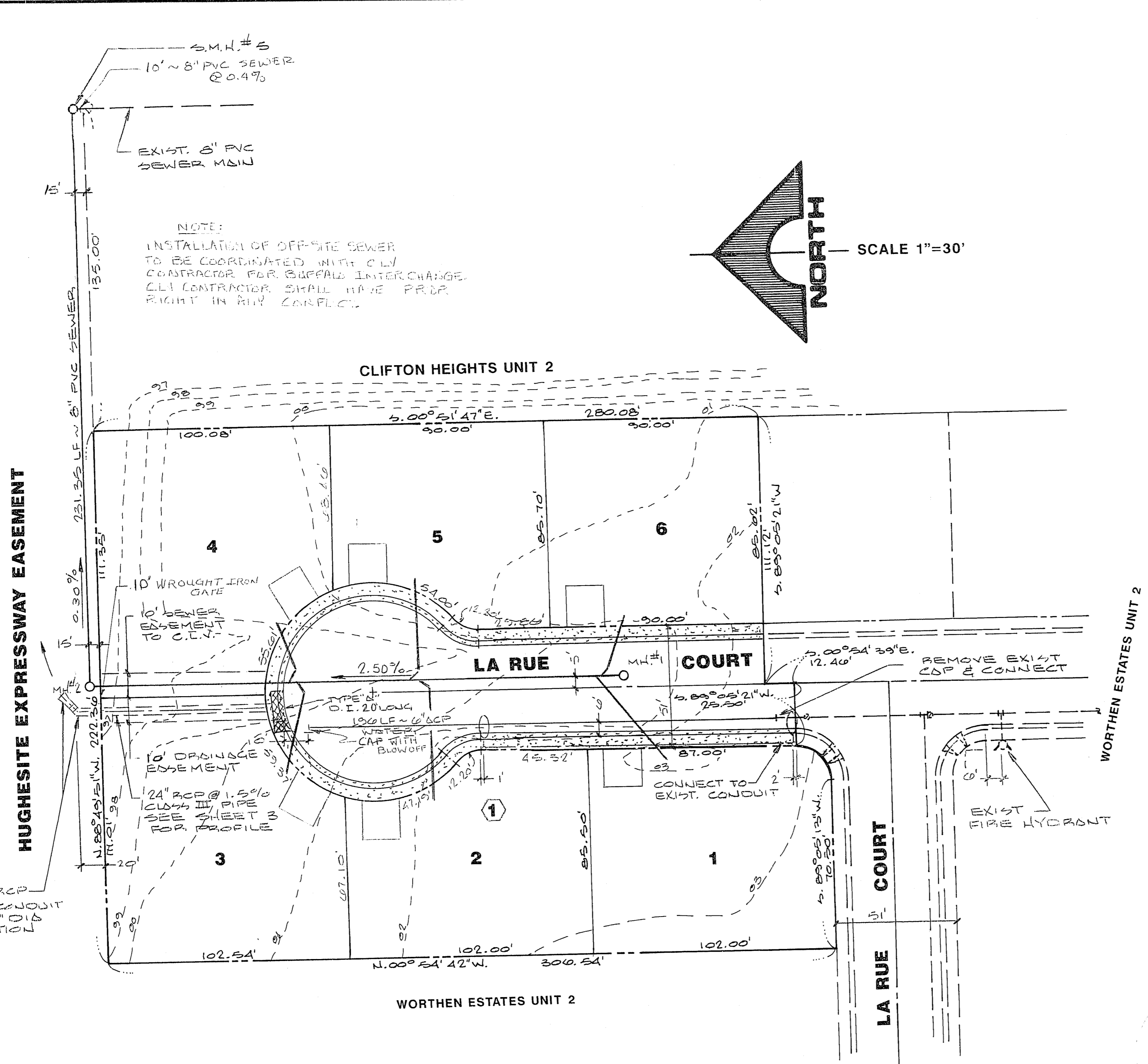


CITY OF LAS VEGAS
FIRE DEPARTMENT NOTES

- All work shall be done in strict accordance with the City of Las Vegas Fire Department "Hydrant Specifications", "Hydrant Installation Specifications" and Ordinance #3545.
- Authorized hydrants for this project are:
 - Kennedy Guardian
 - Mettler A-23 Centurian
 - Clow Model 2546 Medallion
- On any new home or building installation, accessible fire hydrants shall be installed before combustible construction commences and said fire hydrants shall be in good working order with an adequate water supply.
- Contractor shall place a blue reflective marker at centerline of street adjacent to fire hydrant as required in Ordinance #3545 to identify fire hydrant locations.
- Call the Las Vegas Building Department at 799-2071 for underground inspection, pressure and flush verification of all fire hydrants and fire lines before covering.
- Painting of the curb and hydrant and any work necessary for protection of hydrants from physical damage per the Ordinance #3545 shall be completed before approval by the City of Las Vegas Fire Department.
- A permit is required from the Fire Department for on-site water line and fire hydrant. The Permit and contractor's material and test certificate for underground piping form shall be obtained from the Fire Protection Engineer prior to any work beginning.
- A flow test must be witnessed by the Fire Department prior to occupancy for verification of required on-site water supply.
- All on-site fire main materials must be U.L. listed and F.M. approved.
- Fire hydrant spacing:
 - Residential - 500 feet un sprinklered, 600 feet sprinklered
 - Commercial, including multi-family - 300 feet un sprinklered, 400 feet sprinklered.
- No fire hydrant shall be located within the required radius of a cul-de-sac or within 20 feet of the perimeter of the radius of the cul-de-sac.
- No fire hydrant shall be located within 6 feet of any curb return, driveway, power pole, street light or any other obstruction.
- Not more than 2 hydrants can be out of service due to a single main break.
- The turning radius for any fire apparatus access road and/or fire lane, public or private shall be not less than 45 feet outside radius and 22 feet inside radius.
- A fire apparatus road shall be required when any portion of an exterior wall of the first story is located more than 150 feet from a fire department vehicle access. (See exceptions in UFGS, Section 10.207).
- All dead end fire apparatus access roads and/or fire lanes public or private in excess of 150 feet in length shall be provided with an approved turnaround area. See Ordinance #3545.



LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

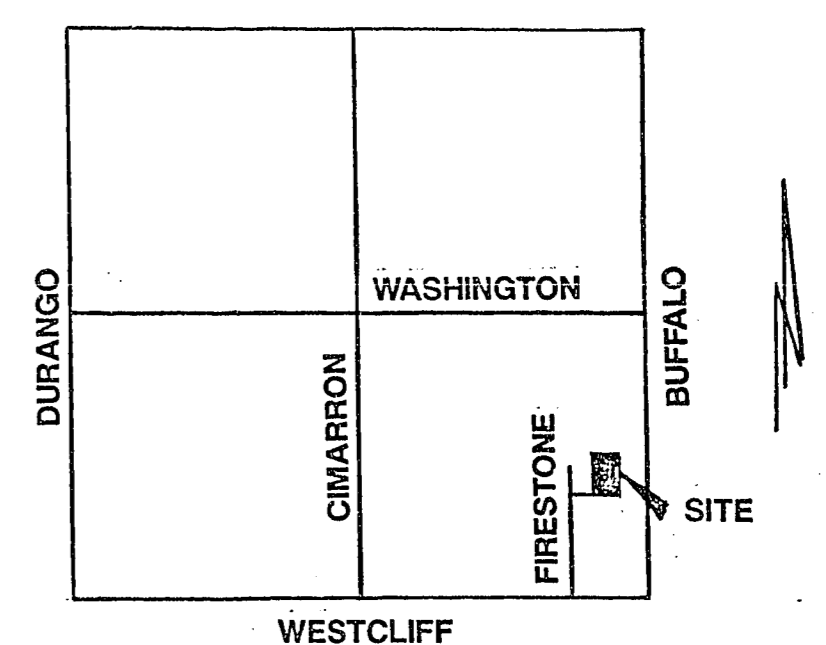
- NO WORK SHALL BEGIN ON THE WATER PLANS UNTIL THEY HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING APPROVAL OF THE PLANS, NOTICE SHALL BE GIVEN TO THE LVVWD CUSTOMER SERVICE DEPARTMENT (870-4194) 48 HOURS PRIOR TO ACTUAL CONSTRUCTION, AND 24 HOURS PRIOR TO AN INSPECTION.
- CALL BEFORE YOU DIG 1-800-227-2600.
- ALL WORK SHALL CONFORM TO LVVWD LATEST STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS.
- ALL WORK, EXCEPT AS MODIFIED HEREON OR BY NOTE 3, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OR ADDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENTS, CLARK COUNTY AREA.
- DISTRICT APPROVED SERVICE SADDLES OR TAPPED COLLARS SHALL BE REQUIRED ON ALL 3/4" AND 1" SERVICE LATERALS. SERVICE SADDLES ONLY SHALL BE PERMITTED ON 1-1/2" AND 2" SERVICE LATERALS. DOUBLE TAPPED COLLARS ARE NOT PERMITTED.
- COPPER SERVICE LATERALS: ALL 3/4" TO 2" SERVICE LATERALS SHALL BE OF COPPER TUBING IN ACCORDANCE WITH THE DISTRICT'S SPECIFICATIONS AND STANDARD PLATES.
- THE MAXIMUM ALLOWABLE JOINT DEFLECTION FOR ACP AND DUCTILE IRON PIPE SHALL BE AS FOLLOWS:

PIPE SIZES	ACP	DUCTILE IRON SLIP JOINT	DUCTILE IRON MECHANICAL JOINT
6 INCH	2.5 DEGREES	2.5 DEGREES	3.5 DEGREES
8 - 12 INCH	" "	" "	2.5 "
14 - 16 INCH	2 DEGREES	1.5 "	1.5 "
18 - 24 INCH	N/A	1.5 "	1.5 "

ON PVC PIPE, THE MAXIMUM OFFSET FOR A 20' LENGTH OF FACTORY BELLED PIPE SHALL BE 16 INCHES FOR 6" PIPE, 12 INCHES FOR 8" PIPE, AND 9 INCHES FOR 10" AND 12" PIPE.

IF THESE OFFSETS CONFLICT WITH THE PIPE MANUFACTURERS RECOMMENDATION, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
- ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS AND VALLEY GUTTERS.
- DETECTOR TAPE SHALL BE REQUIRED IN ACCORDANCE WITH STANDARD PLATE NO. 27 WHERE INDICATED, AS FOLLOWS:
 - OVER ALL MAINS NOT INSTALLED 6 FEET FROM BACK OF CURB.
 - OVER ALL SERVICE LATERALS NOT INSTALLED AT RIGHT ANGLE TO MAIN.
- ALL WATER MAINS SHALL BE PRESSURE TESTED AT 200 PSI FOR A CONTINUOUS TWO HOUR PERIOD, IN ACCORDANCE WITH DISTRICT STANDARDS.
- ALL WATER MAINS SHALL BE DISINFECTED, FLUSHED, AND AN ACCEPTABLE HEALTH SAMPLE OBTAINED, PRIOR TO THE CONNECTION OF THE WATER MAIN(S) AND/OR LATERAL(S) TO THE DISTRICT'S SYSTEM.
- CONTRACTOR TO OBTAIN ALL METERS 2" AND SMALLER FROM LVVWD CENTRAL STORES, TELEPHONE 258-5152 FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.



VICINITY MAP

LAS VEGAS FIRE DEPARTMENT

FIRE FLOW REQUIREMENTS IS 1500 GALLONS PER MINUTE AT 20 POUNDS PER SQUARE INCH RESIDUAL.

BASED:

SQUARE FOOTAGE	2,200
LARGEST AREA BETWEEN AREA SEPARATION WALLS	-
HEIGHT	2 STORY
TYPE OF CONSTRUCTION	TYPE V
EXPOSURES	FRONT - 90' LEFT - 40' BACK - 80' RIGHT - 40'
SPRINKLER SYSTEM	NO
OCCUPANCY	SINGLE FAMILY
ROOF CONSTRUCTION	TILE

BENCH MARK

ALUM. PLATE IN TOP OF CURB AT THE NORTHEAST CORNER OF RAINBOW AND ALTA. CLARK COUNTY B.M. #7C0034E6 ELEV. 2404.05

CITY OF LAS VEGAS SEWER NOTES

- All construction and materials shall be in accordance with the latest edition of the Design & Construction Standards for Wastewater Collection Systems and the Uniform Standard Specifications for Public Works' Systems and the Uniform Standard Specifications for Public Works' Construction Off-Site Improvements, Clark County Area, Nevada, as amended. In all cases, these Standards shall supersede the Uniform Standard Specifications. It will be the responsibility of the Contractor to be aware of the contents of the above specification books.
- It shall be the Contractor's responsibility to perform construction as per plans. Any additions, deletions, or changes shall first meet with the approval of the controlling Agency.
- Chisel "S" or "G" in curbs where sewer or gas laterals pass under the curb.
- Polyvinyl (PVC) sewer pipe shall meet ASTM D-3034 SDR 35 specifications, installed with sand bedding and backfill of Type II gravel.
- All manholes in paved streets 80' R/W and larger, shall have concrete collars.
- Top saddles shall be used to connect sewer laterals to existing main lines up to 12" dia. size. Connections to 15" or larger mains shall require special procedures.
- A sewer main crossing over a water main or less than 18" under a water main, must be reinforced concrete encased for a distance not less than ten feet (10') to each side of the centerline of the water main.
- All Contractors installing sewer mains that will be under the jurisdiction of the controlling Agency must be Class "A" Contractors.

This approval is only for the placement and clearance of street light and signal light installations.

9/11/92
(DATE)
by Rita R. [Signature]
NEVADA POWER COMPANY

APPROVALS:

<i>[Signature]</i> CLV ENGINEER DENNIS ANDERSON P.E.	9-28-92 DATE
<i>[Signature]</i> CLV FIRE MARSHALL	12/11/91 DATE
<i>[Signature]</i> LAS VEGAS VALLEY WATER DISTRICT	12/17/91 DATE

CITY OF LAS VEGAS GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, LATEST ISSUE; THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA, NEVADA", LATEST ISSUE; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCIES; THE UNIFORM BUILDING CODES AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT SHOWN OR NOT SHOWN ON THESE DRAWINGS. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS WILL BE SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OF STRUCTURES SHOWN ON THESE PLANS SHALL BE RESEARCHED AND RECORDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY ENGINEER OR THE UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL NOT BACKFILL ANY TRENCHES IN WHICH WATER LINES HAVE BEEN UNCOVERED UNTIL THE UTILITIES HAVE BEEN INSPECTED BY THE LAS VEGAS VALLEY WATER DISTRICT. THE WATER DISTRICT SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF CONSTRUCTION IN THE VICINITY OF WATER LINES.

QUANTITY ESTIMATE

WATER	
① 6" ACP WATER LINE	136 LF
② 6" ACP W/2" BLOW OFF	1 EA
3/4" WATER SERVICE	
3/4" WATER METER (FROM L.V.V.W.D)	
3/4" METER SERVICE	

SEWER	
STD. SEWER MANHOLE	3 EA
8" PVC SEWER MAIN	477 LF
SERVICE WYE	0 EA
4" SERVICE LATERAL	228 LF

STREET LIGHTS	
1 1/4" ST. LT. CONDUIT	130 LF
0-0 100 WATT H.P.S. ST. LT.	2 EA
0-0 EXIST ST. LT.	
1 EXIST STREET SIGN	

STORM	
24" RCP CULV. III	95 LF
24" - 45° ELL	1 EA
24" END SECT. (HYDRO CONDUIT)	1 EA
TYPE "X" DROP INLET (20')	1 EA
CONCRETE SPLASH SLAB	10 C.F.
10' LONG X 6' HIGH WROUGHT IRON FENCE	1 EA

[Signature]
9/14/91

REVISION
DATE REVIEW BY
1 11/14/92
2 11/14/92

PREPARED FOR:
STEVE TERRY & MARGARET TERRY

DATE DESIGN DRAWN CHECK SCALE

MASTER UTILITY PLAN
WORTHEN ESTATES UNIT 3

SHEET
1
OF
4