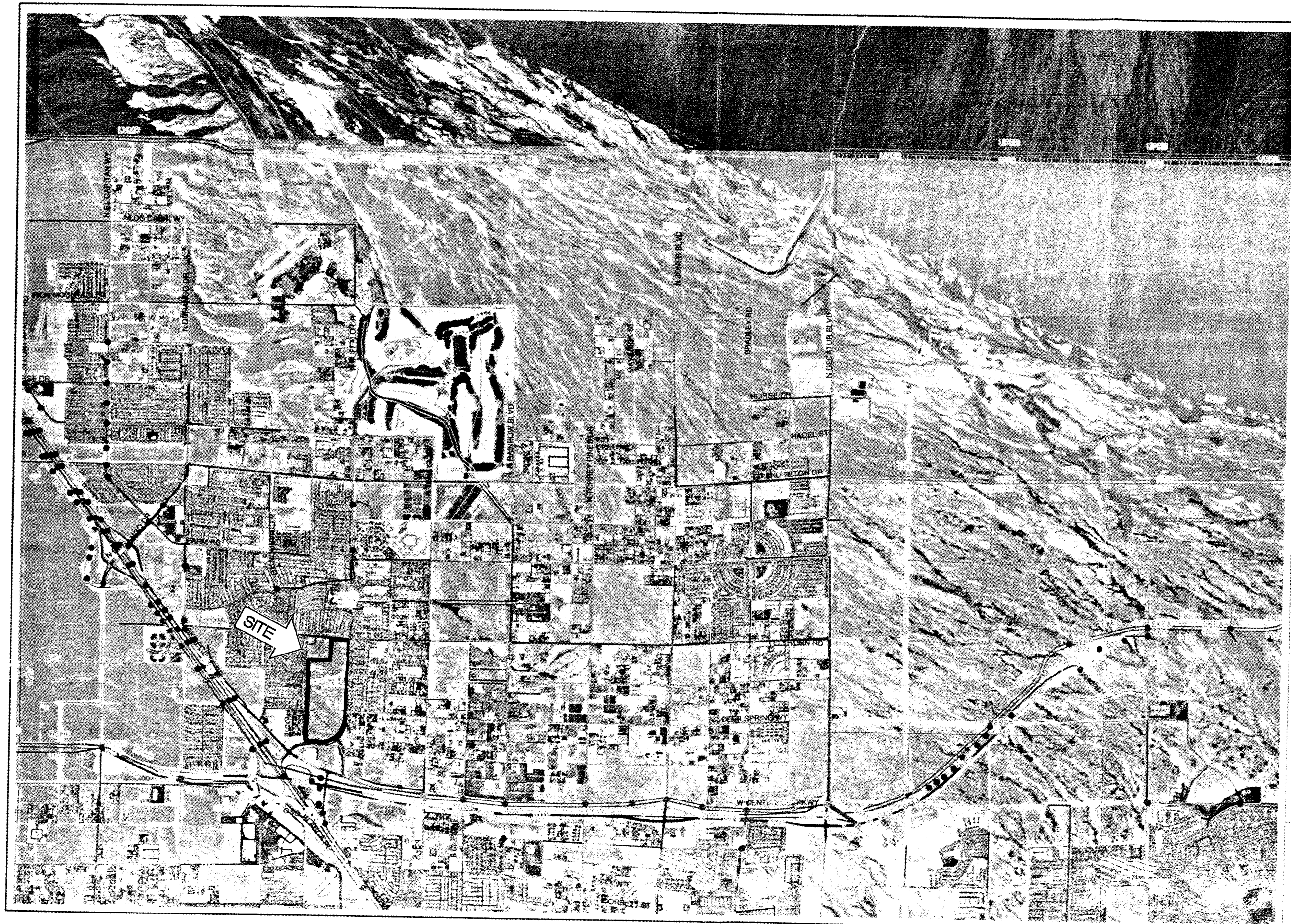


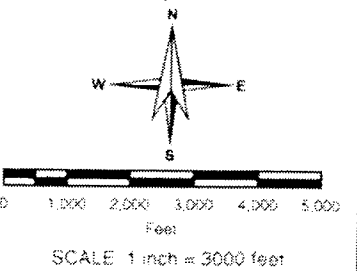


REGIONAL FLOOD CONTROL DISTRICT

2002 LAS VEGAS VALLEY FLOOD CONTROL MASTER PLAN UPDATE

LEGEND

- Ultimate Development Boundary
- Existing Facilities
- Category A Proposed Facilities
- Category B Proposed Facilities
- Local Existing Facilities
- Local Proposed Facilities
- Detention Basin
- Culvert
- Bridge
- Pipeline
- Lined Channel
- Unlined Channel
- Dike
- Natural Wash
- ID-Mile Separator



1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32

FLOOD CONTROL FACILITIES
FIGURE F-4



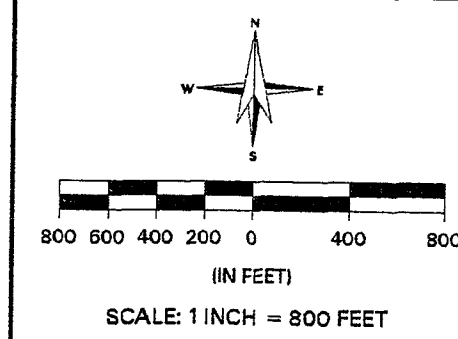
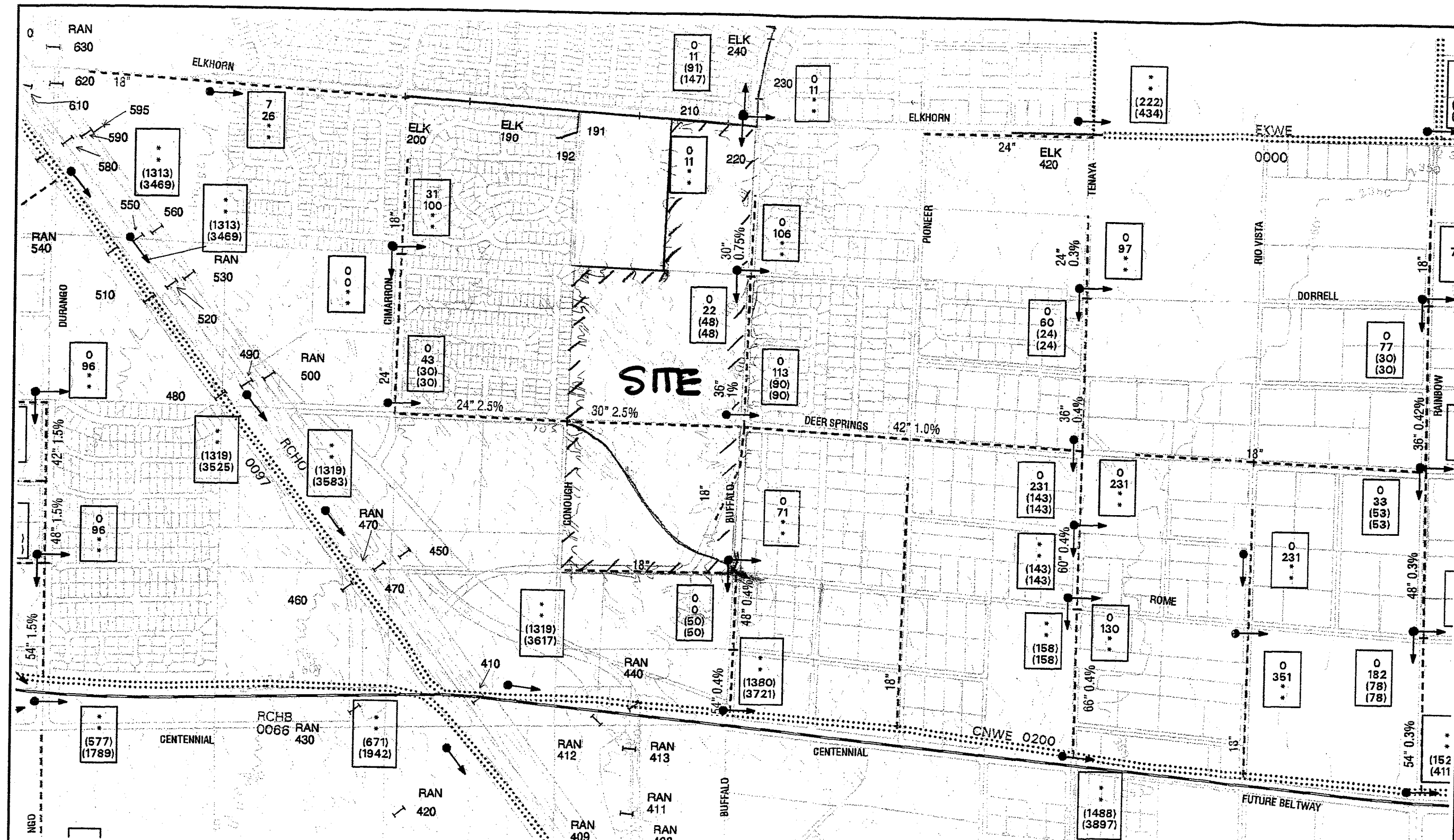


NORTHWEST NEIGHBORHOOD STUDY

LEGEND

- EXISTING REGIONAL DETENTION BASINS
- PROPOSED REGIONAL DETENTION BASINS
- EXISTING LOCAL DETENTION BASINS
- EXISTING REGIONAL BRIDGES
- PROPOSED REGIONAL BRIDGES
- EXISTING LOCAL BRIDGES
- EXISTING REGIONAL CULVERT
- PROPOSED REGIONAL CULVERT
- EXISTING LOCAL CULVERT
- EXISTING REGIONAL PIPELINE
- PROPOSED REGIONAL PIPELINE
- EXISTING LOCAL PIPELINE
- PROPOSED LOCAL PIPELINE
- EXISTING REGIONAL CHANNEL
- PROPOSED REGIONAL CHANNEL
- EXISTING LOCAL CHANNEL
- PROPOSED REGIONAL PIPELINE (Not included in 1996 MPU)
- PROPOSED REGIONAL CHANNEL (Not included in 1996 MPU)
- EXISTING REGIONAL DIKE/LEVEE
- PROPOSED REGIONAL DIKE/LEVEE
- EXISTING LOCAL DIKE/LEVEE
- EXISTING STORM WATER PUMPING STATION
- PROPOSED BELTWAY ALIGNMENT

FIGURE F-2



FLOW ARROW

250	10-YEAR STREET FLOW
500	100-YEAR STREET FLOW
(300)	10-YEAR FACILITY FLOW
(800)	100-YEAR FACILITY FLOW

(FLOWS IN CFS)

NOTE:
Ultimate drainage conditions are based on future CN values with all flood control facilities in place
See the "September 1999 City of Las Vegas Northwest Neighborhood Study Phase 2" for proposed facilities in and north of Elkhorn.

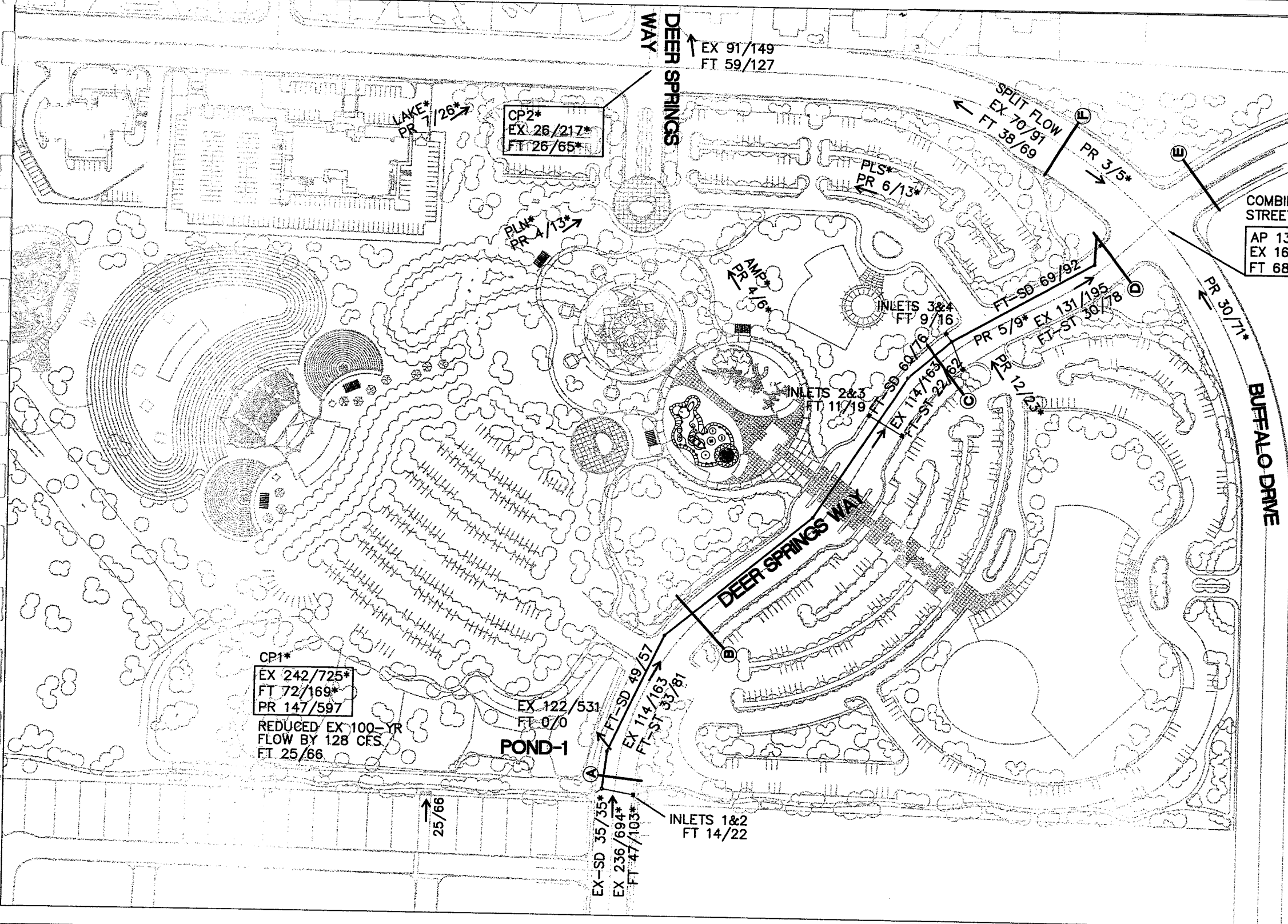
REVISED SEPTEMBER 1999

HUALPAIN	FT. APACHE	DURANGO	SUPPER C	RAINBOW	JONES	DECATUR	ELKHORN
1	2	3	4	5	6	7	CENTENNIAL
8	9	10	11	12	13	14	RAIN
15	16	17	18	19	20	21	LONE MOUNTAIN
22	23	24	25	26	27	28	ALEXANDER
29	30	31	32	33	34	35	CHEYENNE
36	37	38	39	40	41	42	SMOKE RANCH

FUTURE DRAINAGE CONDITIONS

PBSJ
ENGINEERING PLANNING GIS SURVEYING CONSTRUCTION SERVICES
801 North Green Valley Parkway, Suite 100
Henderson, Nevada 89014-6139
Phone: 702/263-7275
Fax: 702/263-7200

ENCLOSURE 5



NOTES

*REFERENCED FLOWS FROM "DEER SPRINGS MASTER DRAINAGE PLAN," PREPARED BY STANTEC CONSULTING INC., JANUARY, 2002
-FLOWS WERE DIRECTLY COMBINED
-EXISTING FLOWS DID NOT CONSIDER STORM DRAIN CAPACITY
-STORM DRAIN CAPACITY IS BASED UPON FUTURE FLOWS

LEGEND

- BASIN BOUNDARY
- (OFF1) DRAINAGE BASIN IDENTIFICATION
- ← DIRECTION OF FLOW
- (CP8) CONCENTRATION POINT
- (A) FLOW MASTER X-SECTION
- 10/100 FLOW, Q10/Q100 (CFS)
- EX EXISTING
- PR PROPOSED
- FT FUTURE
- ST STREET
- SD STORM DRAIN



Stantec Consulting Inc.
7251 W. Charleston Blvd.
Las Vegas NV U.S.A.
89117-1580
Tel. 702.258.0115
Fax. 702.258.4956
www.stantec.com



NAME	Q (cfs)	D (ft)	V (fps)	D x V
X-SECTION A				
EX-10-YR	114	0.72	6.37	4.6
EX-100-YR	163	0.79	7.00	5.5
FT-10-YR	33	0.50	5.27	2.6
FT-100-YR	81	0.66	5.85	3.9
X-SECTION B				
PR-100-YR	163	0.95	4.69	4.4
FT-10-YR	33	0.61	2.91	1.8
FT-100-YR	81	0.78	3.64	2.8

NAME	Q (cfs)	D (ft)	V (fps)	D x V
X-SECTION C				
EX-100-YR	163	0.79	7.00	5.5
FT-10-YR	22	0.44	4.89	2.2
FT-100-YR	62	0.61	5.49	3.3
X-SECTION D				
EX-100-YR	195	0.91	5.84	5.3
FT-10-YR	30	0.55	3.63	2.0
FT-100-YR	78	0.72	4.35	3.1

NAME	Q (cfs)	D (ft)	V (fps)	D x V
X-SECTION E				
PR-100-YR	180	1.07	4.02	4.3
FT-10-YR	30	0.64	2.15	1.4
FT-100-YR	93	0.87	3.12	2.7
X-SECTION F				
PR-100-YR	91	0.57	4.51	2.6
FT-10-YR	38	0.51	4.30	2.2
FT-100-YR	69	0.53	4.30	2.3

DATE: JANUARY 6, 2005
PROJECT: 1812-00-259
CITY OF LAS VEGAS
Figure No. **EXHIBIT-1**
Title
EXISTING FLOWS
PROPOSED CONDITIONS