FLOOD CONTROL
DISTRICT
of
MARICOPA
COUNTY
1959

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JACKRABBIT WASH FLOODPLAIN DELINEATION STUDY

FCD 90-05

TECHNICAL DATA NOTEBOOK HYDROLOGY

BOOK 2 OF 2

Prepared For:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
3335 West Durango Street
Phoenix, Arizona 85009
(602) 262-1501

Prepared By:

BURGESS & NIPLE, INC.
5025 East Washington Street
Phoenix, AZ 85034
(602) 244-8100

Registered Professional Engineer (Civil)
CERTIFICATE NO. 12739
THOMAS R. LOOMIS
Date Signed 2-25-91
ARIZONA, U.S.A.

Project No. 10310

February, 1991
Revised May, 1991

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SECTION 2: Mapping and Surveying Information

2.1 General

The May, 1991 revision of this document includes the addition of Book 2 to include the Exhibit drawings. The wording of Section 2.4 was also revised.

The mapping and survey data used for the hydrology portion of this project is described, by exhibit drawing, as follows:

Exhibits "A", "B" and "C" - The base mapping used for these exhibits consists of United States Geological Survey (USGS) 7.5 minute quadrangle maps. The maps were photo-mosaiced at full 1"=2000' scale for use for Exhibits "B" and "C". A composite of all the USGS quadrangle maps was reduced to 1"=10000' scale for Exhibit "A". The following are the USGS quadrangle maps used for this study:

AGUILA: 1990 provisional, 1951 and 1960 photo date, 20' contour interval (CI) 10' supplementary contour interval (SCI).

BELMONT MOUNTAIN: 1989 provisional, 1951 and 1960 photo date, 40' CI.

BLACK BUTTE: 1990 provisional, 1951 and 1960 photo date, 40 CI, 20 SPI.

BUCKEYE NW: 1982 Photo revised, 1955 and 1978 photo date, 10' CI.

BURNT MOUNTAIN: 1990 provisional, 1960 photo date, 20' CI.

DAGGS TANK: 1988 provisional, 1984 photo date, 20' CI.

FLATIRON MOUNTAIN: 1990 provisional, 1951 and 1960 photo date, 20' CI.

FOREPAUGH PEAK: 1990 provisional, 1951 and 1960 photo date, 20' CI, 10' SCI.

HOT ROCK MOUNTAIN: 1990 provisional, 1951 and 1960 photo date, 20' CI.

HUMMINGBIRD SPRING: 1990 provisional, 1960 photo date, 40' CI.

OUTLAW HILL: 1990 provisional, 1951 and 1960 photo date, 20 CI, 10' SCI.

STAR WELL: 1989 provisional, 1951 and 1960 photo date, 10' CI.

TIGER WELL: 1990 provisional, 1951 and 1960 photo date, 40' CI, 20' SCI.

VULTURE MINE: 1990 provisional, 1951 and 1960 photo date, 20' CI, 10' SCI.

VULTURE PEAK: 1990 provisional, 1951 and 1960 photo date, 20' CI, 10' SCI.

WAGNER WASH WELL: 1988 provisional, 1984 photo date, 20' CI.

WICKENBURG: 1978 photoinspected, 1962 photo date, 20' CI, 10 SCI.

WICKENBURG SW: 1965, 1962 photo date, 20' CI, 10' SCI.

WILDCAT WELL: 1990 provisional, 1951 and 1960 photo date, 20' CI.

WINTERSBURG: 1984 provisional, 1960 photo date, 10' CI.

Exhibit "D" - The cross sections on this exhibit were taken in the field during the period September 6, 1990 through September 20, 1990. The cross section vertical measurements were taken using a Hewlett-Packard laser level. Distances were paced or measured with a Philadelphia rod and hand tape. The horizontal location of each cross section is identified on Exhibit "C".

Each cross section was taken at a location deemed to be representative of that portion of a routing reach. Sufficient cross sections were taken to enable interpolation or estimation of typical cross sections for other representative reaches.

Exhibit "E" - The cross sections on this exhibit are plots of each reach route section used in the HEC-1 models. They were derived from the cross sections shown on Exhibit "D", or from available contour mapping, using one of the following methods:

1. The actual cross section taken in a reach was used where appropriate. The end legs of the section were extended if necessary to contain the computed peak flows. The actual grades shot in the field, or slopes calculated from the USGS quadrangle maps, were used in the extension process.

2. Interpolation between known cross sections from Exhibit "D".

3. Known cross sections from Exhibit "D" were used for reaches deemed similar to the source reach. A reach was deemed similar based on field observation, review of soil survey mapping, or examination of the terrain of the reach on the USGS quadrangle map.

4. Digitized HEC-2 cross sections for Jackrabbit Wash, the West Fork of Jackrabbit Wash, and Star Wash were used for those reaches mapped as a part of the floodplain delineation portion of this project. The mapping was prepared by Aerial Mapping Co. of Phoenix, AZ. The Aerial Mapping Co. job number is 90153, and the mapping flight date was September 28, 1990.

5. A portion of the watershed south of the Central Arizona Project Canal has been mapped at a scale of 1"=500' with a 1' contour interval. The mapping was used for cross sections south of the CAP canal, where possible. The mapping was prepared by Kenney Aerial Mapping of Phoenix, AZ. The Kenney Aerial Mapping job number is 890414. The flight date is unknown. This mapping was prepared for a proposed residential development project known as the "Belmont Planned Community". The mapping is referred to as the "Belmont Mapping" in this report.

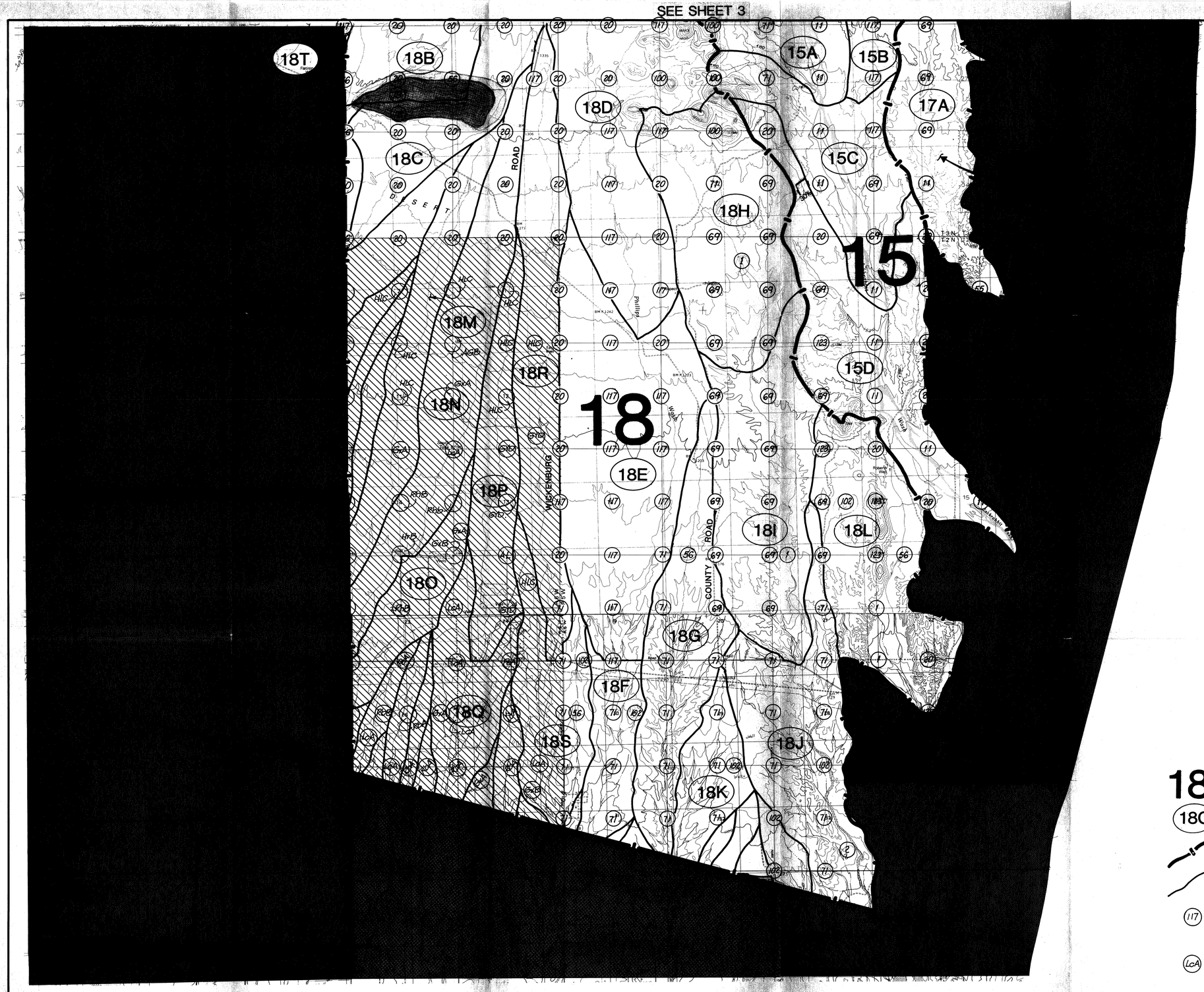
The source of each cross section is referenced in Table R-2 under Section 3.2.2.2 Reach Route Parameters.

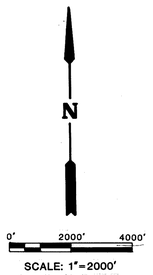
Exhibit "G" - The mapping for this exhibit was done to provide additional detail on the Coyote Wash split area. The mapping is at a scale of 1"=200' with a 2' contour interval. The mapping was prepared by Aerial Mapping Company. The Aerial Mapping Co. job number is 90153, and the flight date was September 28, 1990.

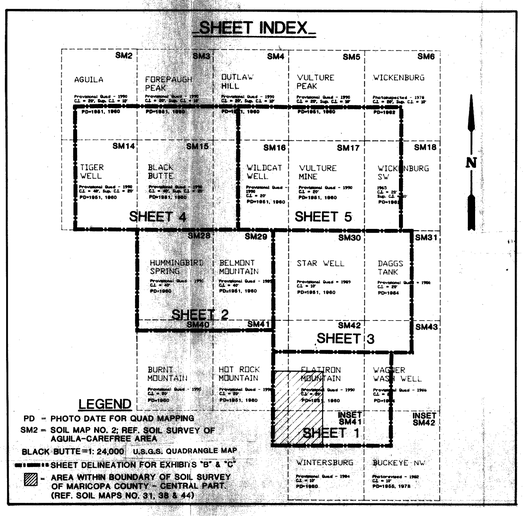
2.2 Index of Maps

2.4 Watershed and Hydrologic Analysis Maps

All maps under Sections 2.2 and 2.4 are contained in Book 2 of 2.







LEGEND

PD - PHOTO DATE FOR QUAD MAPPING

SM2 - SOIL MAP NO. 2; REF. SOIL SURVEY OF AGUILA-CAREFREE AREA

BLACK BUTTE = 1: 24,000 U.S.G.S. QUADRANGLE MAP

SHEET DELINEATION FOR EXHIBITS "B" & "C"

AREA WITHIN BOUNDARY OF SOIL SURVEY OF MARICOPA COUNTY - CENTRAL PART. (REF. SOIL MAPS NO. 31, 38 & 44)

LEGEND

18	MAJOR DRAINAGE BASIN NUMBER 18
18C	DRAINAGE SUB-BASIN NUMBER 18C
	MAJOR DRAINAGE BASIN BOUNDARY
	DRAINAGE SUB-BASIN BOUNDARY
117	SOIL MAP UNIT IDENTIFIER PER Soil Survey of Aguila - Carefree Area, Parts of Maricopa and Pinal Counties, Arizona, USDA - SCS, 1982
LcA	SOIL MAP UNIT IDENTIFIER PER Soil Survey of Maricopa County, Arizona, Central Part, 1972
	WATERSHED AREA WITHIN BOUNDARY OF Soil Survey of Maricopa County, Arizona, Central Part, 1972
	"MOUNTAIN" GROUND SURFACE
	"HILLSLOPE" GROUND SURFACE
	"DESERT RANGELAND" GROUND SURFACE
30%	LOCATION OF VEGETATION COVER DENSITY (VCD) SURVEY, (VCD = 30%)
B16	LOCATION OF PHOTOGRAPH, (PHOTOGRAPH NO. B16 TAKEN LOOKING SOUTHERLY) NOTE : PHOTOGRAPHS ARE ON FILE WITH BURGESS & NIPLE, INC.
	HYDROLOGIC STUDY BOUNDARY

NO.	REVISIONS	DATE	BY	CHK.

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Mentor, OH • Parkersburg, WV • Payson, AZ • Phoenix, AZ

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

JACKRABBIT WASH FLOODPLAIN DELINEATION STUDY

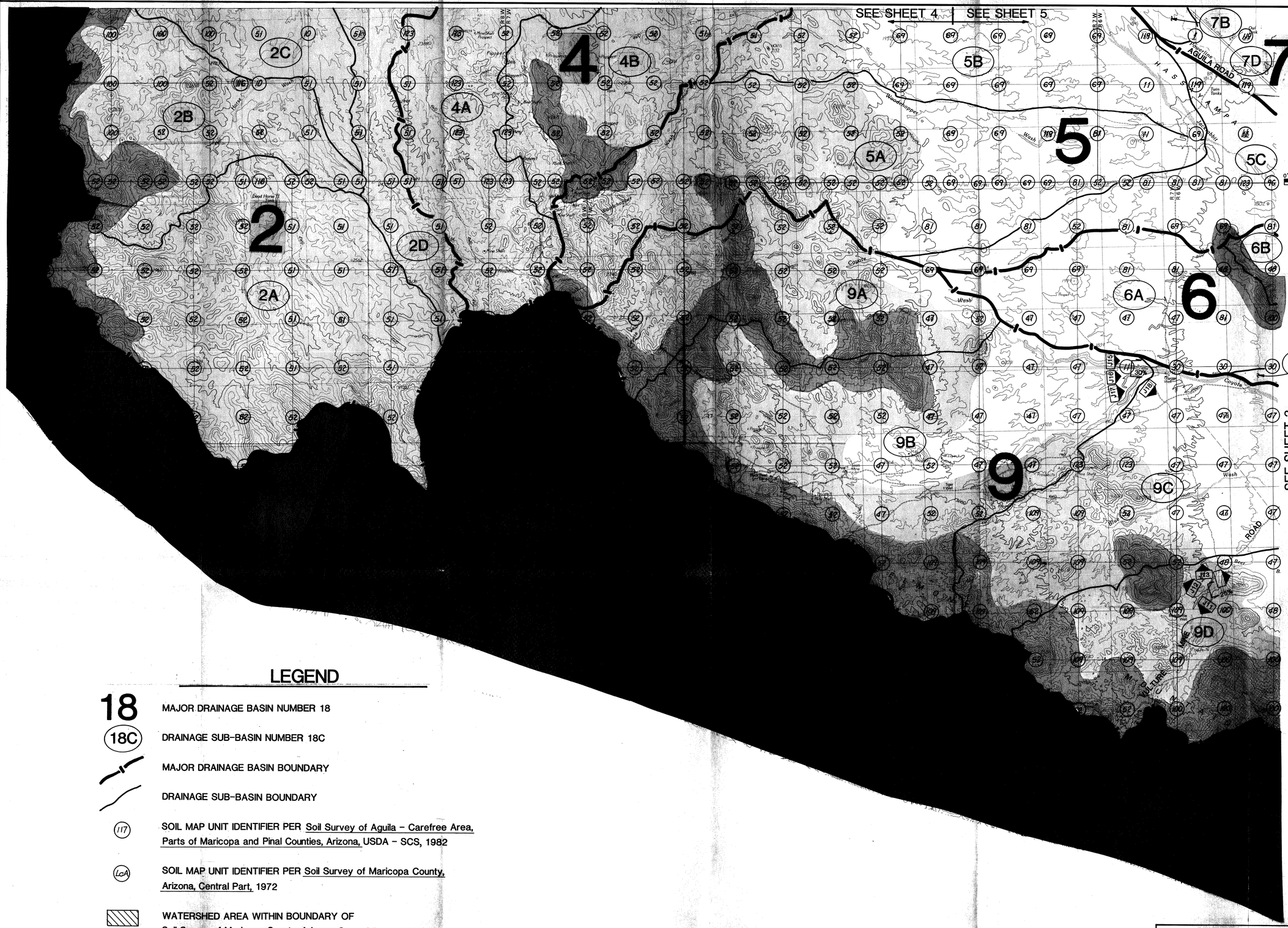
FCD 90-05

JOB NO. 10310
DESIGNED BY: A.J.R.
DRAWN BY: R.E.M.
CHECKED BY: T.R.L.
APPROVED BY: T.R.L.
DATE: 12-90

EXHIBIT "B"

DRAINAGE SUB-BASIN SOILS AND LAND USE MAP

SCALE: 1"=2000'
SHEET NO. 1 OF 5



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SHEET INDEX

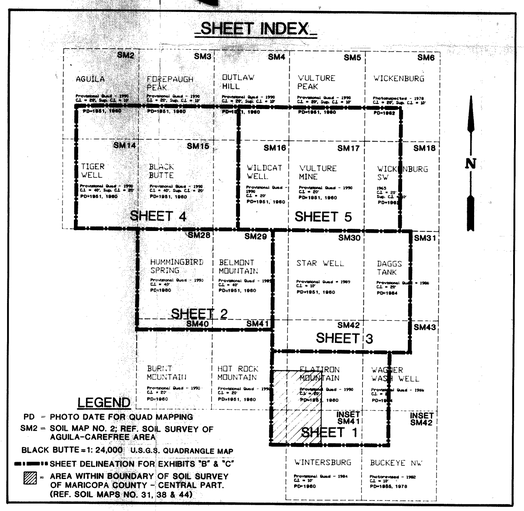

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EXHIBIT "B"

DRAINAGE SUB-BASIN SOILS AND LAND USE MAP

SCALE: 1" = 2000'

SHEET NO. 2 OF 5

SEE SHEET 5

SEE SHEET 2

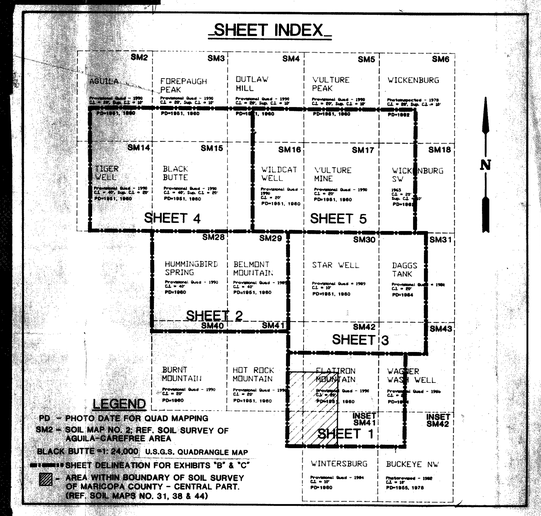
SEE SHEET 1

N

0' 2000' 4000'

SCALE: 1"=2000'

SHEET INDEX



LEGEND

PD. – PHOTO DATE FOR QUAD MAPPING

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– AREA WITHIN BOUNDARY OF SOIL SURVEY OF MARICOPA COUNTY – CENTRAL PART. (REF. SOIL MAPS NO. 31, 38 & 44)

LEGEND

18 — MAJOR DRAINAGE BASIN NUMBER 18

18C — DRAINAGE SUB-BASIN NUMBER 18C

MAJOR DRAINAGE BASIN BOUNDARY

DRAINAGE SUB-BASIN BOUNDARY

117 — SOIL MAP UNIT IDENTIFIER PER Soil Survey of Aguila – Carefree Area, Parts of Maricopa and Pinal Counties, Arizona, USDA – SCS, 1982

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"HILLSLOPE" GROUND SURFACE

"DESERT RANGELAND" GROUND SURFACE

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B16 — LOCATION OF PHOTOGRAPH, (PHOTOGRAPH NO. B16 TAKEN LOOKING SOUTHERLY) NOTE : PHOTOGRAPHS ARE ON FILE WITH BURGESS & NIPLE, INC.

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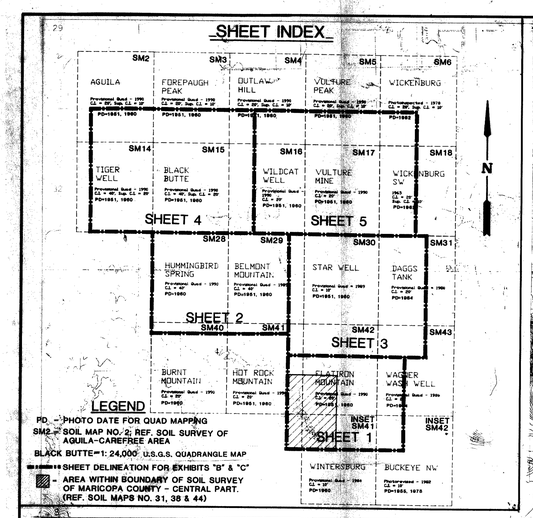
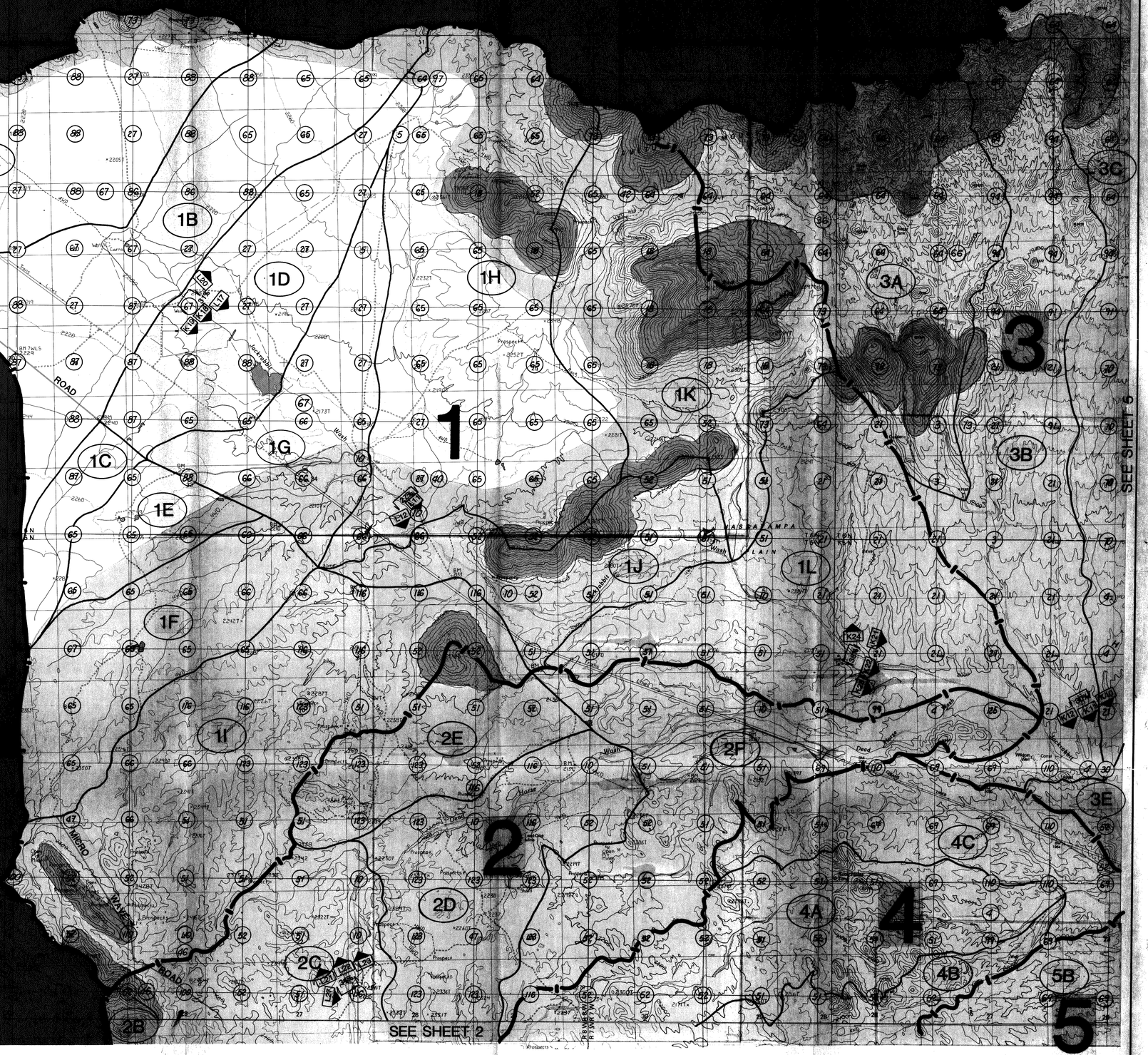
EXHIBIT "B"

DRAINAGE SUB-BASIN SOILS AND LAND USE MAP

SCALE: 1" = 2000'

SHEET NO. 3 OF 6





LEGEND

- **18** MAJOR DRAINAGE BASIN NUMBER 18
- (18C) DRAINAGE SUB-BASIN NUMBER 18C
- MAJOR DRAINAGE BASIN BOUNDARY
- DRAINAGE SUB-BASIN BOUNDARY
- (117) SOIL MAP UNIT IDENTIFIER PER Soil Survey of Aguila - Carefree Area, Parts of Maricopa and Pinal Counties, Arizona, USDA - SCS, 1982
- (LcA) SOIL MAP UNIT IDENTIFIER PER Soil Survey of Maricopa County, Arizona, Central Part, 1972
- WATERSHED AREA WITHIN BOUNDARY OF Soil Survey of Maricopa County, Arizona, Central Part, 1972
- "MOUNTAIN" GROUND SURFACE
- "HILLSLOPE" GROUND SURFACE
- "DESERT RANGELAND" GROUND SURFACE
- (30%) LOCATION OF VEGETATION COVER DENSITY (VCD) SURVEY, (VCD = 30%)
- (B16) LOCATION OF PHOTOGRAPH, (PHOTOGRAPH NO. B16 TAKEN LOOKING SOUTHERLY) NOTE : PHOTOGRAPHS ARE ON FILE WITH BURGESS & NIPLE, INC.
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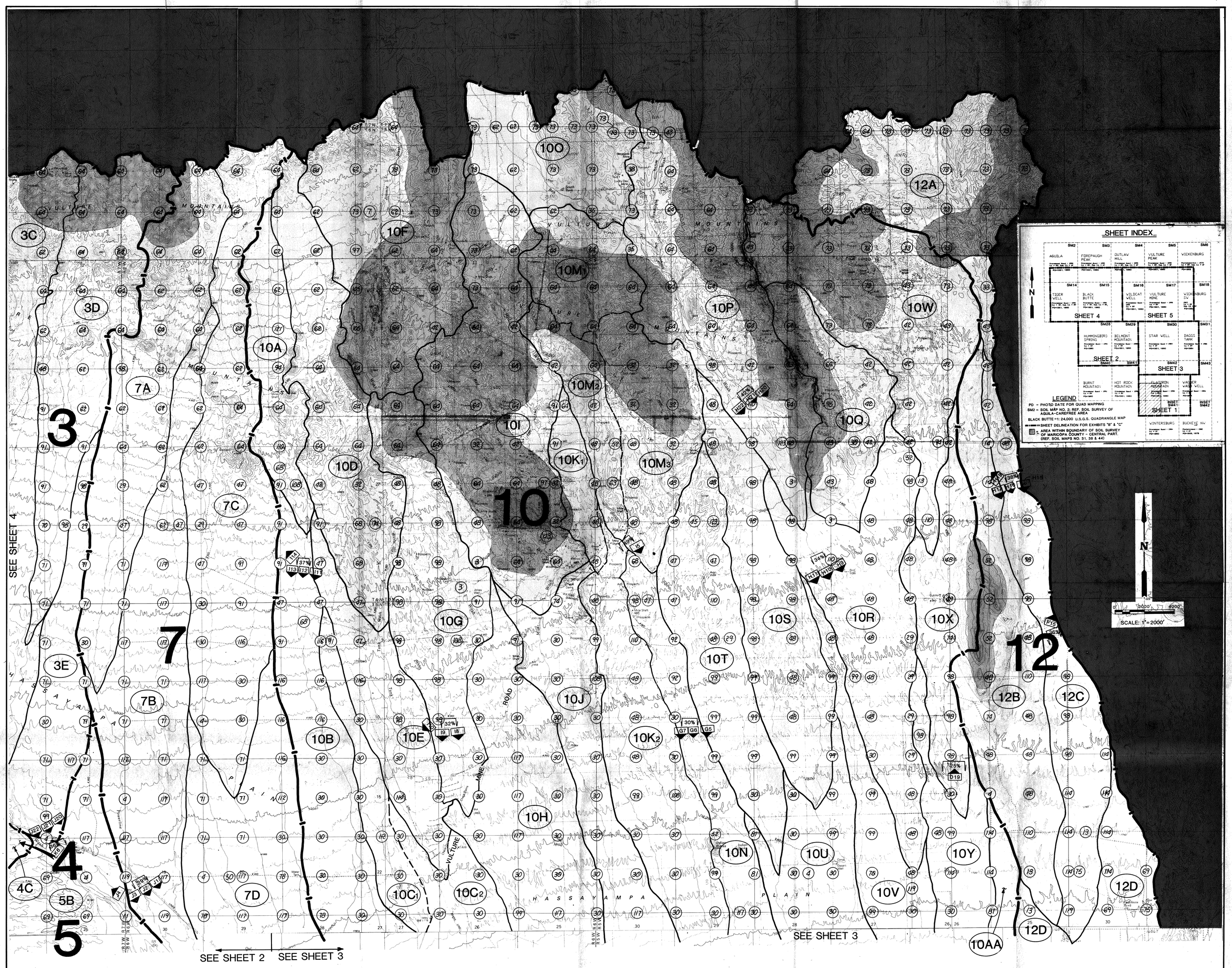
EXHIBIT "B"

DRAINAGE SUB-BASIN SOILS AND LAND USE MAP

SCALE: 1" = 2000'

SHEET NO. 4 OF 5



SEE SHEET 4 of 5 for LEGEND DATA

NO.	REVISIONS	DATE	BY	CHK.

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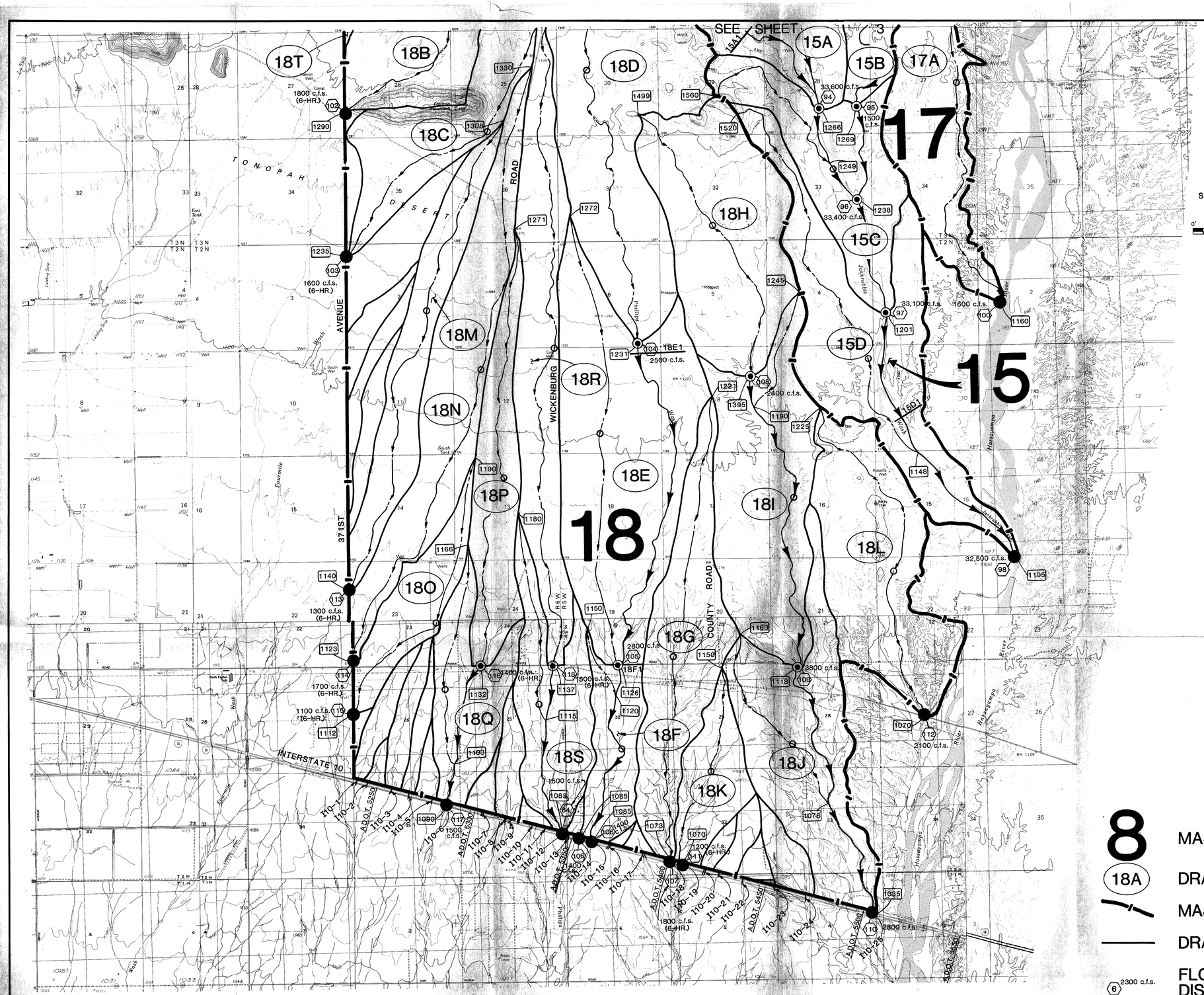
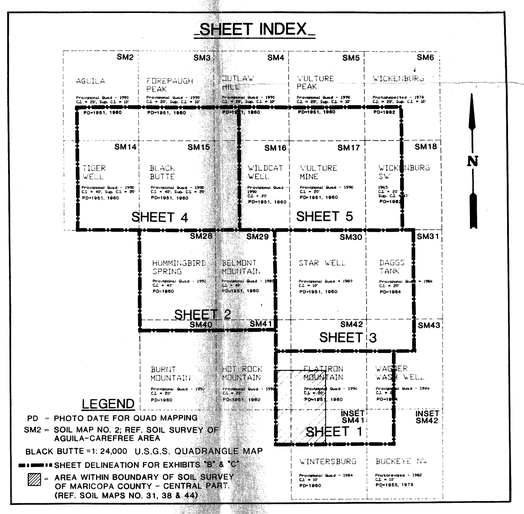
EXHIBIT "B"

DRAINAGE SUB-BASIN SOILS AND LAND USE MAP

SCALE: 1" - 2000'

SHEET NO. 5 OF 5





LEGEND
(Typical For All Sheets)

- 8 — MAJOR DRAINAGE BASIN NUMBER 2
- 18A — DRAINAGE SUB-BASIN NUMBER 18A
- MAJOR DRAINAGE BASIN BOUNDARY
- DRAINAGE SUB-BASIN BOUNDARY
- 6 2300 c.f.s. — FLOW COMBINATION POINT AT NODE 6. PEAK DISCHARGE FROM THE 100-YR. 24-HR. STORM IS 2300 C.F.S. (SEE NOTE)
- 8 — FLOW DIVERSION POINT AT NODE 8
- MAJOR DRAINAGE BASIN CONCENTRATION POINT
- DRAINAGE SUB-BASIN CONCENTRATION POINT (SEE NOTE)
- ROUTING STREAM FLOW PATH
- 1035 — LAG TIME FLOW PATH & REACH DELIMITER AT ELEVATION 1035
- 18F1 — LOCATION OF CHANNEL ROUTING CROSS SECTION
- LOCATION OF POINT ON T_C FLOW PATH OPPOSITE THE CENTROID OF THE SUB-BASIN

NOTE: Dashed symbols denote portions of sub-basin not included in major basin routing. These sub-sub-basins are for individual peaks only, typically at concentration points along a county road.

INTERSTATE 10 STRUCTURES SUMMARY TABLE

ADOT Identifier	ADOT Med. C/L Sta	ADOT Structure Description	Storm Peak Discharge (cfs) 50-Year ADOT	Storm Peak Discharge (cfs) 100-Year B&N	Drainage Area (sm) ADOT	Drainage Area (sm) B&N
I10-1	5240+00	3-36"x211' CMP Culverts	-	-	0.208	-
I10-2	5245+50	1-36"x218' CMP Culvert	-	-	0.057	-
I10-3	5257+80	1-10'x6'x192' R.C.B.C.	244	-	1.467	-
I10-4	5266+50	2-42"x213' CMP Culverts	-	-	0.142	-
I10-5	5278+50	2-36"x235' CMP Culverts	-	-	0.096	-
I10-6	5286+25	2-10'x5'x209' R.C.B.C.	-	1500	1.800	2.490
I10-7	5304+50	2-36"x206' Culverts	-	-	0.113	-
I10-8	5316+00(2)	3-36"x225' Culverts	108	-	0.248	-
I10-9	5319+20(2)	1-42"x242' Culverts	108	-	0.248	-
I10-10	5330+00(3)	2-36"x207' Culverts	68	-	0.049	-
I10-11	5336+75(3)	2-30"x206' Culverts	68	-	0.049	-
I10-12	5345+41	2-10'x8'x194' R.C.B.C.	740	1500	3.670	3.520
I10-13	5349+50	1-48"x226' Culverts	57	-	0.031	-
I10-14	5353+29(4)	2-10'x3'x194' R.C.B.C.	1240	1350	2.460	4.120
I10-15	5360+33(4)	3-10'x5'x194' R.C.B.C.	1240	1350	2.460	4.120
I10-16	5370+55	2-30"x300' Culverts	36	-	0.020	-
I10-17	5387+96	2-36"x281' Culverts	67	-	0.040	-
I10-18	5402+36	1-10'x5'x266' R.C.B.C.	480	1800 (6-Hr)	1.980	2.030
I10-19	5405+30	1-72"x224' Culvert	330	1200 (6-Hr)	0.770	0.800
I10-20	5419+00	2-36"x216' Culverts	82	-	0.069	-
I10-21	5426+40	1-6'x3'x194' R.C.B.C.	70	-	0.132	-
I10-22	5438+00	1-48"x222' Culvert	65	-	0.110	-
I10-23	5453+40	1-30"x234' Culvert	27	-	0.015	-
I10-24	5470+80	2-48"x276' Culverts	160	-	0.306	-
I10-25	5504+18	4-10'x4'x194' R.C.B.C.	1260	2800	7.438	7.550

NOTES
1. Represents a 100-Year24-Hour Storm.
2. Drainage area and peak discharge split between I10-8 and I10-9.
3. Drainage area and peak discharge split between I10-10 and I10-11.
4. Drainage area and peak discharge split between I10-14 and I10-15.

NO.	REVISIONS	DATE	BY	CHK.

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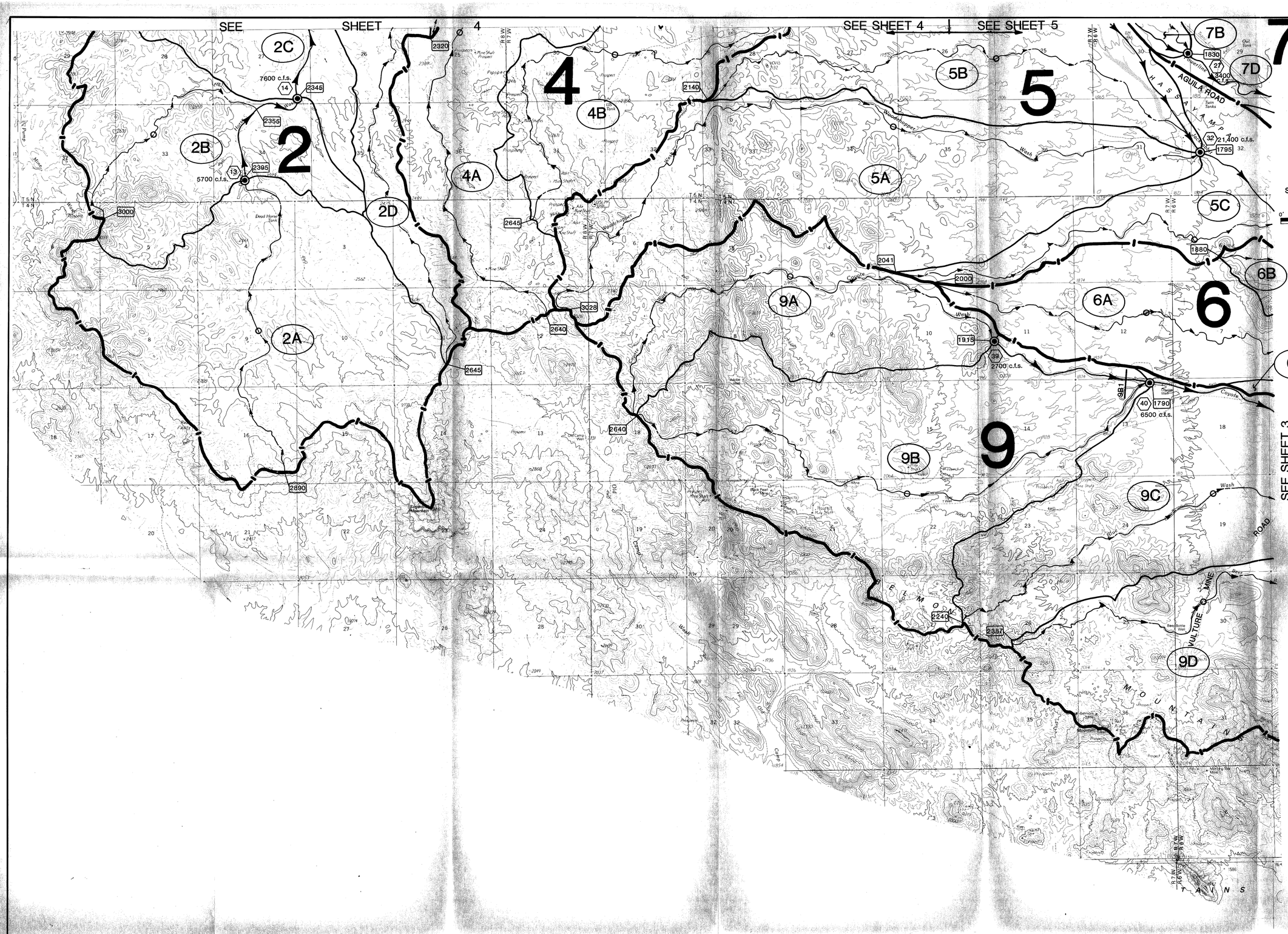
EXHIBIT "C"
DRAINAGE SUB-BASIN DELINEATION, TIME OF CONCENTRATION FLOW PATHS AND FLOOD ROUTING MAP

SCALE: 1"-2000'
SHEET NO. 1 OF 5



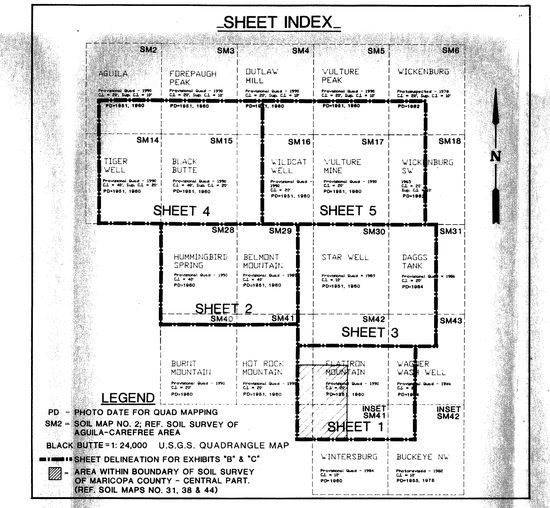


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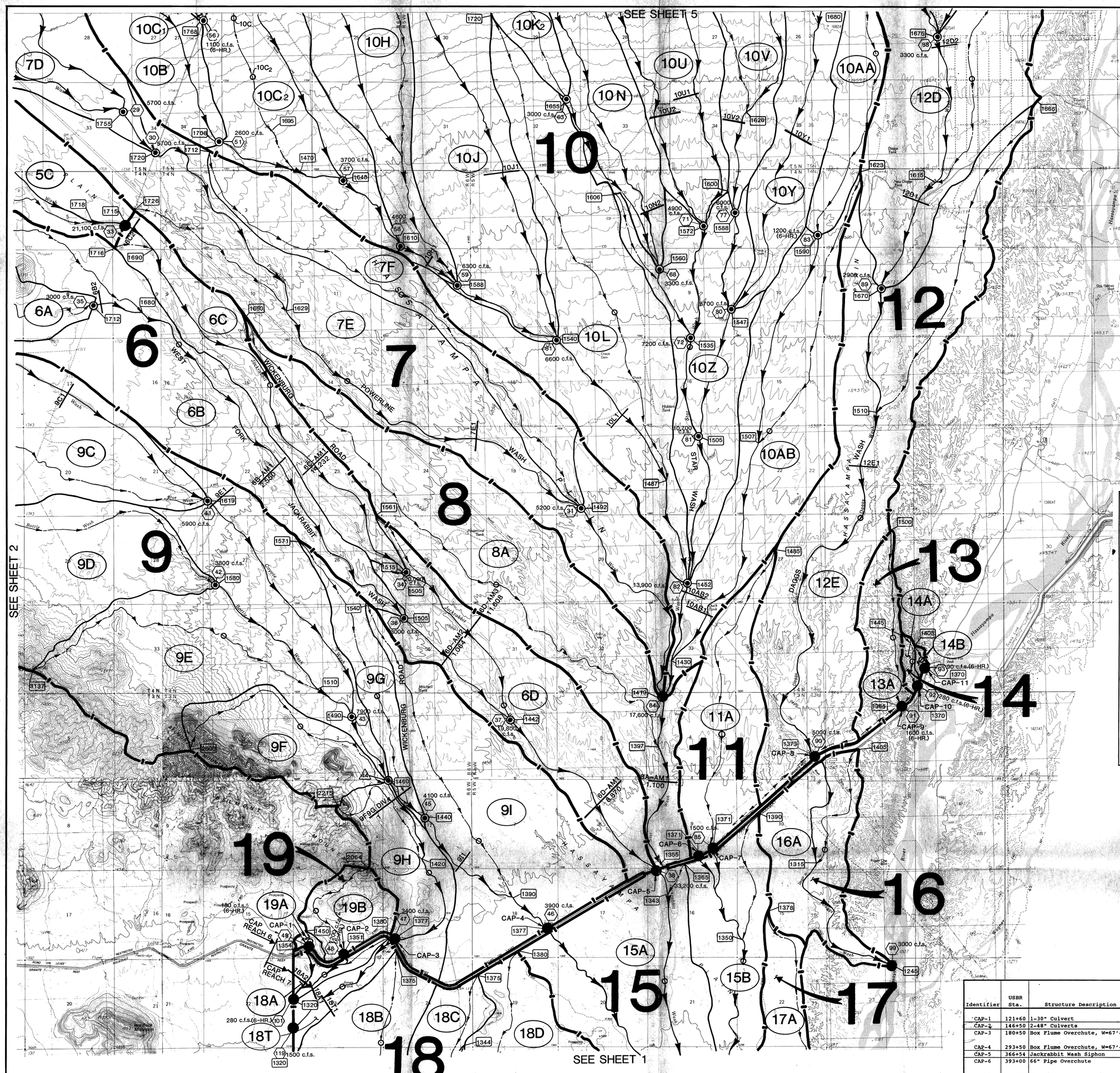
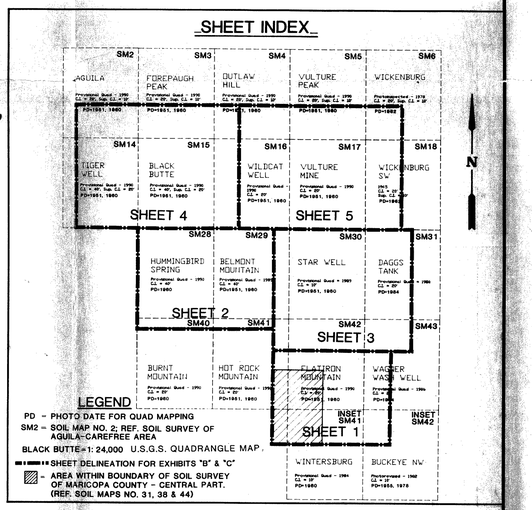
EXHIBIT "C"

DRAINAGE SUB-BASIN DELINEATION, TIME OF CONCENTRATION FLOW PATHS AND FLOOD ROUTING MAP

SCALE: 1"=2000'

SHEET NO. 2 OF 5





Identifier	USBR Sta.	Structure Description	USBR 50-Year 6-Hour Storm In Q	In Vol	Out Q	100-Year 6-Hour Storm In USBR Q	In Vol	In B&N Q	In Vol	Out USBR Q	Out B&N Q	Drainage Area (sq. miles) USBR	B&N
CAP-1	121+60	1-30" Culvert	16	2	16	21	3	180	4	21	1	0.06	0.1
CAP-2	146+50	2-48" Culverts	406	56	184	496	71	1,200	50	-	270	0.76	0.8
CAP-3	180+50	Box Flume Overchute, W=67'-6"	5,387	2,414	-	6,696	3,007	2,400	560	2,917	930	41.35	36.0
CAP-4	293+50	Box Flume Overchute, W=67'-6"			-			2,100	450	2,917	1,100		40.3
CAP-5	366+54	Jackrabbit Wash Siphon	-	-	-	25,536	-	7,500	580	25,536	7,500	291.0	319.2
CAP-6	393+00	66" Pipe Overchute	325	59	69	431	82	1,500	115	-	240	2.39	2.2
CAP-7	402+50	66" Pipe Overchute			69								
CAP-8	485+00	Box Flume Overchute, W=47'-4"	1,710	946	1,576	2,288	1,259	2,600	545	-	2,000	28.18	26.1
CAP-9	544+25	2-36" Culverts	170	26	163	233	36	1,600	65	-	200	0.96	0.9
CAP-10	561+50	1-30" Culvert	17	2	17	22	3	280	7	22	70	0.08	0.1
CAP-11	571+50	1-30" Culvert	9	1	9	12	1	90	2	12	30	0.05	0.1

Note: Q = Discharge in cfs
Vol = Runoff Volume in acre feet

NO.	REVISIONS	DATE	BY	CHK.

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

JACKRABBIT WASH FLOODPLAIN DELINEATION STUDY

FCD 90-05

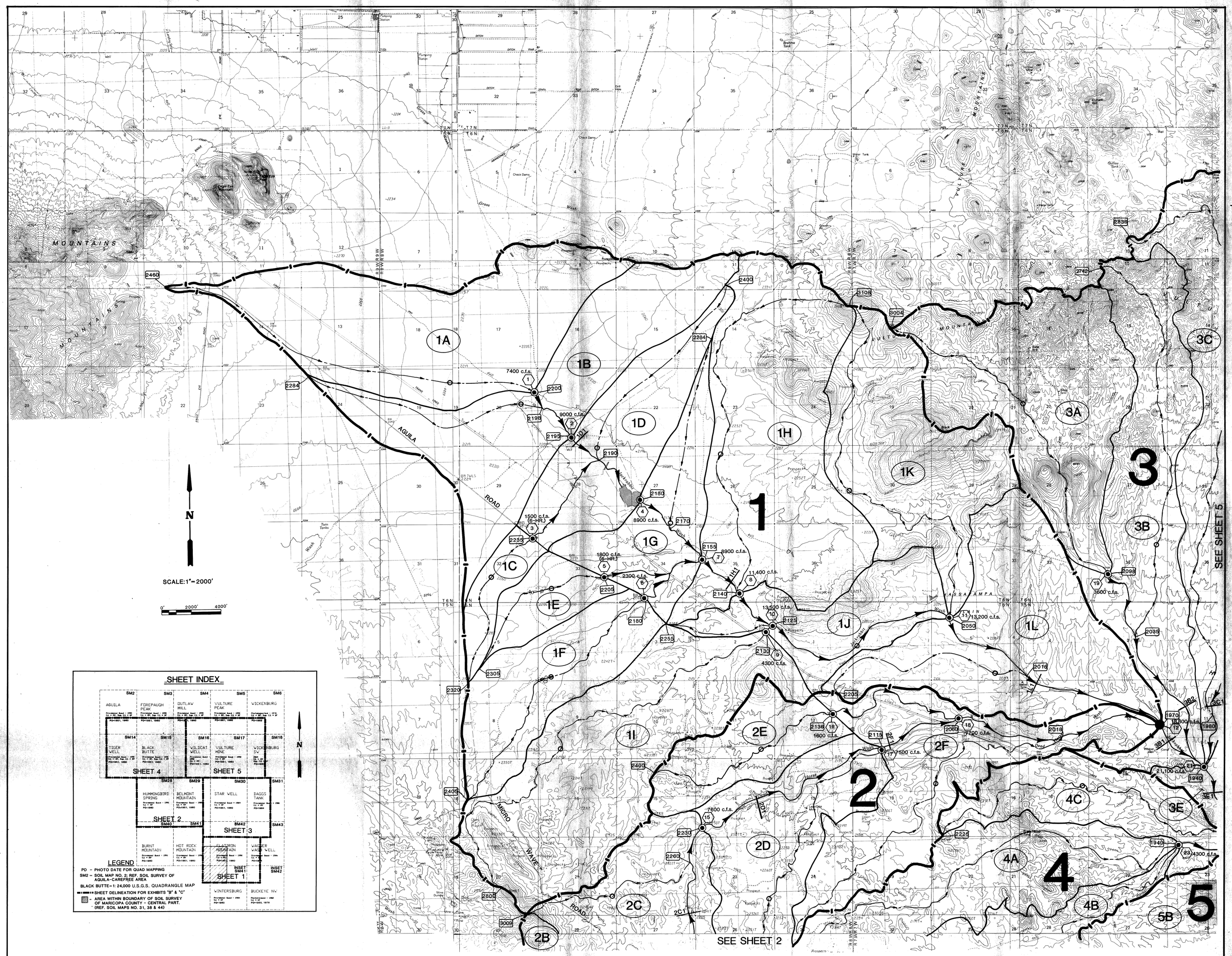
JOB NO. 10310
DESIGNED BY: A.J.R.
DRAWN BY: R.E.M.
CHECKED BY: T.R.L.
APPROVED BY:
DATE:

EXHIBIT "C"

DRAINAGE SUB-BASIN DELINEATION, TIME OF CONCENTRATION FLOW PATHS AND FLOOD ROUTING MAP

SCALE: 1"=2000'

SHEET NO. 3 OF 5



SHEET INDEX

LEGEND

PD = PHOTO DATE FOR QUAD MAPPING

SM2 = SOIL MAP NO. 2; REF. SOIL SURVEY OF AGUILA-CAREFREE AREA

BLACK BUTTE = 1: 24,000 U.S.G.S. QUADRANGLE MAP

SHEET DELINEATION FOR EXHIBITS "B" & "C"

AREA WITHIN BOUNDARY OF SOIL SURVEY OF MARICOPA COUNTY - CENTRAL PART. (REF. SOIL MAPS NO. 31, 38 & 44)

NO.	REVISIONS	DATE	BY	CHK.

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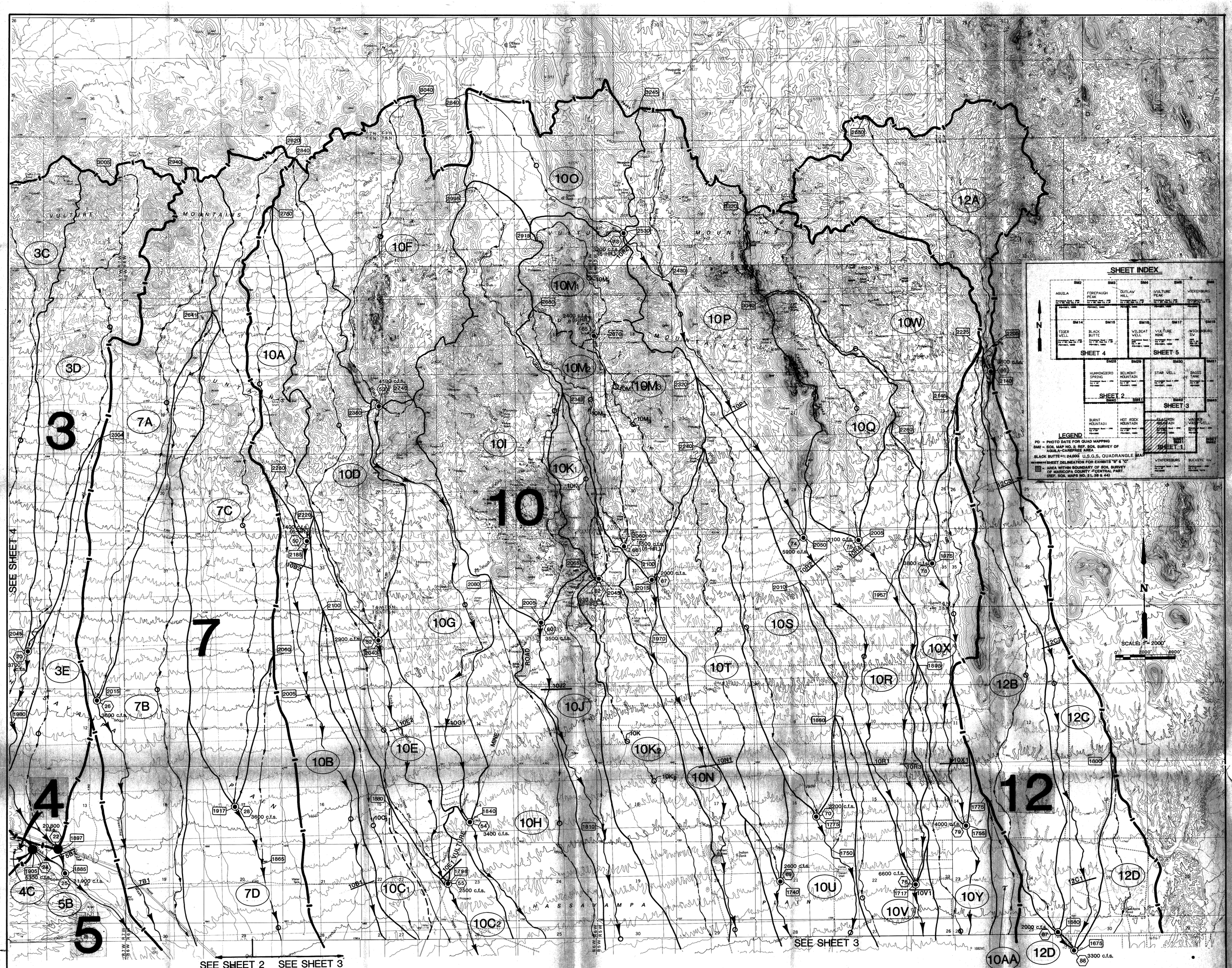
APPROVED BY:	T.R.L.
DATE:	12-90

EXHIBIT "C"

DRAINAGE SUB-BASIN DELINEATION, TIME OF CONCENTRATION FLOW PATHS AND FLOOD ROUTING MAP

SCALE: 1"=2000'

SHEET NO. 4 OF 5



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DATE:	T.R.L.

EXHIBIT "C"

DRAINAGE SUB-BASIN DELINEATION, TIME OF CONCENTRATION FLOW PATHS AND FLOOD ROUTING MAP

SCALE: 1"=2000'

SHEET NO. 5 OF 5

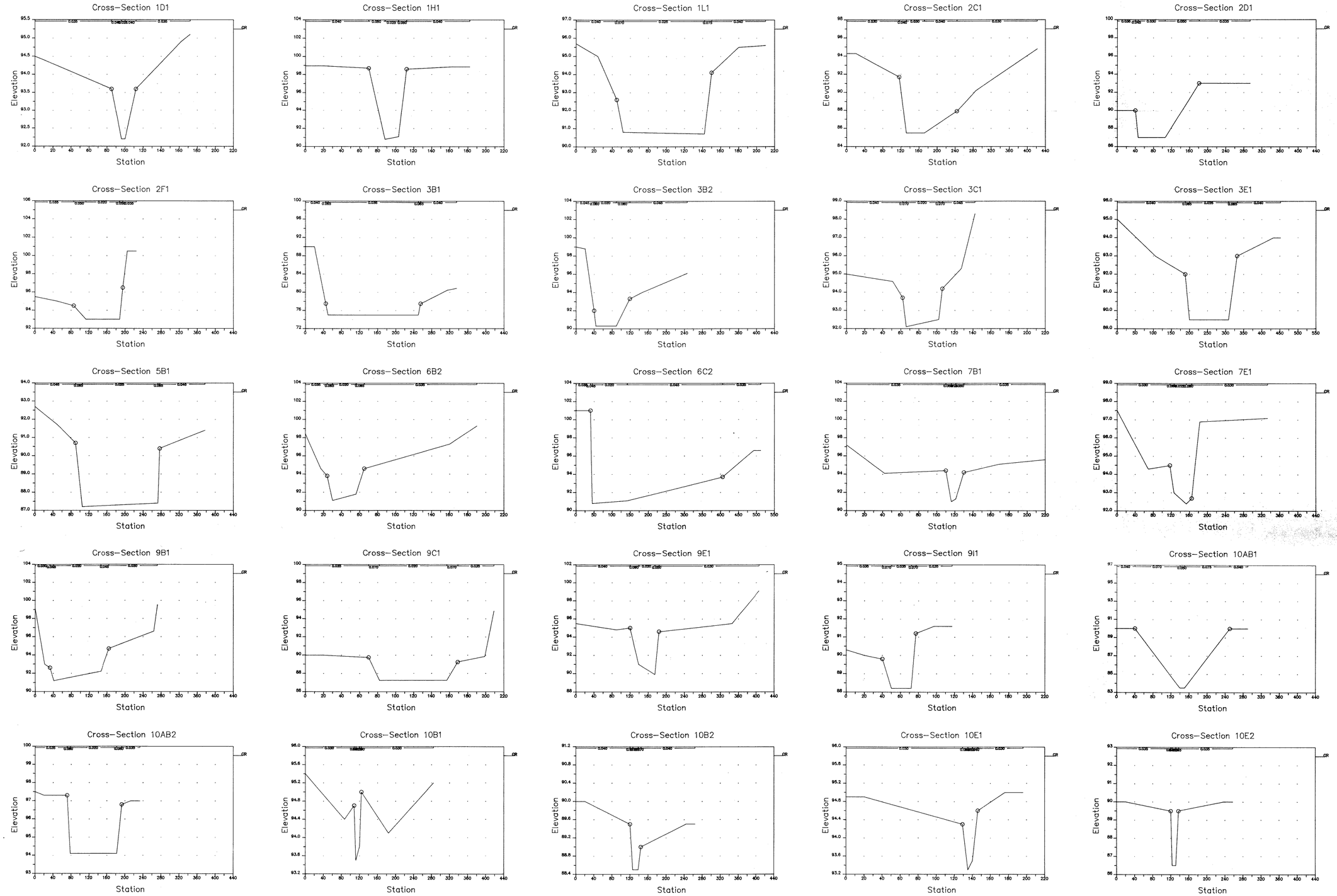

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EXHIBIT "D"

FIELD RECONNAISSANCE REACH ROUTE

CROSS SECTION PLOTS

SCALE: VARIES

SHEET NO. 1 OF 3

BRUNING #307034-1

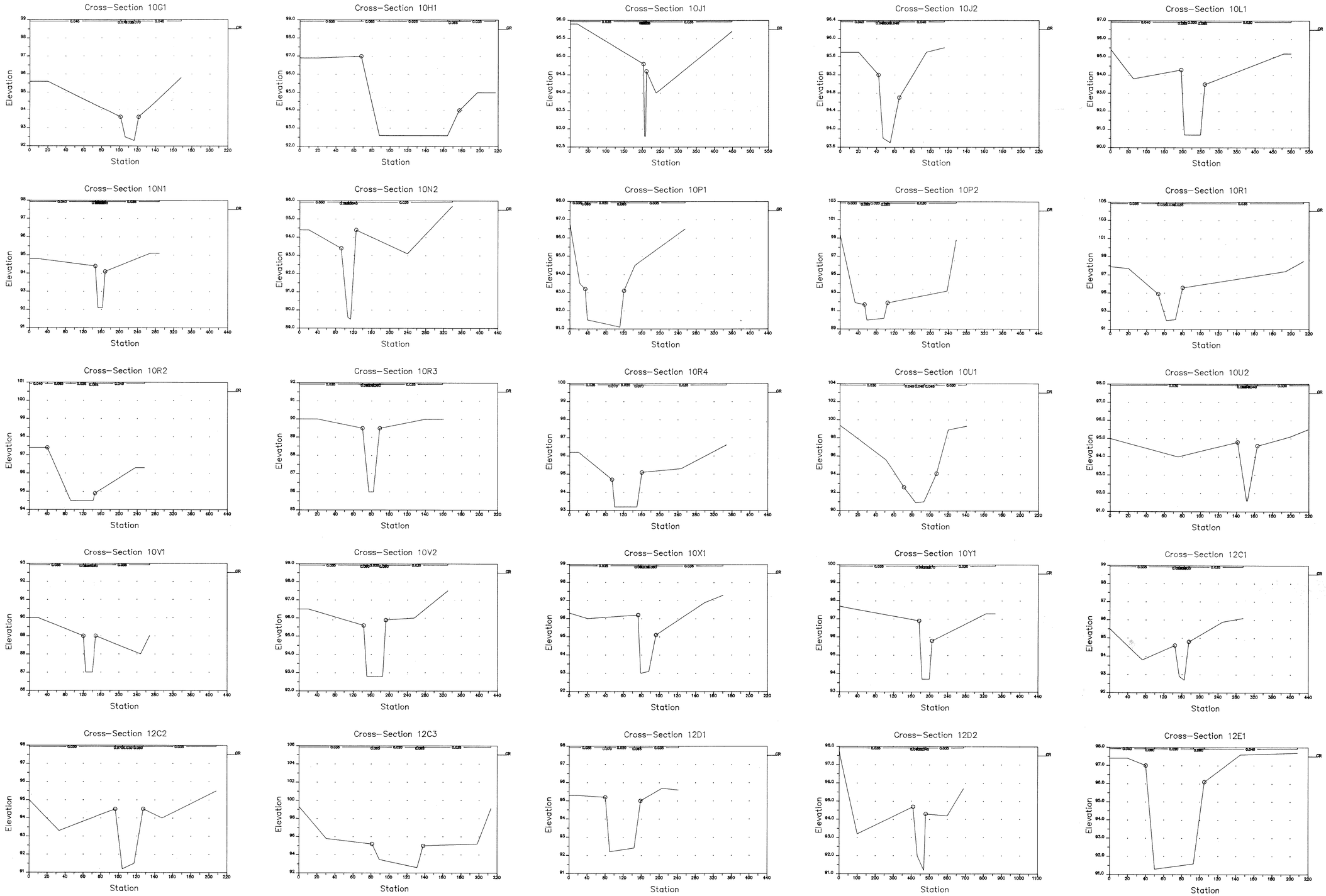

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EXHIBIT "D"

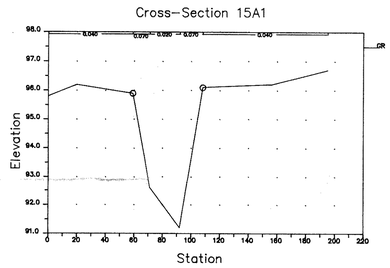
FIELD RECONNAISSANCE REACH ROUTE

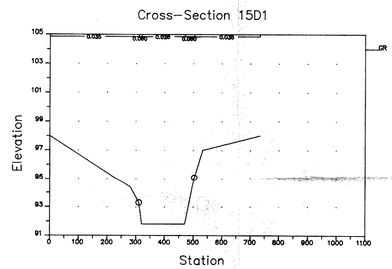
CROSS SECTION PLOTS

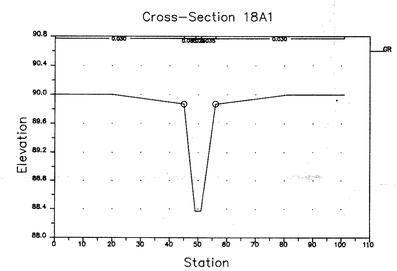
SCALE: VARIES

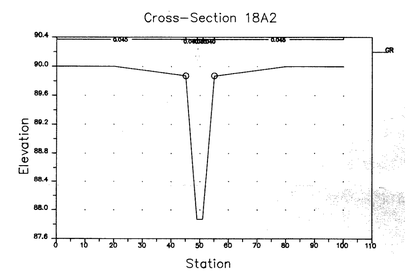
SHEET NO. 2 OF 3

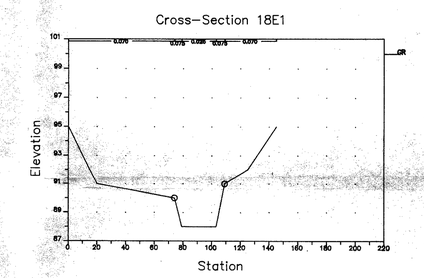
BRUNING #307034-1

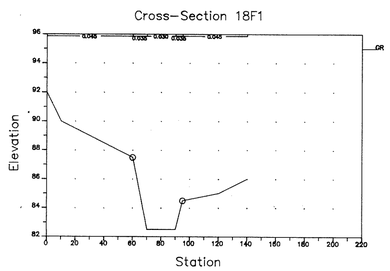


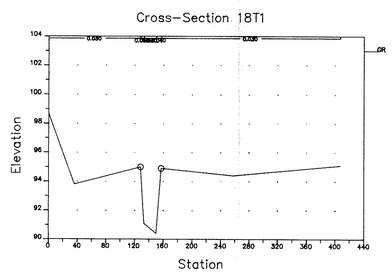












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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
JACKRABBIT WASH FLOODPLAIN DELINEATION STUDY
FCD 90-05

JOB NO. 10310
DESIGNED BY: T.R.L.
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DATE: 12-90

EXHIBIT "D"
FIELD RECONNAISSANCE REACH ROUTE
CROSS SECTION PLOTS

SCALE: VARIES
SHEET NO. 3 OF 3

BRUNING #307034-1

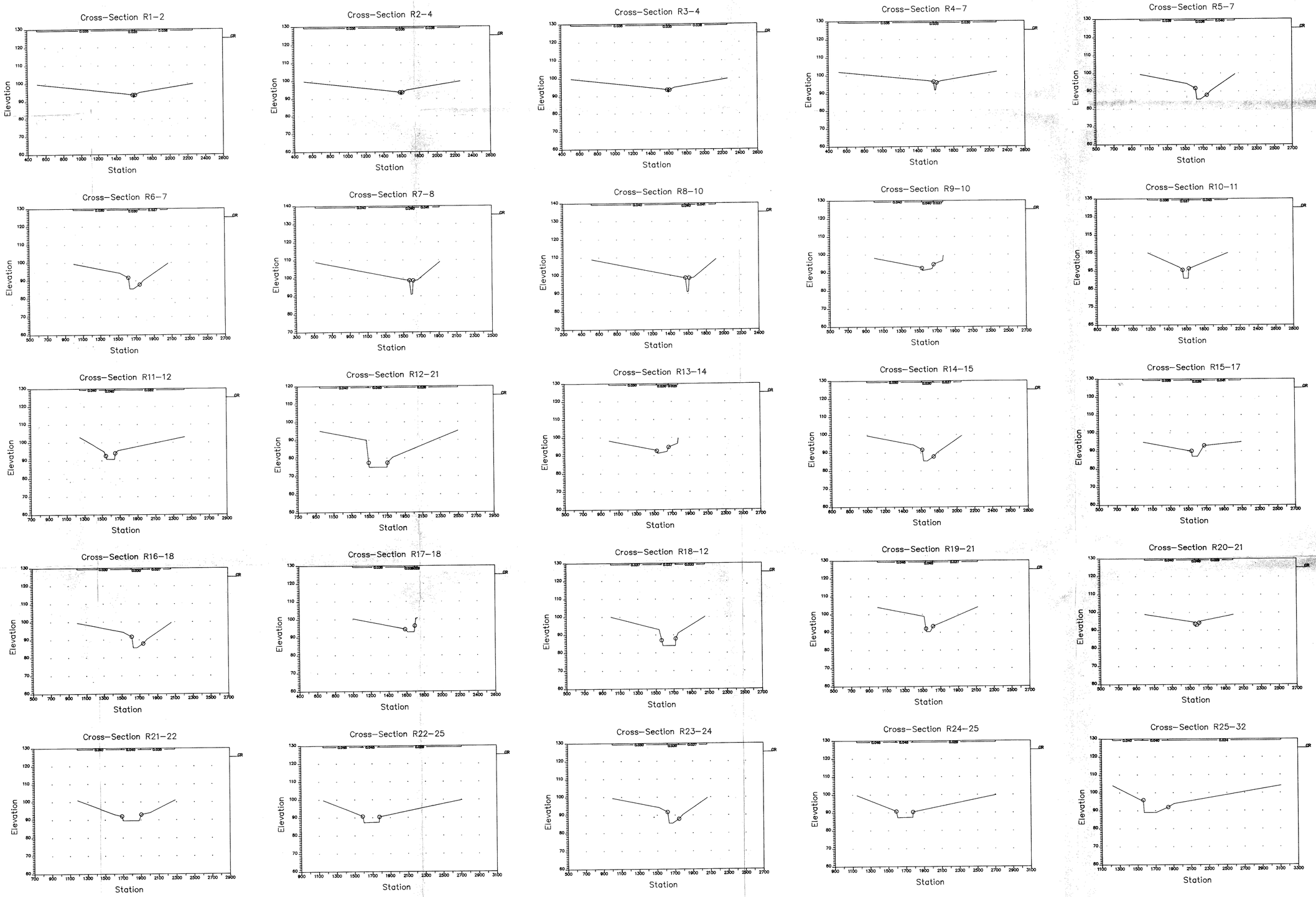

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EXHIBIT "E"

HEC-1 REACH ROUTE

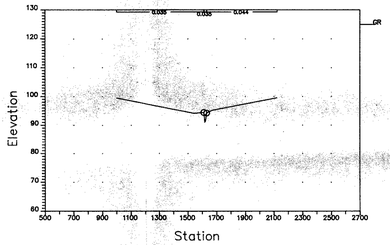
CROSS SECTION PLOTS

SCALE: VARIES

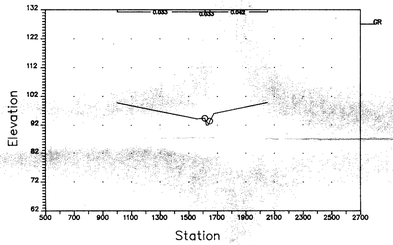
SHEET NO. 1 OF 4

BRUNING #307034-1

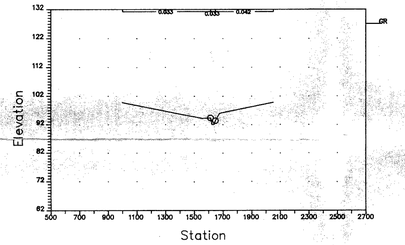
Cross-Section R26-27



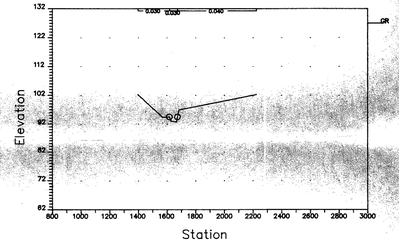
Cross-Section R27-29



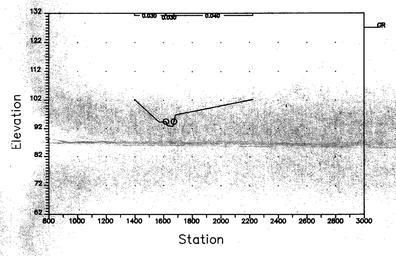
Cross-Section R28-29



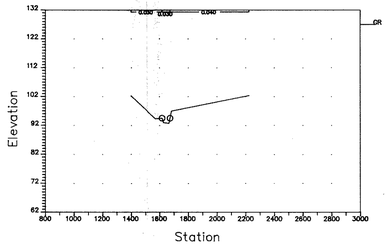
Cross-Section R29-30



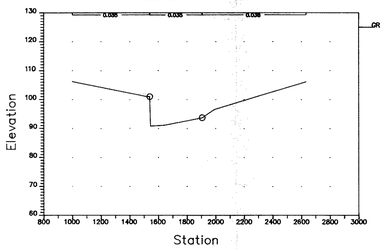
Cross-Section R30-31



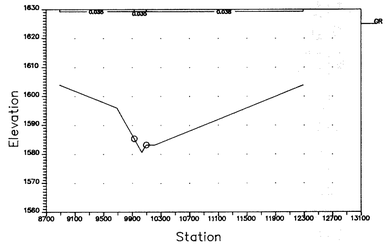
Cross-Section R31-84



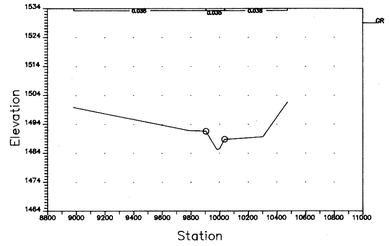
Cross-Section R32-33



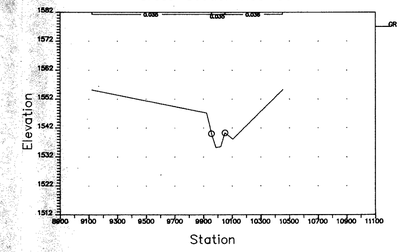
Cross-Section R33-34



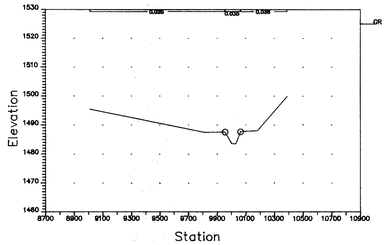
Cross-Section R34-37



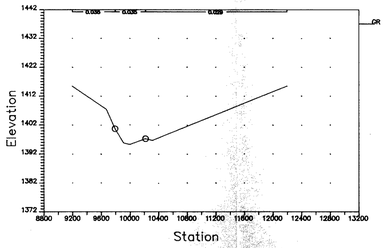
Cross-Section R35-36



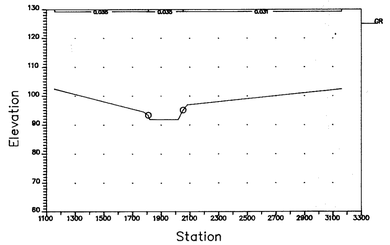
Cross-Section R36-37



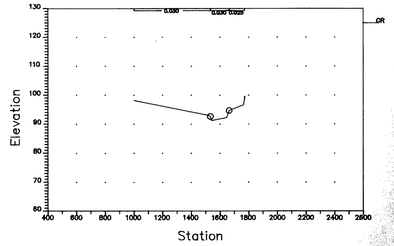
Cross-Section R37-38



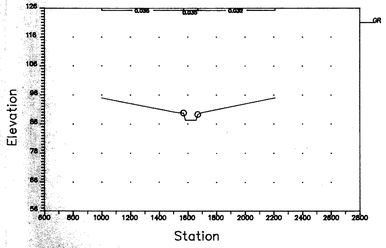
Cross-Section R38-94



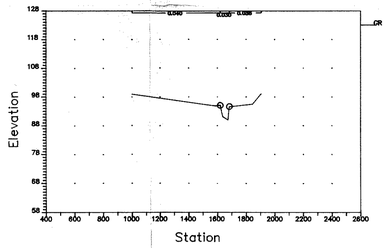
Cross-Section R39-40



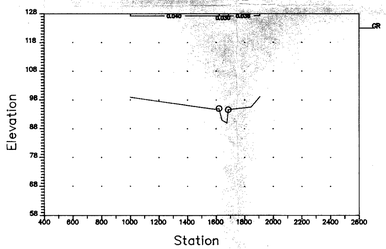
Cross-Section R40-41



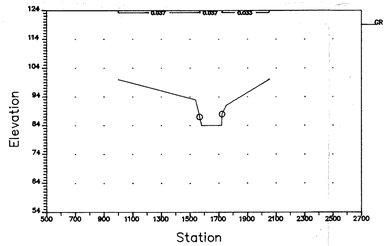
Cross-Section R41-43



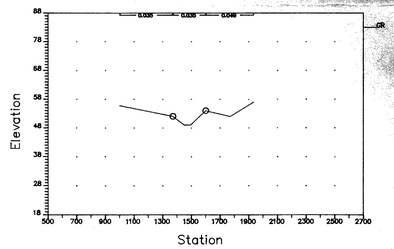
Cross-Section R42-43



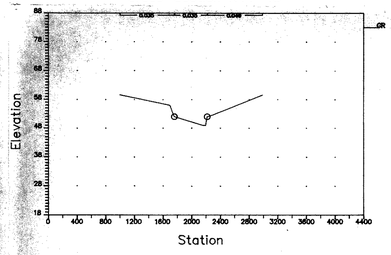
Cross-Section R43-44



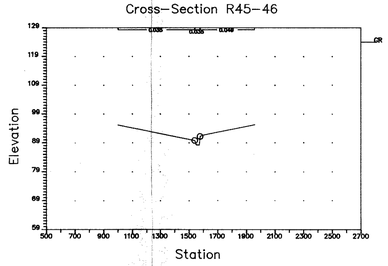
Cross-Section R44-47



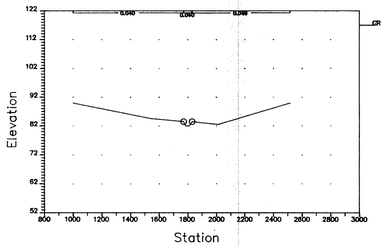
Cross-Section R44-45



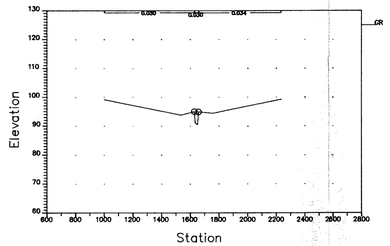
Cross-Section R45-46



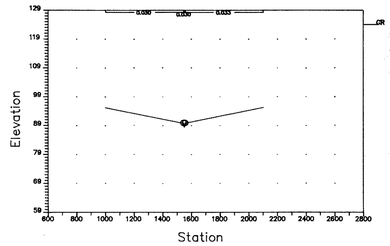
Cross-Section R46-94



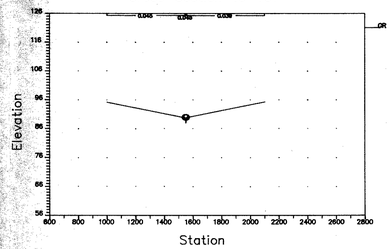
Cross-Section 47-119



Cross-Section 48-101



Cross-Section 49-101



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FCD 90-05

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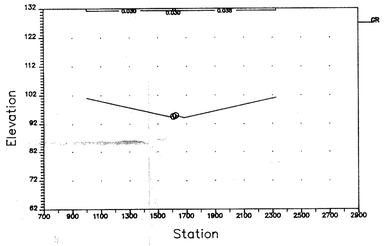
EXHIBIT "E"
HEC-1 REACH ROUTE
CROSS SECTION PLOTS

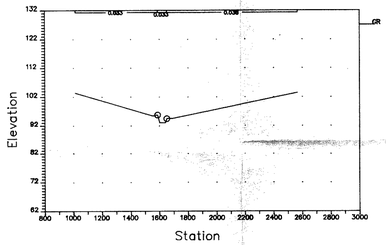
SCALE: VARIES
SHEET NO. 2 OF 4

BRUNING #307034-1

Cross-Section R50-51



Cross-Section R51-57



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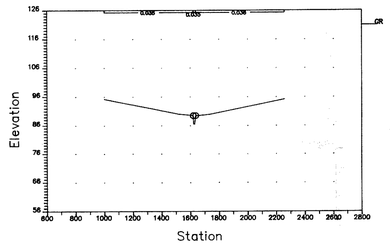

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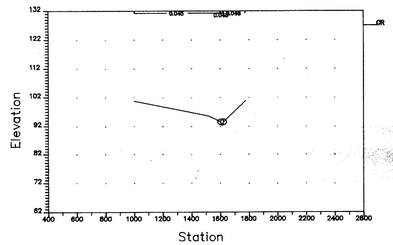

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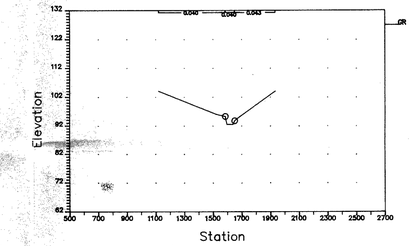

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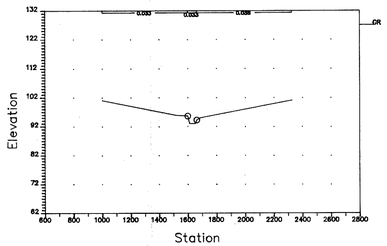

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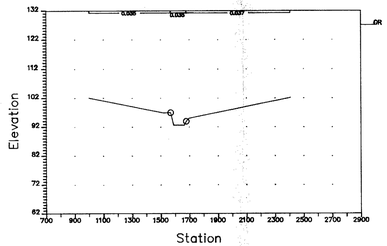

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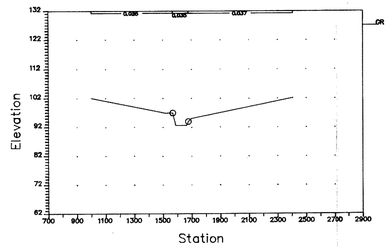
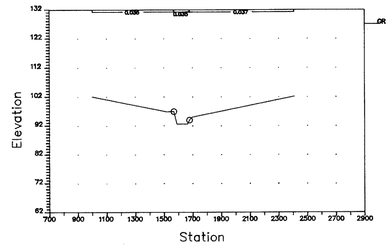


Cross-Section R59-61



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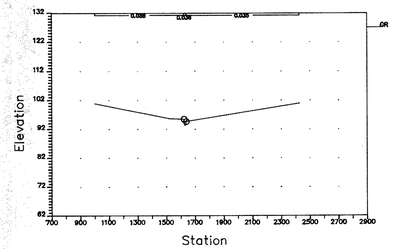

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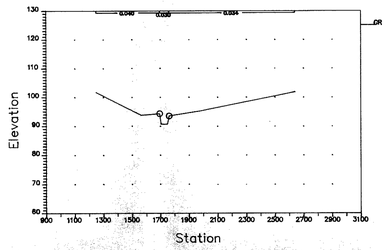

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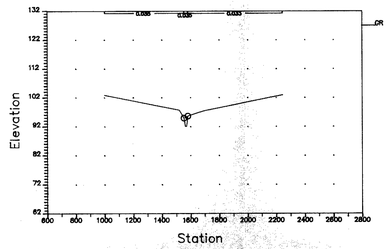

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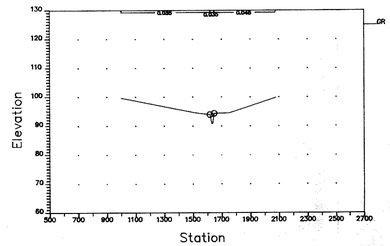

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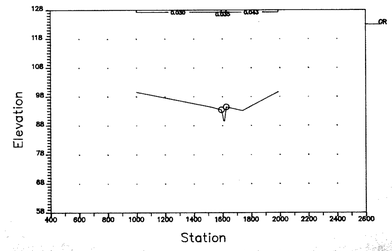

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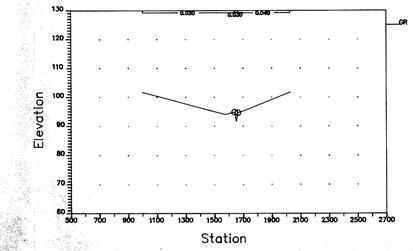
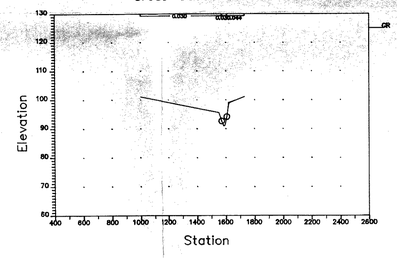
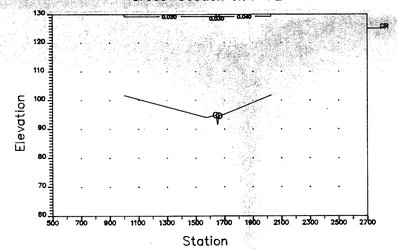


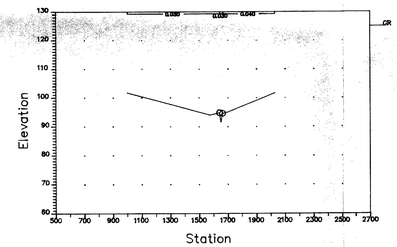
Cross-Section R70-71



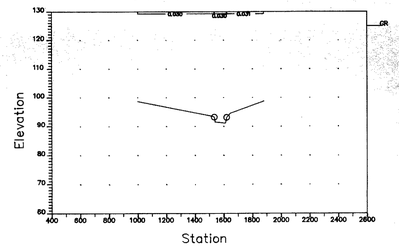
Cross-Section R71-72



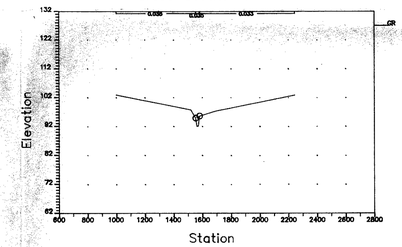
Cross-Section R72-81



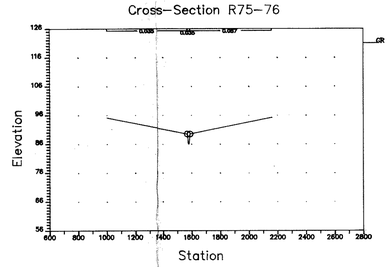
Cross-Section R73-74



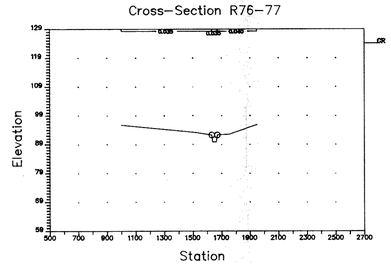
Cross-Section R74-76



Cross-Section R75-76



Cross-Section R76-77



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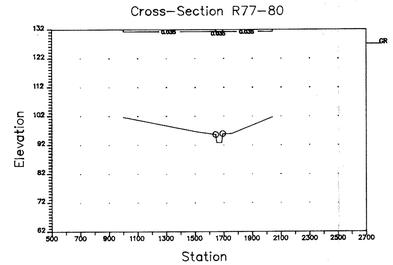
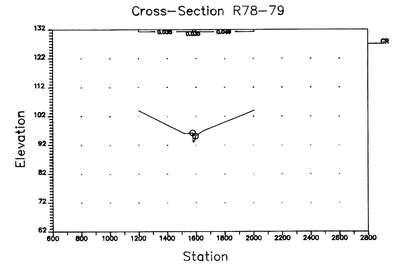
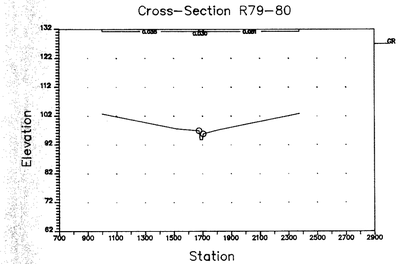


Cross-Section R78-79



Cross-Section R79-80



NO.	REVISIONS	DATE	BY	CHK.

BRUNING #307034-1

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

JACKRABBIT WASH FLOODPLAIN DELINEATION STUDY

FCD 90-05

JOB NO.	10310
DESIGNED BY:	T.R.L.
DRAWN BY:	J.K.D.
CHECKED BY:	A.J.R.
APPROVED BY:	T.R.L.
DATE:	12-90

EXHIBIT "E"

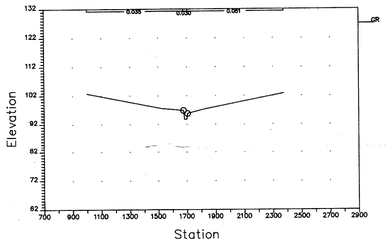
HEC-1 REACH ROUTE

CROSS SECTION PLOTS

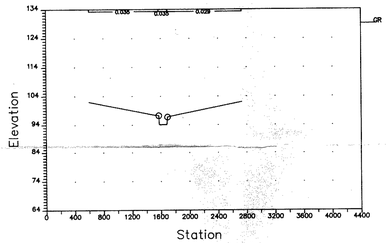
SCALE: VARIES

SHEET NO. 3 OF 4

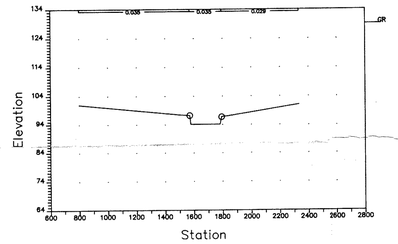
Cross-Section R80-81



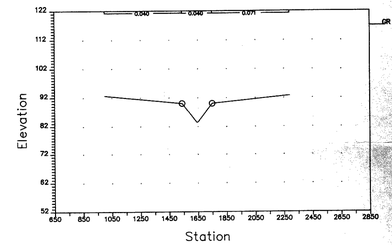
Cross-Section R81-82



Cross-Section R82-84



Cross-Section R83-84



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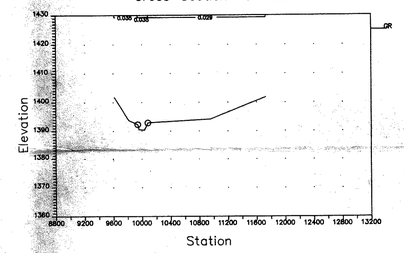

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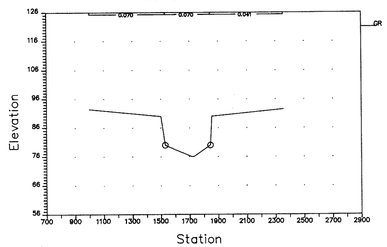
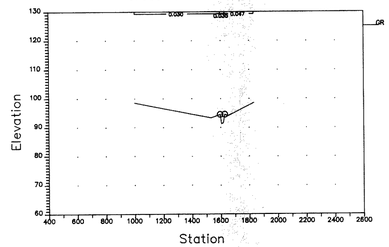


Cross-Section R86-88



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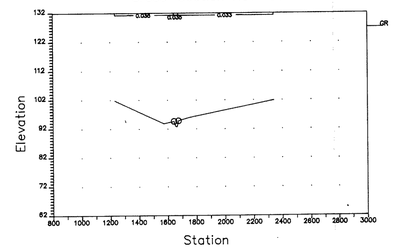

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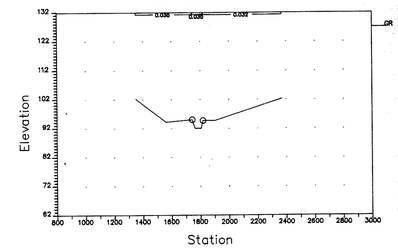

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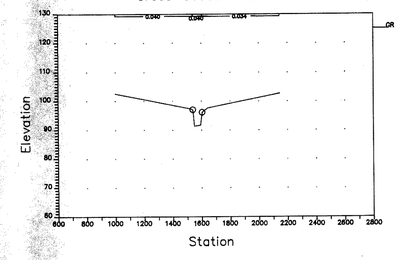

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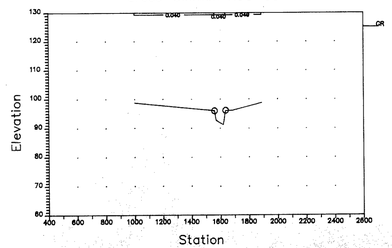

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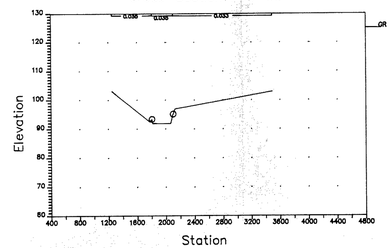
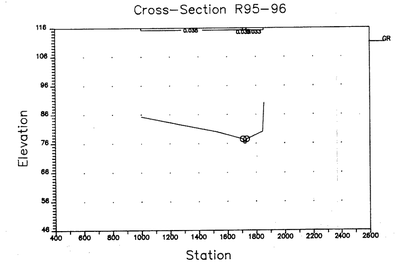
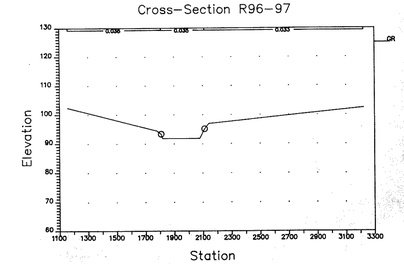


Cross-Section R95-96



Cross-Section R96-97



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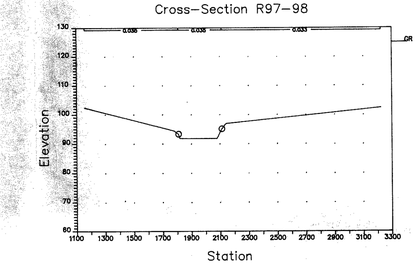
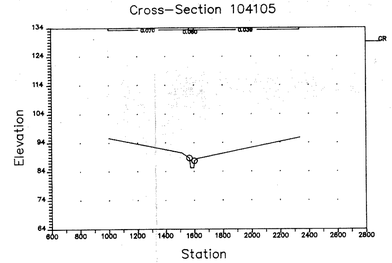
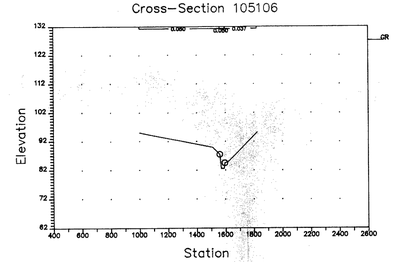


Cross-Section 104105



Cross-Section 105106



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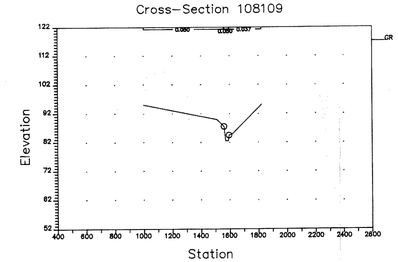

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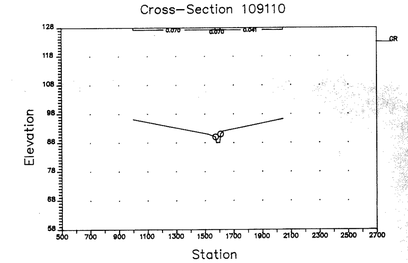

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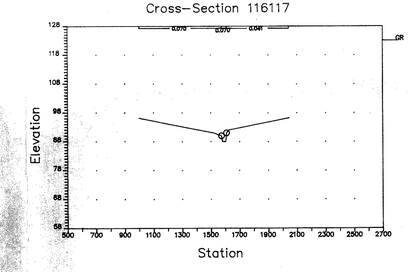

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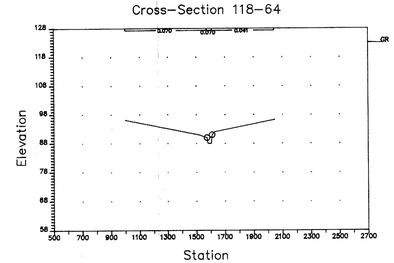

NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Inc.
Engineers and Architects
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Mentor, OH • Parkersburg, WV • Payson, AZ • Phoenix, AZ

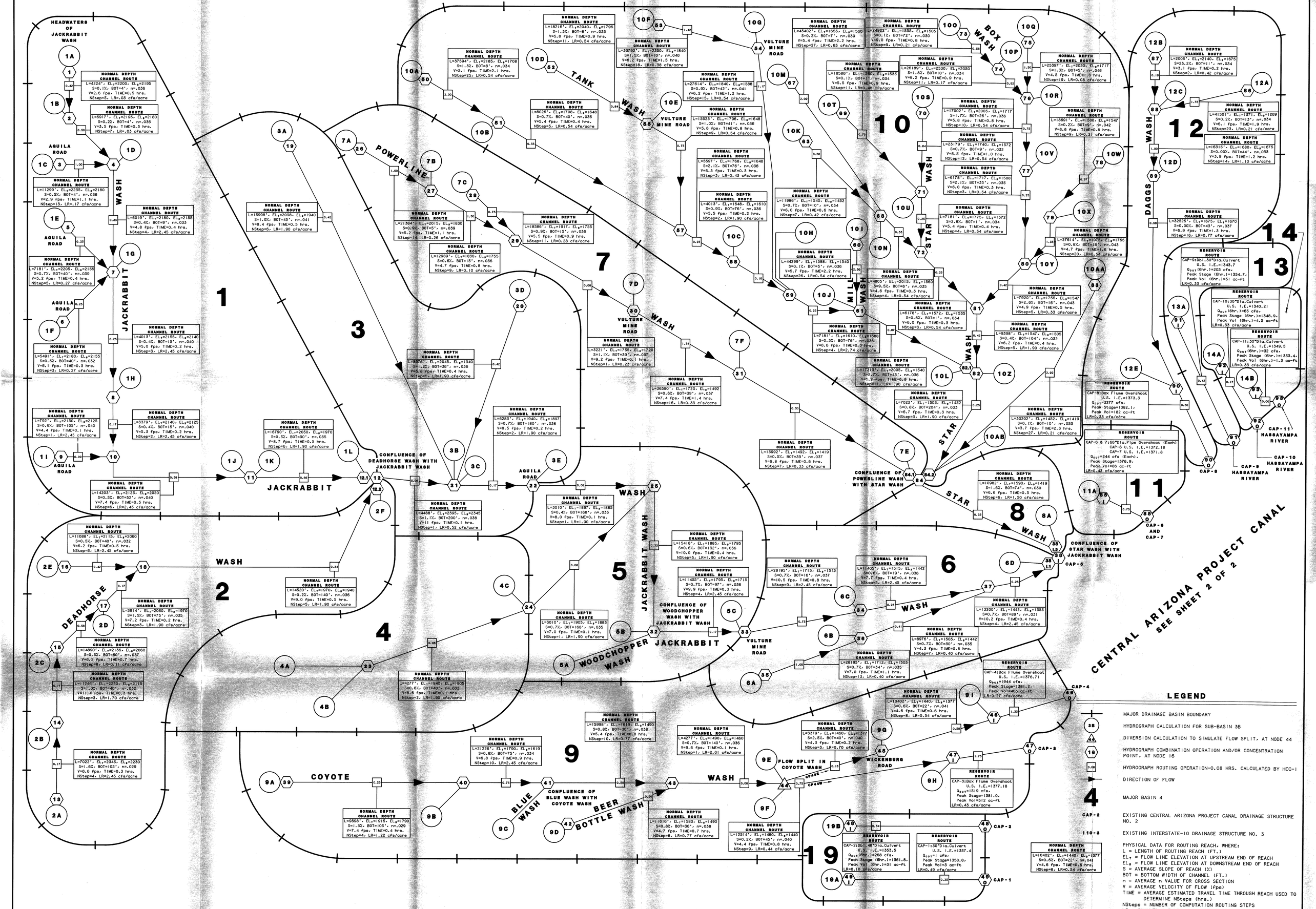
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
JACKRABBIT WASH FLOODPLAIN DELINEATION STUDY
FCD 90-05

JOB NO.	10310
DESIGNED BY:	T.R.L.
DRAWN BY:	J.K.D.
CHECKED BY:	A.J.R.
APPROVED BY:	T.R.L.
DATE:	12-90

EXHIBIT "E"
HEC-1 REACH ROUTE
CROSS SECTION PLOTS

SCALE: VARIES
SHEET NO. 4 OF 4

BRUNING #307034-1



NO.	REVISIONS	DATE	BY	CHK.

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Painesville, OH • Parkersburg, WV • Payson, AZ • Phoenix, AZ

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

JACKRABBIT WASH FLOODPLAIN DELINEATION STUDY

FCD 90-05

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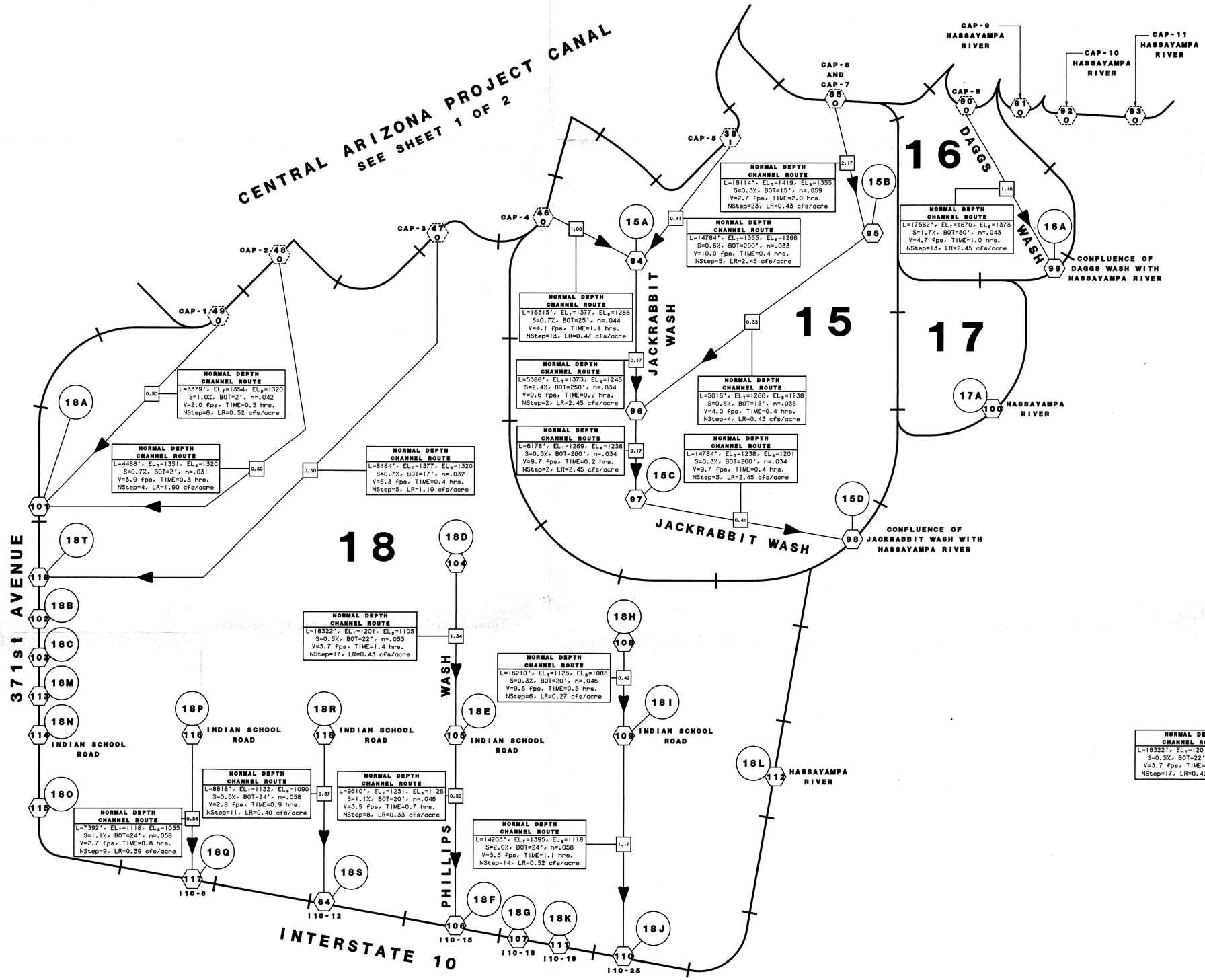
DESIGNED BY:	A.J.R.
DRAWN BY:	J.K.D.
CHECKED BY:	T.R.L.
APPROVED BY:	T.R.L.
DATE:	2-91

EXHIBIT "F"

HEC-1 ROUTING DIAGRAM
100-YEAR 24-HOUR STORM

SCALE: N.T.S.

SHEET NO. 1 OF 2



LEGEND

	MAJOR DRAINAGE BASIN BOUNDARY
3B	HYDROGRAPH CALCULATION FOR SUB-BASIN 3B
44	DIVERSION CALCULATION TO SIMULATE FLOW SPLIT AT NODE 44
16	HYDROGRAPH COMBINATION OPERATION AND/OR CONCENTRATION POINT, AT NODE 16
0.08	HYDROGRAPH ROUTING OPERATION - 0.08 HOURS CALCULATED BY HEC-1
	DIRECTION OF FLOW
4	MAJOR BASIN 4
CAP-2	EXISTING CENTRAL ARIZONA PROJECT CANAL DRAINAGE STRUCTURE NO. 2
I10-8	EXISTING INTERSTATE-10 DRAINAGE STRUCTURE NO. 3

NORMAL DEPTH CHANNEL ROUTE
L=18322', EL_T=1201, EL_B=1105
S=0.5%, BOT=22', n=.053
V=3.7 fps, TIME=1.4 hrs.
NStep=17, LR=0.43 cfs/acre

PHYSICAL DATA FOR ROUTING REACH, WHERE:
L = LENGTH OF ROUTING REACH (FT.)
EL_T = FLOW LINE ELEVATION AT UPSTREAM END OF REACH
EL_B = FLOW LINE ELEVATION AT DOWNSTREAM END OF REACH
S = AVERAGE SLOPE OF REACH (%)
BOT = BOTTOM WIDTH OF CHANNEL (FT.)
n = AVERAGE n VALUE FOR CROSS SECTION
V = AVERAGE VELOCITY OF FLOW (fps)
TIME = AVERAGE ESTIMATED TRAVEL TIME THROUGH REACH USED TO DETERMINE NSteps (hrs.)
NSteps = NUMBER OF COMPUTATION ROUTING STEPS
LR = CHANNEL INFILTRATION LOSS RATE (cfs/acre)

NO.	REVISIONS	DATE	BY	CHK.

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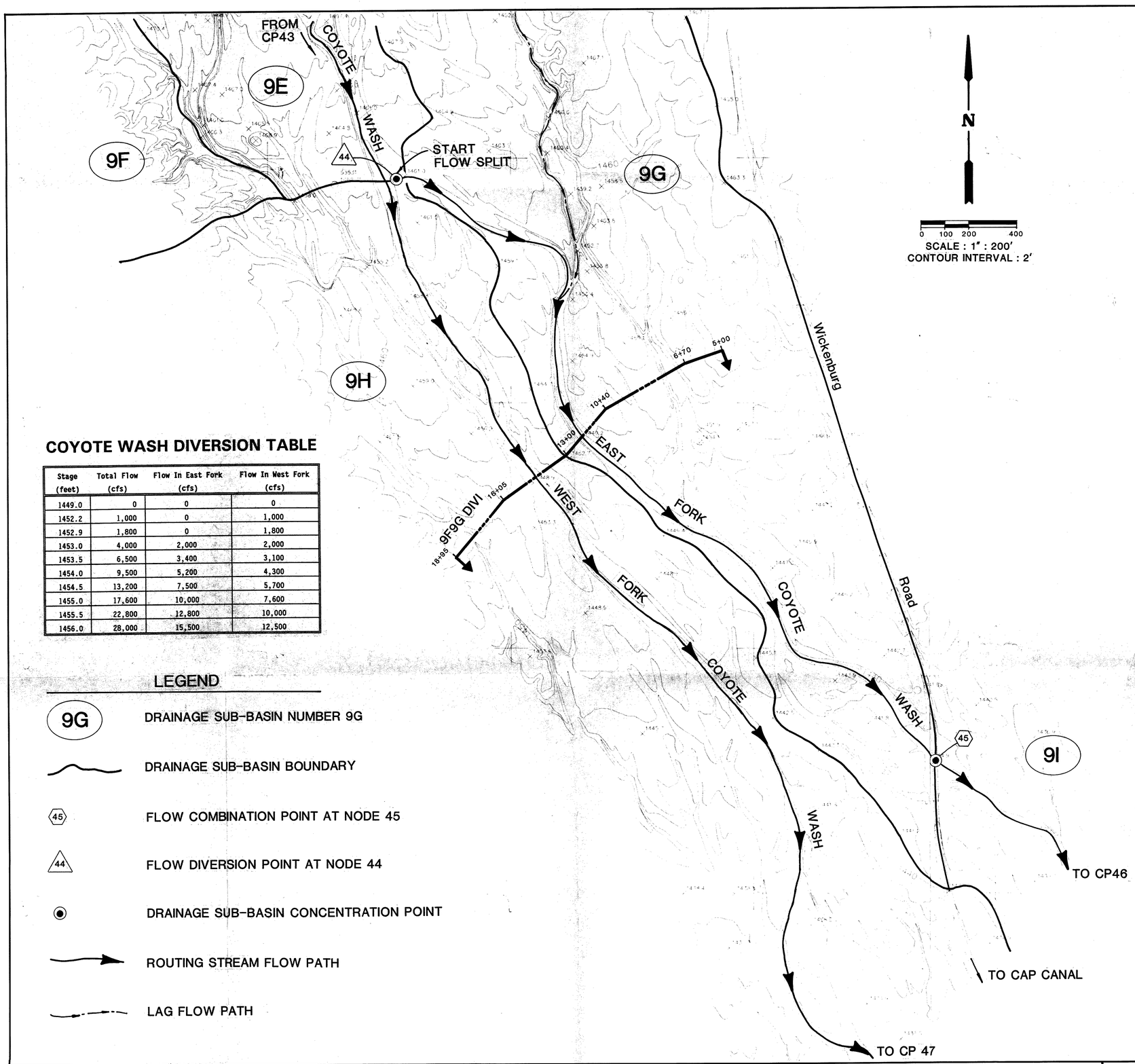
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
JACKRABBIT WASH FLOODPLAIN DELINEATION STUDY
FCD 90-05

JOB NO.	10310
DESIGNED BY:	A.J.R.
DRAWN BY:	J.K.D.
CHECKED BY:	T.R.L.
APPROVED BY:	T.R.L.
DATE:	2-91

EXHIBIT "F"
HEC-1 ROUTING DIAGRAM
100-YEAR 24-HOUR STORM

SCALE: N.T.S.
SHEET NO. 2 OF 2

BRUNING# 3070241

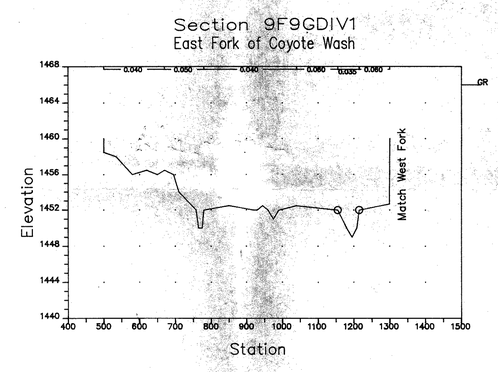


COYOTE WASH DIVERSION TABLE

Stage (feet)	Total Flow (cfs)	Flow In East Fork (cfs)	Flow In West Fork (cfs)
1449.0	0	0	0
1452.2	1,000	0	1,000
1452.9	1,800	0	1,800
1453.0	4,000	2,000	2,000
1453.5	6,500	3,400	3,100
1454.0	9,500	5,200	4,300
1454.5	13,200	7,500	5,700
1455.0	17,600	10,000	7,600
1455.5	22,800	12,800	10,000
1456.0	28,000	15,500	12,500

LEGEND

- 9G — DRAINAGE SUB-BASIN NUMBER 9G
- DRAINAGE SUB-BASIN BOUNDARY
- 45 — FLOW COMBINATION POINT AT NODE 45
- 44 — FLOW DIVERSION POINT AT NODE 44
- DRAINAGE SUB-BASIN CONCENTRATION POINT
- ROUTING STREAM FLOW PATH
- LAG FLOW PATH



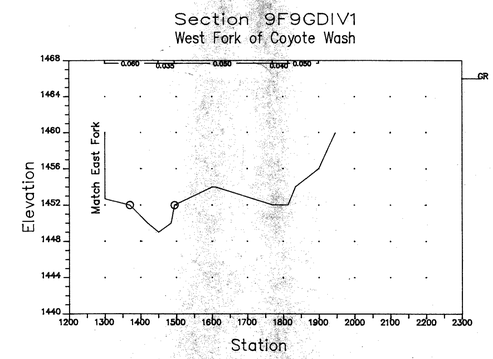
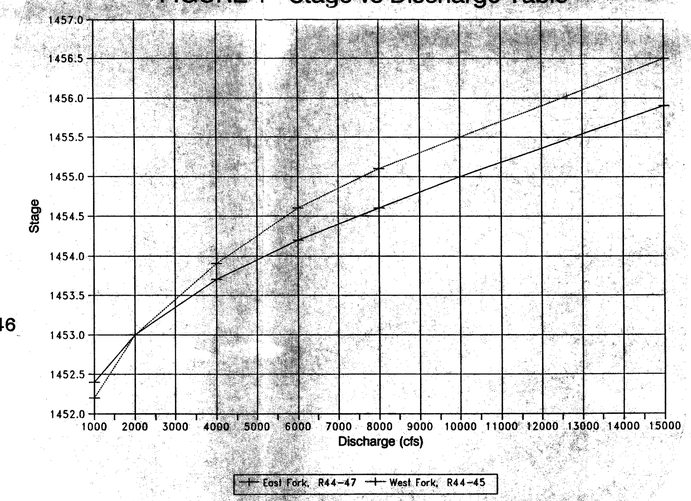


FIGURE 1 - Stage vs Discharge Table



NO.	REVISIONS	DATE	BY	CHK.

Burgess & Niple, Inc.
Engineers and Architects
1106 N. Beeline Highway, Payson, Arizona 85541 (602) 474-5313

b&n 1912

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

JACKRABBIT WASH FLOODPLAIN DELINEATION STUDY

FCD 90-05

JOB NO.	10310
DESIGNED BY :	A.J.R.
DRAWN BY :	W.C.E.
CHECKED BY :	T.R.L.
APPROVED BY :	T.R.L.
DATE :	12/90

EXHIBIT "G"

COYOTE WASH FLOW SPLIT

SCALE : 1" : 200'

SHEET NO. 1 OF 1