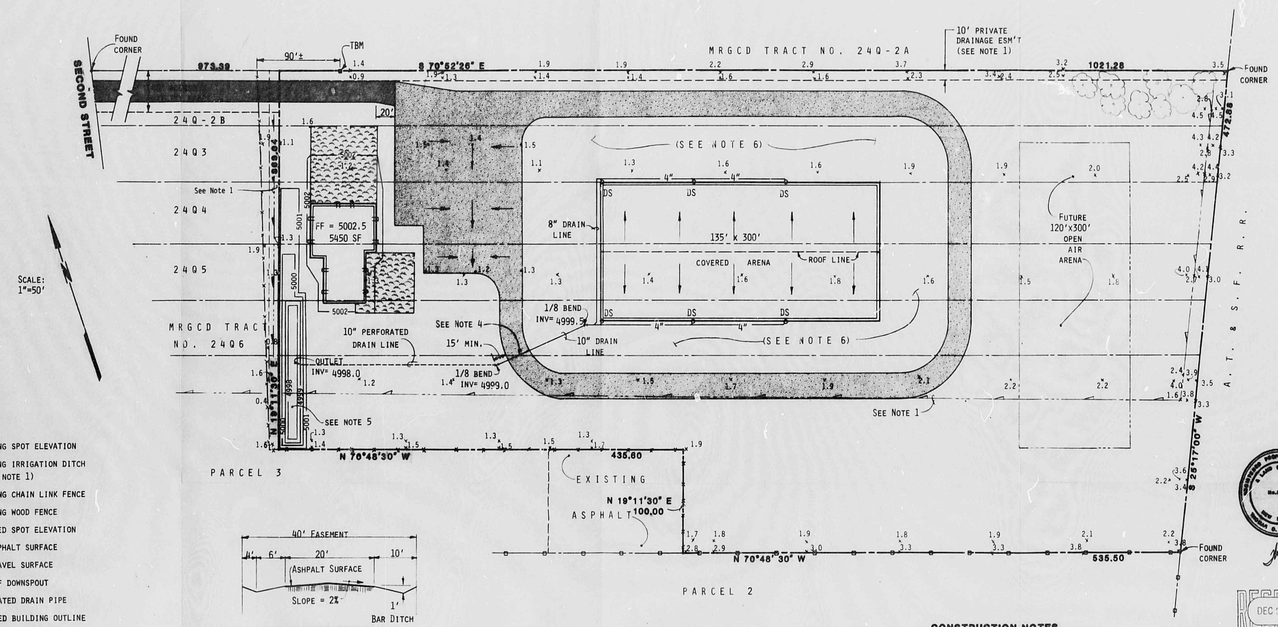
PUBLIC WORKS/HYDROLOGY

B16/D4



ACCESS ROAD SECTION
No Scale

LEGEND

- 1.6 — Existing spot elevation
- Existing irrigation ditch (SEE NOTE 1)
- Existing chain link fence
- Existing wood fence
- 2.4 — Proposed spot elevation
- New asphalt surface
- New gravel surface
- DS — 4" roof downspout
- Perforated drain pipe
- Proposed building outline
- 5002 — Proposed contour

DRAINAGE CONDITIONS

EXISTING: THIS SITE IS RELATIVELY FLAT, SLOPING FROM EAST TO WEST AT LESS THAN 0.5%. THE CONTIGUOUS PROPERTY ON THE EAST, WHICH IS OWNED BY THE A.T. & S.F. RAILROAD, IS ELEVATED APPROXIMATELY 10' PREVENTING ANY OFFSITE FLOWS FROM INUNDATING THE SITE.

PROPOSED: HISTORICAL DRAINAGE PATTERNS WILL NOT BE CHANGED AS THE PROPOSED GRADING IS VERY MINIMAL. WITH THE CREATION OF THE RETENTION POND, ALL THE 100-YR RUNOFF WILL BE RETAINED ONSITE.

DRAINAGE CALCULATIONS

EXISTING: $Q = CIA$ $\quad Q_{10} = (0.657)Q_{100}$

WHERE C = RUNOFF COEFFICIENT = 0.40
I = INTENSITY FACTOR = 2.2"(2.16) = 4.75
A = AREA = 9.7397 ACRES

$Q_{100} = (0.40)(4.75)(9.7397) = 18.5$ CFS
$Q_{10} = (0.657)(18.5) = 12.1$ CFS

SCS VOLUME CALCULATIONS: GOOD PASTURE LAND: CN = 61
A = 9.74 ACRES, Tc = 1.0 HOUR, P = 2.2"
DIRECT RUNOFF = 0.2" DISTRIBUTION CURVE NO. = 75
VOLUME = (0.2")(9.74)(43560)(1/12) = 7,070 CU FT
$V_{10} = (0.657)(7070) = 4,650$ CU FT

DRAINAGE CALCULATIONS (CONTINUED)

PROPOSED: COMPOSITE 'C' & CN

	% AREA	'C'	COMPOSITE 'C'	CN	COMPOSITE CN
GOOD PASTURE LAND	75	0.40	0.30	61	45
ROOF AREA	11	0.90	0.10	98	11
PAVED SURFACE	1	0.95	0.01	98	1
GRAVEL SURFACE	13	0.70	0.09	85	11
	100	'C' = 0.50		CN =	69

$Q_{100} = (0.50)(4.75)(9.7397) = 23.1$ CFS
$Q_{10} = (0.657)(23.1) = 15.2$ CFS

P = 2.2", DC = 75, DIRECT RUNOFF = 0.3"
VOLUME = (0.3")(9.74)(43560)(1/12) = 10,600 CU FT
$V_{10} = (0.657)(10,600) = 6,960$ CU FT

POND VOLUME COMPUTATIONS (SEE NOTE 5)

THE POND HAS BEEN SIZED TO HOLD NOT ONLY OCCASIONAL NUISANCE FLOWS, BUT ALSO THE TOTAL OF THE 100 YEAR DISCHARGE. THE POND HAS INCREMENTAL CAPACITY AS FOLLOWS:

ELEV.	DEPTH	VOLUME/ CONTOUR	TOTAL VOLUME
4998	0 FT	0	0
4999	1	1800 CF	1800CF
5000	2	2600	4400
5001	3	6000	10,400

TOTAL POND VOLUME (@ ELEV 5001) = 10,400 CF

GENERAL NOTES

BENCH MARK(S): ACS BM "3-B17", A 40 PENNY NAIL IN POWER POLE LOCATED 0.3 MILES SOUTH OF THE NORTH DIVERSION CHANNEL ON THE WEST SIDE OF EDITH BLVD. ELEVATION: 5014.72

TEMPORARY BENCHMARK: A 20 PENNY NAIL DRIVEN IN A RR TIE FENCE POST 90 FEET EAST OF THE NORTHWEST CORNER OF THIS SITE. ELEVATION: 5002.08

LEGAL DESCRIPTION: AN EASTERLY PORTION OF MRGCD TRACTS 24Q2B, 24Q3, 24Q4, 24Q5, 24Q6, AND AN EASTERLY PORTION OF PARCEL 3.

FLOOD HAZARD STATEMENT: AS SHOWN ON PANEL 3 OF 50 OF THE FEMA FLOOD MAPS, THIS SITE IS NEITHER IN A DESIGNATED FLOOD AREA NOR DOES IT DISCHARGE TO A FLOOD HAZARD AREA.

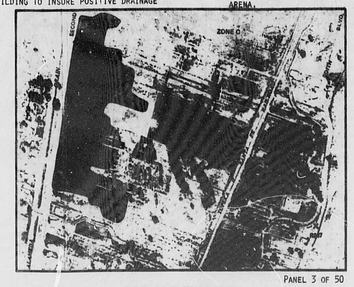
SOILS: FROM THE SCS SOIL SURVEY OF BERNALILLO COUNTY, THESE GILA AND VINTON SERIES CLAY LOAM SOILS ARE CLASSIFIED AS HYDROLOGICAL SOIL GROUP B SOILS.

OFFSITE FLOWS: THIS SITE DOES NOT ACCEPT ANY OFFSITE FLOWS.

ACCESS ROAD: THE 20' WIDE PAVED ACCESS ROAD WILL SHED ALL RUNOFF TO ADJACENT BAR DITCHES AS SHOWN ABOVE. THE BAR DITCH WILL NOT CONVEY WATER ALONG THE ROAD, BUT WILL ACT AS A LONG NARROW RETENTION POND.

CONSTRUCTION NOTES

1. EXISTING IRRIGATION DITCH SHOWN SHALL BE REALIGNED WITHIN 10' PRIVATE DRAINAGE ESM'T AS SHOWN ALONG THE NORTH PROPERTY LINE. THE DITCH LEAVES THE PROPERTY AT THE NORTHWEST CORNER WHERE IT TURNS SOUTH FOR 315' AT WHICH POINT IT TURNS WEST IN ITS OLD ALIGNMENT.
2. ARENA DOWNSPOUTS SHALL BE LOCATED COINCIDENT WITH STRUCTURAL SUPPORTS (100'OC).
3. CONTRACTOR SHALL GRADE AREA ADJACENT TO BUILDING TO INSURE POSITIVE DRAINAGE AWAY FROM THE FOUNDATION.
4. MINIMUM OF 12" COVER REQUIRED OVER DRAIN LINE AT ROAD CROSSING.
5. RETENTION POND BOTTOM ELEV=4998.0 POND BOTTOM SIZE=100'x130', SIDE SLOPES TO BE 3:1 (HORIZ.:VERT.)
6. THE EARTH FLOOR OF THE ARENA SHALL BE RAISED 6"± RELATIVE TO THE SURROUNDING GROUND TO INSURE POSITIVE DRAINAGE AWAY FROM THE ARENA.



PANEL 3 OF 50

FLOOD HAZARD MAP
SCALE: 1"=500'

RECEIVED
DEC 11 1987
HYDROLOGY SECTION

Date 12/11/87
Designed
Drawn
Checked
TCI

Isaacson & Arfman, P.A.
CONSULTING ENGINEERING ASSOCIATES
Albuquerque, New Mexico

DRAINAGE & GRADING PLAN

SHERIFF'S POSSE ARENA

Sheet 1 of 1

R# 24 DATE 3/14/92 OP

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)

DIRECTOR 11/5/92

NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 8/20/92

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

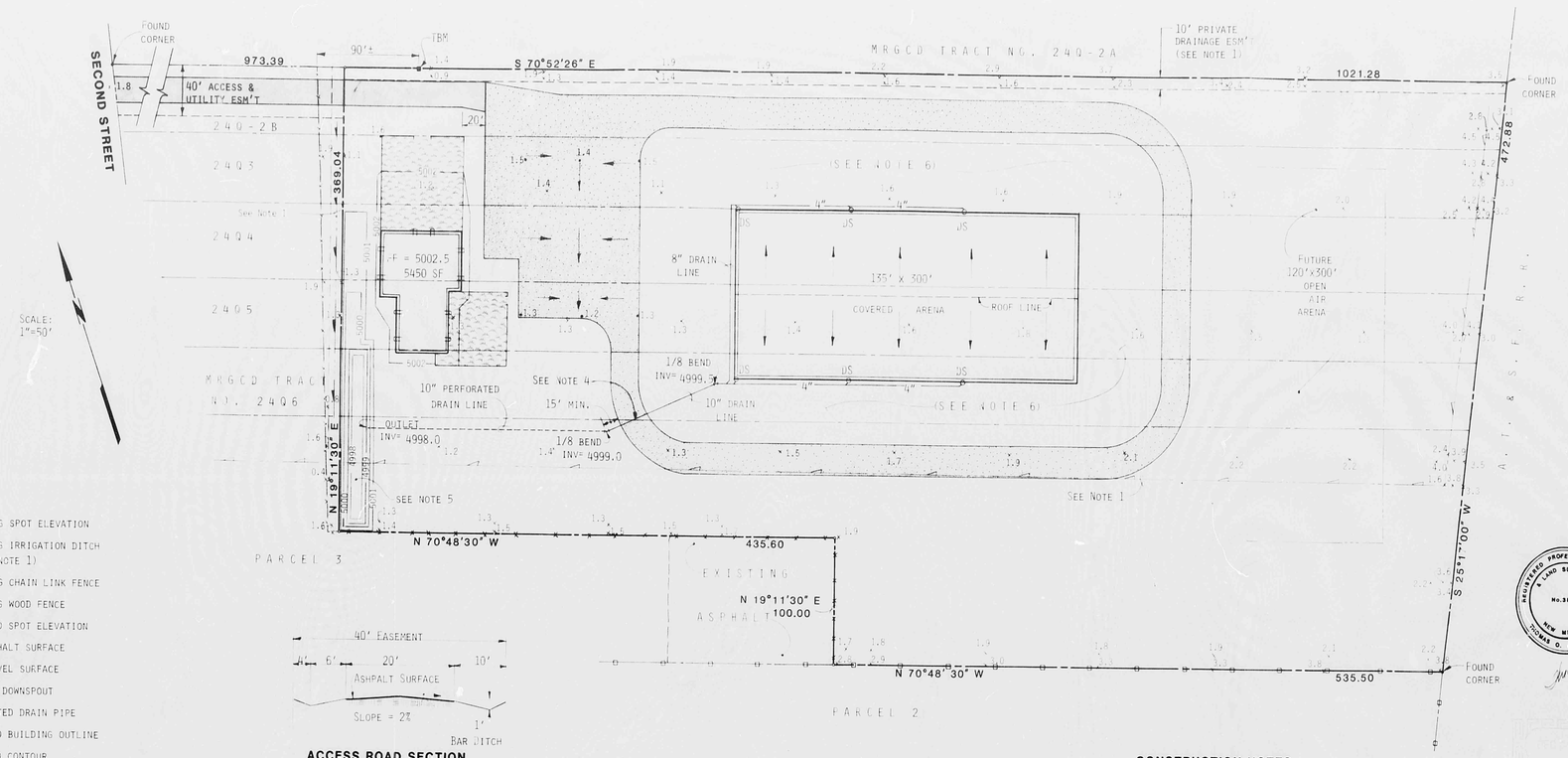
CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

PLANS/PLATS ON FILE

FILE DESC: B16/D4

PLANS/PLATS 2

E 30 D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D F



LEGEND

- 1.6 — EXISTING SPOT ELEVATION
- EXISTING IRRIGATION DITCH (SEE NOTE 1)
- EXISTING CHAIN LINK FENCE
- EXISTING WOOD FENCE
- 1.4 — PROPOSED SPOT ELEVATION
- NEW ASPHALT SURFACE
- NEW GRAVEL SURFACE
- DS — 4" ROOF DOWNSPOUT
- PERFORATED DRAIN PIPE
- PROPOSED BUILDING OUTLINE
- 5002 — PROPOSED CONTOUR

ACCESS ROAD SECTION

No Scale

DRAINAGE CONDITIONS

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DIRECT RUNOFF = 0.2" DISTRIBUTION CURVE No. = 75
VOLUME = (0.2")(9.74)(43560)(1/12) = 7,070 CU FT
V_{10} = (0.657)(7070) = 4,650 CU FT

DRAINAGE CALCULATIONS (CONTINUED)

PROPOSED: COMPOSITE 'C' & CN

	% AREA	'C'	COMPOSITE 'C'	CN	COMPOSITE CN
GOOD PASTURE LAND	75	0.40	0.30	61	45
ROOF AREA	11	0.90	0.10	98	11
PAVED SURFACE	1	0.95	0.01	98	1
GRAVEL SURFACE	13	0.70	0.09	85	11
	100	'C' = 0.50		CN =	69

Q_{100} = (0.50)(4.75)(9.7397) = 23.1 CFS

Q_{10} = (0.657)(23.1) = 15.2 CFS

P = 2.2", DC = 75, DIRECT RUNOFF = 0.3"
VOLUME = (0.3")(9.74)(43560)(1/12) = 10,600 CU FT
V_{10} = (0.657)(10,600) = 6,960 CU FT

POND VOLUME COMPUTATIONS (SEE NOTE 5)

THE POND HAS BEEN SIZED TO HOLD NOT ONLY OCCASIONAL NUISANCE FLOWS, BUT ALSO THE TOTAL OF THE 100 YEAR DISCHARGE. THE POND HAS INCREMENTAL CAPACITY AS FOLLOWS:

ELEV.	DEPTH	VOLUME/ CONTOUR	TOTAL VOLUME
4998	0 FT	0	0
4999	1	1800 CF	1800 CF
5000	2	2600	4400
5001	3	6000	10,400

TOTAL POND VOLUME (@ ELEV 5001) = 10,400 CF

GENERAL NOTES

BENCH MARK(S): ACS BM "3-B17", A 40 PENNY NAIL IN POWER POLE LOCATED 0.3 MILES SOUTH OF THE NORTH DIVERSION CHANNEL ON THE WEST SIDE OF EDITH BLVD. ELEVATION: 5014.72

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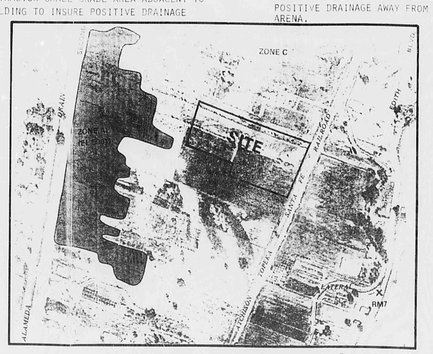

PANEL 3 OF 50

FLOOD HAZARD MAP

SCALE: 1"=500'

REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR No.3895 NEW MEXICO THOMAS O. ISAACSON

Date 12/11/87
Designed SPM
Checked TOI

Isaacson & Arfman, P.A.
CONSULTING ENGINEERING ASSOCIATES
Albuquerque, New Mexico

DRAINAGE & GRADING PLAN

SHERIFF'S POSSE ARENA

Sheet 1 of 1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 24 DATE 3/14/2 OP

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DIRECTOR

NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
07/08/02

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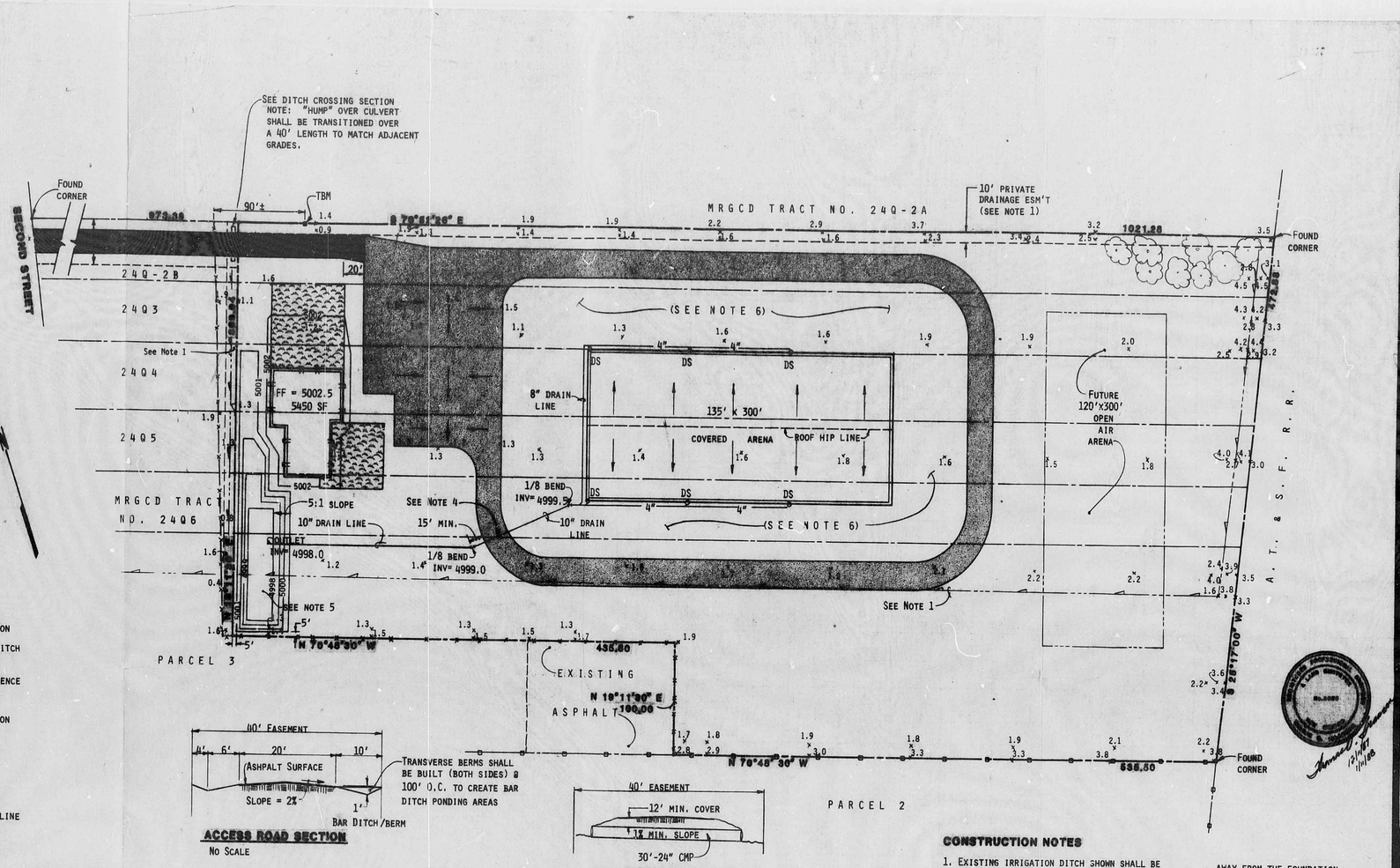

ACCESS ROAD SECTION
No Scale

DITCH CROSSING SECTION
No Scale

LEGEND

- 1.6 — Existing spot elevation
- Existing irrigation ditch (see note 1)
- Existing chain link fence
- Existing wood fence
- 2.4 — Proposed spot elevation
- New asphalt surface
- New gravel surface
- DS — 4" roof downspout
- Perforated drain pipe
- Proposed building outline
- 5002 — Proposed contour

DRAINAGE CONDITIONS

EXISTING: THIS SITE IS RELATIVELY FLAT, SLOPING FROM EAST TO WEST AT LESS THAN 0.5%. THE CONTIGUOUS PROPERTY ON THE EAST, WHICH IS OWNED BY THE A.T. & S.F. RAILROAD, IS ELEVATED APPROXIMATELY 10' PREVENTING ANY OFFSITE FLOWS FROM INUNDATING THE SITE.

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$V_{10} = (0.657)(7070) = 4,650$ CU FT

DRAINAGE CALCULATIONS (CONTINUED)

PROPOSED: COMPOSITE 'C' & CN

	% AREA	'C'	COMPOSITE 'C'	CN	COMPOSITE CN
FAIR RANGE LAND	75	0.40	0.30	69	52
ROOF AREA	11	0.90	0.10	98	11
PAVED SURFACE	1	0.95	0.01	98	1
GRAVEL SURFACE	13	0.70	0.09	85	11
	100	'C' = 0.50		CN =	75

$Q_{100} = (0.50)(4.75)(9.7397) = 23.1$ CFS
$Q_{10} = (0.657)(23.1) = 15.2$ CFS
P = 2.2", DC = 75, DIRECT RUNOFF = 0.5"
VOLUME = (0.5")(9.74)(43560)(1/12) = 17,680 CU FT
$V_{10} = (0.657)(17,680) = 11,620$ CU FT

POND VOLUME COMPUTATIONS (SEE NOTE 5)

THE POND HAS BEEN SIZED TO HOLD 100% OF THE DEVELOPED RUNOFF. PORTIONS OF THE SITE ARE SO FLAT THAT IT IS NOT PRACTICAL TO FORCE THEM TO DRAIN TO THE POND. THEREFORE SOME SHALLOW PUDDLES WILL EXIST. INCREMENTAL POND CAPACITY IS:

ELEV.	DEPTH	VOLUME/ CONTOUR	TOTAL VOLUME
4998	0 FT	0	0
4999	1	3000 CF	3000 CF
5000	2	3900	6900
5001	3	7700	14600

TOTAL POND VOLUME (@ ELEV 5001) = 14,600 CF

GENERAL NOTES

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ACCESS ROAD: THE 20' WIDE PAVED ACCESS ROAD WILL SHED ALL RUNOFF TO ADJACENT BAR DITCHES AS SHOWN ABOVE. THE BAR DITCH WILL NOT CONVEY WATER ALONG THE ROAD, BUT WILL ACT AS LONG NARROW RETENTION PONDS SEPARATED BY TRANSVERSE BERMS LOCATED 100' APART.

CONSTRUCTION NOTES

1. EXISTING IRRIGATION DITCH SHOWN SHALL BE REALIGNED WITHIN 10' PRIVATE DRAINAGE ESM'T AS SHOWN ALONG THE NORTH PROPERTY LINE. THE DITCH LEAVES THE PROPERTY AT THE NORTHEST CORNER WHERE IT TURNS SOUTH FOR 315' AT WHICH POINT IT TURNS WEST IN ITS OLD ALIGNMENT.
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3. CONTRACTOR SHALL GRADE AREA ADJACENT TO BUILDING TO INSURE POSITIVE DRAINAGE AWAY FROM THE FOUNDATION.
4. MINIMUM OF 12" COVER REQUIRED OVER DRAIN LINE AT ROAD CROSSING.
5. RETENTION POND BOTTOM ELEV=4998.0 POND BOTTOM SIZE= 25'x100', 3:1 SIDE SLOPES ADJACENT TO BOUNDARIES.
6. THE EARTH FLOOR OF THE ARENA SHALL BE RAISED 6"± RELATIVE TO THE SURROUNDING GROUND TO INSURE POSITIVE DRAINAGE AWAY FROM THE AREA.

FLOOD HAZARD MAP
SCALE: 1"=500'

PANEL 3 OF 50
FEB 02 1988

1/11/88 REVISION DATE: RETENTION POND REDESIGNED.

SHERIFF'S POSSE ARENA

DRAINAGE & GRADING PLAN

Isaacson & Arfman, P.A.
CONSULTING ENGINEERING ASSOCIATES
Albuquerque, New Mexico

Date 12/11/87
Designed
Drawn
Checked

Sheet 1 of 1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 24 DATE 3/14/02 DP

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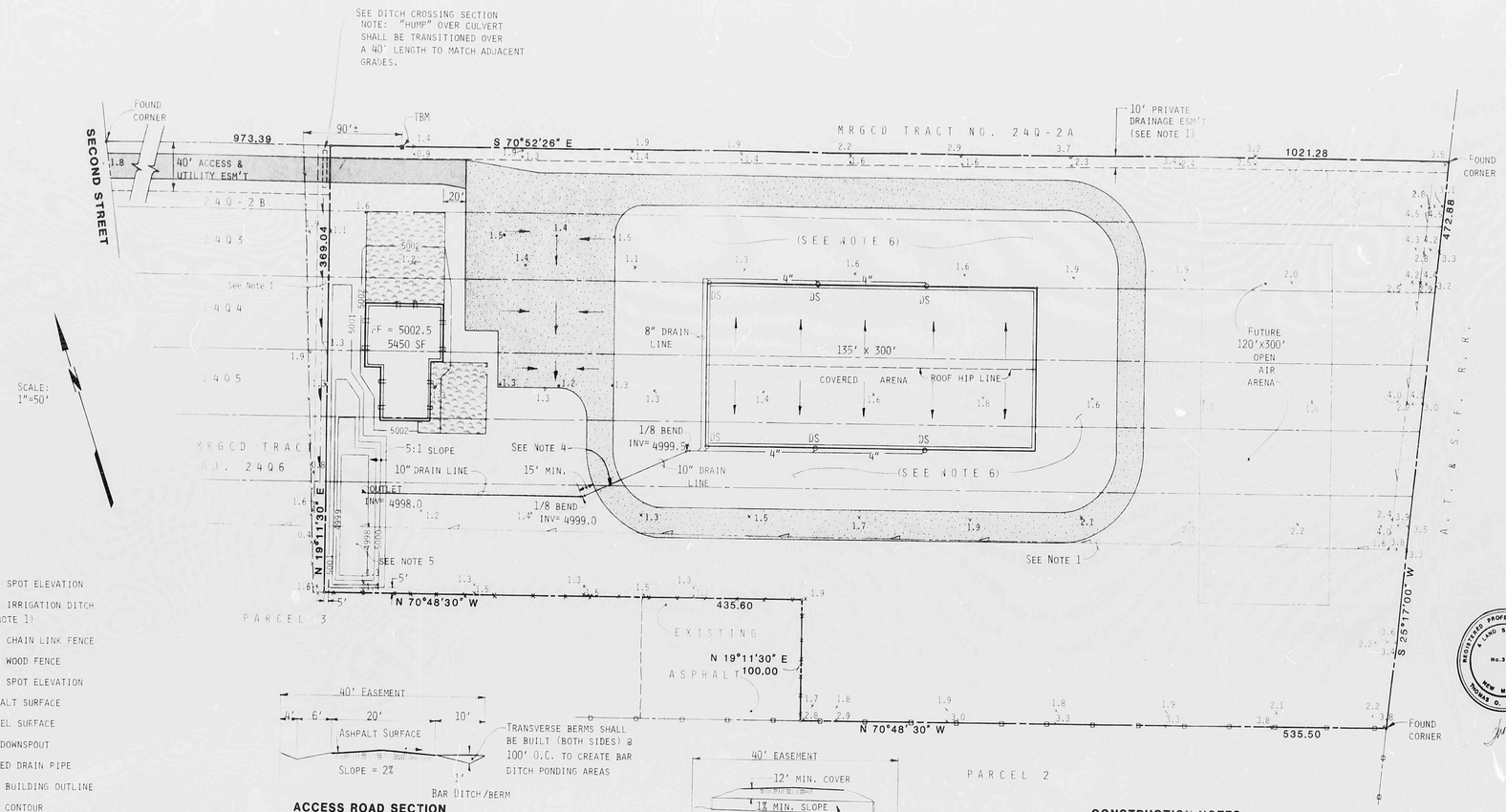

LEGEND

- 1.6 — Existing spot elevation
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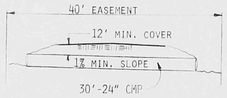
- New gravel surface
- DS — 4" roof downspout
- Perforated drain pipe
- Proposed building outline
- 5002 — Proposed contour

TRANSVERSE BERMS SHALL BE BUILT (BOTH SIDES) @ 100' O.C. TO CREATE BAR DITCH PONDING AREAS

ACCESS ROAD SECTION

No Scale



DITCH CROSSING SECTION

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POND VOLUME COMPUTATIONS (SEE NOTE 5)

THE POND HAS BEEN SIZED TO HOLD 100% OF THE DEVELOPED RUNOFF. PORTIONS OF THE SITE ARE SO FLAT THAT IT IS NOT PRACTICAL TO FORCE THEM TO DRAIN TO THE POND. THEREFORE SOME SHALLOW PUDDLES WILL EXIST. INCREMENTAL POND CAPACITY IS:

ELEV.	DEPTH	VOLUME/ CONTOUR	TOTAL VOLUME
4998	0 FT	0	0
4999	1	3000 CF	3000 CF
5000	2	3900	6900
5001	3	7700	14600

TOTAL POND VOLUME (@ ELEV 5001) = 14,600 CF

GENERAL NOTES

BENCH MARK(S): ACS BM "3-B17", A 40 PENNY NAIL IN POWER POLE LOCATED 0.3 MILES SOUTH OF THE NORTH DIVERSION CHANNEL ON THE WEST SIDE OF EDITH BLVD. ELEVATION: 5014.72

TEMPORARY BENCHMARK: A 20 PENNY NAIL DRIVEN IN A RR TIE FENCE POST 90 FEET EAST OF THE NORTHWEST CORNER OF THIS SITE. ELEVATION: 5002.08

LEGAL DESCRIPTION: AN EASTERLY PORTION OF MRGCD TRACTS 24Q2B, 24Q3, 24Q4, 24Q5, 24Q6, AND AN EASTERLY PORTION OF PARCEL 3.

FLOOD HAZARD STATEMENT: AS SHOWN ON PANEL 3 OF 50 OF THE FEMA FLOOD MAPS, THIS SITE IS NEITHER IN A DESIGNATED FLOOD AREA NOR DOES IT DISCHARGE TO A FLOOD HAZARD AREA.

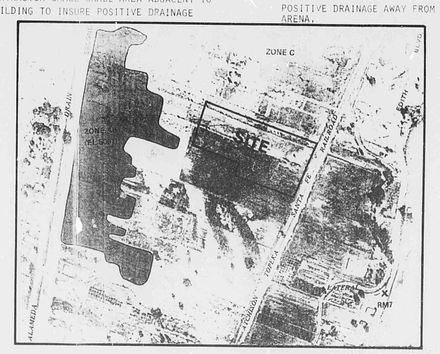
SOILS: FROM THE SCS SOIL SURVEY OF BERNALILLO COUNTY, THESE GILA AND VINTON SERIES CLAY LOAM SOILS ARE CLASSIFIED AS HYDROLOGICAL SOIL GROUP B SOILS.

OFFSITE FLOWS: THIS SITE DOES NOT ACCEPT ANY OFFSITE FLOWS.

ACCESS ROAD: THE 20' WIDE PAVED ACCESS ROAD WILL SHED ALL RUNOFF TO ADJACENT BAR DITCHES AS SHOWN ABOVE. THE BAR DITCH WILL NOT CONVEY WATER ALONG THE ROAD, BUT WILL ACT AS LONG NARROW RETENTION PONDS SEPARATED BY TRANSVERSE BERMS LOCATED 100' APART.

CONSTRUCTION NOTES

1. EXISTING IRRIGATION DITCH SHOWN SHALL BE REALIGNED WITHIN 10' PRIVATE DRAINAGE ESM'T AS SHOWN ALONG THE NORTH PROPERTY LINE. THE DITCH LEAVES THE PROPERTY AT THE NORTHWEST CORNER WHERE IT TURNS SOUTH FOR 315' AT WHICH POINT IT TURNS WEST IN ITS OLD ALIGNMENT.
2. ARENA DOWNSPOUTS SHALL BE LOCATED COINCIDENT WITH STRUCTURAL SUPPORTS (100'OC).
3. CONTRACTOR SHALL GRADE AREA ADJACENT TO BUILDING TO INSURE POSITIVE DRAINAGE AWAY FROM THE FOUNDATION.
4. MINIMUM OF 12" COVER REQUIRED OVER DRAIN LINE AT ROAD CROSSING.
5. RETENTION POND BOTTOM ELEV=4998.0 POND BOTTOM SIZE= 25'x100', 3:1 SIDE SLOPES ADJACENT TO BOUNDARIES.
6. THE EARTH FLOOR OF THE ARENA SHALL BE RAISED 6" RELATIVE TO THE SURROUNDING GROUND TO INSURE POSITIVE DRAINAGE AWAY FROM THE ARENA.



PANEL 3 OF 50

FLOOD HAZARD MAP

SCALE: 1"=500'

1/11/88 REVISION DATE: RETENTION POND REDESIGNED.

REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR No. 3895 NEW MEXICO THOMAS D. ISAACSON

DRAINAGE & GRADING PLAN

SHERIFF'S POSSE ARENA

Isaacson & Arfman, P.A.
CONSULTING ENGINEERING ASSOCIATES
Albuquerque, New Mexico

Date 12/11/87
Designed
Drawn
Checked

Sheet 1 of

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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CITY OF ALBUQUERQUE

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Roberta Duran
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STATE OF NEW MEXICO
My Commission Expires 07/07/02