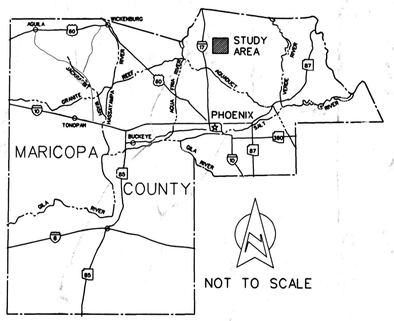
The change in discharge is a result of joining of two Flood Insurance Studies (FIS's)--Jerry Jones and Stanley. Stanley did not change any downstream discharges used in the Jerry Jones study. Stanley's discharges are based upon a more detailed hydrology upstream.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

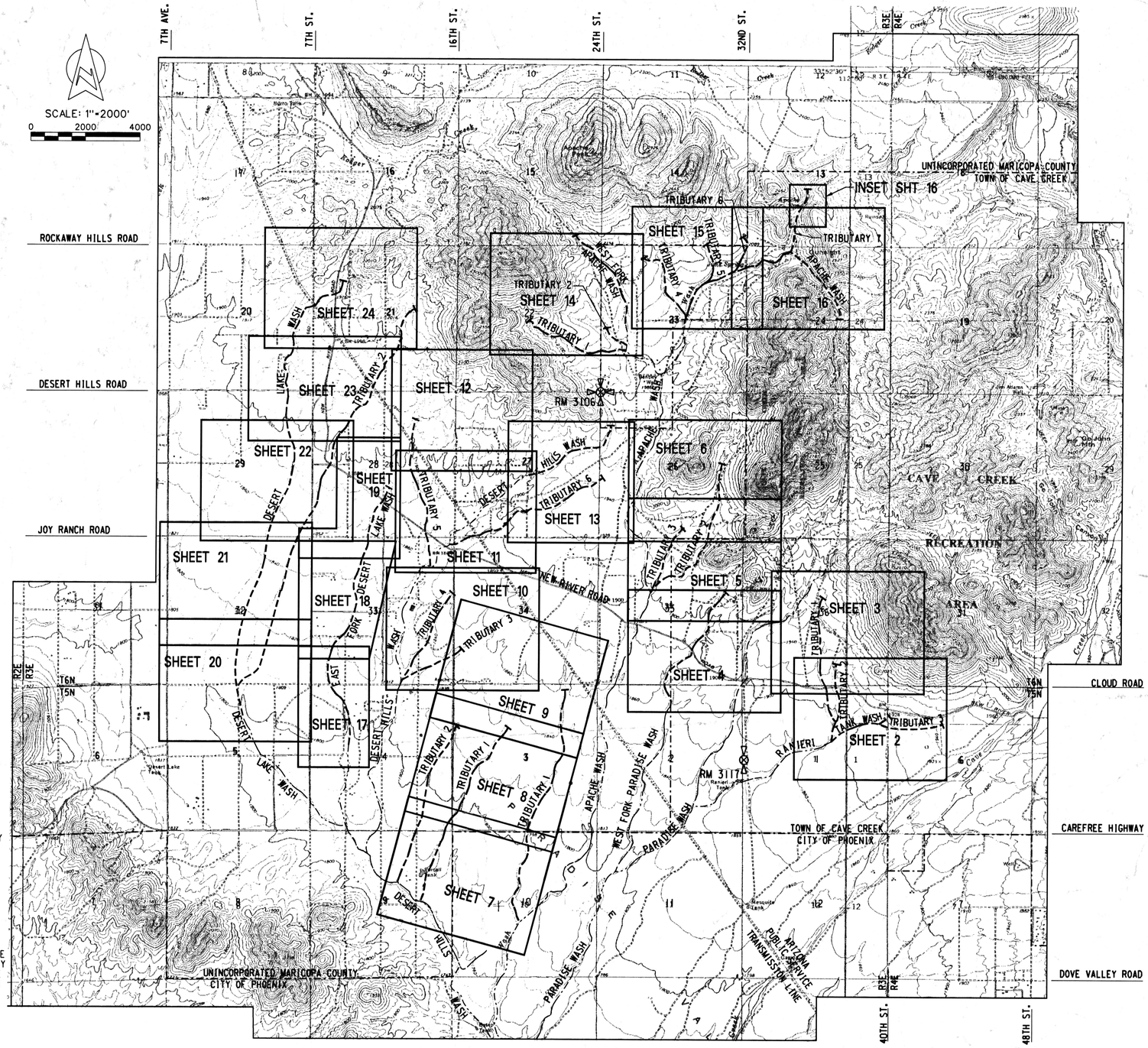
FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA

FCD 96-06



LOCATION MAP

SCALE: 1"=2000'
0 2000 4000



LEGEND:

- DELINEATED WASH (JRJ APACHE WASH STUDY)
- DELINEATED WASH (DESERT HILLS STUDY)
- SECTION CORNER (FOUND)
- QUARTER CORNER (FOUND)
- SECTION CORNER (APPROXIMATE)
- QUARTER CORNER (APPROXIMATE)
- ⊗ RM 127 — ELEVATION REFERENCE MARK
- CITY/TOWN LIMIT

FLOOD CONTROL DISTRICT
RECEIVED
JAN 18 '01
DSB

AERIAL MAPPING:

COOPER AERIAL OF PHOENIX, INC.
11402 N. CAVE CREEK ROAD
PHOENIX, ARIZONA 85020 PHONE-(602)678-5111
FLIGHT DATE: MARCH 20, 1997
CONTOUR INTERVAL: 2 FEET

GROUND CONTROL:

PROJECT ENGINEERING CONSULTANTS, LTD
2320 W. PEORIA AVENUE SUITE C-122
PHOENIX, ARIZONA 85029 PHONE-(602)906-1901

DATUM

HORIZONTAL: NORTH AMERICAN DATUM OF 1983
VERTICAL: NATIONAL GEODETIC VERTICAL DATUM OF 1929

BENCHMARK

RM 2045 - CHISELED SQUARE ON WEST END CONCRETE HEADWALL AT NORTHWEST CORNER 16TH STREET AND JOY RANCH ROAD.

ELEVEATION 1861.040

SUPPLEMENTAL RM'S (SEE THIS SHEET FOR LOCATION)

ID NUMBER	ELEVATION	DESCRIPTION/LOCATION
RM 3106	2010.531	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE APPROXIMATELY .2 FEET ABOVE GROUND, ON DESERT HILLS ROAD, APPROXIMATELY 1320 FEET WEST OF 26TH STREET, SOUTHWEST CORNER OF SECTION 23, T6N, R3E G&SRB&M
RM 3117	1867.556	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE ON 32ND STREET APPROXIMATELY 2640 FEET NORTH OF CAREFREE HIGHWAY, EAST QUARTER NORTH OF CAREFREE HIGHWAY, EAST QUARTERCORNER OF SECTION 2, T5N, R3E, G&SRB&M.

CENTRAL FILE
DRAWER # 318

EXHIBIT T1 - TOPOGRAPHY

Stanley Consultants INC.
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

SCI • 13484 | SHEET T1 OF 24

Floodplain Delineation and Topographic Mapping for the Desert Hills Area
Stanley Consultants
Study Year 1999
FCD 96-06
Drawer
318

SEE SHEET 3

STREET

38TH

CLOUD ROAD (NEW RIVER ROAD)

RM 3111

HV-56 1925.23

HV-67 1912.42

HV-68 1935.80

RM 0127

E 675,000

N 1,023,000

36 1 6 31 T6N T5N

APPROXIMATE PARK BOUNDARY

CAVE CREEK RECREATION AREA

40TH STREET (ALIGNMENT)

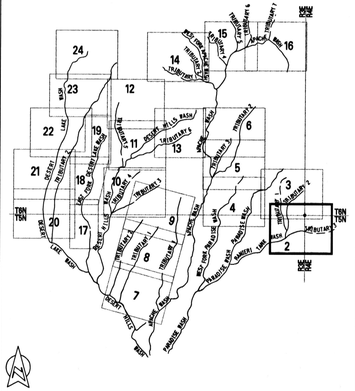
R3E R4E

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 0127	1923.60	U.S GEOLOGICAL SURVEY BRASS CAP IN CONCRETE POST PROJECTING 0.5 FEET ABOVE GROUND 2.3 MILES WEST OF THE JUNCTION OF CAVE CREEK ROAD AND NEW RIVER ROAD, 39 FEET NORTH OF NEW RIVER AND 2 FEET EAST OF FENCE AT NORTH END OF CATTLE GUARD. MARKED 8 HRP 1963.
RM 3111	1919.395	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET EAST OF 32ND STREET, APPROXIMATELY 100 FEET NORTH OF CLOUD ROAD, NORTH QUARTER CORNER OF SECTION 1, T5N, R3E, G&SRB&M.



SHEET INDEX MAP

SCALE: 1IN=200FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

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Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T2 OF 24

Q:\N3484\PLAN\TOPOPLOTS\RW SHT2 .DGN

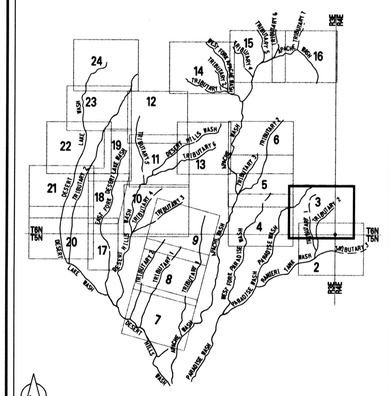
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 3111	1919.395	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET EAST OF 32ND STREET, APPROXIMATELY 100 FEET NORTH OF CLOUD ROAD, NORTH QUARTER CORNER OF SECTION 1, T5N, R3E, G&SRB&M.



SHEET INDEX MAP

SCALE: 1IN=200FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

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	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T3 OF 24

O:\3484\PLAN\TOPOPLOTS\RW SHT3 .DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

CAVE CREEK RECREATION AREA

APPROXIMATE PARK BOUNDARY

RM 2037

N 1,026,000

E 667,000

UNINCORPORATED COUNTY
TOWN OF CAVE CREEK

29TH STREET

28TH STREET

NEW RIVER ROAD

CLOUD ROAD

RM 3115

RM 3116

35 36

36 35 1 6

T6N
T5N

32ND STREET (APPROX)

E 671,000

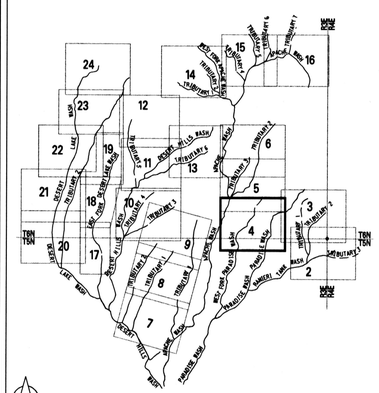
N 1,023,000

HV-5
1886

HV-61

1901.2 1905.6 1901.4 1903.4 1902.6 1898 1896.9 1896.6 1890.9 1890.9 1885.3 1914.5 1916.6 1910.5 1879.5 1881.2 1877.2 1877.1 1873.8 1907.1 1911.1 1910 1899.1 1894.7 1909.1 1872.2 1868.8 1887.1 1905.1 1870.4 1870 1871.2 1868.9 1863.4 1867.6 1862.2 1899.5 1900.8 1886.4 1867.2 1865.2 1893.2 1902.4 1875.4 1889.4 1890 1894.9 1864.6 1885.7 1862.9 1857.4 1862.6 1865.1 1880 1879.5 1884.9 1889.6 1861.4 1861.1 1859.4 1861.5 1860 1884.8 1859.1 1860 1870.9 1870 1856.9 1855.9 1853.4 1878.9 1857.6 1853.3 1855.8 1864.7 1875.3 1884.4 1869.6

SHEET INDEX MAP



ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 2037	1906.10	TOP OF HALF INCH IRON REBAR (FLUSH) POSSIBLY CENTER SECTION 35 TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM 3115	1864.193	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 28TH STREET AND CLOUD ROAD.
RM 3116	1900.167	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 200 FEET EAST OF INTERSECTION OF 32ND STREET AND CLOUD ROAD.

SCALE: 1IN=200FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

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	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

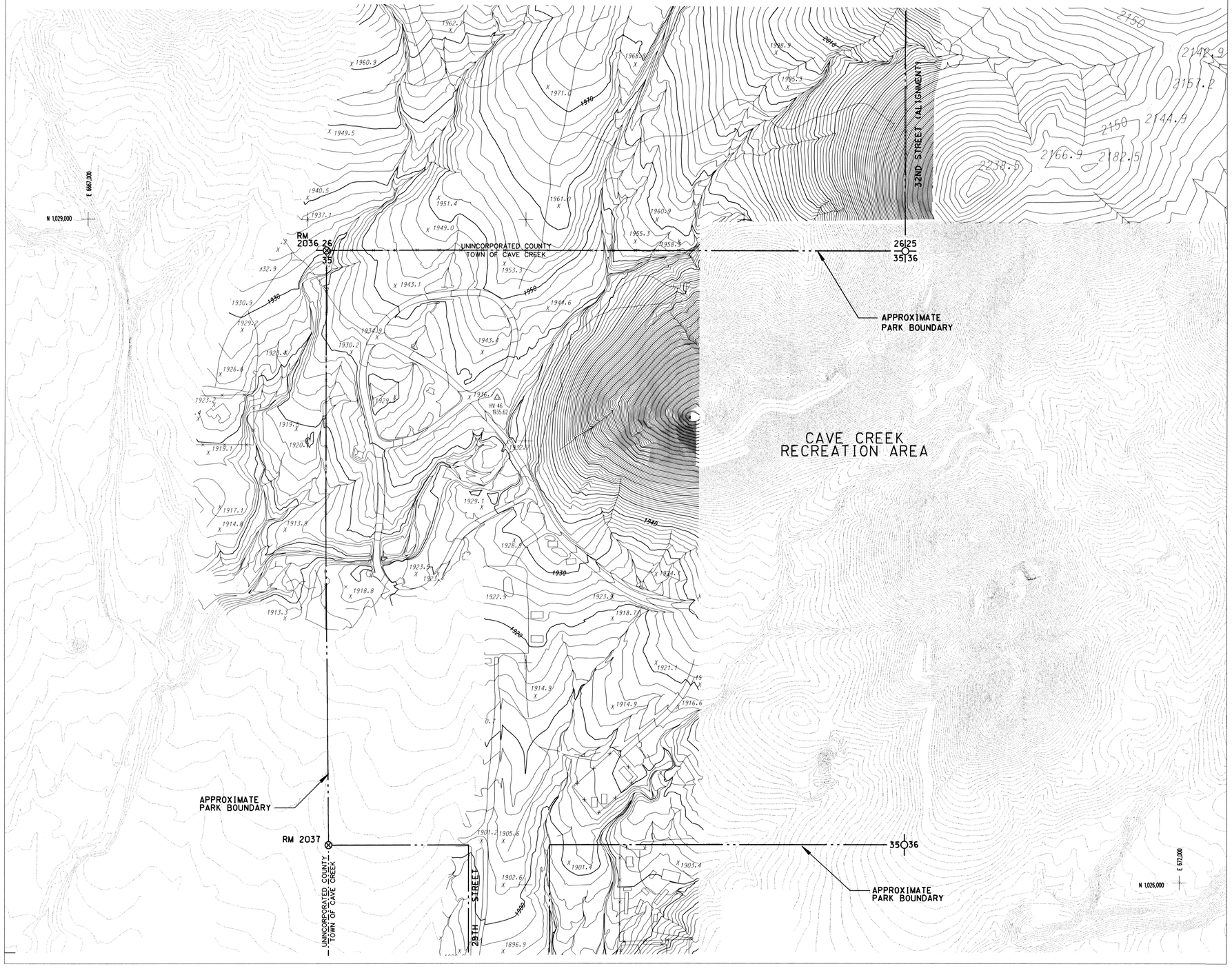
CHIEF ENGINEER AND GENERAL MANAGER

SHEET T4 OF 24

Q:\13484\PLAN\TOPOPLOTS\PAW SHT4.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

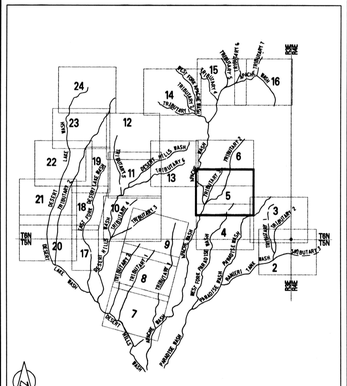
FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 2036	1931.56	TOP OF GLO BRASS CAP, 1922, QUARTER SECTION 26 AND 35, TOWNSHIP 6 NORTH RANGE 3 EAST.
RM 2037	1906.10	TOP OF HALF INCH IRON REBAR (FLUSH) POSSIBLY CENTER QUARTER SECTION 35 TOWNSHIP 6 NORTH, RANGE 3 EAST.



SHEET INDEX MAP

SCALE :1IN = 200FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

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and Construction Services - Worldwide

	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

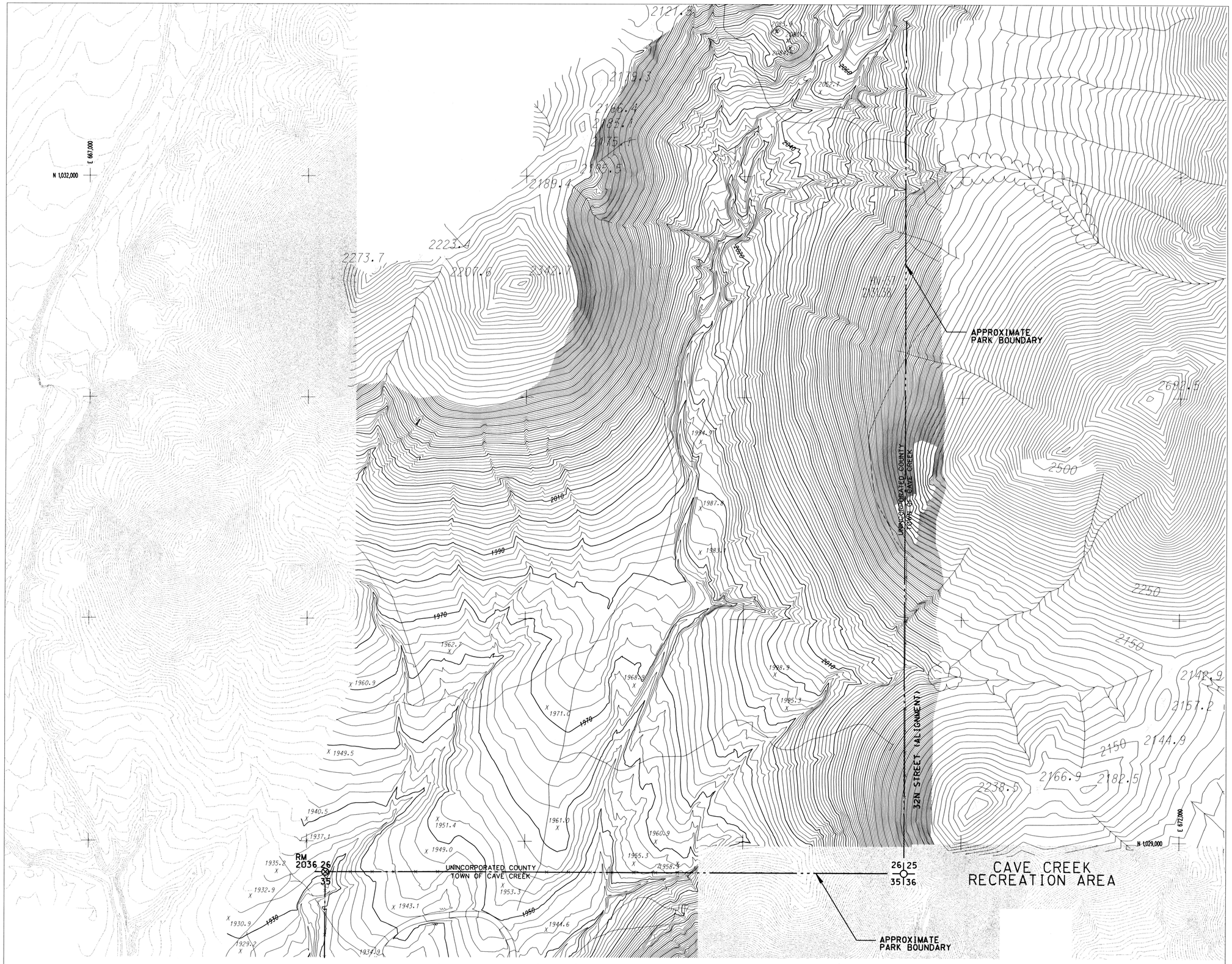
CHIEF ENGINEER AND GENERAL MANAGER

SHEET T5 OF 24

Q:\3484\PLAN\TOPOPLOTS\PAW SHT5.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

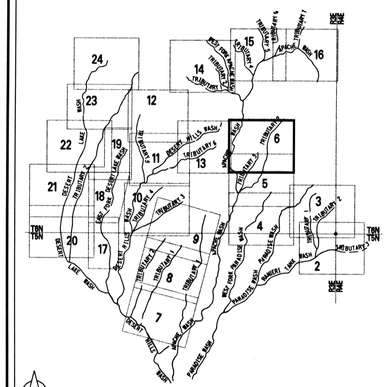


SEE SHEET 5

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 2036	1931.56	TOP OF GLO BRASS CAP, 1922, QUARTER SECTION 26 AND 35, TOWNSHIP 6 NORTH RANGE 3 EAST.



SCALE :1IN = 200FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

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	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

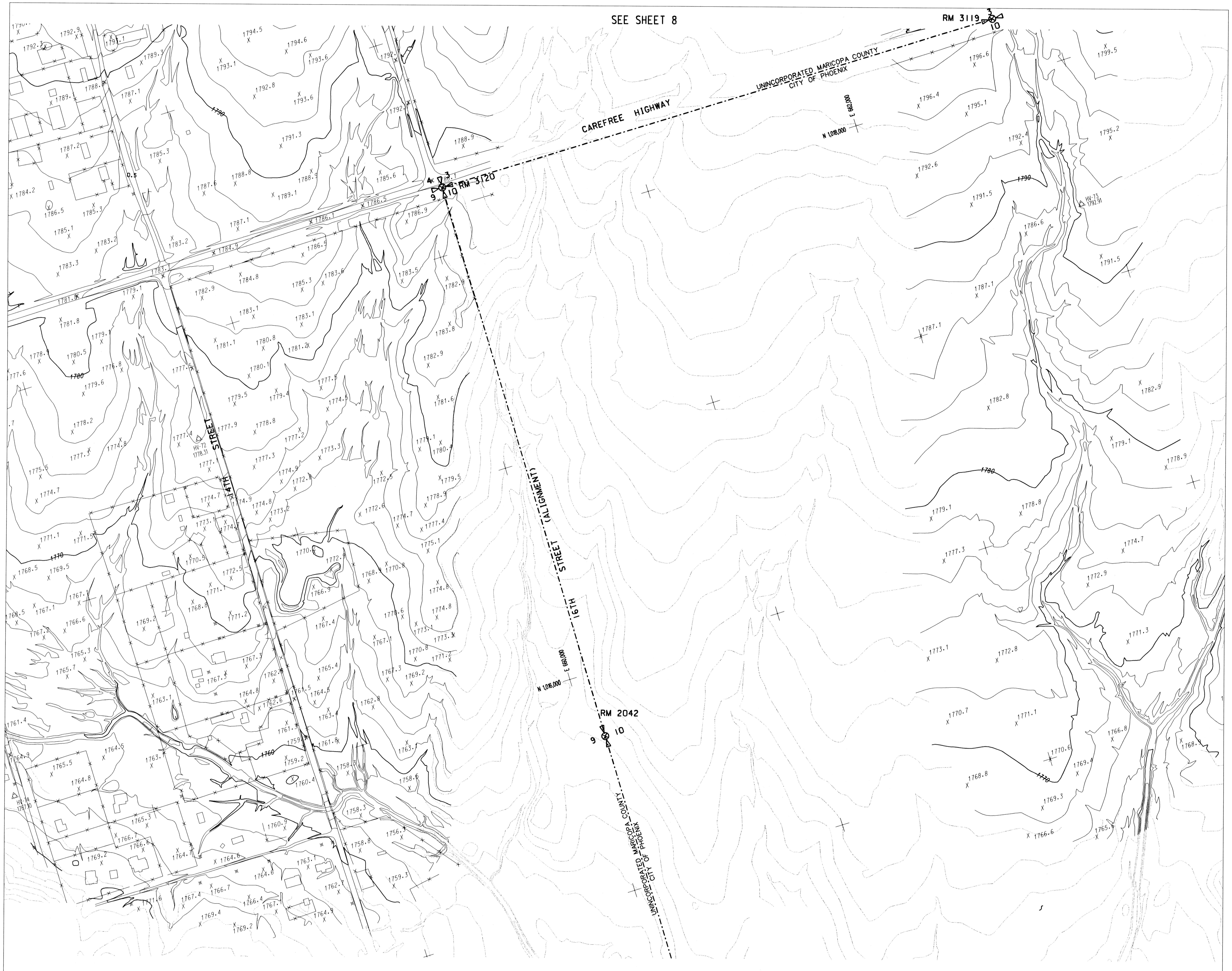
RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T6 OF 24

Q:\13484\PLAN\TOPOPLOTS\PAW SHT6.DGN



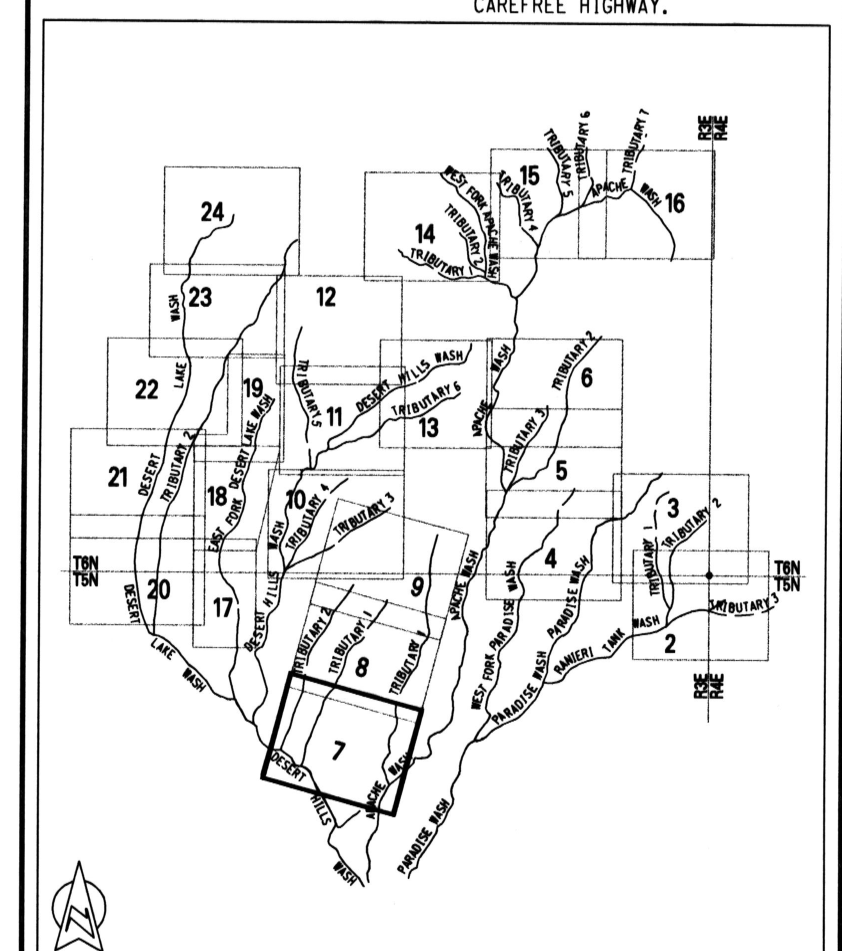
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 2042	1764.74	TOP OF STONE EAST QUARTER SECTION 9, TOWNSHIP 5, NORTH, RANGE 3 EAST
RM 3119	1798.390	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET EAST OF 16TH STREET, APPOXIMATELY 10 FEET SOUTH OF SOUTH EDGE OF PAVEMENT ON CAREFREE HIGHWAY, SOUTH QUARTER CORNER OF SECTION 3, T5N, R3E, G&SRB&M.
RM 3120	1787.090	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 50 FEET EAST OF 16TH STREET, APPROXIMATELY 10 FEET SOUTH OF SOUTH EDGE OF PAVEMENT ON CAREFREE HIGHWAY.



SHEET INDEX MAP

SCALE: 1" = 200'

0 200 400

CONTOUR INTERVAL: 2'

FLIGHT DATE: 3-20-97

Stanley Consultants INC.

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	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T7 OF 24

Q:\13484\PLAN\TOPOPLOTS\APW SHT7.DGN

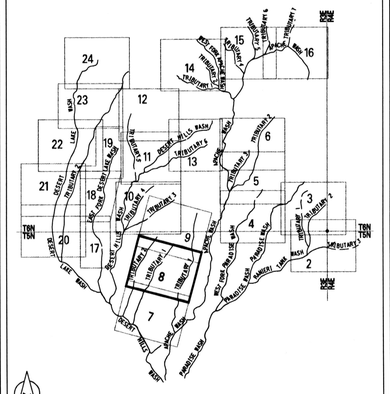
SEE SHEET 9

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 3119	1798.390	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET EAST OF 16TH STREET, APPOXIMATELY 10 FEET SOUTH OF SOUTH EDGE OF PAVEMENT ON CAREFREE HIGHWAY, SOUTH QUARTER CORNER OF SECTION 3, T5N, R3E, G&SRB&M.



SHEET INDEX MAP

SCALE :1" = 200'

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

SEE SHEET 7

Stanley Consultants INC.
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	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

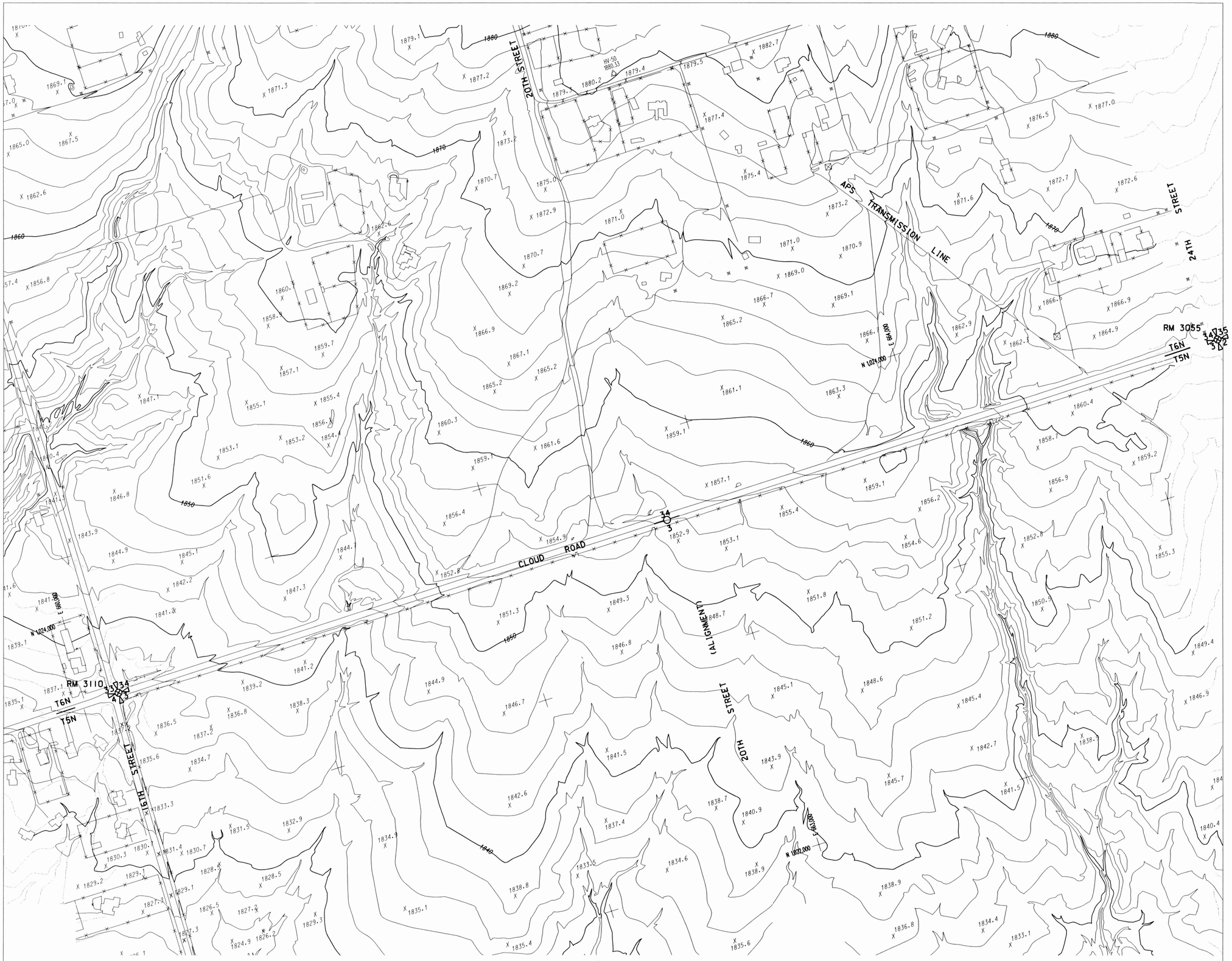
CHIEF ENGINEER AND GENERAL MANAGER

SHEET T8 OF 24

Q:\3484\PLAN\TOPOPLOTS\APW SHT8.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

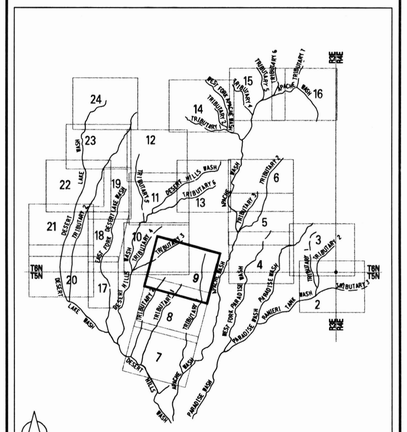
FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 3110	1837.224	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 16TH STREET AND CLOUD ROAD.
RM 3055	1861.680	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 24TH STREET AND CLOUD ROAD.



SCALE :1" = 200'

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

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Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T9 OF 24

Q:\13484\PLAN\TOPOPLOTS\APW SHT9.DGN

SEE SHEET 11

SEE SHEET 9

NEW RIVER ROAD

20TH STREET

16TH STREET

14TH STREET

CLOUD ROAD

RM 3049

RM 3110

N 1,027,000

E 658,000

N 1,026,000

E 660,000

N 1,024,000

E 662,000

T6N
T5N

33 34
4 3

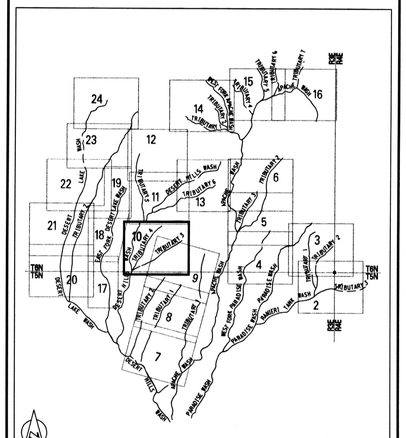
34
3

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3049	1862.815	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET NORTH OF CLOUD ROAD ON 16TH STREET, EAST QUARTER CORNER OF SECTION 33, T6N, R3E, G&SRB&M.
RM3110	1837.224	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 16TH STREET AND CLOUD ROAD.



SHEET INDEX MAP

SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
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Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

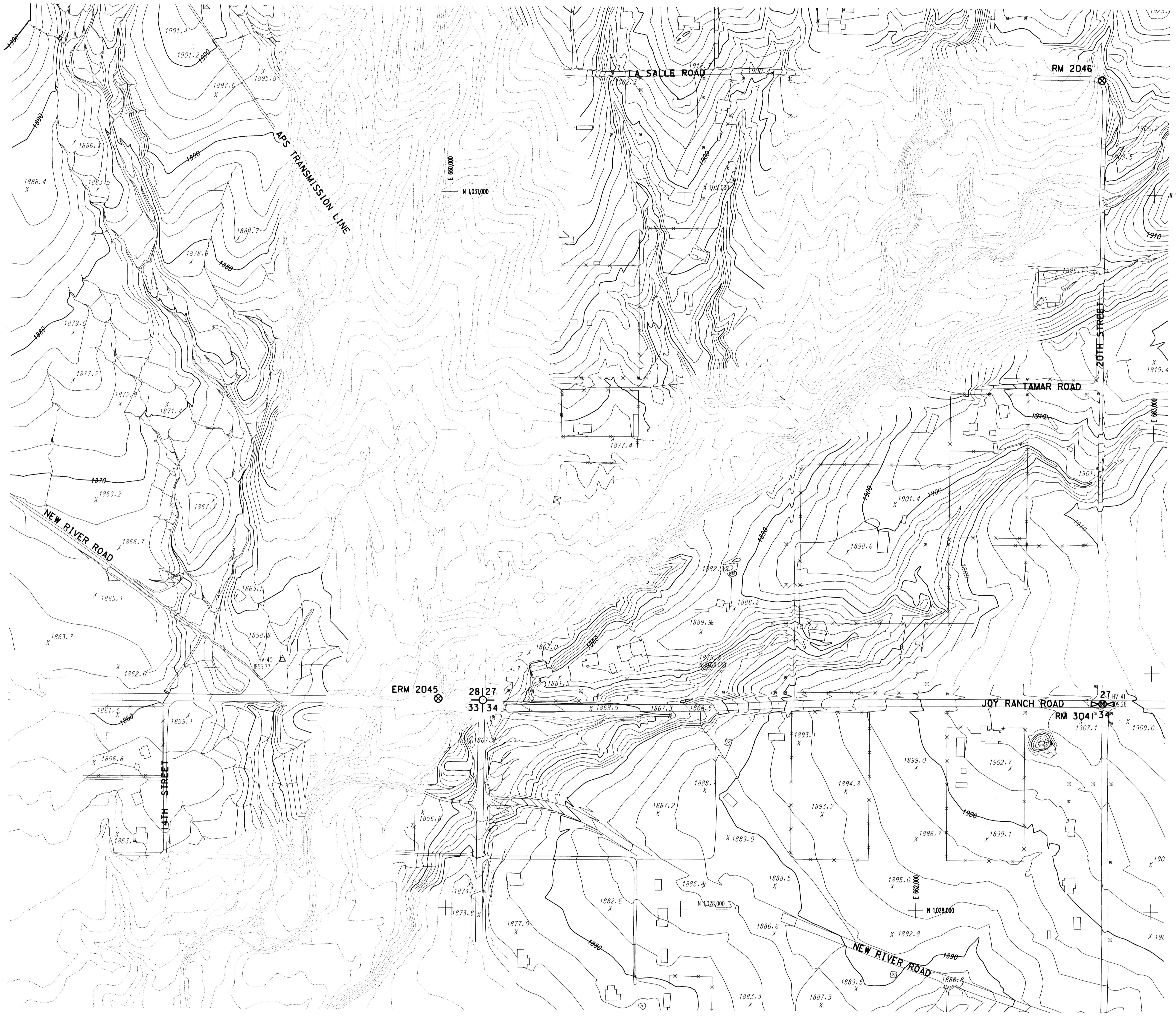
APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T10 OF 24

Q:\13484\PLAN\TOPOPLOTS\APW SHT10.DGN

SEE SHEET 12



SEE SHEET 13

SEE SHEET 10

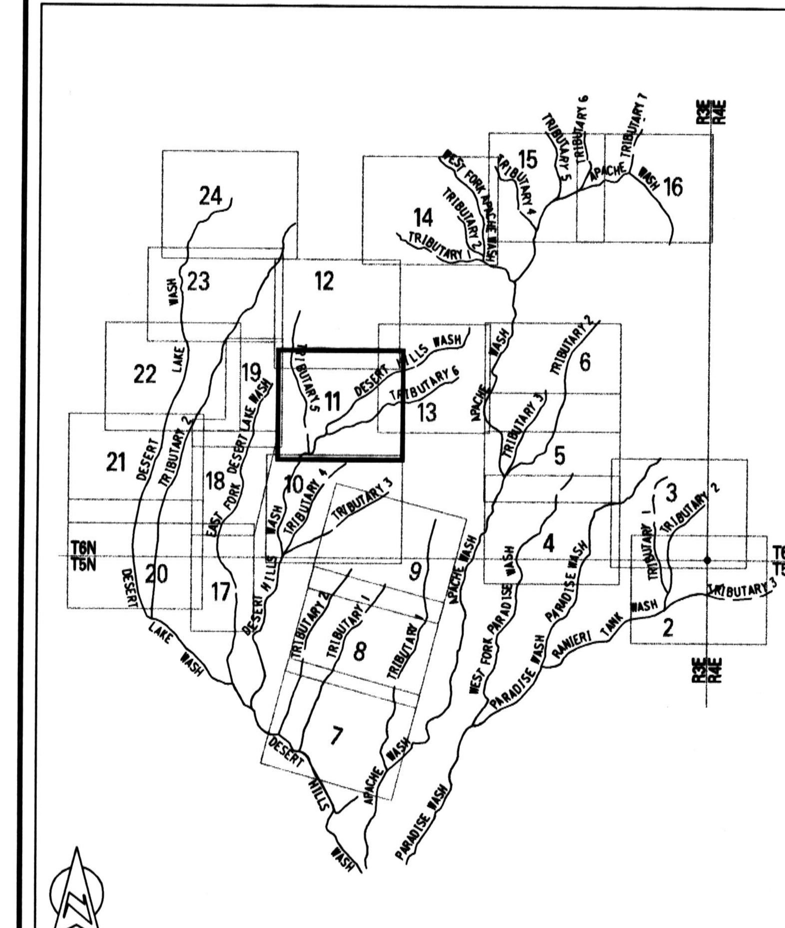
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2045	1861.040	CHISELED SQUARE ON WEST END CONCRETEHEADWALL AT NORTHWEST CORNER 16TH STREET AND JOY RANCH ROAD.
RM2046	1910.74	TOP OF 1-INCH IRON PIPE POSSIBLY CENTER SECTION 27, TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM3041	1908.655	FOUND MARICOPA COUNTY DEPARTMENTTRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 20TH STREET AND JOY RANCH ROAD.



SHEET INDEX MAP

SCALE: 1IN = 200 FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN			RECOMMENDED BY: DATE
DESIGN CHK.			APPROVED BY: DATE
DRAWN			CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY: DATE			SHEET T11 OF 24

Q:\13484\PLAN\TOPOPLOTS\DH SHT11.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

DESERT HILLS DRIVE

E 658,000

N 1,034,000

RM 3105 2J 22 28 27

22 27

APS TRANSMISSION LINE

16TH STREET

TANYA ROAD

LA SALLE ROAD

20TH STREET (ALIGNMENT)

HV-33
1965.30

E 659,000

N 1,032,000

RM 2046

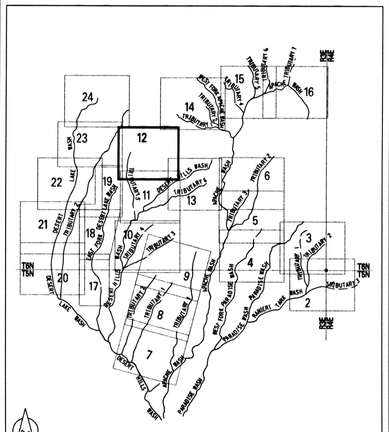
34 35

SEE SHEET 11

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2046	1910.74	TOP OF 1-INCH IRON PIPE POSSIBLY CENTER SECTION 27, TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM3105	1981.969	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY 1 FOOT ABOVE GROUND, BENT 15 DEGREES TO SOUTHWEST; CORNER OF SECTIONS 21, 22, 27, 28, T6N, R3E, G&SRB&M.



SHEET INDEX MAP

SCALE: 1IN = 200 FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

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	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T12 OF 24

Q:\J3484\PLAN\TOPOPLOTS\DH SHT12.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

TANYA ROAD

LA SALLE ROAD

RM 2046

TAMAR ROAD

JOY RANCH ROAD

RM 3041

RM 3108

20TH STREET

22ND STREET (ALIGNMENT)

24TH STREET (ALIGNMENT)

26TH STREET

TOWN OF CAVE CREEK
UNINCORPORATED MARICOPA COUNTY

ZONE AE

E 665,000

N 1,032,000

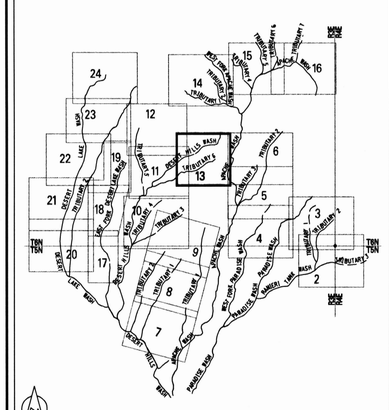
N 1,030,000

27 26 34 35

SEE SHEET 11

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2046	1910.74	TOP OF 1-INCH IRON PIPE POSSIBLY CENTER SECTION 27, TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM3041	1908.655	FOUND MARICOPA COUNTY DEPARTMENTTRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 20TH STREET AND JOY RANCH ROAD.
RM3108	1922.034	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 24TH STREET AND JOY RANCH ROAD.



SHEET INDEX MAP

SCALE: 1IN = 200 FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

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Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

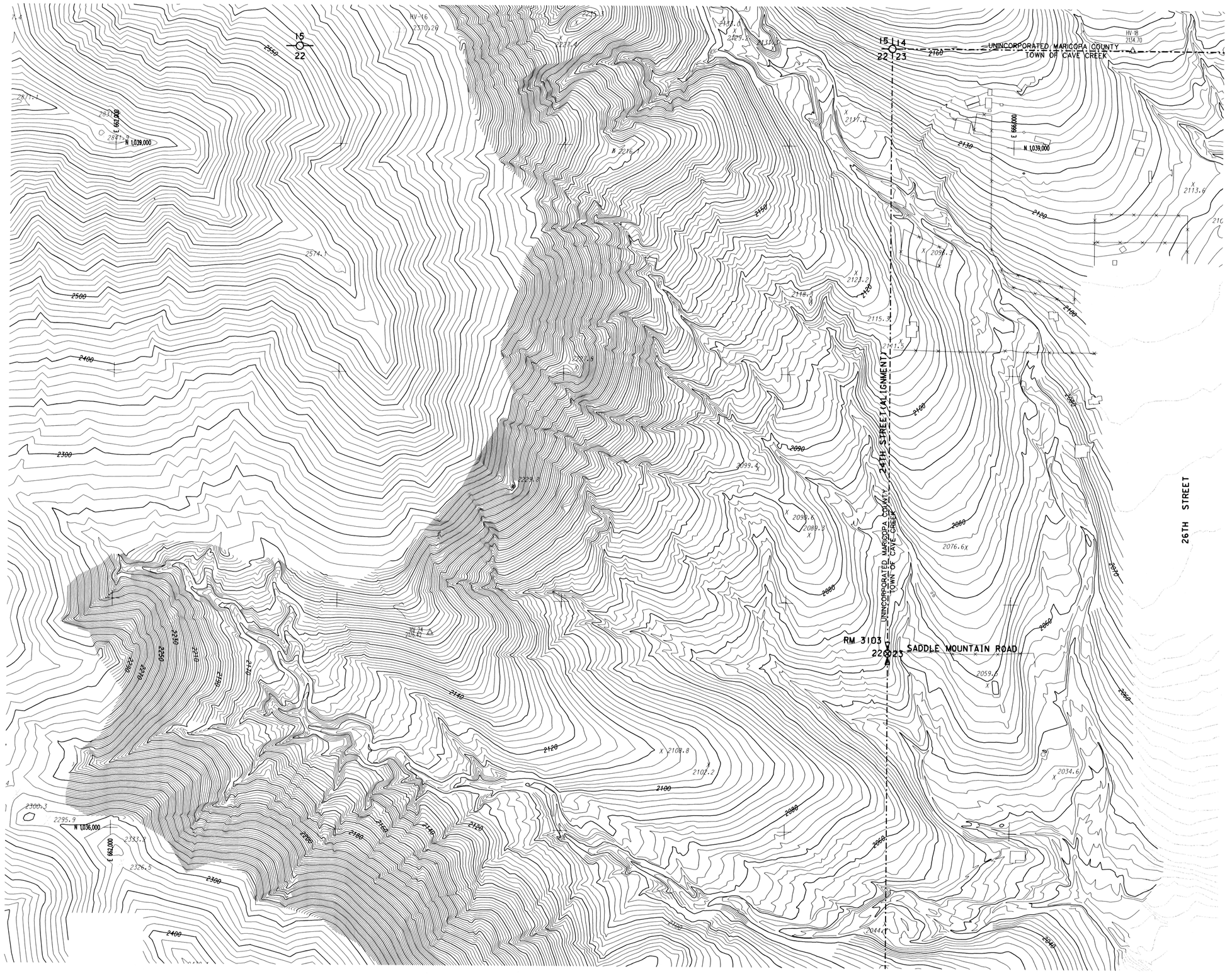
CHIEF ENGINEER AND GENERAL MANAGER

SHEET T13 OF 24

Q:\13484\PLAN\TOPOPLOTS\DH SHT13.DGN

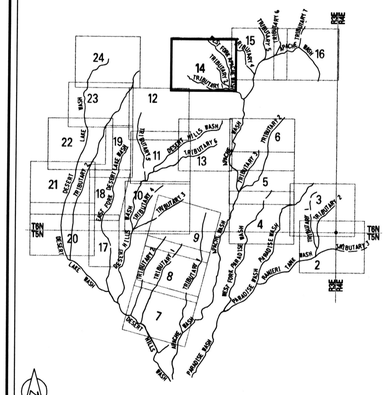
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3103	2063.533	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY 2 FEET ABOVE GROUND, APPROXIMATELY 1320 FEET WEST OF 26TH STREET ON SADDLE MOUNTAIN ROAD, WEST QUARTER CORNER OF SECTION 23, T6N R3E, G&SRB&M.



SCALE: 1IN = 200 FT
0 200 400
CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
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	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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APPROVED BY: DATE

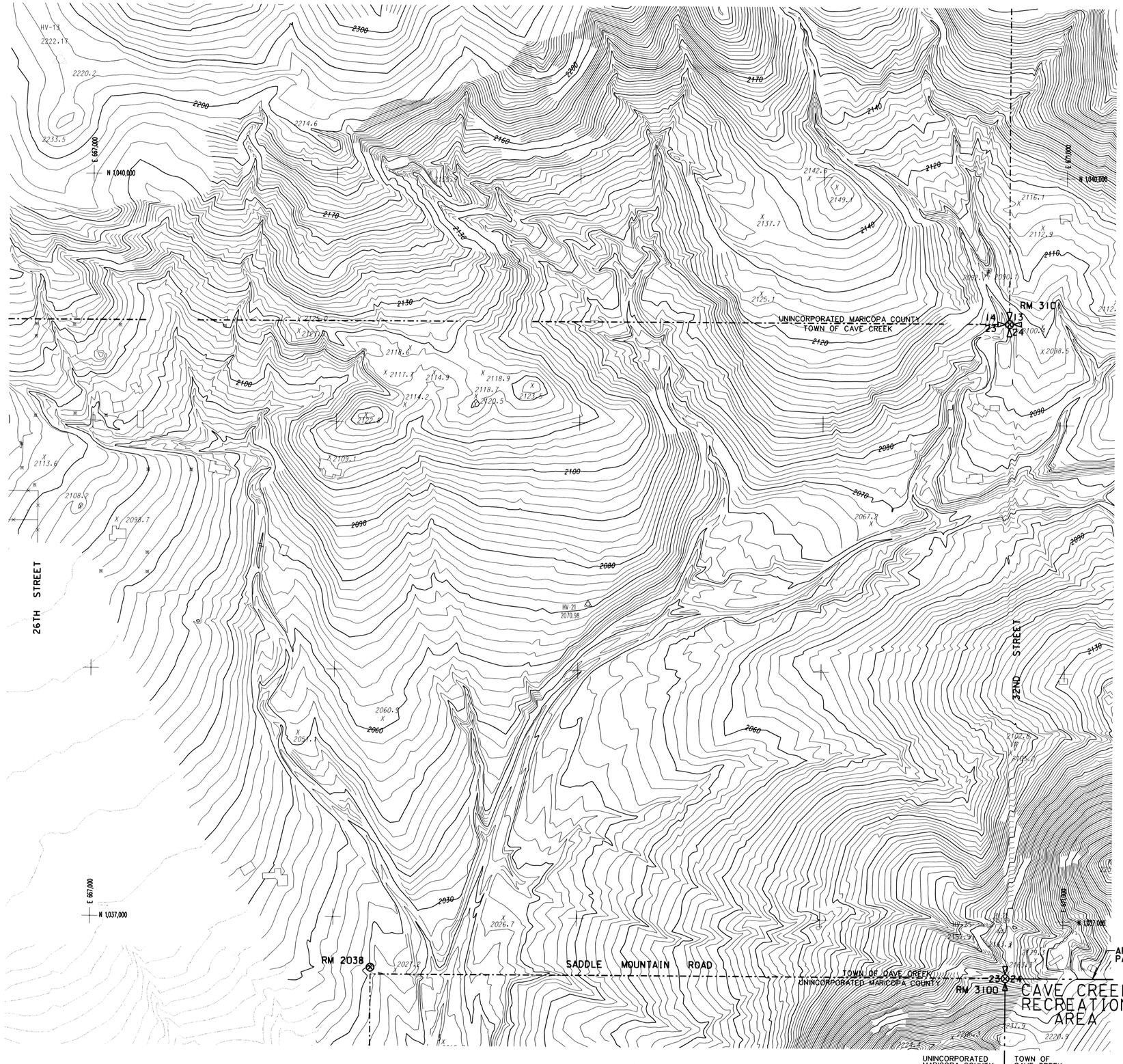
CHIEF ENGINEER AND GENERAL MANAGER

SHEET T14 OF 24

Q:\13484\PLAN\TOPOPLOTS\APW SHT14.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

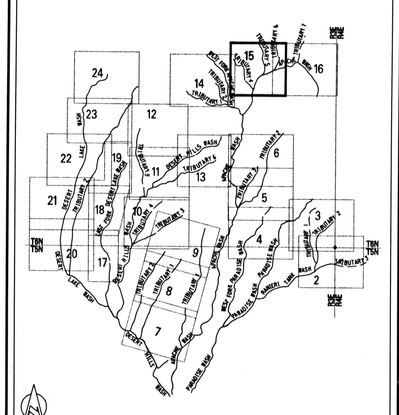
FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2038	2030.59	TOP OF 1 INCH IRON PIPE POSSIBLY CENTER OF QUARTER SECTION 23, TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM3100	2165.200	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY 1.7 FEET ABOVE GROUND, AT INTERSECTION OF 32ND STREET AND SADDLE MOUNTAIN ROAD, EAST QUARTER CORNER OF SECTION 23, T6N R3E, G&SRB&M.
RM3101	2088.917	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY .9 FEET ABOVE GROUND, APPROXIMATELY 2640 FEET NORTH OF SADDLE MOUNTAIN ROAD ON 32ND STREET EXTENDED, NORTH-EAST CORNER OF SECTION 23, T6N R3E, G&SRB&M.



SHEET INDEX MAP

SCALE: 1IN = 200 FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
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	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T15 OF 24

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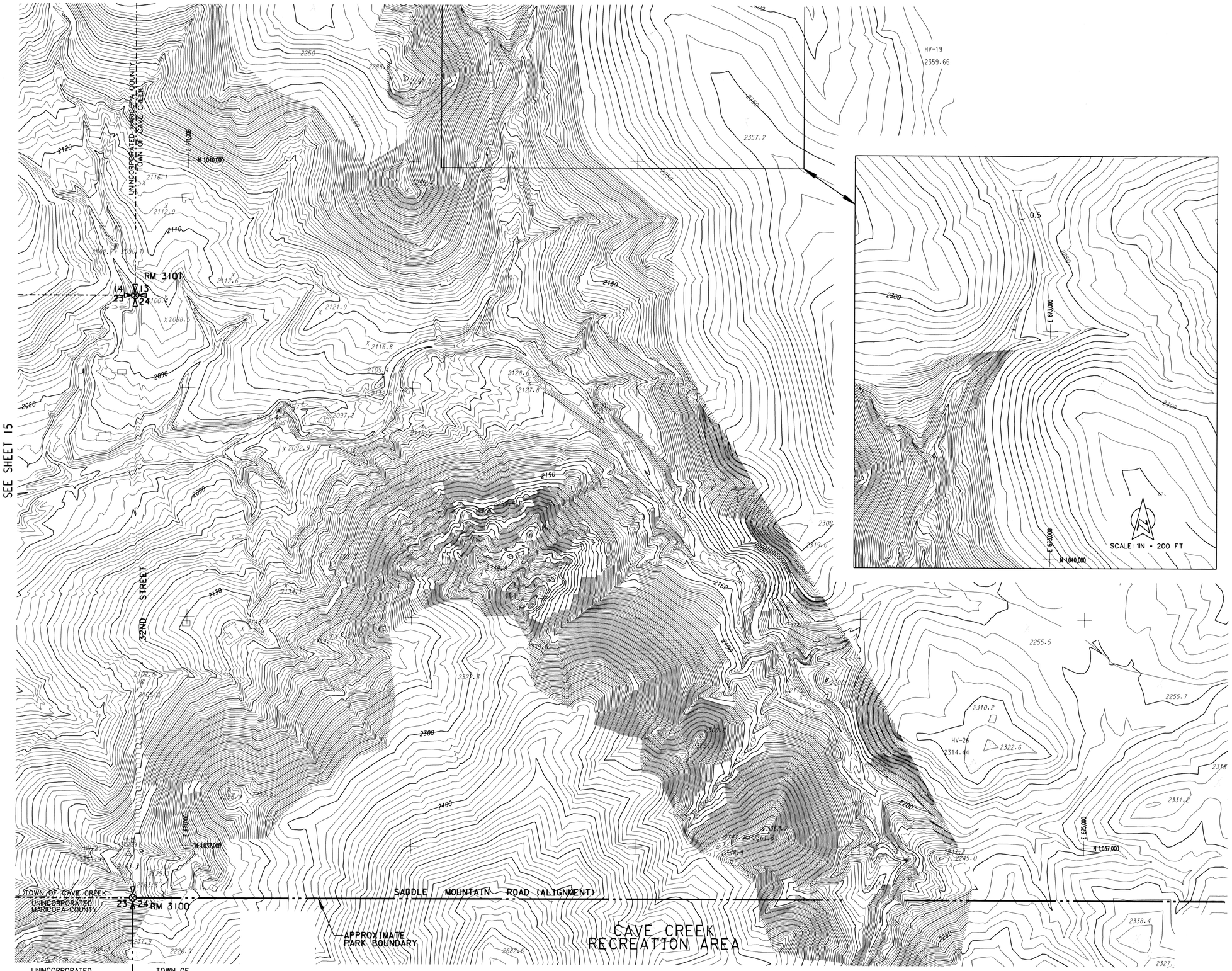
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

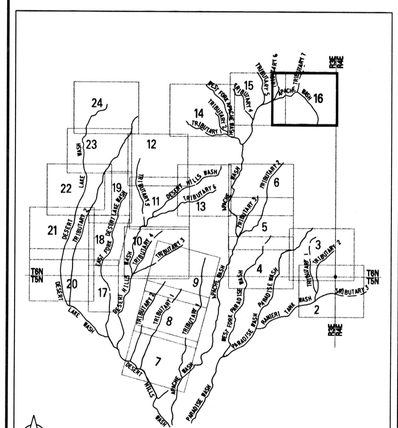
FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3100	2165.200	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY 1.7 FEET ABOVE GROUND, AT INTERSECTION OF 32ND STREET AND SADDLE MOUNTAIN ROAD, EAST QUARTER CORNER OF SECTION 23, T6N R3E, G&SRB&M.
RM3101	2088.917	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY .9 FEET ABOVE GROUND, APPROXIMATELY 2640 FEET NORTH OF SADDLE MOUNTAIN ROAD ON 32ND STREET EXTENDED, NORTH-EAST CORNER OF SECTION 23, T6N R3E, G&SRB&M.



SHEET INDEX MAP

SCALE: 1IN = 200 FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

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DESIGN		
DESIGN CHK.		
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T16 OF 24

O:\13484\PLAN\TOPOPLOTS\APW SHT16.DGN

SEE SHEET 18

SEE SHEET 20

STREET NAME

7TH STREET

10TH STREET

9TH STREET

CLOUD ROAD

GALVIN STREET

T6N
T5N

32 33
5 4

RM 3109

RM 2043

RM 3114

N 1,024,000

N 1,023,000

N 1,022,000

E 655,000

1820

1810

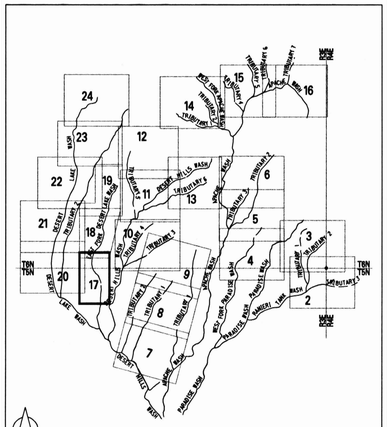
1800

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2043	1797.59	MARICOPA COUNTY HIGHWAY DEPARTMENT BRASS CAP, FLUSH 7TH STREET AND GALVIN STREET
RM3109	1812.510	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND CLOUD ROAD
RM3114	1794.181	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP FLUSH WITH PAVEMENT AT 10TH STREET AND GALVIN STREET



SHEET INDEX MAP

SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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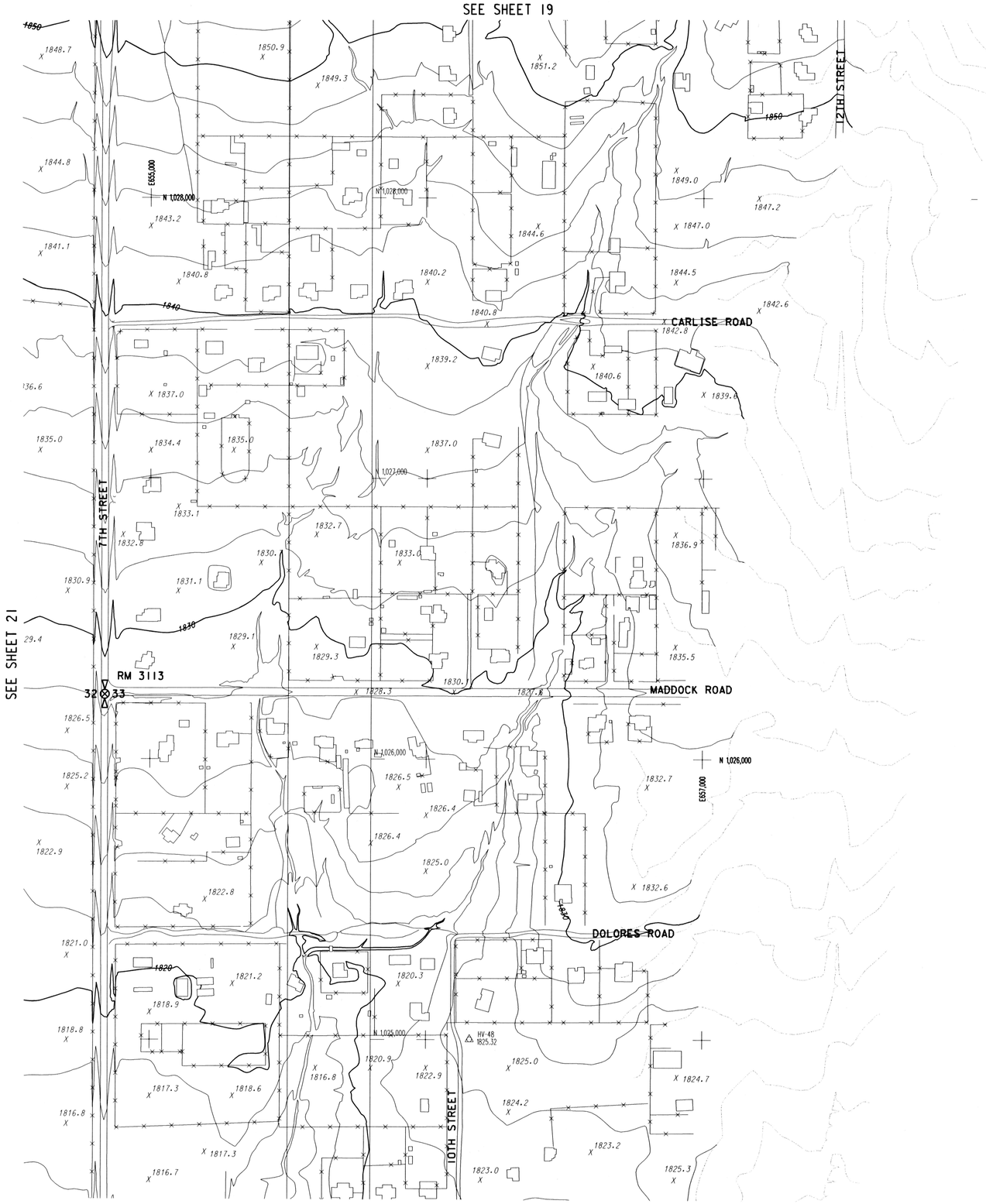
CHIEF ENGINEER AND GENERAL MANAGER

SHEET T17 OF 24

Q:\13484\PLAN\TOPOPLOTS\DLW SHT17.DGN

SEE SHEET 19



SEE SHEET 21

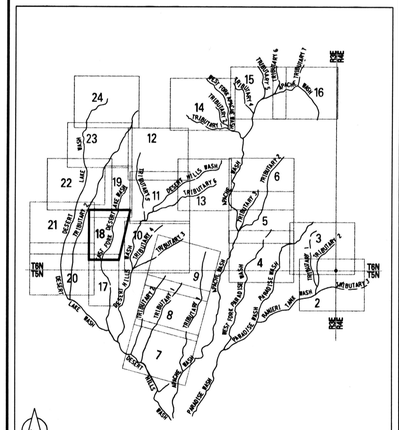
SEE SHEET 17

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3113	1829.213	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP FLUSH WITH PAVEMENT AT INTERSECTION OF 7TH STREET AND MADDOCK ROAD



SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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CHIEF ENGINEER AND GENERAL MANAGER

SHEET T18 OF 24

Q:\13484\PLAN\TOPOPLOTS\DLW SHT18.DGN

SEE SHEET 23

SEE SHEET 22

SEE SHEET 11

SEE SHEET 18

IRVINE ROAD

NEW RIVER ROAD

JOY RANCH ROAD

RM 3109

10TH STREET

12TH STREET

7TH STREET

N 1,032,000

E 656,000

N 1,030,000

N 1,029,000

E 658,000

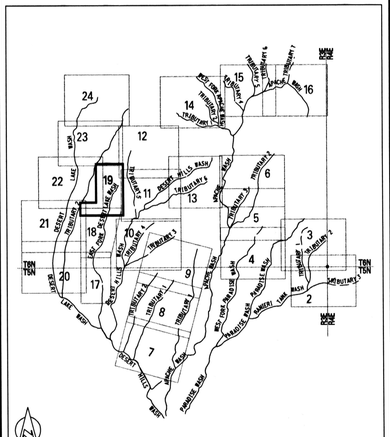
HV-39
1859.87

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3109	1812.510	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND CLOUD ROAD



SHEET INDEX MAP

SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
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Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T19 OF 24

Q:\13484\PLAN\TOPOPLOTS\DLW SHT19.DGN

SEE SHEET 21

SEE SHEET 17

CENTRAL AVE (ALIGNMENT)

7TH AVE

7TH STREET

CLOUD ROAD

CLOUD ROAD

RM 3112

RM 3109

HV-47
1811.29

HV-57
1795.89

E 650,000

N 1,024,000

E 654,000

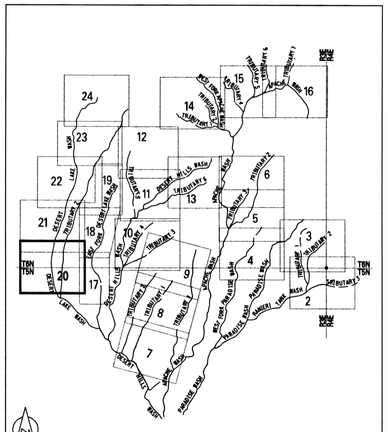
N 1,022,000

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3109	1812.510	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND CLOUD ROAD
RM3112	1804.342	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF CENTRAL AVENUE AND CLOUD ROAD.



SHEET INDEX MAP

SCALE: 1IN = 200FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
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DESIGN CHK.		
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T20 OF 24

O:\13484\PLAN\TOPOPLOTS\DLW SHT20.DGN

SEE SHEET 22

SEE SHEET 18

SEE SHEET 20

E 650,000
N 1,029,000

JOY RANCH ROAD
CENTRAL AVE
1ST STREET
DESERT RANCH LANE
4TH STREET
DESERT RANCH LANE
7TH STREET
7TH AVE

RM 3107
29 28
32 33

RM 3113
32 33

HV-44
1822.98

E 650,000
N 1,026,000

E 650,000
N 1,026,000

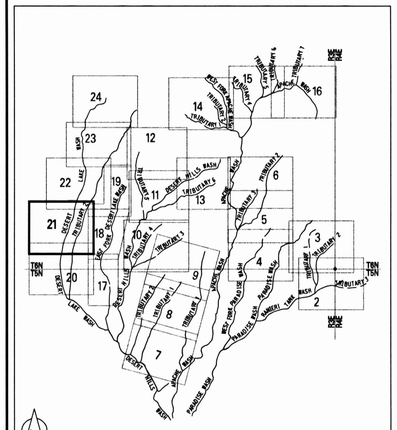
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3113	1829.213	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP FLUSH WITH PAVEMENT AT INTERSECTION OF 7TH STREET AND MADDOCK ROAD
RM3107	1854.613	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND JOY RANCH ROAD



SHEET INDEX MAP

SCALE: 1IN = 200FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET T21 OF 24

Q:\13484\PLAN\TOPOPLOTS\DLW SHT21.DGN

SEE SHEET 23

TANYA RAOD
JORDON LANE
IRVINE ROAD
ADAMANDA DRIVE
ADAMANDA COURT
DESERT HILLS ESTATE DRIVE
LAVITT LANE
BLUE EAGLE LANE
DESERT RANCH LANE
JOY RANCH ROAD
RM 3107
1ST STREET
2ND WAY
3RD STREET
4TH STREET
5TH STREET
7TH STREET
10TH STREET
CENTRAL AVE
29 28 32 33
E 653,000
N 1,032,000
N 1,031,000
E 656,000
N 1,030,000
N 1,029,000
HV-38 1852.00
HV-39 1859.87

SEE SHEET 19

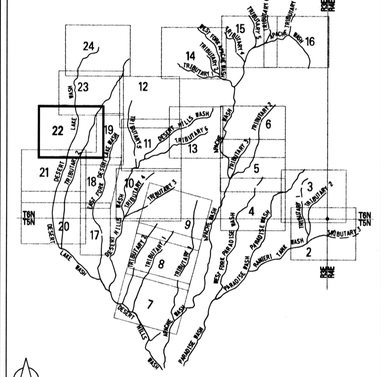
SEE SHEET 21

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3107	1854.613	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND JOY RANCH ROAD



SHEET INDEX MAP

SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

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DESIGN CHK.		
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CHIEF ENGINEER AND GENERAL MANAGER

SHEET T22 OF 24

Q:\13484\PLAN\TOPOPLOTS\DLW SHT22.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

SEE SHEET 24

SEE SHEET 12

SEE SHEET 22

DESERT HILLS DRIVE

TANYA ROAD

TANYA TRAIL

SPEER TRAIL

MESQUITE STREET

NEW RIVER ROAD

STREET NAME

NORTH 8TH STREET

2ND WAY

3RD STREET

7TH STREET

10TH STREET

12TH STREET

RM 3104

E 653,000

E 654,000

E 655,000

E 656,000

E 657,000

E 658,000

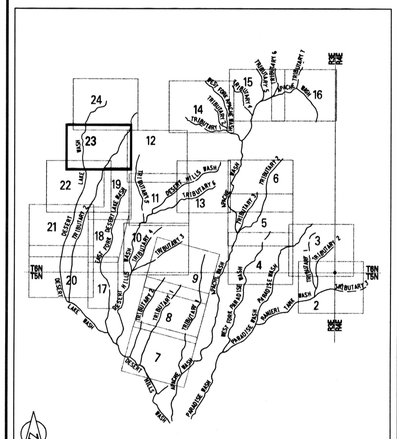
N 1,033,000

N 1,036,000

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3104	1934.449	SET ALUMINUM CAP ON NORTHEAST CORNER OF HEADWALL, APPROX 400 FEET WEST OF NEW RIVER ROAD, APPROX 25 FEET NORTH OF DESERT HILLS DRIVE



SHEET INDEX MAP

SCALE: 1IN = 200FT

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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APPROVED BY: DATE

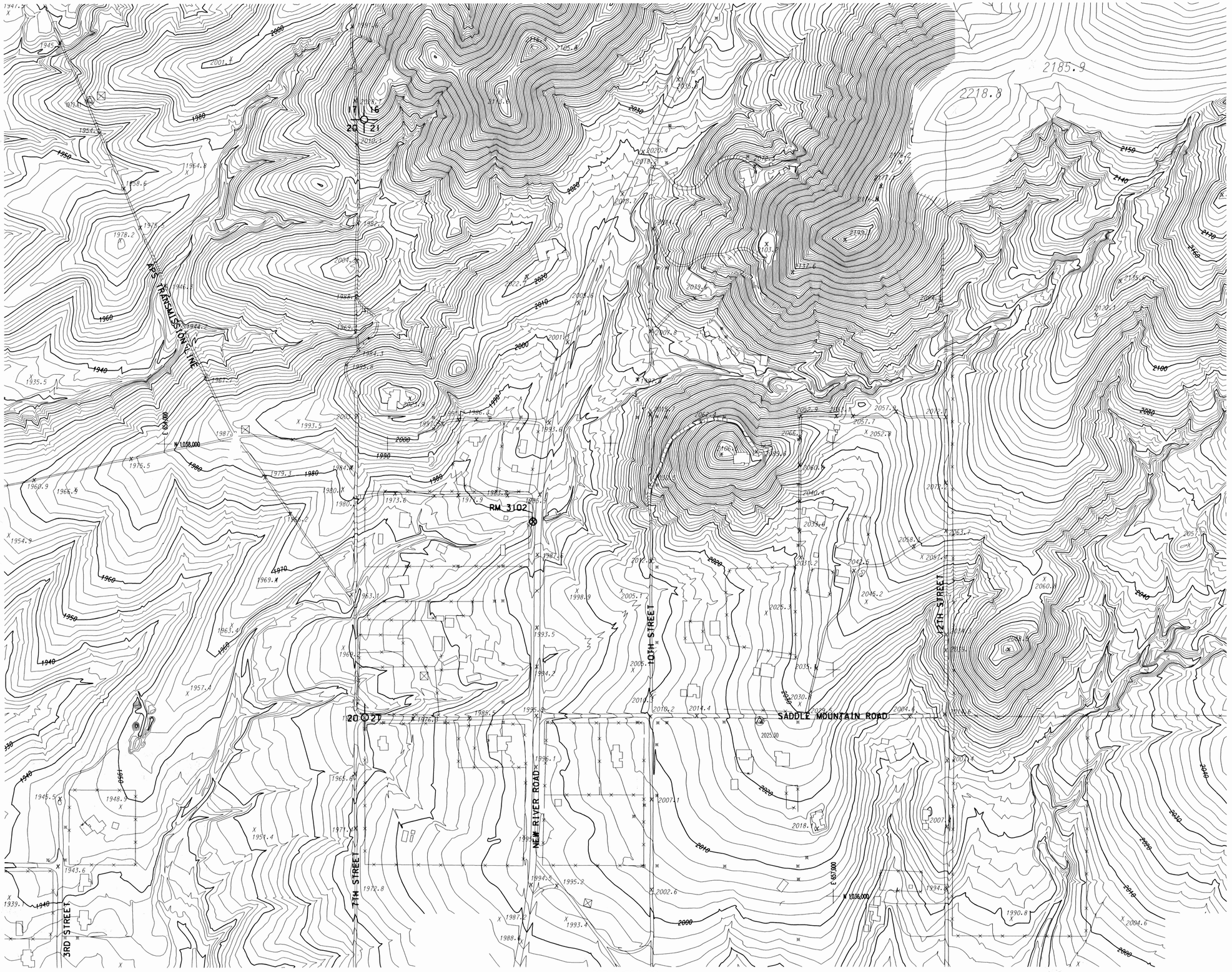
CHIEF ENGINEER AND GENERAL MANAGER

SHEET T23 OF 24

Q:\13484\PLAN\TOPOPLOTS\DLW SHT23.DGN

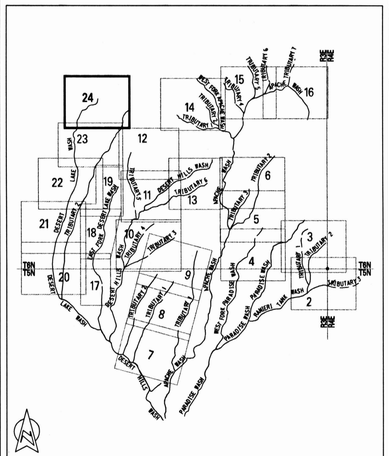
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3102	1982.992	SET ALUMINUM CAP ON SOUTH CORNER OF WEST HEADWALL, APPROXIMATELY 1200 FEET NORTH OF SADDLE MOUNTAIN RAOD, APPROXIMATELY 20 FEET WEST OF NEW RIVER ROAD.



SCALE: 1IN = 200FT
0 200 400
CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN		
DESIGN CHK.		
DRAWN		

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

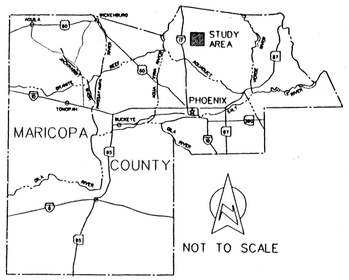
APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

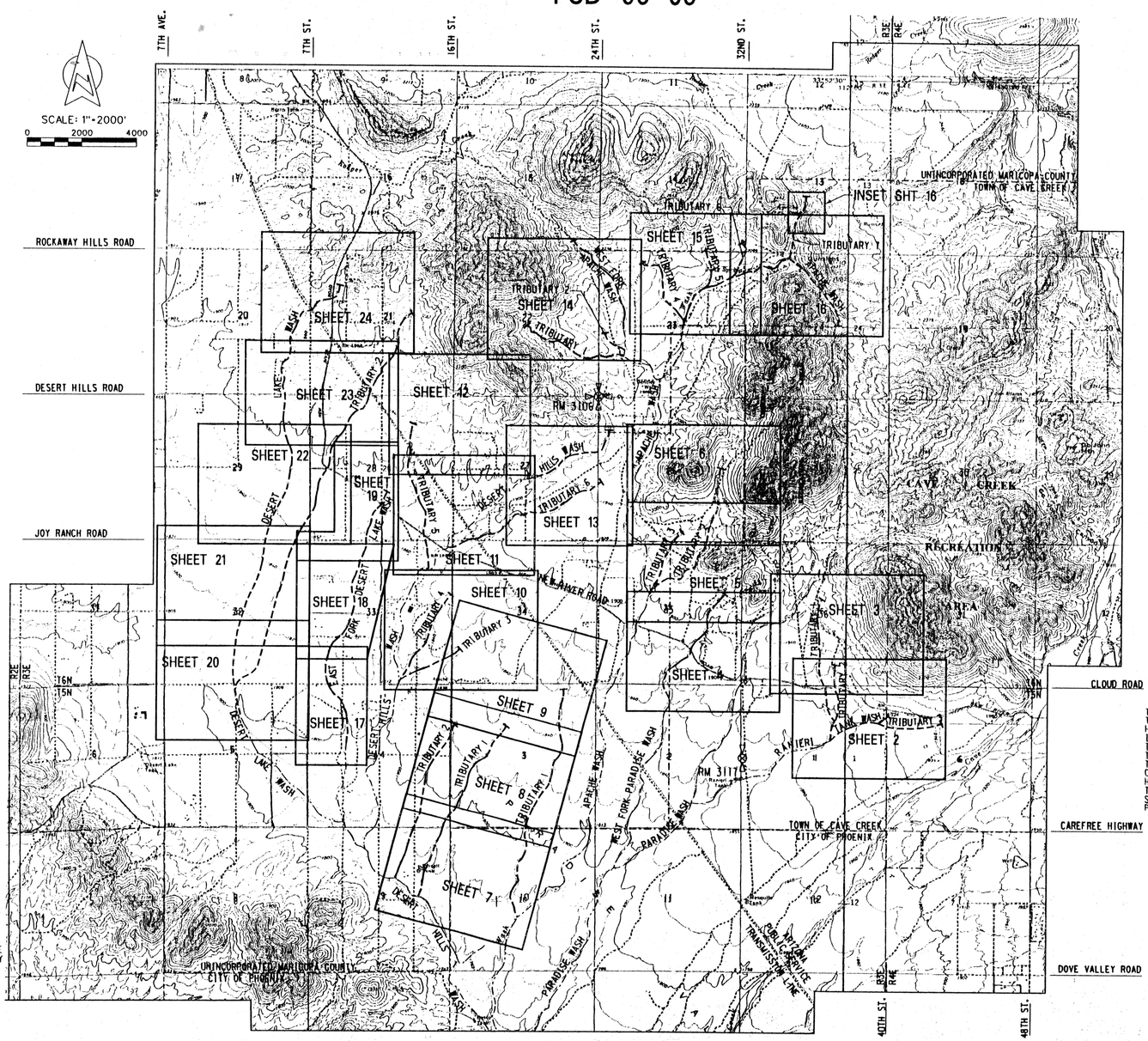
SHEET T24 OF 24

Q:\13484\PLAN\TOPOPLOTS\DLW SHT24.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA
FCD 96-06



LOCATION MAP



LEGEND:

- DELINEATED WASH (JRJ APACHE WASH STUDY)
- DELINEATED WASH (DESERT HILLS STUDY)
- SECTION CORNER (FOUND)
- QUARTER CORNER (FOUND)
- SECTION CORNER (APPROXIMATE)
- QUARTER CORNER (APPROXIMATE)
- RM 127 — ELEVATION REFERENCE MARK
- CITY/TOWN LIMIT

AERIAL MAPPING:
COOPER AERIAL OF PHOENIX, INC.
11402 N. CAVE CREEK ROAD
PHOENIX, ARIZONA 85020 PHONE-(602)678-5111
FLIGHT DATE: MARCH 20, 1997
CONTOUR INTERVAL: 2 FEET

GROUND CONTROL:
PROJECT ENGINEERING CONSULTANTS, LTD
2320 W. PEORIA AVENUE SUITE C-122
PHOENIX, ARIZONA 85029 PHONE-(602)906-1901

HYDROLOGY:
JERRY R. JONES APACHE WASH FLOODPLAIN DELINEATION STUDY (FCD 89-66) AS AMENDED BY STANLEY CONSULTANTS.

DELINEATION:
STANLEY CONSULTANTS, INC.
2929 EAST CAMELBACK ROAD
SUITE 130
PHOENIX, ARIZONA 85016 PHONE-(602)912-6500

NOTE
THE DESERT HILLS FLOODPLAN DELINEATION STUDY UTILIZES HYDROLOGIC AND HYDRAULIC DATA FROM THE APACHE WASH (AND TRIBUTARIES) FLOODPLAIN DELINEATION STUDY PREPARED BY JERRY R. JONES (FCD 89-66) FOR THE FLOOD CONTROL DISTRICT OF MARICOPA COUNTY. REFER TO THAT STUDY FOR FLOODPLAIN DELINEATIONS DOWNSTREAM FROM THE DESERT HILLS STUDY.

DATUM
HORIZONTAL: NORTH AMERICAN DATUM OF 1983
VERTICAL: NATIONAL GEODETIC VERTICAL DATUM OF 1929

BENCHMARK
RM 2045 - CHISELED SQUARE ON WEST END CONCRETE HEADWALL AT NORTHWEST CORNER 16TH STREET AND JOY RANCH ROAD.

ELEVEATION 1861.040

SUPPLEMENTAL RM'S (SEE THIS SHEET FOR LOCATION)

ID NUMBER	ELEVATION	DESCRIPTION/LOCATION
RM 3106	2010.531	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE APPROXIMATELY 1.2 FEET ABOVE GROUND, ON DESERT HILLS ROAD, APPROXIMATELY 1320 FEET WEST OF 26TH STREET, SOUTHWEST CORNER OF SECTION 23, T6N, R3E G&SRB&M
RM 3117	1867.556	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE ON 32ND STREET APPROXIMATELY 2640 FEET NORTH OF CAREFREE HIGHWAY, EAST QUARTER NORTH OF CAREFREE HIGHWAY, EAST QUARTERCORNER OF SECTION 2, T5N, R3E, G&SRB&M.

CERTIFICATION
THIS IS TO CERTIFY THAT ALL WORK PERFORMED IN ASSOCIATION WITH THE FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA WAS DONE IN ACCORDANCE WITH FEMA DOCUMENT 37, "FLOOD INSURANCE STUDY GUIDELINES AND SPECIFICATIONS FOR STUDY CONTRACTORS," FEDERAL INSURANCE ADMINISTRATION, JANUARY 1995 AND THE GENERAL PROVISIONS OF FCD CONTRACT 96-06 AND ALL AMENDMENTS THERE TO, TOGETHER WITH ALL SUCH MODIFICATIONS, EITHER WRITTEN OR ORAL AS THE FCD CONTRACTING OFFICER OR THEIR REPRESENTATIVES HAVE DIRECTED, AS SUCH MODIFICATIONS AFFECT THIS CONTRACT, AND THAT ALL SUCH WORK HAS BEEN ACCOMPLISHED IN ACCORDANCE WITH SOUND AND ACCEPTED ENGINEERING PRACTICE WITHIN THE CONTRACT PROVISIONS FOR RESPECTIVE PHASES OF THE WORK.

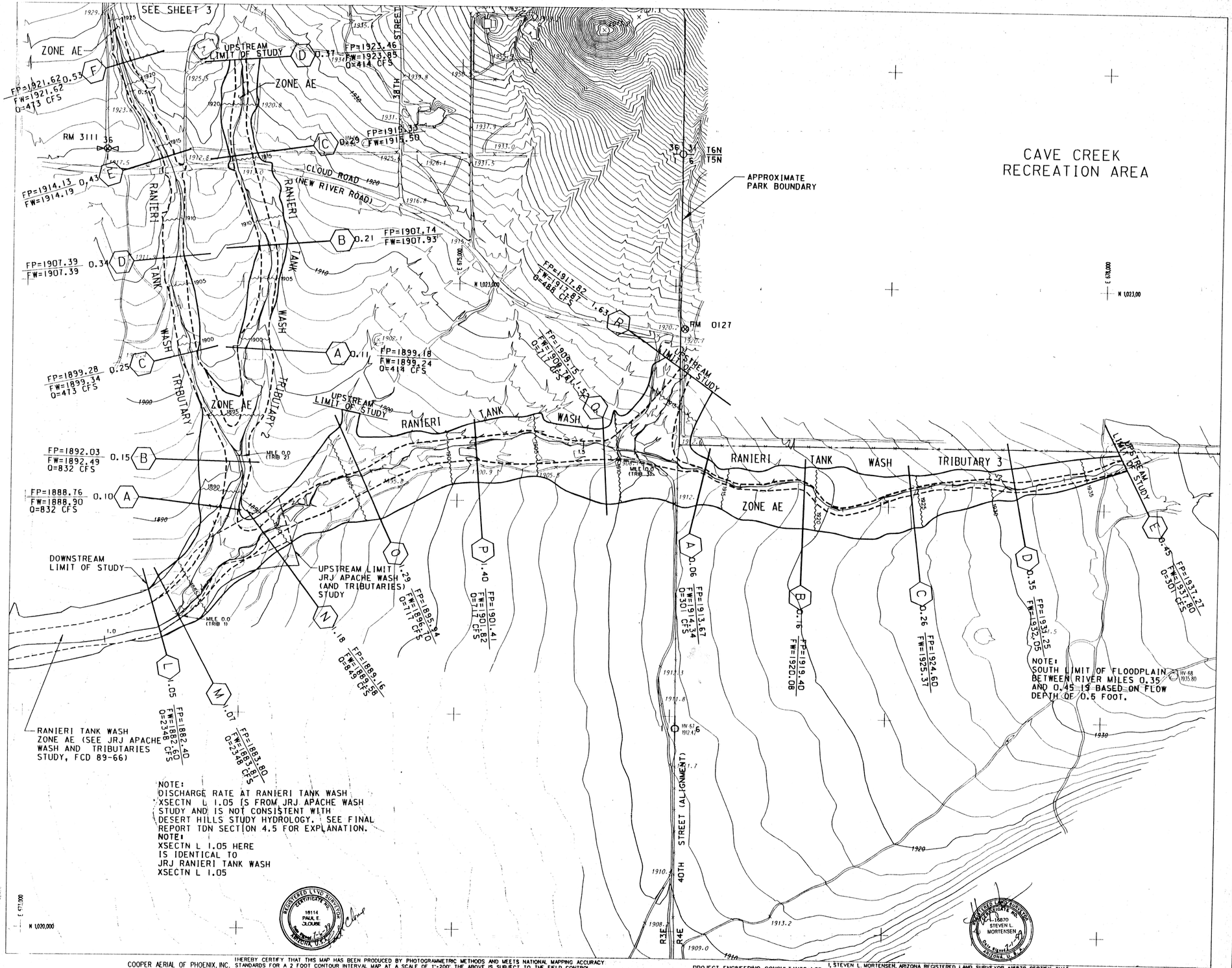
EXHIBIT 1

Stanley Consultants INC.
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

SCI #13484 | SHEET 1 OF 24

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE: WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION — A 0.10 — FP= 1888.74 FW= 1888.74 Q= 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK RM 3111

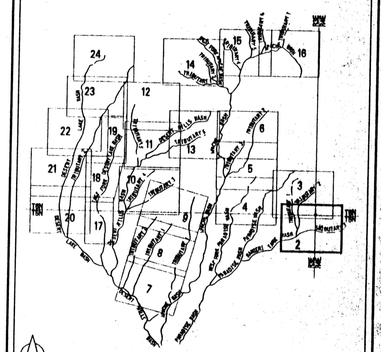
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 0127	1923.60	U.S GEOLOGICAL SURVEY BRASS CAP IN CONCRETE POST PROJECTING 0.5 FEET ABOVE GROUND 2.1 MILES WEST OF THE JUNCTION OF CAVE CREEK ROAD AND NEW RIVER ROAD, 39 FEET NORTH OF NEW RIVER AND 2 FEET EAST OF FENCE AT NORTH END OF CATTLE GUARD. MARKED B HRP 1963.
RM 3111	1919.395	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET EAST OF 32ND STREET, APPROXIMATELY 100 FEET NORTH OF CLOUD ROAD, NORTH QUARTER CORNER OF SECTION 1, T5N, R3E, G&SRB&M.



SCALE: 1IN=200FT (0, 200, 400)

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC. — A Stanley Group Company: Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY: DATE		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 2 OF 24

I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

COOPER AERIAL OF PHOENIX, INC.

I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

PROJECT ENGINEERING CONSULTANTS, LTD.

O:\N348\PLAN\RW SHT2 .DGN

PARADISE WASH ZONE AE
(SEE JRJ APACHE WASH
AND TRIBUTARIES STUDY,
FCD 89-66)

UPSTREAM LIMIT OF STUDY

L 1.05 FP=1975.02 FW=1975.02 Q=311 CFS

K 0.95 FP=1964.60 FW=1964.62 Q=441 CFS

RANIER TANK WASH TRIBUTARY

J 0.86 FP=1955.38 FW=1955.38

ZONE AE

I 0.77 FP=1944.30 FW=1944.33 Q=441 CFS

H 0.66 FP=1936.68 FW=1936.68 Q=473 CFS

G 0.60 FP=1928.65 FW=1928.68

F 0.53 FP=1921.62 FW=1921.62

RM 3111 36

E 0.43 FP=1914.13 FW=1914.19 Q=473 CFS

SEE SHEET 2

UPSTREAM LIMIT OF STUDY

D 0.31 FP=1923.46 FW=1923.85 Q=414 CFS

RANIER TANK TRIBUTARY 2

C 0.42 FP=1918.38 FW=1918.50 Q=414 CFS

CLOUD ROAD (NEW RIVER ROAD)

ZONE AE WASH

38TH STREET

40TH STREET (ALIGNMENT)

R3E R4E

T6N T5N

APPROXIMATE PARK BOUNDARY

CAVE CREEK RECREATION AREA

N 1,027,000 E 677,000

E 672,000 N 1,024,000

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

O:\13484\PLAN\RW SHT3 .DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION — A 0.10 — FP= 1888.74, FW= 1888.74, Q= 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

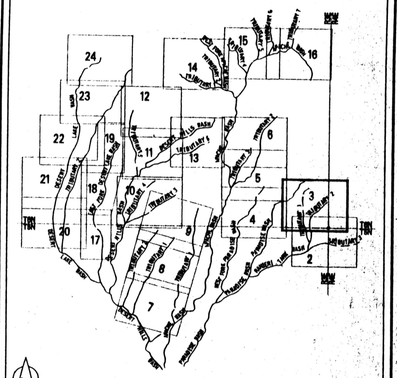
ELEVATION REFERENCE MARK RM 3111

BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE , ZONE AE

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 3111	1919.395	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET EAST OF 32ND STREET, APPROXIMATELY 100 FEET NORTH OF CLOUD ROAD, NORTH QUARTER CORNER OF SECTION 1, T5N, R3E, G&SRB&M.



SHEET INDEX MAP

REGISTERED LAND SURVEYOR CERTIFICATE NO. 16870 STEVEN L MORTENSEN 7-6-99 ARIZONA, U.S.A.

REGISTERED LAND SURVEYOR CERTIFICATE NO. 18114 PAUL E CLOUSE 7-6-99 ARIZONA, U.S.A.

SCALE: 1IN-200FT (0, 200, 400)

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

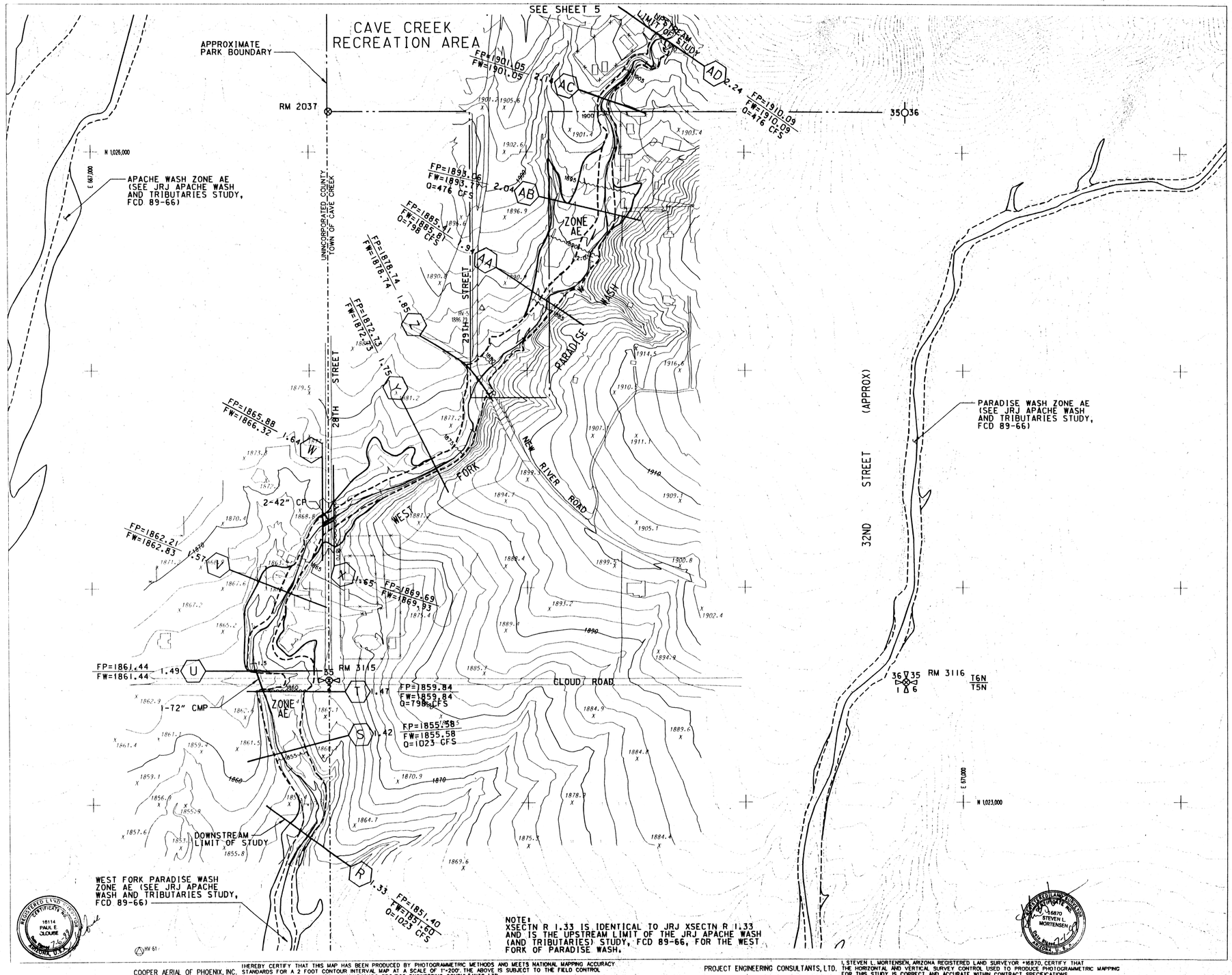
APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 3 OF 24

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



NOTE:
XSECTN R 1.33 IS IDENTICAL TO JRJ XSECTN R 1.33 AND IS THE UPSTREAM LIMIT OF THE JRJ APACHE WASH (AND TRIBUTARIES) STUDY, FCD 89-66, FOR THE WEST FORK OF PARADISE WASH.

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION (A, 0.10) — FLOODPLAIN WATER SURFACE ELEVATION; FP= 1888.74; FW= 1888.74; Q= 948CFS; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE; FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION

ELEVATION REFERENCE MARK RM 3111

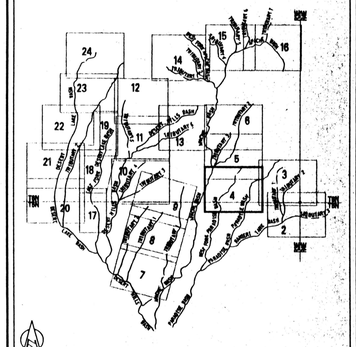
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 2037	1906.10	TOP OF HALF INCH IRON REBAR (FLUSH) POSSIBLY CENTER SECTION 35 TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM 3115	1864.193	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 28TH STREET AND CLOUD ROAD.
RM 3116	1900.167	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 200 FEET EAST OF INTERSECTION OF 32ND STREET AND CLOUD ROAD.



SCALE: 1IN=200FT
0 200 400
CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

REGISTERED LAND SURVEYOR CERTIFICATE NO. 16870 STEVEN L. MORTENSEN ARIZONA, U.S.A.

REGISTERED LAND SURVEYOR CERTIFICATE NO. 10114 PAUL E. CLOUSE ARIZONA, U.S.A.

Stanley Consultants INC.
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY: DATE		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 4 OF 24

I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200' THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

COOPER AERIAL OF PHOENIX, INC.

I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

PROJECT ENGINEERING CONSULTANTS, LTD.

Q:\13484\PLAN\PAW SHT4.DGN

SEE SHEET 6

APACHE WASH ZONE AE (SEE JRJ APACHE WASH AND TRIBUTARIES STUDY, FCD 89-66)

E 867,000

N 1029,000

FP=1938.05
FW=1938.05
Q=306 CFS

0.48 E

UPSTREAM LIMIT OF STUDY

FP=1929.00
FW=1929.00

0.39 D

RM 2036

26
35

UNINCORPORATED COUNTY
TOWN OF CAVE CREEK

ZONE AE

FP=1920.84
FW=1920.84

0.29 C

APACHE WASH TRIBUTARY 3

FP=1933.02
FW=1933.02

0.46 H

FP=1905.66
FW=1905.66
Q=306 CFS

0.10 A

B 0.18 FP=1912.28 (FW=1912.28)

ZONE AE

2-8'WX6'H CBC

ZONE AE

MILE 0.0 (TRIB 3)

B 0.11 FP=1904.22 FW=1904.22 Q=1316 CFS

A 0.07 FP=1903.71 FW=1903.71 Q=1316 CFS

DOWNSTREAM LIMIT OF STUDY

MILE 0.0 (TRIB 2)

C 0.17 FP=1908.52 FW=1908.52 Q=93 CFS

D 0.25 FP=1915.48 FW=1915.18

E 0.26 FP=1917.28 FW=1917.61

F 0.35 FP=1921.88 FW=1921.88

G 0.45 FP=1930.53 FW=1930.53

APACHE WASH TRIBUTARY 2

L 0.82 FP=1966.74 FW=1966.74 Q=98 CFS

K 0.73 FP=1956.74 FW=1956.74

330D STREET (ALIGNMENT)

J 0.63 FP=1945.95 FW=1946.01

I 0.51 FP=1937.51 FW=1937.51

APPROXIMATE PARK BOUNDARY

26
35

CAVE CREEK RECREATION AREA

APPROXIMATE PARK BOUNDARY

PARADISE WASH ZONE AE (SEE JRJ APACHE WASH AND TRIBUTARIES STUDY, FCD 89-66)

E 872,000

N 1026,000

AD 2.24 FP=1910.09 FW=1910.06 Q=476 CFS

35
36

RM 2037

UNINCORPORATED COUNTY
TOWN OF CAVE CREEK

APPROXIMATE PARK BOUNDARY

FP=1901.05
FW=1901.11

2.14 AC

UPSTREAM LIMIT OF STUDY

FORK

WASH

PARADISE

WEST

FP=1893.06
FW=1893.10
Q=476 CFS

2.04 AB

20TH STREET

ZONE AE

SEE SHEET 4

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
18114
PAUL E. SLOUGE
ARIZONA U.S.A.

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
16870
STEVEN L. MORTENSEN
ARIZONA U.S.A.

I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

COOPER AERIAL OF PHOENIX, INC.

PROJECT ENGINEERING CONSULTANTS, LTD.

I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

G:\N3484\PLAN\PAW_SHT5.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION — A 0.10 — FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION FP= 1888.74; ENCROACHED WATER SURFACE ELEVATION FW= 1888.74; 100-YEAR DISCHARGE Q= 948CFS

ELEVATION REFERENCE MARK RM 3111

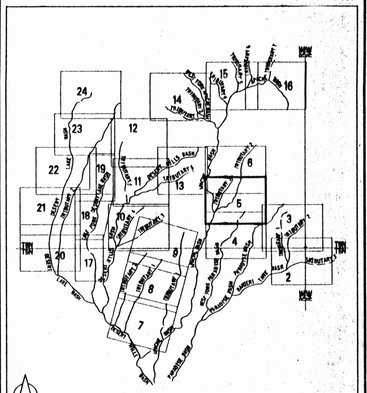
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 2036	1931.56	TOP OF GLO BRASS CAP, 1922, QUARTER SECTION 26 AND 35, TOWNSHIP 6 NORTH RANGE 3 EAST.
RM 2037	1906.10	TOP OF HALF INCH IRON REBAR (FLUSH) POSSIBLY CENTER QUARTER SECTION 35 TOWNSHIP 6 NORTH, RANGE 3 EAST.



SHEET INDEX MAP

Registered Professional Engineer (Civil)
26837
O. SCOTT BUCHANAN
29th Street
ARIZONA U.S.A.

SCALE 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.

A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	12/99
DESIGN CHK.	GSB	12/99
DRAWN	RM/SB	12/99

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: _____ DATE _____

APPROVED BY: _____ DATE _____

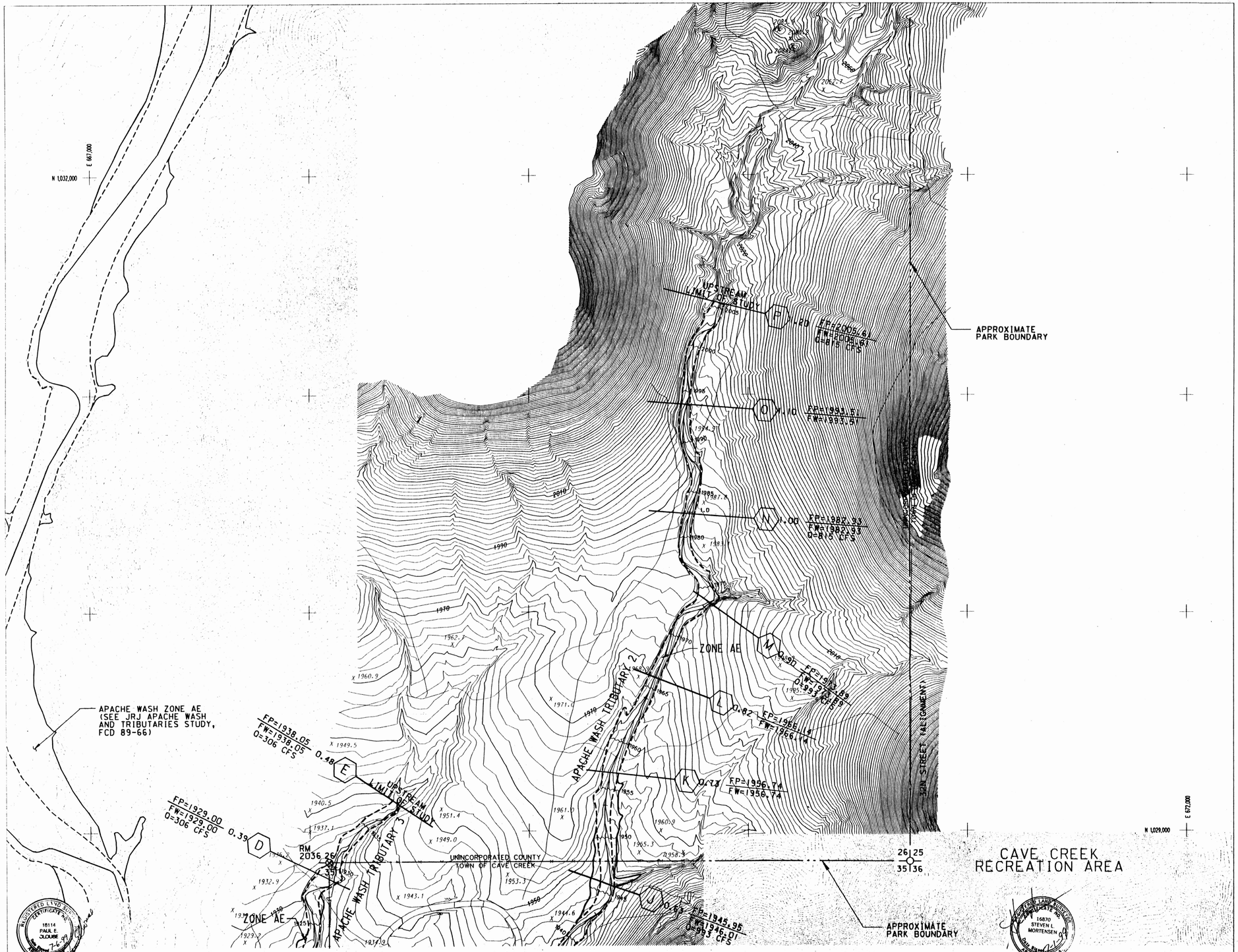
CHIEF ENGINEER AND GENERAL MANAGER

SUBMITTED BY: _____ DATE _____

SHEET 5 OF 24

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION — A 0.10 — FP= 1888.74, FW= 1888.74, Q= 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK RM 3111

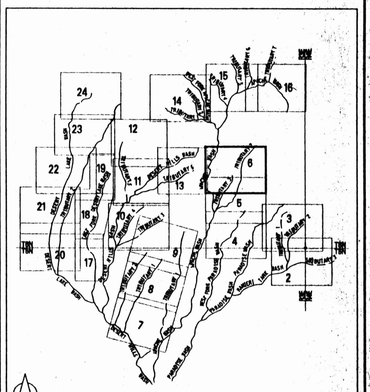
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 2036	1931.56	TOP OF GLO BRASS CAP, 1922, QUARTER SECTION 26 AND 35, TOWNSHIP 6 NORTH RANGE, 3 EAST.



SCALE 1IN = 200FT
0 200 400
CONTOUR INTERVAL 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY:		DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 6 OF 24

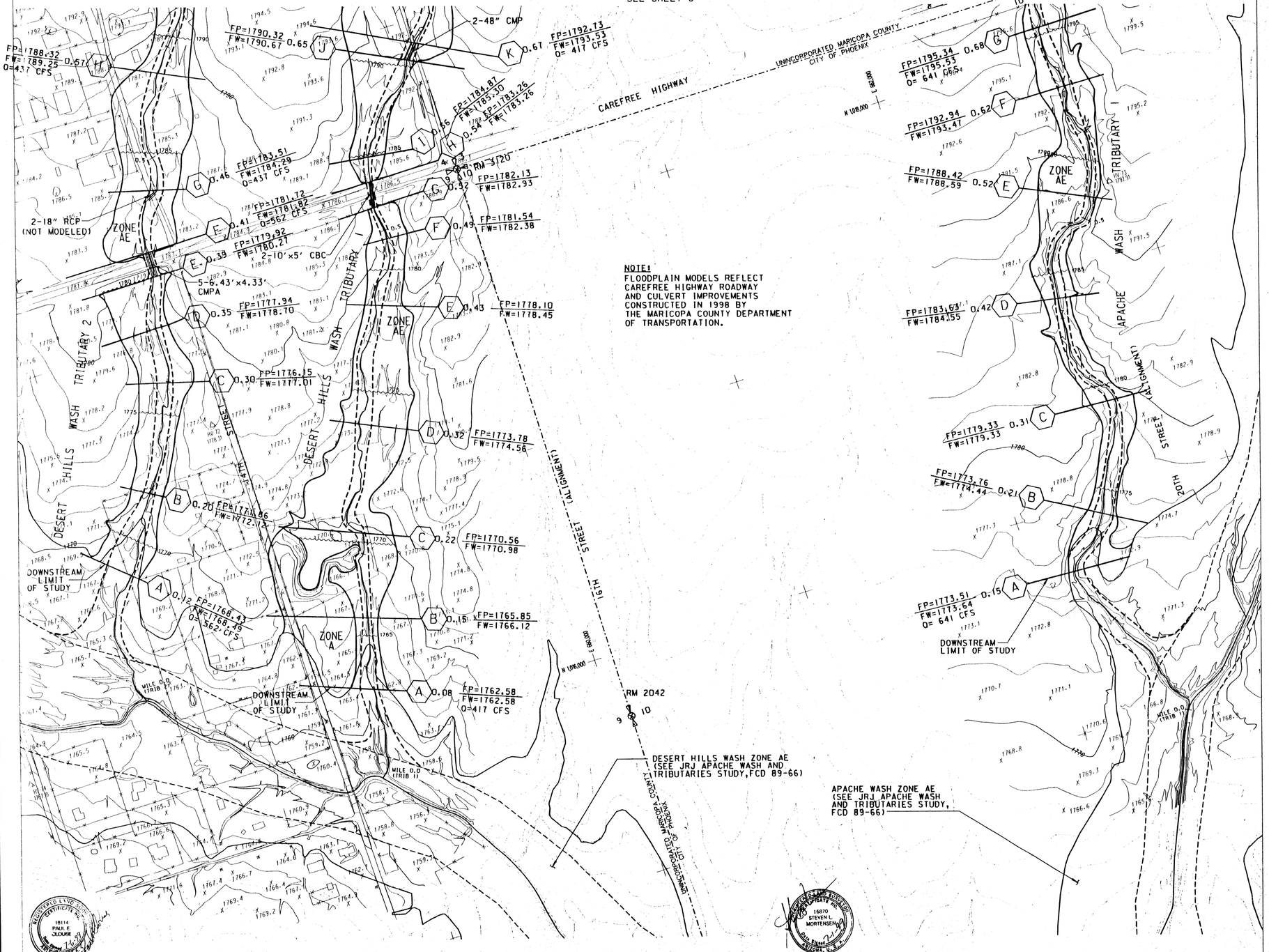
O:\13484\PLAN\PAW SHT6.DGN

COOPER AERIAL OF PHOENIX, INC.

I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200' THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD.

I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION — A — 0.10 — FP= 1888.74, FW= 1888.74, Q= 940CFS
- A: FEMA CROSS SECTION DESIGNATION
- 0.10: CROSS SECTION RIVER MILE DESIGNATION
- FP: FLOODPLAIN WATER SURFACE ELEVATION
- FW: ENCROACHED WATER SURFACE ELEVATION
- Q: 100-YEAR DISCHARGE

ELEVATION REFERENCE MARK RM 3111

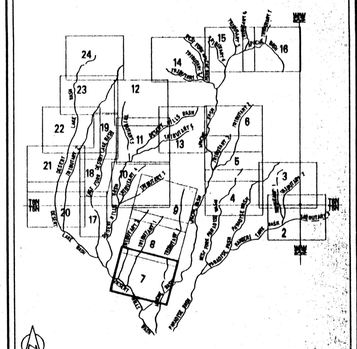
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 2042	1764.74	TOP OF STONE EAST QUARTER SECTION 9, TOWNSHIP 5, NORTH, RANGE 3 EAST
RM 3119	1798.390	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET EAST OF 16TH STREET, APPROXIMATELY 10 FEET SOUTH OF SOUTH EDGE OF PAVEMENT ON CAREFREE HIGHWAY, SOUTH QUARTER CORNER OF SECTION 3, 7SN, R3E, G&SRB&M.
RM 3120	1787.090	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 50 FEET EAST OF 16TH STREET, APPROXIMATELY 10 FEET SOUTH OF SOUTH EDGE OF PAVEMENT ON CAREFREE HIGHWAY.



SHEET INDEX MAP

SCALE 1" = 200'

0 200 400

CONTOUR INTERVAL 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY:		DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

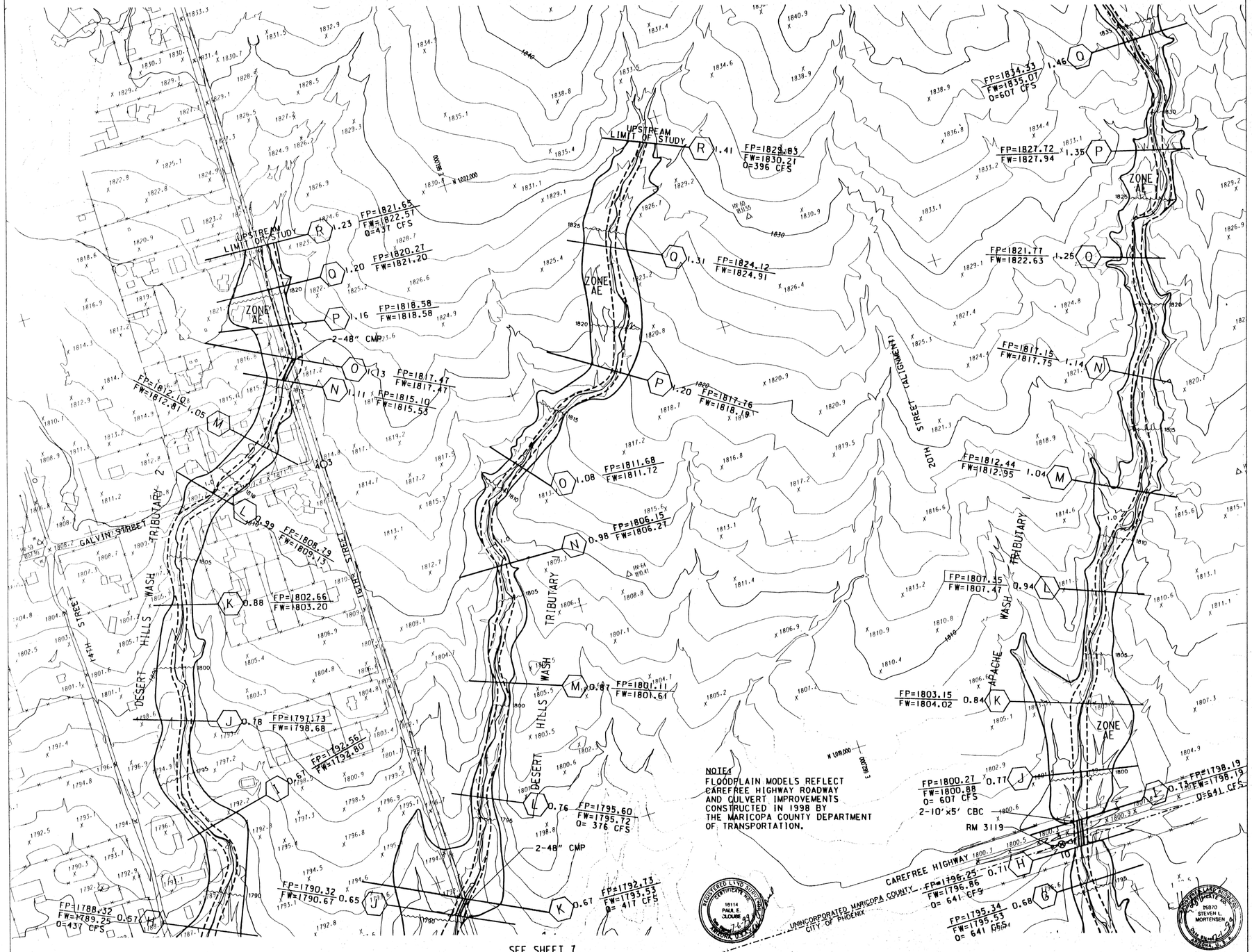
SHEET 7 OF 24

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

D:\3484\PLAN\APW_SHT7.DGN

SEE SHEET 9



SEE SHEET 7

COOPER AERIAL OF PHOENIX, INC.

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PROJECT ENGINEERING CONSULTANTS, LTD.

I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION (A, 0.10) — FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION: FP= 1888.74, FW= 1888.74, Q= 9480CFS; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE

ELEVATION REFERENCE MARK RM 3111

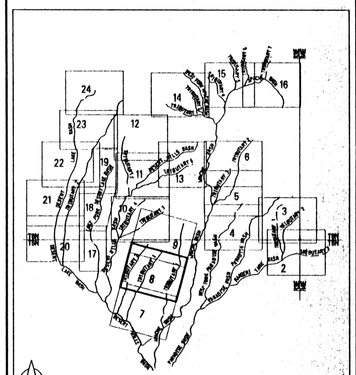
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 3119	1798.390	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET EAST OF 16TH STREET, APPROXIMATELY 10 FEET SOUTH OF SOUTH EDGE OF PAVEMENT ON CAREFREE HIGHWAY, SOUTH QUARTER CORNER OF SECTION 3, 15N, R3E, G&SRB&M.



SHEET INDEX MAP

SCALE 1" = 200'
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SUBMITTED BY: DATE

SHEET 8 OF 24

REGISTERED LAND SURVEYOR CERTIFICATE NO. 16114 PAUL E. JULIANO ARIZONA U.S.A.

REGISTERED LAND SURVEYOR CERTIFICATE NO. 16870 STEVEN L. MORTENSEN ARIZONA U.S.A.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION — A 0.10 — FP= 1888.74, FW= 1888.74, Q= 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK RM 3111

BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM 3110	1837.224	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 16TH STREET AND CLOUD ROAD.
RM 3055	1861.680	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 24TH STREET AND CLOUD ROAD.

SHEET INDEX MAP

SCALE 1" = 200'

0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

SEE SHEET 10

SEE SHEET 8

DESERT HILLS WASH TRIBUTARY 1 ZONE AE

ZONE AE

RM 3110 1837.224

RM 3055 1861.680

T6N T5N

CLOUD ROAD

24TH STREET

20TH STREET

16TH STREET

APS TRANSMISSION LINE

DESERT HILLS WASH TRIBUTARY

APACHE WASH TRIBUTARY

ALIGNMENT

UPSTREAM LIMIT OF STUDY

H 0.50 FP=1841.25 FW=1842.20 Q=532 CFS

G 0.47 FP=1841.40 FW=1842.08

F 0.45 FP=1837.17 FW=1837.38 Q=532 CFS

U 1.82 FP=1852.23 FW=1852.31 Q=607 CFS

T 1.73 FP=1847.27 FW=1847.51

S 1.65 FP=1843.13 FW=1843.31

R 1.56 FP=1839.04 FW=1839.48

Q 1.46 FP=1834.33 FW=1835.01

N 1.35 FP=1827.72 FW=1827.94 Q=607 CFS

R 1.41 FP=1828.85 FW=1830.27 Q=417 CFS

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY:		DATE

Stanley Consultants INC.
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 9 OF 24

I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY W. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

COOPER AERIAL OF PHOENIX, INC.

PROJECT ENGINEERING CONSULTANTS, LTD.

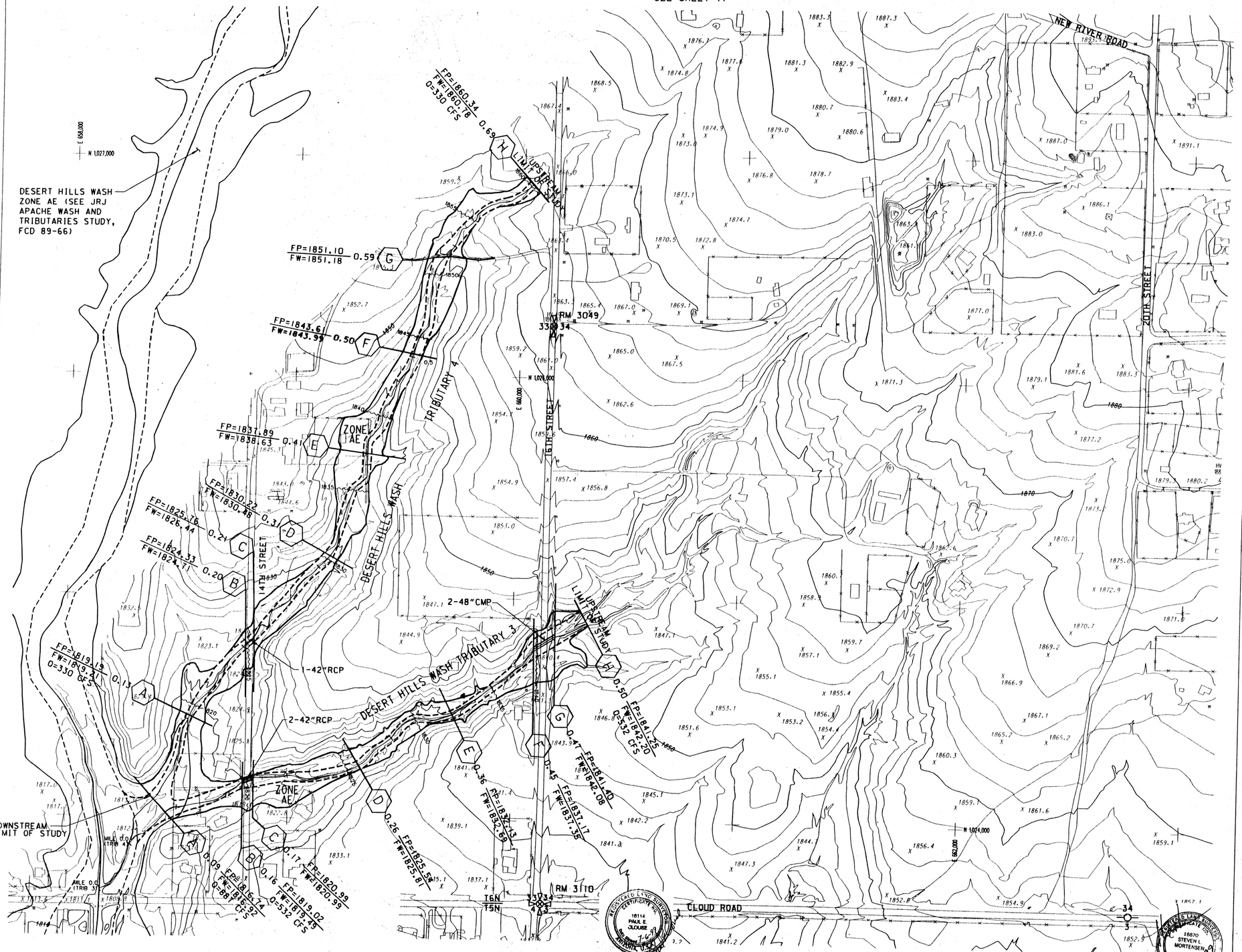
I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

16114 PAUL E. CLOUSE

16870 STEVEN L. MORTENSEN

D:\13484\PLAN\APW SHT9.DGN

SEE SHEET 11



SEE SHEET 9

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

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O:\13484\PLAN\APW SHT10.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0 … 1.5)

CROSS SECTION — A — 0.10 — FP= 1888.74 / FW= 1888.74 / Q= 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

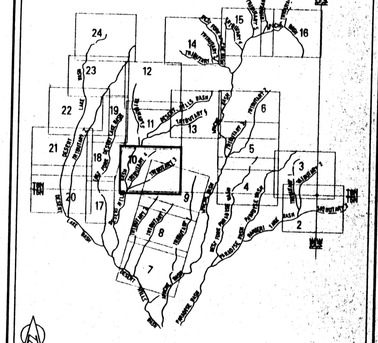
ELEVATION REFERENCE MARK RM 3111

BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3049	1862.815	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE APPROXIMATELY 2640 FEET NORTH OF CLOUD ROAD ON 16TH STREET, EAST QUARTER CORNER OF SECTION 33, T6N, R3E, G&SRB&M.
RM3110	1837.224	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 16TH STREET AND CLOUD ROAD.



SCALE: 1IN. = 200FT
0 200 400
CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99

SUBMITTED BY: DATE

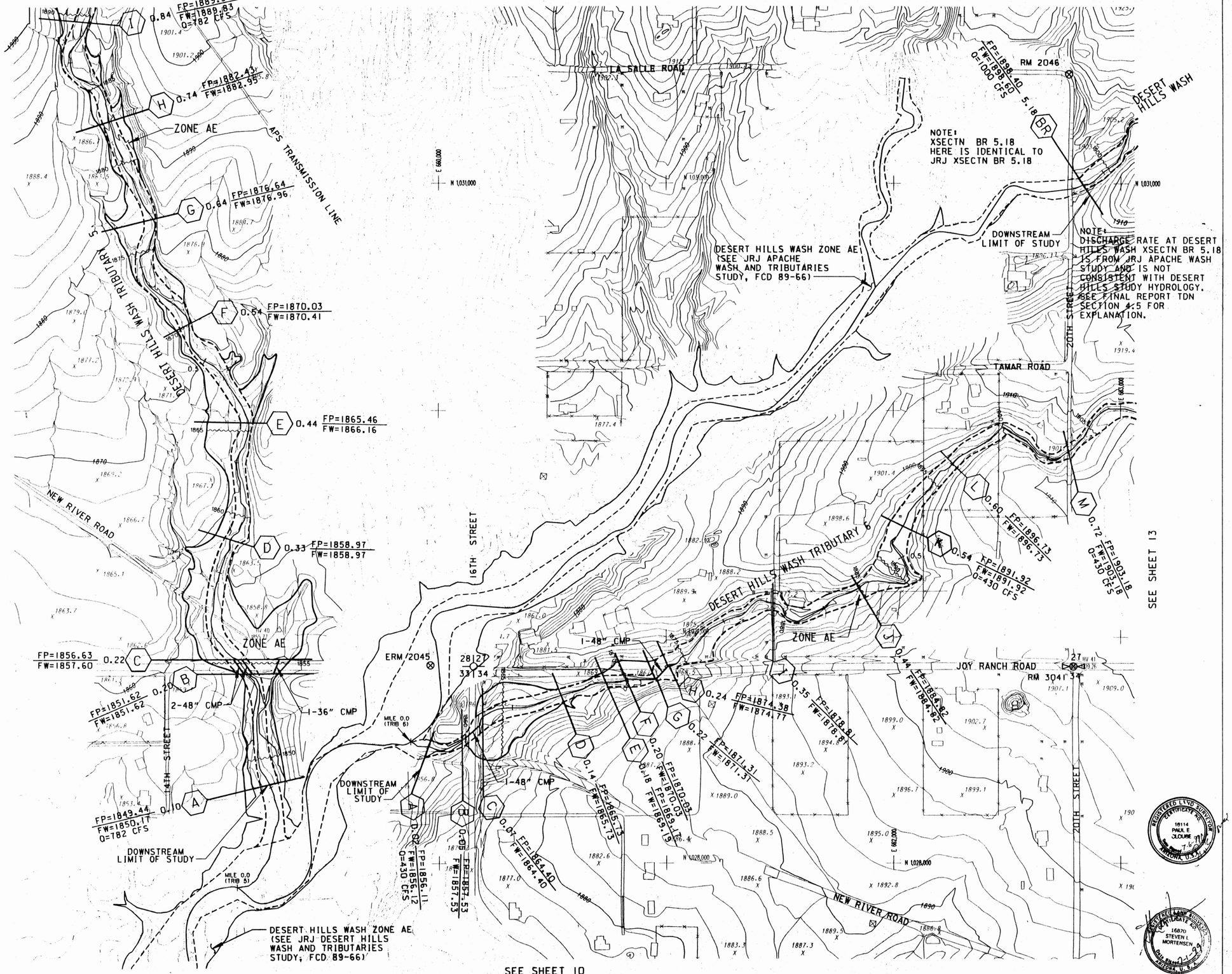
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 10 OF 24



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

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FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION — A / 0.10 — FLOODPLAIN WATER SURFACE ELEVATION: FP= 1888.74, FW= 1888.74, Q= 948CFS — FEMA CROSS SECTION DESIGNATION — CROSS SECTION RIVER MILE DESIGNATION — ENCROACHED WATER SURFACE ELEVATION — 100-YEAR DISCHARGE

ELEVATION REFERENCE MARK RM 3111

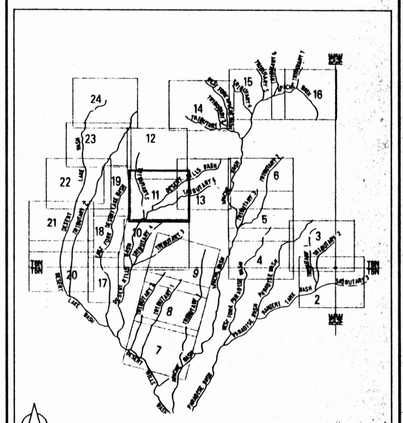
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2045	1861.040	CHISELED SQUARE ON WEST END CONCRETE HEADWALL AT NORTHWEST CORNER 16TH STREET AND JOY RANCH ROAD.
RM2046	1910.74	TOP OF 1-INCH IRON PIPE POSSIBLY CENTER SECTION 21, TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM3041	1908.655	FOUND MARICOPA COUNTY DEPARTMENT TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 20TH STREET AND JOY RANCH ROAD.



SCALE: 1IN = 200 FT (0, 200, 400)

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC. — A Stanley Group Company, Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY: DATE		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 11 OF 24

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

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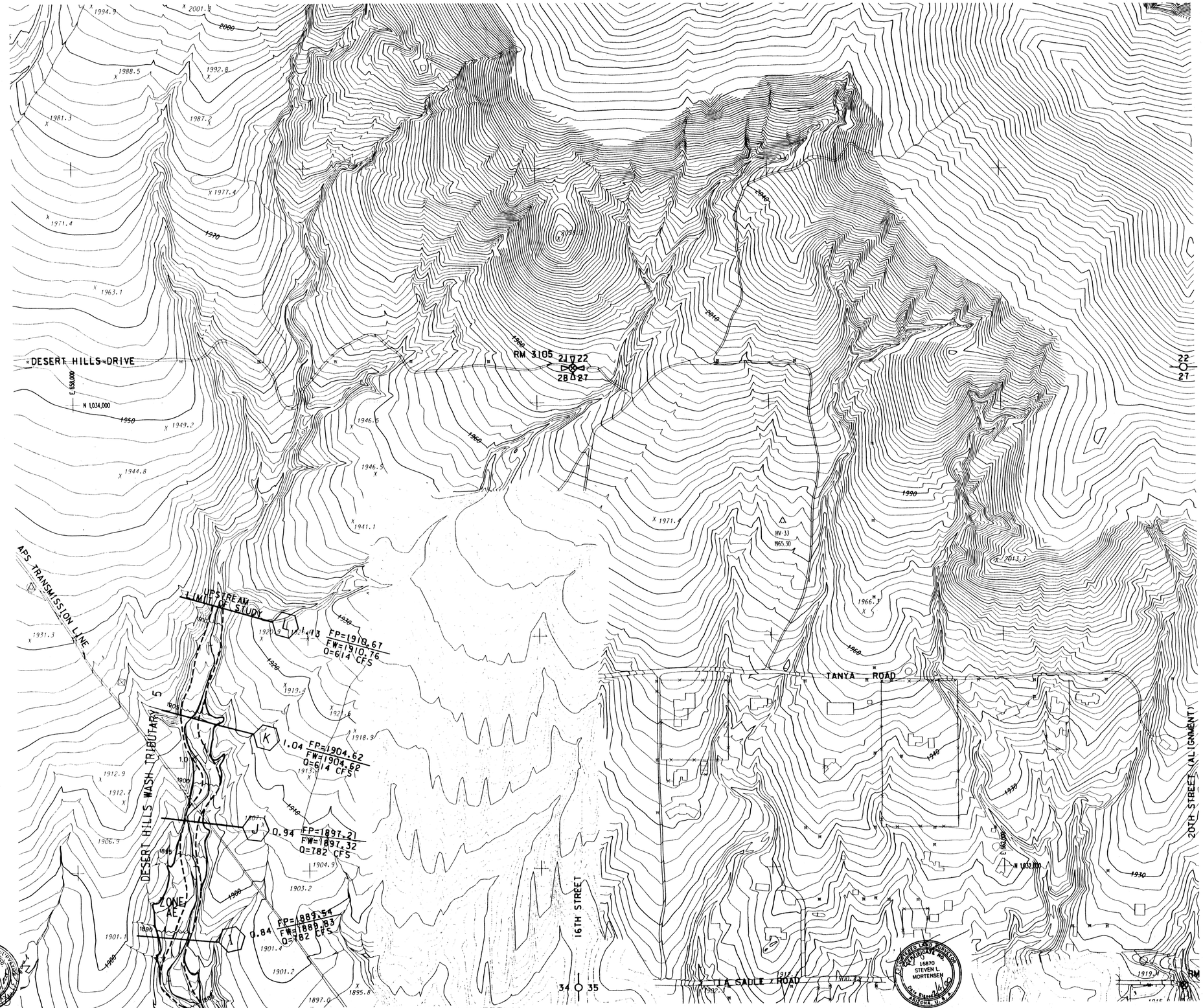
O:\N3484\PLAN\DH SHT11.DGN



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION: A, 0.10 — FP= 1888.74, FW= 1888.74, Q= 948CFS
- A: FEMA CROSS SECTION DESIGNATION
- 0.10: CROSS SECTION RIVER MILE DESIGNATION
- FP= 1888.74: FLOODPLAIN WATER SURFACE ELEVATION
- FW= 1888.74: ENCROACHED WATER SURFACE ELEVATION
- Q= 948CFS: 100-YEAR DISCHARGE

ELEVATION REFERENCE MARK RM 3111

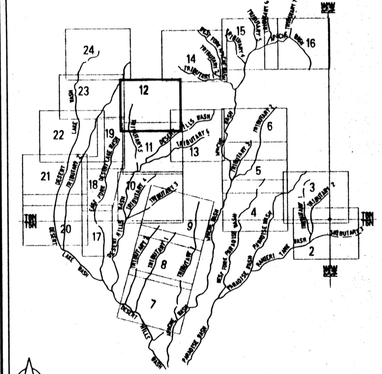
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2046	1910.74	TOP OF 1-INCH IRON PIPE POSSIBLY CENTER SECTION 27, TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM3105	1981.969	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY 1 FOOT ABOVE GROUND, BENT 15 DEGREES TO SOUTHWEST, CORNER OF SECTIONS 21, 22, 27, 28, T6N, R3E, G&SRB&M.



SHEET INDEX MAP

REGISTERED LAND SURVEYOR CERTIFICATE NO. 16114 PAUL E. JOUBERT — Date Signed 2-3-97 — ARIZONA, U.S.A.

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 26837 G. SCOTT BUCHANAN — Date Signed 2-3-97 — ARIZONA, U.S.A.

SCALE: 1IN = 200 FT (0, 200, 400)

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	11/99
DESIGN CHK.	GSB	11/99
DRAWN	RM/SB	11/99

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: _____ DATE _____

APPROVED BY: _____ DATE _____

CHIEF ENGINEER AND GENERAL MANAGER

SUBMITTED BY: _____ DATE _____

SHEET 12 OF 24

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

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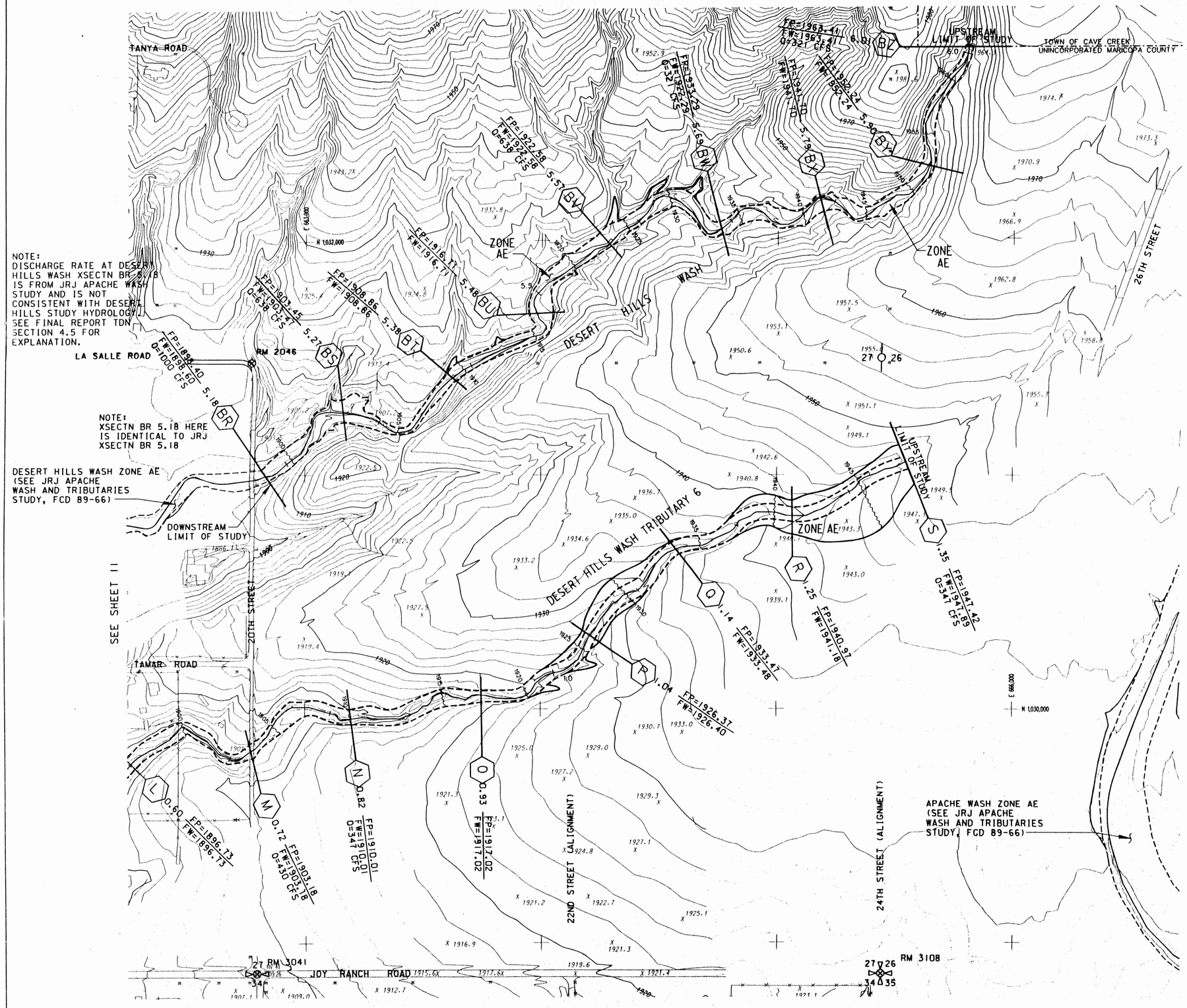
REGISTERED LAND SURVEYOR CERTIFICATE NO. 16870 STEVEN L. MORTENSEN — Date Signed 2-3-97 — ARIZONA, U.S.A.

O:\13484\PLAN\DH SHT12.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE: WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION (A, 0.10; FP= 1888.74, FW= 1888.74, Q= 9480CFS; FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK RM 3111

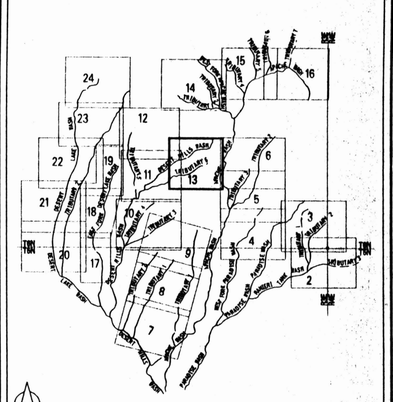
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2046	1910.74	TOP OF 1-INCH IRON PIPE POSSIBLY CENTER SECTION 27, TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM3041	1908.655	FOUND MARICOPA COUNTY DEPARTMENT TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 20TH STREET AND JOY RANCH ROAD.
RM3108	1922.034	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 24TH STREET AND JOY RANCH ROAD.



SHEET INDEX MAP

SCALE: 1IN = 200 FT

0 200 400

CONTOUR INTERVAL 2'

FLIGHT DATE: 3-20-97

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99

SUBMITTED BY: _____ DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: _____ DATE

APPROVED BY: _____ DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 13 OF 24

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

O:\13484\PLAN\DH SHT13.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY.

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE — 1.0 — 1.5

CROSS SECTION — A 0.10 — FP= 1888.74, FW= 1888.74, Q= 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK — RM 3111

BASE FLOOD ELEVATION — 1925

FLOOD INSURANCE ZONE — ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3103	2063.533	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY 2 FEET ABOVE GROUND, APPROXIMATELY 1320 FEET WEST OF 26TH STREET ON SADDLE MOUNTAIN ROAD, WEST QUARTER CORNER OF SECTION 23, T6N R3E, G&SRB&M.

NOTE:
DISCHARGE RATE AT WEST FORK APACHE WASH XSECTN H 0.57 IS FROM JRJ APACHE WASH STUDY AND IS NOT CONSISTENT WITH DESERT HILLS STUDY HYDROLOGY. SEE FINAL REPORT TDN SECTION 4.5 FOR EXPLANATION.

NOTE: XSECTN H 0.57 HERE IS IDENTICAL TO JRJ XSECTN H 0.57

SEE SHEET 15

SHEET INDEX MAP

SCALE: 1IN - 200 FT
0 200 400
CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY:		DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

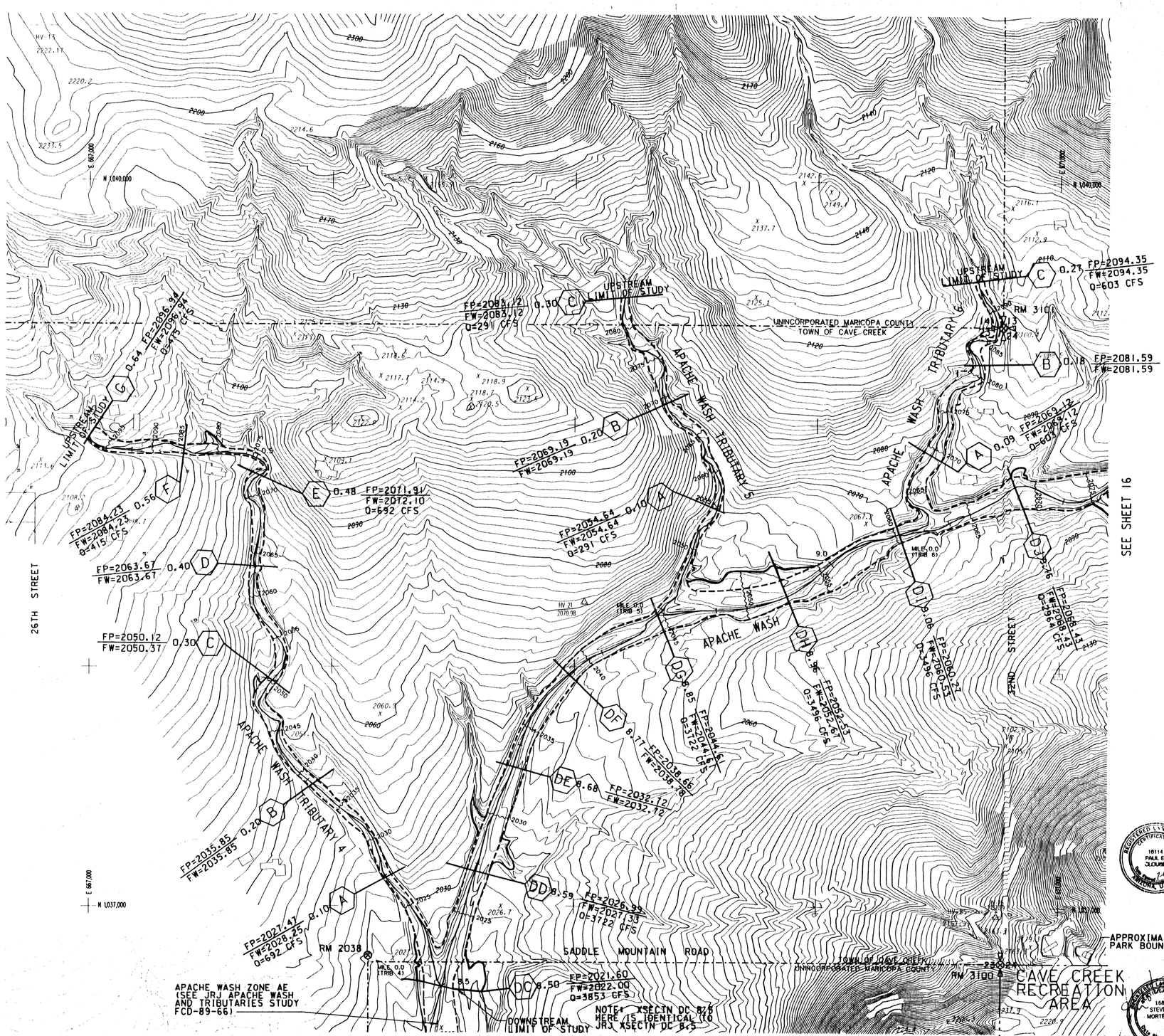
CHIEF ENGINEER AND GENERAL MANAGER

SHEET 14 OF 24

Q:\13484\PLAN\APW SHT14.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)



LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION — FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE

ELEVATION REFERENCE MARK RM 3111

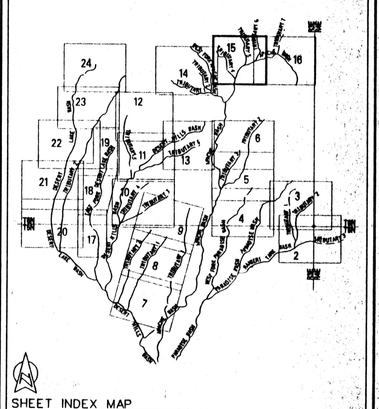
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2038	2030.59	TOP OF 1 INCH IRON PIPE POSSIBLY CENTER OF QUARTER SECTION 23, TOWNSHIP 6 NORTH, RANGE 3 EAST.
RM3100	2165.200	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY 1.7 FEET ABOVE GROUND, AT INTERSECTION OF 32ND STREET AND SADDLE MOUNTAIN ROAD, EAST QUARTER CORNER OF SECTION 23, T6N R3E, G&SRB&M.
RM3101	2088.917	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY 3 FEET ABOVE GROUND, APPROXIMATELY 2640 FEET NORTH OF SADDLE MOUNTAIN ROAD ON 32ND STREET EXTENDED, NORTH-EAST CORNER OF SECTION 23, T6N R3E, G&SRB&M.



SHEET INDEX MAP

SCALE: 1IN = 200 FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

REGISTERED LAND SURVEYOR — CERTIFICATE NO. 20137 — H. SCOTT BUCHANAN — ARIZONA U.S.A.

REGISTERED LAND SURVEYOR — CERTIFICATE NO. 16870 — STEVEN L. MORTENSEN — ARIZONA, U.S.A.

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide.

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY:		DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 15 OF 24

COOPER AERIAL OF PHOENIX, INC. — I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. — I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

O:\13484\PLAN\APW SHT15.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE — 1.0 — 1.5

CROSS SECTION — A 0.10 — FP= 1888.74, FW= 1888.74, Q= 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK — RM 3111

BASE FLOOD ELEVATION — 1925

FLOOD INSURANCE ZONE — ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3100	2165.200	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY 1.7 FEET ABOVE GROUND, AT INTERSECTION OF 32ND STREET AND SADDLE MOUNTAIN ROAD, EAST QUARTER CORNER OF SECTION 23, T6N R3E, G&SRB&M.
RM3101	2088.917	FOUND UNITED STATES GENERAL LAND OFFICE BRASS CAP ON 2 INCH IRON PIPE, APPROXIMATELY .9 FEET ABOVE GROUND, APPROXIMATELY 2640 FEET NORTH OF SADDLE MOUNTAIN ROAD ON 32ND STREET EXTENDED, NORTH-EAST CORNER OF SECTION 23, T6N R3E, G&SRB&M.

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #18870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services : Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY:		DATE:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: ____ DATE ____

APPROVED BY: ____ DATE ____

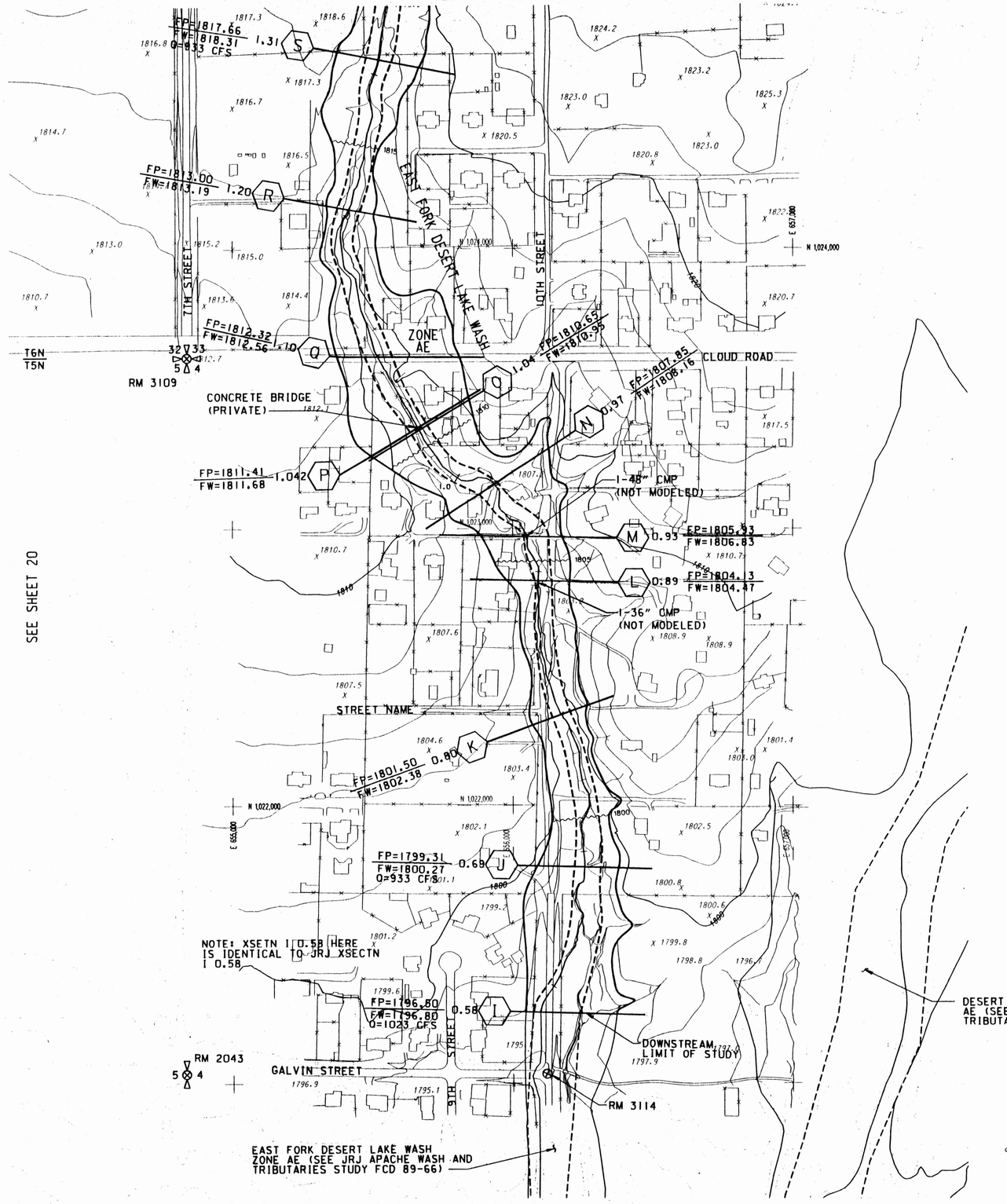
CHIEF ENGINEER AND GENERAL MANAGER

SHEET 16 OF 24

O:\13484\PLAN\APW_SHT16.DGN

SEE SHEET 18

SEE SHEET 20



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION — A — 0.10 — FP= 1888.74, FW= 1888.74, Q= 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK RM 3111

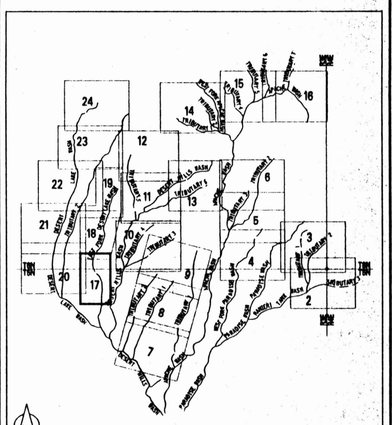
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM2043	1797.59	MARICOPA COUNTY HIGHWAY DEPARTMENT BRASS CAP, FLUSH 7TH STREET AND GALVIN STREET
RM3109	1812.510	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND CLOUD ROAD
RM3114	1794.181	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP FLUSH WITH PAVEMENT AT 10TH STREET AND GALVIN STREET



SHEET INDEX MAP

SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

REGISTERED LAND SURVEYOR CERTIFICATE NO. 16114 PAUL E. DUBOIS — 7-6-99 — ARIZONA, U.S.A.

REGISTERED LAND SURVEYOR CERTIFICATE NO. 16870 STEVEN L MORTENSEN — 7-1-99 — ARIZONA, U.S.A.

REGISTERED PROFESSIONAL ENGINEER (CIVIL) SCOTT G. BUCHMAN — 7-1-99 — ARIZONA, U.S.A.

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY: DATE		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 17 OF 24

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

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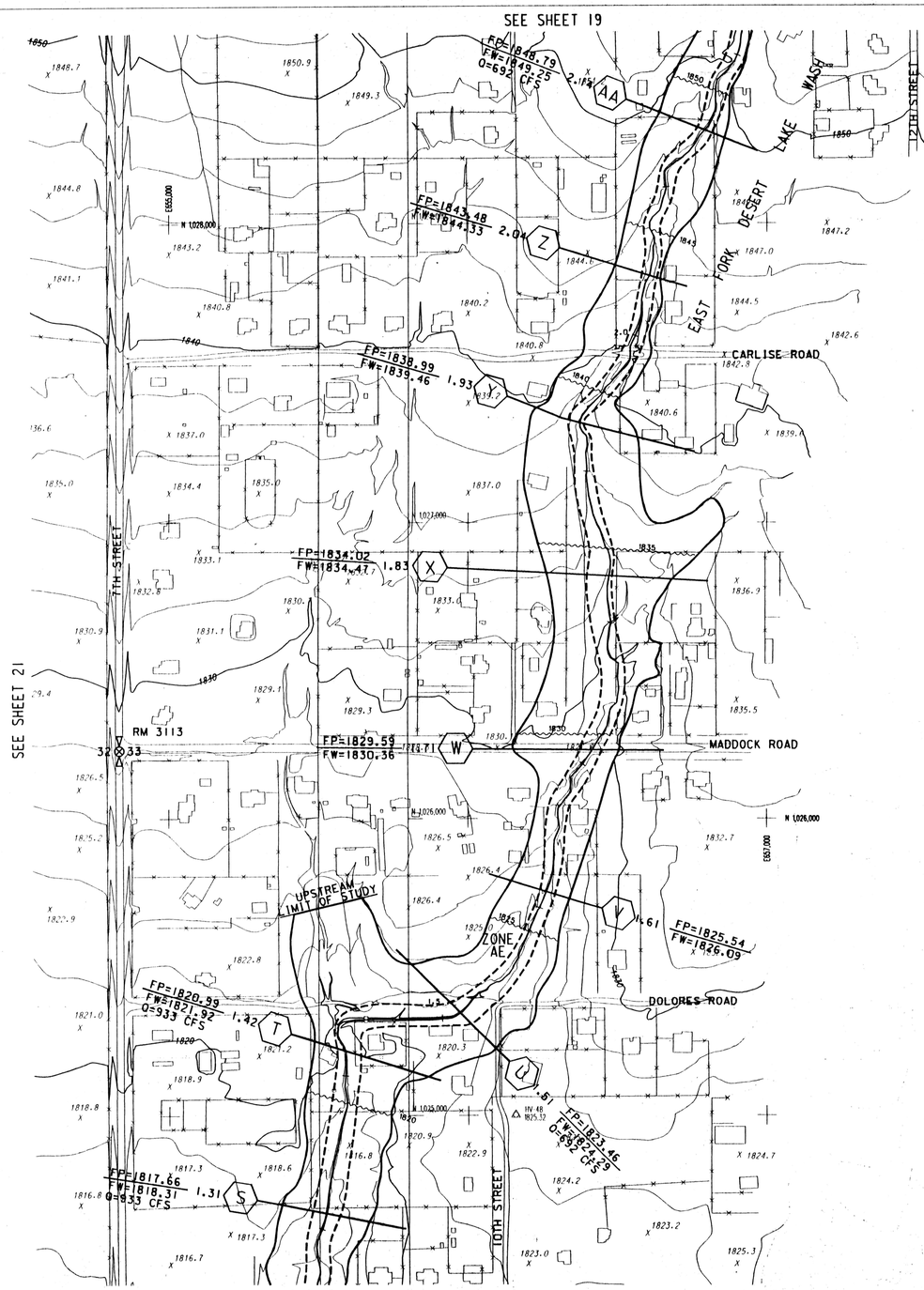


FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.8, 1.5)

CROSS SECTION (A, 0.10) — FP= 1888.74, FW= 1888.74, Q= 948CFS
- FEMA CROSS SECTION DESIGNATION
- CROSS SECTION RIVER MILE DESIGNATION
- FLOODPLAIN WATER SURFACE ELEVATION
- ENCROACHED WATER SURFACE ELEVATION
- 100-YEAR DISCHARGE

ELEVATION REFERENCE MARK RM 3111

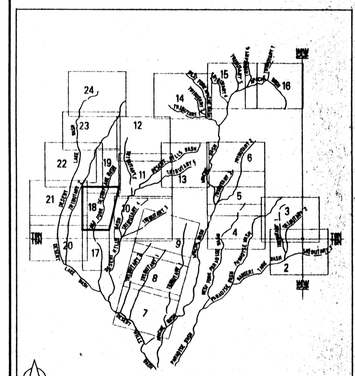
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3113	1829.213	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP FLUSH WITH PAVEMENT AT INTERSECTION OF 7TH STREET AND MADDOCK ROAD



SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

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	BY	DATE
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DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SUBMITTED BY: DATE

SHEET 18 OF 24

I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200' THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.
COOPER AERIAL OF PHOENIX, INC.

I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.
PROJECT ENGINEERING CONSULTANTS, LTD.

Q:\13484\PLAN\DLW SHT18.DGN

SEE SHEET 23

SEE SHEET 22

SEE SHEET 11

SEE SHEET 18

IRVINE ROAD

JOY RANCH ROAD

RM 3109

29T28
32A83

7TH STREET

12TH STREET

DESERT LAKE WASH

EAST FORK

NEW RIVER ROAD

ZONE AE

FP=1878.35
FW=1878.62
Q=278 CFS
2.67
AG

FP=1870.91
FW=1871.18
Q=218 CFS
2.58
AF

FP=1865.70
FW=1866.37
Q=592 CFS
2.37
AE

FP=1859.79
FW=1860.11
2.37
AD

FP=1856.53
FW=1856.53
2.27
AC

FP=1853.59
FW=1854.26
2.25
AB

FP=1849.79
FW=1849.25
Q=692 CFS
2.13
AA

UPSTREAM LIMIT OF STUDY

2-48" CMP

N 1,032,000
E 646,000
N 1,031,000
N 1,030,000
N 1,029,000
E 650,000

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION — A 0.10 — FP- 1888.74, FW- 1888.74, Q- 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK — RM 3111

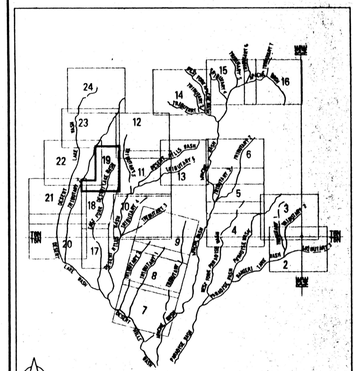
BASE FLOOD ELEVATION — 1925

FLOOD INSURANCE ZONE — ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3109	1812.510	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND CLOUD ROAD



SHEET INDEX MAP

REGISTERED PROFESSIONAL ENGINEER — 25637 — G SCOTT BUCHANAN — ARIZONA U.S.A.

REGISTERED LAND SURVEYOR — CERTIFICATE NO. 16114 — PAUL E. CLOUNE — ARIZONA U.S.A.

REGISTERED LAND SURVEYOR — CERTIFICATE NO. 16870 — STEVEN L. MORTENSEN — ARIZONA U.S.A.

SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
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DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 19 OF 24

I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.
COOPER AERIAL OF PHOENIX, INC.

I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.
PROJECT ENGINEERING CONSULTANTS, LTD.

C:\17484\PLAN\DLW_SHT19.DGN

SEE SHEET 21

NOTE:
THE COMBINED FLOODPLAINS OF DESERT LAKE WASH AND DESERT LAKE WASH TRIBUTARY 2 FROM CROSS SECTION 2.14 UPSTREAM TO JOY RANCH ROAD IS PREDOMINANTLY CHARACTERIZED AS SHALLOW/4.9 FLOODING WITH AN AVERAGE DEPTH OF FLOW OF LESS THAN 0.5 FEET. THE LIMIT OF THIS FLOODING IS APPROXIMATED BY THE ZONE A DESIGNATION.

ZONE A

ZONE A

ZONE A

ZONE AE

ZONE AE

CENTRAL AVE (ALIGNMENT)

DESERT LAKE WASH

DESERT LAKE WASH TRIBUTARY 2

DESERT LAKE WASH

7TH AVE

7TH STREET

CLOUD ROAD

CLOUD ROAD

RM 3112

RM 3109

MILE 0.0 (TRIB 2)

UPSTREAM LIMIT OF ZONE AE

UPSTREAM LIMIT OF STUDY

DOWNSTREAM LIMIT OF STUDY

FP=1811.09
Q=1481 CFS
1.95
X

FP=1817.47
Q=1481 CFS
2.14
Y

FP=1805.41
FW=1806.38
Q=1484 CFS
1.76
W

FP=1802.99
FW=1803.21
Q=1484 CFS
1.64
V

FP=1800.62
FW=1801.62
Q=2224 CFS
1.52
U

FP=1797.60
FW=1798.40
Q=3406 CFS
1.42
T

HV-47
1811.29

HV-57
1795.89

E 650,000

N 1,024,000

E 654,000

N 1,022,000

NOTE:
XSECTN T 1.42 HERE IS IDENTICAL TO JRJ DESERT LAKE WASH XSECTN T 1.42

NOTE:
DISCHARGE RATE AT DESERT LAKE WASH XSECTN T 1.42 IS FROM JRJ APACHE WASH STUDY AND IS NOT CONSISTENT WITH DESERT HILLS STUDY HYDROLOGY. SEE FINAL REPORT TDN SECTION 4.5 FOR EXPLANATION.

DESERT LAKE WASH ZONE AE (SEE JRJ APACHE WASH AND TRIBUTARIES STUDY, FCD 89-66)

SEE SHEET 17

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
16114
PAUL E. SLOUBE
ARIZONA, U.S.A.

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
16870
STEVEN L. MORTENSEN
ARIZONA, U.S.A.

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

Q:\13484\PLAN\DLW SHT20.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.8, 1.5)

CROSS SECTION (A, 0.10) — FLOODPLAIN WATER SURFACE ELEVATION: FP= 1888.74; ENCROACHED WATER SURFACE ELEVATION: FW= 1888.74; 100-YEAR DISCHARGE: Q= 948CFS; FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION

ELEVATION REFERENCE MARK RM 3111

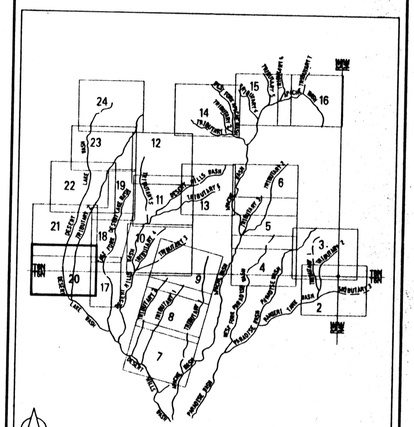
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3109	1812.510	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND CLOUD ROAD.
RM3112	1804.342	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF CENTRAL AVENUE AND CLOUD ROAD.



SHEET INDEX MAP

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
26837
G. SCOTT BUCHANAN
ARIZONA, U.S.A.

SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	11/99
DESIGN CHK.	GSB	11/99
DRAWN	RM/SB	11/99
SUBMITTED BY:		DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 20 OF 24

SEE SHEET 22

E 650,000
N 1,029,000

JOY RANCH ROAD
CENTRAL AVE
1ST STREET
DESERT RANCH LANE
4TH STREET
DESERT RANCH LANE
ZONE AE
ZONE AE
RM 3107
29728
32 33 34 35 36 37

DOWNSTREAM LIMIT OF ZONE AE

FP=1844.27
Q=1446 CFS
2.79
AA

ZONE A
1.0

DESERT LAKE WASH
DESERT LAKE WASH TRIBUTARY 2

HV 44
1872.98

FP=1824.37
Q=1465 CFS
2.34
Z

FP=1817.47
Q=1481 CFS
2.14
Y

ZONE A
2.5
0.5

RM 3113
32 33

E 650,000
N 1,026,000

NOTE:
THE COMBINED FLOODPLAINS OF DESERT LAKE WASH AND DESERT LAKE WASH TRIBUTARY 2 FROM CROSS SECTION 2.14 UPSTREAM TO JOY RANCH ROAD IS PREDOMINANTLY CHARACTERIZED AS SHALLOW FLOODING WITH AN AVERAGE DEPTH OF FLOW LESS THAN 0.5 FEET. THE LIMIT OF THIS FLOODING IS APPROXIMATED BY THE ZONE A DESIGNATION.

27TH AVE

SEE SHEET 20
SEE SHEET 18

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
16114
PAUL S. CHOUSE
ARIZONA U.S.A.

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
14670
STEVEN L. MORTENSEN
ARIZONA U.S.A.

COOPER AERIAL OF PHOENIX, INC.

I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD.

I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

O:\13484\PLAN\DLW SHT21.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE — 1.0 — 1.5

CROSS SECTION — A 0.10 — FP- 1888.74 FW- 1888.74 Q- 948CFS
(FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK RM 3111

BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3113	1829.213	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP FLUSH WITH PAVEMENT AT INTERSECTION OF 7TH STREET AND MADDOCK ROAD
RM3107	1854.613	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND JOY RANCH ROAD

SHEET INDEX MAP

REGISTERED Professional Engineer (Civil)
28837
G. SCOTT BUCHANAN
ARIZONA U.S.A.

SCALE: 1IN = 200FT
0 200 400
CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
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DESIGN	GGC	11/99
DESIGN CHK.	GSB	11/99
DRAWN	RM/SB	11/99
SUBMITTED BY:		DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 21 OF 24

SEE SHEET 23

NOTE: HYDRAULIC MODEL AND FLOODPLAIN LIMITS REFLECT ESTATES NORTH UNIT 2 ROADWAY AND CULVERT IMPROVEMENTS @ TANYA ROAD.

NOTES:

1. THE WEST SIDE OF THE DESERT LAKE WASH FLOODPLAIN DOWNSTREAM FROM CROSS SECTION 3.71 IS NOT CONTAINED AND A BREAKOUT OCCURS WITH DISCHARGE RATE INDICATED. THIS BREAKOUT FLOW TRAVELS SOUTHWEST TOWARD IRVINE ROAD AND IS GENERALLY CHARACTERIZED AS SHALLOW FLOODING. THE WEST LIMIT OF THE FLOODPLAIN FROM CROSS SECTION 3.63 TO IRVINE ROAD HAS BEEN ESTABLISHED ALONG THE WEST BANK OF A SMALL BREAKOUT CHANNEL WHERE THE DEPTH OF FLOW IS 0.5 FEET. THE BREAKOUT CHANNEL ESSENTIALLY ENDS AT IRVINE ROAD. WEST OF THIS CHANNEL AND SOUTH OF IRVINE ROAD, THE AVERAGE DEPTH OF FLOODING IS LESS THAN 0.5 FEET. THE BREAKOUT FLOW EVENTUALLY TRAVELS OUTSIDE OF THE STUDY LIMITS AND JOINS SKUNK TANK WASH TO THE WEST.

2. THE DESERT LAKE WASH FLOODPLAIN DOWNSTREAM FROM CROSS SECTION 3.46 IS PREDOMINANTLY CHARACTERIZED AS SHALLOW FLOODING. THE ZONE "AE" LIMITS ON BOTH SIDES OF DESERT LAKE WASH DOWNSTREAM FROM CROSS SECTION 3.46 ARE ESTABLISHED WHERE THE DEPTH OF FLOODING IS APPROXIMATELY 0.5 FEET. WITHIN THESE LIMITS, THE AVERAGE DEPTH OF FLOODING IS GREATER THAN 0.5 FEET. OUTSIDE OF THESE LIMITS, THE AVERAGE DEPTH OF FLOODING IS LESS THAN 0.5 FEET.

3. THE DESERT LAKE WASH TRIBUTARY 2 FLOODPLAIN DOWNSTREAM FROM CROSS SECTION 1.59 IS PREDOMINANTLY CHARACTERIZED AS SHALLOW FLOODING AND THE FLOW IS NOT COMPLETELY CONTAINED. A BREAKOUT OCCURS ON THE EAST SIDE OF THE FLOODPLAIN WITH THE DISCHARGE RATE SHOWN. THE BREAKOUT IS ALSO PREDOMINANTLY SHALLOW FLOODING WITH AN AVERAGE DEPTH OF FLOW THAT IS LESS THAN 0.5 FEET. THE BREAKOUT FLOW JOINS THE EAST FORK OF DESERT LAKE WASH APPROXIMATELY ONE MILE SOUTH. THE ZONE "AE" LIMITS ON BOTH SIDES OF DESERT LAKE WASH TRIBUTARY 2 DOWNSTREAM FROM CROSS SECTION 1.59 ARE ESTABLISHED WHERE THE DEPTH OF FLOW IS APPROXIMATELY 0.5 FEET.

4. SHALLOW OVERBANK FLOW FROM DESERT LAKE WASH AND DESERT LAKE WASH TRIBUTARY 2 JOINS NEAR CROSS SECTION 3.22. DOWNSTREAM FROM THIS CROSS SECTION, THE COMBINED FLOW IS PREDOMINANTLY CHARACTERIZED AS SHALLOW FLOODING WITH AN AVERAGE DEPTH OF FLOW OF LESS THAN 0.5 FEET. THIS SHALLOW FLOODING CONTINUES DOWNSTREAM FOR APPROXIMATELY ONE MILE TO CROSS SECTION 2.14 WHERE THE AVERAGE DEPTH OF FLOW INCREASES TO GREATER THAN 0.5 FEET.

5. THE ZONE AE LIMITS FOR DESERT LAKE WASH FROM RIVER MILE 3.3 TO JOY RANCH ROAD AND FOR DESERT LAKE WASH TRIBUTARY 2 FROM 7TH STREET TO JOY RANCH ROAD COINCIDE WITH THE RECORDED DRAINAGE EASTMENT FOR THE DESERT HILLS ESTATES SUBDIVISION.

TANYA ROAD
FP=1893.96 FW=1894.44 Q=992 CFS
3.72 AH
2-18" CMP (NOT MODELED) 1-10'x4' CBC 1-6'x4' CBC
FP=1888.36 FW=1889.53 Q=663 CFS
3.63 AF
2-18" CMP (NOT MODELED)
BREAKOUT Q=323 CFS
ZONE AE
UPSTREAM LIMIT OF ZONE AE
AG 3.71
FP=1892.72 FW=1892.82 Q=992 CFS
FP=1904.09 FW=1904.23 Q=725 CFS
1.91 D
1.69 FP=1909.98 FW=1909.98 Q=948 CFS
JORDON LANE
E 653,000
N 1,032,000
FP=1884.96 FW=1885.16 Q=915 CFS
3.55 AE
ZONE AE
2ND WAY
7TH STREET
N 1,032,000
E 656,000
1.82 C
FP=1896.26 FW=1896.83
IRVINE ROAD
29
28
AD 3.46
FP=1887.98 FW=1888.55 Q=915 CFS
FP=1876.10 FW=1876.68 Q=915 CFS
3.39 AC
ADAMANDA DRIVE
FP=1866.51 Q=1423 CFS
3.22 AB
1ST STREET
3RD STREET
5TH STREET
ADAMANDA COURT
ZONE AE
1.73 B
FP=1889.51 FW=1890.13
1.59 FP=1880.95 FW=1881.39 Q=729 CFS
A
DESERT HILLS ESTATE DRIVE
10TH STREET
LAVITT LANE
CENTRAL AVE
BLUE EAGLE LANE
DESERT LAKE WASH
DESERT LAKE WASH TRIBUTARY 2
BREAKOUT Q=206 CFS
N 1,030,000
E 656,000
HV-38 1852.00
HV-38 1859.87
DESERT RANCH LANE
DOWNSTREAM LIMIT OF ZONE AE
RM 3107
ZONE A
JOY RANCH ROAD
32
33

SEE SHEET 19

SEE SHEET 21

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY
NOTE: WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE (1.0, 1.5)

CROSS SECTION (A, 0.10) — FP= 1888.74, FW= 1888.74, Q= 948CFS
FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE

ELEVATION REFERENCE MARK RM 3111

BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3107	1854.613	FOUND MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE AT INTERSECTION OF 7TH STREET AND JOY RANCH ROAD

SHEET INDEX MAP

SCALE: 1IN - 200FT
0 200 400
CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC.
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	11/99
DESIGN CHK.	GSB	11/99
DRAWN	RM/SB	11/99

SUBMITTED BY: DATE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 22 OF 24

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

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O:\13484\PLAN\DLW SHT22.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION — FEMA CROSS SECTION DESIGNATION; CROSS SECTION RIVER MILE DESIGNATION; FLOODPLAIN WATER SURFACE ELEVATION; ENCROACHED WATER SURFACE ELEVATION; 100-YEAR DISCHARGE
FP= 1888.74
FW= 1888.74
Q= 948CFS

ELEVATION REFERENCE MARK RM 3111

BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3104	1934.449	SET ALUMINUM CAP ON NORTHEAST CORNER OF HEADWALL, APPROX 400 FEET WEST OF NEW RIVER ROAD, APPROX 25 FEET NORTH OF DESERT HILLS DRIVE

SHEET INDEX MAP

SCALE: 1IN = 200FT
0 200 400
CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

SEE SHEET 24
SEE SHEET 12
SEE SHEET 22

DESERT HILLS DRIVE
MESQUITE STREET
TANYA TRAIL
SPEER TRAIL
NEW RIVER ROAD
TANYA ROAD
2ND WAY
3RD STREET
7TH STREET
10TH STREET
12TH STREET
NORTH 7TH STREET
DESERT LAKE WASH
DESERT LAKE WASH TRIBUTARY 2
ZONE AE
UPSTREAM LIMIT OF STUDY
RM 3104
2-55"x39" CMPA
3-55"x39" CMPA
2-18" CMP (NOT MODELED)
1-10'x4' CBC
1-6'x4' CBC
1-60" CMP

AO	4.31	FP=1932.82	FW=1933.63 Q=992 CFS
AN	4.28	FP=1925.91	FW=1926.17
AM	4.17	FP=1919.09	FW=1920.05
AL	4.08	FP=1913.16	FW=1913.92
AK	3.99	FP=1910.86	FW=1911.77
AJ	3.98	FP=1908.90	FW=1909.86
AI	3.85	FP=1900.88	FW=1901.33
AH	3.72	FP=1893.96	FW=1894.44 Q=992 CFS
AG	3.71	FP=1892.72	FW=1892.82 Q=992 CFS
AF	3.63	FP=1889.36	FW=1889.53 Q=669 CFS
A	2.78	FP=1982.05	FW=1982.09 Q=845 CFS
N	2.68	FP=1971.41	FW=1971.42
M	2.51	FP=1962.80	FW=1962.80
K	2.49	FP=1953.15	FW=1953.39
J	2.43	FP=1946.81	FW=1946.97
L	2.56	FP=1959.00	FW=1959.00
I	2.37	FP=1940.84	FW=1941.06 Q=845 CFS
H	2.28	FP=1933.02	FW=1933.02 Q=725 CFS
G	2.19	FP=1923.80	FW=1923.80
F	2.08	FP=1915.27	FW=1915.33
D	1.91	FP=1904.09	FW=1904.25 Q=725 CFS
H1	1.99	FP=1909.98	FW=1909.98

NOTE: HYDRAULIC MODEL AND FLOODPLAIN LIMITS REFLECT ESTATES NORTH UNIT 2 ROADWAY AND CULVERT IMPROVEMENTS @ TANYA ROAD.

REGISTERED LAND SURVEYOR CERTIFICATE NO. 16114 PAUL E. DUJOUNE ARIZONA U.S.A.

REGISTERED LAND SURVEYOR CERTIFICATE NO. 16870 STEVEN L MORTENSEN ARIZONA U.S.A.

COOPER AERIAL OF PHOENIX, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

Stanley Consultants INC. — A Stanley Group Company — Engineering, Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	5/99
DESIGN CHK.	GSB	5/99
DRAWN	RM/SB	5/99
SUBMITTED BY: DATE		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 23 OF 24

Q:\13484\PLAN\DLW SHT23.DGN

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

LEGEND

100-YR FLOODPLAIN BOUNDARY

NOTE:
WHERE THE FLOODPLAIN AND FLOODWAY BOUNDARIES COINCIDE, THE FLOODPLAIN BOUNDARY IS ILLUSTRATED AS A DASHED FLOODWAY BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION — A (FEMA CROSS SECTION DESIGNATION) 0.10 (CROSS SECTION RIVER MILE DESIGNATION) FP= 1888.74 (FLOODPLAIN WATER SURFACE ELEVATION) FW= 1888.74 (ENCROACHED WATER SURFACE ELEVATION) Q= 9480CFS (100-YEAR DISCHARGE)

ELEVATION REFERENCE MARK RM 3111

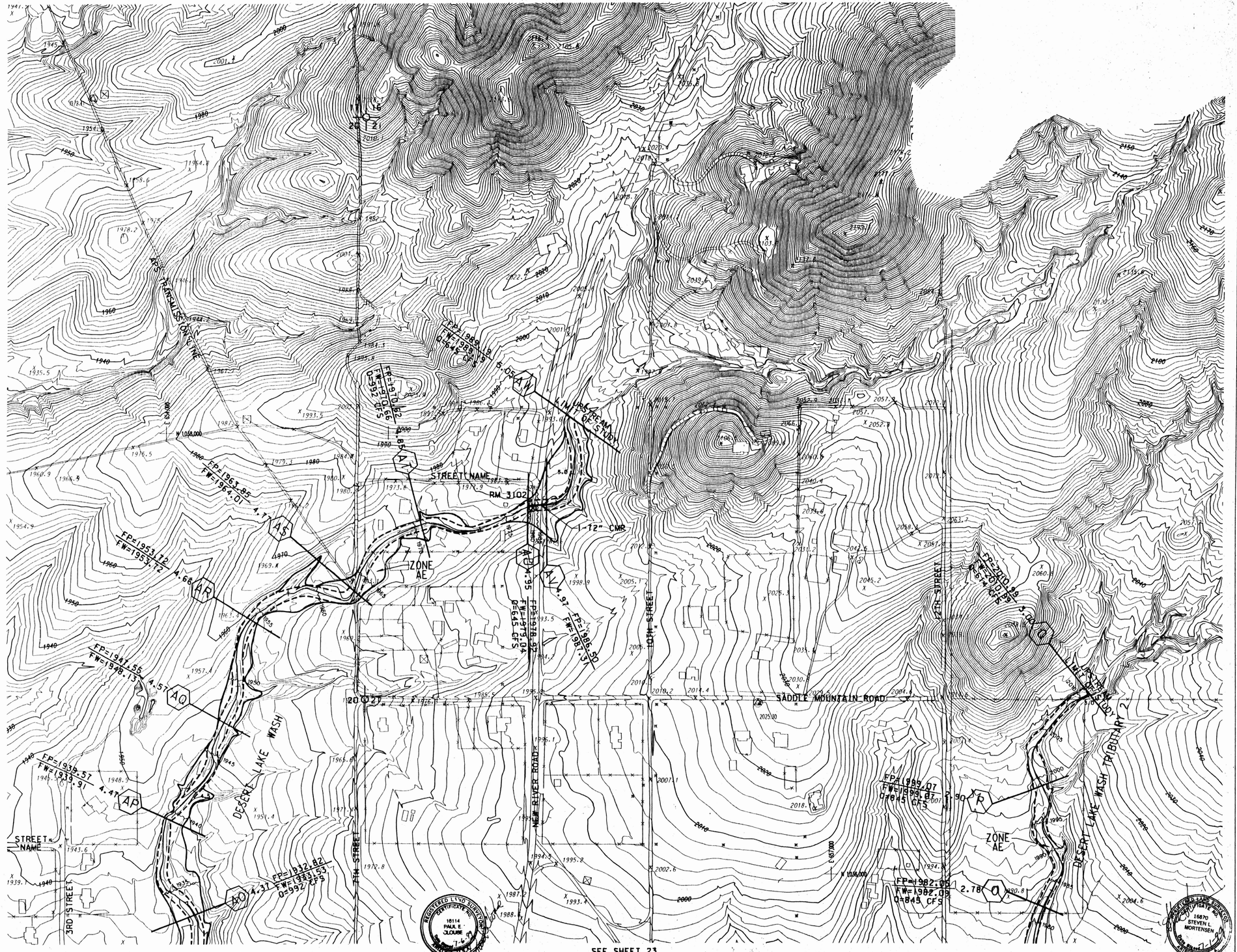
BASE FLOOD ELEVATION 1925

FLOOD INSURANCE ZONE ZONE AE

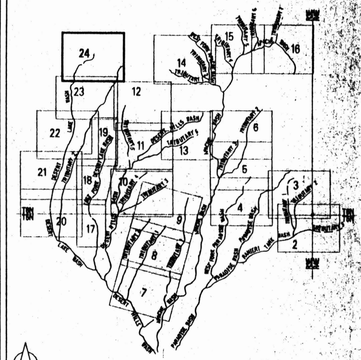
ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION LOCATION
RM3102	1982.992	SET ALUMINUM CAP ON SOUTH CORNER OF WEST HEADWALL, APPROXIMATELY 1200 FEET NORTH OF SADDLE MOUNTAIN RAOD, APPROXIMATELY 20 FEET WEST OF NEW RIVER ROAD.



SEE SHEET 23



SHEET INDEX MAP

SCALE: 1IN = 200FT
0 200 400

CONTOUR INTERVAL: 2'
FLIGHT DATE: 3-20-97

Stanley Consultants INC. — A Stanley Group Company — Engineering Environmental and Construction Services - Worldwide

	BY	DATE
DESIGN	GGC	6/99
DESIGN CHK.	GSB	6/99
DRAWN	RM/SB	6/99
SUBMITTED BY: DATE		

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF, ENGINEER AND GENERAL MANAGER

SHEET 24 OF 24

COOPER AERIAL OF PHOENIX, INC. — I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY LARRY M. MALDONADO, PROJECT ENGINEERING CONSULTANTS, LTD.

PROJECT ENGINEERING CONSULTANTS, LTD. — I, STEVEN L. MORTENSEN, ARIZONA REGISTERED LAND SURVEYOR #16870, CERTIFY THAT THE HORIZONTAL AND VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

Q:\13484\PLAN\DLW SHT24.DGN

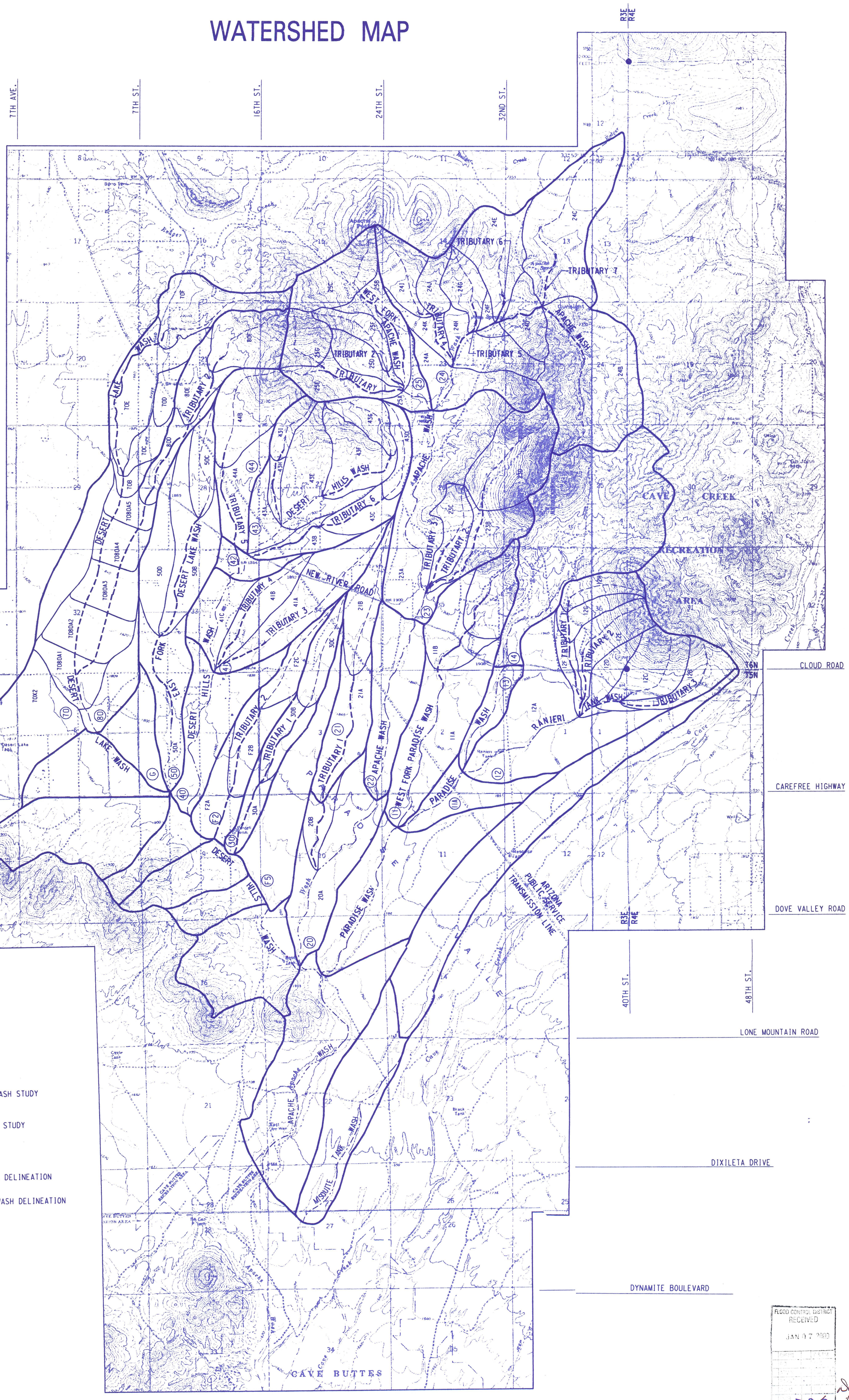
FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING FOR THE DESERT HILLS AREA (FCD 96-06)

WATERSHED MAP

N

SCALE: 1"=2000'

0 2000 4000



LEGEND:

- (70) — JRJ APACHE WASH STUDY SUBBASIN
- 20B — DESERT HILLS STUDY SUBBASIN
- FLOW PATH
- DESERT HILLS DELINEATION STUDY LIMIT
- JRJ APACHE WASH DELINEATION STUDY LIMIT

FLOOD CONTROL DISTRICT
RECEIVED
JAN 07 2000

DBB ↓ DRZ 1/10/0

EXHIBIT 3

Stanley Consultants INC.
A Stanley Group Company
Engineering, Environmental and Construction Services - Worldwide

PROJECT: 13484 DATE: 6 /14/99

G:\13484\hibit\fcdboundary.DGN