

SCALE: 1"=40'

PHASE	SFR	DAILY AVE. Q.	PEAK Q.
1	33	8137 GPD	28,480 GPD
2	44	10,849 GPD	33,972 GPD
3	39	9,616 GPD	33,657 GPD
4	39	9,616 GPD	33,657 GPD
TOTAL	155	38,219 GPD	133,767 GPD

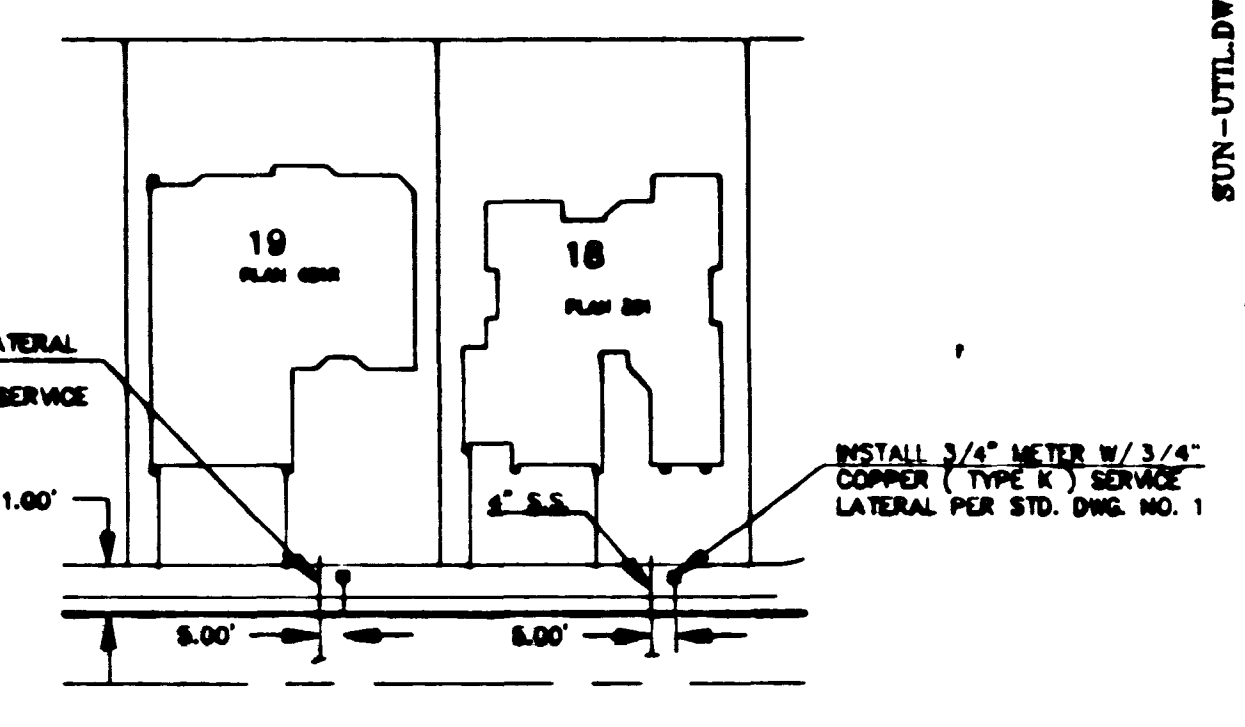
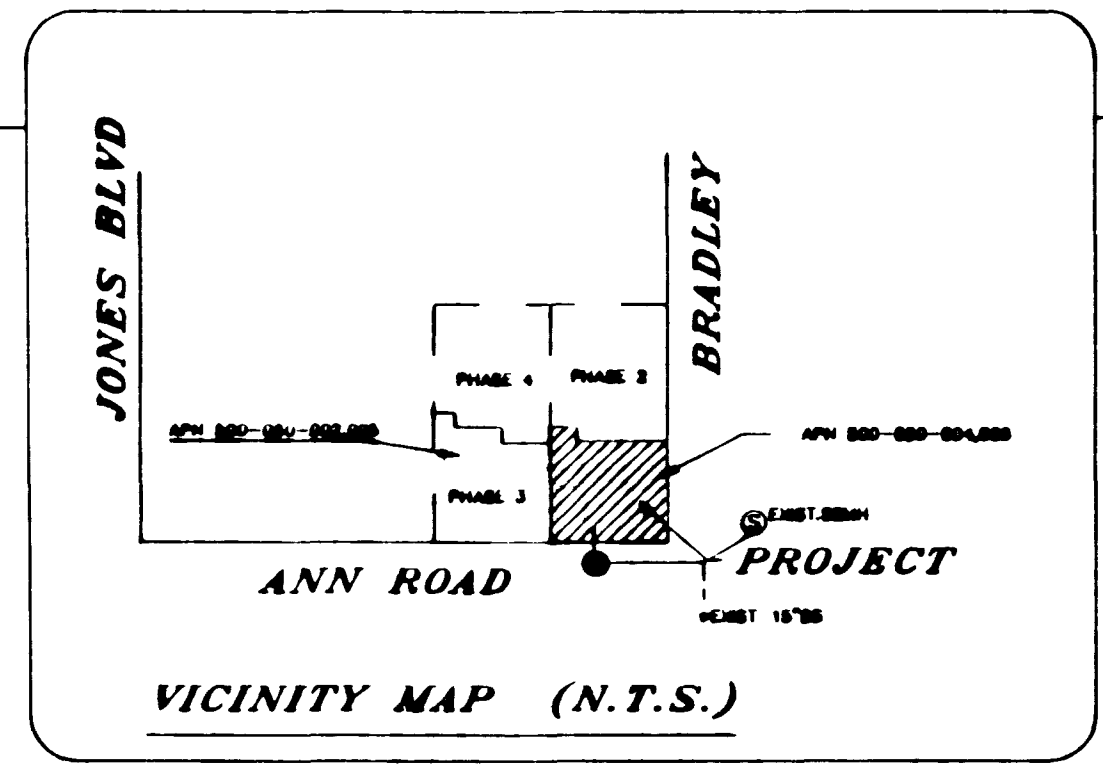
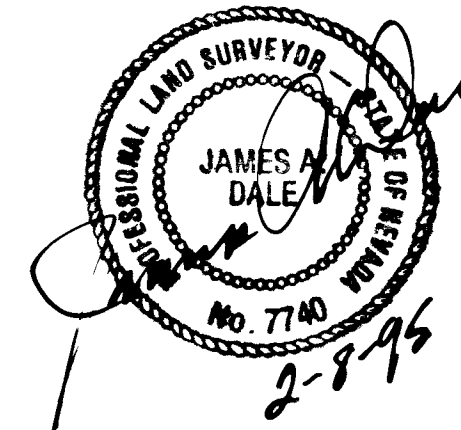
**LAS VEGAS FIRE DEPARTMENT**

Fire Flow Requirements 1,500 gallons per minute at 20 pounds per square inch residual  
 BASED ON:  
 Square footage 1450, 2100  
 Largest area between grid separation walls 1800  
 Height 20 FT  
 Type of Construction V-H  
 Exposures \_\_\_\_\_  
 Sprinkler System NO  
 Roof Construction TILE  
 Reviewed By: [Signature]  
 Date: 9/9/93

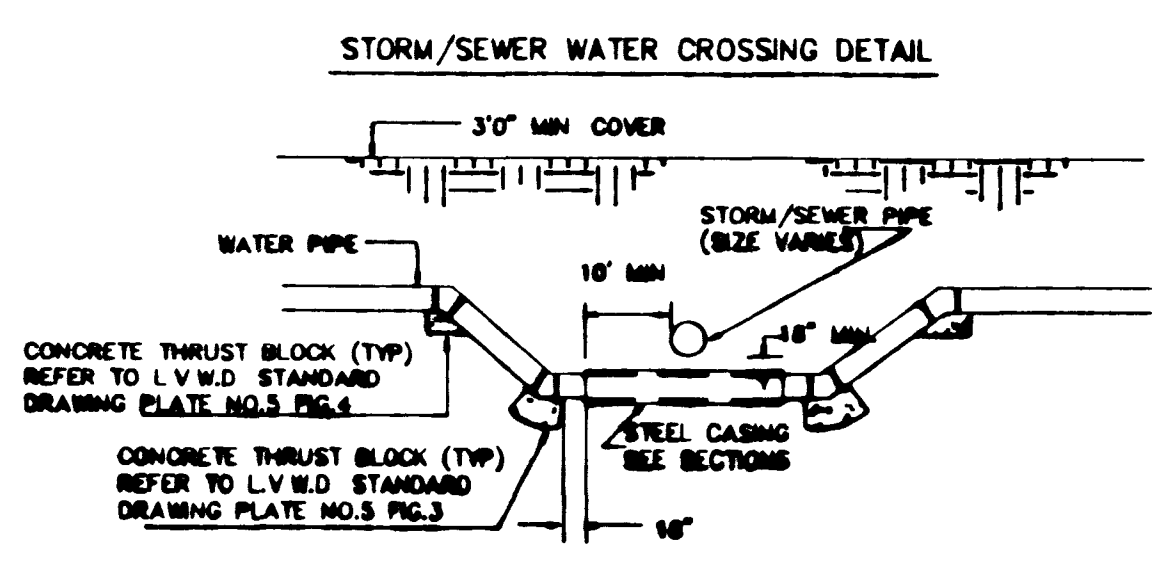
**As-Built Certificate**

I, James A. Dale, a Professional Land Surveyor in the state of Nevada, here by certify that the information shown hereon reflects as-built conditions.

JAMES A. DALE DATE 2-8-96

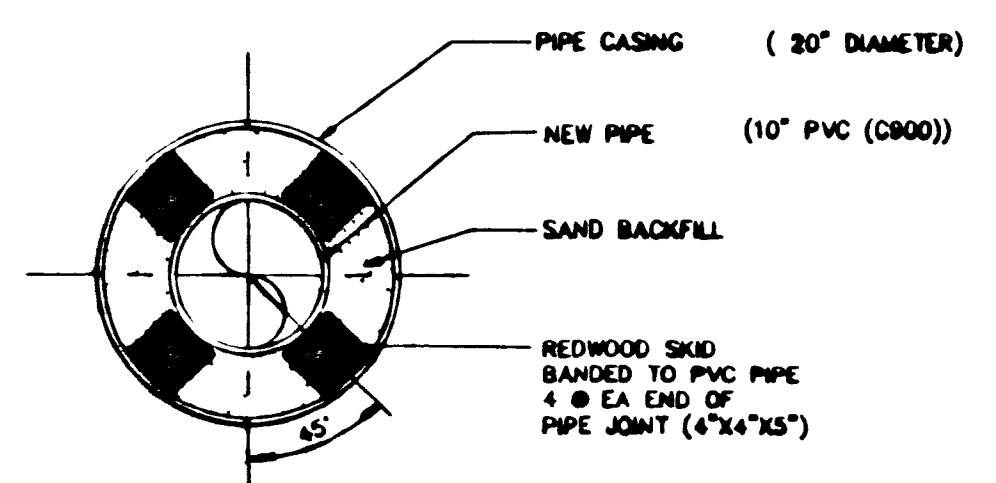


TYPICAL SERVICE LATERAL DETAIL



WHERE THE WATER LINE IS LESS THAN 18 INCHES OVER THE SEWER LINE, WHERE THE WATER LINE IS UNDER THE SEWER LINE, AND WHERE THE HORIZONTAL SEPARATION, AS REQUIRED BY THE WATER SUPPLY REGULATIONS, CANNOT BE MAINTAINED BECAUSE OF PHYSICAL OBSTRUCTIONS, THE WATER LINE SHALL BE PROTECTED BY CONSTRUCTION OF THE STORM/SEWER LINE AS FOLLOWS:  
 1. EXTRA HEAVY CAST IRON PIPE.  
 2. WATER SUPPLY QUALITY MATERIALS, OR  
 3. ENCASING WITH FOUR INCHES MINIMUM OF CONCRETE OR SLEEVING WITH WATER SUPPLY QUALITY PIPE.  
 EACH OF THESE PROVISIONS SHALL ALSO BE EXTENDED FOR OTHER THAN 90 DEGREE CROSSINGS TO THE POINT AT WHICH THE TEN FOOT SEPARATION BETWEEN THE WATER AND SEWER LINES IS ACHIEVED (10'/SINE OF CROSSING ANGLE).

DETAIL "A" 10" WATER MAIN CONDUIT CROSSING



TYPICAL CASING SECTION

**PROJECT NAME: SUNSET HILLS NOTE**

- Phase 1  
 This project water plan complies with the Las Vegas Valley Water District's technical requirements. However, this water plan is NOT A FINAL PLAN. THE CONSTRUCTION OF THIS PLAN AND THE ESTIMATED COST ARE SUBJECT TO FINAL PLAN AND BIDDING REQUIREMENTS.
1. STEEL PIPE CASING SHALL BE FABRICATED FROM A MINIMUM OF 1/4" THICK STEEL PLATES, CONFORMING TO THE REQUIREMENTS OF ASTM A283, GRADE B, COR. D. ALL JOINTS SHALL BE WELDED. INTERIOR JOINTS SHALL BE GROUNDED TO A SMOOTH FINISH. ALL WELDING SHALL BE PERFORMED BY ACCORDANCE WITH ANNA C201, "ANNA STANDARD FOR FABRICATED ELECTRICALLY WELDED STEEL WATER PIPE". COATINGS FOR STEEL CASING ARE NOT REQUIRED.
  2. PIPE CASING SHALL BE LAD TRUE TO LINE AND GRADE WITH NO BENDS OR CHANGES IN GRADE FOR THE FULL LENGTH OF THE CASING.
  3. THE PIPE SHALL BE SUPPORTED AT EACH END OF EACH JOINT WITH SKIDS. THE ANNUAL SPACE BETWEEN THE PIPE AND THE CASING SHALL BE BACKFILLED WITH SAND. AFTER INSTALLATION OF THE PIPE, THE CASING SHALL BE SEALED AT BOTH ENDS WITH MORTARED BRICK OR CEMENT MORTAR.

NOTE:  
 10" WATER MAIN WILL BE EXTENDED TO THE EAST TO THE EXISTING 10" ACP WATER MAIN AT OAK GROVE & ANN RD (LOS PRADOS-PHASE 2) DURING PHASE 2 CONSTRUCTION FOR SUNSET HILLS.

CVV.W.D. DATE REVISION 3

SUN-UTIL.DWG  
**SUMMIT**  
 ENGINEERING CORPORATION  
 CONSULTING ENGINEERS AND SURVEYORS  
 115 S. RENO BLVD., SUITE 100, LAS VEGAS, NV 89101  
 DESIGNED BY: J.A.E.  
 DRAWN BY: M.J.D.  
 CHECKED BY: B.H.W.  
 DATE: JULY, 1993

SUNSET HILLS PHASE 1  
 AS-BUILT SEWER PLAN  
 LAS VEGAS, NEVADA

REV.	DATE	DESCRIPTION	BY/APP'D
1	8/27/93	LVWD REV	B.H./J.A.E.
2	10/1/93	REVISED AS-BUILT	J.T.A./J.A.E.
3	10/1/93	REVISED AS-BUILT	J.T.A./J.A.E.
4	12/22/94	REVISED AS-BUILT INFORMATION	J.A.D./J.A.E.

SCALE: HORIZ. 1"=40'  
 VERT. 1"=4'  
 SHEET 6 OF 13  
 JOB NO. 70646

11-6-199 "As Built" 307Y-4290-1

