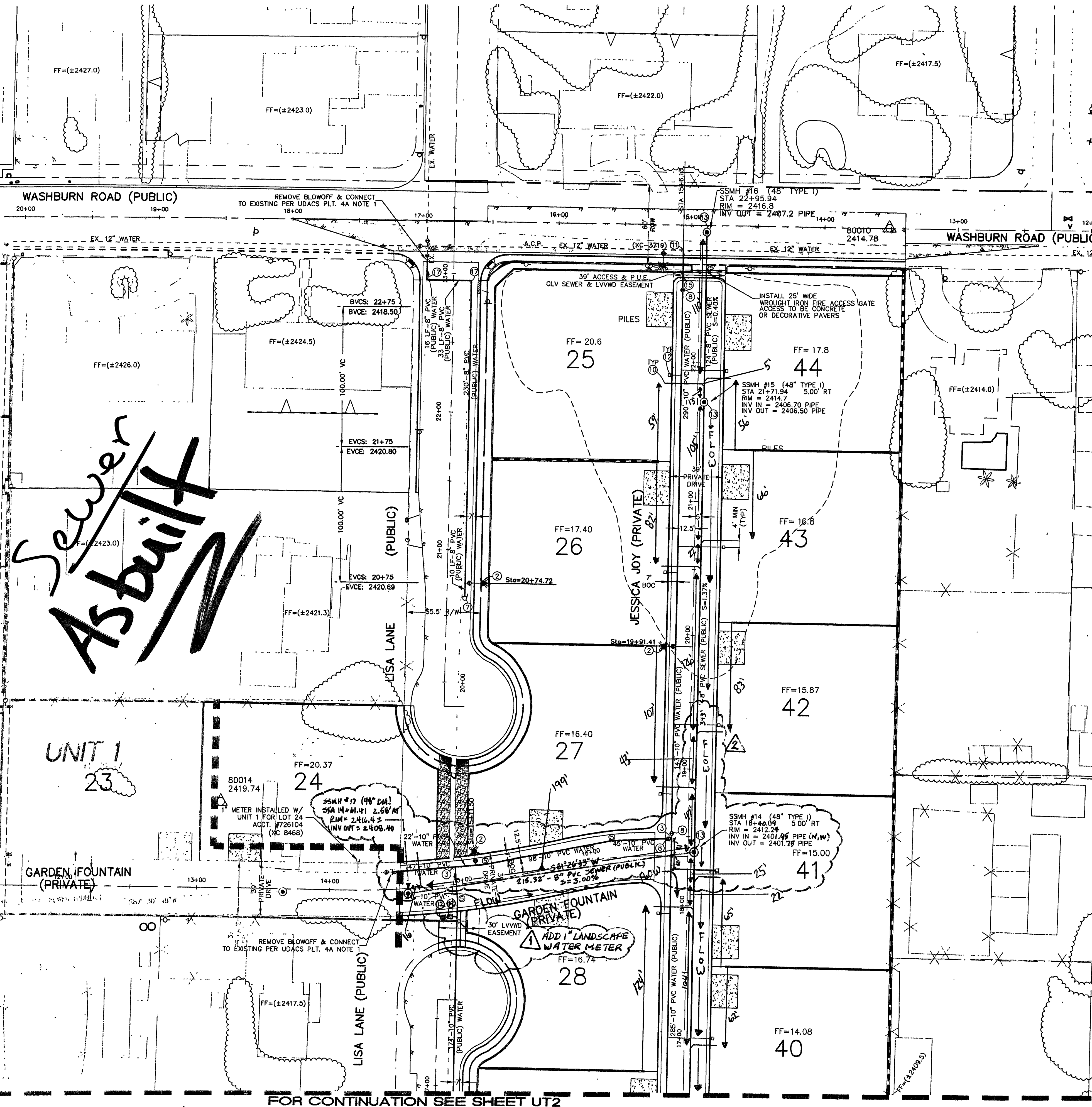


FOR CONTINUATION SEE SHEET UT1 OF UNIT 1

FOR CONTINUATION SEE SHEET UT2



MANHOLE INFO

SMH #6 (48" TYPE I) STA 14+3.05 8.00' RT RIM = 2405.96 INV IN = 2398.78 PIPE INV OUT = 2398.58 PIPE	SMH #15 (48" TYPE I) STA 21+71.94 8.00' RT RIM = 2414.7 INV IN = 2406.70 PIPE INV OUT = 2406.50 PIPE
SMH #13 (48" TYPE I) STA 15+83.03 8.00' RT RIM = 2409.11 INV IN = 2398.50 PIPE INV OUT = 2399.30 PIPE	SMH #16 (48" TYPE I) STA 22+95.94 5.00' RT RIM = 2414.7 INV IN = 2406.70 PIPE INV OUT = 2406.50 PIPE
SMH #14 (48" TYPE I) STA 18+40.06 8.00' RT RIM = 2412.24 INV IN = 2401.95 PIPE (N.W.) INV OUT = 2401.75 PIPE	SMH #17 (48" TYPE I) STA 14+61.41 2.50' RT RIM = 2416.4 ± INV OUT = 2406.40

FIRE FLOW REQUIREMENT IS 1500 GALLONS PER MINUTE AT 20 POUNDS SQUARE INCH RESIDUAL PRESSURE.
BASED ON:
LARGEST SQUARE FOOTAGE: 3600- SQ.FT.
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS: 3600- SQ.FT.
BUILDING HEIGHT: 35' FEET
NUMBER OF STORIES: 2 FLOORS
TYPE OF CONSTRUCTION: (VN)
OCCUPANCY: SINGLE FAMILY
FULL AUTOMATIC FIRE SPRINKLER SYSTEM: NO
REVIEWED BY: _____
DATE: _____

SEWER FLOW CONTRIBUTIONS
AVERAGE DAILY FLOW = 250 GPD x 21 = 5,250 GPD
PEAK DAILY FLOW = 3.1 (250 GPD) x 21 = 16,275 GPD

NOTE: WHEN MINIMUM 18 INCH CLEARANCE BETWEEN WATER AND SEWER LINES CANNOT BE MAINTAINED USE C900 WATER QUALITY PIPE FOR SEWER LINE PER UDACS 2.19.02.B.5A

LWWD EASEMENT SECTION DETAIL
SCALE: NTS

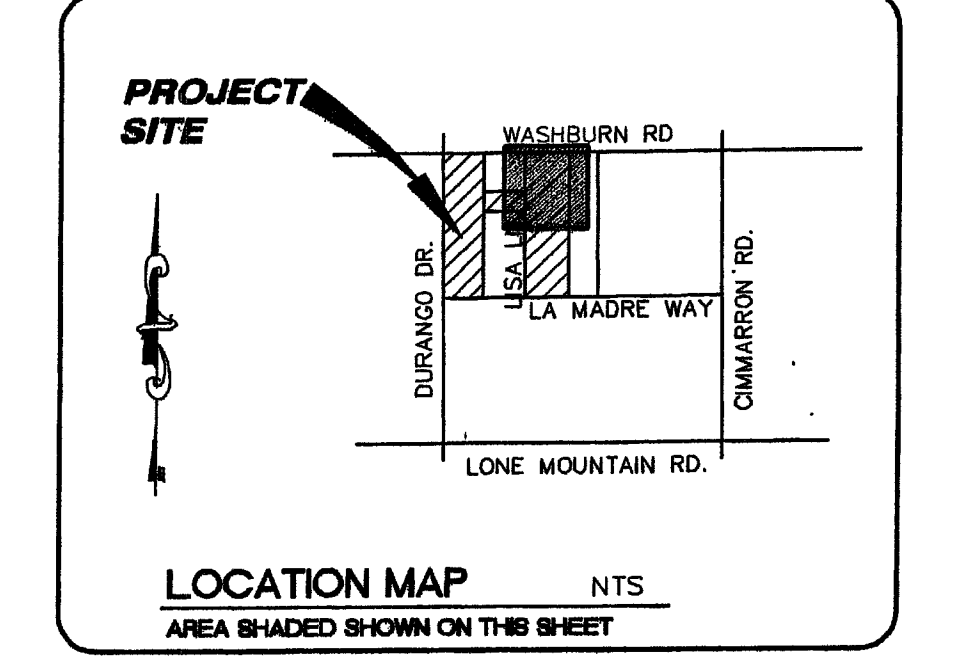
LWWD EASEMENT PROFILE DETAIL
SCALE: 1"=10'

PRIVATE DRIVE NOTE
ALL STREETS AND DRIVES SHOWN ARE PRIVATE UNLESS OTHERWISE NOTED.

APPROVED FOR CONSTRUCTION

DATE: 4/14/04

DATE: 4/15/04



BENCH MARK
CITY OF LAS VEGAS VERTICAL CONTROL
RIVET AND PLATE IN TOP OF CURB, NE
RETURN OF DURANGO DRIVE & WASHBURN RD.
STATION 11V90
33W4
ELEVATION = 740.8191 METERS 2430.50 FEET (NAVD88) OLD
740.7932 METERS 2430.42 FEET NEW
OLD - 0.08' = NEW

BASE OF BEARING
NORTH 88°58'14" WEST BEING THE EAST-WEST LINE CENTER OF SECTION LINE BETWEEN THE WEST QUARTER (1/4) CORNER AND THE WEST SIXTEENTH (1/16) CORNER OF SECTION 33, TOWNSHIP 19 SOUTH, RANGE 60 EAST M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA. AS SHOWN BY MAP IN THE OFFICE OF THE CLARK COUNTY, NEVADA RECORDER IN FILE 82 OF PARCEL MAPS PAGE 75.

LEGEND

- EXISTING STREET LIGHTS
- NEW STREET LIGHT (UNLESS NOTED AS EXISTING)
- PHOTO EYE
- ELECTRICAL PEDISTAL
- PULL BOX AS SHOWN
- GATE VALVE
- EX GATE VALVE
- EXISTING FIRE HYDRANT
- NEW FIRE HYDRANT (UNLESS NOTED AS EXISTING)
- BACKWATER VALVE
- SEWER MANHOLE
- EXISTING SEWER MANHOLE
- STORM DRAIN MANHOLE
- SEWER AND WATER SERVICE
- STREET NAME SIGN
- STREET SIGN (SPEED LIMIT 25) (R2-1)
- STOP SIGN (R1-1)
- FUTURE IMPROVEMENTS
- EX. IMPROVEMENTS
- STREET LIGHT CONDUIT
- UNIT LINE

UTILITY CONSTRUCTION NOTES UNIT 2

- INSTALL 10" PVC (PUBLIC) WATERLINE 1,582 LF
- INSTALL FIRE HYDRANT ASSEMBLY PER UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDS) PLATE No. 7, AND THE LOCATION SHALL BE DETERMINED BY USD 516 6 EA
- INSTALL 10" TEE PER UDACS PLT. 5 2 EA
- INSTALL 8" - 45° BEND PER UDACS PLT. 5 2 EA
- INSTALL 10" - "SPECIFIED FITTINGS" 5" BEND W/ RESTRAINED JOINTS 3 EA
- INSTALL 10" - 11.25° BEND 0 EA
- INSTALL CAP & 2" BLOWOFF ASSEMBLY PER UDACS PLATE No. 4A 3 EA
- INSTALL 10" GATE VALVE. VALVES SHALL NOT BE LOCATED IN STREET VALLEY GUTTERS PER UDACS PLT. 3 & 8 4 EA
- 8" PVC SANITARY SEWER LINE 146 LF
- 4" PVC SANITARY SEWER LATERAL 596 LF
- CONNECT TO EXISTING W/ 12"x10" MJ TAPPING TEE & TAPPING VALVE 1 EA
- INSTALL 1" METER W/ 1" COPPER SERVICE CONNECTION 21 EA
- INSTALL 48" DIAMETER MANHOLE 3 EA (SEE PLAN & PROFILE FOR VERTICAL INFO.)
- USE AWWA C900 PVC WATER QUALITY PIPE FOR SEWER LATERAL.
- INSTALL 10" DUCTILE IRON PIPE 29 LF
- INSTALL 8" GATE VALVE. VALVES SHALL NOT BE LOCATED IN STREET VALLEY GUTTERS PER UDACS PLT. 3 & 8 1 EA
- INSTALL 8" - 90° BEND 2 EA
- INSTALL 8" PVC (PUBLIC) WATERLINE 289 LF
- INSTALL 1" RPPA

FUTURE SERVICE LATERALS AND METERS

INSTALLATION OF SERVICE LATERALS (1" TO 2") FOR FUTURE LOTS SHALL BE INSTALLED PER THE UDACS PLATE 1D. IF ANY OF THE SERVICE LATERAL TO BE INSTALLED FOR FUTURE LOTS ARE INCORRECTLY LOCATED OR ARE NOT USED FOR ANY REASON WHEN THE LOTS ARE DEVELOPED, THE DEVELOPER SHALL ABANDON THE LATERALS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH THE DISTRICT'S STANDARDS AND AT THE DEVELOPER'S EXPENSE.

GRAPHIC SCALE
1 inch = 40 ft.

SEWER MANHOLE NOTE
ALL ON-SITE SEWER MANHOLE TO BE CONSTRUCTED AS 48" SEWER MANHOLE PER DCSWS STANDARD DRAWING NO SD-1 UNLESS OTHERWISE NOTED ON PLANS.

PRV'S & SEWER BACKWATER VALVES
INDIVIDUAL PRESSURE REDUCED VALVES (PRV) ARE REQUIRED FOR ALL BUILDINGS WHICH EXCEEDS STATIC PRESSURE OF 80 PSI.

CALL BEFORE YOU OVERHEAD
1-702-583-6111
NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

NOTICE!
EXISTING UTILITIES ARE SHOWN ON PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR SHOWN INCORRECTLY.

CALL BEFORE YOU DIG
1-800-227-2600
UNDERGROUND SERVICE (USA)

TOLL BROTHERS
1635 VILLAS CENTER CIRCLE, SUITE 100
(702) 243-9800 FAX (702) 243-9610

ENGINEERING COMPANY
50 So. Jones #202, Las Vegas, NV 89107
Telephone: (702) 877-1300

ALPHA

WASHBURN & DURANGO UNIT 2
(AKA - NORTH CANYON ESTATES)

Asbuilt UTILITY PLAN 1 OF 2

UT1
6 OF 14 SHEETS
DRAWING NO. 107Y4789-2

PROFESSIONAL ENGINEER
GEORGE W. SPENCER JR.
CIVIL
EXPIRATION DATE 06/30/04
NO. 7848

SCALE:
1"=40'

DATE:
05/13/03

DESIGNED BY:
RCV

CHECKED BY:
CWS

PROJECT NO.:
316710

-107Y4789-2-