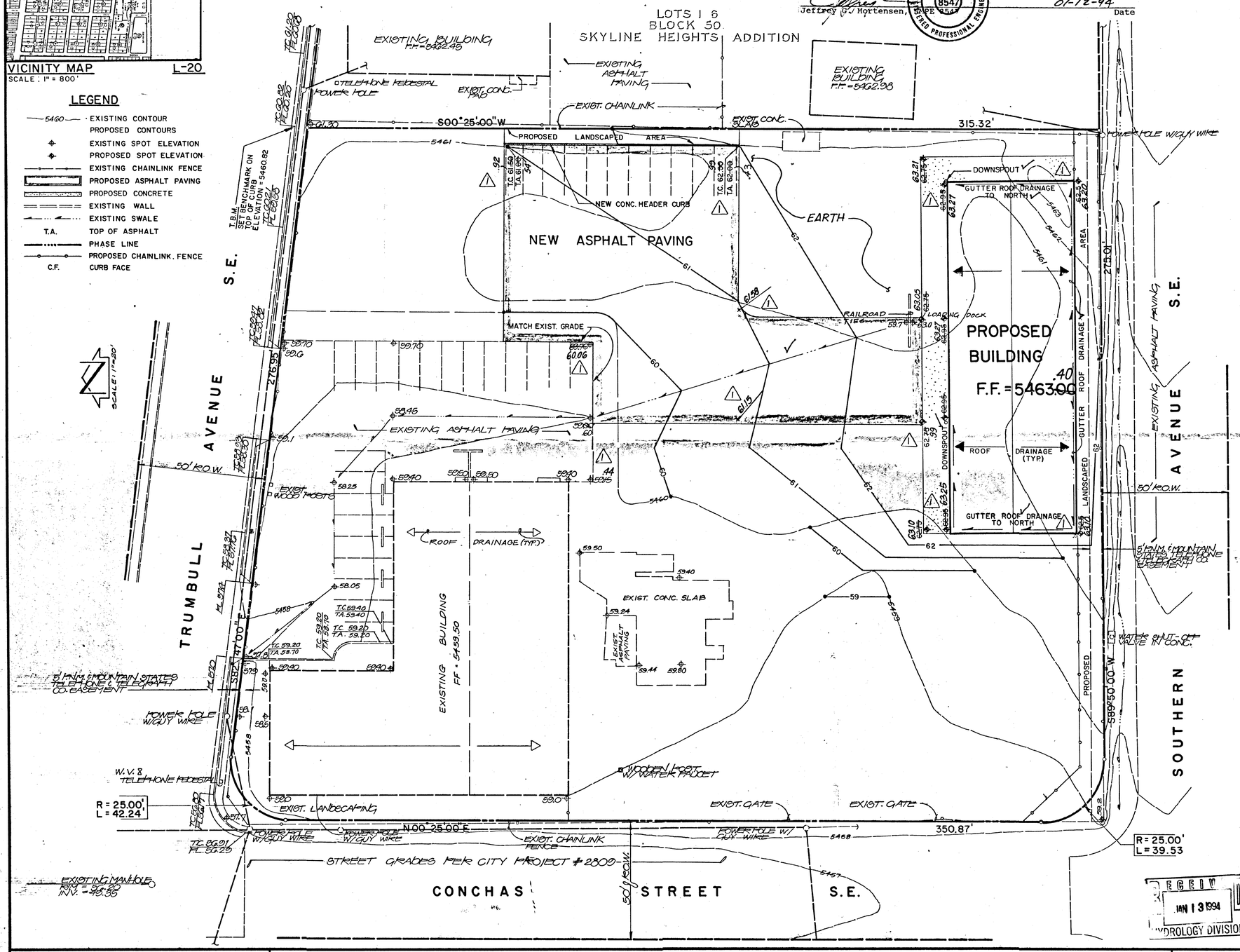
1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED 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.

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.
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.

LEGEND

- 5460 — EXISTING CONTOUR
- PROPOSED CONTOURS
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING CHAINLINK FENCE
- PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE
- EXISTING WALL
- EXISTING SWALE
- T.A. TOP OF ASPHALT
- PHASE LINE
- PROPOSED CHAINLINK FENCE
- C.F. CURB FACE



DRAINAGE PLAN

The following items concerning the Henderson Construction Drainage Plans are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, the site is located in the southeast corner of the intersection of Trumbull Avenue S.E. and Conchas Street S.E. Much of the surrounding area is already developed making this a modification to an existing site within an infill area.

As shown by Panel 36 of 50 of the National Flood Insurance Rate Maps for the City of Albuquerque, the site does not lie within a designated flood hazard zone. Review of the City of Albuquerque Storm Drain Facilities Maps reveals that there is an existing storm drain with inlets located west of the project site on Trumbull Avenue S.E. As stated by the previously approved plan, these storm drain improvements remove runoff from the street.

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 building addition and 4) continuity between existing and proposed grades. As shown by this plan, this phase of the project consists of a building addition to an already developed site. At present, the site freely discharges developed runoff to Trumbull Avenue S.E. via an existing drivepad. It is the intent of this plan to maintain that drainage pattern by discharging the developed runoff from the new paving and building addition in the same manner. The previously approved plan for this site demonstrated that the free discharge of runoff was appropriate. Due to the fact that this is an infill site, the runoff created by the site is negligible, thereby having minimal downstream impact, and the proximity of the site to existing downstream storm drain facilities (The Fairgrounds Storm Water Relief System). The proposed improvements now represent a modification to an existing site within an infill area, the other conditions for free discharge remain the same as per the previous submittal.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Procedure for 40-acre and Smaller Basins, as set forth in the Revision of Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, dated August, 1991, has been used to quantify the peak rate of discharge and volume of runoff generated. As shown by these calculations, the proposed development will result in a modest increase in runoff.

CALCULATIONS

Site Characteristics

1. Precipitation Zone 3
2. $P_{6,100} = P_{360}$ = 2.60 in.
3. Total Area (A_T) 2.11 Acres
4. Existing Land Treatment

Treatment	Area (sf/ac)	%
B	2,200/0.05	02
C	65,350/1.50	71
D	24,400/0.56	27

5. Developed Land Treatment

Treatment	Area (sf/ac)	%
B	5,700/0.13	06
C	40,100/0.92	44
D	46,150/1.06	50

Existing Condition

1. Volume

$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$
$E_W = [(0.92)(0.05)+(1.29)(1.50)+(2.36)(0.56)]/2.11 = 1.57$ in
$V_{100} = (E_W/12)A_T$
$V_{100} = (1.57/12)(2.11) = 0.2761$ Ac.Ft.; 12,000 cf

2. Peak Discharge

$Q_p = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$
$Q_p = Q_{100} = (2.60)(0.05)+(3.45)(1.50)+(5.02)(0.56) = 8.1$ cfs

Developed Condition

1. Volume

$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$
$E_W = [(0.92)(0.13)+(1.29)(0.92)+(2.36)(1.06)]/2.11 = 1.80$ in
$V_{100} = (E_W/12)A_T$
$V_{100} = (1.80/12)(2.11) = 0.3173$ Ac.Ft.; 13,850 cf

2. Peak Discharge

$Q_p = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$
$Q_p = Q_{100} = (2.60)(0.13)+(3.45)(0.92)+(5.02)(1.06) = 8.8$ cfs

Comparison

1. ΔV_{100} = 13,850 - 12,000 = 1,850 cf (increase)
2. ΔQ_{100} = 8.8 - 8.1 = 0.7 cfs (increase)

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JAN 13 1994
HYDROLOGY DIVISION

JEFFREY G. MORTENSEN — NEW MEXICO — 8547 — REGISTERED PROFESSIONAL ENGINEER

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6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS & SURVEYORS (505)345-4250

GRADING & DRAINAGE PLAN
NEW MANUFACTURING BUILDING
HENDERSON CONSTRUCTION

DESIGNED BY JGM/MFD
DRAWN BY JMC, TPH
APPROVED BY JGM

NO.	DATE	BY	REVISIONS
1	01/94	J.G.M.	AS-BUILT & CERTIFY

JOB NO. 60533
DATE 08/93
SHEET 1 OF 1

1/6/94