HYDROLOGY

C17/D1u2
3 PLANS

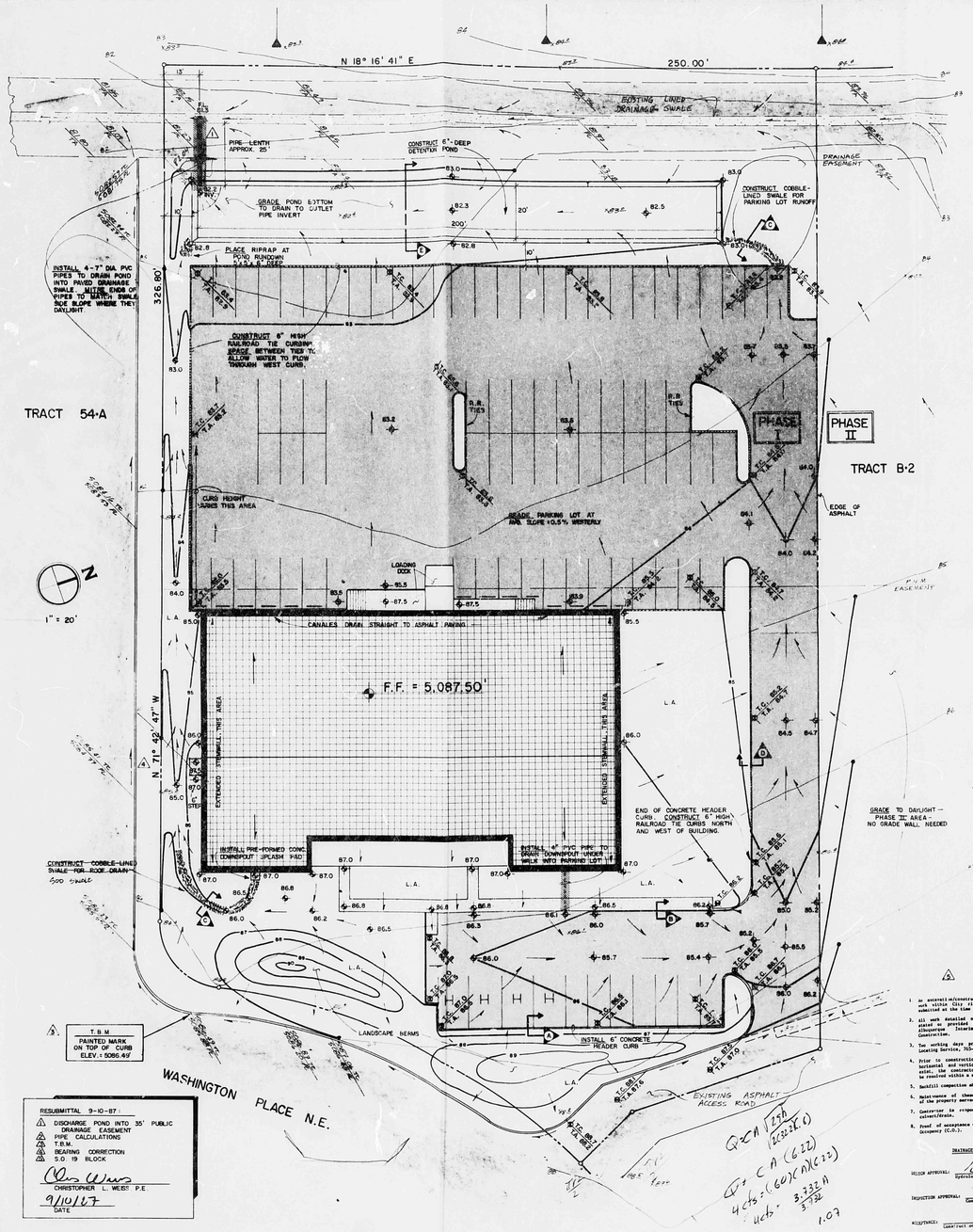
C17/D102

3 PLANS

D 24 | C 20 | B 16 | A 12

CITY OF ALBUQUERQUE

C D

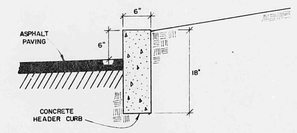



RESUBMITTAL 9-10-87:

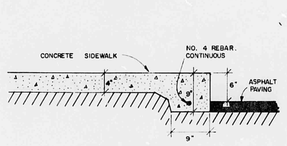
1. DISCHARGE POND INTO 35' PUBLIC DRAINAGE EASEMENT
2. PIPE CALCULATIONS
3. T.B.M.
4. BEARING CORRECTION
5. S.O. 19 BLOCK

CHRISTOPHER L. WEISS P.E.
9/10/87
DATE

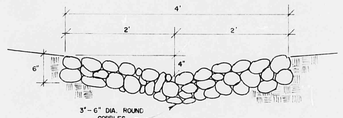
GRADE TO DAYLIGHT — PHASE III AREA — NO GRADE WALL NEEDED



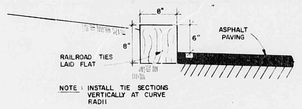

SECTION A
CONCRETE HEADER CURB




SECTION B
SIDEWALK/PAVING TRANSITION

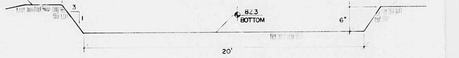



SECTION C
COBBLE LINED SWALE




NOTE: INSTALL TIE SECTIONS VERTICALLY AT CURVE RADII

SECTION D
RAILROAD TIE CURBING




SECTION E
DETENTION POND (NTS)

LEGEND

| | |
|---|---|
| SIDEWALK, CURB & GUTTER (EXISTING, PROPOSED) | SURFACE FLOW DIRECTION (EXISTING, PROPOSED) |
| PROPOSED ASPHALT | L.A. LANDSCAPED AREA |
| BUILDING (EXISTING, PROPOSED) | T.B.W. TOP OF GRADE WALL (LESS THAN 18" HIGH) |
| PROPERTY LINE | T.B.W. TOP OF RETAINING WALL (MORE THAN 18" HIGH) |
| 10.72 EXISTING SPOT ELEVATION | T.A. TOP OF ASPHALT |
| EXISTING CONTOUR | T.C. TOP OF CURB |
| 87.12 PROPOSED SPOT ELEVATION | F.L. FLOW LINE |
| PROPOSED CONTOUR | F.F. FINISHED FLOOR |

NOTICE TO CONTRACTOR

1. An excavation/construction permit will be required before beginning 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 noted or provided herein, shall be constructed in accordance with Albuquerque Interim Standard Specifications for Public Works Construction.
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 within a minimum amount of delay.
5. Backfill compaction shall be according to Resignatural street use.
6. Maintenance of these facilities shall be the responsibility of the Owner of the property served.
7. Contractor is responsible for obtaining excavation permit for sidewalk culvert/drain.
8. Proof of acceptance will be required prior to sign off for Certificate of Occupancy (C.O.).

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

DESIGN APPROVAL: Hydrology Section — Date 9/10/87

INSPECTION APPROVAL: Construction Section — Date

ACCEPTANCE: Construct ion Sect ion — Date

SCOPE:

The proposed improvements are comprised of a 15,000 SF office/warehouse building, the asphalt-paved parking, associated sidewalks and landscaped areas, and a runoff detention pond.

The present site is undeveloped open land sloping at 2% from east to west. Existing improvements adjacent to the site are a 35'-wide asphalt paved drainage swale, which runs parallel to the west property line, and a paved private access road which straddles the northeast property line.

The intent of this plan is to show:

a) Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.

b) The extent of propos... site improvements, including buildings, walks and personal.

c) The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City requirements for drainage management.

d) The relationship of onsite improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

DRAINAGE PLAN CONCEPT: The proposed improvements will be Phase I of the development of Tract 54-A of Washington Business Park, Albuquerque, New Mexico. The remaining 2.7 acres of Tract 54-A will be developed later as Phase II. The Phase I plan complies with the allowable maximum runoff coefficient of 0.70 (Johnson-Boston Master Drainage Plan, August 1982). In anticipating the worst case condition for Phase II future development of 100% paving (C = 0.95), the peak flow rate increase resulting from the higher runoff coefficient would require a detention pond size of 2,000 CF. The property owner has opted to construct this pond within the site improvements of Phase I. Therefore, when Phase II is developed, free discharge can be obtained for Phase II without jeopardizing downstream carrying capacities of the drainage swales.

GENERAL NOTES:

LEGAL: Phase I of Tract B-2 of Washington Business Park, Albuquerque, New Mexico.

SURVEYING: Clausnen and Associates, Inc., Albuquerque, New Mexico, December 1985.

B.M.: ACS brass tablet stamped "6-C17, 1975", cemented in a drill hole in top of concrete curb located on west side of Washington Street, approximately 0.3 mile north of intersection of Washington Street and Los Angeles Blvd. Elevation = 5,111.029'.

T.B.M.: Top of concrete curb at east curb return at intersection of Washington Place and Tract 54A of Washington Business Park. Elevation = 5,086.49' PAINTED MARK.

SOILS: Per Bernalillo County SCS Soil Survey Map No.11, soil types 'WeB' (Weiss series sandy loam) and 'LmB' (Embudo series gravelly sandy loam). Both types are Hydrologic Group 'B'.

FLOOD HAZARD: Per FIRM Map No.9, the closest flood boundaries are the Arroyo de Domingo Baca Channel (1700' south) and Alameda Blvd. (1200' north). Site is not in flood area.

OFF-SITE DRAINAGE: Paved drainage swales adjoin the site's west and south sides. Site runoff discharges to these swales. An existing paved street on the east intercepts east-west flows for routing to these drainage swales. Site is isolated from offsite drainage because of these improvements.

EROSION CONTROL: All sediment generated during construction is to be retained on the site and will collect in the detention pond to be built at the west end of the site.

CALCULATIONS: Calculations are based on the City of Albuquerque D.P.M. Manual, Vol. II for the 100-year, 6-hour storm, using the Rational Formula to compute the existing and proposed runoff rates.

RATIONAL METHOD: Q = CIA

Area of site: 96,885 SF = 2.22 AC

Run-off Coefficient:

Existing site:

Undeveloped Area = 66,690 ft²
Paved Area = 30,195 ft²

$C_u = \frac{(66,690)(0.40)}{96,885} = 0.36$

$C_p = \frac{(30,195)(0.95)}{96,885} = 0.30$

Composite C = 0.46

Developed Site:

Roof Area = 15,000 ft²
Landscaped Area = 31,935 ft²
Paved Area = 49,950 ft²

$C_r = \frac{(15,000)(0.90)}{96,885} = 0.14$

$C_l = \frac{(31,935)(0.25)}{96,885} = 0.09$

$C_p = \frac{(49,950)(0.95)}{96,885} = 0.47$

Composite C = 0.70

Rainfall Intensity:

$I = P_6 (6.46) T^{-0.51} = 4.65"$ per hour
where $P_6 = 2.2$ (DPM 22.7 D-1)
$T_c = 10$ minutes

Existing Condition:

$Q_{100} = (0.46)(4.65)(2.2) = 4.7$ cfs

$V_{100} = \frac{(0.46)(2.2)(96,885)}{8,170 \text{ ft}^3} = 8,170$ ft³

Developed Conditions:

$Q_{100} = (0.70)(4.65)(2.2) = 7.2$ cfs

$V_{100} = \frac{(0.70)(2.2)(96,885)}{12,430 \text{ ft}^3} = 12,430$ ft³

SUMMARY:

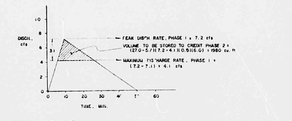
$Q_{100} = (7.2)-(4.7) = 2.5$ cfs (increase)
$V_{100} = (12,430)-(8,170) = 4,260$ ft³ (increase)

PHASE II (F TRACT B-2 EXTENDED TOMORROW)

Allowable runoff coefficient = 0.70
worst case maximum runoff coefficient after development = 0.95 (all paved)
Difference = 0.25 increase

Peak Discharge Rate Increase =
Q = CIA = (0.25)(4.65)(2.7) = 3.1 cfs increase over allowable

HYDROGRAPH TO SIZE DETENTION POND:



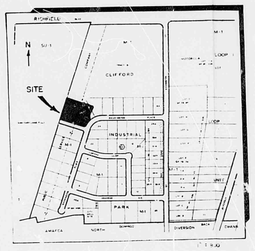

DETENTION POND VOLUME:

(200')(20')(0.5')+(400')(50')(0.5) = 2,165 CF (greater than required 1,980 CF)

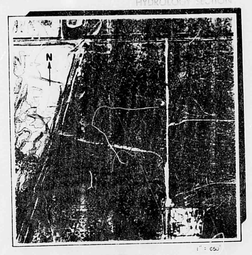
DETENTION POND DISCHARGE RATE:

The discharge from the pond will be held to 4 cfs under the following conditions:

D = CA (2gh)^½
A = 0.6
g = 32.2
h = 4.5 ft
D = 4 cfs
d = 0.5 in
Use 4" Dia pipe




VICINITY MAP C-17




FLOOD HAZARD MAP

WEISS-HINES ENGINEERING INC.
1100 ALVARADO N.E. SUITE B
ALBUQUERQUE, NEW MEXICO 87110
(505) 268-5464

| REVISIONS | DATE |
|---|---|
| | |

DESIGNED
DRAWN
CHECKED

# AQUILA OFFICE / WAREHOUSE
## GRADING / DRAINAGE PLAN

SHEET 1 OF 1

CITY OF ALBUQUERQUE

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

D 24 C 20 B 16 A 12 C D

C21-44-2

QUITCLAIM DEED, FILED AUG 28, 1981
BOOK D148A, PAGE 977-981

RICHFIELD 124' R.O.W. AVENUE

QUITCLAIM DEED, FILED AUG. 28, 1981
BOOK D148A, PAGE 971-973

R=50.00'
Δ=88°37'50"
L=78.51'

83 24548

S89°37'29"E 903.40'

SET BOHANNAN-HUSTON BRASS CAP IN 6" CONCRETE MONUMENT STAMPED "SSWPC 1982" N.M. STATE PLANE COOR. CENTRAL ZONE X=396,970.42 Y=1,522,469.15 ΔX,Y=-00°11'55" GROUND TO GRID FACTOR F.D.0.9996678

# CLIFFORD INDUSTRIAL PARK

ALBUQUERQUE, NEW MEXICO
SCALE: 1"=100' JULY 1982

ANY REPLAT REQUIRES THE APPROVAL OF THE OWNER'S CONTROL COMMITTEE

N

SCALE: 1"=100'

TRACT B
25.0000 Ac.

10' UTILITY EASEMENT

MOTOROLA LOT "1-A" (FILED NOV. 15, 1981) L19-23

WASHINGTON STREET

PUBLIC SERVICE COMPANY POWER LINE EASEMENT

TRACT E
LANDS OF SPRINGER CORP.
(FILED JULY 11, 1975)
D6-163

15' PRIVATE DRAINAGE EASEMENT FOR LOT 57

SWITCH GEAR EASEMENT 12'x15'

CORRECTED AND AMENDED REPLAT OF LOTS, UNIT II, LOOP INDUSTRIAL PARK, LANDS OF LOS ANGELES INVESTORS (FILED AUG. 13, 1979) B16-173

LOT I

LOT H

LOT G

LOT F

LOTS F, G AND H, TRACT 4
LANDS OF LOS ANGELES INVESTORS
(FILED AUG. 13, 1979)
B16-174

WASHINGTON PLACE

10' UTILITY EASEMENT

TEMPORARY 15' PUBLIC DRAINAGE EASEMENT

TRACT 54A 0.3912 Ac.

PRIVATE ACCESS EASEMENT SEE SHEET 4 FOR DETAIL

SEE SHEET 3 FOR MATCH LINE

## TANGENT DATA FOR SHEETS 2 & 3 ONLY

| NR. | DISTANCE | BEARING |
|---|---|---|
| T1 | 79.14' | S01°08'55"E |
| T2 | 115.00' | S88°51'05"W |
| T3 | 75.00' | N12°08'55"W |
| T4 | 99.38' | S77°51'05"W |
| T5 | 45.40' | S12°08'55"E |
| T6 | 6.48' | S71°43'19"E |
| T7 | 6.19' | S89°33'39"E |
| T8 | 55.04' | S00°20'21"W |
| T9 | 54.96' | S00°20'21"W |
| T10 | 7.08' | S89°33'39"E |
| T11 | 30.01' | S89°33'39"E |
| T12 | 176.41' | N77°51'05"E |
| T13 | 52.42' | N77°51'05"E |
| T14 | 60.00' | S71°43'19"E |
| T15 | 55.00' | S00°20'21"E |
| T16 | 30.00' | S71°43'19"E |
| T17 | 55.00' | N00°20'21"E |
| T18 | 30.00' | N71°43'19"W |
| T19 | 55.04' | N00°20'21"E |
| T20 | 54.96' | N00°20'21"E |
| T21 | 12.59' | S18°16'41"W |
| T22 | 42.02' | N18°16'41"E |
| T23 | 28.68' | N86°51'54"E |
| T24 | 60.00' | N71°43'19"W |

| NR. | DISTANCE | BEARING |
|---|---|---|
| T25 | 41.73' | N30°46'41"E |
| T26 | 44.31' | S71°43'19"E |
| T27 | 15.10' | N18°16'41"E |
| T28 | 32.90' | N18°16'41"E |
| T29 | 10.31' | S57°41'08"E |
| T30 | 10.31' | S85°48'29"E |
| T31 | 39.00' | N18°16'41"E |
| T32 | 20.00' | N18°16'41"E |
| T33 | 6.02' | N18°16'41"E |

## CURVE DATA FOR SHEETS 2 & 3 ONLY

| NR. | RADIUS | ARC | CHORD | DELTA | TANGENT |
|---|---|---|---|---|---|
| C1 | 200.00' | 106.88' | 105.61' | 30°37'06" | 54.75' |
| C2 | 400.00' | 124.54' | 124.04' | 17°50'21" | 62.78' |
| C3 | 45.00' | 57.48' | 53.65' | 73°11'14" | 33.41' |
| C4 | 45.00' | 67.11' | 61.07' | 85°27'09" | 41.56' |
| C5 | 25.00' | 39.27' | 35.36' | 90°00'00" | 25.00' |
| C6 | 370.00' | 115.20' | 114.74' | 17°50'21" | 58.07' |
| C7 | 25.00' | 13.05' | 12.90' | 29°54'16" | 6.68' |
| C8 | 25.00' | 3.63' | 3.62' | 08°18'32" | 1.82' |
| C9 | 45.00' | 65.32' | 59.73' | 83°09'48" | 39.93' |
| C10 | 45.00' | 62.29' | 57.44' | 79°18'58" | 37.30' |
| C11 | 45.00' | 3.02' | 3.02' | 03°50'50" | 1.51' |
| C12 | 25.00' | 16.57' | 16.37' | 38°12'48" | 8.66' |
| C13 | 25.00' | 39.23' | 35.32' | 89°54'00" | 24.96' |
| C14 | 25.00' | 39.31' | 35.39' | 90°06'00" | 25.04' |
| C15 | 430.00' | 32.68' | 32.67' | 04°21'14" | 16.35' |
| C16 | 430.00' | 30.30' | 30.29' | 04°02'14" | 15.16' |
| C17 | 430.00' | 70.91' | 70.83' | 09°26'53" | 35.53' |
| C18 | 45.00' | 76.80' | 67.81' | 97°47'11" | 51.37' |
| C19 | 430.00' | 4.54' | 4.54' | 00°36'20" | 2.27' |
| C20 | 430.00' | 129.34' | 128.85' | 17°14'00" | 65.16' |
| C21 | 370.00' | 57.60' | 57.54' | 08°55'10" | 28.86' |
| C22 | 50.00' | 78.51' | 70.69' | 89°57'50" | 49.97' |
| C23 | 200.00' | 251.89' | 235.57' | 72°09'39" | 145.74' |
| C24 | 170.00' | 214.11' | 200.23' | 72°09'39" | 123.88' |
| C25 | 230.00' | 72.53' | 72.23' | 18°04'07" | 36.57' |
| C26 | 230.00' | 94.56' | 93.90' | 23°53'24" | 47.96' |
| C27 | 230.00' | 94.56' | 93.90' | 23°53'24" | 47.96' |
| C28 | 25.00' | 36.23' | 33.14' | 83°01'13" | 22.13' |
| C29 | 230.00' | 28.01' | 28.00' | 06°58'43" | 14.02' |
| C30 | 22.50' | 1.17' | 1.17' | 02°52'58" | 0.58' |
| C31 | 22.50' | 29.27' | 27.25' | 74°32'02" | 17.12' |
| C32 | 37.50' | 36.49' | 35.07' | 55°45'16" | 19.84' |

## SURVEYOR'S CERTIFICATION

I, A. DWAIN WEAVER, UNDER THE LAWS OF NEW MEXICO, CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, AND THAT THIS PLAT WAS PREPARED BY ME OR UNDER MY SUPERVISION, SHOWS ALL EASEMENTS OF RECORD, MEETS THE MINIMUM REQUIREMENTS FOR MONUMENTATION AND SURVEYS CONTAINED IN THE ALBUQUERQUE SUBDIVISION ORDINANCE, AND IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

A. Dwain Weaver
A. DWAIN WEAVER
PLS No. 6544, NEW MEXICO

AUG. 11, 1982
DATE

JOB NO 20691

SHEET 2 OF 4 SHEETS

C21-44-2

C 20 B 16 A 2

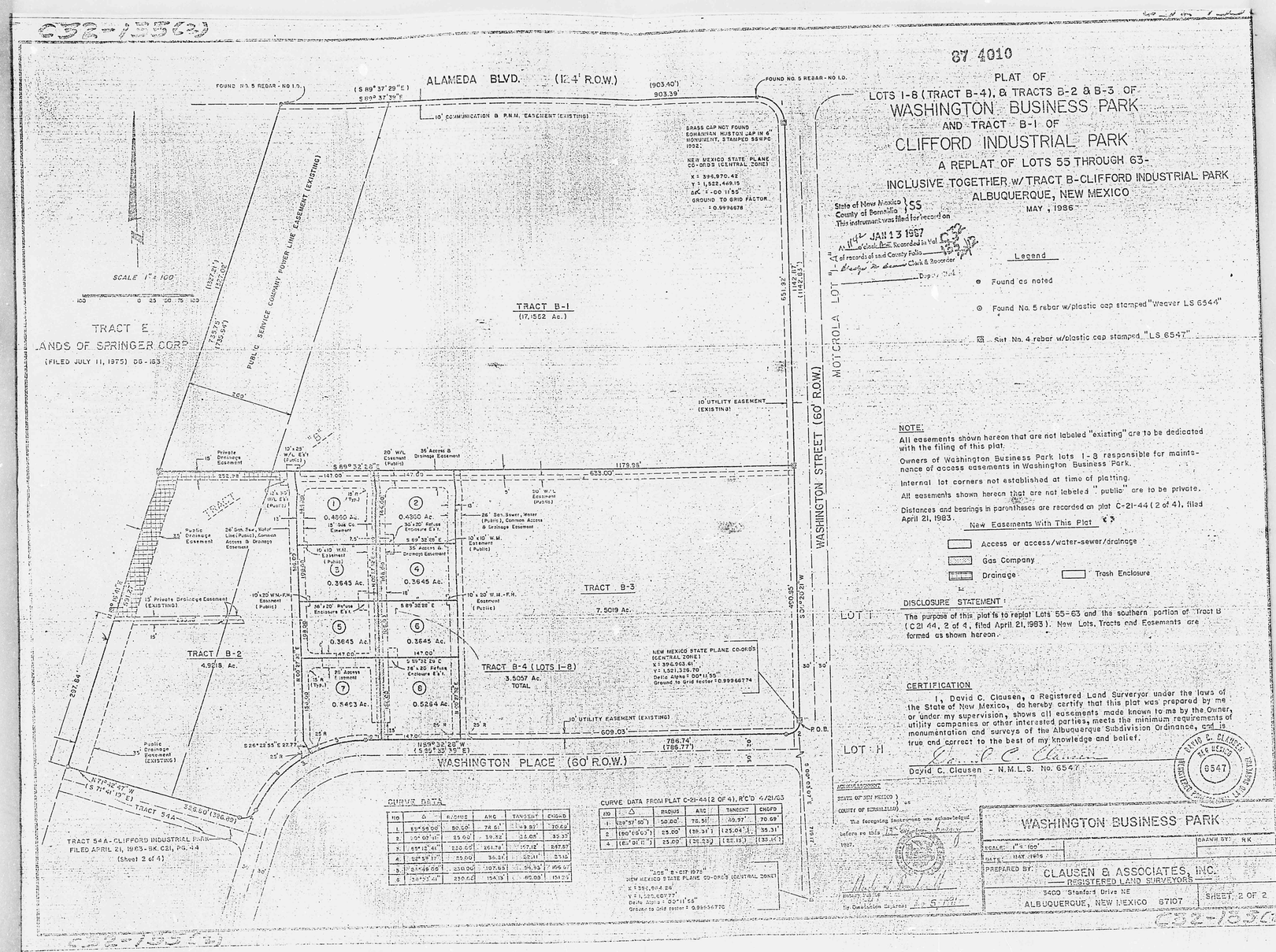
CITY OF ALBUQUERQUE

C

C32-185(2)

87 4010

# PLAT OF
## LOTS 1-8 (TRACT B-4), & TRACTS B-2 & B-3 OF
## WASHINGTON BUSINESS PARK
## AND TRACT B-1 OF
## CLIFFORD INDUSTRIAL PARK
A REPLAT OF LOTS 55 THROUGH 63-
INCLUSIVE TOGETHER w/ TRACT B-CLIFFORD INDUSTRIAL PARK
ALBUQUERQUE, NEW MEXICO
MAY, 1986




CURVE DATA

| NO | Δ | RADIUS | ARC | TANGENT | CHORD |
|---|---|---|---|---|---|
| 1. | 89°59'00" | 50.00' | 78.51' | 49.97' | 70.69' |
| 2. | 90°00'00" | 25.00' | 39.32' | 25.00' | 35.36' |
| 3. | 55°12'41" | 220.00' | 201.79' | 109.72' | 194.07' |
| 4. | 02°59'17" | 25.00' | 1.30' | 0.65' | 1.30' |
| 5. | 181°46'00" | 230.00' | 407.65' | 54.93' | 356.67' |
| 6. | 38°55'41" | 230.00' | 154.19' | 80.03' | 151.27' |

CURVE DATA FROM PLAT C-21-44 (2 OF 4), R'C'D 4/21/83

| NO | Δ | RADIUS | ARC | TANGENT | CHORD |
|---|---|---|---|---|---|
| 1 | 89°57'50" | 50.00' | 78.51' | 49.97' | 70.69' |
| 2 | (90°00'00") | 25.00' | (39.31') | (25.04') | 35.31' |
| 4 | (0°01'11") | 25.00' | (0.53) | (0.26) | (0.53) |

"ADD" BASED ON 1975
NEW MEXICO STATE PLANE CO-ORDS (CENTRAL ZONE)
X = 396,984.26
Y = 1,520,607.77
DELTA ALPHA = 00° 11' 58"
GROUND TO GRID FACTOR = 0.99966770

State of New Mexico } SS
County of Bernalillo }
This instrument was filed for record on
JAN 13 1987
at 11:42 o'clock AM, Recorded in Vol. ____ of records of said County Folio ____
Clerk & Recorder
Deputy

### Legend

- Found as noted
- Found No. 5 rebar w/plastic cap stamped "Weaver LS 6544"
- Set No. 4 rebar w/plastic cap stamped "LS 6547"

NOTE:

All easements shown hereon that are not labeled "existing" are to be dedicated with the filing of this plat.

Owners of Washington Business Park lots 1-3 responsible for maintenance of access easements in Washington Business Park.

Internal lot corners not established at time of platting.

All easements shown hereon that are not labeled "public" are to be private.

Distances and bearings in parentheses are recorded on plat C-21-44 (2 of 4), filed April 21, 1983.

New Easements With This Plat

- Access or access/water-sewer/drainage
- Gas Company
- Drainage
- Trash Enclosure

DISCLOSURE STATEMENT:

The purpose of this plat is to replat Lots 55-63 and the southern portion of Tract B (C21 44, 2 of 4, filed April 21, 1983). New Lots, Tracts and Easements are formed as shown hereon.

CERTIFICATION

I, David C. Clausen, a Registered Land Surveyor under the laws of the State of New Mexico, do hereby certify that this plat was prepared by me or under my supervision, shows all easements made known to me by the Owner, utility companies or other interested parties, meets the minimum requirements of monumentation and surveys of the Albuquerque Subdivision Ordinance, and is true and correct to the best of my knowledge and belief.

David C. Clausen - N.M.L.S. No. 6547

DAVID C. CLAUSEN REG. NO. 6547 NEW MEXICO LICENSED LAND SURVEYOR

ACKNOWLEDGMENT

STATE OF NEW MEXICO }
COUNTY OF BERNALILLO } ss

The foregoing instrument was acknowledged before me this 12th day of January, 1987.

Notary Public

My Commission Expires: 5-1-88

| WASHINGTON BUSINESS PARK | |
|---|---|
| SCALE: 1" = 100' | DRAWN BY: R.K. |
| DATE: MAY 1986 | |
| PREPARED BY: CLAUSEN & ASSOCIATES, INC. — REGISTERED LAND SURVEYORS | |
| 3400 Stanford Drive NE ALBUQUERQUE, NEW MEXICO 87107 | SHEET 2 OF 2 |

C32-185(2)

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

C 20 B 15 A 2
CITY OF ALBUQUERQUE C