PUBLIC WORKS/HYDROLOGY

E19/D25C1

1 OF 2

## DRAINAGE PLAN

The following items concerning the Big "O" Tires San Antonio Conceptual Drainage Plan are contained hereon:

1. Vicinity Map
2. Conceptual Grading Plan

As shown by the Vicinity Map, the site is located on the south side of San Antonio Drive N.E., just west of its intersection with San Antonio Place N.E. The site lies within the Wyoming Commercial Complex. The Pino Arroyo lies to the south of the site. The Pino Arroyo is currently fully improved as a City of Albuquerque Public Drainage Channel. This site outfalls to that existing drainage facility.

As shown by Panel 17 of 50 of the National Flood Insurance Program Flood Insurance Rate Maps published by F.E.M.A. for the City of Albuquerque, New Mexico dated October 14, 1983, this site does not lie within a designated flood hazard zone. A flood hazard zone is identified within the Pino Arroyo. The Flood Maps indicate that the 100-year flood is "confined to channel". Due to the proximity of the site to the Pino Arroyo, and the status of that channel, the free discharge of runoff from this site is appropriate. Further, it is consistent with the previously approved Master Drainage Plan for this site (Hydrology File No. E19/D25C). The downstream concrete rundown was improved and upgraded as part of the Zip-Lube project (E19/D25C3). The downstream improvements therefore satisfy the requirements of previously approved plans.

The Grading Plan shows: 1) existing grades indicated by contours at 1'0" intervals, 2) proposed grades indicated by contours at 1'0" intervals and spot elevations, 3) the limit and character of the existing improvements, 4) the limit and character of the proposed improvements, and 5) continuity between existing and proposed grades. As shown by this plan, a Big "O" Tire Store is proposed within the easterly portion of Tract C-1-C-1. At present, this portion of the site slopes from northeast to southwest. This trend of drainage will be maintained through the development of the site. The runoff generated by the proposed improvements will be discharged onto the existing paving which slopes in a westerly direction and eventually discharges to the existing concrete rundown referenced above. No detention ponding is required.

Due to the fact that this Conceptual Plan is consistent with the previously approved Master Drainage plan, Calculations have not been provided with this submittal. Calculations will be submitted, however, upon submission for Building Permit approval.

### LEGEND

| | |
|---|---|
| Ⓓ | BUILDING DESIGNATION |
| ⬚ | EXISTING BUILDING |
| ▨ | PROPOSED BUILDING |
| ‐ ‐ ‐ | EXISTING CONTOURS |
| —74— | PROPOSED CONTOUR |
| ◁— · · · | EXISTING FLOW LINE |
| ◀— · · · | PROPOSED FLOW LINE |
| ● 74.0 | PROPOSED SPOT ELEVATION |

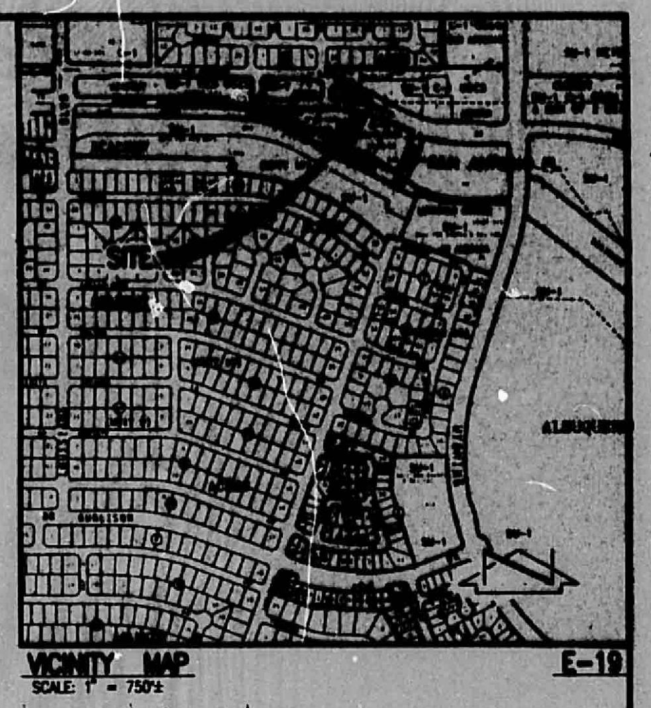
### LEGAL DESCRIPTION

PORTION OF TRACT C-1-C-1, ACADEMY ACRES, UNIT 17, ALBUQUERQUE, NEW MEX

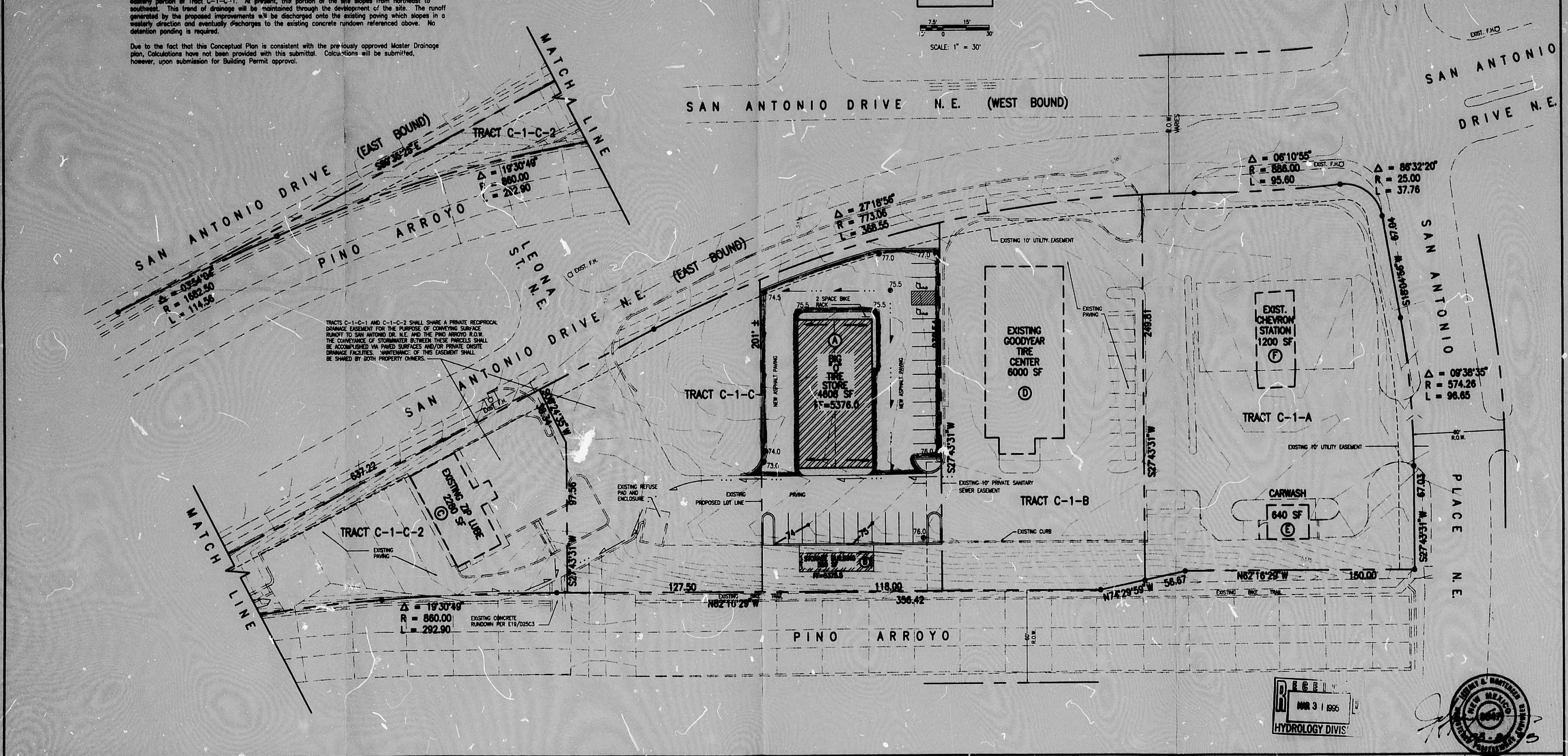
### PROJECT BENCHMARK

THE STATION IS A STANDARD A.C.S. BRASS CAP STAMPED "6-019-1978" SET ON TOP OF A CONCRETE POST FLUSH WITH THE GROUND LOCATED AT THE NORTHWEST CORNER OF SAN ANTONIO DRIVE AND WYOMING BOULEVARD N.E. ELEVATION = 5403.54 FEET (M.S.L.D.)

NOTE:
THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS ARE SHOWN FOR ORIENTATION ONLY.



VICINITY MAP
SCALE: 1" = 750'±


7.5'
15'
0
30'
SCALE: 1" = 30'
SAN ANTONIO DRIVE N.E. (WEST BOUND)
SAN ANTONIO DRIVE N.E.
SAN ANTONIO DRIVE (EAST BOUND)
SAN ANTONIO DRIVE N.E. (EAST BOUND)
SAN ANTONIO PLACE N.E.
MATCH LINE
MATCH LINE
PINO ARROYO
PINO ARROYO
LEONA ST. N.E.
TRACT C-1-C-2
TRACT C-1-C-2
TRACT C-1-C
TRACT C-1-B
TRACT C-1-A
Δ = 19°30'49"
R = 860.00
L = 292.90
Δ = 27°18'56"
R = 773.06
L = 368.55
Δ = 06°10'55"
R = 886.00
L = 95.60
Δ = 86°32'20"
R = 25.00
L = 37.76
Δ = 09°38'35"
R = 574.26
L = 96.65
Δ = 19°30'49"
R = 860.00
L = 292.90
BIG O TIRE STORE 4808 SF FF=5376.0
EXISTING GOODYEAR TIRE CENTER 6000 SF
EXIST. CHEVRON STATION 1200 SF
CARWASH 640 SF
EXISTING ZIP LUBE 2200 SF
127.50
118.00
356.42
56.67
150.00
N82°10'29"W
N82°10'29"W
N74°29'59"W
S27°43'31"W
248.81
201'±
637.22
EXISTING 10' UTILITY EASEMENT
EXISTING 10' PRIVATE SANITARY SEWER EASEMENT
EXISTING REFUSE PAD AND ENCLOSURE
EXISTING CONCRETE RUNDOWN PER E19/D25C3
EXISTING PAVING
EXISTING CURB
PROPOSED LIP LINE
2 SPACE BIKE RACK
NEW ASPHALT PAVING
EXIST. F.H.
TRACT C-1-C-1 AND C-1-C-2 SHALL SHARE A PRIVATE RECIPROCAL DRAINAGE EASEMENT FOR THE PURPOSE OF CONVEYING SURFACE RUNOFF TO SAN ANTONIO DR. N.E. AND THE PINO ARROYO R.O.W. THE CONVEYANCE OF STORMWATER BETWEEN THESE PARCELS SHALL BE ACCOMPLISHED VIA PAVED SURFACES AND/OR PRIVATE ONSITE DRAINAGE FACILITIES. MAINTENANCE OF THIS EASEMENT SHALL BE SHARED BY BOTH PROPERTY OWNERS.

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| | | |
|---|---|---|
| **JMA** JEFF MORTENSEN & ASSOCIATES, INC.<br>6010-B MIDWAY PARK BLVD. N.E.<br>ALBUQUERQUE, NEW MEXICO 87109<br>ENGINEERS SURVEYORS (505) 345-4250 | CONCEPTUAL GRADING AND DRAINAGE PLAN<br>BIG "O" TIRES - SAN ANTONIO<br>WYOMING COMMERCIAL COMPLEX | DESIGNED BY J.G.M.<br>DRAWN BY ACAD<br>APPROVED BY J.G.M. |

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| | | | |

JOB NO. 950341
DATE 03-1995
SHEET 3 OF 5

R# 25 DATE 3-15-12 OP E.S.P.

CITY OF ALBUQUERQUE

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11/5/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

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

PLANS/PLATS ON FILE

FILE DESC: E19/D25C1

# PLANS/PLATS 3

CITY OF ALBUQUERQUE

## DRAINAGE PLAN

The following items concerning the Big "O" Tires San Antonio Conceptual Drainage Plan are contained hereon:

1. Vicinity Map
2. Conceptual Grading Plan

As shown by the Vicinity Map, the site is located on the south side of San Antonio Drive N.E., just west of its intersection with San Antonio Place N.E. The site lies within the Wyoming Commercial Complex. The Pino Arroyo lies to the south of the site. The Pino Arroyo is currently fully improved as a City of Albuquerque Public Drainage Channel. This site outfalls to that existing drainage facility.

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| | |
|---|---|
| Ⓓ | BUILDING DESIGNATION |
| [ – – ] | EXISTING BUILDING |
| ▨ | PROPOSED BUILDING |
| | EXISTING CONTOURS |
| —74— | PROPOSED CONTOUR |
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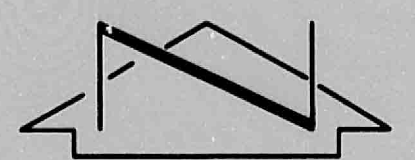

### LEGAL DESCRIPTION

PORTION OF TRACT C-1-C-1, ACADEMY ACRES, UNIT 17, ALBUQUERQUE, NEW MEXICO

### PROJECT BENCHMARK

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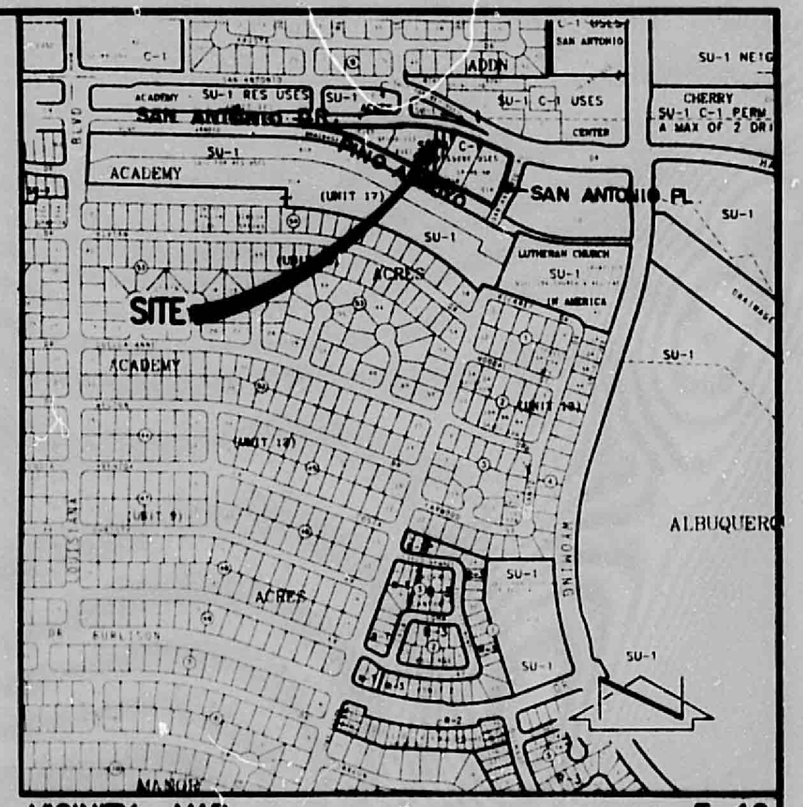
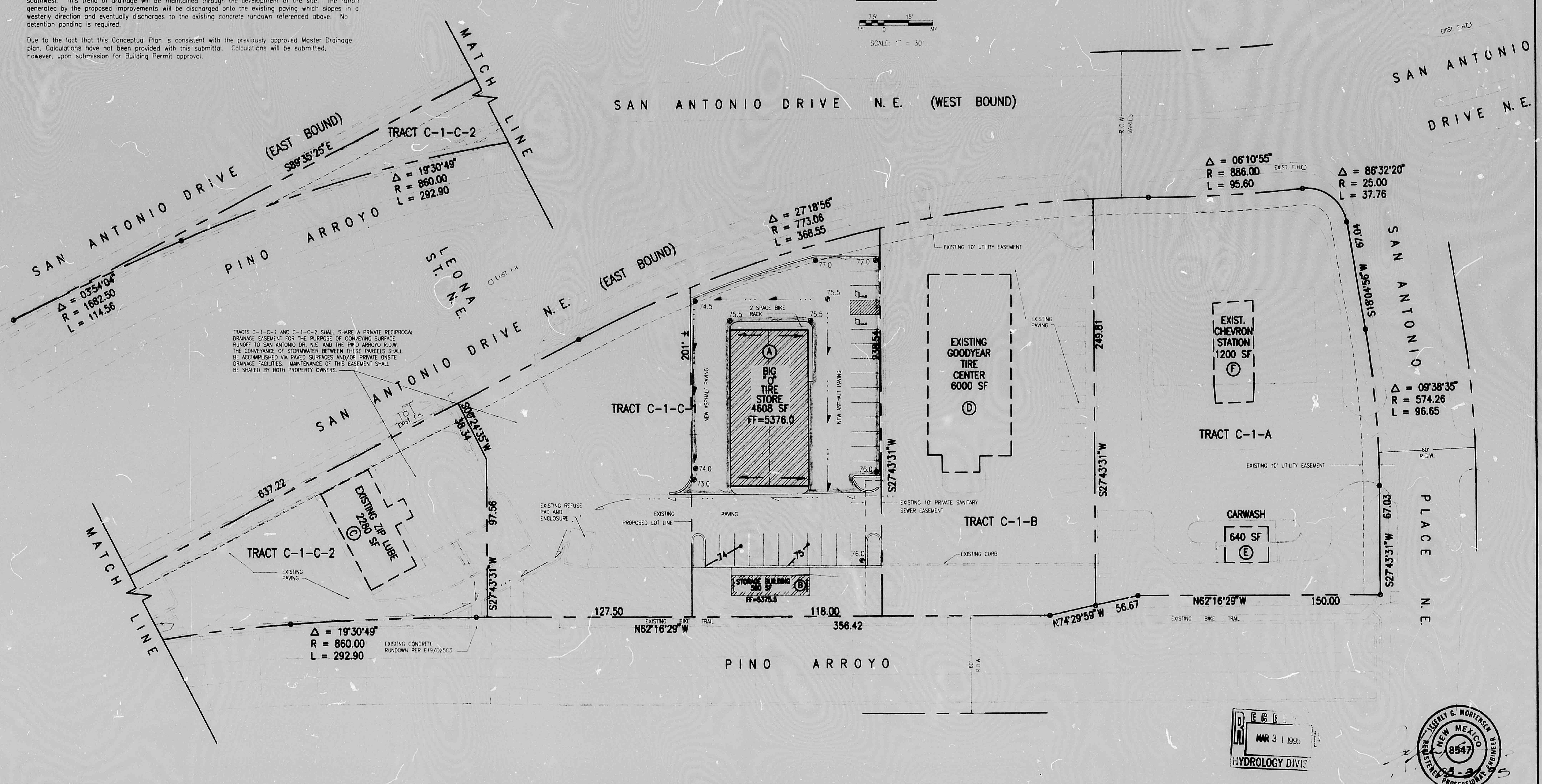

SITE
ACADEMY
SAN ANTONIO PL.
ALBUQUERQ
E-19

VICINITY MAP
SCALE: 1" = 750'±


7.5' 15'
15' 0 30'
SCALE: 1" = 30'
SAN ANTONIO DRIVE N.E. (WEST BOUND)
SAN ANTONIO DRIVE N.E.
EXIST. F.H.
R.O.W. VARIES
MATCH LINE
SAN ANTONIO DRIVE (EAST BOUND)
S89°35'25"E
TRACT C-1-C-2
Δ = 19°30'49"
R = 860.00
L = 292.90
PINO ARROYO
Δ = 03°54'04"
R = 1682.50
L = 114.56
LEONA ST. N.E.
EXIST. F.H.
SAN ANTONIO DRIVE N.E. (EAST BOUND)
Δ = 27°18'56"
R = 773.06
L = 368.55
EXISTING 10' UTILITY EASEMENT
Δ = 06°10'55"
R = 886.00
L = 95.60
EXIST. F.H.
Δ = 86°32'20"
R = 25.00
L = 37.76
SAN ANTONIO PLACE N.E.
67.04
S18°04'56"W
77.0
77.0
75.5
74.5
75.5
2 SPACE BIKE RACK
75.5
201' ±
NEW ASPHALT PAVING
Ⓐ BIG "O" TIRE STORE 4608 SF FF=5376.0
NEW ASPHALT PAVING
239.54
74.0
73.0
76.0
S27°43'31"W
TRACT C-1-C-1
EXISTING PAVING
EXISTING GOODYEAR TIRE CENTER 6000 SF Ⓓ
249.81
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Δ = 09°38'35"
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60' R.O.W.
EXISTING 10' UTILITY EASEMENT
CARWASH
640 SF Ⓔ
67.03
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38.34
637.22
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TRACT C-1-C-2
EXISTING PAVING
97.56
S27°43'31"W
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EXISITNG CONCRETE RUNDOWN PER E19/D25C3
EXISTING REFUSE PAD AND ENCLOSURE
EXISTING PROPOSED LOT LINE
PAVING
74
75
76.0
STORAGE BUILDING 500 SF Ⓑ FF=5375.5
EXISTING 10' PRIVATE SANITARY SEWER EASEMENT
TRACT C-1-B
EXISTING CURB
127.50
118.00
356.42
EXISTING BIKE TRAIL
N62°16'29"W
N74°29'59"W
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PINO ARROYO
60' R.O.W.

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MAR 3 1 1995
HYDROLOGY DIVIS

JEFFREY G. MORTENSEN
8547
03-31-95

**JMA** JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
☐ ALBUQUERQUE ☐ NEW MEXICO 87109
☐ ENGINEERS ☐ SURVEYORS (505) 345-4250

# CONCEPTUAL GRADING AND DRAINAGE PLAN
# BIG "O" TIRES - SAN ANTONIO
# WYOMING COMMERCIAL COMPLEX

DESIGNED BY J.G.M.
DRAWN BY ACAD
APPROVED BY J.G.M.

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| | | | |

JOB NO. 950341
DATE 03-1995
SHEET 3 OF 5

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 25 DATE 3-15-02 OP E.S.P.

CITY OF ALBUQUERQUE

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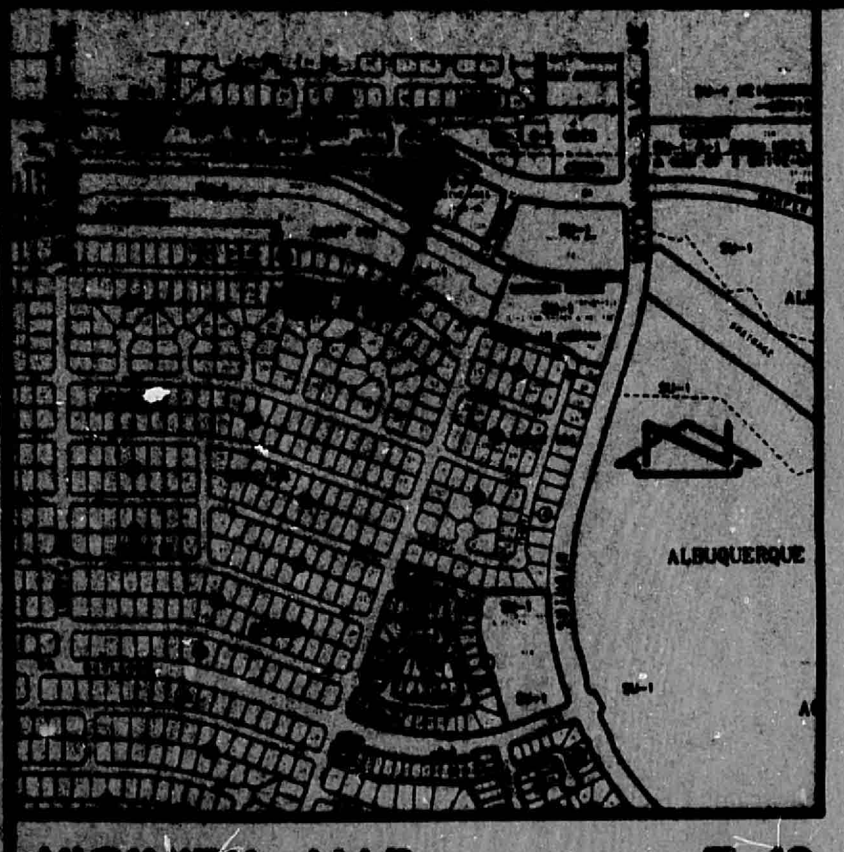
11/5/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/08/02 Rmd

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D



## VICINITY MAP

E-19

SCALE: 1" = 750'

## LEGAL DESCRIPTION

TRACT C-1-C-1-B, ACADEMY ACRES, UNIT 17

## PROJECT BENCHMARK

A.C.S. 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 12-E19" EPOXIED TO THE TOP OF THE CONCRETE CURB, AT THE WEST NORTHWEST CURB RETURN OF THE INTERSECTION OF WYOMING BLVD. N.E. AND SAN ANTONIO DR. N.E.
ELEVATION = 5404.28' (M.S.L.D.)

## T.B.M.

FOUND " + " CHISELED ON TOP OF CURB ● NE CORNER OF SITE
ELEVATION = 5378.21' (M.S.L.D.)

## LEGEND

| | |
|---|---|
| TC | TOP OF CURB |
| FL | FLOWLINE |
| TCO | TOP OF CONCRETE |
| TSW | TOP OF SIDEWALK |
| TA | TOP OF ASPHALT |
| EA | EDGE OF ASPHALT |
| TW | TOP OF WALL |
| BW | BOTTOM OF WALL |
| W.M. | WATER METER |
| P.P. | POWER POLE |
| W.V. | WATER VALVE |
| F.H. | FIRE HYDRANT |
| C.O. | CLEANOUT |
| SAS | SANITARY SEWER LINE |
| E | POWER LINE |
| T | TELEPHONE LINE |
| L.P. | LIGHT POLE |
| G.M. | GAS METER |
| G.P. | GUARD POST |
| W.C. | WHEELCHAIR |
| CONC. | CONCRETE |
| S/W | SIDEWALK |
| ○ | SMALL TREE |
| ⬭ | BOULDER |
| + 72.40 | EXISTING SPOT ELEVATION |
| —— 70 —— | EXISTING CONTOURS |
| ← · · · | EXISTING FLOWLINE |
| ● | PROPOSED SPOT ELEVATION |
| ——70—— | PROPOSED CONTOUR |
| ←—— ••• | PROPOSED FLOWLINE |
| ▨ | PROPOSED CONCRETE |
| ▨ | PROPOSED ASPHALT |
| ←—— | ROOF DRAINAGE |

RECEIVED
AUG 15 1995
HYDROLOGY DIVISION

### DRAINAGE PLAN

The following items concerning the Big "O" Tires San Antonio Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

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The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Procedure for 40-acre and Smaller Basins, as set forth in the Revision of Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, dated January, 1993, has been used to quantify the peak rate of discharge and volume of runoff generated. As shown by these calculations, an increase of 1430 cf in runoff volume and 0.5 cfs in the peak discharge rate is expected with this development.

### CALCULATIONS

Site Characteristics

1. Precipitation Zone = 3
2. $P_{6,100} = P_{360} =$ 2.60 in.
3. Total Area ($A_T$) = [illegible] ac/26,215 sf
4. Existing Land Treatment

| Treatment | Area (sf/ac) | % |
|---|---|---|
| C | 20,905/0.48 | 80.0 |
| D | 5,310/0.12 | 20.0 |

5. Developed Land Treatment

| Treatment | Area (sf/ac) | % |
|---|---|---|
| B | 1,575/0.04 | 6.7 |
| C | 2,725/0.06 | 10.0 |
| D | 21,915/0.50 | 83.3 |

Existing Condition

1. Volume

$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$$
$$E_W = (1.29(0.48)+2.36(0.12))/0.60 = 1.50 \text{ in.}$$
$$V_{100} = (E_W/12)A_T$$
$$V_{100} = (1.50/12)0.60 = 0.0750 \text{ ac.ft.} = 3{,}270 \text{ cf}$$

2. Peak Discharge

$$Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$$
$$Q_p = Q_{100} = 3.45(0.48)+5.02(0.12) = 2.3 \text{ cfs}$$

Developed Condition

1. Volume

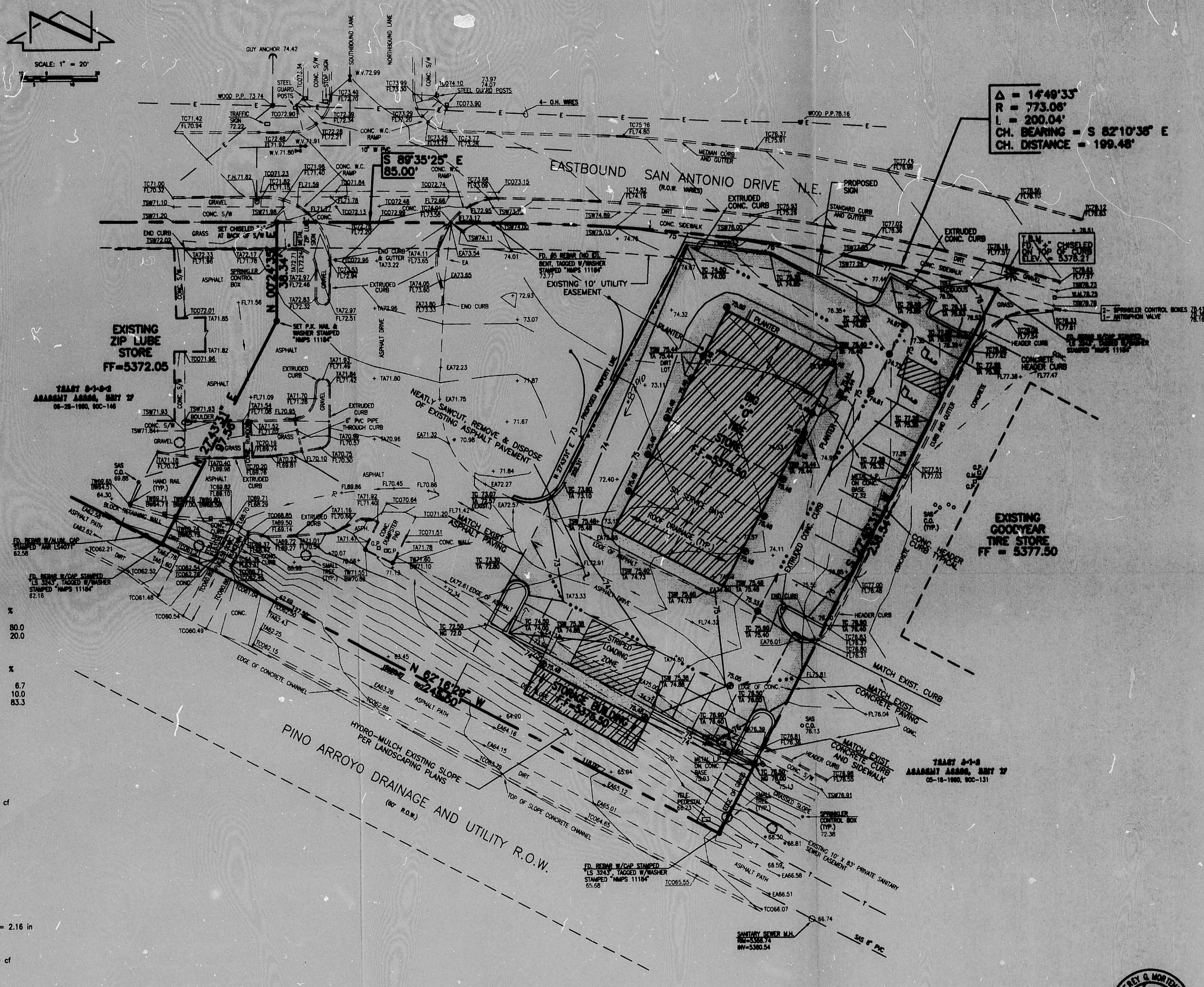
$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$$
$$E_W = (0.92(0.04)+1.29(0.06)+2.36(0.50))/0.60 = 2.16 \text{ in}$$
$$V_{100} = (E_W/12)A_T$$
$$V_{100} = (2.16/12)0.60 = 0.1079 \text{ ac.ft.} = 4{,}700 \text{ cf}$$

2. Peak Discharge

$$Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$$
$$Q_p = Q_{100} = 2.60(0.04)+3.45(0.06)+5.02(0.50) = 2.8 \text{ cfs}$$

Comparison

1. $\Delta V_{100} = 4700 - 3270 = 1430$ cf (increase)
2. $\Delta Q_{100} = 2.8 - 2.3 = 0.5$ cfs (increase)


SCALE: 1" = 20'
Δ = 14°49'33"
R = 773.06'
L = 200.04'
CH. BEARING = S 82°10'38" E
CH. DISTANCE = 199.48'
EASTBOUND SAN ANTONIO DRIVE N.E.
S 89°35'25" E
85.00'
EXISTING ZIP LUBE STORE
FF=5372.05
EXISTING 10' UTILITY EASEMENT
NEATLY SAWCUT REMOVE & DISPOSE OF EXISTING ASPHALT PAVEMENT
BIG "O" TIRE STORE
EXISTING GOODYEAR TIRE STORE
FF = 5377.50
STORAGE BUILDING
STRIPED LOADING ZONE
MATCH EXIST. CURB
MATCH EXIST. CONCRETE PAVING
HYDRO-MULCH EXISTING SLOPE PER LANDSCAPING PLANS
PINO ARROYO DRAINAGE AND UTILITY R.O.W.
EDGE OF CONCRETE CHANNEL
TOP OF SLOPE CONCRETE CHANNEL
ASPHALT PATH
T.B.M.
SANITARY SEWER M.H.

8547
08-11-95

## GRADING AND DRAINAGE PLAN
## BIG "O" TIRES - SAN ANTONIO
## WYOMING COMMERCIAL COMPLEX

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

DESIGNED BY J.G.M./G.R.B.
DRAWN BY C.J.H./TNT
APPROVED BY J.G.M.

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| | | | |
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JOB NO. 950345
DATE 07-1995
SHEET 4 OF 6

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

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R# 25 DATE 3-15-02 OP E.S.P.

CITY OF ALBUQUERQUE

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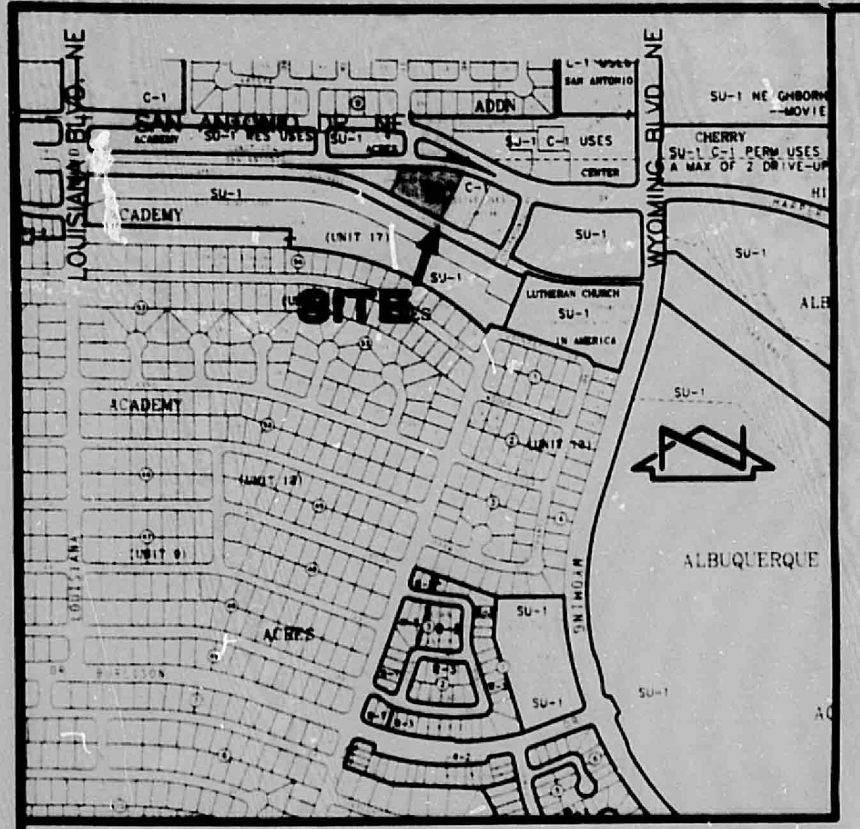
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/08/02

C 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C


SITE
ACADEMY
ACRES
WYOMING BLVD. N.E.
ALBUQUERQUE
SU-1

## VICINITY MAP  E-19

SCALE: 1" = 750'

## LEGAL DESCRIPTION

TRACT C-1-C-1-B, ACADEMY ACRES, UNIT 17

## PROJECT BENCHMARK

A.C.S. 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 12-E19" EPOXIED TO THE TOP OF THE CONCRETE CURB, AT THE WEST NORTHWEST CURB RETURN OF THE INTERSECTION OF WYOMING BLVD. N.E. AND SAN ANTONIO DR. N.E.
ELEVATION = 5404.28' (M.S.L.D.)

## T.B.M.

FOUND " + " CHISELED ON TOP OF CURB @ NE CORNER OF SITE
ELEVATION = 5378.21' (M.S.L.D.)

## LEGEND

| | |
|---|---|
| TC | TOP OF CURB |
| FL | FLOWLINE |
| TCO | TOP OF CONCRETE |
| TSW | TOP OF SIDEWALK |
| TA | TOP OF ASPHALT |
| EA | EDGE OF ASPHALT |
| TW | TOP OF WALL |
| BW | BOTTOM OF WALL |
| W.M. | WATER METER |
| P.P. | POWER POLE |
| W.V. | WATER VALVE |
| F.H. | FIRE HYDRANT |
| C.O. | CLEANOUT |
| SAS | SANITARY SEWER LINE |
| E | POWER LINE |
| T | TELEPHONE LINE |
| L.P. | LIGHT POLE |
| G.M. | GAS METER |
| G.P. | GUARD POST |
| W.C. | WHEELCHAIR |
| CONC. | CONCRETE |
| S/W | SIDEWALK |
| ○ | SMALL TREE |
| ⬭ | BOULDER |
| · 72.40 | EXISTING SPOT ELEVATION |
| — 70 — | EXISTING CONTOURS |
| ← | EXISTING FLOWLINE |
| ● | PROPOSED SPOT ELEVATION |
| —70— | PROPOSED CONTOUR |
| ← • • • | PROPOSED FLOWLINE |
| ▭ | PROPOSED CONCRETE |
| ▭ | PROPOSED ASPHALT |
| ← | ROOF DRAINAGE |

RECEIVED
AUG 15 1995
HYDROLOGY

### DRAINAGE PLAN

The following items concerning the Big "O" Tires San Antonio Drainage Plan are contained hereon:

1. Vicinity Map
2. Grading Plan
3. Calculations

As shown by the Vicinity Map, the site is located on the south side of San Antonio Drive N.E., just west of its intersection with San Antonio Place N.E. The site lies within the Wyoming Commercial Complex. The Pino Arroyo lies to the south of the site. The Pino Arroyo is currently fully improved as a City of Albuquerque Public Drainage Channel. This site outfalls to that existing drainage facility.

As shown by Panel 17 of 50 of the National Flood Insurance Program Flood Insurance Rate Maps published by F.E.M.A. for the City of Albuquerque, New Mexico dated October 14, 1983, this site does not lie within a designated flood hazard zone. A flood hazard zone is identified within the Pino Arroyo. The Flood Maps indicate that the 100-year flood is "confined to channel". Due to the proximity of the site to the Pino Arroyo, and the status of that channel, the free discharge of runoff from this site is appropriate. Further, it is consistent with the previously approved Master Drainage Plan for this site (Hydrology File No. E19/D25C). The downstream concrete rundown was improved and upgraded as part of the Zip-Lube project (E19/D25C3). The downstream improvements therefore satisfy the requirements of previously approved plans.

The Grading Plan shows: 1) existing grades indicated by contours at 1'0" intervals, 2) proposed grades indicated by contours at 1'0" intervals and spot elevations, 3) the limit and character of the existing improvements, 4) the limit and character of the proposed improvements, and 5) continuity between existing and proposed grades. As shown by this plan, a Big "O" Tire Store is proposed within the easterly portion of Tract C-1-C-1. At present, this portion of the site slopes from northeast to southwest. This trend of drainage will be maintained through the development of the site. The runoff generated by the proposed improvements will be discharged onto the existing paving which slopes in a westerly direction and eventually discharges to the existing concrete rundown referenced above. No detention ponding is required.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Procedure for 40-acre and Smaller Basins, as set forth in the Revision of Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, dated January, 1993, has been used to quantify the peak rate of discharge and volume of runoff generated. As shown by these calculations, an increase of 1430 cf in runoff volume and 0.5 cfs in the peak discharge rate is expected with this development.

### CALCULATIONS

Site Characteristics

1. Precipitation Zone = 3
2. $P_{6,100} = P_{360} = 2.60$ in.
3. Total Area ($A_T$) = 0.[illegible] ac/26,215 sf
4. Existing Land Treatment

| Treatment | Area (sf/ac) | % |
|---|---|---|
| C | 20,905/0.48 | 80.0 |
| D | 5,310/0.12 | 20.0 |

5. Developed Land Treatment

| Treatment | Area (sf/ac) | % |
|---|---|---|
| B | 1,575/0.04 | 6.7 |
| C | 2,725/0.06 | 10.0 |
| D | 21,915/0.50 | 83.3 |

Existing Condition

1. Volume

$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$$

$$E_W = (1.29(0.48) + 2.36(0.12))/0.60 = 1.50 \text{ in.}$$

$$V_{100} = (E_W/12)A_T$$

$$V_{100} = (1.50/12)0.60 = 0.0750 \text{ ac.ft.} = 3270 \text{ cf}$$

2. Peak Discharge

$$Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$$

$$Q_p = Q_{100} = 3.45(0.48) + 5.02(0.12) = 2.3 \text{ cfs}$$

Developed Condition

1. Volume

$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$$

$$E_W = (0.92(0.04) + 1.29(0.06) + 2.36(0.50))/0.60 = 2.16 \text{ in}$$

$$V_{100} = (E_W/12)A_T$$

$$V_{100} = (2.16/12)0.60 = 0.1079 \text{ ac.ft.} = 4{,}700 \text{ cf}$$

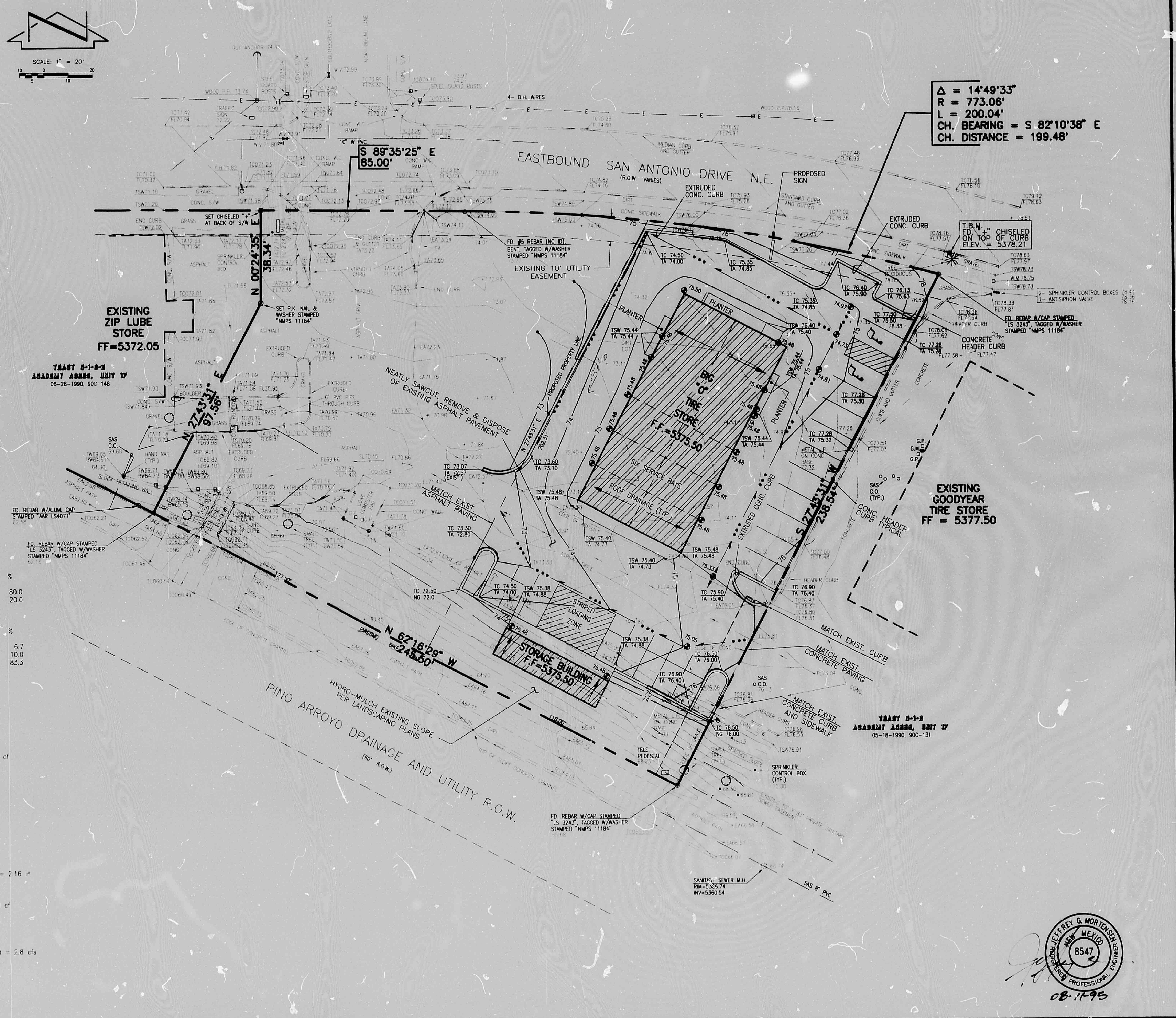
2. Peak Discharge

$$Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$$

$$Q_p = Q_{100} = 2.60(0.04) + 3.45(0.06) + 5.02(0.50) = 2.8 \text{ cfs}$$

Comparison

1. $\bullet V_{100} = 4700 - 3270 = 1430$ cf (increase)
2. $\bullet Q_{100} = 2.8 - 2.3 = 0.5$ cfs (increase)


SCALE: 1" = 20'
10
0
5
10
20
Δ = 14°49'33"
R = 773.06'
L = 200.04'
CH. BEARING = S 82°10'38" E
CH. DISTANCE = 199.48'
S 89°35'25" E
85.00'
EASTBOUND SAN ANTONIO DRIVE N.E.
(R.O.W. VARIES)
O.H. WIRES
PROPOSED SIGN
EXTRUDED CONC. CURB
T.B.M.
FD. "+" CHISELED ON TOP OF CURB
ELEV. = 5378.21'
SPRINKLER CONTROL BOXES
ANTISIPHON VALVE
FD. REBAR W/CAP STAMPED "LS 3243", TAGGED W/WASHER STAMPED "NMPS 11184"
CONCRETE HEADER CURB
N 00°24'35" E
38.34'
SET CHISELED "+" AT BACK OF S/W
SET P.K. NAIL & WASHER STAMPED "NMPS 11184"
FD. 5/8 REBAR (NO ID) BENT, TAGGED W/WASHER STAMPED "NMPS 11184"
EXISTING 10' UTILITY EASEMENT
EXISTING ZIP LUBE STORE
FF=5372.05
TRACT C-1-C-2
ACADEMY ACRES, UNIT 17
06-28-1990, 90C-148
NEATLY SAWCUT, REMOVE & DISPOSE OF EXISTING ASPHALT PAVEMENT
PROPOSED PROPERTY LINE
PLANTER
BIG "O" TIRE STORE
F.F.=5375.50
SIX SERVICE BAYS
ROOF DRAINAGE (TYP.)
EXTRUDED CONC. CURB
S 27°43'31" W
238.34'
N 27°43'31" E
97.56'
CONC. HEADER CURB TYPICAL
EXISTING GOODYEAR TIRE STORE
FF = 5377.50
MATCH EXIST. ASPHALT PAVING
FD. REBAR W/ALUM. CAP STAMPED "AAR LS4071"
FD. REBAR W/CAP STAMPED "LS 3243", TAGGED W/WASHER STAMPED "NMPS 11184"
STRIPED LOADING ZONE
STORAGE BUILDING
F.F.=5375.50
N 62°16'29" W
249.50'
MATCH EXIST. CURB
MATCH EXIST. CONCRETE PAVING
MATCH EXIST. CONCRETE CURB AND SIDEWALK
TRACT C-1-3
ACADEMY ACRES, UNIT 17
05-18-1990, 90C-131
HYDRO-MULCH EXISTING SLOPE PER LANDSCAPING PLANS
PINO ARROYO DRAINAGE AND UTILITY R.O.W.
(60' R.O.W.)
TELE PEDESTAL
SPRINKLER CONTROL BOX (TYP.)
SANITARY SEWER M.H.
SAS 8" PVC
SAS C.O. (TYP.)

JEFFREY G. MORTENSEN 8547
08-11-95

**JEFF MORTENSEN & ASSOCIATES, INC.**
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE ☐ NEW MEXICO 87109
ENGINEERS ☐ SURVEYORS (505) 345-4250

# GRADING AND DRAINAGE PLAN
# BIG "O" TIRES - SAN ANTONIO
# WYOMING COMMERCIAL COMPLEX

| | |
|---|---|
| DESIGNED BY | J.G.M./G.R.B. |
| DRAWN BY | C.J.H./TNT |
| APPROVED BY | J.G.M. |

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| | | | |

| | |
|---|---|
| JOB NO. | 950345 |
| DATE | 07-1995 |
| SHEET | 4 OF 6 |

C:\DATA\ACADWG\950345\950345GD P1 Aug 11 11:46 23 1995

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

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

R# 25 DATE 3-15-02 OP E.S.P.

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the Public Works Department and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

11/5/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/08/02 Rmd

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D

PUBLIC WORKS/HYDROLOGY 2 OF 2

E19/D25C1

## VICINITY MAP

E-19

SCALE: 1" = 750'

## LEGAL DESCRIPTION

TRACT C-1-C-1-B, ACADEMY ACRES, UNIT 17

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| ← ••• | PROPOSED FLOWLINE |
| ▭ | PROPOSED CONCRETE |
| ▨ | PROPOSED ASPHALT |
| ← | ROOF DRAINAGE |
| TC73.55 | AS-BUILT TOP OF CURB ⚠ |
| TA72.10 | AS-BUILT TOP OF ASPHALT ⚠ |
| TSW74.35 | AS-BUILT TOP OF SIDEWALK ⚠ |
| ● 75.28 | AS-BUILT SPOT ELEVATION ⚠ |
| ✓ | AS-BUILT ELEVATION=AS-DESIGNED ELEVATION ⚠ |

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2. Peak Discharge

$$Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$$
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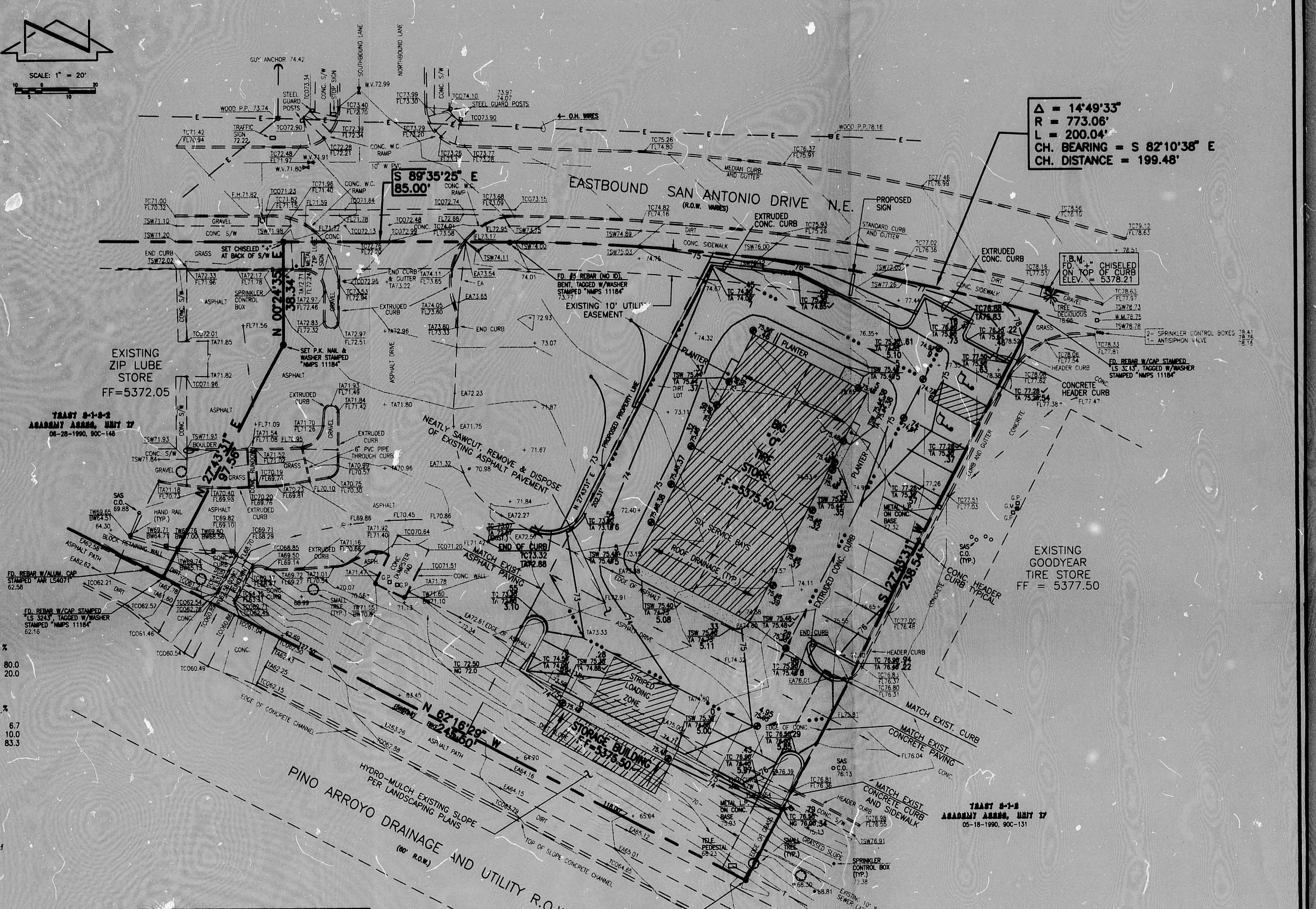
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TRACT 2-1-2-2 ACADEMY ACRES, UNIT 17
TRACT 2-1-2 ACADEMY ACRES, UNIT 17
MATCH EXIST. CURB
MATCH EXIST. CONCRETE PAVING
MATCH EXIST. CONCRETE CURB AND SIDEWALK
SANITARY SEWER M.H.
SAS 6" PVC

⚠1 DRAINAGE CERTIFICATION

As indicated by the as-built information shown hereon, the Big 'O' Tires - San Antonio has been constructed in substantial compliance with the approved Grading Plan. It is based upon this evaluation that acceptance of this project and issuance of a Permanent Certificate of Occupancy are hereby recommended. The as-built information has been obtained by me or under my direct supervision and is true and correct to the best of my knowledge and belief.

Jeffrey G. Mortensen, NMPE 8547 — 02-07-96 Date

8547

RECEIVED
FEB - 8 1996
HYDROLOGY SECTION

8547

08-11-95

# GRADING AND DRAINAGE PLAN
# BIG "O" TIRES - SAN ANTONIO
# WYOMING COMMERCIAL COMPLEX

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

DESIGNED BY J.G.M./G.R.B.
DRAWN BY E.M.S.
APPROVED BY J.G.M.

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| ⚠1 | 02/96 | G.R.B. | AS-BUILT & CERTIFY |

JOB NO. 950345
DATE 07-1995
SHEET 4 OF 6

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

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

R# 25 DATE 3-15-02 OP E.S.P.

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the Public Works Department and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

11/5/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
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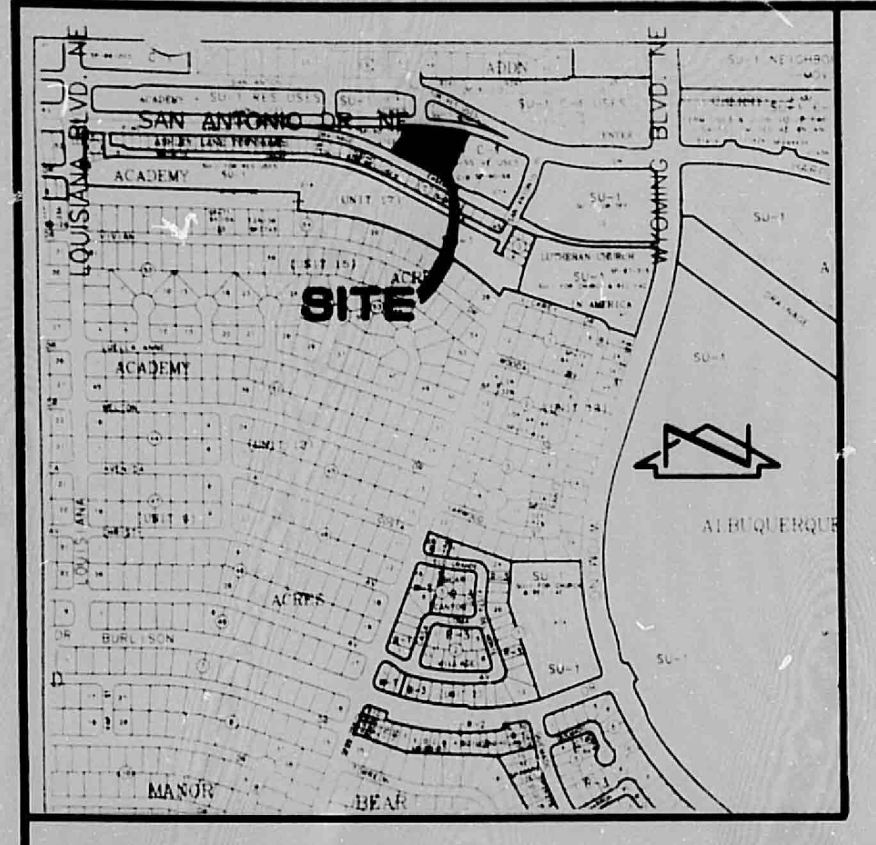
STATE OF NEW MEXICO
My Commission Expires 04/08/02

E 24 C 20 B 16 A 12
CITY OF ALBUQUERQUE C


SAN ANTONIO
SITE
ACRES
BURLISON
MANOR
BEAR
SU-1
ALBUQUERQUE

## VICINITY MAP E-19

SCALE: 1" = 750'

## LEGAL DESCRIPTION

TRACT C-1-C-1-B, ACADEMY ACRES, UNIT 17

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| —70— | PROPOSED CONTOUR |
| ← ••• | PROPOSED FLOWLINE |
| ▭ | PROPOSED CONCRETE |
| ▭ | PROPOSED ASPHALT |
| ← | ROOF DRAINAGE |
| TC73.~~38~~ .55 | AS-BUILT TOP OF CURB ⚠1 |
| TA72.~~00~~ .10 | AS-BUILT TOP OF ASPHALT ⚠1 |
| TSW74.~~48~~ .35 | AS-BUILT TOP OF SIDEWALK ⚠1 |
| ● 75.~~35~~ .28 | AS-BUILT SPOT ELEVATION ⚠1 |
| ✓ | AS-BUILT ELEVATION=AS-DESIGNED ELEVATION ⚠1 |

### DRAINAGE PLAN

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3. Calculations

As shown by the Vicinity Map, the site is located on the south side of San Antonio Drive N.E., just west of its intersection with San Antonio Place N.E. The site lies within the Wyoming Commercial Complex. The Pino Arroyo lies to the south of the site. The Pino Arroyo is currently fully improved as a City of Albuquerque Public Drainage Channel. This site outfalls to that existing drainage facility.

As shown by Panel 17 of 50 of the National Flood Insurance Program Flood Insurance Rate Maps published by F.E.M.A. for the City of Albuquerque, New Mexico dated October 14, 1983, this site does not lie within a designated flood hazard zone. A flood hazard zone is identified within the Pino Arroyo. The Flood Maps indicate that the 100-year flood is "confined to channel". Due to the proximity of the site to the Pino Arroyo, and the status of that channel, the free discharge of runoff from this site is appropriate. Further, it is consistent with the previously approved Master Drainage Plan for this site (Hydrology File No. E19/D25C). The downstream concrete rundown was improved and upgraded as part of the Zip-Lube project (E19/D25C3). The downstream improvements therefore satisfy the requirements of previously approved plans.

The Grading Plan shows: 1) existing grades indicated by contours at 1'0" intervals, 2) proposed grades indicated by contours at 1'0" intervals and spot elevations, 3) the limit and character of the existing improvements, 4) the limit and character of the proposed improvements, and 5) continuity between existing and proposed grades. As shown by this plan, a Big "O" Tire Store is proposed within the easterly portion of Tract C-1-C-1. At present, this portion of the site slopes from northeast to southwest. This trend of drainage will be maintained through the development of the site. The runoff generated by the proposed improvements will be discharged onto the existing paving which slopes in a westerly direction and eventually discharges to the existing concrete rundown referenced above. No detention ponding is required.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Procedure for 40-acre and Smaller Basins, as set forth in the Revision of Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, dated January, 1993, has been used to quantify the peak rate of discharge and volume of runoff generated. As shown by these calculations, an increase of 1430 cf in runoff volume and 0.5 cfs in the peak discharge rate is expected with this development.

### CALCULATIONS

Site Characteristics

1. Precipitation Zone = 3
2. $P_{6,100} = P_{360} = 2.60$ in.
3. Total Area ($A_T$) = 0.60 ac/26,215 sf
4. Existing Land Treatment

| Treatment | Area (sf/ac) | % |
|---|---|---|
| C | 20,905/0.48 | 80.0 |
| D | 5,310/0.12 | 20.0 |

5. Developed Land Treatment

| Treatment | Area (sf/ac) | % |
|---|---|---|
| B | 1,575/0.04 | 6.7 |
| C | 2,725/0.06 | 10.0 |
| D | 21,915/0.50 | 83.3 |

Existing Condition

1. Volume

$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$$
$$E_W = (1.29(0.48) + 2.36(0.12))/0.60 = 1.50 \text{ in.}$$
$$V_{100} = (E_W/12)A_T$$
$$V_{100} = (1.50/12)0.60 = 0.0750 \text{ ac.ft.} = 3{,}270 \text{ cf}$$

2. Peak Discharge

$$Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$$
$$Q_p = Q_{100} = 3.45(0.48) + 5.02(0.12) = 2.3 \text{ cfs}$$

Developed Condition

1. Volume

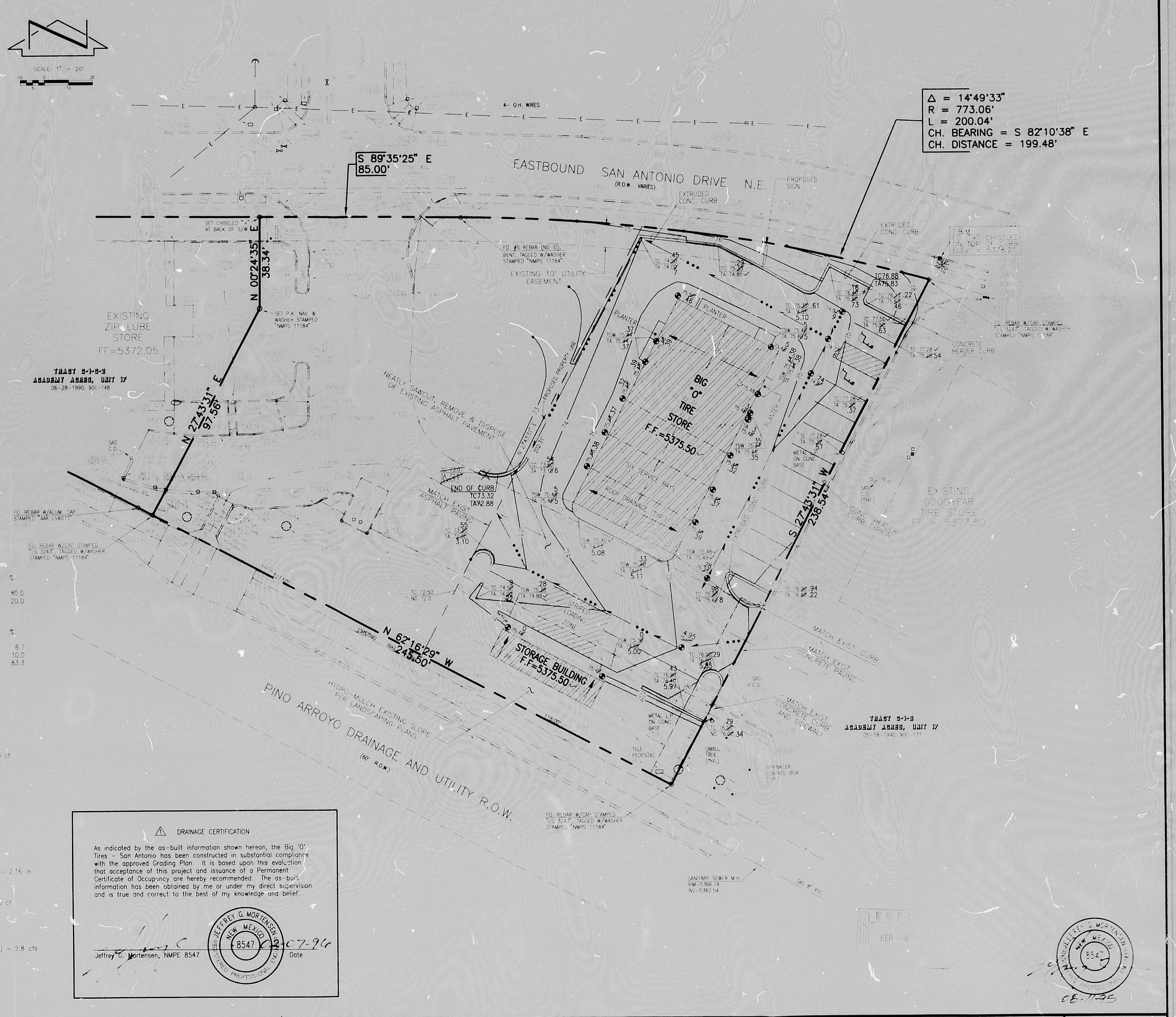
$$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$$
$$E_W = (0.92(0.04) + 1.29(0.06) + 2.36(0.50))/0.60 = 2.16 \text{ in}$$
$$V_{100} = (E_W/12)A_T$$
$$V_{100} = (2.16/12)0.60 = 0.1079 \text{ ac.ft.} = 4{,}700 \text{ cf}$$

2. Peak Discharge

$$Q_p = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$$
$$Q_p = Q_{100} = 2.60(0.04) + 3.45(0.06) + 5.02(0.50) = 2.8 \text{ cfs}$$

Comparison

1. $\Delta V_{100} = 4700 - 3270 = 1430$ cf (increase)
2. $\Delta Q_{100} = 2.8 - 2.3 = 0.5$ cfs (increase)


SCALE: 1" = 20'
10 0 5 10 20
Δ = 14°49'33"
R = 773.06'
L = 200.04'
CH. BEARING = S 82°10'38" E
CH. DISTANCE = 199.48'
4- O.H. WIRES
S 89°35'25" E
85.00'
EASTBOUND SAN ANTONIO DRIVE N.E.
(ROW VARIES)
PROPOSED SIGN
EXTRUDED CONC. CURB
EXISTING 10' UTILITY EASEMENT
SET CHISELED "+" AT BACK OF S/W
N 00°24'35" E
38.34'
N 27°43'31" E
97.56'
EXISTING ZIP-LUBE STORE
FF=5372.05
TRACT C-1-C-3
ACADEMY ACRES, UNIT 17
06-28-1990, 90C-148
NEATLY SAWCUT, REMOVE & DISPOSE OF EXISTING ASPHALT PAVEMENT
BIG "O" TIRE STORE
F.F.=5375.50
PLANTER
END OF CURB
TC73.32
TA72.88
MATCH EXIST. ASPHALT PAVING
S 27°43'31" W
238.54'
EXISTING GOODYEAR TIRE STORE
STORAGE BUILDING
F.F.=5375.50
N 62°16'29" W
245.50'
PINO ARROYO DRAINAGE AND UTILITY R.O.W.
(60' ROW)
HYDRO-MULCH EXISTING SLOPE (SEE LANDSCAPING PLAN)
MATCH EXIST. CURB
MATCH EXIST. CONCRETE PAVING
TRACT C-1-B
ACADEMY ACRES, UNIT 17
FD. REBAR W/ALUM. CAP STAMPED "AAR LS4071"
FD. REBAR W/CAP STAMPED "LS 3243", TAGGED W/WASHER STAMPED "NMPS 11184"
SANITARY SEWER M.H.
FEB - 8
08-11-95

⚠1 DRAINAGE CERTIFICATION

As indicated by the as-built information shown hereon, the Big 'O' Tires - San Antonio has been constructed in substantial compliance with the approved Grading Plan. It is based upon this evaluation that acceptance of this project and issuance of a Permanent Certificate of Occupancy are hereby recommended. The as-built information has been obtained by me or under my direct supervision and is true and correct to the best of my knowledge and belief.

Jeffrey G. Mortensen, NMPE 8547 — 8547 — 02-07-96 Date

## GRADING AND DRAINAGE PLAN

## BIG "O" TIRES - SAN ANTONIO
## WYOMING COMMERCIAL COMPLEX

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

DESIGNED BY J.G.M./G.R.B.
DRAWN BY E.M.S.
APPROVED BY J.G.M.

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| ⚠1 | 02/96 | G.R.B. | AS-BUILT & CERTIFY |

JOB NO. 950345
DATE 07-1995
SHEET 4 OF 6

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 25 DATE 3-15-02 OP E.S.P.

CITY OF ALBUQUERQUE

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11/5/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
07/08/02

D 24 C 20 B 16 A 12
CITY OF ALBUQUERQUE C D