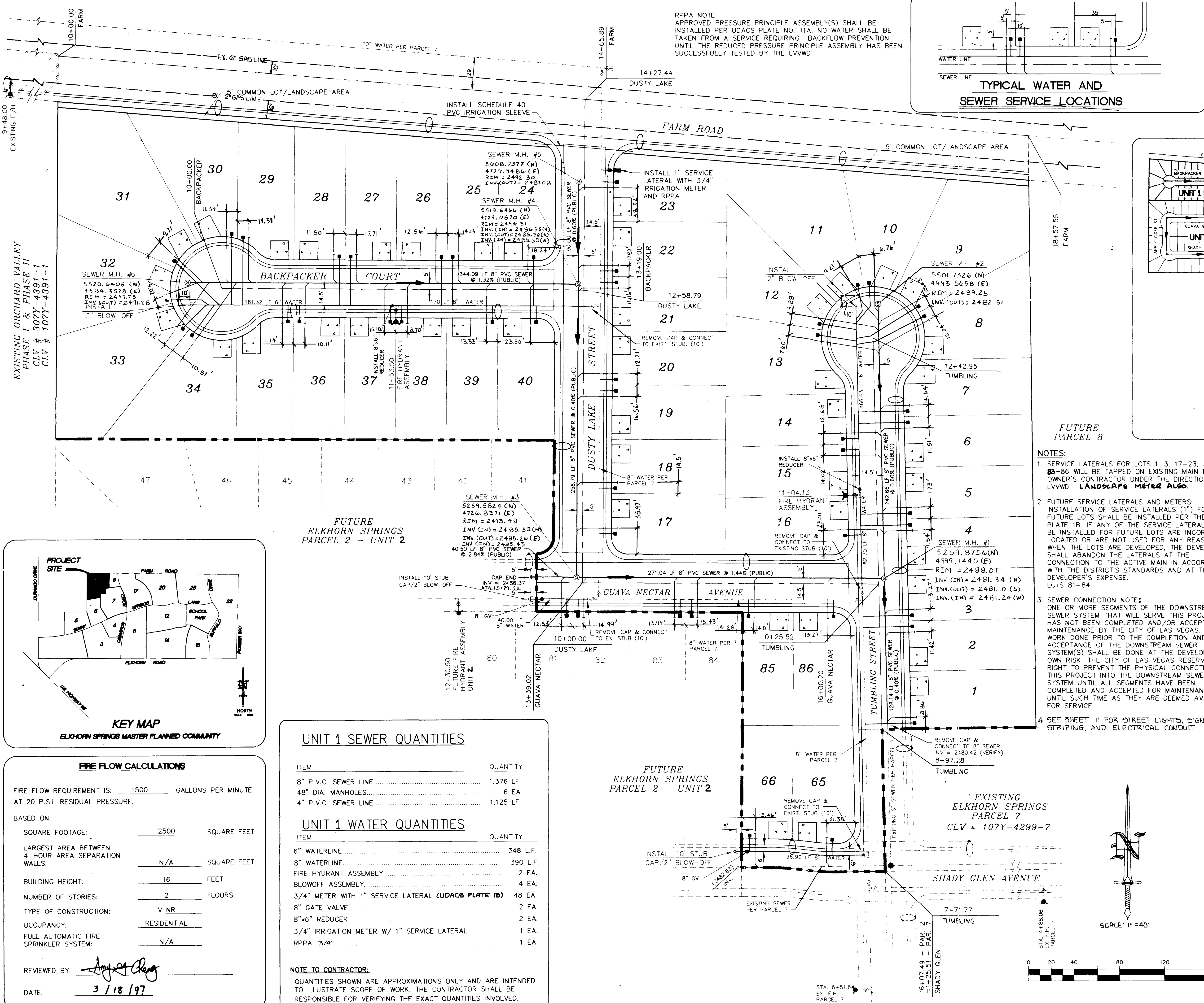
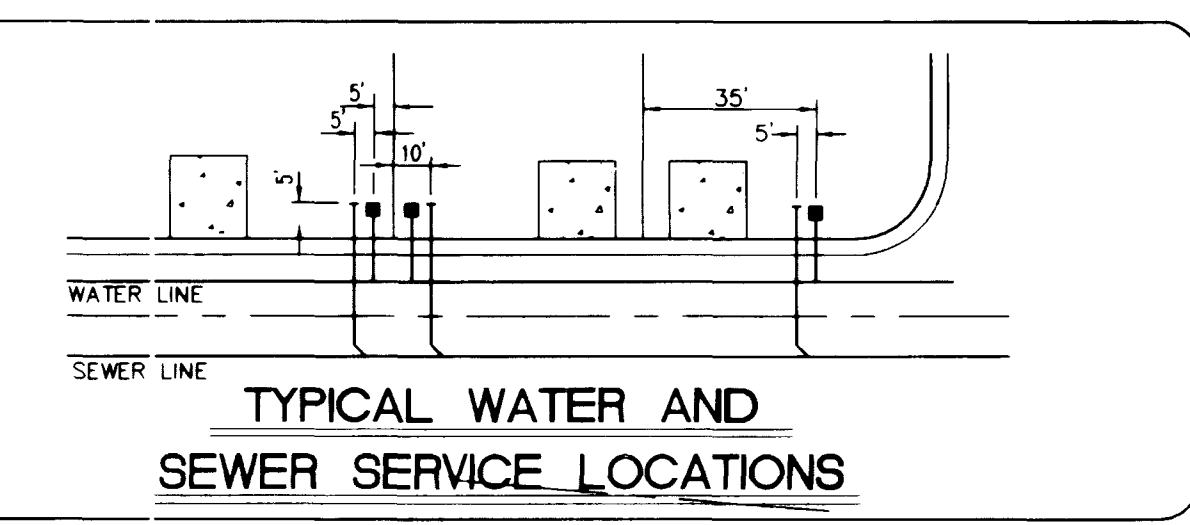


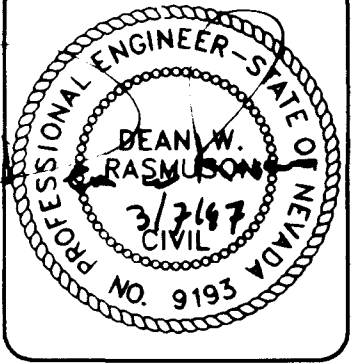


RPAA NOTE:
APPROVED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE
INSTALLED PER UDACS PLATE NO. 11A. NO WATER SHALL BE
TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION
UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN
SUCCESSFULLY TESTED BY THE LVVWD.

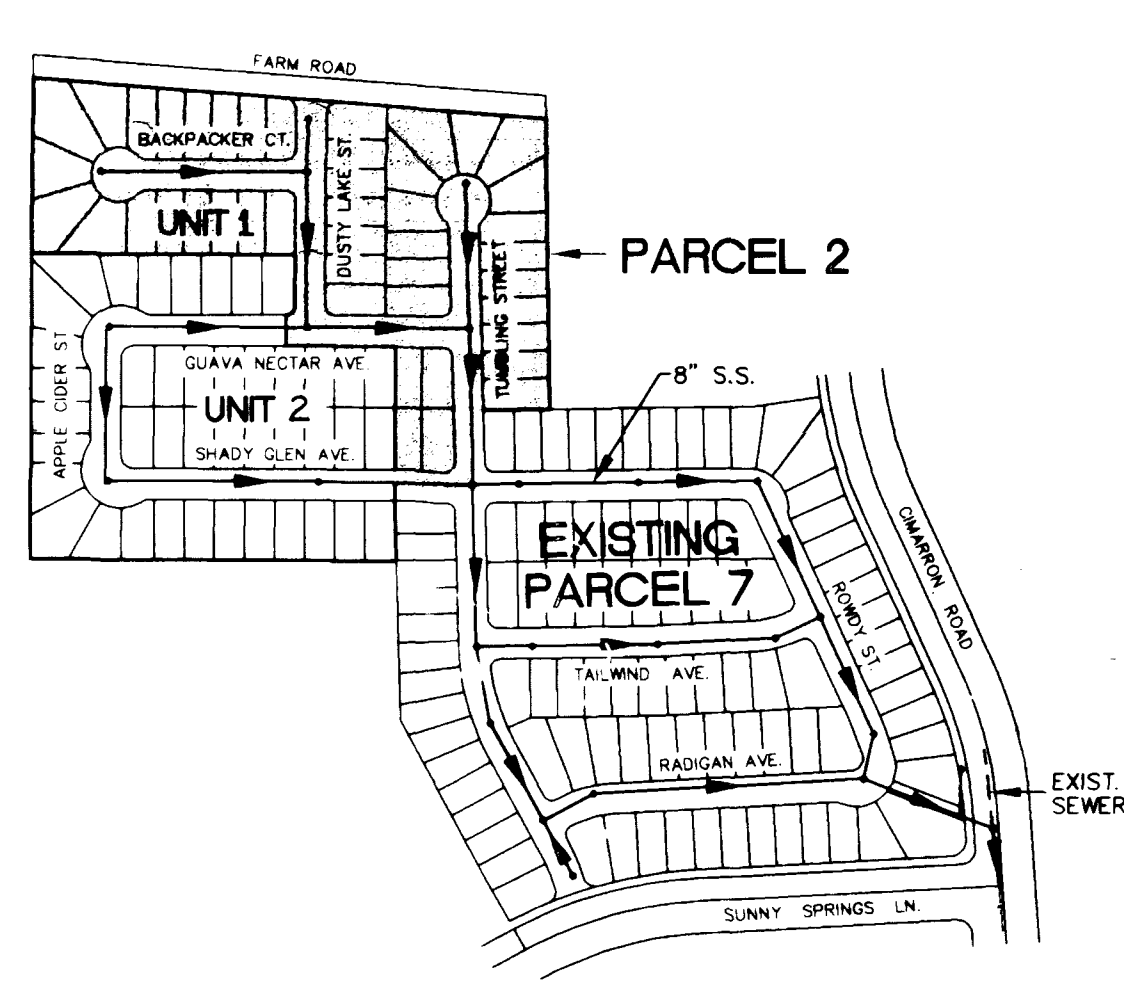


Avoid overhead power line contact.
Call before you Overhead
1-702-593-6111
NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

Avoid cutting underground utility lines. It's costly.
Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE ALERT (USA)

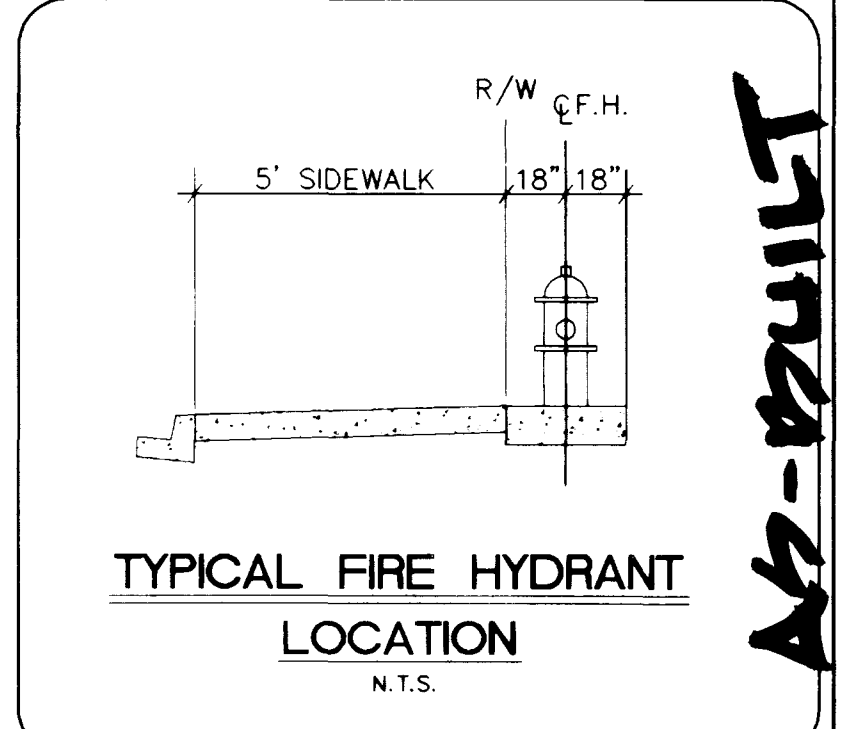


DESIGNED BY: DRJ	DRAWN BY: DRJ	DATE: 10/96
CHECKED BY: MS	JOB NUMBER: 001.700X	BY DATE
NO	REVISION	



- NOTES:
- SERVICE LATERALS FOR LOTS 1-3, 17-23, AND 85-86 WILL BE TAPPED ON EXISTING MAIN BY OWNER'S CONTRACTOR UNDER THE DIRECTION OF LVVWD. LANDSCAPE METER ALSO.
 - FUTURE SERVICE LATERALS AND METERS: INSTALLATION OF SERVICE LATERALS (1") FOR FUTURE LOTS SHALL BE INSTALLED PER THE UDACS PLATE 1B. IF ANY OF THE SERVICE LATERALS 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. LOTS 81-84.
 - SEWER CONNECTION NOTE: ONE OR MORE SEGMENTS OF THE DOWNSTREAM SEWER SYSTEM THAT WILL SERVE THIS PROJECT HAS NOT BEEN COMPLETED AND/OR ACCEPTED FOR MAINTENANCE BY THE CITY OF LAS VEGAS. ANY WORK DONE PRIOR TO THE COMPLETION AND/OR ACCEPTANCE OF THE DOWNSTREAM SEWER SYSTEM(S) SHALL BE DONE AT THE DEVELOPER'S OWN RISK. THE CITY OF LAS VEGAS RESERVES THE RIGHT TO PREVENT THE PHYSICAL CONNECTION OF THIS PROJECT INTO THE DOWNSTREAM SEWER SYSTEM UNTIL ALL SEGMENTS HAVE BEEN COMPLETED AND ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THEY ARE DEEMED AVAILABLE FOR SERVICE.
 - SEE SHEET 11 FOR STREET LIGHTS, SIGNAGE, STRIPING, AND ELECTRICAL CONDUIT.

- LEGEND
- LF 8" WATER
 - 8" S.S.
 - PROPERTY LINE
 - WATER SERVICE LATERAL W/METER AND METER BOX
 - SANITARY SEWER LATERAL
 - SANITARY SEWER MANHOLE
 - FIRE HYDRANT ASSEMBLY (INCLUDES 8"x6" TEE & 6" GATE VALVE)
 - BLOW-OFF ASSEMBLY
 - EXISTING STREET LIGHT
 - PROPOSED STREET LIGHT (SEE SHEET 11)



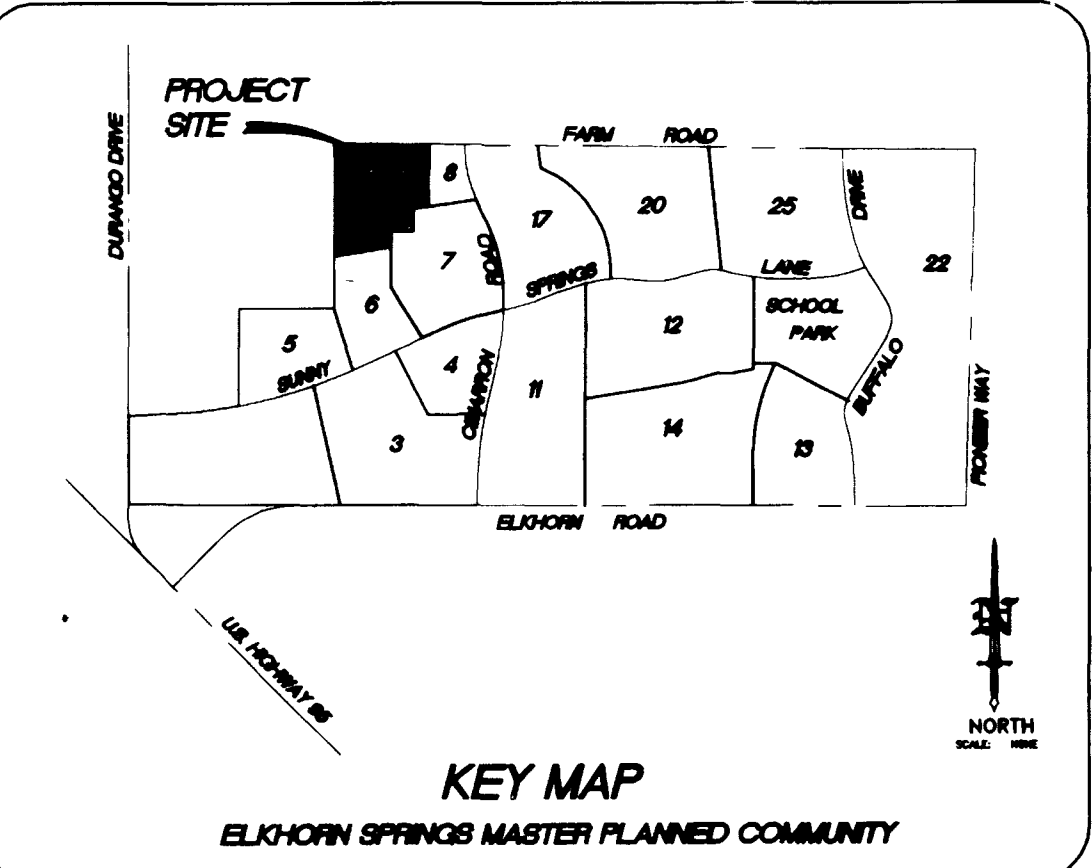
ESTIMATED SEWER CONTRIBUTION

AVERAGE DAY:	.011 MGD
PEAK:	.033 MGD

APPROVED FOR CONSTRUCTION

Las Vegas Valley Water District
DATE: 4/6/97

FILE NAME: 5185U105.DWG



FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENT IS: 1500 GALLONS PER MINUTE AT 20 P.S.I. RESIDUAL PRESSURE.

BASED ON:

SQUARE FOOTAGE:	2500	SQUARE FEET
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS:	N/A	SQUARE FEET
BUILDING HEIGHT:	16	FEET
NUMBER OF STORIES:	2	FLOORS
TYPE OF CONSTRUCTION:	V NR	
OCCUPANCY:	RESIDENTIAL	
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	N/A	

REVIEWED BY: [Signature]
DATE: 3/18/97

UNIT 1 SEWER QUANTITIES

ITEM	QUANTITY
8" P.V.C. SEWER LINE	1,376 LF
48" DIA. MANHOLES	6 EA
4" P.V.C. SEWER LINE	1,125 LF

UNIT 1 WATER QUANTITIES

ITEM	QUANTITY
6" WATERLINE	348 L.F.
8" WATERLINE	390 L.F.
FIRE HYDRANT ASSEMBLY	2 EA.
BLOWOFF ASSEMBLY	4 EA.
3/4" METER WITH 1" SERVICE LATERAL (UDACS PLATE 1B)	48 EA.
8" GATE VALVE	2 EA.
8"x6" REDUCER	2 EA.
3/4" IRRIGATION METER W/ 1" SERVICE LATERAL	1 EA.
RPAA 3/4"	1 EA.

NOTE TO CONTRACTOR:
QUANTITIES SHOWN ARE APPROXIMATIONS ONLY AND ARE INTENDED TO ILLUSTRATE SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT QUANTITIES INVOLVED.

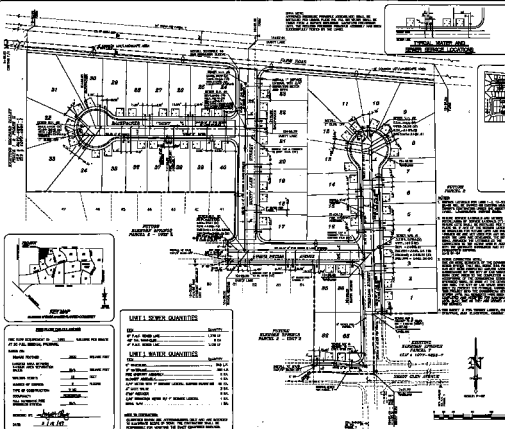
WATT HOMES - NEVADA DIVISION
ELKHORN SPRINGS - PARCEL 2
UNIT 1 - UTILITY PLAN

ORION ENGINEERING AND SURVEYING, INC.
2700 CHANDLER AVENUE, SUITE B-1
LAS VEGAS, NEVADA 89120
(702) 730-5921 FAX (702) 730-5929

Orion

SHEET 6 of 12

"As-Built" 307Y-4399-2-1



Call
before you
Overhead
1-702-523-8777
702-523-8777

Call before you Dig
1-800-257-2600



NEARBY KEY MAP

confidential

LEADS

PTW	WATSON
FAL	KIRKMAN
	POPEY LEE
W	WILLIAMS LARRY LANCE AND OTHERS
S	SMITH JOHN LANCE

TYPICAL FIRE ALARM LOCATION

AVERAGE DASH **dash word**
mean **over mean**

APPROVED FOR CONSTRUCTION

Livingston J. Neelands 1871
LIFE: 1840-1841, 1842-1843, 1844-1845, 1846-1847, 1848-1849, 1850-1851, 1852-1853, 1854-1855, 1856-1857, 1858-1859, 1860-1861, 1862-1863, 1864-1865, 1866-1867, 1868-1869, 1870-1871, 1872-1873, 1874-1875, 1876-1877, 1878-1879, 1880-1881, 1882-1883, 1884-1885, 1886-1887, 1888-1889, 1890-1891, 1892-1893, 1894-1895, 1896-1897, 1898-1899, 1900-1901, 1902-1903, 1904-1905, 1906-1907, 1908-1909, 1910-1911, 1912-1913, 1914-1915, 1916-1917, 1918-1919, 1920-1921, 1922-1923, 1924-1925, 1926-1927, 1928-1929, 1930-1931, 1932-1933, 1934-1935, 1936-1937, 1938-1939, 1940-1941, 1942-1943, 1944-1945, 1946-1947, 1948-1949, 1950-1951, 1952-1953, 1954-1955, 1956-1957, 1958-1959, 1960-1961, 1962-1963, 1964-1965, 1966-1967, 1968-1969, 1970-1971, 1972-1973, 1974-1975, 1976-1977, 1978-1979, 1980-1981, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994-1995, 1996-1997, 1998-1999, 2000-2001, 2002-2003, 2004-2005, 2006-2007, 2008-2009, 2010-2011, 2012-2013, 2014-2015, 2016-2017, 2018-2019, 2020-2021, 2022-2023, 2024-2025, 2026-2027, 2028-2029, 2030-2031, 2032-2033, 2034-2035, 2036-2037, 2038-2039, 2040-2041, 2042-2043, 2044-2045, 2046-2047, 2048-2049, 2050-2051, 2052-2053, 2054-2055, 2056-2057, 2058-2059, 2060-2061, 2062-2063, 2064-2065, 2066-2067, 2068-2069, 2070-2071, 2072-2073, 2074-2075, 2076-2077, 2078-2079, 2080-2081, 2082-2083, 2084-2085, 2086-2087, 2088-2089, 2090-2091, 2092-2093, 2094-2095, 2096-2097, 2098-2099, 2100-2101, 2102-2103, 2104-2105, 2106-2107, 2108-2109, 2110-2111, 2112-2113, 2114-2115, 2116-2117, 2118-2119, 2120-2121, 2122-2123, 2124-2125, 2126-2127, 2128-2129, 2130-2131, 2132-2133, 2134-2135, 2136-2137, 2138-2139, 2140-2141, 2142-2143, 2144-2145, 2146-2147, 2148-2149, 2150-2151, 2152-2153, 2154-2155, 2156-2157, 2158-2159, 2160-2161, 2162-2163, 2164-2165, 2166-2167, 2168-2169, 2170-2171, 2172-2173, 2174-2175, 2176-2177, 2178-2179, 2180-2181, 2182-2183, 2184-2185, 2186-2187, 2188-2189, 2190-2191, 2192-2193, 2194-2195, 2196-2197, 2198-2199, 2200-2201, 2202-2203, 2204-2205, 2206-2207, 2208-2209, 2210-2211, 2212-2213, 2214-2215, 2216-2217, 2218-2219, 2220-2221, 2222-2223, 2224-2225, 2226-2227, 2228-2229, 2230-2231, 2232-2233, 2234-2235, 2236-2237, 2238-2239, 2240-2241, 2242-2243, 2244-2245, 2246-2247, 2248-2249, 2250-2251, 2252-2253, 2254-2255, 2256-2257, 2258-2259, 2260-2261, 2262-2263, 2264-2265, 2266-2267, 2268-2269, 2270-2271, 2272-2273, 2274-2275, 2276-2277, 2278-2279, 2280-2281, 2282-2283, 2284-2285, 2286-2287, 2288-2289, 2290-2291, 2292-2293, 2294-2295, 2296-2297, 2298-2299, 2300-2301, 2302-2303, 2304-2305, 2306-2307, 2308-2309, 2310-2311, 2312-2313, 2314-2315, 2316-2317, 2318-2319, 2320-2321, 2322-2323, 2324-2325, 2326-2327, 2328-2329, 2330-2331, 2332-2333, 2334-2335, 2336-2337, 2338-2339, 2340-2341, 2342-2343, 2344-2345, 2346-2347, 2348-2349, 2350-2351, 2352-2353, 2354-2355, 2356-2357, 2358-2359, 2360-2361, 2362-2363, 2364-2365, 2366-2367, 2368-2369, 2370-2371, 2372-2373, 2374-2375, 2376-2377, 2378-2379, 2380-2381, 2382-2383, 2384-2385, 2386-2387, 2388-2389, 2390-2391, 2392-2393, 2394-2395, 2396-2397, 2398-2399, 2400-2401, 2402-2403, 2404-2405, 2406-2407, 2408-2409, 2410-2411, 2412-2413, 2414-2415, 2416-2417, 2418-2419, 2420-2421, 2422-2423, 2424-2425, 2426-2427, 2428-2429, 2430-2431, 2432-2433, 2434-2435, 2436-2437, 2438-2439, 2440-2441, 2442-2443, 2444-2445, 2446-2447, 2448-2449, 2450-2451, 2452-2453, 2454-2455, 2456-2457, 2458-2459, 2460-2461, 2462-2463, 2464-2465, 2466-2467, 2468-2469, 2470-2471, 2472-2473, 2474-2475, 2476-2477, 2478-2479, 2480-2481, 2482-2483, 2484-2485, 2486-2487, 2488-2489, 2490-2491, 2492-2493, 2494-2495, 2496-2497, 2498-2499, 2500-2501, 2502-2503, 2504-2505, 2506-2507, 2508-2509, 2510-2511, 2512-2513, 2514-2515, 2516-2517, 2518-2519, 2520-2521, 2522-2523, 2524-2525, 2526-2527, 2528-2529, 2530-2531, 2532-2533, 2534-2535, 2536-2537, 2538-2539, 2540-2541, 2542-2543, 2544-2545, 2546-2547, 2548-2549, 2550-2551, 2552-2553, 2554-2555, 2556-2557, 2558-2559, 2560-2561, 2562-2563, 2564-2565, 2566-2567, 2568-2569, 2570-2571, 2572-2573,

UNIT 1 - BRITISH ISLES

Orion
 OTHER PRODUCTS AND SERVICES, INC.
 3000 CHURCHILL AVENUE, SUITE 3-1
 LAS VEGAS, NEVADA 89102
 (702) 735-0000 FAX: (702) 735-0000

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