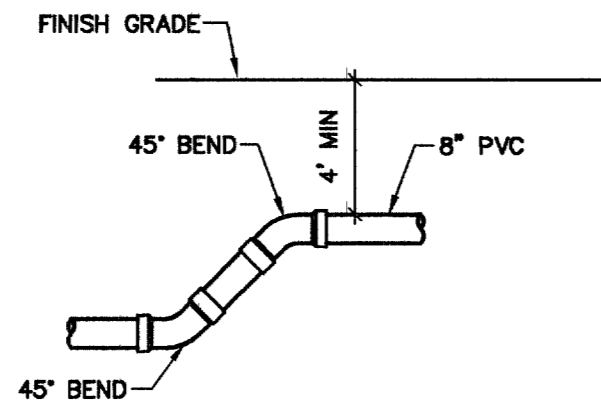


WATER MAIN JOINT DEFLECTION (PVC, 4"-24")

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.



45 DEGREE BEND DETAIL
N.T.S.

NOTE

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

ALL SEWER/STORM DRAINS CROSSINGS WATER LINES MUST CONFORM TO SECTION 2.19 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

REDUCED PRESSURE PRINCIPLE ASSEMBLY 1

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE 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.

ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENT SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

CONTRACTOR NOTE

CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING IMPROVEMENTS UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

PRIVATE STREET NOTE:

PRIVATE STREETS AND PRIVATE DRIVES ARE P.U.E.S C.L.V. PUBLIC SEWER EASEMENTS, AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

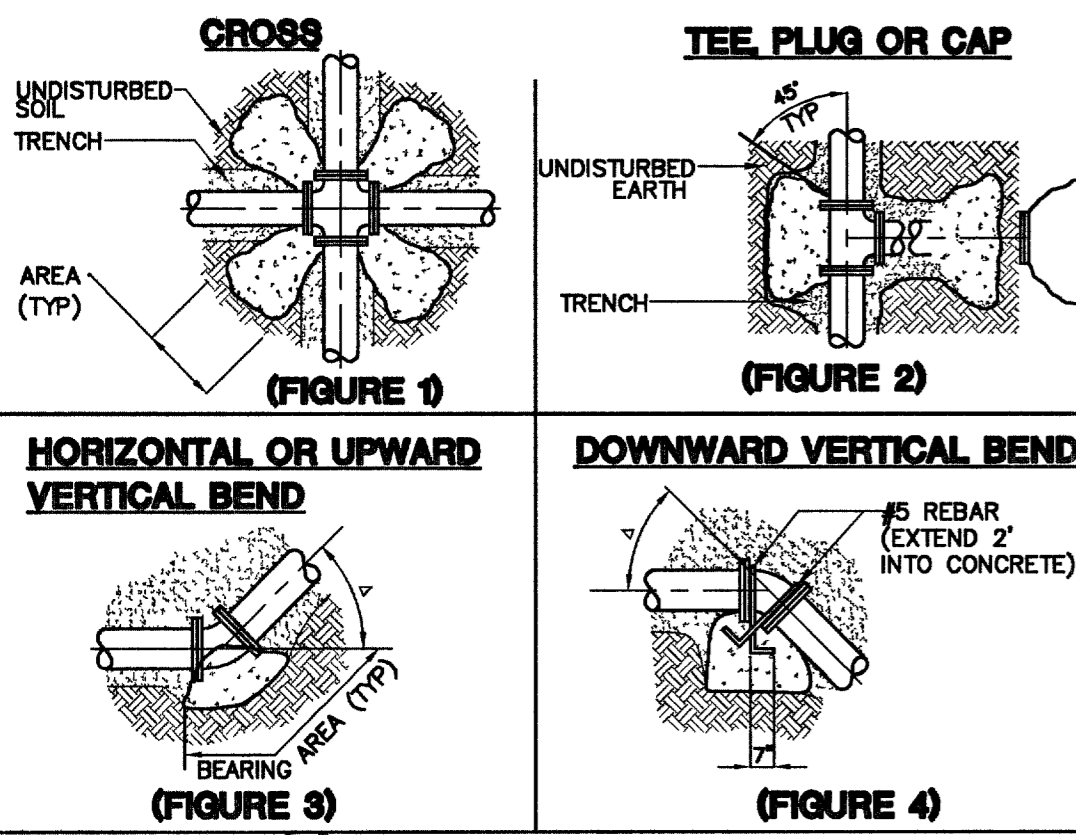
ADJUST EXISTING WATER VALVE BOX TO FINISHED GRADE PER UDACS PLATE No. 8 VALVE SHALL BE ACCESSIBLE AT ALL TIMES. ESN.035

PRIVATE STREET NOTE:

ADJUST EXIST. WATER VALVE BOX TO FINISHED GRADE PER UDACS PLATE No. 8 VALVE SHALL BE ACCESSIBLE AT ALL TIMES. ESN.035

PIPE ID	BEARING AREA IN SQ FT				CONC/CU YDS			
	FIGURE 1	FIGURE 2	FIGURE 3, Δ	FIGURE 4, Δ	FIGURE 1	FIGURE 2	FIGURE 3, Δ	FIGURE 4, Δ
4"	2	2	2	1	1.0	0.5	0.5	
6"	2	3	4	2	1.5	1.0	0.5	
8"	3	5	7	4	2	1.5	1.0	
10"	4	8	11	6	3	2	1.5	
12"	5	11	15	8	4	2	1.5	

THRUST BLOCK INSTALLATION
N.T.S. USD PLATE NO. 5 PL11-1



N.T.S. 85638 11

SANITARY SEWER MANHOLE SCHEDULE

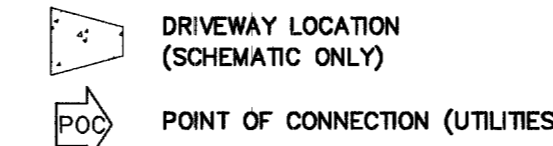
SSMH #	NORTHING	EASTING	TMH	INV. IN	INV. OUT
1	26813752.5902	732116.7436	2964.6±	N/A	2957.06
2	26813686.0121	732116.6327	2964.4±	2956.66	2956.46
3	26813624.8332	732160.8264	2963.4±	2956.01	2955.81
4	26813551.8536	732160.7048	2963.3±	2955.52	2955.32
5	26813410.9428	732140.4701	2961.2±	2953.40	2953.20
6	26813148.5358	732140.0297	2957.7±	2949.10	2948.90
7	26813148.3871	732024.2114	2961.2±	N/A	2954.20
8	26813138.6607	732399.8403	2946.6±	2939.80	2939.40
9	26812985.4399	732428.1187	2944.0±	2937.00	2936.80
10	26812892.9868	732428.6724	2942.4±	2935.40	2935.20
11	26812890.1267	732735.3709	2935.1±	2928.10	2927.90
12	26812555.4615	732909.7273	2921.2±	2911.25	2911.05
13	26812906.5228	732910.3121	2929.1±	2921.46	2921.26
14	26812947.5931	732861.5119	2930.8±	2921.98	2921.78
15	26813042.1323	732906.7573	2929.7±	2922.70	2922.50
16	26813140.1135	732916.8257	2931.2±	2924.20	2924.00
17	26813140.5446	732858.0204	2937.7±	2930.49	2930.29
18	26813133.0588	732649.4779	2937.8±	2930.80	2930.60
19	26813133.1417	732599.7301	2938.3±	N/A	2931.30
20	26813404.5442	732658.4601	2944.7±	2937.14	2936.94
21	26813411.9954	732687.7783	2944.6±	2937.52	2937.32
22	26813411.8905	732750.7595	2944.9±	N/A	2937.90
23	26813498.8425	732917.4199	2936.2±	2929.20	2929.00
24	26813723.2703	732926.4914	2939.2±	N/A	2932.13
25	26813686.9359	732926.4309	2939.0±	2931.91	2931.71
26	26813638.5502	732902.4249	2938.9±	2931.38	2931.18
27	26813666.0999	732749.6274	2943.5±	2936.50	2936.30
28	26813660.2878	732483.9864	2954.1±	2947.10	2946.90
29	26813654.2163	732208.3128	2963.5±	N/A	2956.50
32	26813404.8951	732447.7902	2951.4±	N/A	2944.40
37 T-LOCK	26812663.2613	732700.6494	2930.0±	2919.04	2918.84

ESTIMATE OF QUANTITIES/LEGEND

WATER	PUBLIC
① FIRE HYDRANT ASSEMBLY (INCLUDES 8"x6" TEE & 6"V)	10 EA.
② 6" GATE VALVE	0 EA.
③ 6" TEE	0 EA.
④ 8"x 6" TEE	2 EA.
⑤ 8" GROSS	1 EA.
⑥ 8"-11 1/4" BEND	3 EA.
⑦ 6" GATE VALVE	5 EA.
⑧ 8" TEE	3 EA.
⑨ 6" 45° BEND	2 EA.
⑩ CAP W/2" BLOW OFF	6 EA.
⑪ 8" 90° ELBOW	0 EA.
⑫ 8" 45° BEND	6 EA.
⑬ 8"-22 1/2" BEND	4 EA.
⑭ 8"-11 1/4" BEND	8 EA.
⑮ 8"-5" BEND	3 EA.
⑯ 8"-22-1/2" BEND	2 EA.
⑰ 8"x 8" REDUCER	3 EA.
⑱ 1" IRRIGATION METER PER UDACS PLATE 1-D W/1" RPPA PER	1 EA.
UDACS PLATE 11-A	97 EA.
W/ 3/4" METER (UDACS PLATE 1B)	556.74 LF.
6" WATER MAIN (PUBLIC)	2,894.87 LF.
8" WATER MAIN (PUBLIC)	
SEWER	PUBLIC
● STANDARD MANHOLE (PUBLIC)	31 EA.
④ 4" SEWER LATERALS (PRIVATE)	2,911.11 LF.
④ 4" SEWER WYES (PUBLIC)	113 EA.
④ 8" SEWER MAIN (PUBLIC)	4,680.14 LF.
④ BWV BACK WATER VALVE (PRIVATE)	46 EA.

SEWER CONTRIBUTION (BASED ON 67 LOTS)

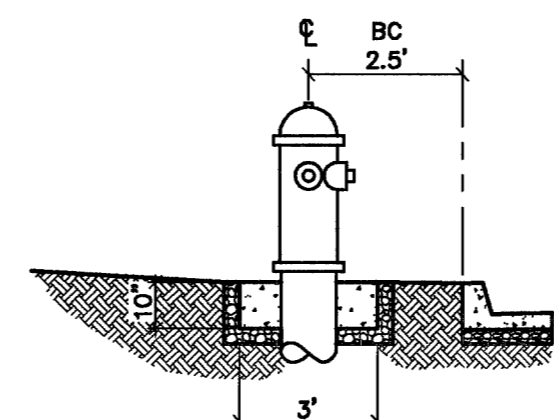
AVERAGE DAILY FLOW = 0.02425 MGD.
PEAK FLOW = 0.08487 MGD.



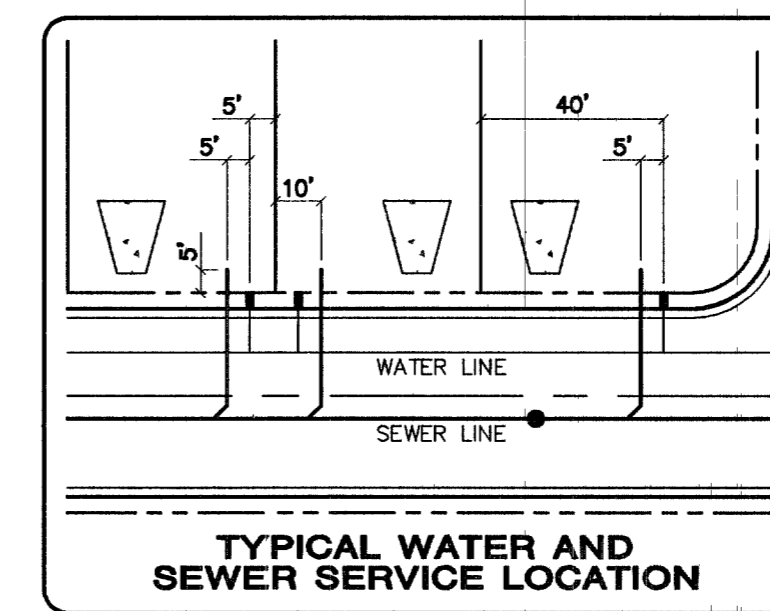
LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT #111526

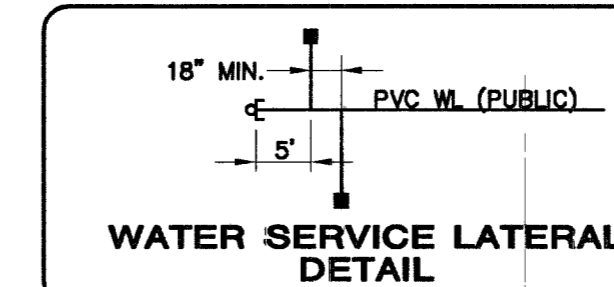
- NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
- ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2003 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABLE WATER SYSTEMS (UDACS).
- ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
- A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
- ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
- ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
- ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSING SHALL CONFORM TO SECTION 2.19 OF THE 2003 EDITION OF THE UDACS.
- ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
- THE CONTRACTOR MUST OBTAIN ALL METER TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
- ANY INTERRUPTION OF SERVICE MUST BE APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
- ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD PRE-APPROVED MATERIALS AND MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
- TELEPHONE "CALL BEFORE YOU DIG" AT 1-800-227-2600.



FIRE HYDRANT DETAIL (PRIVATE STREET)
N.T.S.

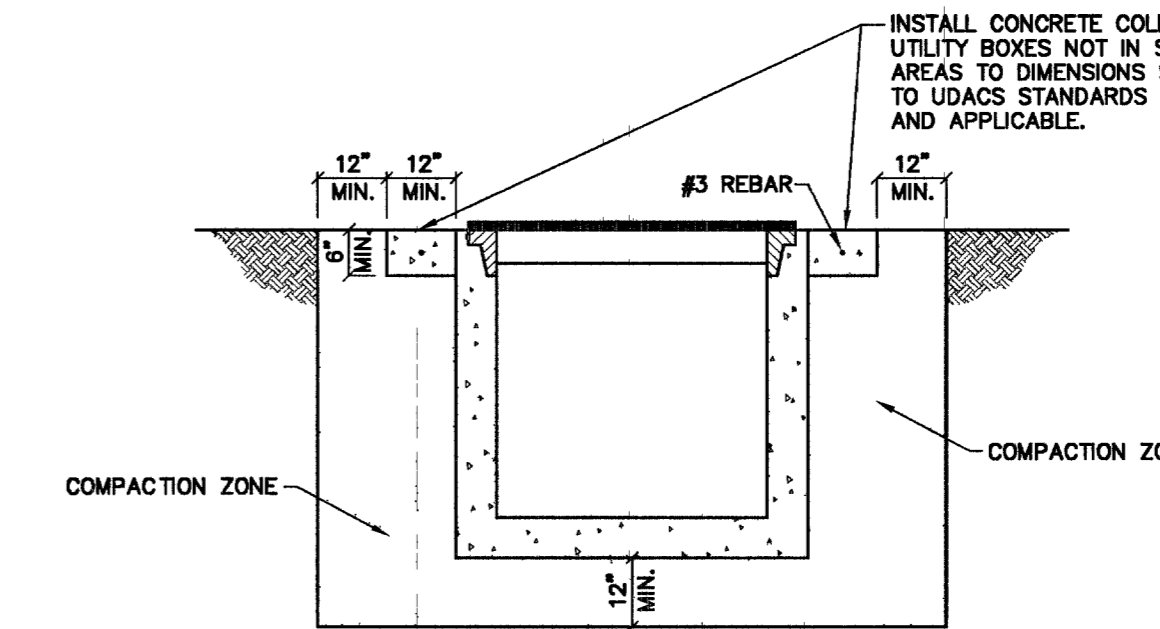


TYPICAL WATER AND SEWER SERVICE LOCATION



WATER SERVICE LATERAL DETAIL

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD DETAIL



UTILITY BOX/VAULT INSTALLATION NOT IN SIDEWALK
N.T.S.

CONSTRUCTION NOTES:

CONSTRUCTION NOTES:

- CONCRETE COLLARS TO BE CLASS "A" CONCRETE PER SECTION 501.03.04 OF "UNIFORM STANDARD SPECIFICATION, CLARK COUNTY AREA, NEVADA."
- INSTALL ONE #3 REBAR ALL AROUND IF REQUIRED BY THE APPLICABLE UTILITY OR AGENCY.
- CONCRETE COLLARS SHALL BE INSTALLED TO MIN. DIMENSIONS SHOWN HEREON UNLESS OTHERWISE DELINEATED BY STANDARDS DICTATED BY THE APPLICABLE UTILITY OR AGENCY.
- BASE AND BACKFILL WITHIN THE "COMPACTION ZONE" DELINEATED HEREON SHALL BE TYPE II OR SUITABLE ON-SITE MATERIALS COMPACTED TO 95% MAXIMUM RELATIVE DENSITY.

NOTE: THIS PROJECT PLAN APPROVAL CONTINGENT ON
111527 BRIGHTON & KENSINGTON @ PROVIDENCE/CLIFF'S EDGE UNIT 1
PLAN APPROVAL.

APPROVAL:

Robert J. Morgan 9/15/06
LAS VEGAS VALLEY WATER DISTRICT PROJ 111526 DATE

[Signature] 11/7/05
CITY OF LAS VEGAS FIRE MARSHAL DATE

[Signature]
NEVADA POWER COMPANY DATE

NEVADA POWER COMPANY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NEVADA POWER COMPANY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENT IS 1500 GALLONS PER MINUTE AT 20 psi RESIDUAL PRESSURE.

BASED ON:

SQUARE FOOTAGE: <3800 SQ. FT.

LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS: <3800 SQ. FT.

BUILDING HEIGHT: FEET

NUMBER OF STORIES: 2

TYPE OF CONSTRUCTION: V-NR

OCCUPANCY: SFR

FULL AUTOMATIC FIRE SPRINKLER SYSTEM: N/A

REVIEWED BY: *[Signature]*
DATE: 11/7/05

CITY OF LAS VEGAS

KIMBALL HILL
8 SUNSET WAY, SUITE 101
HENDERSON, NEVADA 89014
(702) 436-4582

UTILITY NOTES AND DETAILS SHEET

BRIGHTON & KENSINGTON @ PROVIDENCE / CLIFFS EDGE UNIT 2

DRAWN BY: mjb/bm/lp
DESIGNED BY: bjm/lp
CHECKED BY: CRG
PROJECT NO.: 5398-2

2/25/05
2/25/05
2/25/05

SCALE: 1"=30' HORIZ. N/A VERT.

UT6
9 OF 52 SHEETS
DRAWING NO. 1074890-2

EXPIRES 06-30-07
11/4/05

REGISTERED PROFESSIONAL ENGINEER STATE OF NEVADA
CHRISTOPHER GRIFFIN
No. 13958
11/4/05