HYDROLOGY D17/D52 NO PLANS

D17/D52

NO PLANS

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

April 24, 1985

Marvin R. Kortum
1605 Speakman Drive, SE
Albuquerque, New Mexico 87123

RE: REVISED DRAINAGE/GRADING PLAN FOR ACADEMY EAST INDUSTRIAL PARK (D-17/D52)

Dear Mr. Kortum:

The referenced plan dated August 8, 1984, is approved for building permit sign-off.

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

If you have any questions or comments, please call me at 766-7644.

Cordially,

Carlos A. Montoya

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

85 29888 .0 350

DRAINAGE COVENANT

THIS COVENANT made this 15th day of April 1985, by and between Tracts 1 and 2 of WESTERN SUN PARTNERSHIP and WESTERN SUN PARTNERSHIP (Owner, which term includes successors and assigns).

RECEIVED APR 19 1985 HYDROLOGY SECTION

RECITAL

The Owner is owner of certain real property located at 7100 Jefferson N.E. - Tract One (1) of ACADEMY EAST INDUSTRIAL as the same is shown and designated on said plat as filed in Bernalillo County, New Mexico on November on November 15, 1976; Book B-12, Page 5.

That pursuant to City ordinances, regulations, and other applicable laws, the Owner is required to install and/or maintain certain drainage facilities on the property, and the parties wish to provide for an agreement as to the obligations and responsibilities for same.

DESCRIPTION OF FACILITIES

The following facilities are to be constructed and/or maintained by the Owner:

A drainage surface swale at the South 30 feet (S.30') of Tract 1, of said ACADEMY EAST INDUSTRIAL PARK as per the Drainage and Grading Plan (D-17/D52)

CONSTRUCTION OF DRAINAGE FACILITIES

The Owner shall construct the drainage facilities in accordance with standards, plans, and specifications prescribed and approved by the City.

MAINTENANCE OF FACILITIES

The Owner shall at his cost in accordance with the standards, plans, and specifications prescribed by the City, maintain said drainage facility. The City shall have the right to enter periodically upon the property to inspect the drainage facility.

FAILURE TO COMPLY AND LIEN

In the event that the Owner shall fail to construct the drainage facility in accordance with standards, plans, and specifications prescribed and approved by the City, or fail to adequately maintain said facilities, the City shall give the Owner notice in writing to construct correct, or maintain said facilities and if the Owner fails to comply therewith within 30 days, the City may enter upon said property to perform the necessary construction or maintenance. The cost of the City's performing such construction or maintenance shall be paid by the Owner. In the event the Owner fails to pay said cost within thirty (30) days after being billed for same, the City may file a lien against the property.

LIABILITY

The City shall not be liable for any damages to the Owner resulting from its construction, modification, or maintenance of said facilities.

NOTICE

The written notice provided for herein shall be accomplished by mailing same to:

WESTERN SUN PARTNERSHIP
215 Marble NW
Albuquerque, N.M. 87102

The Owner may change said address by giving written notice, certified mail, return receipt requested, to the City Engineer, City Hall at 505 Marquette Street, Albuquerque, New Mexico 87103.

INDEMNIFICATION AND HOLD HARMLESS

The Owner agrees to defend, indemnify, and hold harmless, the City, its officials, agents and employees from and against any and all claims, actions, suits, or proceedings of any kind brought against said parties for or on account of any matter arising from the drainage facility provided for herein or the Owner's failure to construct, maintain, or modify the drainage facility under this covenant.

COVENANT RUNNING WITH THE PROPERTY

The obligation of the Owner set forth herein shall be binding upon the Owner, his heirs, and assigns, and the property of the Owner as described herein and will run with said property until released by the City.

OWNER

By: WESTERN SUN PARTNERSHIP
Title: JOINT VENTURE PARTNER

CITY OF ALBUQUERQUE

Chief Administrative Officer

REVIEWED BY THE LEGAL DEPARTMENT:

Assistant City Attorney

City Attorney

ATTEST:

City Clerk

ACKNOWLEDGEMENTS

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this
_____ day of _____, 1985, By _____
_____, _____
(Name of Officer) (Title)
_____, _____
(Name of Corporation) (State of Incorporation)

_____
Notary Public

My Commission Expires:
_____

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

OFFICIAL SEAL
DANIEL M. GRANEY
NOTARY PUBLIC STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires _____

The foregoing instrument was acknowledged before me this
28th day of March, 1985, By _____
Jeff Boyd - Partner
(Name of Acknowledging Partner of Partners)
on behalf of Western Sun Partnership
(Name of Partnership)
a partnership.

Daniel M. Graney
Notary Public

My Commission Expires:
8-8-87

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me by
_____, On this _____ day of _____ 1985.

_____
Notary Public

My Commission Expires:
_____

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 18th
day of April, 1985, By Frank A. Kleinberg
Chief Administrative Officer of the City of Albuquerque, Municipal Corporation, on behalf of said Corporation.

John L. Grant
Notary Public

My Commission Expires:
10/18/88

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

March 6, 1985

Marvin Kortum
1605 Speakman, SE
Albuquerque, New Mexico 87123

RE: DRAINAGE & GRADING PLAN FOR ACADEMY EAST INDUSTRIAL PARK
(D-17/D52) RECEIVED FEBRUARY 6, 1985

Dear Mr. Kortum:

The referenced plan dated February 5, 1985, is approved contingent on the following: 1) a general easement for drainage across lot lines must be inserted on the plat for Tract 1.

If you have any questions or comments regarding this project, please call me at 766-7644.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

Marvin R Kortum
Civil Engineering
1605 Speakman Dr. SE
Albuquerque, NM 87123

February 5, 1985

RECEIVED
FEB 06 1985
HYDROLOGY SECTION

City Of Albuquerque
Design Hydrology Section
123 Central NW
Albuquerque, NM 87102

RE: A. Academy East Industrial Park; Lots 2 & 3, Ellison St. NE (D-17/D52)
B. City of Albuquerque letter, January 24, 1985, same subject.

Dear Sirs:

The above referenced item concerns the Grading and Drainage Plan and the approval for Lots 2 & 3 of the Academy East Industrial Park. This approved plan provided for storm run off onto Ellison Street, NE, and through an underground culvert across and onto Tract 1, then onto Jefferson Street, NE.

The owner/developer has now determined that the site will be more accessible if the specialized drainage structures for lots 2 and 3 can be eliminated. As an alternative, the owner/developer is willing to consider surface flow across the existing swales on lot 1, which is also under his control. As a practical solution, this will permit less steep transition ramps from lot 1 to lot 2, and will eliminate the theneed for the berm along the lower edge of the lot 2 terrace.

Attached for your review and approval is a revised drawing (Revision date February 5, 1985) for the Grading and Drainage Plan, Lots 2 and 3, Academy East Industrial Park, which incorporates the alternative concept. There are no changes to the drainage and grading within the lots 2 and 3. Changes to the outflow of storm runoff are summarized below:

1. Eliminate the catch basins and through-the-curb storm drains along the south of lot 2.
2. Eliminate the catch basin, drop inlet, and culvert along the north of lots 1 and 2.
3. Eliminate the berm along the west of lot 2.
4. Add drainage swales extending from lot 1 into lot 2, along the north and south ends, to direct storm and other runoff into the existing swales on lot 1.
5. Add small raised paved levees diagonally on the existing asphalt pavement between the building on lot 1 and the building on lot 2. These levees will divert roof runoff from the west of building, lot 2, into the existing swales with less tendency to overflow into the building on lot 1.
6. There will be no storm runoff onto Ellison Street. All flow will go onto Jefferson Street and thence onward as covered in the Drainage Report. The added peak flow (4.8 CFS or less) will not significantly increase the flow in this established and paved runoff channel.

A revised plat of tract 1 is being prepared which will state the same easement conditions as now stated on the plat for tracts 2 and 3, as recorded on December 26, 1984 at the Bernalillo County Clerks Office, No. 84 97572. The revised plat will be recorded upon your approval of the revised concept as shown on the attached drawing.

Please contact me if I can be of assisstance.

Respectfully

Marvin R Kortum
299-0774

B17 D5-2

July 17, 1984

City of Albuquerque
Municipal Development Department

Atten: Hydrology

Dear Sirs:

The following comments are provided to answer questions raised by Mr. Goolsby during the July 11, 1984 review of the drainage report, D-17-52 for Academy East Industrial Park, Tracts 2 and 3.

1. Attached is a copy of the revised plat of Tracts 1, 2, and 3, Academy East Industrial Park. The plat shows the drainage easements for cross flow of rainfall runoffs. Berms at the southeast corner of Tract 2 are revised so that flood overflow will be north along Tract 2 west boundary, and thence across the established drainage easement for Tract 1.

2. Attached is a revised copy of the grading plan which corrects the elevation shown for the outflow into the Ellison Street gutter (48.65 vs. 49.65), and also shows the outflow onto Jefferson Street from the drive-pad to Tract 1. Also shown are the berm elevation changes which redirect flood overflow when Ellison Street outdrains are inoperative.

3. Flows Running Past the Site:

In addition to the flow from the San Antonio Blvd. and underpass, which are fully discussed in the original report, there is some flow onto Ellison Street to be expected from the east from present and future developments along Ellison Street and that portion of Hawkins Street which discharges onto Ellison Street. This quantity is as estimated below.

Site Area: 9 acres

Site Description: Industrial development, some landscaping 2% and length of drain path is 1400 feet. (Largest run-off expected from the Square Dance Parking Lot). Type B soils. Rainfall data as in original report.

Volume of Runoff: Direct runoff is 0.6 inches (plate 22.2 C-4)
Volume is .6" x 9 acres x 43560 ft^2/1/12 = 20,000 ft^3

Peak Runoff:

$$Tc = .0078 \frac{L^{.77}}{S^{.385}} = 9.3 \text{ acres}$$

use intensity factor for 10 minutes equal 2.15
Rational Coefficient C = 0.7
Q = CIA = (.7)(2.15) (2.2) 9 = 30 cfs

At a gutter slope of 2.3% east to west, along Ellison, the standard gutter capacity for 1/2 of the 48 ft. wide street is about 35 cfs at a depth of .87 ft. and velocity of 2.5 fps (plate 22.2 D-3). The addition of 4.8 fps from the discharge of the Academy East Industrial Park will bring the 100 year flood runoff into the north gutter of Wllison to near its capacity.

RECEIVED
JUL 18 1984
HYDROLOGY SECTION

4. Down Stream and Facilities:

A. The flow on Ellison Street will continue toward the west on Ellison Street to its intersection with Washington Street. At this point it is discharged into an unimproved dirt channel, and flows about 1000 feet into the collecting vasin of the North Diversion Channel at its intersection with PINO ARROYO. Additional inflow onto Ellison Street west of Jefferson Street may cause Ellison Street to overflow into presently undeveloped lands. Overflow fron the present unimproved dirt channel will flow across unimproved lands toward PINO ARROYO and the North Diversion ditch inlet.

B. The runoff from the Northwest corner of Tracts 2 and 3 through Tract 1 will flow north on Jefferson Street, then west on Hawkins Street, where it will enter into a concrete lined inlet channel into the North Diversion Channel.

Marvin R. Kortum, NMPF NO. 6519

4. Down Stream and Facilities:

A. The flow on Ellison Street will continue toward the west on Ellison Street to its intersection with Washington Street. At this point it is discharged into an unimproved dirt channel, and flows about 1000 feet into the collecting vasin of the North Diversion Channel at its intersection with PINO ARROYO. Additional inflow onto Ellison Street west of Jefferson Street may cause Ellison Street to overflow into presently undeveloped lands. Overflow fron the present unimproved dirt channel will flow across unimproved lands toward PINO ARROYO and the North Diversion ditch inlet.

B. The runoff from the Northwest corner of Tracts 2 and 3 through Tract 1 will flow north on Jefferson Street, then west on Hawkins Street, where it will enter into a concrete lined inlet channel into the North Diversion Channel.

Marvin R. Kortum, NMPE NO. 6519

Marvin R. Kortum
New Mexico P.E. 6519
1605 Speakman S.E.
Albuquerque, New Mexico 87123

August 8, 1984

City of Albuquerque
Municipal Development Department
Atten: Hydrology
123 Central Ave., N.W.
Albuquerque, New Mexico

Ref: A. Academy East Industrial Park, Tracts 2 and 3. File #D-17-32
B. My discussion, August 8, 1984 with Mr. Carlos Montoya, Hydrology.

Dear Sirs:

Attached is a site and grading plan for the referenced site which shows revisions as of August 8, 1984. The revision shows that the paved areas around the buildings are now established as traffic and drainage easements.

MARVIN R. KORTUM
NEW MEXICO
6519
REGISTERED PROFESSIONAL ENGINEER

Sincerely,

Marvin R. Kortum

RECEIVED
AUG 08 1984
HYDROLOGY SECTION

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-76..

August 10, 1984

Mr. Marvin Kortum
1605 Speakman SE
Albuquerque, New Mexico 87123

RE: DRAINAGE & GRADING PLAN FOR ACADEMY EAST INDUSTRIAL PARK
(D-17 D-52) RECEIVED JULY 18, 1984.

Dear Mr. Kortum:

The above referenced plan, dated July 18, 1984 is approved with the following comments:

A "Drainage Facilities Within City Right-of-Way" document must be attached to the construction set prior to release of the building permit. Also, before the final C.O. is issued the general easement requirement for drainage across lot lines must be inserted on the plat.

If I can be of further assistance, please contact me at 766-7644.

Sincerely,

Carlos A. Montoya
Civil Engineer/Hydrology

CAM/cl

Marvin R. Kortum
Civil Engineering
1605 Speakman Dr. S.E.
Albuquerque, N.M. 87123

January 14, 1985

City of Albuquerque
Design Hydrology Section
123 Central N.W.
Albuquerque, N.M. 87102

Reference A. Drainage and Grading Plan for Academy East Industrial Park (D-17 D-52)(DRB 84-288)(DRB 84-428)

B. Your letter, same subject, Dated August 10, 1984

Dear Mr. Carlos Montoya;

Attached are copies of the following documents:

1. Drainage facilities within City right-of-way for through curb drain D-186. (Approved City of Albuquerque Engineer November 27, 1984)
2. Plat showing across property line drainage easements. (Recorded County of Bernalillo December 26, 1984, Volume C 25 Folio 195)(84-97572)

The attached documents are for your files.

Respectfully,

Marvin R. Kortum

MRK:tjs

Enclosures

cc: Devco
Attn: Mr. Jeff Boyd
*Copies of attached are required for Occupancy Permit.

RECEIVED
JAN 14 1985
HYDROLOGY SECTION

DRAINAGE INFORMATION SHEET

PROJECT TITLE: ACADEMY EAST INDUSTRIAL PARK LOTS 2 & 3 ZONE ATLAS/DRNG. FILE #: D-17 - DS2

LEGAL DESCRIPTION: TRACTS 2 & 3 OF ACADEMY EAST INDUSTRIAL PARK OCT 15 1976

CITY ADDRESS: ELLISON ST. N.E.

ENGINEERING FIRM: MARVIN R. KORTUM CONTACT:

ADDRESS: 1605 SPEAKMAN DR SE PHONE: 299-0774

OWNER: DEVCO CONTACT:

ADDRESS: PHONE:

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

____ YES

____ NO

____ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ____

EPC NO. ____

PROJ. NO. ____

RECEIVED JAN 15 1985 HYDROLOGY SECTION

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

____ DRAINAGE PLAN

____ CONCEPTUAL GRADING & DRAINAGE PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

____ ENGINEER'S CERTIFICATION

X THIS SUBMITTAL PROVIDES INFORMATION ON THE APPROVAL CONTINGENCIES

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

X FINAL PLAT APPROVAL

____ BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

____ CERTIFICATE OF OCCUPANCY APPROVAL

____ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

____ OTHER ____ (SPECIFY)

DATE SUBMITTED: JAN 13 1985

BY: MARVIN KORTUM

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

January 24, 1985

Marvin R. Kortum
1605 Speakman Drive, NE
Albuquerque, New Mexico 87123

RE: ACADEMY EAST INDUSTRIAL PARK; LOTS 2 & 3
ELLISON STREET, NE (D-17/D52)

Dear Mr. Kortum:

The referenced plan dated August 8, 1984, is approved.

Please attach a copy of this approved plan along with the appropriately approved "Drainage Facilities Within City Right-of-Way" document to the construction set prior to Hydrology sign-off.

If I can be of further assistance, please call me at 766-7644.

Cordially,

Carlos A. Montoya
City/County Floodplain Administrator

CAM/bsj

INFORMATION SHEET

PROJECT TITLE Academy East Industrial Park TYPE OF SUBMITTAL Drainage Plan

ZONE ATLAS PAGE NO. D-17 852 CITY ADDRESS Ellison St. N.E.

LEGAL DESCRIPTION Tracts 2 & 3 Academy East Industrial Park

ENGINEERING FIRM Marvin R. Kortum CONTACT

ADDRESS 1605 Speakman Dr. S.E. PHONE 299-0774

OWNER Western Sun CONTACT

ADDRESS PHONE

ARCHITECT Gordon Hall CONTACT

ADDRESS PHONE

SURVEYOR Southwest Surveying CONTACT

ADDRESS 215 Marble N.W. PHONE 247-4444

CONTRACTOR Devco Enterprises Inc. CONTACT

ADDRESS PHONE

PRE-DESIGN MEETING:

___ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
X FINAL PLAT APPROVAL
X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
✓ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 5/22/84

BY: Tony Stevens

RECEIVED
MAY 22 1984
HYDROLOGY SECTION

Responded in person
7/11/84 BG

Project Title: ACADEMY EAST INDUSTRIAL PARK
Tracts 2 and 3

Zone Atlas D-17-Z

Ellison Street N.E.

Type of Submittal: Drainage Plan, Detailed Grading, and Erosion Control Plan

Legal Description: Tracts numbered Two (2) and Three (3) of the Plat of Tracts 1.2. and 3, ACADEMY EAST INDUSTRIAL PARK, as the same is shown and designated on said plat filed in the office of the County Clerk of Bernalillo County, New Mexico, on October 15, 1976.

Engineering Firm: Marvin R. Kortum
1605 Speakman Dr. S.E.
Albuquerque, New Mexico 87123
(505) 299-0774
Contact, Marvin R. Kortum

Owner: Western Sun

Architect: Gordon Hall

Surveyor: Southwest Surveying Co.

Contractor: Devco Enterprises Inc.

Date Submitted: May 18, 1984

By: Marvin R. Kortum

MARVIN R. KORTUM
NEW MEXICO
6519
REGISTERED PROFESSIONAL ENGINEER

RECEIVED
MAY 22 1984
HYDROLOGY SECTION

I. ON-SITE CONDITIONS

A). Site Characteristics:

Tracts 2 and 3 of the ACADEMY EAST INDUSTRIAL PARK (AEIP) consist of a near rectangular shaped plat 320 feet North to South, and 275 feet east to west, containing 2.02 acres. The surface is essentially the native soils, but with major surface disturbance caused by recent adjacent construction and street building. The surface slopes at a 2% to 4% slope from east to west, with a level and bermed area near the west edge. The last 35 feet along the west edge is a strip of asphalt surface sloping at about 5% slope toward a swale which provides drainage for the adjacent building and parking area. (see cross sections). The earth surface has sparce vegetation, consisting of annual weed plants and some perennial grasses.

B). Soils:

The soils, as identified on the Bernalillo County Soils Survey by the SCS, USDA, are Embudo gravelly fine sandy loam, 0 to 5 percent slopes (EMB). The Embudo series consist of deep, well drained soils that formed in alluvium derived from decomposed coarse grained granite rocks on old alluvial fans. By on site visual inspection, and by viewing adjacent cuts, the soils appear to be appropriately classified. The engineering characteristics of the soils do not present undue constraints on the proposed use of the area for single story industrial buildings with paved hardstand. The SCS cautions that the soils are loose, probably subject to compressing, or settling, when wetted, and stress the need for control of moisture for proper compaction. The soil is also subject to consideration under load. The foundations and construction methods to be used should be designed for those soil conditions.

C). Undeveloped Runoff:

The soils are identified as hydrologic soil group B, soils which absorb more water than is typical. An average drainage path length of 200 feet, and a fall of 5 feet is typical of the sloped area leading to the bermed and level strip.

D). Direct Run Off Volume; Undeveloped Land

The 6 hour - 100 year frequency rainfall for the A.E.I.P. is 2.2 inches, per 1973 NOAA Atlas 2, Volume IV, (plate, 22.2 D-1) The present surface is typical of range land in poor condition, for which a curve number (CN) of 79 is appropriate, (plate 22.2, C-2). From plate 22.2 C-4, read direct run off as 0.7 inches. Direct run off for the unpaved area is 320 x (275 -35) x .70/12 = 4480 Ft^3. The existing level bench provides about 10,000 $feet^2$

of (200' x 50') irregular catch basin, for a potential depth of about .45 feet. This would probably exceed the capacity of the irregular catch basin, with run off flowing out the west end of the north property line, and then toward the west (Jefferson St.) across adjacent property. The portion of direct run off falling on the existing 35 ft. wide asphalt strip (CN = 98) (320 x 35 x 2.2/12). = 2050 ft^3 would flow to the existing swale, and from there to Jefferson Street. Total run off, undeveloped, would be about 1/2 (4480) + 2050 = 4000 to 5000 ft^3.

E). Peak Run Off, Undeveloped Land:

Based on the present surface irregularity, the peak run off would occur at some point in time during a rainfall when the irregular catch basin is filled, and overflow starts on erosion channel which subsequently drains a portion of the basin (say 50%). With the 100 year, 6 hour direct rainfall run off volume and estimating 10 minutes as the time for 50% of this volume to erode a channel and escape. The peak run off would be $\frac{4480}{(2)(60)(10)} = 3.7$

or about 4 cfs.

F). Developed Run Off:

There will be a small 20 ft. wide strip of landscaping, trees and grass along the Ellison St. (south) side of the property. For developed run off computations, this minor area will be ignored. The remainder of the area is to paved hardstand, and sloped roof. (roof area + 33,600 ft^2, hardstand 54,400 ft^2). For drainage purposes, the area is divided into two approximately equal areas, the north half draining toward the north property line, and then west along a swale, the south half toward the south, then west along a swale. The north swale will drain along a drainage easement, past the existing adjacent building, and then onto Jefferson Street. The south swale drains onto Ellison Street near the southeast corner of the property. The area west of the center line of the western building is drained by separate swales, but is included in the below computations.

G). Direct Run Off Volumes For Developed Property

Rainfall is 2.2 inches, as above. Use CN = 98 for hardstand and roof areas. The run off volume for each the north and south half would be $\frac{320 \times 275}{2} \times \frac{2.2}{12} = 8070$ ft^3, or 16140 ft^3 total

(.37 acre feet)

H). Peak Run Off For Developed Property

The length of the drainage path for determining peak run off is from the mid point of the east swale, to the northeast or southwest corners, repectively. Average length is 410 feet, elevation drop of 4.25 feet, or slope of 1%. Time of concentration, using

the Kirpich urban flow equation $TC = .0078 \frac{L^{.77}}{S^{.385}}$, is thus estimated to be 4.6 minutes. From plate 22.2 D-2, use rainfall intensity factor for TC = 10 minutes, which is 2.15. Using the rational fromula, Q = CIA, and a C = 1.00, the peak run off per drainage area, Q = (1.0) (1.01 acre) (2.2 x 2.15) = 4.8 cfs. therefore, total peak run off equals 9.6 cfs, 4.8 cfs. toward Jefferson St., and 4.8 cfs toward Ellison St.

I).. Depth Of Peak flow In Swales:

The paved hardstand swales can be represented by a triangular ditch, with side slopes of 5 percent and longitudinal slopes of 1 percent.

Use Bureau of Public Roads equation for flow in a very shallow triangular ditch

$Q = .56 \frac{Z}{n} S^{1/2} y^{8/3}$, = Discharge in cfs

and Z = width divided by the depth (20/.5) = 40

n = Mannings coefficient for paved surface = .017

S = Longitudinal slope (1 percent)

y = depth in feet

Thus, for $Q = 4.8$ CFS $= .56 \frac{40}{.017}(.01)^{1/2} y^{8/3}$

$y^{8/3} = 4.8 / 131.76 = .0364$

$\therefore y = (.0368)^{3/8} = .289$ ft., or, 3.5 inches

Check $Q = VA$, where $A = \frac{1}{2} wy$ and $w = 40y$

$\therefore Q = V(\frac{1}{2})(40y)(y) = 20Vy^2$

For $Q = 4.8$, $V = \frac{4.8}{20(.289)^2} = 2.82$ fps

The calcualted depth of 3.5 inches will occur as the run off enters the small catch basin at either west corner.

J). Discharge, Northwest Corner:

At the Northwest corner the run off enters a 4ft. x 4ft. drop inlet, and then flows through an 18" in diameter culvert (CMP) to free discharge in existing swale. Grate discharge capacity for a square grate is 4.8 cfs. with a head of about .21 ft. (CE Manual, Page 119). Capacity of an 18" CMP at a slope of .006 is 4.8 cfs. (CE Manual, Page 105).

K). Discharge Southwest Corner:

At the Southeast corner, discharge will be to the Ellison Gutter, by under sidewalk drains, at a slope of 2.5%. Using the Manning equation for flow in an open channel, and M = .017 consider an under sidewalk drain with a width of 18 inches, and a water depth of 6 inches.

$Q = A \frac{1.486}{M} R^{2/3} S^{1/2}$, where R = hydrologic radius

$$R = \frac{A}{\text{wetted perimeter}} = \frac{(.5)(1.5)}{.5 + 1.5 + .5} = \frac{.75}{2.5}$$

$$\text{thus } Q = (.5)(1.5) \frac{1.486}{.017} \left(\frac{.75}{2.5}\right)^{2/3} (.025)^{1/2} = 5.40 \text{ cfs.}$$

The selected section will be adjacent for the computed peak flow of 4.8 cfs. plus minor entry losses.

L). Greater Than Calculated Run Off:

The catch basins in both north and south corners include a 1.5 ft. berm within the paved surface. Runover due to clogged out-drains or greater than calculated run off will flow tto the drainage swales on the adjacent property, and then to Jefferson Street. Overflow will not cause serious damage to the adjacent down hill property, nor will there be back up into the buildings on AEIP.

Requires concurrence

II. OFF-SITE FLOWS:

Tracts 2 and 3 of ACADEMY EAST INDUSTRIAL PARK (AEIP) are not in the natural flow path of any major off-site flows. The site is located generally on the high ground between two natural drainage channels which run from the Sandia Mountains toward the Rio Grande (from east to west). The one natural drainge channel is identified as Arroyo del Pino located about 500 feet south of the AEIP, crossing under Interstate 25 about one fourth mile north of the Osuna Road interchange. The second major drainage channel is identified as Arroyo de Domingo Baca, located about one half mile north of the AEIP, crossing under I-25 at the Journal Industrial Park and near the Los Angeles overpass. The AEIP is located within the natural headwaters of a small local drainage feature identified as Arroyo del Pino North, man made features have and are continuning to alter the natural drainage features. The elevated roadbed of I-25 provides a large berm and dam about one fourth mile east of the AEIP. Existing culvert drains through this berm are now being changed, so the discussion below will cover the proposed changes now under construction.

A). Inflows:

Interstate 25 and San Antonio Blvd. Underpass

The San Antonio Blvd. crossing under I-25, and the associated east and west side frontage road ramps create a funnel and chanelling effect which could direct run off into the AEIP. The new San Antonio Blvd. will connect to the existing Ellison St. pavement near the Southeast corner of the AEIP. The underpass complex does include an extensive storm drain and inlet system which should direct all run off from the ramps and crossing site into the Arroyo del Pino channel. Included in the storm drain system is run off from the Southeast corner of the Meadows Mobile Home Park, and adjacent vacant properties. Not included in the storm drain system under construction are possible run offs from areas east of the San Antonio underpass, an indeterminate area uphill from the underpass, and generally paralleling the present San Antonio Blvd. alignment. A study and design is believed to consider that this area will be included in the drainage run off into Arroyo del Pino, Current I-25 construction does include an 8ft. x 8ft. box culvert under I-25 for Arroyo del Pino.

The conditions which could cause run off into the AEIP would be major run off from areas east of the new San Antonio underpass, after substantial completion of the underpass, but before adequate completion of Arroyo del Pino channelling. The consequences of such run off on AEIP could be some floor level flooding, but serious damage should not occur.

B). Minor Off-Site Inflows:

Inflow from a major run off just east (uphill) of the AEIP is effectively blocked by the channelling effect on Hawkins Street,

running east and north of the site. The adjacent properties along the east property line are developed and should cause no run off. The properties along the north half have a drainage ditch which drains to the north. This ditch is partially broken and inactive due to ongoing building construction on site. The property along the south half has a catch basin in its northwest corner, conceivably seepage from this basin could flow under the retaining wall and undermine the hardstand on the AEIP. The elevation of this basin is sufficient to permit its drainage to Ellison St.

C). Off-Site Outflows: Pond Ponding area

As discussed above, run off from the undeveloped site would run onto Jefferson St., then north to an improved concrete lined channel which flows west initially along the alignment of the Arroyo del Pino North, natural channel. Run off from the north half of the developed site would follow this same general flow path. Run off from the south half of the developed site would flow down Ellison Street, across Jefferson St., to the intersection of Ellison St. and Washington St., at which point it would flow into an improvised dirt channel across undeveloped land.

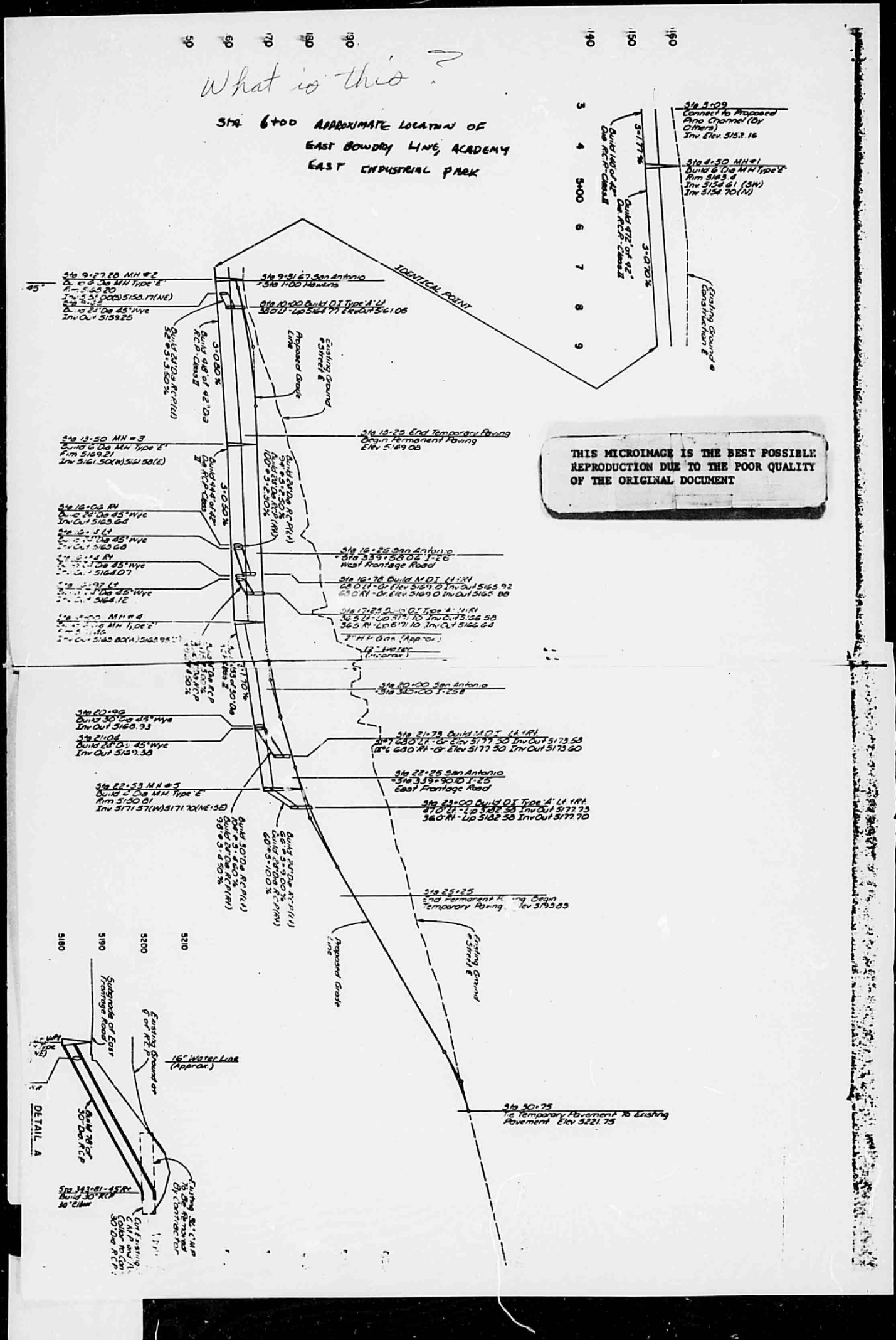
III. EROSION CONTROL:

During the construction phase, severe water run off and erosion can be reduced by placing berms parallel to the contours. Two berms running north to south, one along the west boundary, and sufficient berming on the north to close the terrace should be adequate. Berms should be high enough and have a level area uphill to hold 2750 ft^3 each. [10 year rainfall = 2.2 x .65) = 1.45 inches, CN = 90, [Direct Run off = .75 inches, total run off = 88,000 ft^2 x $\frac{.75 \text{ in. ft.}}{12 \text{ in.}}$ = 5500, one half back of each berm = 2750 ft^3]. Two berms are one foot high with ponding area 10 feet wide would be adequate.

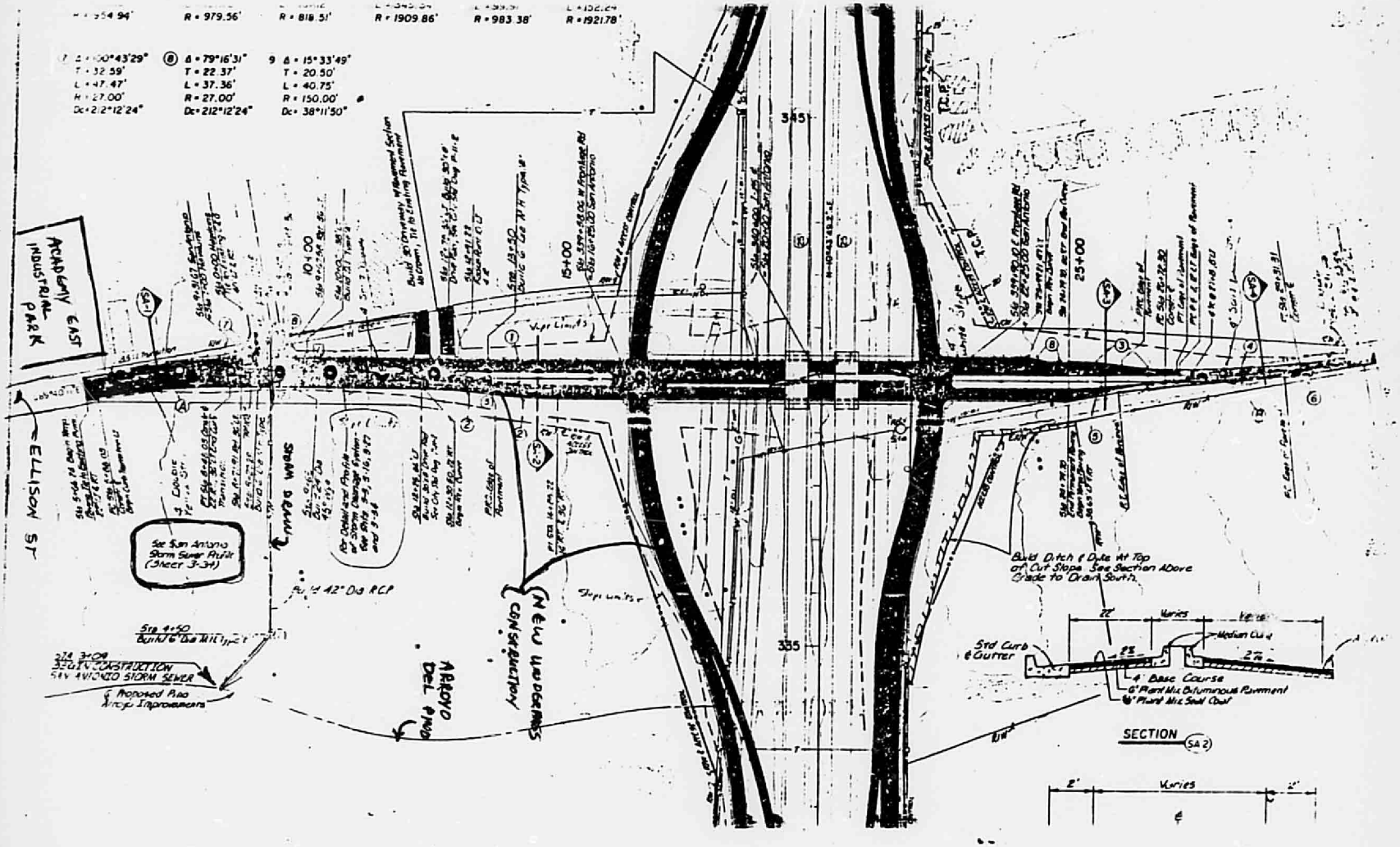
(320 x 10 x 1 = 3200 ft^3.)

What is this?

STA 6+00 APPROXIMATE LOCATION OF EAST BOUNDRY LINE, ACADEMY EAST INDUSTRIAL PARK

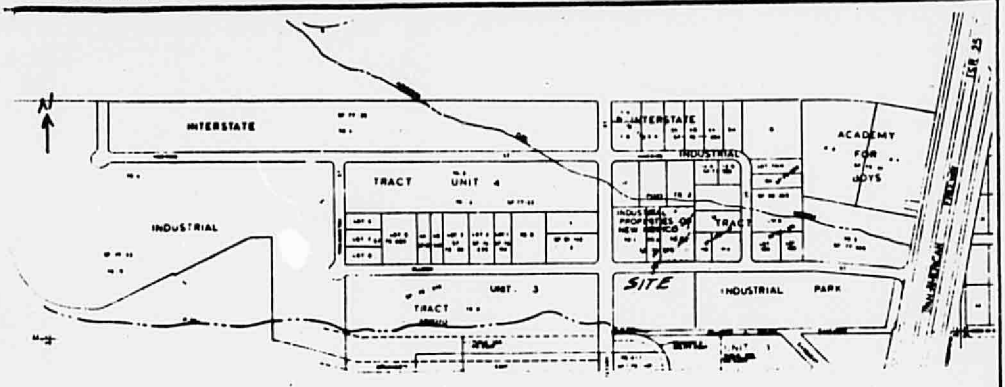


THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT


R = 979.56'
R = 818.51'
R = 1909.86'
R = 983.38'
R = 1921.78'
Δ = 79°16'31"
T = 22.37'
L = 37.36'
R = 27.00'
Dc = 212°12'24"
Δ = 15°33'49"
T = 20.50'
L = 40.75'
R = 150.00'
Dc = 38°11'50"
ACADEMY EAST INDUSTRIAL PARK
ELLISON ST
10+00
15+00
25+00
Slope Limits
See San Antonio Storm Sewer Profile (Sheet 3-31)
Sta 4+50 Build 42" Dia RCP
Sta 3+09 BEGIN CONSTRUCTION SAN ANTONIO STORM SEWER
Proposed Rio Arroyo Improvements
ARROYO DEL RIO
NEW WATERWAYS CONSTRUCTION
Build Ditch & Dike At Top of Cut Slope. See Section Above Slope to Drain South.
Std Curb & Gutter
Median Curb
4" Base Course
6" Plant Mix Bituminous Pavement
1/2" Plant Mix Seal Coat
SECTION (SA 2)
Varies
2'

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



D·17·Z

LEGAL DESCRIPTION

Tracts 2-A and 3-A of the Replat of tracts 2 and 3 of ACADEMY EAST INDUSTRIAL PARK [illegible] as shown and designated on said replat thereof, filed in the office of the County Clerk [illegible] County, New Mexico, on July 5, 1984.

NEW MEXICO 6519 REGISTERED PROFESSIONAL ENGINEER

Bench mark used: 8-D 17, 60 penny nail in North pole of pylon #RE10 - 5145.784 elevation.

Location: Located along an electric x-mission line, in an open field, 0.35 miles West of Highway I-25 and on the projected centerline of San Antonio Dr. NE.

RECEIVED JAN 14 1985 HYDROLOGY SECTION

NOTICE TO CONTRACTOR

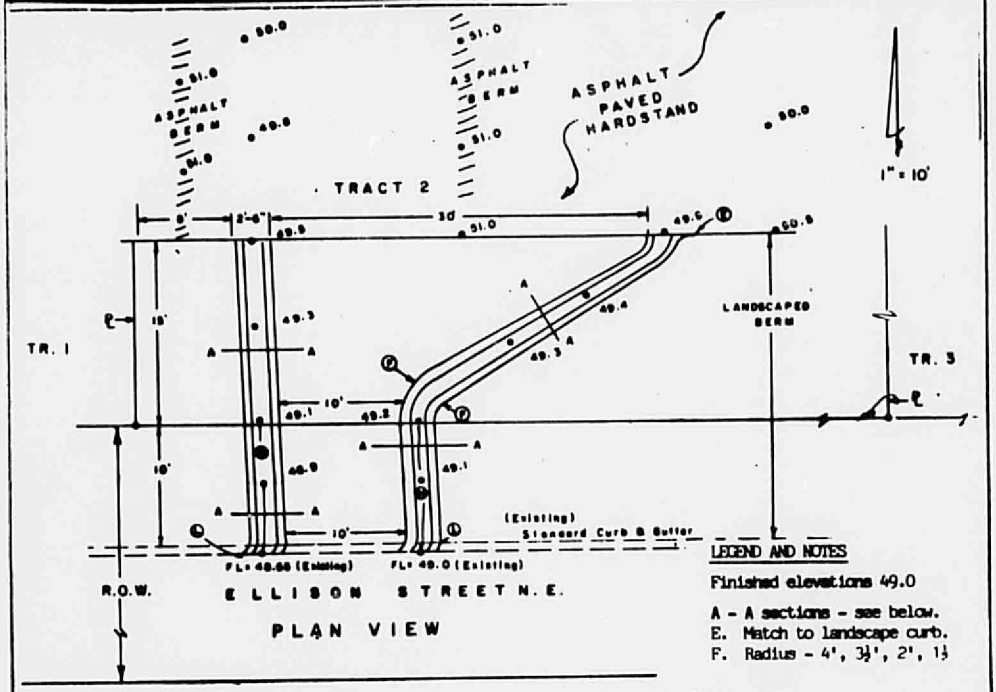
1. An excavation/construction permit will be required before any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with "Contract Documents for City-Wide Utilities and Cash Paving No. 84-3 "
3. Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.
4. 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 with a minimum amount of delay.
5. Backfill compaction shall be according to ARTERIAL street use.

D-186

APPROVALS	NAME	DATE	TITLE: Academy East Industrial Park, Tracts 2 & 3 through curb drain. 4801 Ellison St. N.E.
A.C.E./DESIGN	[signature]	11/27/84	
INSPECTOR			PERMIT NO.
A.C.E./FIELD			SHEET 1 OF 2 — MAP NO. D-17-Z

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



LEGEND AND NOTES

Finished elevations 49.0

A - A sections - see below.

E. Match to landscape curb.

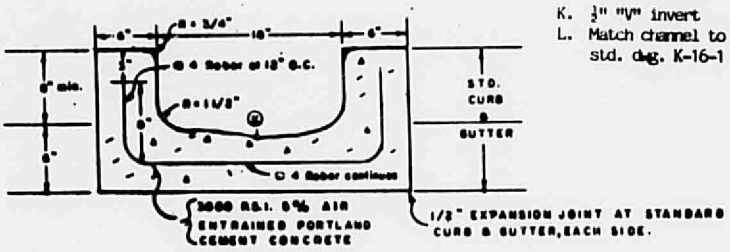
F. Radius - 4', 3½', 2', 1½

G. Slope = 4.5%

H. Slope = 2.0%

K. ½" "V" invert

L. Match channel to curb and gutter per std. dwg. K-16-1



SECTION A-A
SCALE: 1" = 1'

RECEIVED
JAN 12 1985
HYDROLOGY SECTION

MARTIN R. KORTUM
NEW MEXICO
6549
REGISTERED PROFESSIONAL ENGINEER

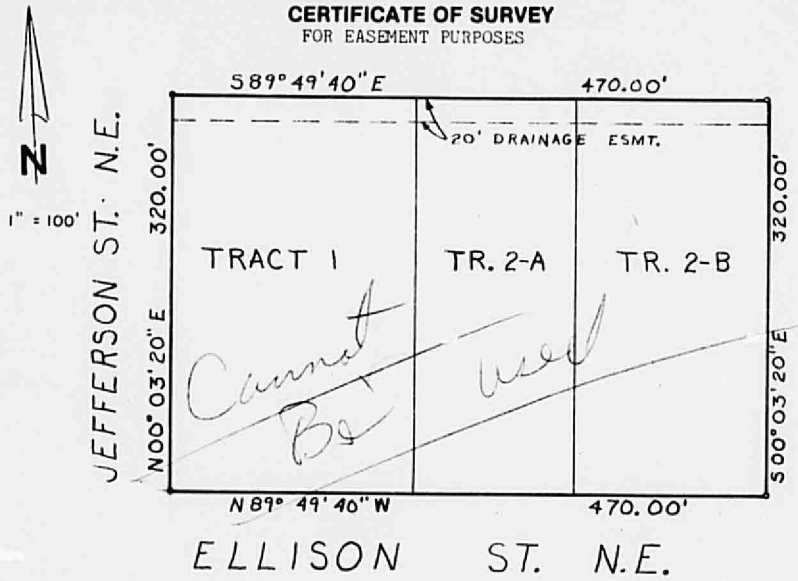
D-186

APPROVALS	NAME	DATE	TITLE: Academy East Industrial Park, Tract 2 & 3 through curb drain. 4801 Ellison St. N.E.
A.C.E./DESIGN		11/27/84	
INSPECTOR			PERMIT NO. / SHEET 2 OF 2 / MAP NO. D-17-2
A.C.E./FIELD			

84 61264

CERTIFICATE OF SURVEY

FOR EASEMENT PURPOSES



General Easement Requirement:

Common lands (areas are to be used for traffic circulation, utilities and drainage for all users and occupiants of Tracts 1, 2, & 3.

LEGAL DESCRIPTION

Tract 1 of Academy East Industrial Park filed in Bernalillo County, New Mexico on October 15, 1976

together with

Tracts 2-A and 2-B of Academy East Industrial Park filed in Bernalillo County, New Mexico on July 5, 1984.

WESTERN SUN PARTNERSHIP BY Jeff C. Boyd
Jeff C. Boyd

ACKNOWLEDGEMENT

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

OFFICIAL SEAL
DANIEL M. GRANEY
NOTARY PUBLIC STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires 8-6-87

The foregoing instrument was acknowledged before me this 13th day of August, 1984.

BY: JEFF BOYD

My Commission Expires:
8-6-87

Daniel M. Graney
Notary Public

Note: Compare all points before building and at once report any difference

SURVEYOR'S CERTIFICATE

I, Franklin E. Wilson, licensed under the laws of the State of New Mexico, do hereby certify that this plat was prepared by me or under my direction from notes of an actual field survey, and is true and correct to the best of my knowledge and belief.

This certificate is executed at Albuquerque, New Mexico on this 13th day of August, 19 84.

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR STATE OF NEW MEXICO FRANKLIN E. WILSON

Franklin E. Wilson, New Mexico Licensed Surveyor No. 6446

SOUTHWEST SURVEYING CO., INC. 802 LOMAS NE, . ALBUQUERQUE,NM 87102

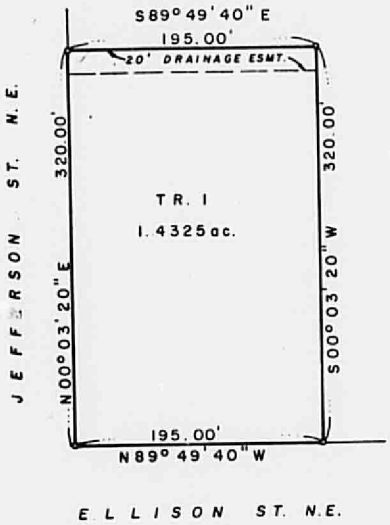
247-4444

CERTIFICATE OF SURVEY

84 53503

For Easement Purposes

1" = 100'



STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD
1984 JUL 16 PM 3:32
BY _____
DOLORES C. WALLER
CO. CLERK & RECORDER
_____ DEPUTY

LEGAL DESCRIPTION

The North 20 feet of Tract 1 of the plat of Tracts 1, 2, and 3 ACADEMY EAST INDUSTRIAL PARK, as the same is shown and designated on said plat thereof filed in the Office of the County Clerk of Bernalillo County, New Mexico on October 15, 1976, to be used as a drainage easement only.

WESTERN SUN PARTNERSHIP BY Jeff Boyd
Jeff Boyd

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

OFFICIAL SEAL
DANIEL M. GRANEY
NOTARY PUBLIC, STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires 8-8-87

The foregoing instrument acknowledged before me this 16 day of July, 19 84, by JEFF BOYD, Western Sun Partnership.

My Commission Expires:
8-8-87

Daniel M. Graney
Notary Public

Note: Compare all points before building and at once report any difference

RECEIVED
JUL 18 1984
HYDROLOGY SECTION

SURVEYOR'S CERTIFICATE

I, Franklin E. Wilson, licensed under the laws of the State of New Mexico, do hereby certify that this plat was prepared by me or under my direction from notes of a field survey, and is true and correct to the best of knowledge and belief.

This certificate is executed at Albuquerque, New Mexico on this 16th day of July, 19 84.

Franklin E. Wilson

Franklin E. Wilson, New Mexico Licensed Surveyor No. 6446
SOUTHWEST SURVEYING CO., INC. 215 MARBLE NW, ALBUQUERQUE, NM 87102
247-4444

Book _____ Page _____

HYDROLOGY D17/D52 ACADEMY EAST INDUS. PARK

D17/D52

ACADEMY EAST

INDUS. PARK

1 PLAN

INFORMATION SHEET

PROJECT TITLE Academy East Industrial Park TYPE OF SUBMITTAL Drainage Plan

ZONE ATLAS PAGE NO. D-17 052 CITY ADDRESS Ellison St. N.E.

LEGAL DESCRIPTION Tracts 2 & 3 Academy East Industrial Park

ENGINEERING FIRM Marvin R. Kortum CONTACT

ADDRESS 1605 Speakman Dr. S.E. PHONE 299-0774

OWNER Western Sun CONTACT

ADDRESS PHONE

ARCHITECT Gordon Hall CONTACT

ADDRESS PHONE

SURVEYOR Southwest Surveying CONTACT

ADDRESS 215 Marble N.W. PHONE 247-4444

CONTRACTOR Devco Enterprises Inc. CONTACT

ADDRESS PHONE

PRE-DESIGN MEETING:

___ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
___ PRELIMINARY PLAT APPROVAL
___ SITE DEVELOPMENT PLAN APPROVAL
___ FINAL PLAT APPROVAL
X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
✓ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 5/22/84

BY: Tony Stevens

RECEIVED MAY 22 1984 HYDROLOGY SECTION

Responded in person
7/11/84 BG

B17 D52

City of Albuquerque
Municipal Development Department

July 17, 1984

Atten: Hydrology

Dear Sirs:

The following comments are provided to answer questions raised by Mr. Goolsby during the July 11, 1984 review of the drainage report, D-17-52 for Academy East Industrial Park, Tracts 2 and 3.

1. Attached is a copy of the revised plat of Tracts 1, 2, and 3, Academy East Industrial Park. The plat shows the drainage easements for cross flow of rainfall runoffs. Berms at the southeast corner of Tract 2 are revised so that flood overflow will be north along Tract 2 west boundary, and thence across the established drainage easement for Tract 1.

2. Attached is a revised copy of the grading plan which corrects the elevation shown for the outflow into the Ellison Street gutter (48.65 vs. 49.65), and also shows the outflow onto Jefferson Street from the drive-pad to Tract 1. Also shown are the berm elevation changes which redirect flood overflow when Ellison Street outdrains are inoperative.

3. Flows Running Past the Site:

In addition to the flow from the San Antonio Blvd. and underpass, which are fully discussed in the original report, there is some flow onto Ellison Street to be expected from the east from present and future developments along Ellison Street and that portion of Hawkins Street which discharges onto Ellison Street. This quantity is as estimated below.

Site Area: 9 acres

Site Description: Industrial development, some landscaping 2% and length of drain path is 1400 feet. (Largest runoff expected from the Square Dance Parking Lot). Type B soils. Rainfall data as in original report.

Volume of Runoff: Direct runoff is 0.6 inches (plate 22.2 C-4)
Volume is .6" x 9 acres x 43560 ft^2/1/12 = 20,000 ft^3

Peak Runoff:

$$Tc = .0078 \frac{L^{.77}}{S^{.385}} = 9.3 \text{ acres}$$

use intensity factor for 10 minutes equal 2.15
Rational Coefficient C = 0.7
Q = CIA = (.7)(2.15) (2.2) 9 = 30 cfs

At a gutter slope of 2.3% east to west, along Ellison, the standard gutter capacity for 1/2 of the 48 ft. wide street is about 35 cfs at a depth of .87 ft. and velocity of 2.5 fps (plate 22.2 D-3). The addition of 4.8 fps from the discharge of the Academy East Industrial Park will bring the 100 year flood runoff into the north gutter of Wllison to near its capacity.

RECEIVED
JUL 18 1984
HYDROLOGY SECTION

4. Down Stream and Facilities:

A. The flow on Ellison Street will continue toward the west on Ellison Street to its intersection with Washington Street. At this point it is discharged into an unimproved dirt channel, and flows about 1000 feet into the collecting vasin of the North Diversion Channel at its intersection with PINO ARROYO. Additional inflow onto Ellison Street west of Jefferson Street may cause Ellison Street to overflow into presently undeveloped lands. Overflow fron the present unimproved dirt channel will flow across unimproved lands toward PINO ARROYO and the North Diversion ditcn inlet.

B. The runoff from the Northwest corner of Tracts 2 and 3 through Tract 1 will flow north on Jefferson Street, then west on Hawkins Street, where it will enter into a concrete lined inlet channel into the North Diversion Channel.

REGISTERED PROFESSIONAL ENGINEER

Marvin R. Kortum, NMPE NO. 6519

Marvin R. Kortum
New Mexico P.E. 6519
1605 Speakman S.E.
Albuquerque, New Mexico 87123

August 8, 1984

City of Albuquerque
Municipal Development Department
Atten: Hydrology
123 Central Ave., N.W.
Albuquerque, New Mexico

Ref: A. Academy East Industrial Park, Tracts 2 and 3. File #D-17-32
B. My discussion, August 8, 1984 with Mr. Carlos Montoya, Hydrology.

Dear Sirs:

Attached is a site and grading plan for the referenced site which shows revisions as of August 8, 1984. The revision shows that the paved areas around the buildings are now established as traffic and drainage easements.

MARVIN R. KORTUM
NEW MEXICO
6519
REGISTERED PROFESSIONAL ENGINEER

Sincerely,

Marvin R. Kortum

RECEIVED
AUG 0 8 1984
HYDROLOGY SECTION

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

August 10, 1984

Mr. Marvin Kortum
1605 Speakman SE
Albuquerque, New Mexico 87123

RE: DRAINAGE & GRADING PLAN FOR ACADEMY EAST INDUSTRIAL PARK
(D-17 D-52) RECEIVED JULY 18, 1984.

Dear Mr. Kortum:

The above referenced plan, dated July 18, 1984 is approved with the following comments:

A "Drainage Facilities Within City Right-of-Way" document must be attached to the construction set prior to release of the building permit. Also, before the final C.O. is issued the general easement requirement for drainage across lot lines must be inserted on the plat.

If I can be of further assistance, please contact me at 766-7644.

Sincerely,

Carlos A. Montoya
Civil Engineer/Hydrology

CAM/cl

Marvin R. Kortum
Civil Engineering
1605 Speakman Dr. S.E.
Albuquerque, N.M. 87123

January 14, 1985

City of Albuquerque
Design Hydrology Section
123 Central N.W.
Albuquerque, N.M. 87102

Reference A. Drainage and Grading Plan for Academy East Industrial Park (D-17 D-52)(DRB 84-288)(DRB 84-428)

B. Your letter, same subject, Dated August 10, 1984

Dear Mr. Carlos Montoya;

Attached are copies of the following documents:

1. Drainage facilities within City right-of-way for through curb drain D-186. (Approved City of Albuquerque Engineer November 27, 1984)
2. Plat showing across property line drainage easements. (Recorded County of Bernalillo December 26, 1984, Volume C 25 Folio 195)(84-97572)

The attached documents are for your files.

Respectfully,

Marvin R. Kortum

MRK:tjs

Enclosures

cc: Devco
Attn: Mr. Jeff Boyd
*Copies of attached are required for Occupancy Permit.

RECEIVED
JAN 14 1985
HYDROLOGY SECTION

DRAINAGE INFORMATION SHEET

PROJECT TITLE: ACADEMY EAST INDUSTRIAL PARK LOTS 2 & 3 ZONE ATLAS/DRNG. FILE #: D-17 - D52

LEGAL DESCRIPTION: TRACTS 2 & 3 OF ACADEMY EAST INDUSTRIAL PARK OCT 15 1976

CITY ADDRESS: ELLISON ST. N.E.

ENGINEERING FIRM: MARVIN R. KORTUM CONTACT:

ADDRESS: 1605 SPEAKMAN DR SE PHONE: 299-0774

OWNER: DEVCO CONTACT:

ADDRESS: PHONE:

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: CONTACT:

ADDRESS: PHONE:

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

___ YES

___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ___

EPC NO. ___

PROJ. NO. ___

RECEIVED JAN 15 1985 HYDROLOGY SECTION

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

X THIS SUBMITTAL PROVIDES INFORMATION ON THE APPROVAL CONTINGENCIES

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

X FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER ___ (SPECIFY)

DATE SUBMITTED: JAN 13 1985

BY: MARVIN KORTUM

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

January 24, 1985

Marvin R. Kortum
1605 Sneakman Drive, NE
Albuquerque, New Mexico 87123

RE: ACADEMY EAST INDUSTRIAL PARK; LOTS 2 & 3
ELLISON STREET, NE (D-17/D52)

Dear Mr. Kortum:

The referenced plan dated August 8, 1984, is approved.

Please attach a copy of this approved plan along with the appropriately approved "Drainage Facilities Within City Right-of-Way" document to the construction set prior to Hydrology sign-off.

If I can be of further assistance, please call me at 766-7644.

Cordially,

Carlos A. Montoya
City/County Floodplain Administrator

CAM/bsj

DRAINAGE INFORMATION SHEET

PROJECT TITLE: ACADEMY EAST INDUSTRIAL PARK ZONE ATLAS/DRWG. FILE #: D17/D52

LEGAL DESCRIPTION: LOTS 2 + 3

CITY ADDRESS: ELLISON ST NE

ENGINEERING FIRM: MARVIN R KORTUM CONTACT: MARVIN R KORTUM

ADDRESS: 3605 SPEARMAN DR SE PHONE: 299-0774

OWNER: WESTERN SUN (DUCO) CONTACT: JEFF BOYD

ADDRESS: MARBLE NW PHONE:

ARCHITECT: GORDON HALL CONTACT:

ADDRESS: PHONE:

SURVEYOR: S.W. SURVEYING CONTACT: DAN GRAILEY

ADDRESS: 333 LOMAS N.E PHONE: 247-4444

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

___ YES

___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. ___

EPC NO. ___

PROJ. NO. ___

RECEIVED FEB 06 1985 HYDROLOGY SECTION

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

___ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

PROPOSED CHANGE TO APPROVED DRAINAGE / GRADING PLAN

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

X FINAL PLAT APPROVAL

___ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

X GRADING/PAVING PERMIT APPROVAL

___ OTHER ___ (SPECIFY)

DATE SUBMITTED: FEB 6 1985

BY: MARVIN R KORTUM

Marvin R Kortum
Civil Engineering
1605 Speakman Dr. SE
Albuquerque, NM 87123

February 5, 1985

RECEIVED
FEB 06 1985
HYDROLOGY SECTION

City Of Albuquerque
Design Hydrology Section
123 Central NW
Albuquerque, NM 87102

RE: A. Academy East Industrial Park; Lots 2 & 3, Ellison St. NE (D-17/D52)
B. City of Albuquerque letter, January 24, 1985, same subject.

Dear Sirs:

The above referenced item concerns the Grading and Drainage Plan and the approval for Lots 2 & 3 of the Academy East Industrial Park. This approved plan provided for storm run off onto Ellison Street, NE, and through an underground culvert across and onto Tract 1, then onto Jefferson Street, NE.

The owner/developer has now determined that the site will be more accessible if the specialized drainage structures for lots 2 and 3 can be eliminated. As an alternative, the owner/developer is willing to consider surface flow across the existing swales on lot 1, which is also under his control. As a practical solution, this will permit less steep transition ramps from lot 1 to lot 2, and will eliminate the theneed for the berm along the lower edge of the lot 2 terrace.

Attached for your review and approval is a revised drawing (Revision date February 5, 1985) for the Grading and Drainage Plan, Lots 2 and 3, Academy East Industrial Park, which incorporates the alternative concept. There are no changes to the drainage and grading within the lots 2 and 3. Changes to the outflow of storm runoff are summarized below:

1. Eliminate the catch basins and through-the-curb storm drains along the south of lot 2.
2. Eliminate the catch basin, drop inlet, and culvert along the north of lots 1 and 2.
3. Eliminate the berm along the west of lot 2.
4. Add drainage swales extending from lot 1 into lot 2, along the north and south ends, to direct storm and other runoff into the existing swales on lot 1.
5. Add small raised paved levees diagonally on the existing asphalt pavement between the building on lot 1 and the building on lot 2. These levees will divert roof runoff from the west of building, lot 2, into the existing swales with less tendency to overflow into the building on lot 1.
6. There will be no storm runoff onto Ellison Street. All flow will go onto Jefferson Street and thence onward as covered in the Drainage Report. The added peak flow (4.8 CFS or less) will not significantly increase the flow in this established and paved runoff channel.

A revised plat of tract 1 is being prepared which will state the same easement conditions as now stated on the plat for tracts 2 and 3, as recorded on December 26, 1984 at the Bernalillo County Clerks Office, No. 84 97572. The revised plat will be recorded upon your approval of the revised concept as shown on the attached drawing.

Please contact me if I can be of assisstance.

Respectfully

Marvin R Kortum
299-0774

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

March 6, 1985

Marvin Kortum
1605 Speakman, SE
Albuquerque, New Mexico 87123

RE: DRAINAGE & GRADING PLAN FOR ACADEMY EAST INDUSTRIAL PARK
(D-17/D52) RECEIVED FEBRUARY 6, 1985

Dear Mr. Kortum:

The referenced plan dated February 5, 1985, is approved contingent on the following: 1) a general easement for drainage across lot lines must be inserted on the plat for Tract 1.

If you have any questions or comments regarding this project, please call me at 766-7644.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

April 24, 1985

Marvin R. Kortum
1605 Speakman Drive, SE
Albuquerque, New Mexico 87123

RE: REVISED DRAINAGE/GRADING PLAN FOR ACADEMY EAST INDUSTRIAL PARK (D-17/D52)

Dear Mr. Kortum:

The referenced plan dated August 8, 1984, is approved for building permit sign-off.

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

If you have any questions or comments, please call me at 766-7644.

Cordially,

Carlos A. Montoya

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

85 29888 .0 350

DRAINAGE COVENANT

THIS COVENANT made this 18th day of April 1985, by and between Tracts 1 and 2 of WESTERN SUN PARTNERSHIP and WESTERN SUN PARTNERSHIP (Owner, which term includes successors and assigns).

RECEIVED APR 19 1985 HYDROLOGY SECTION

RECITAL

The Owner is owner of certain real property located at 7100 Jefferson N.E. - Tract One (1) of ACADEMY EAST INDUSTRIAL as the same is shown and designated on said plat as filed in Bernalillo County, New Mexico on November on November 15, 1976; Book B-12, Page 5.

That pursuant to City ordinances, regulations, and other applicable laws, the Owner is required to install and/or maintain certain drainage facilities on the property, and the parties wish to provide for an agreement as to the obligations and responsibilities for same.

DESCRIPTION OF FACILITIES

The following facilities are to be constructed and/or maintained by the Owner:

A drainage surface swale at the South 30 feet (S.30') of Tract 1, of said ACADEMY EAST INDUSTRIAL PARK as per the Drainage and Grading Plan (D-17/D52)

CONSTRUCTION OF DRAINAGE FACILITIES

The Owner shall construct the drainage facilities in accordance with standards, plans, and specifications prescribed and approved by the City.

MAINTENANCE OF FACILITIES

The Owner shall at his cost in accordance with the standards, plans, and specifications prescribed by the City, maintain said drainage facility. The City shall have the right to enter periodically upon the property to inspect the drainage facility.

FAILURE TO COMPLY AND LIEN

In the event that the Owner shall fail to construct the drainage facility in accordance with standards, plans, and specifications prescribed and approved by the City, or fail to adequately maintain said facilities, the City shall give the Owner notice in writing to construct correct, or maintain said facilities and if the Owner fails to comply therewith within 30 days, the City may enter upon said property to perform the necessary construction or maintenance. The cost of the City's performing such construction or maintenance shall be paid by the Owner. In the event the Owner fails to pay said cost within thirty (30) days after being billed for same, the City may file a lien against the property.

LIABILITY

The City shall not be liable for any damages to the Owner resulting from its construction, modification, or maintenance of said facilities.

NOTICE

The written notice provided for herein shall be accomplished by mailing same to:

WESTERN SUN PARTNERSHIP
215 Marble NW
Albuquerque, N.M. 87102

The Owner may change said address by giving written notice, certified mail, return receipt requested, to the City Engineer, City Hall at 505 Marquette Street, Albuquerque, New Mexico 87103.

INDEMNIFICATION AND HOLD HARMLESS

The Owner agrees to defend, indemnify, and hold harmless, the City, its officials, agents and employees from and against any and all claims, actions, suits, or proceedings of any kind brought against said parties for or on account of any matter arising from the drainage facility provided for herein or the Owner's failure to construct, maintain, or modify the drainage facility under this covenant.

COVENANT RUNNING WITH THE PROPERTY

The obligation of the Owner set forth herein shall be binding upon the Owner, his heirs, and assigns, and the property of the Owner as described herein and will run with said property until released by the City.

OWNER

By: WESTERN SUN PARTNERSHIP
Title: GENERAL PARTNER

REVIEWED BY THE LEGAL DEPARTMENT:

Assistant City Attorney

City Attorney

CITY OF ALBUQUERQUE

Chief Administrative Officer

ATTEST:

City Clerk

ACKNOWLEDGEMENTS

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this
_____ day of _____, 1985, By _____
_____, _____
(Name of Officer) (Title)
_____, _____
(Name of Corporation) (State of Incorporation)

My Commission Expires: _____
Notary Public

_____

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

OFFICIAL SEAL
DANIEL M. GRANEY
NOTARY PUBLIC - STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires _____

The foregoing instrument was acknowledged before me this
28th day of March, 1985, By _____
Jeff Boyd - Partner
(Name of Acknowledging Partner of Partners)
on behalf of Western Sun Partnership
(Name of Partnership)
a partnership.

Daniel M. Graney
Notary Public

My Commission Expires:
8-8-87

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me by
_____, On this _____ day of _____ 1985.

My Commission Expires: _____
Notary Public

_____

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 18th
day of April, 1985, By Frank A. Kleinberg
Chief Administrative Officer of the City of Albuquerque, Municipal Corporation, on behalf of said Corporation.

Iola L. Grant
Notary Public

My Commission Expires:
10/18/88

Project Title: ACADEMY EAST INDUSTRIAL PARK
Tracts 2 and 3

Zone Atlas D-17-Z Ellison Street N.E.

Type of Submittal: Drainage Plan, Detailed Grading, and Erosion Control Plan

Legal Description: Tracts numbered Two (2) and Three (3) of the Plat of Tracts 1.2. and 3, ACADEMY EAST INDUSTRIAL PARK, as the same is shown and designated on said plat filed in the office of the County Clerk of Bernalillo County, New Mexico, on October 15, 1976.

Engineering Firm: Marvin R. Kortum
1605 Speakman Dr. S.E.
Albuquerque, New Mexico 87123
(505) 299-0774
Contact, Marvin R. Kortum

Owner: Western Sun

Architect: Gordon Hall

Surveyor: Southwest Surveying Co.

Contractor: Devco Enterprises Inc.

Date Submitted: May 18, 1984

By: Marvin R. Kortum

MARVIN R. KORTUM
NEW MEXICO
6519
REGISTERED PROFESSIONAL ENGINEER

RECEIVED
MAY 22 1984
HYDROLOGY SECTION

I. ON-SITE CONDITIONS

A). Site Characteristics:

Tracts 2 and 3 of the ACADEMY EAST INDUSTRIAL PARK (AEIP) consist of a near rectangular shaped plat 320 feet North to South, and 275 feet east to west, containing 2.02 acres. The surface is essentially the native soils, but with major surface disturbance caused by recent adjacent construction and street building. The surface slopes at a 2% to 4% slope from east to west, with a level and bermed area near the west edge. The last 35 feet along the west edge is a strip of asphalt surface sloping at about 5% slope toward a swale which provides drainage for the adjacent building and parking area. (see cross sections). The earth surface has sparce vegetation, consisting of annual weed plants and some perennial grasses.

B). Soils:

The soils, as identified on the Bernalillo County Soils Survey by the SCS, USDA, are Embudo gravelly fine sandy loam, 0 to 5 percent slopes (EMB). The Embudo series consist of deep, well drained soils that formed in alluvium derived from decomposed coarse grained granite rocks on old alluvial fans. By on site visual inspection, and by viewing adjacent cuts, the soils appear to be appropriately classified. The engineering characteristics of the soils do not present undue constraints on the proposed use of the area for single story industrial buildings with paved hardstand. The SCS cautions that the soils are loose, probably subject to compressing, or settling, when wetted, and stress the need for control of moisture for proper compaction. The soil is also subject to consideration under load. The foundations and construction methods to be used should be designed for those soil conditions.

C). Undeveloped Runoff:

The soils are identified as hydrologic soil group B, soils which absorb more water than is typical. An average drainage path length of 200 feet, and a fall of 5 feet is typical of the sloped area leading to the bermed and level strip.

D). Direct Run Off Volume; Undeveloped Land

✓The 6 hour - 100 year frequency rainfall for the A.E.I.P. is 2.2 inches, per 1973 NOAA Atlas 2, Volume IV, (plate, 22.2 D-1) The present surface is typical of range land in poor condition, for which a curve number (CN) of 79 is appropriate, (plate 22.2, C-2). From plate 22.2 C-4, read direct run off as 0.7 inches. Direct run off for the unpaved area is 320 x (275 -35) x .70/12 = 4480 Ft^3. The existing level bench provides about 10,000 $feet^2$

of (200' x 50') irregular catch basin, for a potential depth of about .45 feet. This would probably exceed the capacity of the irregular catch basin, with run off flowing out the west end of the north property line, and then toward the west (Jefferson St.) across adjacent property. The portion of direct run off falling on the existing 35 ft. wide asphalt strip (CN = 98) (320 x 35 x 2.2/12). = 2050 ft^3 would flow to the existing swale, and from there to Jefferson Street. Total run off, undeveloped, would be about 1/2 (4480) + 2050 = 4000 to 5000 ft^3.

E). Peak Run Off, Undeveloped Land:

Based on the present surface irregularity, the peak run off would occur at some point in time during a rainfall when the irregular catch basin is filled, and overflow starts on erosion channel which subsequently drains a portion of the basin (say 50%). With the 100 year, 6 hour direct rainfall run off volume and estimating 10 minutes as the time for 50% of this volume to erode a channel and escape. The peak run off would be $\frac{4480}{(2)(60)(10)} = 3.7$ or about 4 cfs.

F). Developed Run Off:

There will be a small 20 ft. wide strip of landscaping, trees and grass along the Ellison St. (south) side of the property. For developed run off computations, this minor area will be ignored. The remainder of the area is to paved hardstand, and sloped roof. (roof area + 33,600 ft^2, hardstand 54,400 ft^2). For drainage purposes, the area is divided into two approximately equal areas, the north half draining toward the north property line, and then west along a swale, the south half toward the south, then west along a swale. The north swale will drain along a drainage easement, past the existing adjacent building, and then onto Jefferson Street. The south swale drains onto Ellison Street near the southeast corner of the property. The area west of the center line of the western building is drained by separate swales, but is included in the below computations.

G). Direct Run Off Volumes For Developed Property

Rainfall is 2.2 inches, as above. Use CN = 98 for hardstand and roof areas. The run off volume for each the north and south half would be $\frac{320 \times 275}{2} \times \frac{2.2}{12} = 8070$ ft^3, or 16140 ft^3 total (.37 acre feet)

H). Peak Run Off For Developed Property

The length of the drainage path for determining peak run off is from the mid point of the east swale, to the northeast or southwest corners, respectively. Average length is 410 feet, elevation drop of 4.25 feet, or slope of 1%. Time of concentration, using

the Kirpich urban flow equation TC = .0078 $\frac{L^{.77}}{S^{.385}}$, is thus estimated to be 4.6 minutes. From plate 22.2 D-2, use rainfall intensity factor for TC = 10 minutes, which is 2.15. Using the rational fromula, Q = CIA, and a C = 1.00, the peak run off per drainage area, Q = (1.0) (1.01 acre) (2.2 x 2.15) = 4.8 cfs. therefore, total peak run off equals 9.6 cfs, 4.8 cfs. toward Jefferson St., and 4.8 cfs toward Ellison St.

I).. Depth Of Peak flow In Swales:

The paved hardstand swales can be represented by a triangular ditch, with side slopes of 5 percent and longitudinal slopes of 1 percent.

Use Bureau of Public Roads equation for flow in a very shallow triangular ditch

$Q = .56 \frac{Z}{n} S^{1/2} y^{8/3}$, = Discharge in cfs

and Z = width divided by the depth (20/.5) = 40

n = Mannings coefficient for paved surface = .017

S = Longitudinal slope (1 percent)

y = depth in feet

Thus, for Q = 4.8 CFS = $.56 \frac{40}{.017}(.01)^{1/2} y^{8/3}$

$y^{8/3} = 4.8 / 131.76 = .0364$

$\therefore y = (.0368)^{3/8} = .289$ ft., or 3.5 inches

Check Q = VA, where $A = \frac{1}{2} wy$ and $w = 40y$

$\therefore Q = V(\frac{1}{2})(40y)(y) = 20vy^2$

For Q = 4.8, $v = \frac{4.8}{20\ (.289)^2} = 2.82$ fps

The calcualted depth of 3.5 inches will occur as the run off enters the small catch basin at either west corner.

J). Discharge, Northwest Corner:

At the Northwest corner the run off enters a 4ft. x 4ft. drop inlet, and then flows through an 18" in diameter culvert (CMP) to free discharge in existing swale. Grate discharge capacity for a square grate is 4.8 cfs. with a head of about .21 ft. (CE Manual, Page 119). Capacity of an 18" CMP at a slope of .006 is 4.8 cfs. (CE Manual, Page 105).

K). Discharge Southwest Corner:

At the Southeast corner, discharge will be to the Ellison Gutter, by under sidewalk drains, at a slope of 2.5%. Using the Manning equation for flow in an open channel, and M = .017 consider an under sidewalk drain with a width of 18 inches, and a water depth of 6 inches.

$Q = A \frac{1.486}{M} R^{2/3} S^{1/2}$, where R = hydrologic radius

$$R = \frac{A}{\text{wetted perimeter}} = \frac{(.5)(1.5)}{.5 + 1.5 + .5} = \frac{.75}{2.5}$$

$$\text{thus } Q = (.5)(1.5) \frac{1.486}{.017} \left(\frac{.75}{2.5}\right)^{2/3} (.025)^{\frac{1}{2}} = 5.40 \text{ cfs.}$$

The selected section will be adjacent for the computed peak flow of 4.8 cfs. plus minor entry losses.

L). Greater Than Calculated Run Off:

The catch basins in both north and south corners include a 1.5 ft. berm within the paved surface. Runover due to clogged out-drains or greater than calculated run off will flow tto the drainage swales on the adjacent property, and then to Jefferson Street. Overflow will not cause serious damage to the adjacent down hill property, nor will there be back up into the buildings on AEIP.

Requires concurrence

II. OFF-SITE FLOWS:

Tracts 2 and 3 of ACADEMY EAST INDUSTRIAL PARK (AEIP) are not in the natural flow path of any major off-site flows. The site is located generally on the high ground between two natural drainage channels which run from the Sandia Mountains toward the Rio Grande (from east to west). The one natural drainge channel is identified as Arroyo del Pino located about 500 feet south of the AEIP, crossing under Interstate 25 about one fourth mile north of the Osuna Road interchange. The second major drainage channel is identified as Arroyo de Domingo Baca, located about one half mile north of the AEIP, crossing under I-25 at the Journal Industrial Park and near the Los Angeles overpass. The AEIP is located within the natural headwaters of a small local drainage feature identified as Arroyo del Pino North, man made features have and are continuning to alter the natural drainage features. The elevated roadbed of I-25 provides a large berm and dam about one fourth mile east of the AEIP. Existing culvert drains through this berm are now being changed, so the discussion below will cover the proposed changes now under construction.

A). Inflows:

Interstate 25 and San Antonio Blvd. Underpass:

The San Antonio Blvd. crossing under I-25, and the associated east and west side frontage road ramps create a funnel and chanelling effect which could direct run off into the AEIP. The new San Antonio Blvd. will connect to the existing Ellison St. pavement near the Southeast corner of the AEIP. The underpass complex does include an extensive storm drain and inlet system which should direct all run off from the ramps and crossing site into the Arroyo del Pino channel. Included in the storm drain system is run off from the Southeast corner of the Meadows Mobile Home Park, and adjacent vacant properties. Not included in the storm drain system under construction are possible run offs from areas east of the San Antonio underpass, an indeterminate area uphill from the underpass, and generally paralleling the present San Antonio Blvd. alignment. A study and design is believed to consider that this area will be included in the drainage run off into Arroyo del Pino, Current I-25 construction does include an 8ft. x 8ft. box culvert under I-25 for Arroyo del Pino.

The conditions which could cause run off into the AEIP would be major run off from areas east of the new San Antonio underpass, after substantial completion of the underpass, but before adequate completion of Arroyo del Pino channelling. The consequences of such run off on AEIP could be some floor level flooding, but serious damage should not occur.

B). Minor Off-Site Inflows:

Inflow from a major run off just east (uphill) of the AEIP is effectively blocked by the channelling effect on Hawkins Street,

running east and north of the site. The adjacent properties along the east property line are developed and should cause no run off. The properties along the north half have a drainage ditch which drains to the north. This ditch is partially broken and inactive due to ongoing building construction on site. The property along the south half has a catch basin in its northwest corner, conceivably seepage from this basin could flow under the retaining wall and undermine the hardstand on the AEIP. The elevation of this basin is sufficient to permit its drainage to Ellison St.

C). Off-Site Outflows: Pond Ponding area

As discussed above, run off from the undeveloped site would run onto Jefferson St., then north to an improved concrete lined channel which flows west initially along the alignment of the Arroyo del Pino North, natural channel. Run off from the north half of the developed site would follow this same general flow path. Run off from the south half of the developed site would flow down Ellison Street, across Jefferson St., to the intersection of Ellison St. and Washington St., at which point it would flow into an improvised dirt channel across undeveloped land.

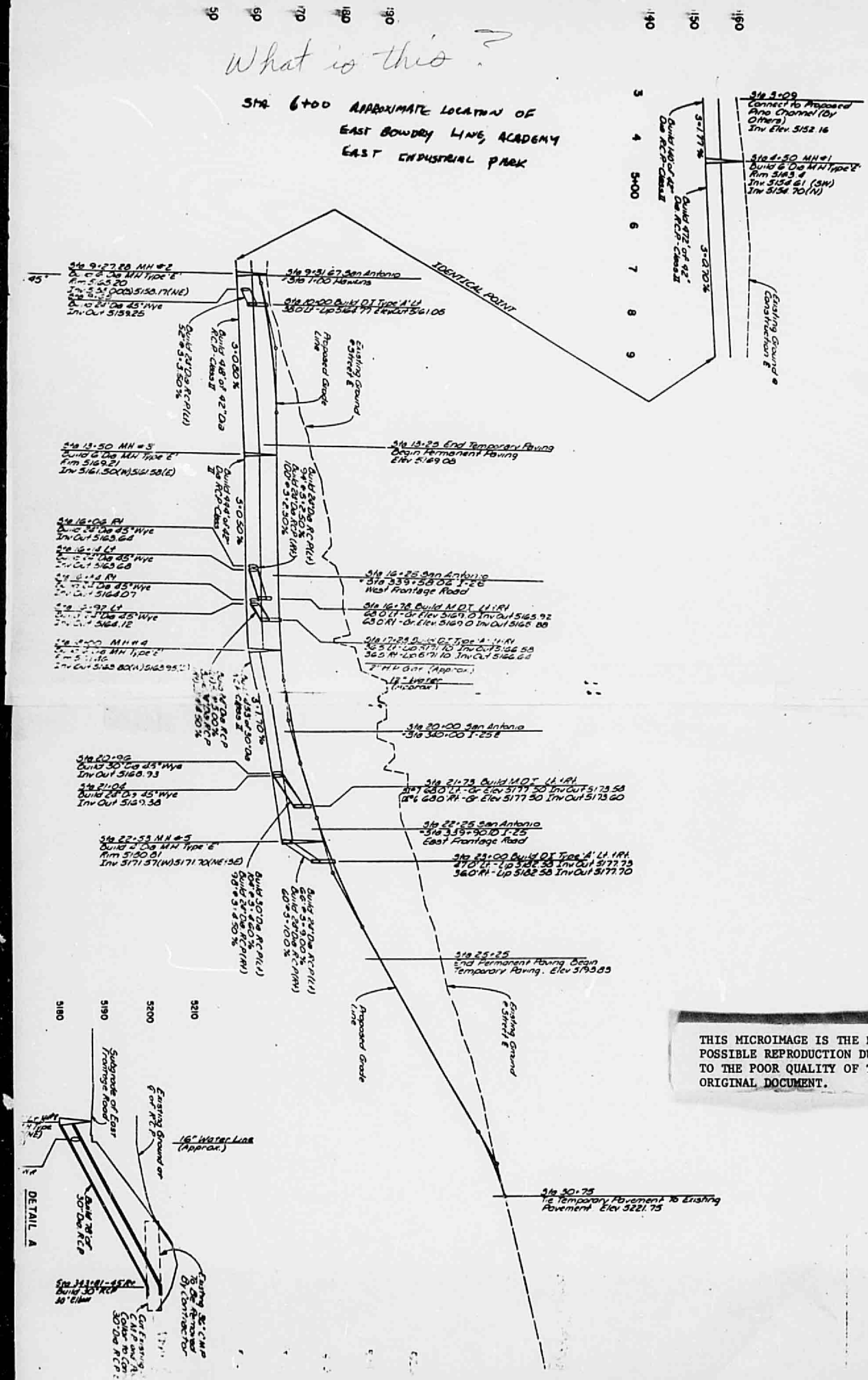
III. EROSION CONTROL:

During the construction phase, severe water run off and erosion can be reduced by placing berms parallel to the contours. Two berms running north to south, one along the west boundary, and sufficient berming on the north to close the terrace should be adequate. Berms should be high enough and have a level area uphill to hold 2750 ft^3 each. [10 year rainfall = 2.2 x .65) = 1.45 inches, CN = 90, [Direct Run off = .75 inches, total run off = 88,000 ft^2 x $\frac{.75 \text{ in. ft.}}{12 \text{ in.}}$ = 5500, one half back of each berm = 2750 ft^3]. Two berms are one foot high with ponding area 10 feet wide would be adequate.

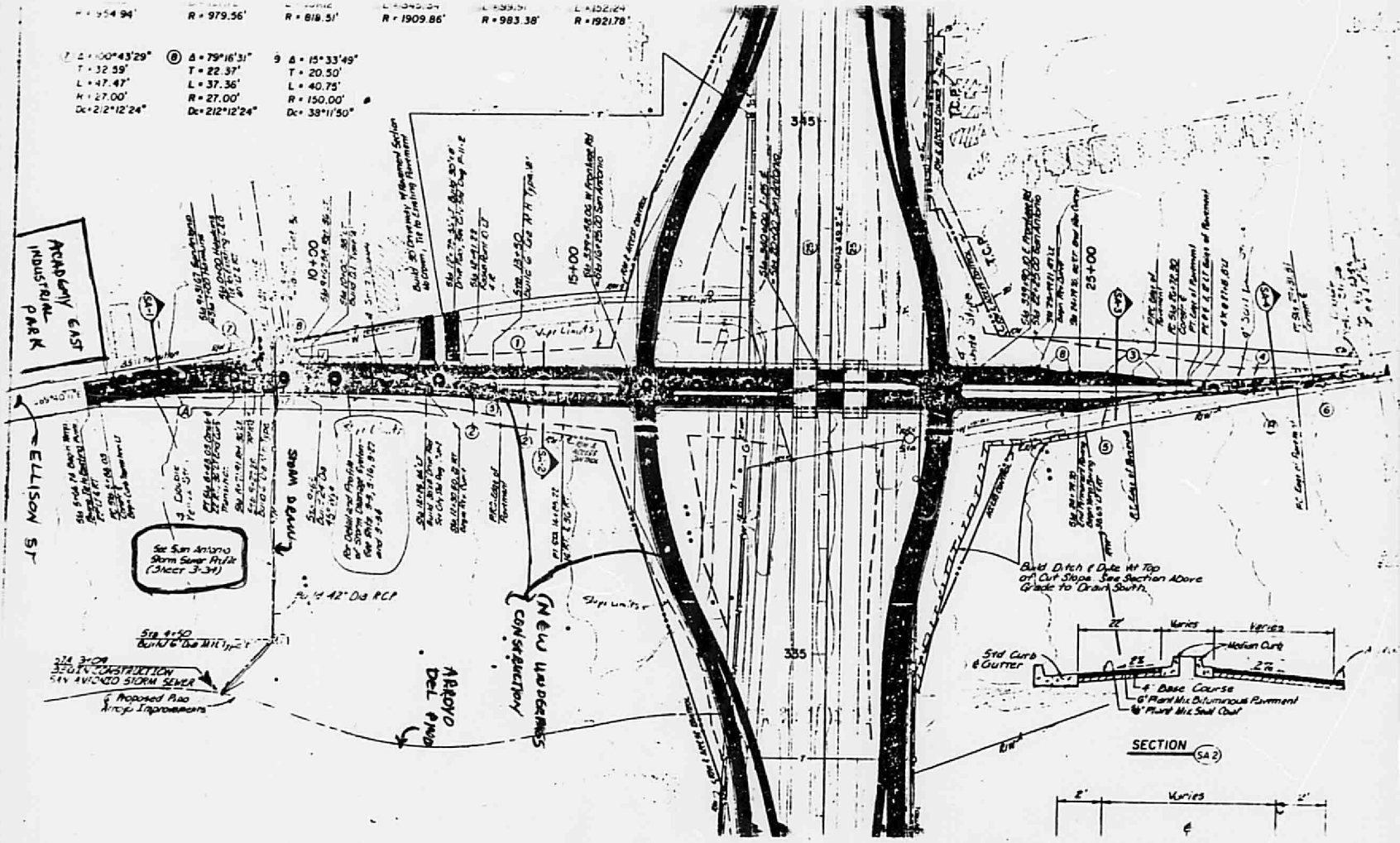
(320 x 10 x 1 = 3200 ft^3.)

What is this?

STA 6+00 APPROXIMATE LOCATION OF EAST BOUNDRY LINE, ACADEMY EAST INDUSTRIAL PARK

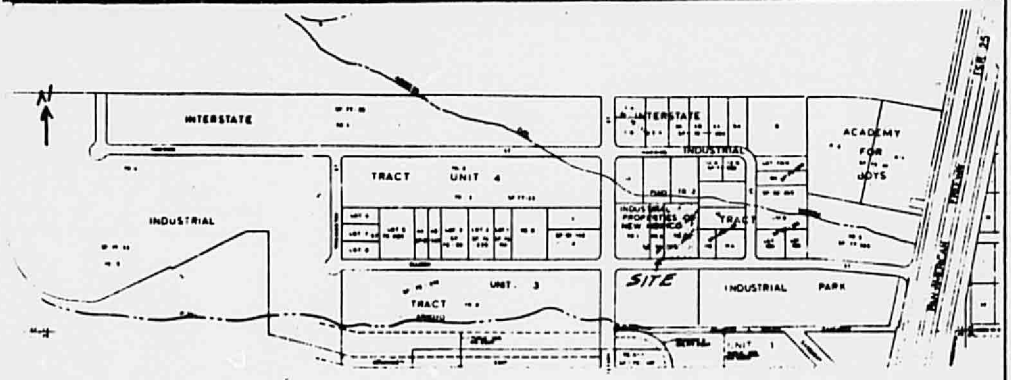


THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.


R = 979.56'
R = 818.51'
R = 1909.86'
R = 983.38'
R = 1921.78'
Δ = 79°16'31"
T = 22.37'
L = 37.36'
R = 27.00'
Dc = 212°12'24"
Δ = 15°33'49"
T = 20.50'
L = 40.75'
R = 150.00'
Dc = 38°11'50"
ACADEMY EAST INDUSTRIAL PARK
ELLISON ST
10+00
15+00
25+00
345
335
See San Antonio Storm Sewer Profile (Sheet 3-3H)
Build 42" Dia RCP
Sta 4+50 Build 6" Dia MH
Sta 3+09 BEGIN CONSTRUCTION SAN ANTONIO STORM SEWER
Proposed Rio Arroyo Improvements
ARROYO DEL PINO
NEW WALDEMERE CONSTRUCTION
Build Ditch & Dike At Top of Cut Slope. See Section Above Grade to Drain South.
Std Curb & Gutter
Median Curb
4" Base Course
6" Plant Mix Bituminous Pavement
1½" Plant Mix Seal Coat
SECTION SA2
Varies

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



D·17·Z

LEGAL DESCRIPTION

Tracts 2-A and 3-A of the Replat of tracts 2 and 3 of ACADEMY EAST INDUSTRIAL PARK [illegible] is shown and designated on said replat thereof, filed in the office of the County Clerk [illegible] County, New Mexico, on July 5, 1984.

MARTIN E. NORTON NEW MEXICO 6519 REGISTERED PROFESSIONAL ENGINEER

Bench mark used: 8-D 17, [illegible] nail in North pole of pylon #RE10 - 5145.784 elevation.

Location: Located along an electric x-mission line, in an open field, 0.35 miles West of Highway I-25 and on the projected centerline of San Antonio Dr. NE.

RECEIVED JAN 14 1985 HYDROLOGY SECTION

NOTICE TO CONTRACTOR

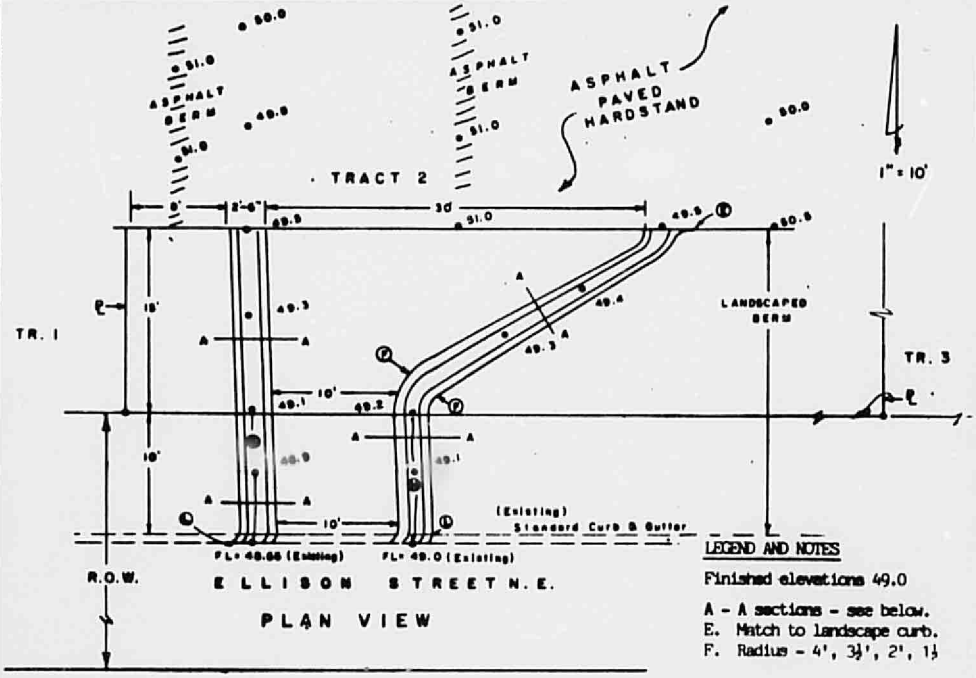
1. An excavation/construction permit will be required [illegible] any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with "Contract Documents for City-Wide Utilities and Cash Paving No. 84-3 "
3. Two working days prior to any excavation, contractor must contact Line Locating Service, 765-1234, for location of existing utilities.
4. 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 with a minimum amount of delay.
5. Backfill compaction shall be according to ARTERIAL street use.

D-186

APPROVALS	NAME	DATE	TITLE: Academy East Industrial Park, Tracts 2 & 3 through curb drain. 4801 Ellison St. N.E.
A.C.E./DESIGN		11/27/84	
INSPECTOR			PERMIT NO.
A.C.E./FIELD			SHEET 1 OF 2 — MAP NO. D-17-Z

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



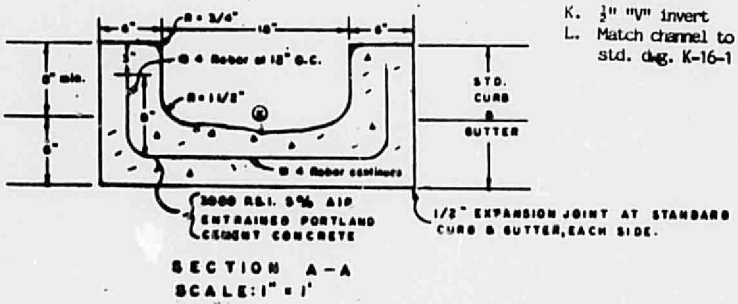
LEGEND AND NOTES

Finished elevations 49.0

A - A sections - see below.
E. Match to landscape curb.
F. Radius - 4', 3½', 2', 1½

G. Slope = 4.5%
H. Slope = 2.0%

K. ½" "V" invert
L. Match channel to curb and gutter per std. dwg. K-16-1



SECTION A-A
SCALE: 1" = 1'

RECEIVED
JAN 12 1985
HYDROLOGY SECTION

MARTIN R. KORTUM
NEW MEXICO
6549
REGISTERED PROFESSIONAL ENGINEER

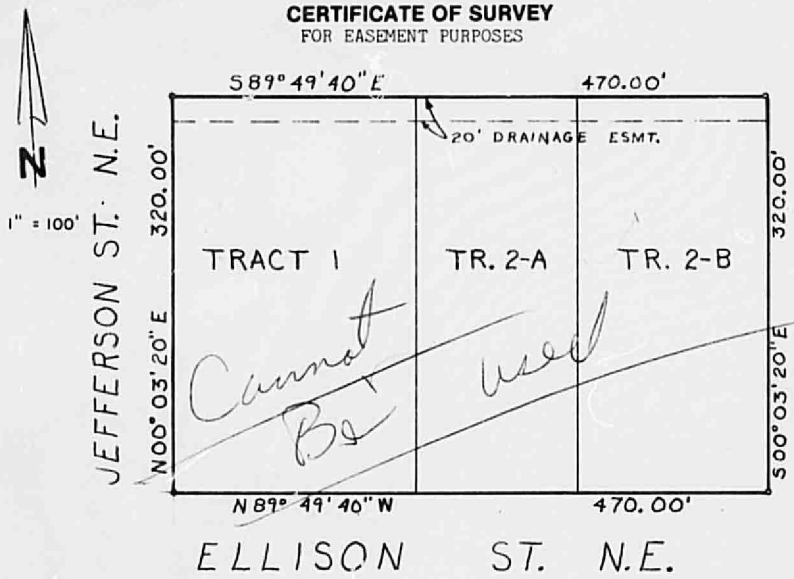
D-186

APPROVALS	NAME	DATE	TITLE:
A.C.E./DESIGN		11/27/84	Academy East Industrial Park, Tract 2 & 3 through curb drain. 4801 Ellison St. N.E.
INSPECTOR			
A.C.E./FIELD			PERMIT NO. / SHEET 2 OF 2 / MAP NO. D-17-Z

84 61264

CERTIFICATE OF SURVEY

FOR EASEMENT PURPOSES



General Easement Requirement:

Common lands (areas are to be used for traffic circulation, utilities and drainage for all users and occupants of Tracts 1, 2, & 3.

LEGAL DESCRIPTION

Tract 1 of Academy East Industrial Park filed in Bernalillo County, New Mexico on October 15, 1976

together with

Tracts 2-A and 2-B of Academy East Industrial Park filed in Bernalillo County, New Mexico on July 5, 1984.

WESTERN SUN PARTNERSHIP BY Jeff C Boyd
Jeff C. Boyd

ACKNOWLEDGEMENT

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

OFFICIAL SEAL
DANIEL M. GRANEY
NOTARY PUBLIC STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires [redacted]

The foregoing instrument was acknowledged before me this 13th day of August, 1984.

BY: JEFF BOYD

My Commission Expires:
8-6-87

Daniel M. Graney
Notary Public

Note: Compare all points before building and at once report any difference

SURVEYOR'S CERTIFICATE

I, Franklin E. Wilson, licensed under the laws of the State of New Mexico, do hereby certify that this plat was prepared by me or under my direction from notes of an actual field survey, and is true and correct to the best of my knowledge and belief.

This certificate is executed at Albuquerque, New Mexico on this 13th day of August, 19 84.

REGISTERED PROFESSIONAL SURVEYOR STATE OF NEW MEXICO 6446 FRANKLIN E. WILSON

Franklin E. Wilson, New Mexico Licensed Surveyor No. 6446

SOUTHWEST SURVEYING CO., INC. 662 LOMAS NE, ALBUQUERQUE, NM 87102

247-4444

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

1984 AUG 14 AM 9: 22

BK_____ PG_____
DOLORES C. WALLER
CO. CLERK & RECORDER

_____ DEPUTY

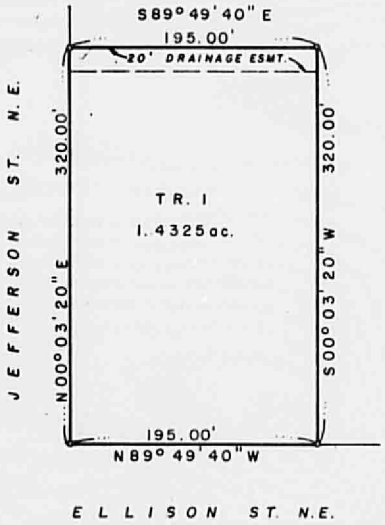
CERTIFICATE OF SURVEY

84 53503

For Easement Purposes

N

1" = 100'



STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD
1984 JUL 16 PM 3:32
BK. ____ PG. ____
DOLORES C. WALLER
CO. CLERK & RECORDER
____ DEPUTY

LEGAL DESCRIPTION

The North 20 feet of Tract 1 of the plat of Tracts 1, 2, and 3 ACADEMY EAST INDUSTRIAL PARK, as the same is shown and designated on said plat thereof filed in the Office of the County Clerk of Bernalillo County, New Mexico on October 15, 1976, to be used as a drainage easement only.

WESTERN SUN PARTNERSHIP BY Jeff Boyd
Jeff Boyd

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

OFFICIAL SEAL
DANIEL M. GRANEY
NOTARY PUBLIC - STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires 8-8-87

The foregoing instrument acknowledged before me this 8th day of July, 19 87, by JEFF BOYD, Western Sun Partnership.

My Commission Expires:
8-8-87

Daniel M. Graney
Notary Public

Note: Compare all points before building and at once report any difference

RECEIVED
JUL 18 1984
HYDROLOGY SECTION

SURVEYOR'S CERTIFICATE

I, Franklin E. Wilson, licensed under the laws of the State of New Mexico, do hereby certify that this plat was prepared by me or under my direction from notes of a field survey, and is true and correct to the best of knowledge and belief.

This certificate is executed at Albuquerque, New Mexico on this 16th day of July, 19 84.

Franklin E. Wilson

REGISTERED LAND SURVEYOR
STATE OF NEW MEXICO
FRANKLIN E. WILSON

Franklin E. Wilson, New Mexico Licensed Surveyor No. 6446
SOUTHWEST SURVEYING CO., INC. 215 MARBLE NW, ALBUQUERQUE, NM 87102
247-4444

Book _____ Page _____