LEGEND

- RIGHT OF WAY LINE
- EASEMENT LINE
- 8" W — EXIST. WATER LINE
- 8"S — EXIST. SEWER LINE
- FIRE HYDRANT W/LEAD AND G.V.
- WATER LINE
- MH #3 — SEWER LINE WITH MANHOLE
- SEWER LATERAL
- GATE VALVE
- 1 1/4" PVC CONDUIT (STREET LIGHTS)
- CONCRETE DRIVEWAY
- 200W HPS LUMINAIRE W/11 GA. POLE
- 100W HPS LUMINAIRE W/11 GA. POLE
- P.B. — NO. 3 1/2 CONCRETE PULL BOX W/METAL COVER
- STOP SIGN
- STREET SIGN
- S.P.O.C. (SERVICE POINT OF CONNECTION)
- IRRIGATION ELECTRICAL METER

SEWAGE CONTRIBUTION

154 RESIDENTIAL UNITS X 250 G.P.D. = 38,500 G.P.D.
PEAKING FACTOR = 3.3 (FROM TABLE D, PG. T-3)
PEAK FLOW: 38,500 X 3.2 = 123,200 G.P.D.

LAS VEGAS FIRE DEPARTMENT

Fire flow Requirement is 1500 gallons per minute at 20 pounds per square inch residual.

Based on:

Square footage 1100 – 2200

Largest area between area separation walls NA

Height 26 FEET

Type of Construction FRAME / STUCCO

Exposures NA

Sprinkler System NONE

Occupancy RESIDENTIAL

Roof Construction TILE

Review By:

Date:

NOTE:
A 1"X3/4" ANGLE METER STOP AND 3/4" METER BOX WILL BE REQUIRED WITH THE 1" SERVICE LATERALS FOR ALL SERVICES WITH 5/8" OR 3/4" SERVICES. DETAILS OF THE ABOVE INSTALLATION ARE AVAILABLE FROM THE ENGINEERING SERVICES DIVISION AND FROM THE DISTRICT'S INSPECTORS.

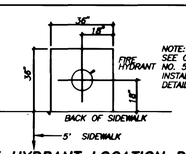
WATER–SEWER/STORM DRAIN CROSSING

THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT OF A WATER–SEWER/STORM CROSSING:

WHEN PROTECTION OF THE WATER LINE IS CONSIDERED, THE MINIMUM VERTICAL DISTANCE OF 18 INCHES MUST BE MAINTAINED WHEN THE WATERLINE IS INSTALLED OVER THE SEWER/STORM LINE. IF THIS DISTANCE CANNOT BE MAINTAINED BECAUSE OF PHYSICAL OBSTRUCTIONS OR THE WATERLINE MUST BE PLACED UNDER THE SEWER/STORM LINE, THE SEWER/STORM LINE MUST BE CONSTRUCTED WITH ANY ONE OF THE FOLLOWING:

A. EXTRA HEAVY CAST IRON OR DUCTILE IRON PIPE,
B. WATER SUPPLY QUALITY MATERIAL,
C. ENCASEMENT, WITH 4 INCHES MINIMUM CONCRETE SLEEVING OR WITH WATER QUALITY PIPE.

EACH OF THESE PROVISIONS MUST BE EXTENDED FOR 10 FEET ON EITHER SIDE OF THE WATERLINE AT 90 DEGREES TO THE CROSSING.



NOTE: SEE C.L.V. DWG. NO. 516 FOR INSTALLATION DETAILS.

FIRE HYDRANT LOCATION DETAIL PER STD. DWG. NO. 516

ESTIMATE OF QUANTITIES

PHASE II

1. STD. F.H. W/6" G.V., 8" x 6" TEE & 6" A.C.P. LATERAL	2	EA.
2. 1" SERVICE W/METER BOX	76	EA.
3. 3/4" METER BY L.V.V.W.D.	76	EA.
4. 8" PVC	802	L.F.

TRAFFIC SIGN QUANTITIES

PHASE II

1. 6" D–3 STREET NAME SIGN	1	EA.
2. STOP SIGN	1	EA.

NOTE: SEE GRADING PLANS (SHTS 20, 21 & 22) AND RECORDED FINAL MAP FOR LOCATIONS OF SIGHT VISIBILITY RESTRICTION EASEMENTS. NO IMPROVEMENTS OR LANDSCAPING FEATURES TALLER THAN 30" ARE ALLOWED IN SUCH EASEMENT AREAS.

SEWER NOTES

1. 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 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.
2. 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.
3. CHISEL "S" OR "C" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D–3034 SDR35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II GRAVEL.
5. ALL MANHOLES IN PAVED STREETS, 80' R/W AND LARGER, SHALL HAVE CONCRETE COLLARS.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO 12" DIA. SIZE. CONNECTION TO 15" OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES.
7. 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. SEE WATER–SEWER/STORM DRAIN CROSSING NOTE THIS SHEET.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CONTROLLING AGENCY MUST BE CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN A TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED AND REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY.

STREET LIGHTING NOTE

ALL STREET LIGHT INSTALLATIONS SHALL CONFORM TO THE STANDARD DETAILS AND SPECIFICATIONS OF THE CITY OF LAS VEGAS, AND SHALL ALSO CONFORM TO THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OF OFF–SITE IMPROVEMENTS, CLARK COUNTY AREA, LATEST EDITION, UNLESS OTHERWISE NOTED. SEE UNIFORM STANDARD DRAWING NO. 318.

BENCHMARK

CLV BENCHMARK: 1LV9020NES, EL. 2528.486 FEET NGVD29, 771.4156 METERS NAVD88. BLM BRASS CAP, DURANGO DRIVE ELKHORN ROAD.

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, 48 HOUR NOTICE SHALL BE GIVEN TO THE LVVWD CUSTOMER SERVICE DEPARTMENT (258–7171) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO A LVVWD INSPECTION.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS AND SPECIFICATIONS, LATEST EDITION.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENTS, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT A WATER LINE AND SANITARY OR STORM SEWER LINE CROSS:

   A MINIMUM EIGHTEEN (18) INCH VERTICAL SEPARATION (OUTSIDE TO OUTSIDE) MUST BE MAINTAINED WHEN THE WATER LINE IS INSTALLED OVER THE SANITARY OR STORM SEWER LINE. IF THE VERTICAL SEPARATION CANNOT BE MAINTAINED OR THE WATER LINE MUST BE PLACED UNDER THE SANITARY OR STORM SEWER LINE, THE SANITARY OR STORM SEWER LINE MUST BE CONSTRUCTED WITH ONE OF THE FOLLOWING OR, AS SHOWN ON THESE PLANS:

   A. POTABLE WATER SUPPLY QUALITY MATERIAL,
   B. ENCASEMENT, WITH FOUR (4) INCH CONCRETE, (MINIMUM)
   C. SLEEVING WITH POTABLE WATER SUPPLY QUALITY PIPE.

   EACH PROVISION MUST EXTEND ALONG THE SANITARY OR STORM SEWER, ON EITHER SIDE OF THE MAIN, A MINIMUM 10 FOOT DISTANCE PERPENDICULAR TO THE WATER MAIN EXTERIOR.
9. WARNING TAPE SHALL BE REQUIRED OVER ALL MAINS, ALL SIX (6) INCH DIAMETER AND LARGER SERVICE LATERALS, AND ANY SERVICE LATERAL NOT INSTALLED PERPENDICULAR TO THE MAIN IN ACCORDANCE WITH STANDARD PLATE NO. 27.
10. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD'S DISTRIBUTION SYSTEM.
11. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258–3152 FORTY–EIGHT (48) HOURS PRIOR TO PICKUP.
12. CONSTRUCTION MAY INTERRUPT SERVICE. WITH LVVWD APPROVAL AND PROPER NOTIFICATION, BETWEEN THE HOURS OF 10 P.M. AND 6 AM, SUNDAY THROUGH THURSDAY. CIRCUMSTANCES MAY REQUIRE TEMPORARY SERVICE FEEDS BE INSTALLED, WITHOUT LVVWD REIMBURSEMENT. ANY TEMPORARY SERVICE FEED MUST HAVE PRIOR LVVWD APPROVAL.
13. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD'S APPROVED MATERIALS AND MANUFACTURERS LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.

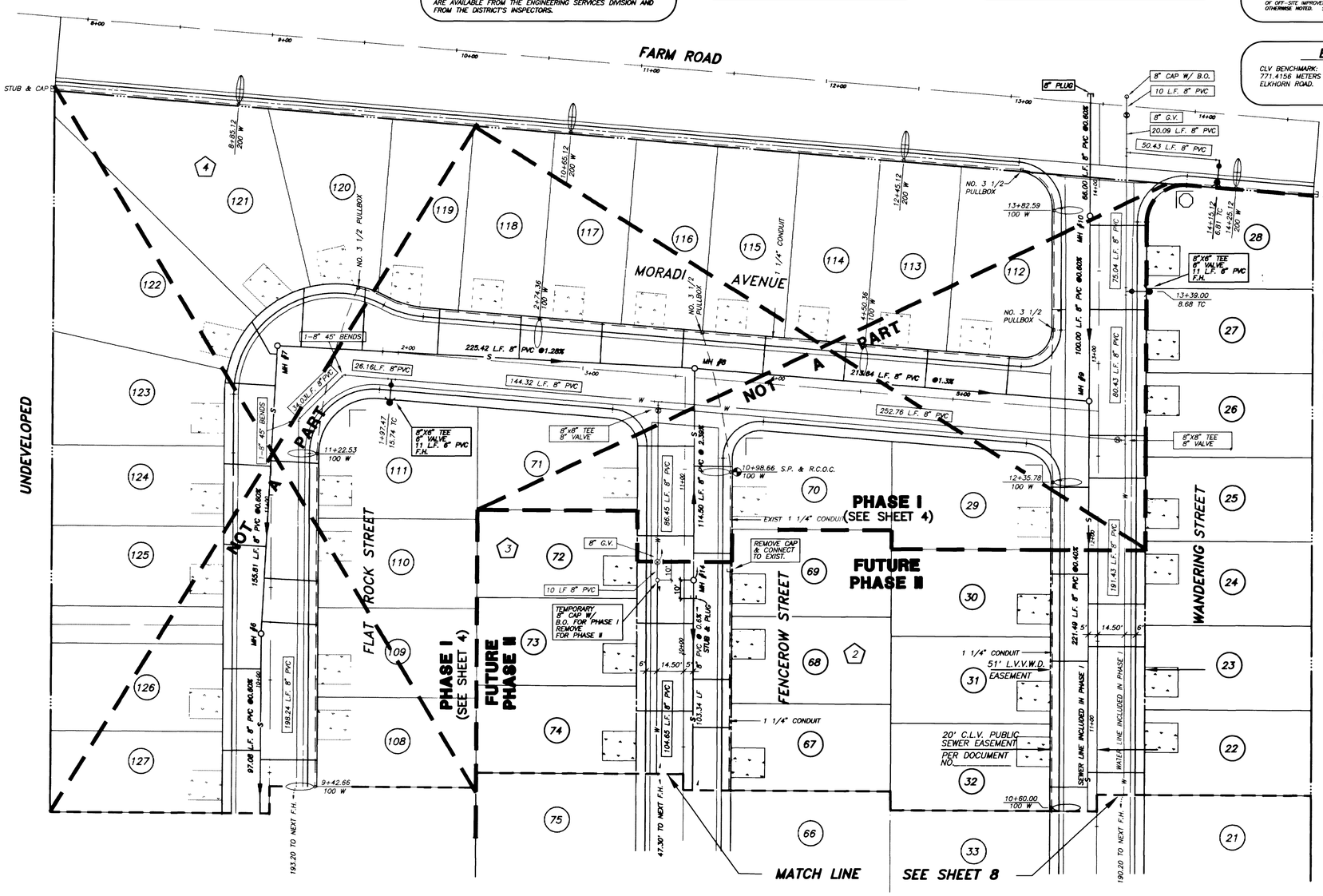
FIRE DEPARTMENT NOTES

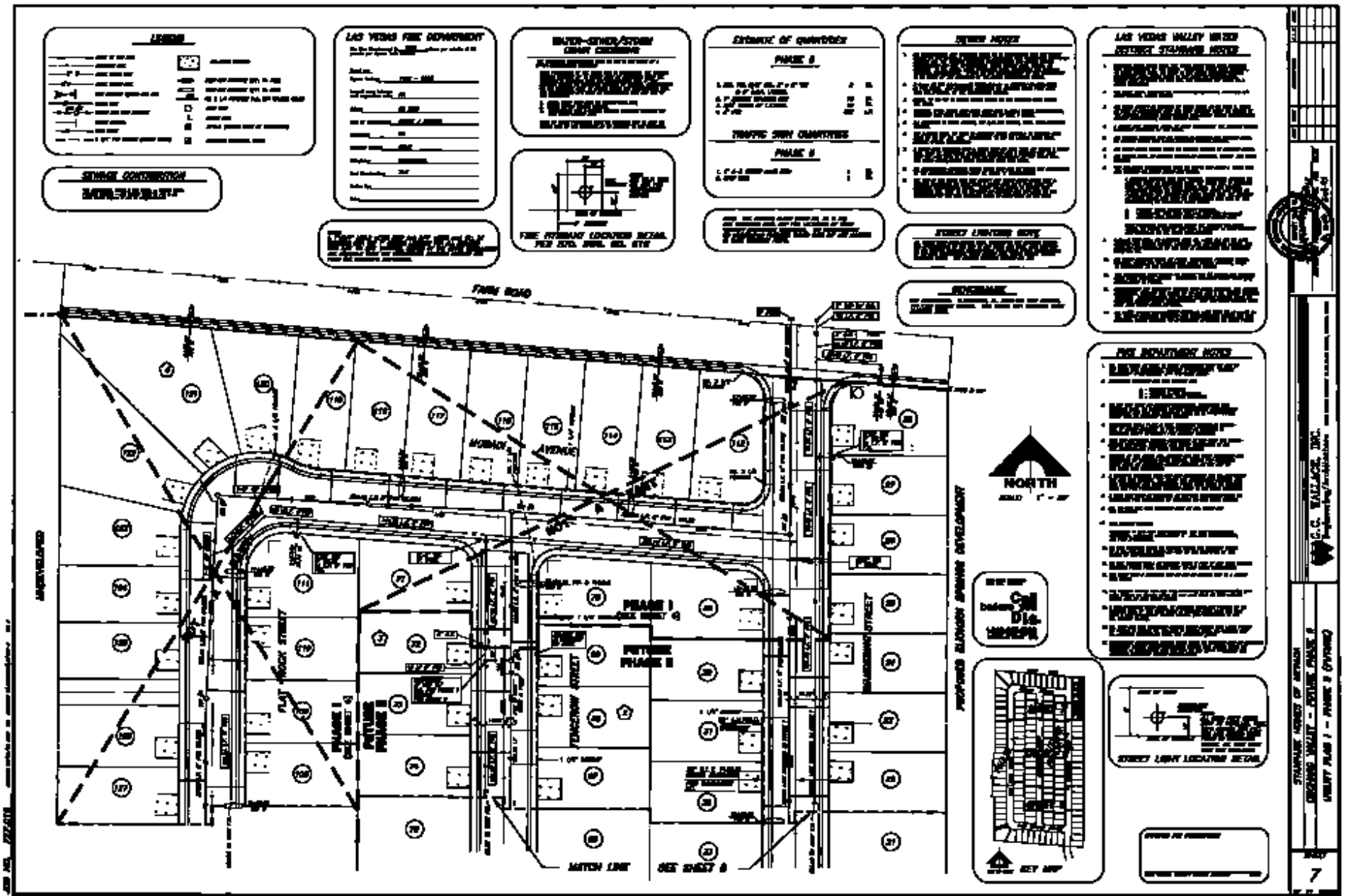
1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT "HYDRANT SPECIFICATIONS", "HYDRANT INSTALLATION SPECIFICATIONS" AND ORDINANCE #3677.
2. AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:

   A – KENNEDY GUARDIAN
   B – MUELLER A–423 CENTURIAN
   C – CLOW MODEL 2546 MEDALLION

3. 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.
4. CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT CENTER–LINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED IN ORDINANCE #3677 TO IDENTIFY FIRE HYDRANT LOCATIONS.
5. CALL THE LAS VEGAS BUILDING DEPARTMENT AT 229–2071 FOR UNDER–GROUND INSPECTION, PRESSURE AND FLUSH VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE COVERING.
6. PAINTING OF THE CURBS AND HYDRANT AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE PER ORDINANCE #3677 SHALL BE COMPLETED BEFORE APPROVAL BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
7. A PERMIT IS REQUIRED FROM THE FIRE DEPARTMENT FOR ON–SITE WATER LINE AND FIRE HYDRANT. THE PERMIT AND CONTRACTORS MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER 258–3210 TO ANY WORK BEGINNING.
8. A FLOW TEST MUST BE WITNESSED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY FOR VERIFICATION OF REQUIRED ON–SITE WATER SUPPLY.
9. ALL ON–SITE FIRE MAIN MATERIALS MUST BE U.L. LISTED AND F.M. APPROVED.
10. FIRE HYDRANT SPACING:

    RESIDENTIAL – 500 FEET UNSPRINKLERED, 600 FEET SPRINKLERED
    COMMERCIAL, INCLUDING MULTI–FAMILY – 300 FEET UNSPRINKLERED, 400 FEET SPRINKLERED.
11. NO FIRE HYDRANTS 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.
12. NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
13. NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
14. 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.
15. 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 UFC 91, SECTION 10.203).
16. 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 #3677.
17. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF LAS VEGAS GUIDELINES FOR AUTOMATIC EMERGENCY VEHICLE ACCESS GATES.


FARM ROAD
STUB & CAP
8+00
9+00
10+00
11+00
12+00
13+00
14+00
8" PLUG
8" CAP W/ B.O.
10 L.F. 8" PVC
8" G.V.
20.09 L.F. 8" PVC
50.43 L.F. 8" PVC
STUB & CAP
8+65.12 200 W
10+65.12 200 W
12+45.12 200 W
13+82.59 100 W
14+15.12 6.81 TC
14+25.12 200 W
NO. 3 1/2 PULLBOX
1 1/4" CONDUIT
MORADI AVENUE
NOT A PART
1–8" 45° BENDS
225.42 L.F. 8" PVC @1.28%
213.64 L.F. 8" PVC @1.33%
144.32 L.F. 8" PVC
252.76 L.F. 8" PVC
26.16 L.F. 8" PVC
54.01 L.F. 8" PVC
1–8" 45° BENDS
11+22.53 100 W
1+97.47 15.74 TC
8"X6" TEE 8" VALVE 11 L.F. 6" PVC F.H.
8"X6" TEE 8" VALVE
8"X6" TEE 8" VALVE
11 L.F. 6" PVC F.H.
13+39.00 8.68 TC
10+98.66 S.P. & R.C.O.C. 100 W
12+35.78 100 W
10+60.00 100 W
MH #7
MH #8
MH #9
MH #10
MH #11
MH #12
MH #13
MH #14
MH #15
MH #16
100.00 L.F. 8" PVC @0.60%
75.04 L.F. 8" PVC
80.43 L.F. 8" PVC
191.43 L.F. 8" PVC
221.49 L.F. 8" PVC @0.60%
155.81 L.F. 8" PVC @0.60%
198.24 L.F. 8" PVC
97.08 L.F. 8" PVC @0.60%
86.45 L.F. 8" PVC
114.50 L.F. 8" PVC @ 2.35%
104.65 L.F. 8" PVC
103.34 L.F.
8" G.V.
10 LF 8" PVC
TEMPORARY 8" CAP W/ B.O. FOR PHASE I REMOVE FOR PHASE II
REMOVE CAP & CONNECT TO EXIST.
8" PVC @ 0.6% STUB & PLUG
1 1/4" CONDUIT
51' L.V.V.W.D. EASEMENT
20' C.L.V. PUBLIC SEWER EASEMENT PER DOCUMENT NO.
SEWER LINE INCLUDED IN PHASE I
WATER LINE INCLUDED IN PHASE I
FLAT ROCK STREET
FENCEROW STREET
WANDERING STREET
PHASE I (SEE SHEET 4)
FUTURE PHASE II
FUTURE PHASE II
PHASE I (SEE SHEET 4)
UNDEVELOPED
PROPOSED ELKHORN SPRINGS DEVELOPMENT
MATCH LINE
SEE SHEET 8
193.20 TO NEXT F.H. –
47.30' TO NEXT F.H. –
190.20 TO NEXT F.H. –
1–8" 45° BENDS
1–8" 45° BENDS
1–8" 45° BENDS


LEGEND
SEWAGE CONTRIBUTION
LAS VEGAS FIRE DEPARTMENT
WATER-SEWER/STORM DRAIN CROSSING
FIRE HYDRANT LOCATION DETAIL
EXTENSION OF QUANTITIES
PHASE II
TRAFFIC SIGN QUANTITIES
PHASE II
SEWER NOTES
STREET LIGHTING GOVE
GENERAL
LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES
FIRE DEPARTMENT NOTES
FARM ROAD
MOBADI AVENUE
FLAT ROCK STREET
FENCEROW STREET
PHASE I
FUTURE PHASE II
PROPOSED ELKHORN SPRINGS DEVELOPMENT
NORTH
MATCH LINE
SEE SHEET 8
KEY MAP
STREET LIGHT LOCATION DETAIL
C.C. WALLACE, INC.
7

11-20-97