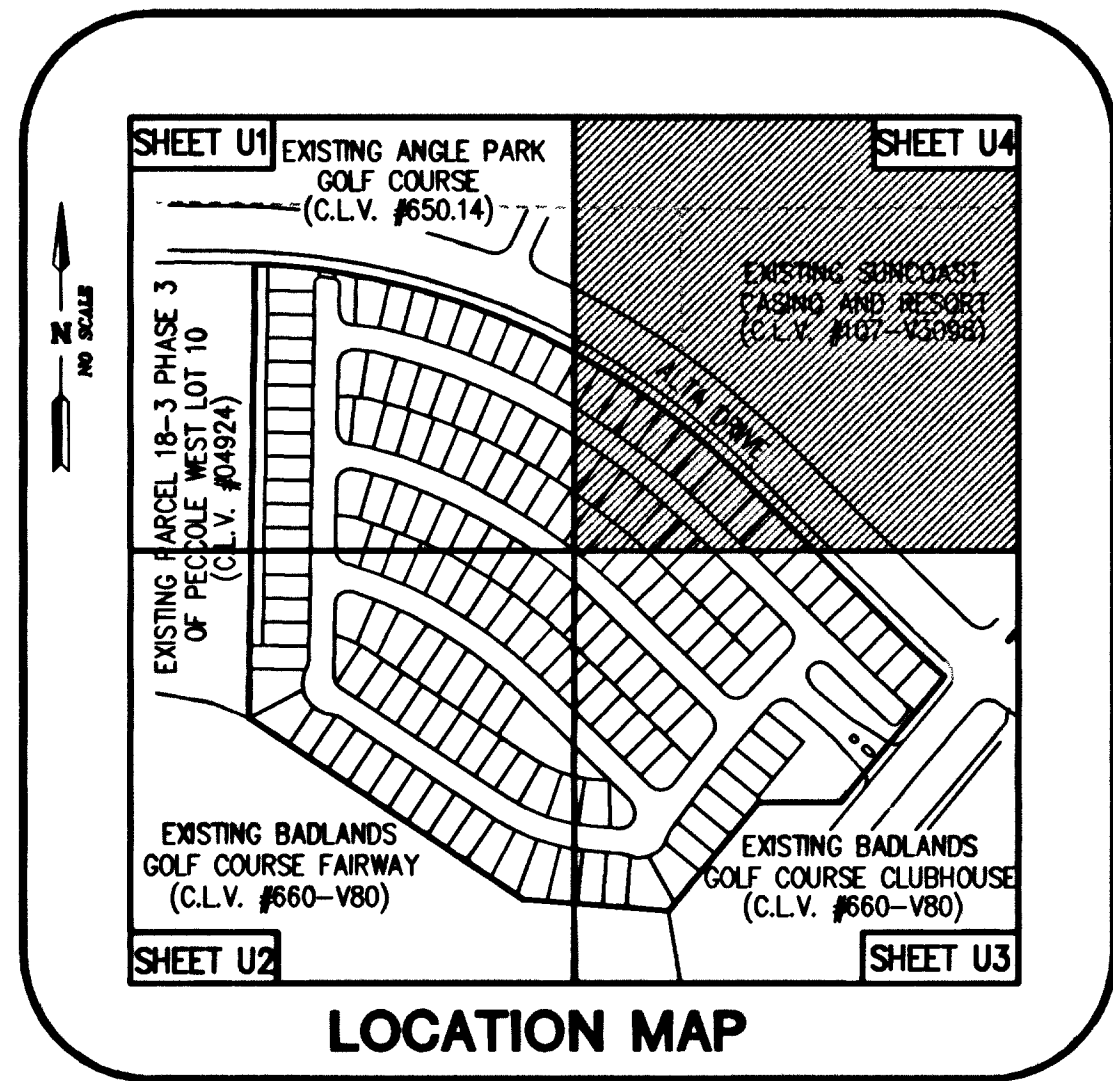
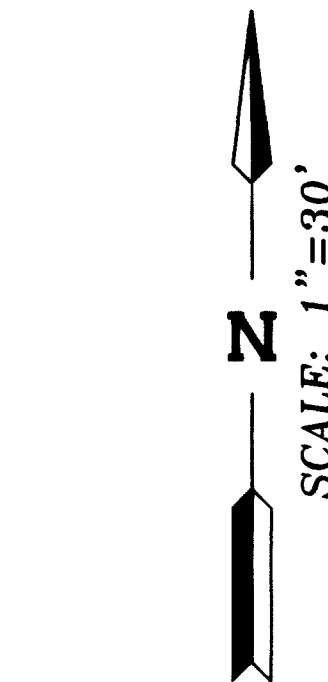




SEWER MANHOLE CONTROL TABLE

EXISTING M.H. NUMBER	EXISTING TOP OF M.H.	EXISTING INV. (IN)	EXISTING INV. (OUT)
#1	(2754.00)	(2744.22)	(2744.02)
#2	(2754.95)	(2742.40)	(2742.20)
#3	(2755.92)	(2742.40)	(2745.03)
M.H. NO.	DIA.	TOP OF M.H.	INV. (IN)
#1	48"	2757.60	2747.80
#2	48"	2760.42	2753.62
#3	48"	2764.32	2757.52
#4	48"	2768.55	2761.75
#5	48"	2772.83	2766.03
#6	48"	2773.54	2766.74
#7	48"	2773.62	2767.30
#8	48"	2772.62	2765.61
#9	48"	2772.43	2765.13
#10	48"	2769.32	2762.52
#11	48"	2766.20	2759.40
#12	48"	2762.22	2755.42
#13	48"	2764.18	2757.38
#14	48"	2768.24	2761.44
#15	48"	2771.53	2764.15
#16	48"	2771.70	2764.49
#17	48"	2770.68	2763.37
#18	48"	2767.53	2760.53
#19	48"	2766.01	2759.01
#20	48"	2764.76	2757.76

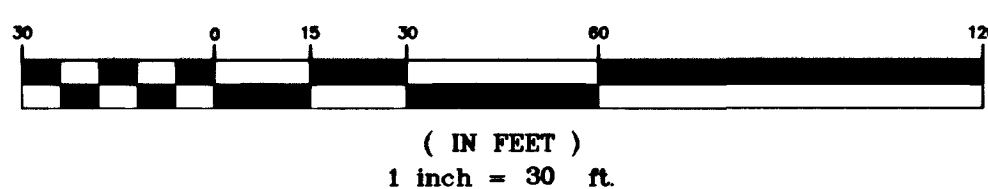


CONSTRUCTION NOTES

- INSTALL FIRE HYDRANT W/ASSEMBLY (PER UDS PLATE NO. 7)
- INSTALL 8"x8" TEE W/THRUST BLOCK (PER UDS PLATE NO. 5)
- INSTALL 8"x6" TEE W/THRUST BLOCK (PER UDS PLATE NO. 5)
- INSTALL 11 1/4" ELBOW W/THRUST BLOCK (PER UDS PLATE NO. 5)
- INSTALL 22 1/2" ELBOW W/THRUST BLOCK (PER UDS PLATE NO. 5)
- INSTALL 45" ELBOW W/THRUST BLOCK (PER UDS PLATE NO. 5)
- INSTALL 90" ELBOW W/THRUST BLOCK (PER UDS PLATE NO. 5)
- INSTALL 8" GATE VALVE (PER UDS PLATE NO. 3 & 8)
- INSTALL 5/8" METER (PER UDS PLATE NO. 18)
- INSTALL CAP W/2" BLOW-OFF ASSEMBLY (PER UDS PLATE NO. 4)
- INSTALL 5/8" IRRIGATION METER W/1" RPPA (PER UDS PLATE NO. 10 & 11A)

NOTE:
FOR TYPICAL WATER AND SEWER LATERAL LOCATIONS SEE SHEET 13 OF 30

GRAPHIC SCALE



BENCHMARK

CITY OF LAS VEGAS BENCHMARK #00LV00 32NWN6
RIVET & PLATE IN TOP OF CURB @ NW CORNER OF
ALTA & WEST EXIT TO SUNCOAST RESORT PARKING LOT.
METERS = 844.0507
U.S. SURVEY ELEV. = 2769.19
NAVD 88, DATUM

OWNER/DEVELOPER

CRESTDALE ASSOCIATES, LTD
1063 LAS PALMAS ENTRADA AVE.
HENDERSON, NEVADA 89012

NOTE:

INSTALL PIPELINE MARKER BALLS IN THE
TRENCH ABOVE EACH HORIZONTAL ELBOW
FITTING, PER UDACS PLATE NO. 27

LEGEND

- EX.2"PE--- EXIST. GAS MAIN
- EX.8"S--- EXIST. SEWER MAIN
- EX.8"W--- EXIST. WATER MAIN
- 8"S--- PROP. SEWER MAIN
- 8"W--- PROP. WATER MAIN
- 1"--- PROP. 1" WATER SERVICE LATERAL (COPPER PIPE)
- 4"--- PROP. 4" SEWER SERVICE LATERAL (PVC PIPE)
- EXIST. SEWER MANHOLE
- PROP. SEWER MANHOLE
- EXIST. FIRE HYDRANT W/ASSEMBLY
- PROP. FIRE HYDRANT W/ASSEMBLY
- EXIST. BACK WATER VALVE REQUIRED
- PROP. STREET LIGHT
- EXIST. STREET LIGHT

BASIS OF BEARING

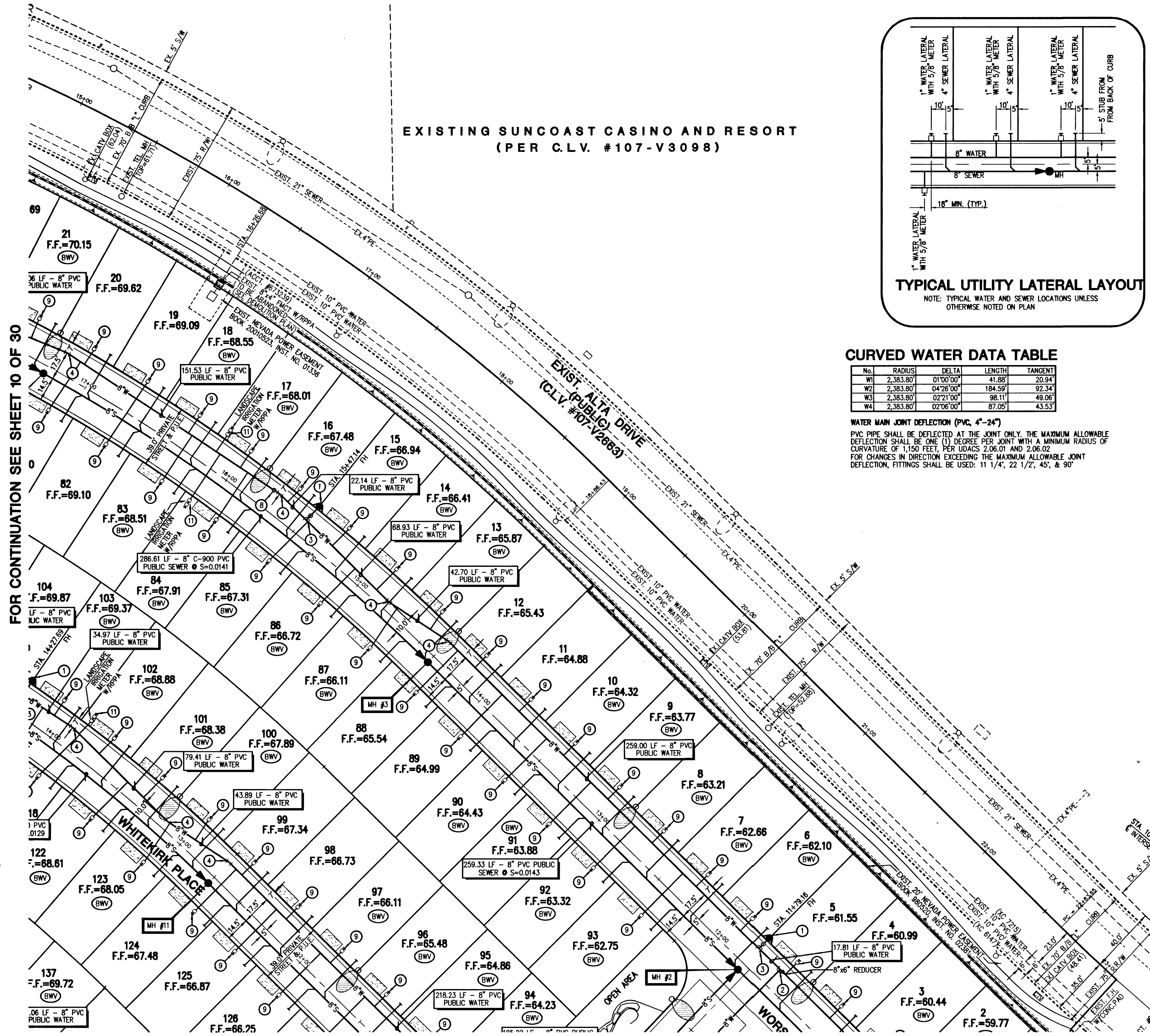
THE BASIS OF BEARING FOR THIS PROJECT IS THE
SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 31,
TOWNSHIP 20 SOUTH, RANGE 60 EAST, M.D.B.M. WHICH BEARS
NORTH 89°40'03" EAST AS SHOWN ON FILE 91, PAGE 27
OF PARCEL MAPS RECORDED IN THE COUNTY RECORDERS
OFFICE OF CLARK COUNTY, NEVADA.

UTILITY INFORMATION

SEWAGE GENERATED: AVG. FLOW = 0.042 MGD
PEAK FLOW = 0.145 MGD
WATER PRESSURE ZONE: 2975 PZ

FIRE FLOW DATA

BUILDING HEIGHT (IN FEET)	28'-0"
OCCUPANCY CLASSIFICATION	GROUP R
CONSTRUCTION CLASSIFICATION	W/A
TOTAL FLOOR AREA OF ALL LEVELS	2,486 SQ.FT.
FLOOR AREA OF THREE LARGEST SUCCESSIVE FLOORS	2,486 SQ.FT.
ESTIMATED FIRE FLOW	1,000



TYPICAL UTILITY LATERAL LAYOUT

NOTE: TYPICAL WATER AND SEWER LOCATIONS UNLESS
OTHERWISE NOTED ON PLAN

CURVED WATER DATA TABLE

No.	RADIUS	DELTA	LENGTH	TANGENT
W1	2,383.80'	01°00'00"	41.88'	20.94'
W2	2,383.80'	04°26'00"	184.59'	92.34'
W3	2,383.80'	02°21'00"	98.11'	49.06'
W4	2,383.80'	02°06'00"	87.05'	43.53'

WATER MAIN JOINT DEFLECTION (PVC, 4"-24")

PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE
DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF
CURVATURE OF 1,150 FEET, PER UDACS 2.06.01 AND 2.06.02
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT
DEFLECTION, FITTINGS SHALL BE USED: 11 1/4", 22 1/2", 45", & 90"

CRESTDALE ASSOCIATES, LTD

1063 LAS PALMAS ENTRADA AVE.
HENDERSON, NEVADA 89012

UTILITY PLAN (4)

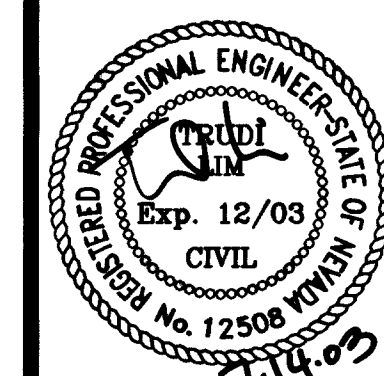
WINDSOR AT QUEENSRIDGE

DRAWN BY: BLOOM 02/03

DESIGNED BY: BLOOM 02/03

CHECKED BY: BLOOM 02/03

PROJECT NO: 086-EG80



SHEET
U4
13 OF 30 SHEETS

DRAWING NO.
10744763

APPROVAL

CITY ENGINEER

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT

DATE