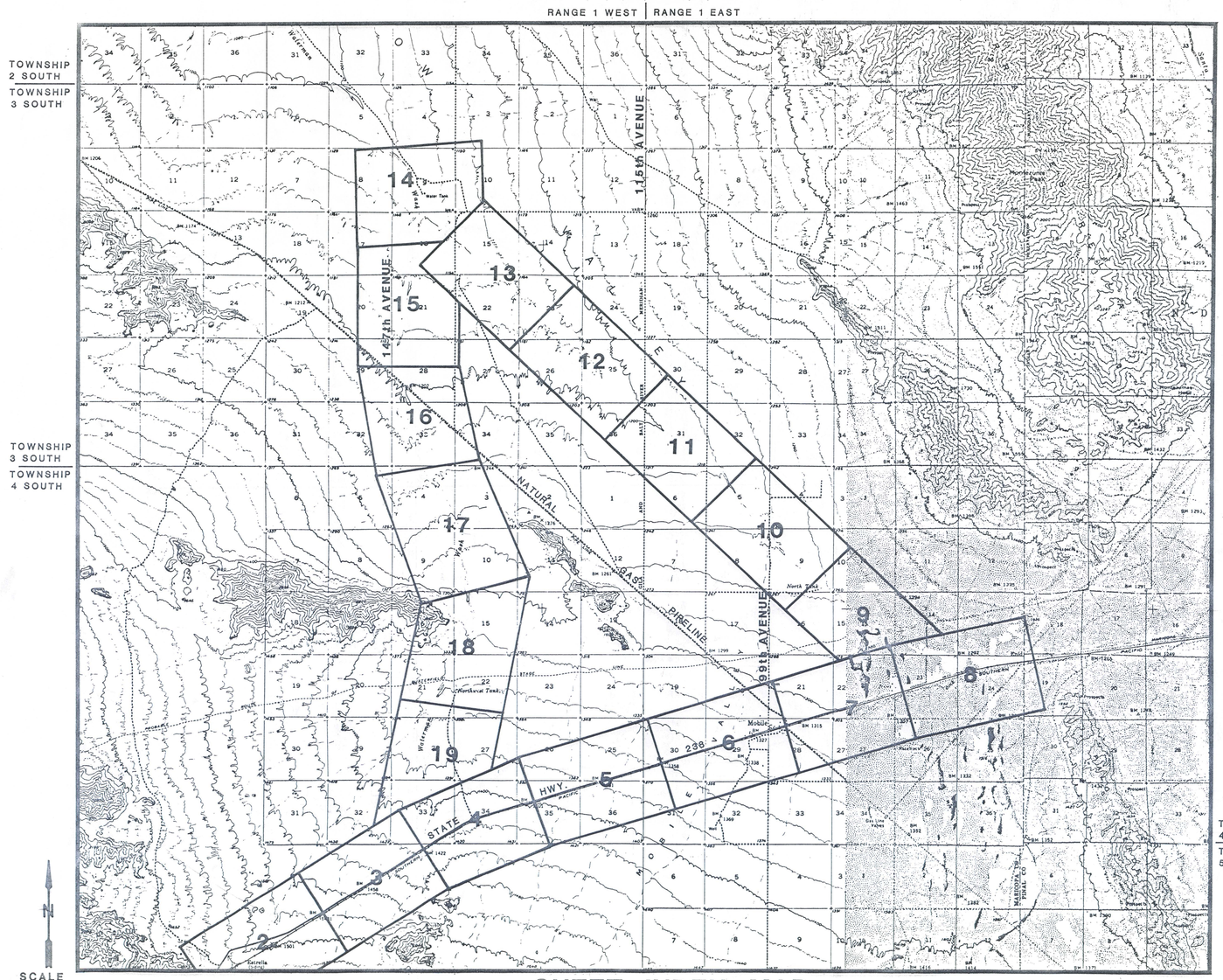
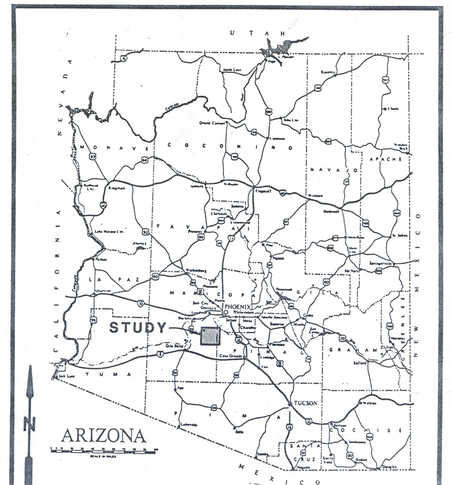
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

EAST AND WEST PRONGS AND SOUTHERN PACIFIC RAILROAD



SHEET INDEX MAP



VICINITY MAP

NOT ON FIRM MAP!!

PRELIMINARY

100 YEAR PEAK DISCHARGES	
EAST PRONG AT CONFLUENCE	9000 CFS
WEST PRONG AT CONFLUENCE	4800 CFS
EAST & WEST PRONGS COMBINED AT CONFLUENCE	13200 CFS

NOTE:
100-YEAR FLOW RATES ON SHEETS 9 THROUGH 19 ARE SHOWN AT SELECTED POINTS AND DO NOT REFLECT ALL THE FLOW RATE CHANGES USED FOR STUDY REACHES FROM ONE POINT TO THE NEXT. FOR A COMPLETE LISTING OF FLOW RATES FOR EACH CROSS SECTION, REFER TO THE HEC-2 PRINTOUT.

Registered Professional Engineer (Civil) 26537 G. SCOTT BUCHANAN Date Signed 3-20-91 ARIZONA, U.S.A.

STANLEY CONSULTANTS

ENGINEERS PLANNERS SURVEYORS

2929 EAST CAMELBACK SUITE #130
PHONEX, ARIZONA 85016 (602)912-6500

REVISED AUGUST 1991

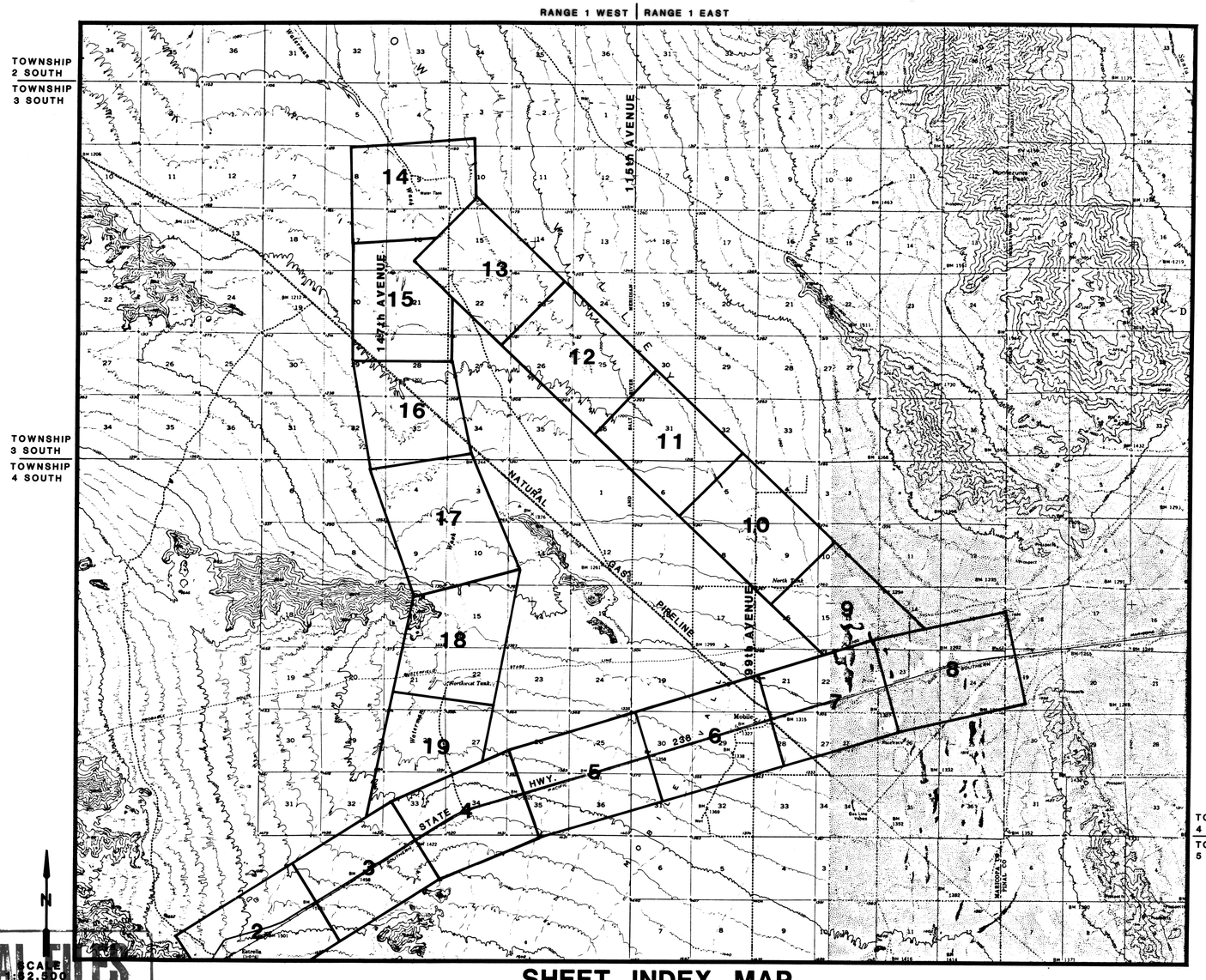
Waterman Wash (Stanley)

36

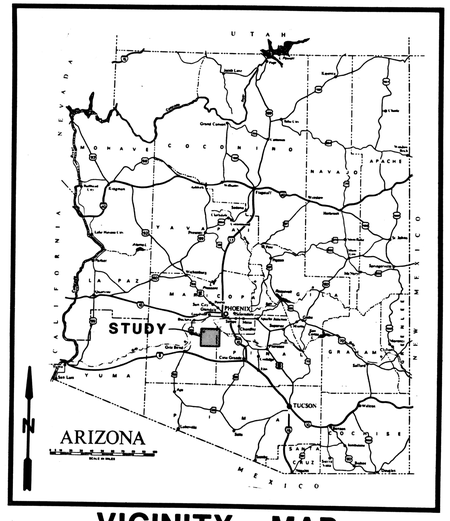
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

EAST AND WEST PRONGS AND SOUTHERN PACIFIC RAILROAD



SHEET INDEX MAP



VICINITY MAP

100 YEAR PEAK DISCHARGES	
EAST PRONG AT CONFLUENCE	9000 CFS
WEST PRONG AT CONFLUENCE	4800 CFS
EAST & WEST PRONGS COMBINED AT CONFLUENCE	13200 CFS

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Registered Professional Engineer
CERTIFICATE NO. 26827 (Civil)
G. SCOTT BUCHANAN
My Signature Expires
ARIZONA, U.S.A.

CENTRAL FILES
CASE
DRAWER # 314

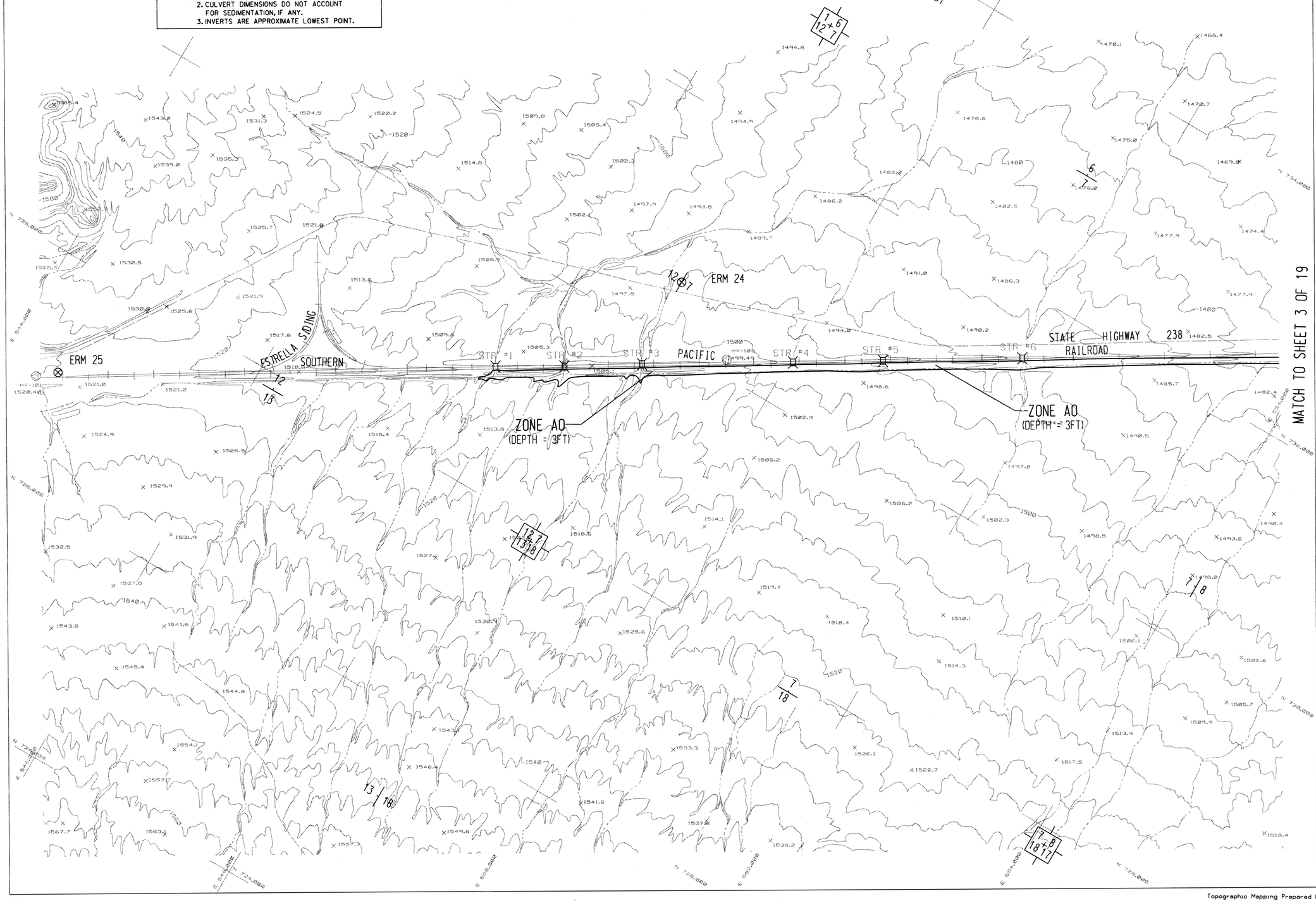
STANLEY CONSULTANTS
ENGINEERS PLANNERS SURVEYORS
2929 EAST CAMELBACK SUITE #130
PHOENIX, ARIZONA 85016 (602)912-6500

REVISED AUGUST 1991

WATERMAN WASH FLOOD
INSURANCE STUDY
STANLEY CONSULTANTS
1994
510
314

STR	MP	DESCRIPTION	INV.
1	21.75	2 - 8' X 4'-10" BOX	1503.4
2	21.90	2 - 36" CMP	1502.5
3	22.00	1 - 10'-4" X 4' BOX	1499.0
4	22.25	2 - 36" CMP	1493.1
5	22.40	1 - 58" X 35" CMP ARCH	1491.6
6	22.65	2 - 36" CMP	1485.0

NOTES: 1. MILE POST LOCATIONS ARE APPROXIMATE.
2. CULVERT DIMENSIONS DO NOT ACCOUNT FOR SEDIMENTATION, IF ANY.
3. INVERTS ARE APPROXIMATE LOWEST POINT.



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section 99 / HEC-2 Section; CU; Natural Water Surface Elev.; FP = 1256.79; FW = 1257.77; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7 ⊗

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

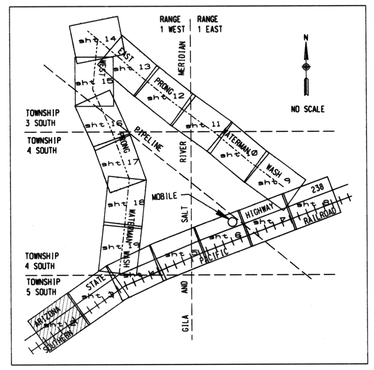
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 24	1497.04	B.L.M. brass cap on 3 inch pipe, 0.5' above ground, 1/4 corner Section 7, T. 5 S.-R. 1 W. & Section 12, T. 5 S.-R. 2 W., dated 1970. ERM is 105' North of the centerline of State Highway 238 (dirt) at milepost 22.05.
ERM 25	1520.88	U.S. Coast and Geodetic Survey benchmark brass cap in 6 inch iron pipe, flush with ground, stamped G 360 1967. ERM is 145' South of the centerline of State Highway 238 (dirt), 40' North of railroad tracks, approx. 2000' West of Estrella Siding.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

CERTIFICATE NO. 29837 G. SCOTT BUCHANAN Date Signed 5-30-94 Registered Professional Engineer (Civil) ARIZONA U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

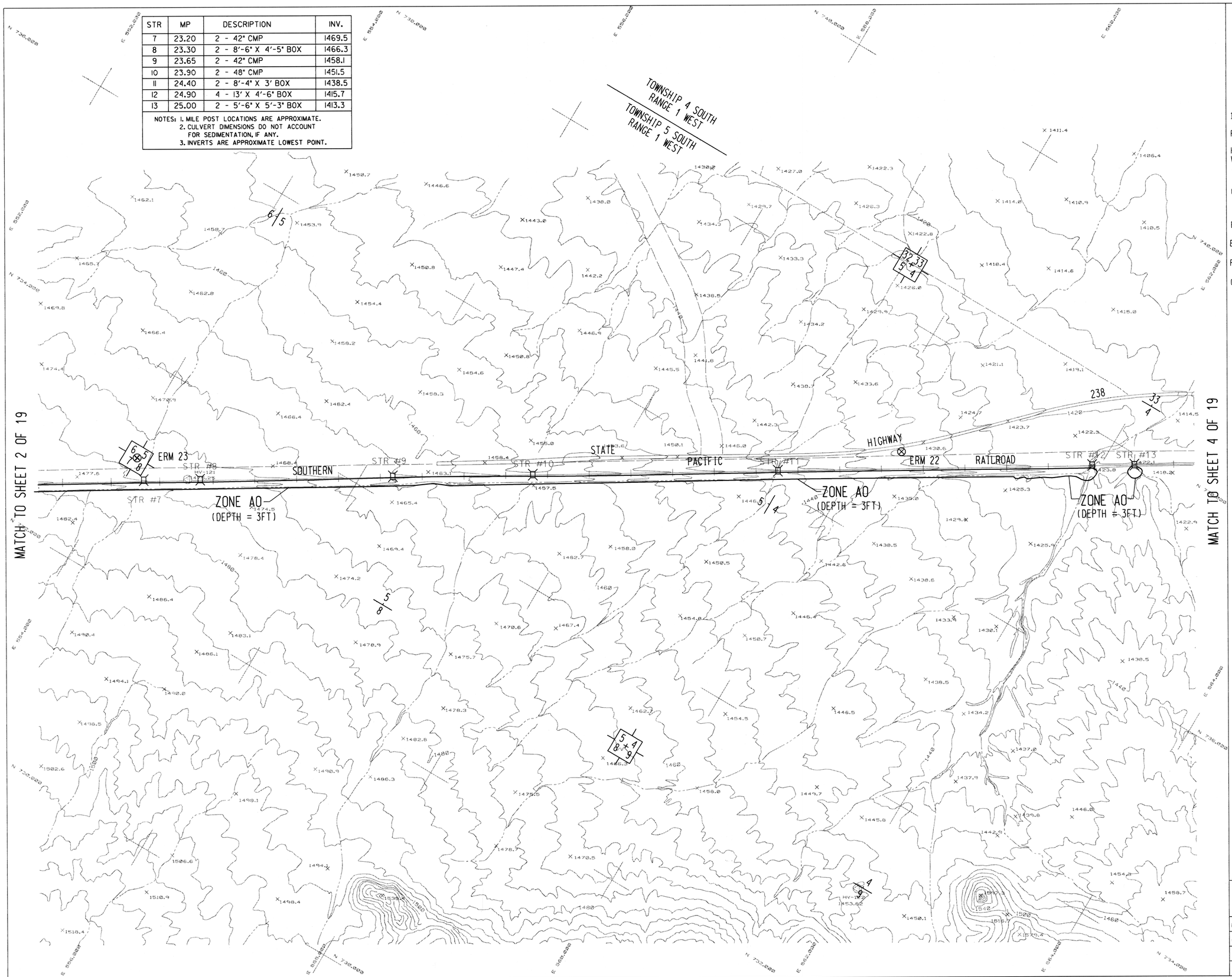
	BY	DATE		
DESIGN	GSB	8 / 91	SUBMITTED BY:	DATE
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 02 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date 8-23-89, CAPCO No. 5060-080289

STR	MP	DESCRIPTION	INV.
7	23.20	2 - 42" CMP	1469.5
8	23.30	2 - 8'-6" X 4'-5" BOX	1466.3
9	23.65	2 - 42" CMP	1458.1
10	23.90	2 - 48" CMP	1451.5
11	24.40	2 - 8'-4" X 3' BOX	1438.5
12	24.90	4 - 13' X 4'-6" BOX	1415.7
13	25.00	2 - 5'-6" X 5'-3" BOX	1413.3

NOTES: 1. MILE POST LOCATIONS ARE APPROXIMATE.
2. CULVERT DIMENSIONS DO NOT ACCOUNT FOR SEDIMENTATION, IF ANY.
3. INVERTS ARE APPROXIMATE LOWEST POINT.



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; Section Zero Point; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

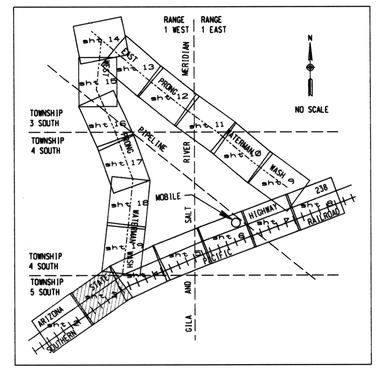
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 22	1430.95	A.D.O.T. Highway Division aluminum cap in concrete, flush with ground, with a 3" angle iron R.O.W. marker 2' to the East, stenciled P.O.C. 1258+41.28. ERM is at an angle point of an A.D.O.T. barbed wire fence that goes to the East and South, and is 40' South of the centerline of State Highway 238 at milepost 24.55; lying in the NW 1/4 of Section 4, T. 5 S.-R. 1 W.
ERM 23	1474.87	U.S. Department of Interior B.L.M. brass cap on 3 inch pipe, 0.3' above ground, corner Sections 5, 6, 7 & 8, T. 5 S.-R. 1 W., dated 1970. ERM is 70' North of centerline State Highway 238 (dirt) at milepost 23.35, and is 40' East of power pole no. 20.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY:	DATE
DESIGN	GSB	8 / 91		
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 03 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date 8-23-89, CAPCO No. 5060-080289

STR	MP	DESCRIPTION	INV.
13	25.0	2 - 5'-6" X 5'-3" BOX	1413.3
14	25.4	1 - 12'-8" X 4' BOX	1412.7
15	25.5	1 - 12'-8" X 2'-11" BOX	1413.3
16	25.7	2 - 60" X 38" CMP ARCH	1412.3
17	26.2	2 - 10'-1" X 4'-2" BOX	1403.5
18	26.5	2 - 8'-3" X 4'-10" BOX	1397.1
19	26.7	1 - 12' X 2'-6" BOX	1394.7

NOTES: 1. MILE POST LOCATIONS ARE APPROXIMATE.
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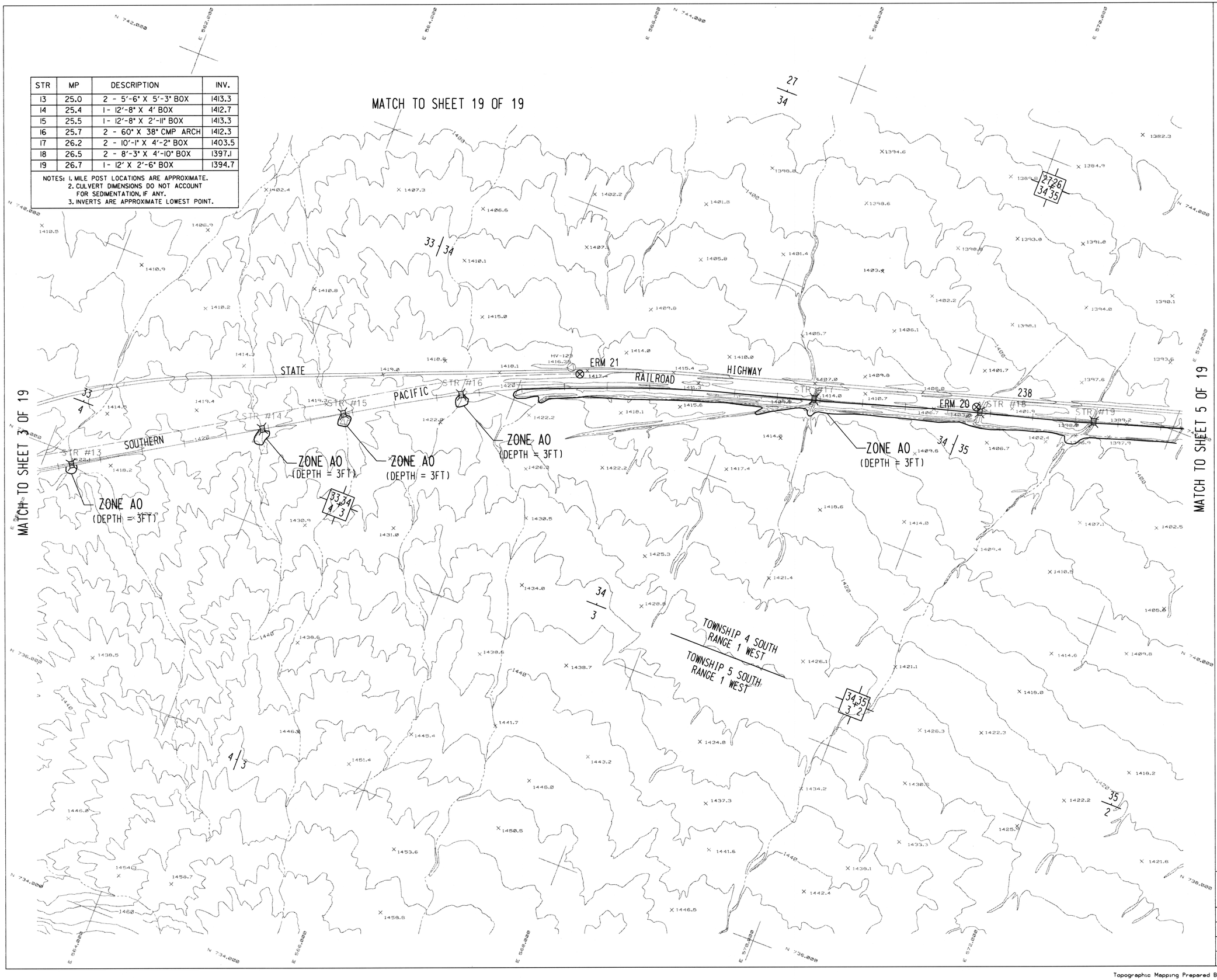


FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; Section Zero Point; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7 ⊗

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

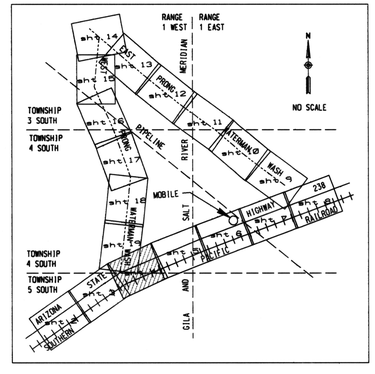
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 20	1401.40	U.S. Coast and Geodetic Survey benchmark brass cap set in the bottom of a 1 inch deep drill hole, on the top of the NW corner of Southern Pacific Railroad bridge no. 880.29. Brass cap is stamped K 279 1948. ERM is 3.9 miles West of Mobile Elementary School at milepost 26.60 of State Highway 238. ERM lies in the Northwest ¼ Section 35, T. 4 S.-R. 1 W.
ERM 21	1416.97	A.D.O.T. Highway Division aluminum cap in concrete, flush with ground, with a 3' high angle iron R.O.W. marker 2' to the East stenciled PC 1330+97.75. Cap is also stamped PC 1330+97.75. ERM is 45' South of the centerline of State Highway 238, 350' West of milepost 26; lying in the SW¼ of Section 34, T. 4 S.-R. 1 W.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer (CIVIL) 29887 G. SCOTT BUCHANAN Date Signed 5-20-94 ARIZONA, U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE		DATE
DESIGN	GSB	8 / 91	SUBMITTED BY:	
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 04 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date 8-23-89 , CAPCO No. 5060-080289

STR	MP	DESCRIPTION	INV.
20	27.00	1- 12' X 2'-6" BOX	1391.1
21	27.40	2 - 7'-10" X 4'-11" BOX	1382.9
22	27.75	2 - 7'-8" X 3'-10" BOX	1380.2
23	28.00	1- 9'-9" X 4' BOX	1372.7
24	28.30	3 - 27-1/2" CMP	1367.5
25	28.50	2 - 8'-8" X 3'-3" BOX	1361.8
26	28.70	2 - 33" CMP	1358.4
27	29.00	2 - 58" X 35" CMP ARCH	1352.6

NOTES: 1. MILE POST LOCATIONS ARE APPROXIMATE.
2. CULVERT DIMENSIONS DO NOT ACCOUNT FOR SEDIMENTATION, IF ANY.
3. INVERTS ARE APPROXIMATE LOWEST POINT.

MATCH TO SHEET 4 OF 19

MATCH TO SHEET 6 OF 19

STATE HIGHWAY 238

SOUTHERN PACIFIC RAILROAD

STR #20 STR #21 STR #22 STR #23 STR #24 STR #25 STR #26 STR #27

ERM 18

ERM 19

TOWNSHIP 4 SOUTH RANGE 1 WEST

TOWNSHIP 4 SOUTH RANGE 1 EAST

(115TH AVE ALIGNMENT)

MERIDIAN

GILA AND SALT RIVER

ZONE AO (DEPTH = 3FT)

ZONE AO (DEPTH = 3FT)

ZONE AO (DEPTH = 3FT)

ZONE AO (DEPTH = 3FT)

ZONE AO (DEPTH = 3FT)

ZONE AO (DEPTH = 3FT)

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

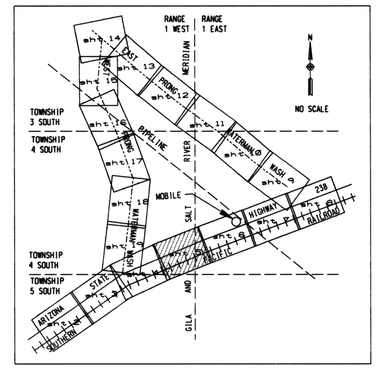
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 18	1363.34	A.D.O.T. Highway Division aluminum cap in concrete, flush with ground, with a 3" high angle iron R.O.W. marker, 2' to the East, stenciled P.O.T. 1478+18.61. ERM is 45' South of the centerline of State Highway 238 at milepost 28.70; lying on the Gila and Salt River Meridian on the Section line of Sections 25 & 30, T. 4 S.-R. 1 W.
ERM 19	1382.25	G.L.O. brass cap on 2 inch pipe, 0.8' above ground, corner Sections 25, 26, 35, 36, T. 4 S.-R. 1 W., dated 1916.

INDEX MAP



0 400 800

Scale: 1"= 400'

Contour Interval = 4 Feet

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE
DESIGN	GSB	8 / 91
DESIGN CHK.	TDC	8 / 91
PLANS	LMR	8 / 91
PLANS CHK.	TDC	8 / 91

SUBMITTED BY: DATE

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 05 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date 8-23-89, CAPCO No. 5060-080289

STR	MP	DESCRIPTION	INV.
27	29.00	2 - 58" X 35" CMP ARCH	1352.6
28	29.30	3 - 58" X 32" CMP ARCH	1347.1
29	29.50	2 - 3'-4" X 32" BOX	1344.5
30	29.80	1 - 10'-6" X 4'-3" BOX	1335.1
31	30.00	3 - 8'-11" X 3'-3" BOX	1331.6
32	30.50	2 - 8'8" X 33" BOX	1320.1
33	31.00	1 - 10'-3" X 6' BOX	1310.5

NOTES: 1. MILE POST LOCATIONS ARE APPROXIMATE.
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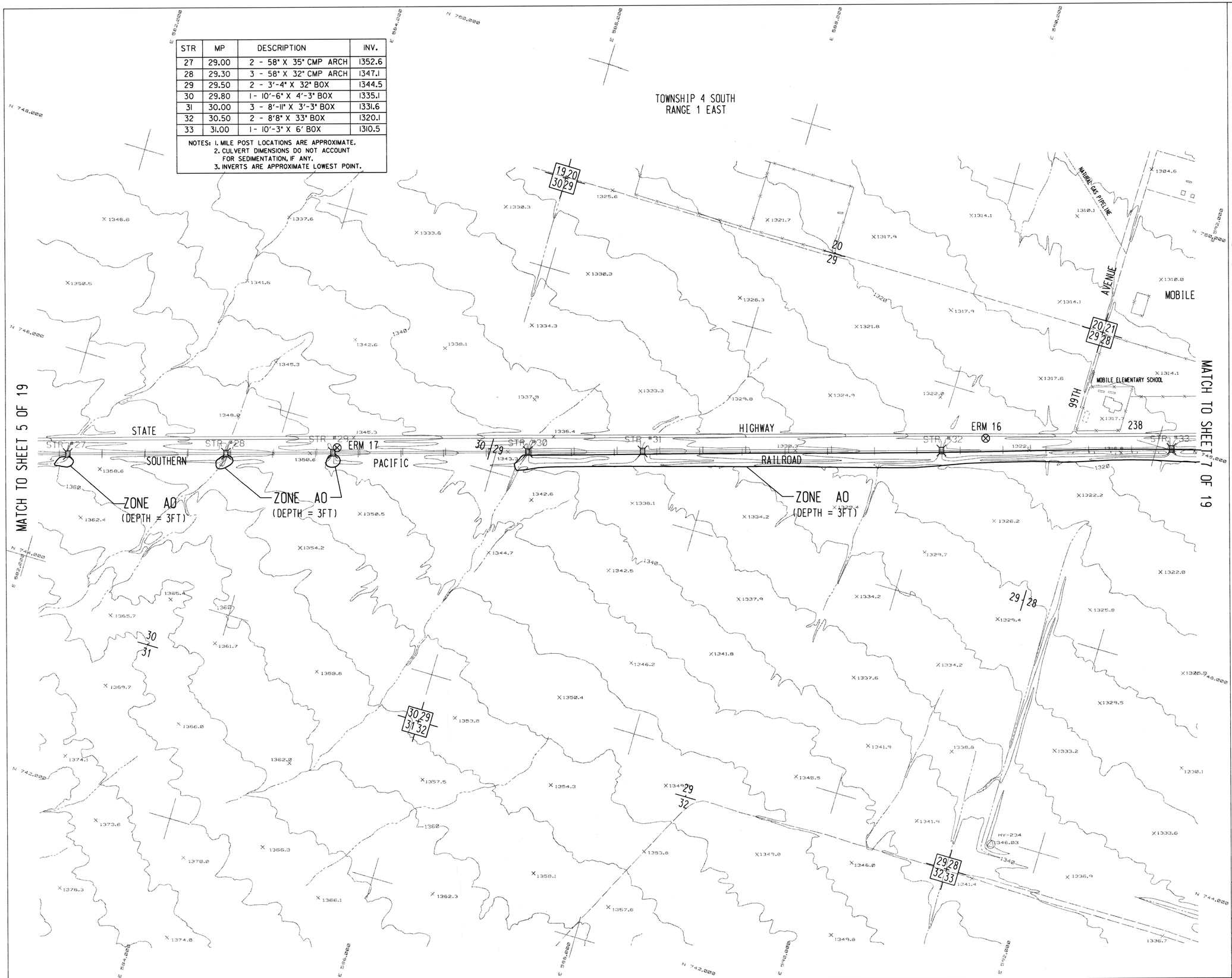


FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; Section Zero Point; Natural Water Surface Elev. FP = 1256.79; Encroached Water Surface Elev. FW = 1257.77

Elevation Reference Marks — ERM7 ⊗

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

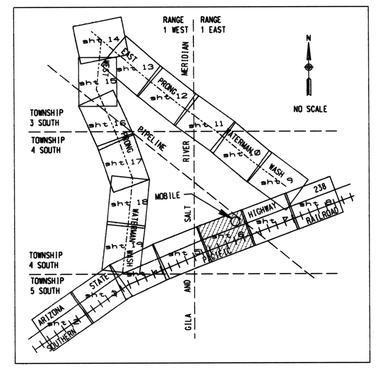
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 16	1323.44	A.D.O.T. Highway Division aluminum cap in concrete, flush with ground, with a 3' high angle iron R.O.W. marker 2' to the East stenciled P.O.T. 1580+00. ERM is 45' South of the centerline of State Highway 238 at milepost 30.60, 900' West of Mobile Elementary School. ERM lies in the Northeast 1/4 of Section 29, T. 4 S.-R. 1 E.
ERM 17	1350.40	U.S. Coast and Geodetic Survey benchmark brass cap set in the top of the NE corner of Southern Pacific Railroad bridge no. 882.91. Brass cap is stamped V 279 1948. ERM is 1.3 miles West of Mobile Elementary School at milepost 29.50 of State Highway 238. ERM lies in the East half of Section 30, T. 4 S.-R. 1 E.

INDEX MAP



0 400 800

Scale: 1"=400'

Contour Interval = 4 Feet

Registered Professional Engineer (Civil) — CERTIFICATE NO. 30937 — G. SCOTT BUCHANAN — My Signed 3-25-94 — ARIZONA, U.S.A.

PREPARED BY:	STANLEY CONSULTANTS 2929 East Camelback Road, Suite 130 Phoenix, Arizona 85016			
DESIGN	BY: GSB	DATE: 8 / 91	SUBMITTED BY:	DATE
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 06 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date 8-23-89 . CAPCO No. 5060-080289

STR	MP	DESCRIPTION	INV.
33	31.00	1 - 10'-3" X 6' BOX	1310.5
34	31.00	4 - 13'-10" X 3'-6" BOX	1312.5
35	31.20	1 - 10'-4" X 34" BOX	1309.5
36	31.50	1 - 12' X 2'-6" BOX	1303.9
37	31.80	2 - 5'-6" X 30" BOX	1298.9
38	32.10	1 - 10'-3" X 4'-6" BOX	1294.2
39	32.30	3 - 10'-10" X 5'-1" BOX	1293.4
40	32.40	2 - 8'-2" X 3'-6" BOX	1295.3
41	32.70	4 - 40" CMP	1295.7

NOTES: 1. MILE POST LOCATIONS ARE APPROXIMATE.
2. CULVERT DIMENSIONS DO NOT ACCOUNT FOR SEDIMENTATION, IF ANY.
3. INVERTS ARE APPROXIMATE LOWEST POINT.

MATCH TO SHEET 6 OF 19

MATCH TO SHEET 8 OF 19

MATCH TO SHEET 9 OF 19

TOWNSHIP 4 SOUTH
RANGE 1 EAST

MOBILE

STATE HIGHWAY 238

SOUTHERN PACIFIC RAILROAD

STR #33 STR #34 STR #35 STR #36 STR #37 STR #38 STR #39 STR #40 STR #41

ERM 15

ERM 12

ZONE AO (DEPTH = 3FT)

ZONE AO (DEPTH = 3FT)

NATURAL GAS PIPELINE

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section, HEC-2 Section, Section Zero Point, Natural Water Surface Elev., FP = 1256.74, FW = 1257.77, Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

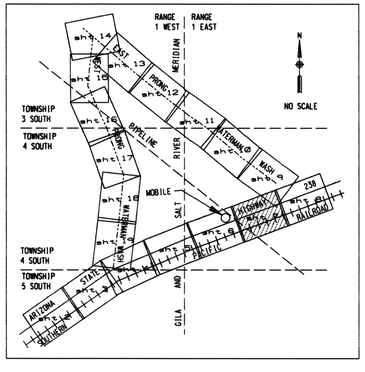
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 12	1284.72	War Department, Army Corps of Engineers brass cap set on top of a 6 inch diameter concrete pillar, 0.6' above ground. Brass cap is stamped benchmark A 30 1948. ERM is 1.3' South of a G. L. O. brass cap on a 2 inch pipe, corner Sections 14, 15, 22, 23, T. 4 S.-R. 1 E.
ERM 15	1301.21	U. S. Department of Interior Geological Survey benchmark brass cap set on top of a concrete post, 1.0' above ground. Brass cap is stamped MF 1948 1301, 1302 1939, with a metal witness post 2.2' East. ERM is 33' South of the Southern Pacific Railroad tracks at milepost 32.10 of State Highway 238, 1.2 miles East of Mobile Elementary School. ERM lies in the Southwest¼ of Section 22, T. 4 S.-R. 1 E.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer (Civil) CERTIFICATE NO. 25837 G. SCOTT BUCHANAN Date Signed 7-3-94 ARIZONA, U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY:	DATE	SHEET
DESIGN	GSB	8 / 91			07
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE	
PLANS	LMR	8 / 91	APPROVED BY:	DATE	OF 19
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER		

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 9-27-89 , CAPCO No. 5060-080289

MATCH TO SHEET 9 OF 19

STR	MP	DESCRIPTION	INV.
42	33.10	2 - 59" X 36" CMP ARCH	1291.6
43	33.30	1- 2' X 2' BOX	1292.3
44	33.40	2 - 4' X 2'-6" BOX	1291.0
45	33.70	1- 3' X 1'-6" BOX	1291.7
46	33.80	2 - 4' X 2'-6" BOX	1289.9

NOTES: 1. MILE POST LOCATIONS ARE APPROXIMATE.
2. CULVERT DIMENSIONS DO NOT ACCOUNT FOR SEDIMENTATION, IF ANY.
3. INVERTS ARE APPROXIMATE LOWEST POINT.

MATCH TO SHEET 7 OF 19

ERM 12

ERM 13

ERM 14

TOWNSHIP 4 SOUTH
RANGE 1 EAST

STATE HIGHWAY

SOUTHERN PACIFIC RAILROAD

STR #42 STR #43 STR #44 STR #45 STR #46

ZONE AO (DEPTH = 3FT)

ZONE AO (DEPTH = 3FT)

PROSPECT

ENID

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section 99 HEC-2 Section; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

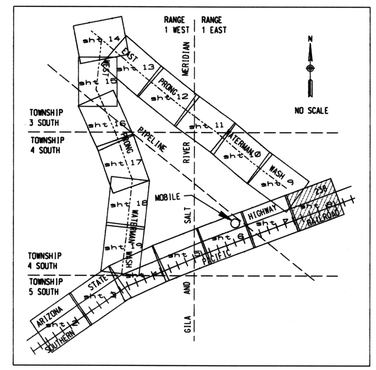
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 12	1284.72	War Department, Army Corps of Engineers brass cap set on top of a 6 inch diameter concrete pillar, 0.6' above ground. Brass cap is stamped benchmark A 30 1948. ERM is 1.3' South of a G. L. O. brass cap on a 2 inch pipe, corner Sections 14, 15, 22, 23, T. 4 S.-R. 1 E.
ERM 13	1292.91	G. L. O. brass cap on 2 inch pipe, 1.1' above ground, corner Sections 13, 14, 23, 24, T. 4 S.-R 1 E., dated 1916.
ERM 14	1287.49	War Department, Army Corps of Engineers brass cap on 6 inch diameter concrete pillar, 0.2' above ground. Brass cap is stamped benchmark C 30 1948. ERM is 91' North of the centerline of State Highway 238, 3' East of the barbed wire fence that makes the Maricopa-Pinal County line. ERM is also 136' South of a G.L.O. brass cap for the closing corner of Sections 13 & 24, T. 4 S.-R. 1 E.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

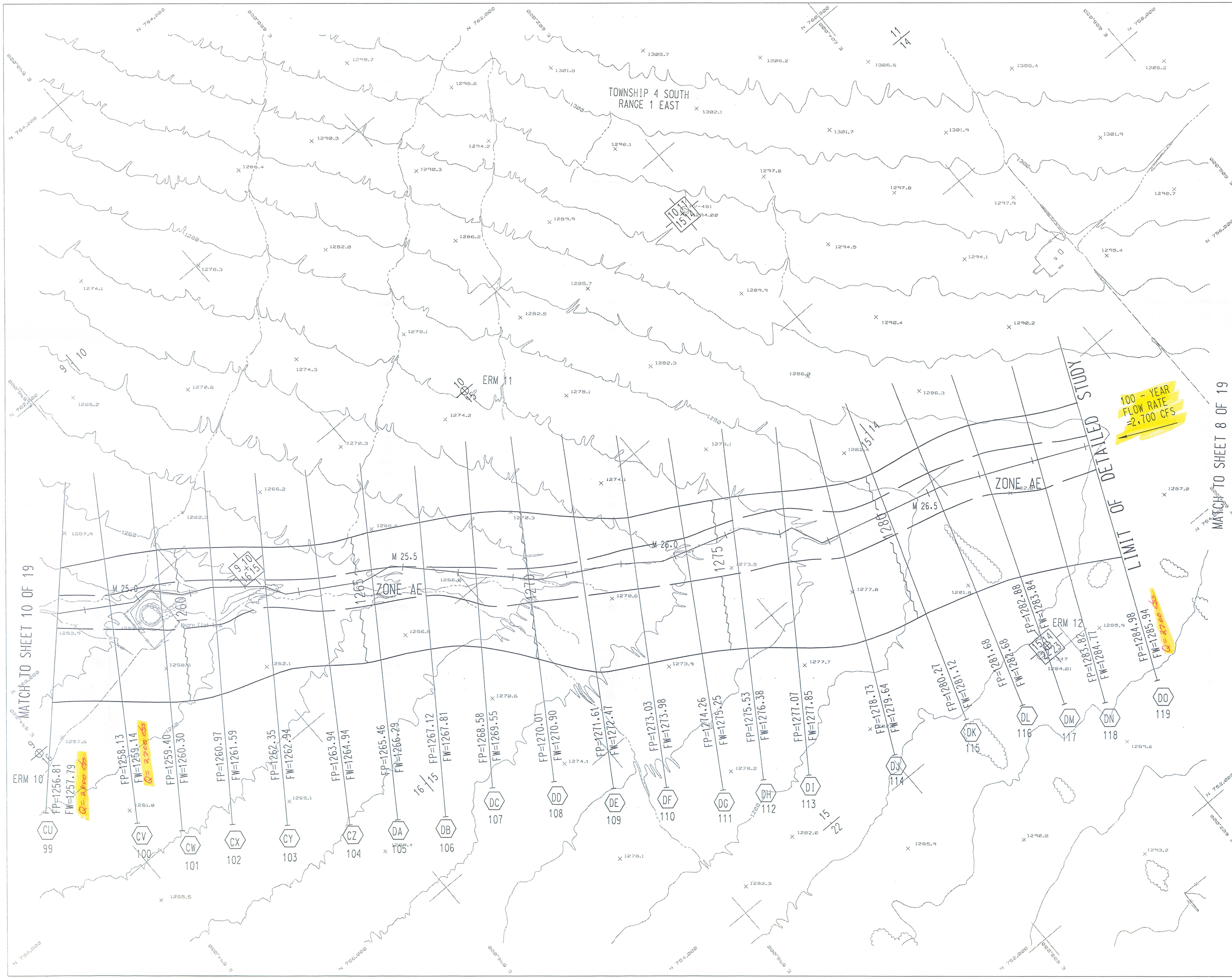
Registered Professional Engineer (Civil) CERTIFICATE NO. 26837 G. SCOTT BUCHANAN Date Signed 7-24-91 ARIZONA, U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE		
DESIGN	GSB	8 / 91	SUBMITTED BY:	DATE
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 08 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 9-27-89 , CAPCO No. 5060-880289



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary	
Floodway Limit	
Hydraulic Base Line With River Mile	M26.0 M26.5
Cross Section	FIS Profile Section; HEC-2 Section; CU; 99; FP = 1256.79 Natural Water Surface Elev.; FW = 1257.77 Encroached Water Surface Elev.; Section Zero Point
Elevation Reference Marks	ERM7 ⊗
Base Flood Elevations	1295
Flood Insurance Zone	ZONE AO ZONE AE
Culvert or Bridge	STR #1

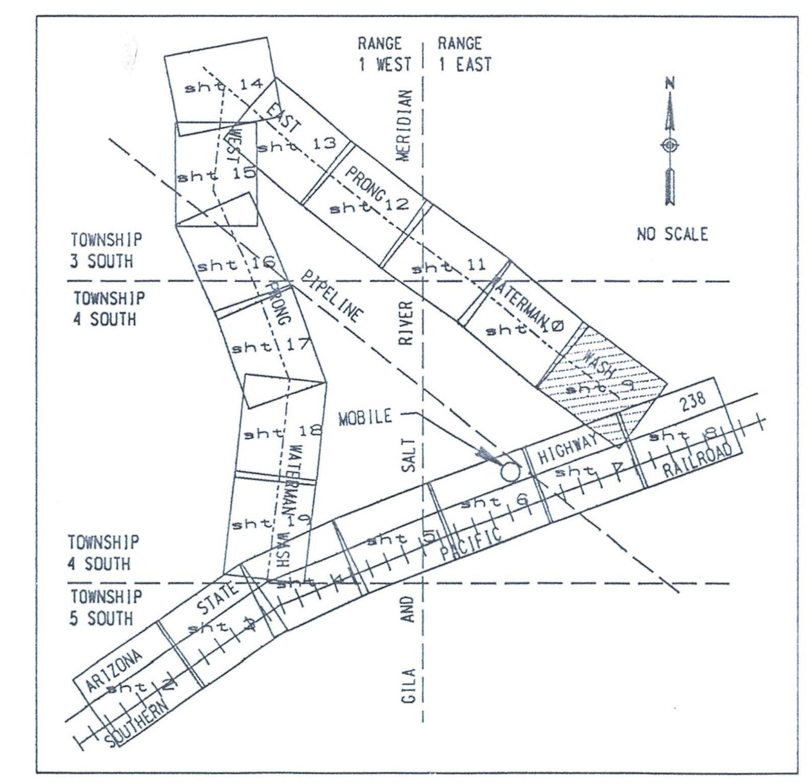
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 10	1260.56	1/2 inch rebar in concrete, 0.2' above ground, approx. 245' South of 1/4 corner Sections 9 & 16, T. 4 S.-R. 1 E. ERM is also 15' South of the centerline of an unnamed dirt road and 4' North of a 7' mesquite tree.
ERM 11	1277.45	G. L. O. brass cap on 1 inch pipe, 0.9' above ground, 1/4 corner Sections 10 & 15, T. 4 S.-R. 1 E., dated 1916.
ERM 12	1284.72	War Department, Army Corps of Engineers brass cap set on top of a 6 inch diameter concrete pillar, 0.6' above ground. Brass cap is stamped benchmark A 30 1948. ERM is 1.3' South of a G. L. O. brass cap on a 2 inch pipe, corner Sections 14, 15, 22, 23, T. 4 S.-R. 1 E.

PRELIMINARY

INDEX MAP



G. SCOTT BUCHANAN
Date Signed 3-25-94
ARIZONA, U.S.A.

0 400 800

Scale: 1"=400'

Contour Interval = 4 Feet

PREPARED BY: STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE		
DESIGN	GSB	8 / 91	SUBMITTED BY: DATE	SHEET 09 OF 19
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY: DATE	
PLANS	LMR	8 / 91	APPROVED BY: DATE	
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 9-27-89 , CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

TOWNSHIP 4 SOUTH
RANGE 1 EAST

ERM 11

ZONE AE

ZONE AO

Negro Flat Tank

100 - YEAR FLOW RATE =2,700 CFS

LIMIT OF DETAILED STUDY

MATCH TO SHEET 10 OF 19

MATCH TO SHEET 8 OF 19

CU 99	FP=1256.81 FW=1257.79		
CV 100	FP=1258.13 FW=1259.14		
CW 101	FP=1259.40 FW=1260.30		
CX 102	FP=1260.97 FW=1261.59		
CY 103	FP=1262.35 FW=1262.94		
CZ 104	FP=1263.94 FW=1264.94		
DA 105	FP=1265.46 FW=1266.29		
DB 106	FP=1267.12 FW=1267.81		
DC 107	FP=1268.58 FW=1269.55		
DD 108	FP=1270.01 FW=1270.90		
DE 109	FP=1271.61 FW=1272.47		
DF 110	FP=1273.03 FW=1273.98		
DG 111	FP=1274.26 FW=1275.25		
DH 112	FP=1275.53 FW=1276.38		
DI 113	FP=1277.07 FW=1277.85		
DJ 114	FP=1278.73 FW=1279.64		
DK 115	FP=1280.27 FW=1281.12		
DL 116	FP=1281.98 FW=1282.89		
DM 117	FP=1282.88 FW=1283.84		
DN 118	FP=1283.82 FW=1284.77		
DO 119	FP=1284.98 FW=1285.94		

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Encroached Water Surface Elev.; Section Zero Point

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 10	1260.56	1/2inch rebar in concrete, 0.2' above ground, approx. 245' South of 1/4 corner Sections 9 & 16, T. 4 S.-R. 1 E. ERM is also 15' South of the centerline of an unnamed dirt road and 4' North of a 7" mesquite tree.
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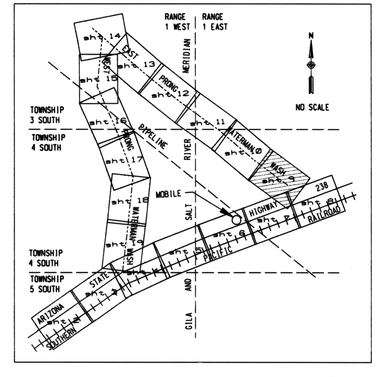
INDEX MAP



0 400 800

Scale: 1"=400'

Contour Interval = 4 Feet

Registered Professional Engineer — Certificate No. 28837 — G. SCOTT BUCHANAN — Date Signed — ARIZONA, U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE
DESIGN	GSB	8 / 91
DESIGN CHK.	TDC	8 / 91
PLANS	LMR	8 / 91
PLANS CHK.	TDC	8 / 91

SUBMITTED BY: DATE

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 09 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 9-27-89, CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

MATCH TO SHEET 11 OF 19

MATCH TO SHEET 9 OF 19

TOWNSHIP 3 SOUTH RANGE 1 EAST

TOWNSHIP 4 SOUTH RANGE 1 EAST

AIRSTRIP

99TH AVENUE

100 - YEAR FLOW-RATE =2,900 CFS

HV-456 1255.72

ERM 9

ERM 10

ZONE AE

ZONE AE

M 23.0

M 23.5

M 24.0

M 24.5

Q= 3400 cfs

Q= 3300 cfs

Q= 3300 cfs

Q= 3400 cfs

Q= 3300 cfs

Q= 3000 cfs

Q= 3000 cfs

Q= 2900 cfs

Q= 2900 cfs

Q= 2900 cfs

	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU
FP	1226.66	1228.14	1229.17	1230.29	1231.61	1232.86	1234.09	1235.56	1237.06	1238.77	1240.51	1242.20	1243.62	1245.12	1246.45	1247.69	1249.27	1250.63	1252.06	1253.78	1255.32	1256.81
FW	1227.58	1229.05	1230.04	1231.16	1232.47	1233.70	1234.92	1236.42	1237.96	1239.69	1241.45	1243.13	1244.54	1246.01	1247.45	1248.65	1250.16	1251.55	1252.92	1254.75	1256.28	1257.79
	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99

LEGEND

- 100-Yr Floodplain Boundary
- Floodway Limit
- Hydraulic Base Line With River Mile — M26.0 — M26.5
- Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.
- Elevation Reference Marks — ERM7
- Base Flood Elevations — 1295
- Flood Insurance Zone — ZONE AO ZONE AE
- Culvert or Bridge — STR #1

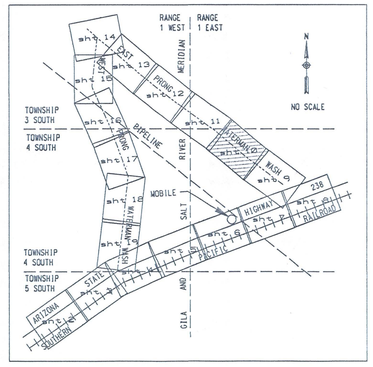
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 9	1240.82	Chiseled 2 inch by 2 inch square on top of the Northwest corner of the west wingwall of an abandoned concrete cattle guard structure. ERM is 8' Northeast of a G. L. O. brass cap, 2' below ground, corner Sections 4, 5, 8, 9, T. 4 S.-R. 1 E., being 15' East of the centerline of 99th Avenue.
ERM 10	1260.56	½inch rebar in concrete, 0.2' above ground, approx 245' South of the ¼ corner Sections 9 & 16, T. 4 S.-R. 1 E. ERM is also 15' South of the centerline of an unnamed dirt road and 4' North of a 7' mesquite tree.

PRELIMINARY

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Professional Engineer Certification 25827 G. SCOTT BUCHANAN Date Signed Arizona, U.S.A.

PREPARED BY:

STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE		
DESIGN	GSB	8 / 91	SUBMITTED BY:	DATE
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 10 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 8-23-89 , CAPCO No. 5060-880289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

MATCH TO SHEET 11 OF 19

MATCH TO SHEET 9 OF 19

TOWNSHIP 3 SOUTH RANGE 1 EAST

TOWNSHIP 4 SOUTH RANGE 1 EAST

AIRSTRIP

99TH AVENUE

100 - YEAR FLOW RATE =2,900 CFS

ZONE AE

ZONE AE

ERM 9

ERM 10

HV-456 1255.72

M 23.0

M 23.5

M 24.0

M 24.5

FP=1226.66 FW=1227.58

FP=1228.14 FW=1229.05

FP=1229.17 FW=1230.04

FP=1230.29 FW=1231.16

FP=1231.61 FW=1232.47

FP=1232.86 FW=1233.70

FP=1234.09 FW=1234.92

FP=1235.56 FW=1236.42

FP=1237.06 FW=1237.96

FP=1238.77 FW=1239.69

FP=1240.51 FW=1241.45

FP=1242.26 FW=1243.13

FP=1243.62 FW=1244.54

FP=1245.12 FW=1246.07

FP=1246.45 FW=1247.45

FP=1247.69 FW=1248.65

FP=1249.27 FW=1250.16

FP=1250.63 FW=1251.55

FP=1252.06 FW=1252.92

FP=1253.78 FW=1254.75

FP=1255.32 FW=1256.28

FP=1256.81 FW=1257.79

BZ 78 · CA 79 · CB 80 · CC 81 · CD 82 · CE 83 · CF 84 · CG 85 · CH 86 · CI 87 · CJ 88 · CK 89 · CL 90 · CM 91 · CN 92 · CO 93 · CP 94 · CQ 95 · CR 96 · CS 97 · CT 98 · CU 99

LEGEND

- 100-Yr Floodplain Boundary
- Floodway Limit
- Hydraulic Base Line With River Mile — M26.0 — M26.5
- Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.
- Elevation Reference Marks — ERM7
- Base Flood Elevations — 1295
- Flood Insurance Zone — ZONE AO ZONE AE
- Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
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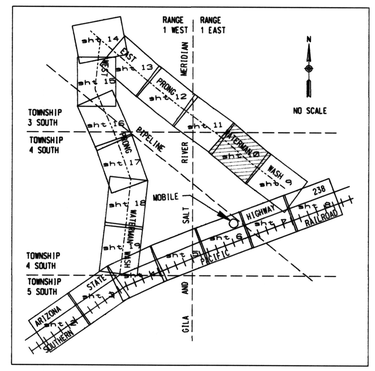
ERM 10	1260.56	½-inch rebar in concrete, 0.2' above ground, approx 245' South of the ¼ corner Sections 9 & 16, T. 4 S.-R. 1 E. ERM is also 15' South of the centerline of an unnamed dirt road and 4' North of a 7' mesquite tree.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer (Civil) CERTIFICATE 28637 G. SCOTT BUCHANAN Date Signed ARIZONA, U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY:	DATE	SHEET
DESIGN	GSB	8 / 91			10
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE	
PLANS	LMR	8 / 91	APPROVED BY:	DATE	
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER		OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 8-23-89 , CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Encroached Water Surface Elev.; Section Zero Point

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

Culvert or Bridge — STR #1

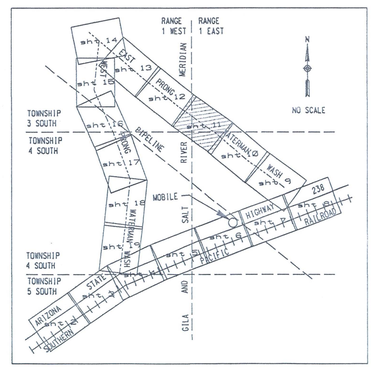
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 6	1203.71	G. L. O. brass cap on 3 inch pipe, 1.2' above ground, corner of Sections 25 & 36, T. 3 S.-R. 1 W., and Sections 30 & 31, T. 3 S.-R. 1 E., dated 1914.
ERM 7	1220.17	G. L. O. brass cap on 1 inch pipe, 0.7' above ground, 1/4 corner Sections 31 & 32, T. 3 S.-R. 1 E., dated 1916.
ERM 8	1228.81	G. L. O. brass cap on 1 inch pipe, 0.75' above ground, 1/4 corner Section 32, T. 3 S.-R. 1 E., and Section 5, T. 4 S.-R. 1 E., dated 1916.

PRELIMINARY

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer — CERTIFICATE NO. 20537 — G. SCOTT BUCHANAN — Date Signed 3-27-92 — ARIZONA, U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE			
DESIGN	GSB	8 / 91	SUBMITTED BY:	DATE	SHEET 11 OF 19
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE	
PLANS	LWR	8 / 91	APPROVED BY:	DATE	
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER		

MATCH TO SHEET 12 OF 19

MATCH TO SHEET 10 OF 19

100 - YEAR FLOWRATE = 4,500 CFS

ZONE AE

ERM 6

ERM 7

ERM 8

115TH AVENUE ALIGNMENT

TOWNSHIP 3 SOUTH RANGE 1 EAST

TOWNSHIP 4 SOUTH RANGE 1 EAST

TOWNSHIP 3 SOUTH RANGE 1 WEST

TOWNSHIP 4 SOUTH RANGE 1 WEST

FP=1198.18 FW=1199.16	FP=1199.31 FW=1200.31	FP=1200.48 FW=1201.48	FP=1201.66 FW=1202.66	FP=1202.98 FW=1203.92	FP=1204.27 FW=1205.26	FP=1205.39 FW=1206.38	FP=1206.64 FW=1207.55	FP=1207.88 FW=1208.76	FP=1209.17 FW=1210.07	FP=1210.56 FW=1211.46	FP=1211.82 FW=1212.77	FP=1213.24 FW=1214.13	FP=1214.53 FW=1215.41	FP=1215.82 FW=1216.73	FP=1217.10 FW=1218.00	FP=1218.34 FW=1219.23	FP=1219.71 FW=1220.66	FP=1221.23 FW=1222.17	FP=1222.65 FW=1223.54	FP=1224.05 FW=1224.85	FP=1225.28 FW=1226.23	FP=1226.66 FW=1227.58
BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ
56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 11-7-89 , CAPCO No. 5080-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; Natural Water Surface Elev. FP = 1256.79; FW = 1257.77; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

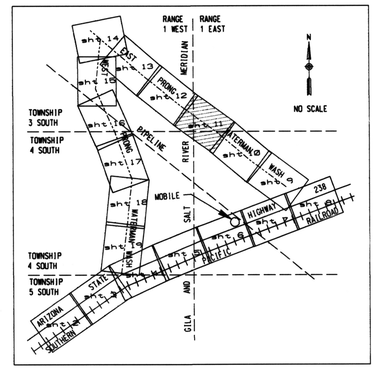
Culvert or Bridge — STR #1

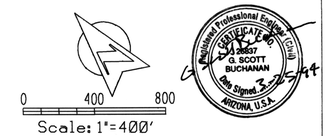
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 6	1203.71	C. L. O. brass cap on 3 inch pipe, 1.2' above ground, corner of Sections 25 & 36, T. 3 S.-R. 1 W., and Sections 30 & 31, T. 3 S.-R. 1 E., dated 1914.
ERM 7	1220.17	C. L. O. brass cap on 1 inch pipe, 0.7' above ground, 1/4 corner Sections 31 & 32, T. 3 S.-R. 1 E., dated 1916.
ERM 8	1228.81	C. L. O. brass cap on 1 inch pipe, 0.75' above ground, 1/4 corner Section 32, T. 3 S.-R. 1 E., and Section 5, T. 4 S.-R. 1 E., dated 1916.

INDEX MAP





0 400 800

Scale: 1"=400'

Contour Interval = 4 Feet

PREPARED BY: STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE		
DESIGN	GSB	8 / 91	SUBMITTED BY: DATE	SHEET 11
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY: DATE	
PLANS	LMR	8 / 91	APPROVED BY: DATE	
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	OF 19

MATCH TO SHEET 12 OF 19

MATCH TO SHEET 10 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 11-7-89 , CAPCO No. 5060-080289

MATCH TO SHEET 13 OF 19

MATCH TO SHEET 11 OF 19

ZONE AE

ZONE AE

ZONE AE

ERM 4

ERM 5

ERM 6

TOWNSHIP 3 SOUTH RANGE 1 WEST

TOWNSHIP 3 SOUTH RANGE 1 EAST

115TH AVE ALLIGNMENT

M 18.5

M 19.0

M 19.5

M 20.0

M 20.5

HV-562
1203.56

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section; Section Zero Point; FP = 1256.74; FW = 1257.77; Natural Water Surface Elev.; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

Culvert or Bridge — STR #1

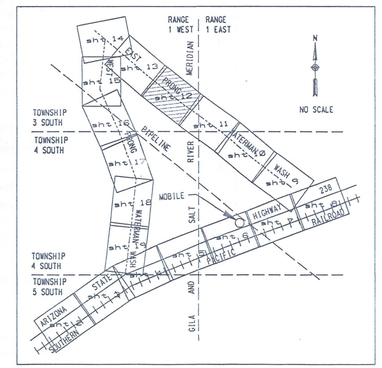
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 4	1184.70	G. L. O. brass cap on 1 inch pipe, 1.15' above ground, 1/4 corner Sections 23 & 26, T. 3 S.-R. 1 W., dated 1916.
ERM 5	1190.65	G. L. O. brass cap on 1 inch pipe, 0.8' above ground, 1/4 corner Sections 25 & 26, T. 3 S.-R. 1 W., dated 1916.
ERM 6	1203.71	G. L. O. brass cap on 3 inch pipe, 1.2' above ground, corner of Sections 25 & 36, T. 3 S.-R. 1 W. and Sections 30 & 31, T. 3 S.-R. 1 E., dated 1914.

PRELIMINARY

INDEX MAP



0 400 800

Scale: 1"=400'

Contour Interval = 4 Feet

REGISTERED LAND SURVEYOR — ARIZONA — 26837 — G. SCOTT BUCHANAN — Date Signed 3-31-94

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY: DATE	SHEET
DESIGN	GSB	8 / 91		12
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY: DATE	
PLANS	LWR	8 / 91	APPROVED BY: DATE	OF 19
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 11-7-84 CAPCO No. 5060-880289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79, FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7 ⊗

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 4	1184.70	G. L. O. brass cap on 1 inch pipe, 1.15' above ground, 1/4 corner Sections 23 & 26, T. 3 S.-R. 1 W., dated 1916.
ERM 5	1190.65	G. L. O. brass cap on 1 inch pipe, 0.8' above ground, 1/4 corner Sections 25 & 26, T. 3 S.-R. 1 W., dated 1916.
ERM 6	1203.71	G. L. O. brass cap on 3 inch pipe, 1.2' above ground, corner of Sections 25 & 36, T. 3 S.-R. 1 W. and Sections 30 & 31, T. 3 S.-R. 1 E., dated 1914.

MATCH TO SHEET 13 OF 19

MATCH TO SHEET 11 OF 19

TOWNSHIP 3 SOUTH RANGE 1 WEST

TOWNSHIP 3 SOUTH RANGE 1 EAST

115TH AVE ALLIGNMENT

ZONE AE

ERM 4

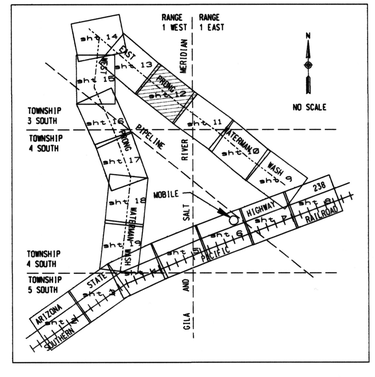
ERM 5

ERM 6

HV-562 1203.56

	FP	FW
AI	1174.59	1175.48
AJ	1175.83	1176.75
AK	1176.89	1177.88
AL	1177.83	1178.82
AM	1178.77	1179.71
AN	1179.94	1180.93
AO	1180.97	1181.96
AP	1182.25	1183.19
AQ	1183.48	1184.47
AR	1184.53	1185.49
AS	1185.96	1186.92
AT	1187.11	1188.04
AU	1188.12	1189.06
AV	1189.14	1190.11
AW	1190.29	1191.24
AX	1191.36	1192.32
AY	1192.16	1193.15
AZ	1192.94	1193.80
BA	1193.93	1194.73
BB	1195.11	1196.04
BC	1197.16	1198.02
BD	1198.18	1199.16

INDEX MAP



0 400 800

Scale: 1"=400'

Contour Interval = 4 Feet

Registered Professional Engineer — 26837 G. SCOTT BUCHANAN — Date Signed — ARIZONA U.S.A.

PREPARED BY:	STANLEY CONSULTANTS 2929 East Camelback Road, Suite 130 Phoenix, Arizona 85016			
DESIGN	GSB	8 / 91	SUBMITTED BY: DATE	SHEET 12 OF 19
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY: DATE	
PLANS	LMR	8 / 91	APPROVED BY: DATE	
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 11-7-84 FCAPCO No. 5060-000289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

TOWNSHIP 3 SOUTH
RANGE 1 WEST

MATCH TO SHEET 14 OF 19

MATCH TO SHEET 12 OF 19

MATCH TO SHEET 14

ZONE AE

ERM 3

HV-673
1186.83

HV-672
1157.14

MAC TANK

139TH AVENUE

Q=7300 cfs

Q=7600 cfs

Q=7000 cfs

Q=6700 cfs

Q=7800 cfs

Q=8200 cfs

Q=8400 cfs

Q=7900 cfs

Q=7600 cfs

Q=7200 cfs

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N 106.000 E 574.000
N 104.232 E 574.000
N 102.000 E 572.000
N 100.232 E 570.000
N 100.000 E 570.232
N 98.232 E 572.000
N 98.000 E 572.232
N 96.000 E 574.000
N 94.232 E 574.000
N 92.000 E 572.000
N 90.232 E 570.000
N 90.000 E 570.232
N 88.232 E 572.000
N 88.000 E 572.232
N 86.000 E 574.000
N 84.232 E 574.000
N 82.000 E 572.000
N 80.232 E 570.000
N 80.000 E 570.232
N 78.232 E 572.000
N 78.000 E 572.232
N 76.000 E 574.000
N 74.232 E 574.000
N 72.000 E 572.000
N 70.232 E 570.000
N 70.000 E 570.232
N 68.232 E 572.000
N 68.000 E 572.232
N 66.000 E 574.000
N 64.232 E 574.000
N 62.000 E 572.000
N 60.232 E 570.000
N 60.000 E 570.232
N 58.232 E 572.000
N 58.000 E 572.232
N 56.000 E 574.000
N 54.232 E 574.000
N 52.000 E 572.000
N 50.232 E 570.000
N 50.000 E 570.232
N 48.232 E 572.000
N 48.000 E 572.232
N 46.000 E 574.000
N 44.232 E 574.000
N 42.000 E 572.000
N 40.232 E 570.000
N 40.000 E 570.232
N 38.232 E 572.000
N 38.000 E 572.232
N 36.000 E 574.000
N 34.232 E 574.000
N 32.000 E 572.000
N 30.232 E 570.000
N 30.000 E 570.232
N 28.232 E 572.000
N 28.000 E 572.232
N 26.000 E 574.000
N 24.232 E 574.000
N 22.000 E 572.000
N 20.232 E 570.000
N 20.000 E 570.232
N 18.232 E 572.000
N 18.000 E 572.232
N 16.000 E 574.000
N 14.232 E 574.000
N 12.000 E 572.000
N 10.232 E 570.000
N 10.000 E 570.232
N 8.232 E 572.000
N 8.000 E 572.232
N 6.000 E 574.000
N 4.232 E 574.000
N 2.000 E 572.000
N 0.232 E 570.000
N 0.000 E 570.232
N 1.768 E 572.000
N 2.000 E 572.232
N 4.000 E 574.000
N 5.768 E 574.000
N 8.000 E 572.000
N 9.768 E 570.000
N 10.000 E 570.232
N 11.768 E 572.000
N 12.000 E 572.232
N 14.000 E 574.000
N 15.768 E 574.000
N 18.000 E 572.000
N 19.768 E 570.000
N 20.000 E 570.232
N 21.768 E 572.000
N 22.000 E 572.232
N 24.000 E 574.000
N 25.768 E 574.000
N 28.000 E 572.000
N 29.768 E 570.000
N

MATCH TO SHEET 14 OF 19

MATCH TO SHEET 12 OF 19

TOWNSHIP 3 SOUTH
RANGE 1 WEST

ZONE AE

ZONE AE

ZONE AE

ERM 3

HV-673
1186.83

HV-672
1157.14

M 16.5

M 17.0

M 17.5

M 18.0

M 18.5

FP=1147.76
FW=1148.74

FP=1149.05
FW=1149.98

FP=1150.17
FW=1151.13

FP=1151.48
FW=1152.39

FP=1152.84
FW=1153.70

FP=1153.93
FW=1154.77

FP=1155.42
FW=1156.38

FP=1156.42
FW=1157.39

FP=1157.99
FW=1158.86

FP=1159.90
FW=1160.89

FP=1161.46
FW=1162.43

FP=1162.88
FW=1163.83

FP=1164.21
FW=1165.19

FP=1165.64
FW=1166.62

FP=1166.90
FW=1167.85

FP=1167.98
FW=1168.87

FP=1169.11
FW=1169.97

FP=1170.40
FW=1171.32

FP=1171.12
FW=1172.10

FP=1171.93
FW=1172.86

FP=1173.48
FW=1174.38

FP=1174.59
FW=1175.48

N
O
P
Q
R
S
T
U
V
W
X
Y
Z
AA
AB
AC
AD
AE
AF
AG
AH
AI

14
15
16
17
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19
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29
30
31
32
33
34
35

MOBILE

139TH AVENUE

MATCH TO SHEET 14

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; 99 HEC-2 Section; CU Section Zero Point; FP = 1256.79 Natural Water Surface Elev.; FW = 1257.77 Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

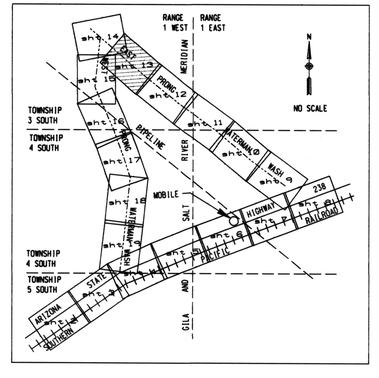
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 3	1157.64	Top of 3/4 inch pipe, 0.5' above ground, 42' East of centerline of unnamed dirt road. 1/4 corner Sections 15 & 22, T. 3 S.-R. 1 W.

INDEX MAP



0 400 800

Scale: 1"=400'

Contour Interval = 4 Feet

Registered Professional Engineer (Civil) — 28837 — G. SCOTT BUCHANAN — Date Signed — ARIZONA, U.S.A.

PREPARED BY:			STANLEY CONSULTANTS 2929 East Camelback Road, Suite 130 Phoenix, Arizona 85016	
DESIGN	BY GSB	DATE 8 / 91	SUBMITTED BY: DATE	SHEET 13 OF 19
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY: DATE	
PLANS	LMR	8 / 91	APPROVED BY: DATE	
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 11-7-89 , CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

TOWNSHIP 3 SOUTH
RANGE 1 WEST

CELLA-BARR
FLOODPLAIN LIMIT
FLOODWAY LIMT
(TYPICAL EACH SIDE)

CELLA-BARR
CROSS SECTION 69

LIMIT OF DETAILED STUDY

ZONE AE

BULLARD AVENUE (147TH AVENUE)

CELLA-BARR
CROSS SECTION 73

ERM 1

ERM 2

FP=1127.43
FW=1128.43
A 1

FP=1130.43
FW=1131.04
B 2

FP=1133.29
FW=1134.00
C 3

FP=1135.46
FW=1136.11
D 4

FP=1137.77
FW=1138.38
E 5

100-YEAR
FLOW RATE
=13,200 CFS

FP=1139.35
FW=1140.05
F 6

FP=1140.47
FW=1141.39
G 7

FP=1141.38
FW=1142.31
H 8

FP=1142.05
FW=1143.05
I 9

FP=1143.16
FW=1144.04
J 10

Q= 9,000 cfs

FP=1144.25
FW=1145.18
K 11

Q=8600 cfs

FP=1145.23
FW=1145.98
L 12

FP=1146.62
FW=1147.44
M 13

FP=1147.76
FW=1148.74
N 14

Q= 8600 cfs

100-YEAR
FLOW RATE
=9000 CFS

FP=1141.38
FW=1142.31
DP 130

Q= 4800 cfs

100-YEAR
FLOW RATE
=4800 CFS

FP=1142.41
FW=1143.24
DQ 131

FP=1144.80
FW=1144.72
DR 132

FP=1146.75
FW=1146.78
DS 133

FP=1148.89
FW=1148.92
DT 134

FP=1150.98
FW=1151.22
DU 135

Q= 4800 cfs

M 15.0
M 15.5
M 0.0
M 16.0
M 0.5

WELL

ZONE AE

ZONE AE

MATCH TO SHEET 15 OF 19

MATCH TO SHEET 13 OF 19

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section 99 / HEC-2 Section — CU — FP = 1256.79, FW = 1257.77 — Natural Water Surface Elev. / Encroached Water Surface Elev. / Section Zero Point

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

Culvert or Bridge — STR #1

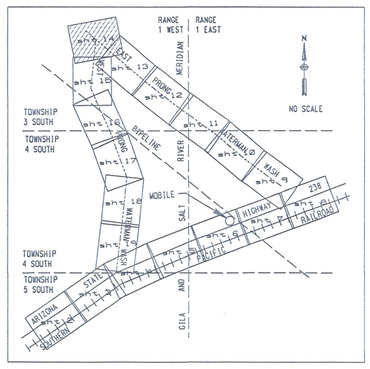
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 1	1146.64	U. S. Department of Interior, Geological Survey brass cap in 8 inch conduit pipe, flush with ground, stamped 9 DOR elevation 1147, dated 1973. brass cap is approx 100' East of corner Sections 8, 9, 16, 17, T. 3 S.-R. 1 W., at Bullard Avenue, and Northwest of an angle point of a power line running to the West and Southeast.
ERM 2	1144.77	½ inch rebar in concrete, 0.2' above ground, approx 39' SW of corner Sections 9, 10, 15, 16, T. 3 S.-R. 1 W. ERM is 21' South and 29' West of the intersection of two barbed wire fences.

PRELIMINARY

INDEX MAP



0 400 800

Scale: 1"=400'

Contour Interval = 4 Feet

PREPARED BY: STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE
DESIGN	GSB	8 / 91
DESIGN CHK.	TDC	8 / 91
PLANS	LMR	8 / 91
PLANS CHK.	TDC	8 / 91

SUBMITTED BY: DATE
RECOMMENDED BY: DATE
APPROVED BY: DATE
CHIEF ENGINEER AND GENERAL MANAGER

SHEET 14 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 11-7-89 , CAPCO No. 5060-080269

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

TOWNSHIP 3 SOUTH
RANGE 1 WEST

CELLA-BARR
FLOODPLAIN LIMIT
FLOODWAY LIMT
(TYPICAL EACH SIDE)

CELLA-BARR
CROSS SECTION 69

LIMIT OF DETAILED STUDY

ZONE AE

BULLARD AVENUE (147TH AVENUE)

CELLA-BARR
CROSS SECTION 73

ERM 1

ERM 2

A 1 FP=1127.43 FW=1128.43
B 2 FP=1130.43 FW=1131.04
C 3 FP=1133.29 FW=1134.00
D 4 FP=1135.46 FW=1136.11
E 5 FP=1137.77 FW=1138.38
F 6 FP=1139.35 FW=1140.05
G 7 FP=1140.47 FW=1141.39
H 8 FP=1141.38 FW=1142.31
I 9 FP=1142.05 FW=1143.05
J 10 FP=1143.16 FW=1144.04
K 11 FP=1144.25 FW=1145.18
L 12 FP=1145.23 FW=1145.98
M 13 FP=1146.62 FW=1147.44
N 14 FP=1147.76 FW=1148.74
DP 130 FP=1141.38 FW=1142.31
DQ 131 FP=1142.41 FW=1143.24
DR 132 FP=1144.80 FW=1144.72
DS 133 FP=1146.75 FW=1146.78
DT 134 FP=1148.89 FW=1148.92
DU 135 FP=1150.98 FW=1151.22

100-YEAR FLOW RATE =13,200 CFS
100-YEAR FLOW RATE =9000 CFS
100-YEAR FLOW RATE =4800 CFS

M 15.0
M 16.0
M 0.0
M 0.5

1130
1135
1140
1145
1150

MATCH TO SHEET 15 OF 19
MATCH TO SHEET 13 OF 19

LEGEND

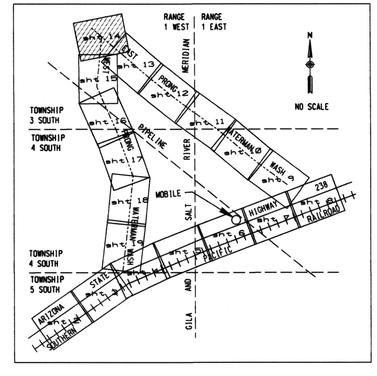
100-Yr Floodplain Boundary
Floodway Limit
Hydraulic Base Line With River Mile — M26.0 — M26.5
Cross Section — FIS Profile Section / HEC-2 Section 99 / CU / Natural Water Surface Elev. / FP = 1256.79 / FW = 1257.77 / Section Zero Point / Encroached Water Surface Elev.
Elevation Reference Marks — ERM7 ⊗
Base Flood Elevations — 1295
Flood Insurance Zone — ZONE AO ZONE AE
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 1	1146.64	U. S. Department of Interior, Geological Survey brass cap in 8 inch conduit pipe, flush with ground, stamped 9 DOR elevation 1147, dated 1973, brass cap is approx 100' East of corner Sections 8, 9, 16, 17, T. 3 S.-R. 1 W., at Bullard Avenue, and Northwest of an angle point of a power line running to the West and Southeast.
ERM 2	1144.77	½ inch rebar in concrete, 0.2' above ground, approx 39' SW of corner Sections 9, 10, 15, 16, T. 3 S.-R. 1 W. ERM is 21' South and 29' West of the intersection of two barbed wire fences.

INDEX MAP



0 400 800
Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer (Civil) CERTIFICATE NO. 26837 G. SCOTT BUCHANAN Date Signed 8-7-91 ARIZONA, U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE		
DESIGN	GSB	8 / 91	SUBMITTED BY: DATE	SHEET 14
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY: DATE	
PLANS	LMR	8 / 91	APPROVED BY: DATE	
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 11-7-89 , CAPCO No. 5060-080289

MATCH TO SHEET 12

MATCH TO SHEET 14 OF 19

MATCH TO SHEET 16 OF 19

TOWNSHIP 3 SOUTH
RANGE 1 WEST

BIG MAC TANK

ZONE AE

ZONE AE

ZONE AE

BULLARD AVENUE (147TH AVENUE)

ERM 33

ERM 34

PIPELINE

GAS PIPELINE

NATURAL

WELL

HV-671
1163.54

17-20-670
1177.59

Q= 4200 cfs

Q= 4200 cfs

Q= 4600 cfs

Q= 4600 cfs

Q= 4600 cfs

Q= 4600 cfs

Q= 4200 cfs

M 1.0

M 1.5

M 2.0

M 2.5

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; Section Zero Point; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

Culvert or Bridge — STR #1

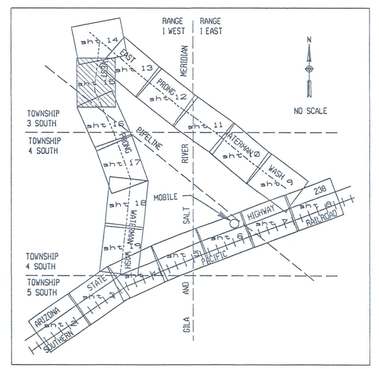
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 33	1183.87	U. S. Department of Interior, Geological Survey brass cap in 8 inch conduit pipe, flush with ground, stamped 11 DDR elevation 1184, dated 1973. ERM is 78' Southwest of corner Sections 28, 21, 28, 29 T. 1 S. R. 1 W. at the intersection of Bullard Road and an unnamed dirt road to the East.
ERM 34	1163.69	U. S. Department of Interior, Geological Survey brass cap in 7 inch conduit pipe, flush with ground, stamped 18 DDR elevation 1164 1973. ERM is 21' North of a 6' railroad tie post, angle point of fence to the North and East, and Northeast of corner Sections 16, 17, 20, 21 T. 2 S. R. 1 W., on Bullard Avenue.

PRELIMINARY

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer
26537
G. SCOTT BUCHANAN
Date Signed
ARIZONA, U.S.A.

PREPARED BY: STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE		
DESIGN	GSB	8 / 91	SUBMITTED BY:	DATE
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 15 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 8-23-89, CAPCO No. 5060-880289

MATCH TO SHEET 14 OF 19

MATCH TO SHEET 16 OF 19

TOWNSHIP 3 SOUTH
RANGE 1 WEST

BIG MAC TANK

ZONE AE

BULLARD AVENUE (147TH AVENUE)

ERM 33

ERM 34

WELL

PIPELINE

DRY WASH

NATURAL GAS PIPELINE

HV-671
1163.94

HV-670
1177.59

DU 135 | DV 136 | DW 137 | DX 138 | DY 139 | DZ 140 | EA 141 | EB 142 | EC 143 | ED 144 | EE 145 | EF 146 | EG 147 | EH 148 | EI 149 | EJ 150 | EK 151 | EL 152 | EM 153 | EN 154 | EO 155 | EP 156

FP=1150.98 FW=1151.22
FP=1153.25 FW=1153.79
FP=1155.29 FW=1155.82
FP=1156.50 FW=1157.11
FP=1158.41 FW=1158.72
FP=1161.22 FW=1161.39
FP=1163.17 FW=1163.57
FP=1164.68 FW=1165.18
FP=1166.82 FW=1167.30
FP=1168.59 FW=1169.41
FP=1169.95 FW=1170.64
FP=1171.58 FW=1172.02
FP=1173.20 FW=1173.26
FP=1175.37 FW=1175.89
FP=1178.12 FW=1178.66
FP=1179.53 FW=1179.86
FP=1181.22 FW=1181.35
FP=1184.17 FW=1184.28
FP=1186.56 FW=1187.07
FP=1188.07 FW=1188.50
FP=1190.27 FW=1190.19
FP=1193.63 FW=1193.69

M 1.0 | M 1.5 | M 2.0 | M 2.5

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

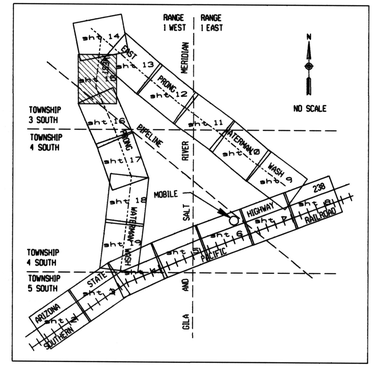
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 33	1183.87	U.S. Department of Interior, Geological Survey brass cap in 8 inch conduit pipe, flush with ground, stamped 11 DDR elevation 1184, dated 1973. ERM is 70' Southwest of corner Sections 28, 21, 28, 29 T. 3 S.-R. 1 W. at the intersection of Bullard Road and an unnamed dirt road to the East.
ERM 34	1163.69	U.S. Department of Interior, Geological Survey brass cap in 7 inch conduit pipe, flush with ground, stamped 10 DDR elevation 1164 1973. ERM is 21' North of a 6' railroad tie post, angle point of fence to the North and East, and Northeast of corner Sections 16, 17, 20, 21 T. 3 S.-R. 1 W., on Bullard Avenue.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer
26837
G. SCOTT BUCHANAN
Date Signed 3-27-94
ARIZONA U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY: DATE	SHEET
DESIGN	GSB	8 / 91		15
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY: DATE	
PLANS	LMR	8 / 91	APPROVED BY: DATE	OF 19
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 8-23-89 . CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

MATCH TO SHEET 15 OF 19

MATCH TO SHEET 17 OF 19

100 - YEAR FLOW RATE 4,000 CFS

Q = 4200 cfs

Q = 4200 cfs

Q = 4200 cfs

NATURAL GAS PIPELINE

BULLARD AVENUE

(147TH AVENUE)

ZONE AE

ZONE AE

ERM 31

ERM 32

WELL

M 3.0

M 3.5

M 4.0

M 4.5

FP=1193.63 FW=1193.92

FP=1195.52 FW=1196.08

FP=1197.42 FW=1198.16

FP=1199.61 FW=1200.11

FP=1201.42 FW=1201.92

FP=1203.23 FW=1203.68

FP=1205.84 FW=1206.01

FP=1208.43 FW=1208.76

FP=1210.93 FW=1211.04

FP=1213.03 FW=1213.12

FP=1215.21 FW=1215.80

FP=1217.36 FW=1218.16

FP=1220.10 FW=1220.24

FP=1221.69 FW=1222.05

FP=1223.33 FW=1223.88

FP=1226.88 FW=1227.58

FP=1229.51 FW=1230.42

FP=1232.48 FW=1233.14

FP=1235.38 FW=1235.85

FP=1238.48 FW=1238.87

FP=1240.98 FW=1241.44

EP 156 EQ 157 ER 158 ES 159 ET 160 EU 161 EV 162 EW 163 EX 164 EY 165 EZ 166 FA 167 FB 168 FC 169 FD 170 FE 171 FF 172 FG 173 FH 174 FJ 175 FJ 176

TOWNSHIP 3 SOUTH RANGE 1 WEST

TOWNSHIP 4 SOUTH RANGE 1 WEST

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Encroached Water Surface Elev.; Section Zero Point

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

Culvert or Bridge — STR #1

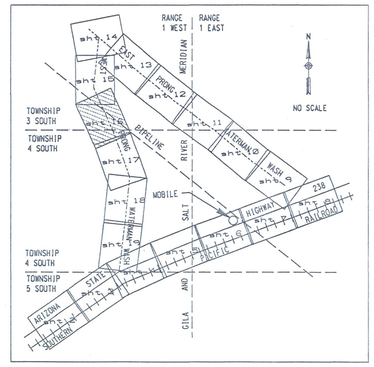
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 31	1240.04	G. L. O. brass cap on 3 inch pipe, 0.5' above ground, corner Sections 33 and 34 T. 3 S.-R. 1 W. and Sections 3 and 4 T. 4 S.-R. 1 W. dated 1916. ERM is 20' South of the centerline of an unnamed dirt road, below a barbed wire fence.
ERM 32	1201.76	U. S. Department of Interior Geological Survey benchmark brass cap on top of a 9 inch diameter concrete pillar, 1.0' high. Brass cap is stamped 28 WF elevation 1202, dated 1948. ERM is approx 1750' NW of corner Sections 28 and 33 T. 3 S.-R. 1 W., 40' SW of the centerline of a gas pipeline road. ERM is also 130' East of the centerline of the West Prong of Waterman Wash, and 12' West of a palo verde tree.

PRELIMINARY

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer (State) SPECIAL DATE 26837 G. SCOTT BUCHANAN Date Signed 3-25-94 ARIZONA, U.S.A.

PREPARED BY: STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY:	DATE
DESIGN	GSB	8 / 91		
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 16 OF 19

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 11-7-89 , CAPCO No. 5060-880289

MATCH TO SHEET 15 OF 19

MATCH TO SHEET 17 OF 19

100 - YEAR FLOW RATE 4,000 CFS

NATURAL GAS PIPELINE

BULLARD AVENUE

(147TH AVENUE)

ZONE AE

ZONE AE

ERM 31

ERM 32

WELL

TOWNSHIP 3 SOUTH RANGE 1 WEST

TOWNSHIP 4 SOUTH RANGE 1 WEST

FP=1193.63 FW=1193.92
FP=1195.52 FW=1196.08
FP=1197.42 FW=1198.16
FP=1199.61 FW=1200.11
FP=1201.42 FW=1201.92
FP=1203.23 FW=1203.68
FP=1205.84 FW=1206.01
FP=1208.43 FW=1208.76
FP=1210.93 FW=1211.04
FP=1213.03 FW=1213.12
FP=1215.21 FW=1215.80
FP=1217.36 FW=1218.16
FP=1220.10 FW=1220.24
FP=1221.69 FW=1222.05
FP=1223.33 FW=1223.88
FP=1226.88 FW=1227.58
FP=1229.57 FW=1230.42
FP=1232.48 FW=1233.14
FP=1235.38 FW=1235.85
FP=1238.46 FW=1238.87
FP=1240.98 FW=1241.44

EP 156 EQ 157 ER 158 ES 159 ET 160 EU 161 EV 162 EW 163 EX 164 EY 165 EZ 166 FA 167 FB 168 FC 169 FD 170 FE 171 FF 172 FG 173 FH 174 FI 175 FJ 176

M 3.0 M 3.5 M 4.0 M 4.5

1195 1200 1205 1210 1215 1220 1225 1230 1235 1240

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79, FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

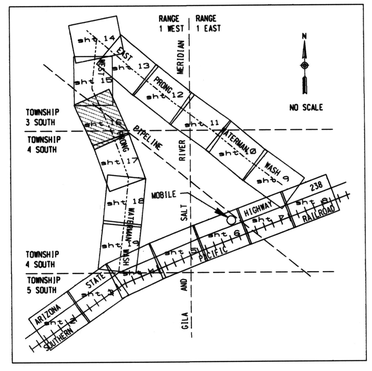
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 31	1240.04	G. L. O. brass cap on 3 inch pipe. 0.5' above ground. corner Sections 33 and 34 T. 3 S.-R. 1 W. and Sections 3 and 4 T. 4 S.-R. 1 W. dated 1916. ERM is 20' South of the centerline of an unnamed dirt road, below a barbed wire fence.
ERM 32	1201.76	U. S. Department of Interior Geological Survey benchmark brass cap on top of a 9 inch diameter concrete pillar, 1.0' high. Brass cap is stamped 28 WF elevation 1202, dated 1948. ERM is approx 1750' NW of corner Sections 28 and 33 T. 3 S.-R. 1 W., 40' SW of the centerline of a gas pipeline road. ERM is also 130' East of the centerline of the West Prong of Waterman Wash, and 12' West of a palo verde tree.

INDEX MAP



0 400 800

Scale: 1"=400'

Contour Interval = 4 Feet

Registered Professional Engineer (Civil) — CERTIFICATE NO. 30837 — G. SCOTT BUCHANAN — Date Signed 3-5-91 — ARIZONA U.S.A.

PREPARED BY: STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY:	DATE	SHEET
DESIGN	GSB	8 / 91			16
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE	
PLANS	LMR	8 / 91	APPROVED BY:	DATE	OF 19
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER		

Topographic Mapping Prepared By COOPER AERIAL OF PHOENIX, INC. Photo Date: 11-7-89 , CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

TOWNSHIP 4 SOUTH
RANGE 1 WEST

MATCH TO SHEET 16 OF 19

MATCH TO SHEET 18 OF 19

ZONE AE

ERM 29

ERM 30

M 5.5

M 5.0

M 6.0

M 6.5

Q = 34500 cfs

Q = 45800 cfs

FP=1240.98 FW=1241.44 — FJ 176
FP=1243.50 FW=1244.12 — FK 177
FP=1246.24 FW=1246.99 — FL 178
FP=1249.16 FW=1250.08 — FM 179
FP=1251.84 FW=1252.70 — FN 180
FP=1254.91 FW=1255.87 — FO 181
FP=1257.65 FW=1258.44 — FP 182
FP=1260.75 FW=1261.08 — FQ 183
FP=1264.01 FW=1264.31 — FR 184
FP=1266.70 FW=1266.93 — FS 185
FP=1269.81 FW=1270.29 — FT 186
FP=1273.06 FW=1274.00 — FU 187
FP=1276.23 FW=1276.71 — FV 188
FP=1279.22 FW=1280.21 — FW 189
FP=1281.42 FW=1282.36 — FX 190
FP=1284.80 FW=1285.74 — FY 191
FP=1287.71 FW=1288.72 — FZ 192
FP=1290.65 FW=1291.24 — GA 193
FP=1293.33 FW=1293.96 — GB 194
FP=1296.22 FW=1296.61 — GC 195
FP=1299.41 FW=1299.74 — GD 196
FP=1301.76 FW=1301.96 — GE 197

LEGEND

- 100-Yr Floodplain Boundary
- Floodway Limit
- Hydraulic Base Line With River Mile — M26.0 — M26.5
- Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Encroached Water Surface Elev.; Section Zero Point
- Elevation Reference Marks — ERM7
- Base Flood Elevations — 1295
- Flood Insurance Zone — ZONE AO ZONE AE
- Culvert or Bridge — STR #1

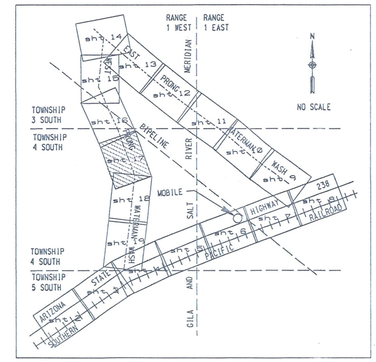
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 29	1301.86	G. L. O. brass cap on 1 inch pipe, 0.75' above ground, ¼ corner Sections 10 & 15, T. 3 S.-R. 1 W., dated 1916.
ERM 30	1268.96	G. L. O. brass cap on 2 inch pipe, 0.5' above ground, corner Sections 3, 4, 9, 10, T. 4 S.-R. 1 W., dated 1916.

PRELIMINARY

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer — Certificate No. 26837 — G. SCOTT BUCHANAN — Date Signed 3-25-94 — ARIZONA, U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY:	DATE	SHEET
DESIGN	GSB	8 / 91			17
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE	
PLANS	LWR	8 / 91	APPROVED BY:	DATE	OF 19
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER		

Topographic Mapping Prepared By COOPER AERIAL of PHOENIX, INC , Photo Date 8-23-89 , CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

TOWNSHIP 4 SOUTH
RANGE 1 WEST

ZONE AE

ZONE AO

ERM 29

ERM 30

MATCH TO SHEET 16 OF 19

MATCH TO SHEET 18 OF 19

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

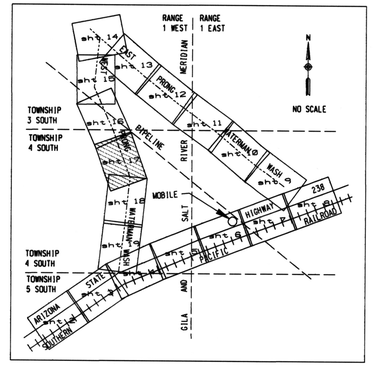
Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 29	1301.86	G. L. O. brass cap on 1 inch pipe, 0.75' above ground, 1/4 corner Sections 10 & 15, T. 3 S.-R. 1 W., dated 1916.
ERM 30	1268.96	G. L. O. brass cap on 2 inch pipe, 0.5' above ground, corner Sections 3, 4, 9, 10, T. 4 S.-R. 1 W., dated 1916.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer (Civil) — CERTIFICATE NO. 26837 — G. SCOTT BUCHANAN — Date Signed 3-5-94 — ARIZONA, U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY:	DATE	SHEET
DESIGN	GSB	8 / 91			17
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE	
PLANS	LMR	8 / 91	APPROVED BY:	DATE	
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER		OF 19

Topographic Mapping Prepared By COOPER AERIAL of PHOENIX, INC , Photo Date 8-23-89 , CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH
FLOOD INSURANCE STUDY

TOWNSHIP 4 SOUTH
RANGE 1 WEST

MATCH TO SHEET 17 OF 19

MATCH TO SHEET 19 OF 19

ERM 29

ERM 28

ZONE AE

NORTH TANK

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; HEC-2 Section 99; CU; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

Culvert or Bridge — STR #1

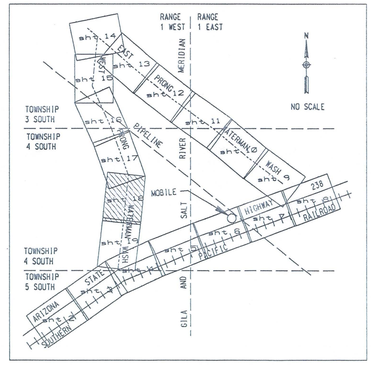
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 28	1332.84	G. L. O. brass cap on 2 inch pipe, 1.1' above ground, corner Sections 15, 16, 21, 22 T. 4 S.-R. 1 W., dated 1916. ERM is approx. 320' West of the west bank of the West Prong of Waterman Wash.
ERM 29	1301.86	G. L. O. brass cap on 1 inch pipe, 0.75' above ground, corner Sections 10 & 15, T. 4 S.-R. 1 W., dated 1916.

PRELIMINARY

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer (Civil) 26837 G. SCOTT BUCHANAN Date Signed 12-31-91 ARIZONA, U.S.A.

PREPARED BY: STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE		
DESIGN	GSB	8 / 91	SUBMITTED BY:	DATE
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 18 OF 19

Topographic Mapping Prepared By COOPER AERIAL of PHOENIX, INC. Photo Date 9-27-89, CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

TOWNSHIP 4 SOUTH
RANGE 1 WEST

ZONE AE

ERM 29

ERM 28

NORTH TANK

MATCH TO SHEET 17 OF 19

MATCH TO SHEET 19 OF 19

LEGEND

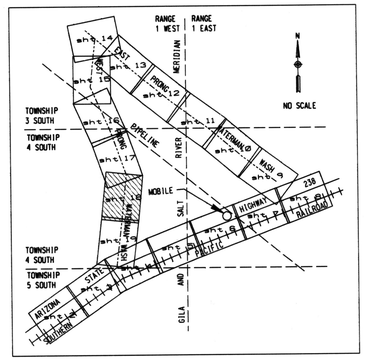
- 100-Yr Floodplain Boundary
- Floodway Limit
- Hydraulic Base Line With River Mile — M26.0 — M26.5
- Cross Section — FIS Profile Section; HEC-2 Section; Natural Water Surface Elev.; FP = 1256.79; FW = 1257.77; Encroached Water Surface Elev.; Section Zero Point
- Elevation Reference Marks — ERM7
- Base Flood Elevations — 1295
- Flood Insurance Zone — ZONE AO ZONE AE
- Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 28	1332.84	G. L. O. brass cap on 2 inch pipe, 1.1' above ground, corner Sections 15, 16, 21, 22 T. 4 S.-R. 1 W., dated 1916. ERM is approx. 320' West of the west bank of the West Prong of Waterman Wash.
ERM 29	1301.86	G. L. O. brass cap on 1 inch pipe, 0.75' above ground, corner Sections 10 & 15, T. 4 S.-R. 1 W., dated 1916.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer (Civil) 20837 G. SCOTT BUCHANAN Date Signed 8-25-94 ARIZONA U.S.A.

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE		DATE
DESIGN	GSB	8 / 91	SUBMITTED BY:	
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY:	DATE
PLANS	LMR	8 / 91	APPROVED BY:	DATE
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

SHEET 18 OF 19

Topographic Mapping Prepared By COOPER AERIAL of PHOENIX, INC. Photo Date 9-27-89, CAPCO No. 5060-080289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

TOWNSHIP 4 SOUTH
RANGE 1 WEST

MATCH TO SHEET 18 OF 19

MATCH TO SHEET 4 OF 19

LIMIT OF DETAILED STUDY

100 YEAR FLOW RATE IN CFS

ZONE AO

ZONE AE

SOUTHERN PACIFIC RAILROAD

STATE HIGHWAY 238

ERM 26

ERM 27

M 9.5

M 10.0

M 10.5

LEGEND

100-Yr Floodplain Boundary

Floodway Limit

Hydraulic Base Line With River Mile — M26.0 — M26.5

Cross Section — FIS Profile Section; CU; 99; HEC-2 Section; FP = 1256.79; FW = 1257.77; Natural Water Surface Elev.; Section Zero Point; Encroached Water Surface Elev.

Elevation Reference Marks — ERM7

Base Flood Elevations — 1295

Flood Insurance Zone — ZONE AO ZONE AE

Culvert or Bridge — STR #1

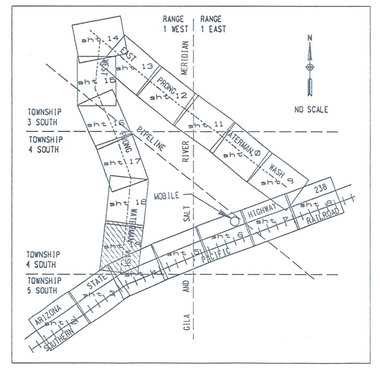
ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 26	1390.56	C. L. O. brass cap on 2inch pipe, 1.05' above ground, corner Sections 27, 28, 33, 34, T. 4 S.-R. 1 W., dated 1916.
ERM 27	1355.28	C. L. O. brass cap on 2 inch pipe, 1.6' above ground, corner Sections 21, 22, 27, 28, T. 4 S.-R. 1 W., dated 1916. ERM is 100' East of unnamed dirt road.

PRELIMINARY

INDEX MAP



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Scale: 1"=400'
Contour Interval = 4 Feet

Registered Professional Engineer (Civil) 29897 G. SCOTT BUCHANAN Date Signed 7-26-94 ARIZONA, U.S.A.

PREPARED BY: STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

	BY	DATE	SUBMITTED BY: DATE	SHEET
DESIGN	CSB	8 / 91		19
DESIGN CHK.	TDC	8 / 91	RECOMMENDED BY: DATE	
PLANS	LMR	8 / 91	APPROVED BY: DATE	OF 19
PLANS CHK.	TDC	8 / 91	CHIEF ENGINEER AND GENERAL MANAGER	

Topographic Mapping Prepared By COOPER AERIAL of PHOENIX, INC., Photo Date 9-27-89, CAPCO No. 5868-880289

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

WATERMAN WASH FLOOD INSURANCE STUDY

TOWNSHIP 4 SOUTH
RANGE 1 WEST

MATCH TO SHEET 18 OF 19

MATCH TO SHEET 4 OF 19

LIMIT OF DETAILED STUDY

100 - YEAR FLOW RATE 400 CFS

ZONE AE

ERM 26

ERM 27

STATE HIGHWAY 238

SOUTHERN PACIFIC RAILROAD

M 9.0

M 9.5

M 10.0

M 10.5

1345 1350 1355 1360 1365 1370 1375 1380 1385 1390 1395 1400

GW 215	FP=1344.29 FW=1344.31		
GX 216	FP=1347.30 FW=1347.30		
GY 217	FP=1349.50 FW=1349.50		
GZ 218	FP=1352.39 FW=1352.39		
HA 219	FP=1355.88 FW=1355.95		
HB 220	FP=1357.74 FW=1357.77		
HC 221	FP=1360.18 FW=1360.56		
HD 222	FP=1362.94 FW=1363.43		
HE 223	FP=1365.92 FW=1365.97		
HF 224	FP=1367.89 FW=1367.99		
HG 225	FP=1370.52 FW=1370.53		
HH 226	FP=1373.32 FW=1374.04		
HI 227	FP=1377.27 FW=1377.73		
HJ 228	FP=1379.58 FW=1379.89		
HK 229	FP=1382.28 FW=1382.67		
HL 230	FP=1384.83 FW=1384.93		
HM 231	FP=1387.10 FW=1387.86		
HN 232	FP=1391.17 FW=1391.66		
HO 233	FP=1393.50 FW=1393.96		
HP 234	FP=1396.17 FW=1396.71		
HQ 235	FP=1398.98 FW=1399.47		
HR 236	FP=1401.78 FW=1402.09		
HS 237	FP=1404.14 FW=1404.32		

LEGEND

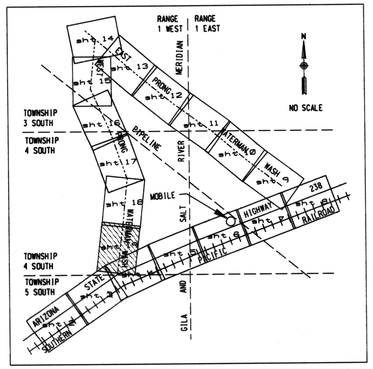
- 100-Yr Floodplain Boundary
- Floodway Limit
- Hydraulic Base Line With River Mile — M26.0 — M26.5
- Cross Section — FIS Profile Section; 99 HEC-2 Section; CU Section Zero Point; FP = 1256.79 Natural Water Surface Elev.; FW = 1257.77 Encroached Water Surface Elev.
- Elevation Reference Marks — ERM7
- Base Flood Elevations — 1295
- Flood Insurance Zone — ZONE AO ZONE AE
- Culvert or Bridge — STR #1

ELEVATION REFERENCE MARKS

NOTE: All Elevations Based On National Geodetic Vertical Datum Of 1929.

I.D. NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 26	1390.56	G. L. O. brass cap on 2inch pipe, 1.05' above ground, corner Sections 27, 28, 33, 34, T. 4 S.-R. 1 W., dated 1916.
ERM 27	1355.28	G. L. O. brass cap on 2 inch pipe, 1.6' above ground, corner Sections 21, 22, 27, 28, T. 4 S.-R. 1 W., dated 1916. ERM is 100' East of unnamed dirt road.

INDEX MAP



0 400 800

Scale: 1"=400'
Contour Interval = 4 Feet

PREPARED BY:
STANLEY CONSULTANTS
2929 East Camelback Road, Suite 130
Phoenix, Arizona 85016

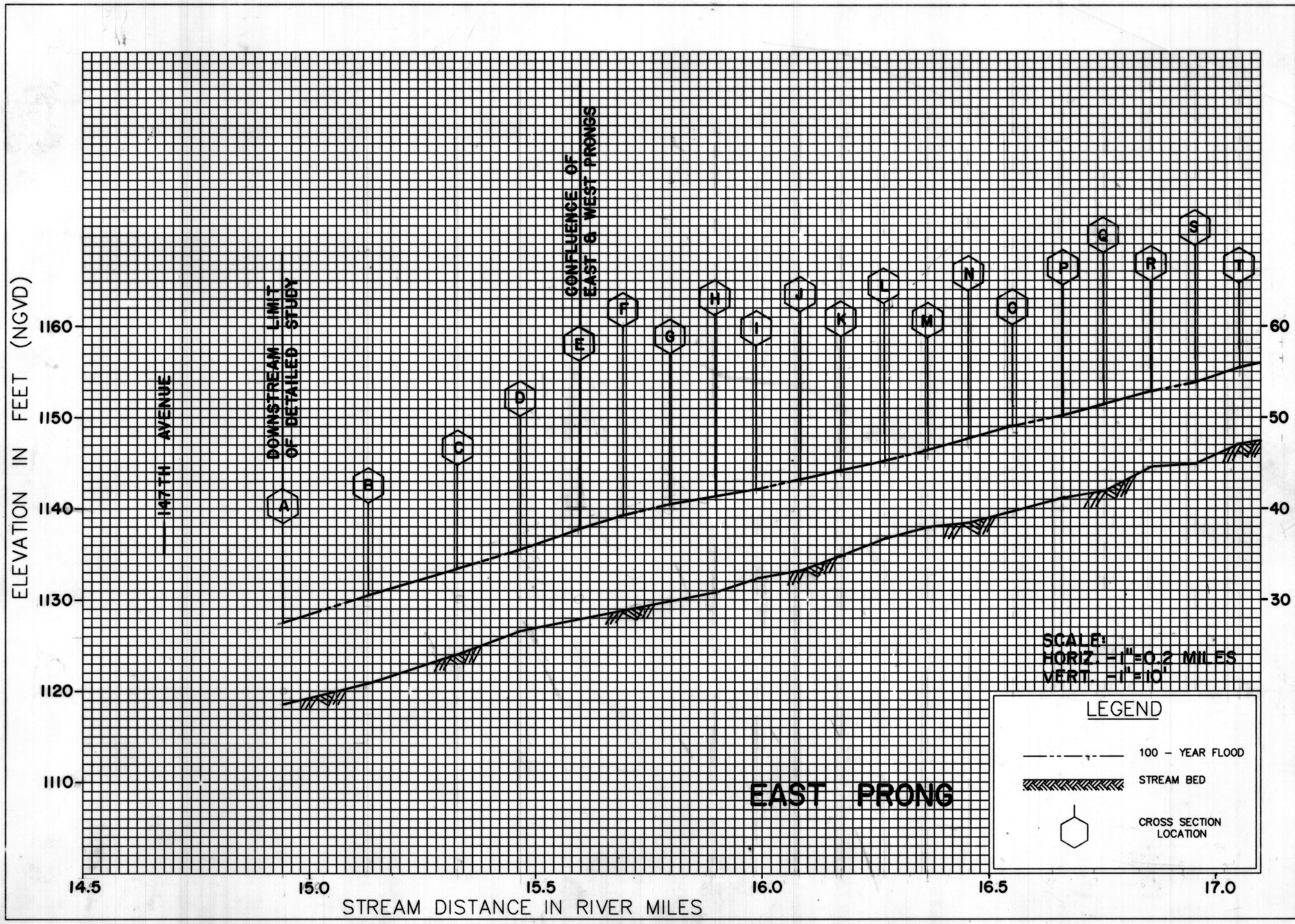
	BY	DATE
DESIGN	GSB	8 / 91
DESIGN CHK.	TDC	8 / 91
PLANS	LMR	8 / 91
PLANS CHK.	TDC	8 / 91

SUBMITTED BY: DATE
RECOMMENDED BY: DATE
APPROVED BY: DATE
CHIEF ENGINEER AND GENERAL MANAGER

SHEET 19 OF 19

Registered Professional Engineer (Civil) 35897 G. SCOTT BUCHANAN Date Signed 7-30-91 ARIZONA, U.S.A.

Topographic Mapping Prepared By COOPER AERIAL of PHOENIX, INC , Photo Date 9-27-89 , CAPCO No. 5060-080289



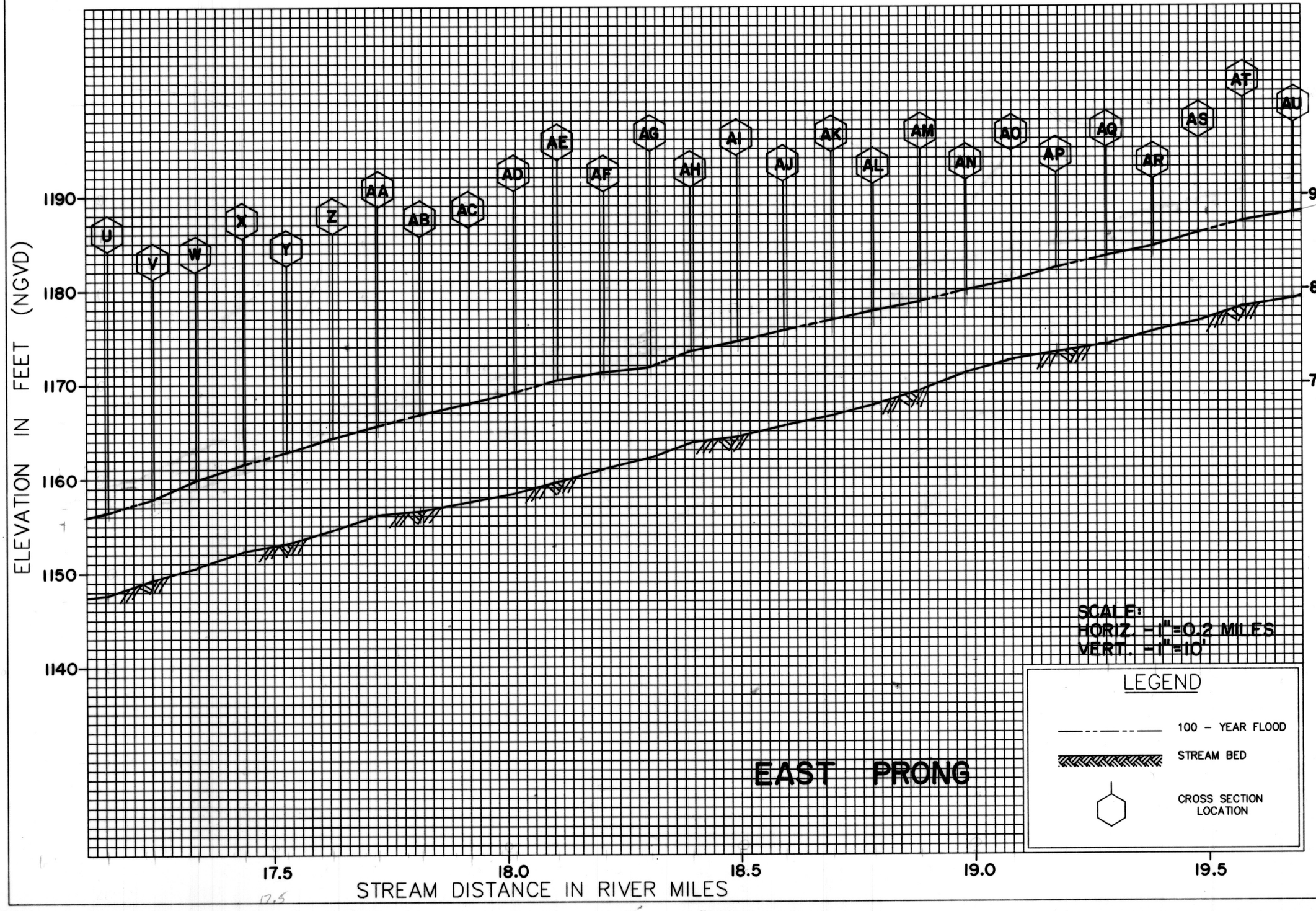
FLOOD PROFILES

WATERMAN WASH-EAST AND WEST PRONGS

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOOD PROFILES

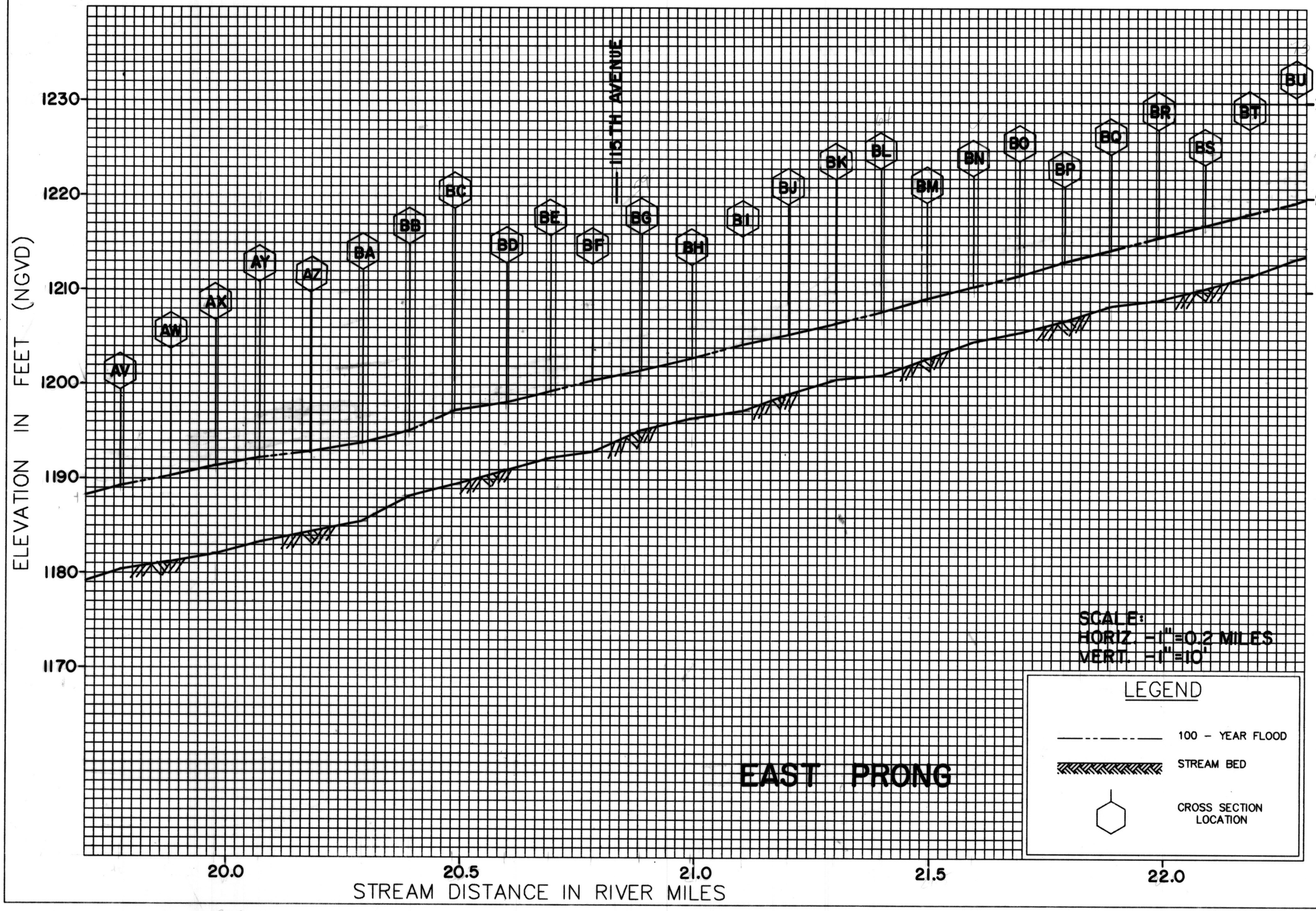
WATERMAN WASH-EAST AND WEST PRONGS



FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOOD PROFILES

WATERMAN WASH-EAST AND WEST PRONGS



FEDERAL EMERGENCY MANAGEMENT AGENCY

ELEVATION IN FEET (NGVD)

1260
1250
1240
1230
1220
1210

60
50
40

99TH AVENUE

BV BW BX BY BZ CA CB CC CD CE CF CG CH CI CJ CK CL CM CN CO CP CQ CR CS CT CU

SCALE:
HORIZ. -1"=0.2 MILES
VERT. -1"=10'

LEGEND

100 - YEAR FLOOD

STREAM BED

CROSS SECTION LOCATION

EAST PRONG

22.5 23.0 23.5 24.0 24.5

STREAM DISTANCE IN RIVER MILES

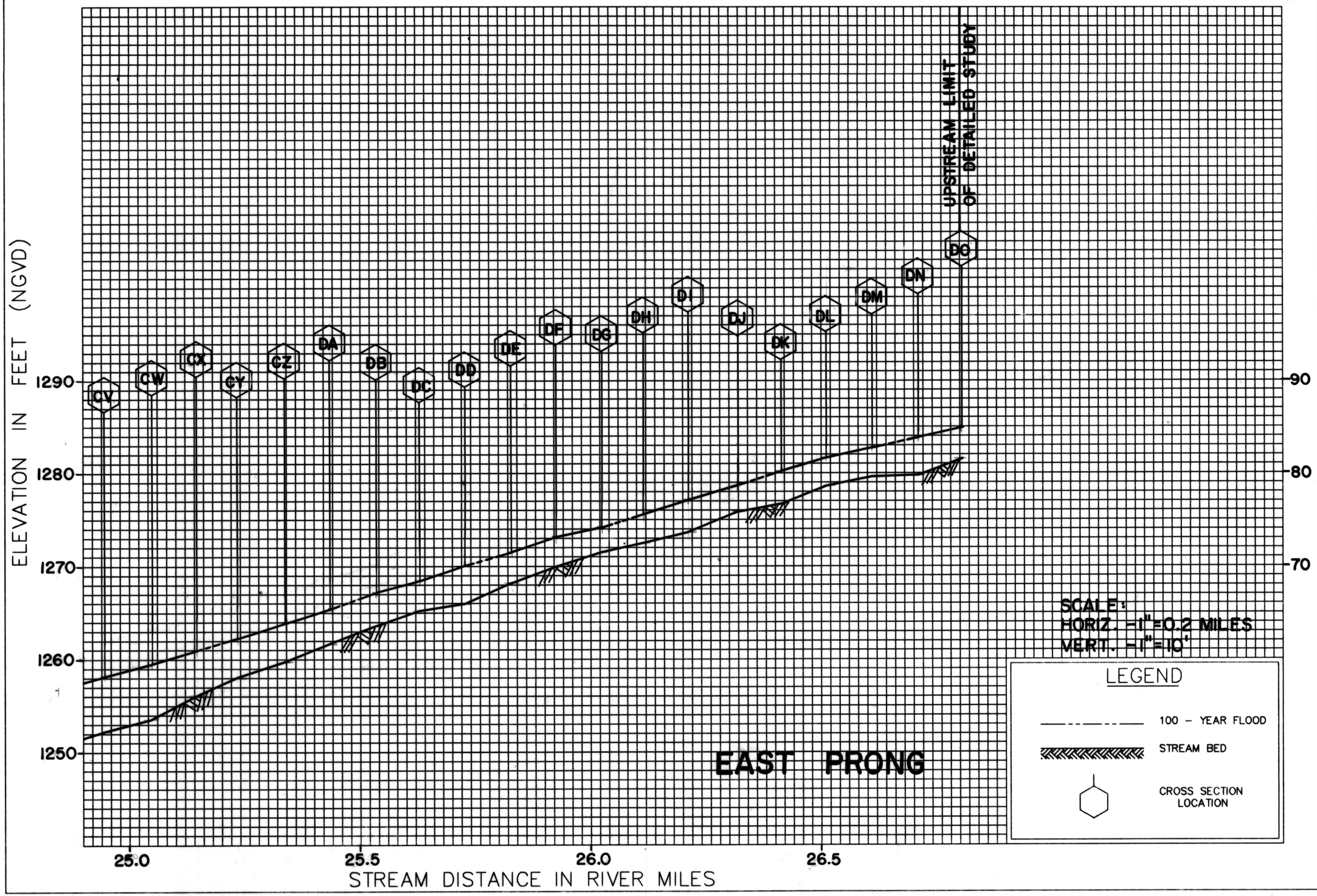
FLOOD PROFILES

WATERMAN WASH-EAST AND WEST PRONGS

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOOD PROFILES

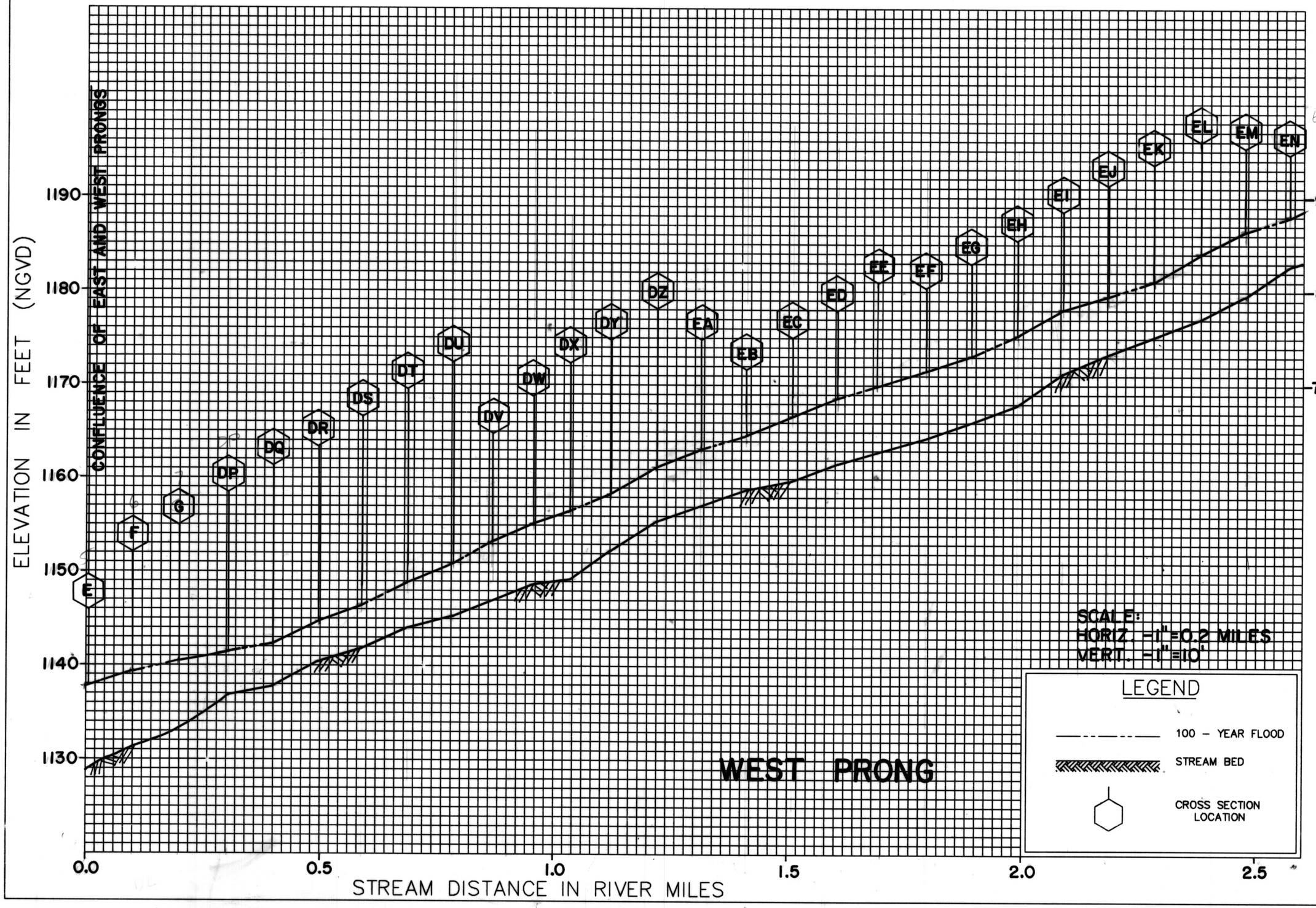
WATERMAN WASH-EAST AND WEST PRONGS



FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOOD PROFILES

WATERMAN WASH-EAST AND WEST PRONGS



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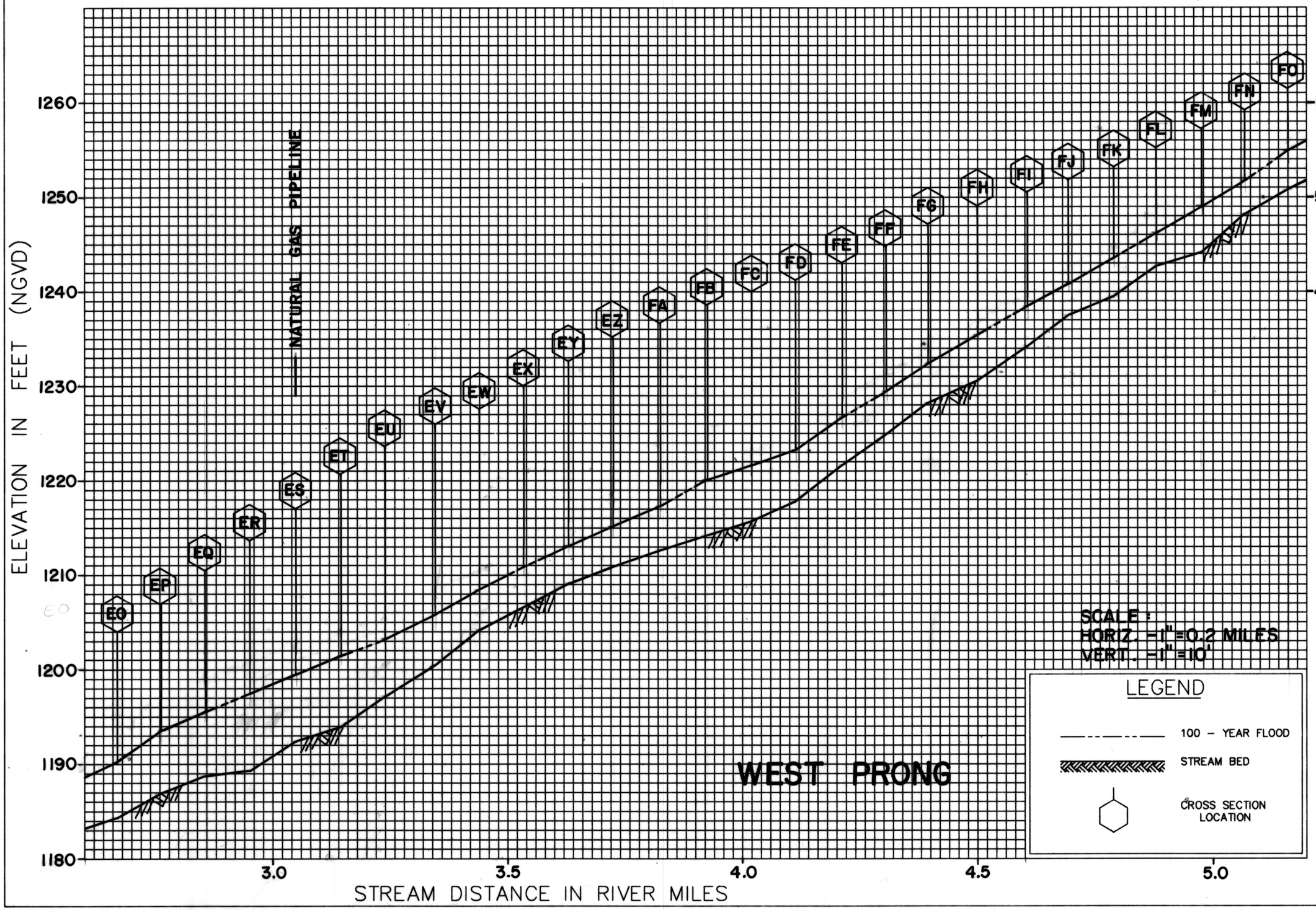

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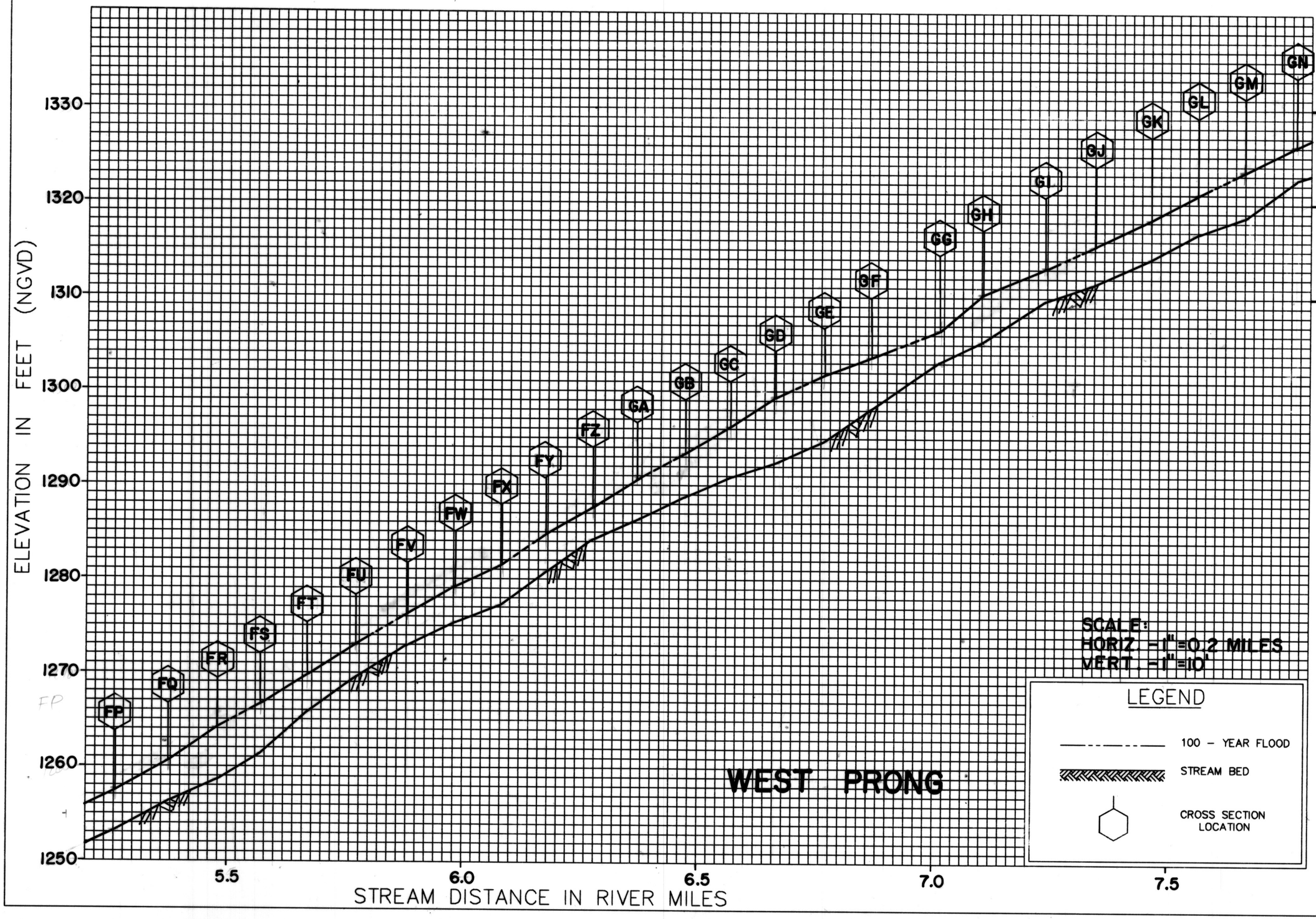

FLOOD PROFILES

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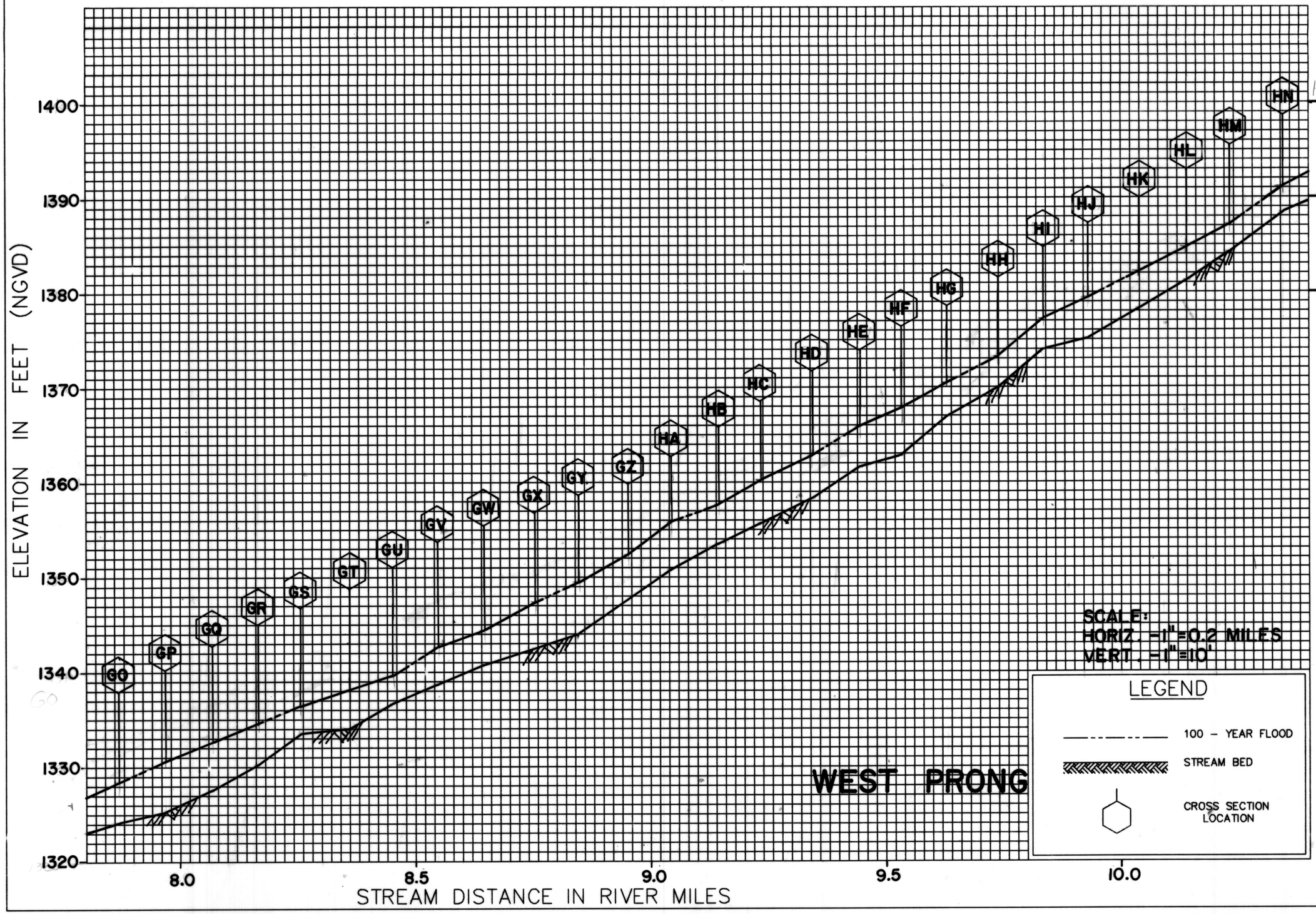

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