ABBREVIATIONS

ABAN – ABANDON
AC – ASPHALTIC CONCRETE
AGGR – AGGREGATE
& – AND
APN – ASSESSOR PARCEL NUMBER
APPROX – APPROXIMATE
ASSY – ASSEMBLY
AVE – AVENUE

BC – BACK OF CURB
BCR – BACK OF CURVE RETURN
BK – BOOK/BACK
BLDG – BUILDING
BLK – BLOCK
BLM – BUREAU OF LAND MANAGEMENT
BLVD – BOULEVARD
BM – BENCHMARK
BO – BLOW OFF ASSEMBLY
BOC – BACK OF CURB
BOT – BOTTOM
BOW – BACK OF WALK
BRG – BEARING
BVC – BEGIN VERTICAL CURVE
BW – BACK OF WALK
BWV – BACK WATER VALVE

C/C – CENTER TO CENTER
C&G – CURB & GUTTER
CC – CLARK COUNTY
CE – COMMON ELEMENT
CI – CAST IRON
CIP – CAST IRON PIPE/ CAST IN PLACE
CIR – CIRCLE
CL OR C – CENTERLINE
CLV – CITY OF LAS VEGAS
CNLV – CITY OF NOTRH LAS VEGAS
CO – COUNTY
COH – CITY OF HENDERSON
CONC – CONCRETE
CONT – CONTINUOUS
COORD – COORDINATE
CTR– CENTER
CV – CONTROL VALVE

Δ– DELTA ANGLE
D/W OR DWY – DRIVEWAY
DEPT – DEPARTMENT
DET – DETAIL
DEV – DEVELOPMENT
DG – DESIGN GRADE
DI – DROP INLET/DUCTILE IRON
DIA OR ⌀ – DIAMETER
DIM – DIMENSION
DIP – DUCTILE IRON PIPE
DIR – DIRECTION
DIST – DISTANCE
DMH – DROP MANHOLE
DN – DOWN
DR – DRIVE
DWG – DRAWING
E – EAST/EDGE
EA – EACH
EG – EXISTING GROUND
ELEV – ELEVATION
EOP – EDGE OF PAVEMENT
EOS – EDGE OF SHOULDER
EQ – EQUAL OR EQUATION
EQ SP – EQUALLY SPACED
ESMT – EASEMENT
EST – ESTIMATE
EVC – END OF VERTICAL CURVE
EW – EACH WAY
EXIST – EXISTING

F/F – FACE TO FACE
FC – FACE OF CURB
FF – FINISHED FLOOR
FG – FINISHED GRADE
FH – FIRE HYDRANT
FIG – FIGURE
FL OR F – FLOW LINE
FLR – FLOOR
FN – FENCE
FND – FOUND
FOC – FACE OF CURB
FOW – FACE OF WALL
FPM – FEET PER MINUTE
FPS – FEET PER SECOND
FT – FOOT OR FEET
FTG – FOOTING
FUT – FUTURE

G/B – GRADE BREAK
GALV – GALVANIZED
GB – GRADE BREAK
GND – GROUND
GPD – GALLONS PER DAY
GPH – GALLONS PER HOUR
GPM – GALLONS PER MINUTE
GRD – GRADE
GRT – GRATE
GV – GATE VALVE

HORIZ – HORIZONTAL
HP – HIGH POINT
HPG – HIGH PRESSURE GAS
HT – HEIGHT
HWY – HIGHWAY

IN – INCH
INST – INSTALL
INT – INTERIOR
INV – INVERT
IRR – IRRIGATION

LB OR # – POUND
LEN OR L – LENGTH OF CURVATURE
LF – LINEAR FOOT
LG – LONG
LN – LANE
LT – LEFT/LIGHT
LVVWD – LAS VEGAS VALLEY WATER DISTRICT
LWR – LOWER

M – METER
MATL – MATERIAL
MAX – MAXIMUM
MECH – MECHANICAL
MFR – MANUFACTURER
MG – MILLION GALLONS
MGD – MILLION GALLONS PER DAY
MH – MANHOLE
MIN – MNIMUM
MISC – MISCELLANEOUS
MJ – MECHICAL JOINT
MKR – MARKER
ML – MORTAR LINED
MLC – MORTAR LINED & COATED
MVC – MIDDLE OF VERTICAL CURVE

N – NORTH
N/A – NOT APPLICABLE
NAP – NOT A PART
NDOT – NEVADA DEPARTMENT OF TRANSPORTATION
NE – NORTHEAST
NF – NORTH FACE
NG – NATURAL GROUNG
NO. OR # – NUMBER
NTS – NOT TO SCALE
NW – NORTHWEST

O/O – OUT TO OUT
OC – ON CENTER
OD – OUTSIDE DIAMETER
OF – OUTSIDE FACE
OHP – OVER HEAD POWER
OHTEL – OVER HEAD TELEPHONE
ORIG – ORIGINAL
OVFL – OVERFLOW

O/O – OUT TO OUT
OC – ON CENTER
OD – OUTSIDE DIAMETER
OF – OUTSIDE FACE
OHP – OVER HEAD POWER
OHTEL – OVER HEAD TELEPHONE
ORIG – ORIGINAL
OVFL – OVERFLOW

PL OR P – PROPERTY LINE
PAVMT – PAVEMENT
PB – PULL BOX
PC – POINT OF CURVE
PCC – POINT OF COMPOUND CURVE
PE – POLYETHYLENE
PED – PEDESTAL
PERM – PERMANENT
PERP – PERPENDICULAR
PH – PHASE
PI – POINT OF INTERSECTION
PKG – PACKAGE
PKWY – PARKWAY
PL – PLACE/PLATE/PARCEL LINE
PLT – PLATE (DRAWNG)
POLY – POLYETHYLENE
PP – POWER POLE
PR – PAIR
PRC – POINT OF REVERSE CURVE/ PRECAST REINFORCED CONCRETE
PRELIM – PRELIMINARY
PROP – PROPOSED
PRV – PRESSURE REGULATING VALVE
PS – PUMP STATION
PSF – POUNDS PER SQUARE FOOT
PSI – POUNDS PER SQUARE INCH
PT – POINT/POINT OF TANGENT
PUE – PUBLIC UTILITY EASEMENT
PVI – POINT OF VERTICAL INTERSECTION
PVC – POLYVINYL CHLORIDE PIPE
QTR – QUARTER
QTY – QUANTITY

R – RADIUS
(R) – RADIAL
R/W – RIGHT OF WAY
RCB – REINFORCED CONCRETE BOX
RCP – REINFORCED CONCRETE PIPE
RD – ROAD
RED – REDUCER
REQD – REQUIRED
RET – RETURN
REV – REVISION OR REVERSE
ROW – RIGHT OF WAY
RPPA – REDUCED PRESSURE PRINCIPLE ASSYMBLY
RR – RAILROAD
RT – RIGHT

S – SOUTH/SLOPE
S/C – SAW CUT
SCCP – STEEL CYLINDER CONCRETE PIPE
SCH – SCHEDULE
SD – STORM DRAIN
SDMH – STORM DRAIN MANHOLE
SDWK – SIDEWALK
SE – SOUTHEAST
SEC – SECTION/SECOND
SEG – SEGMENT
SHLDR – SHOULDER
SHT – SHEET
SID – SPECIAL IMPROVEMENT DISTRICT
SIG – SIGNAL
SL – SLOPE
SLV – SLEEVE
SNWA – SOUTHERN NEVADA WATER AUTHORITY
SPEC(S) – SPECIFICATION(S)
SQ – SQUARE
SQ FT – SQUARE FOOT/FEET
SQ YD – SQUARE YARD
SS – SANITARY SEWER
ST – STREET
STA – STATION
STD – STANDARD
STL – STEEL
STLT – STREET LIGHT
SUR – SURVEY
SW – SIDEWALK OR SOUTHWEST
SY – SQUARE YARD
SYM – SYMBOL
SYS – SYSTEM

T&B – TOP & BOTTOM
TAN – TANGENT
TBM – TEMPORARY BENCH MARK
TC – TOP OF CURB
TD – TRENCH DRAIN
TEMP – TEMPORARY
THK – THICK(NESS)
THR BLK – THRUST BLOCK
TMH – TOP OF MANHOLE
TOF – TOP OF FOOTING
TOGR – TOP OF GRATE
TOP – TOP OF PIPE
TOR – TOP OF RIM
TOS – TOP OF SLAB
TOSW – TOP OF SIDEWALK
TOT – TOTAL
TOW – TOP OF WALL
(TYP) – TYPICAL

UNO – UNLESS NOTED OTHERWISE
UPRR – UNION PACIFIC RAILROAD
USGS – UNITED STATES GEODETIC SURVEY
UTIL – UTILITY

V – VOLT OR VALVE
VAR – VARIES
VB – VALVE BOX
VCP – VITRIFIED
VC – VERTICAL CURVE
VEL – VELOCITY
VERT – VERTICAL
VG – VALLEY GUTTER
VOL – VOLUME
VPI – VERTICAL POINT OF INTERSECTION

W/ – WITH
W – WEST/WATER
W/O – WITH OUT
WD – WIDTH
WDN – WASTE DRAIN
WI – WROUGHT IRON
WL – WASTE LINE
WP – WORK POINT/WEATHER PROOF
WS – WATER SURFACE
WT – WEIGHT
WTR – WATER
WV – WATER VALVE
WWF – WELDED WIRE FABRIC
WWM – WELDED WIRE MESH

XFMR – TRANSFORMER
XFR – TRANSFER
XSEC – CROSS SECTION

YD – YARD
YLD – YIELD

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6325 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.

2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S – APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.

3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [IFC § 105.7.12]

4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDE AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [IFC § 3310, § 3312]

5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC § 507.5.7.3]

6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [IFC 106.3]

7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [IFC § 507.2.1, NFPA 24]

8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [IFC § 507]

9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [IFC § 507.5.7.1]

10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC § 507]

11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC § C102]
- RESIDENTIAL – 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
- COMMERCIAL – 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.

12. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [IFC § C102.8]

13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.

14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [IFC § C102.12]

15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § C102.4]

16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § C102.7]

17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC § C102.6]

18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [IFC § C104]

19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC § 503.2.3]

20. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12%. ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [IFC § 503.2.7, § 503.2.8]

21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. IFC § 503.2.4]

22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. [IFC § 503.2.1]

23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 40 FT FLOW LINE TO FLOW LINE WITH PARALLEL PARKING PERMITTED ON BOTH SIDES. NOT LESS THAN 32 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE PARKING IS PERMITTED ONLY ON ONE SIDE OF THE FIRE APPARATUS ACCESS ROAD. NOT LESS THAN 24 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LANES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [IFC § 503.2.1.1]

24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [IFC § 503.1.1

25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. [IFC § 503.1.2]

26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. [IFC § 503.2.5]

27. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC § 503.3]

28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC § 503.6 AND IFC APPENDIX M.

EFFECTIVE DATE: MARCH 1ST, 2016

CITY OF LAS VEGAS GENERAL NOTES

1. 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 DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".

2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.

3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.

4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.

5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.

6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.

7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.

8. AC PAVEMENT TO BE ONE-HALF INCH (½") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.

9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.

10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.

11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.

12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE (COMPANY, _ REPORT #, DATE) APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.

13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.

14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.

15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.

WALL NOTES:

16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.

17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.

18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.

19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.

20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC, THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.

21. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINTIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).

OR

~~SANITARY SEWER AND STORM DRAIN FACILITIES SHOWN ON THESE PLANS SHALL BE USED TO MEET THE REQUIREMENTS OF NRS 455 AND SHALL SHOW AT A MINIMUM THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY. ANY DEVIATIONS FROM THE INFORMATION SHOWN SHALL BE NOTED AND SUBMITTED AS A REVISION TO THE PLANS AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION.~~

22. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.

23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

REVISED 02/03/15

STORMWATER RUNOFF MANAGEMENT NOTES

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.

2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.

3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION IIIA.5.

4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER AND ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECCESSARY. SOME EXCEPTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.

5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.

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 CITY ENGINEER.

3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.

4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.

5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.

6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" 'S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.

7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.

8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.

9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.

10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

REVISED 04/15/10

SOUTHWEST GAS NOTE

CONTRACTOR SHALL CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HP GAS LINES.

DEVIATIONS FROM STANDARDS

1. CONNECTIVITY RATIO IS 1.25 WHERE 1.3 IS REQUIRED. (VARIANCE)
2. EXISTING POWER POLES TO REMAIN WHERE RELOCATION UNDERGROUND IS REQUIRED. (WAIVER)
3. LOT WIDTHS LESS THAN 80' (32 LOTS). (VARIANCE)
4. NO STREET LIGHTS ON INTERIOR STREETS. (WAIVER)
5. THE EQUESTRIAN TRAIL ON ELKHORN ROAD AS SHOWN IF APPROVED BY THE CITY OF LAS VEGAS WILL MAKE ELKHORN ROAD A NON-STANDARD STREET SECTION. (VARIANCE)

FOR CLARK COUNTY NOTES SEE SHEET 34

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT # 125391

1. 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.**

2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE **2010** EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). **THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.**

3. 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.

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 TYPE K 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. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE **2010** EDITION OF THE UDACS.

9. 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.

10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.

11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.

12. 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.

13. TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.

14. THE INSTALLATION OF LAS VEGAS VALLEY WATER DISTRICT (LVVWD) MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.

ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTANCE, OR THE AGENCY HAVING JURISDICTION DECORATIVE SURFACE MATERIALS PLACED WITHIN THE 10 FOOT EASEMENT ABUTTING A PUBLIC OR PRIVATE STREET, IF DISTRUBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE PLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

15. NO LEAD COMPLINCE NOTE:
TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, ALL WATER WORKS BRASS PRODUCTS PROPOSED TO BE RELOCATED, OR INSTALLED AS NEW, MUST BE INSTALLED WITH THE LEAD FREE APPROVED PRODUCT. THE OLD LEADED PRODUCT MAY NOT BE USED.

REVISED 01/09/2017

ESTIMATE OF QUANTITIES

	PUBLIC	PRIVATE
SEWER IMPROVEMENTS:		
4" SEWER	1,189 LF	
8" SEWER	4,714 LF	
SEWER MANHOLE 6 TO 18 FEET	18 EA	
SEWER MANHOLE ADJUSTMENT	1 EA	
WATER AND FIRE IMPROVEMENTS:		
6" WATER MAIN	291 LF	
8" WATER MAIN	2,916 LF	
12" WATER MAIN	604 LF	
WATER LATERAL	1,161 LF	
LANDSCAPE WATER SERVICE (3/4" IRRG)	2 EA	
WATER SERVICE TO LOTS (3/4" METERS)	47 EA	
FIRE HYDRANT	7 EA	
RPPA (IRRG.)	2 EA	
ROADWAY IMPROVEMENTS:		
CURB & GUTTER (TYPE "L" & "A")	1,334 LF	2,387 LF
CURB & GUTTER ("R" TYPE)		3,710 LF
CROSS GUTTER	1,595 SF	3,502 SF
SIDEWALK 4"	8,879 SF	30,705 SF
SIDEWALK RAMP	2 EA	18 EA
SIDEWALK UNDERDRAIN	1 EA	1 EA
TYPE II GRAVEL BASE	3,088 CY	3,443 CY
2.5" ASPHALTIC CONCRETE PAVING		11,867 SY
4.5" ASPHALTIC CONCRETE PAVING	102 SY	
5.5" ASPHALTIC CONCRETE PAVING	4,731 SY	
PVMT BUTTON (REFLECTIVE)		6 EA
PAVEMENT STRIPING ARTERIAL	3,460 LF	
SURVEY MONUMENTS	4 EA	12 EA
TRAFFIC IMPROVEMENTS:		
PULL BOX	8 EA	
STREETLIGHT (STNDRD BASE)	15 EA	
STRTLT FOUNDATION (STNDRD BASE)	15 EA	
2" ST/LT CONDUIT	2,518 LF	
STREET LIGHT 200 AMP SERVICE	1 EA	
4" INTERCONNECT CONDUIT	2,518 LF	
STREET/STOP SIGNS	5 EA	10 EA
DRAINAGE IMPROVEMENTS:		
18" STORM DRAIN	32 LF	
2.5' TYPE CM2 DI	1 EA	
RIP RAP (D50-06")		6 CY
DRY UTILITIES AND OTHER IMPROVEMENTS:		
EXCAVATION & EMBANKMENT	62,863 CY	
CABLE TO LOTS (RES SUBDIV ONLY)	47 EA	
GAS TO LOTS (RES SUBDIV ONLY)	47 EA	
PHONE TO LOTS (RES SUBDIV ONLY)	47 EA	
POWER TO LOTS (RES SUBDIV ONLY)	47 EA	

GENERAL LEGEND

SYMBOL	DESCRIPTION
	CENTERLINE
	UNIT BOUNDARY
(2614)	PROPOSED 1' GRADE CONTOUR
(2610)	PROPOSED 5' GRADE CONTOUR
(2614)	EXISTING 1' GRADE CONTOUR
(2610)	EXISTING 5' GRADE CONTOUR
	PROPOSED PROPERTY LINE
	PROPOSED SETBACK LINE
	PROPOSED HINGE LINE
	PROPOSED SWALE
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	RETAINING WALL
	GARDEN WALL WITH SOLID GROUT
—X——X—	EXISTING FENCE
	EXISTING EDGE OF PAVEMENT
	PROPOSED EDGE OF PAVEMENT
1-1/4" CONDUIT	PROPOSED STREETLIGHT CONDUIT
P.B.	PROPOSED NO. 3 1/2 CONCRETE PULL BOX w/ METAL COVER
EX. GAS	EXISTING GAS
EX. 10"S	EXISTING SEWER MAIN
8"S	PROPOSED SEWER MAIN
	PROPOSED SEWER LATERAL
EX. 36"SD	EXISTING STORM DRAIN
36"SD	PROPOSED STORM DRAIN
EX. 8"W	EXISTING WATER MAIN
8"W	PROPOSED WATER MAIN
	PROPOSED FIRE HYDRANT
23	LOT NUMBER
FF=22.1	PROPOSED FINISH FLOOR
(12.3)	PROPOSED PAD ELEVATION
	EXISTING STREET LIGHT
	PROPOSED 100w HPS STREET LIGHT
	PROPOSED 150w HPS STREET LIGHT
	PROPOSED 200w HPS STREET LIGHT
	PROPOSED 250w HPS STREET LIGHT
	PROPOSED 400w HPS STREET LIGHT
	PROPOSED CONCRETE DRIVEWAY
	0" LIP DRIVEWAY
	2:1 SCARP
Δ3	COURSES OF 8" CMU NUMBER OF COURSES
1+00.00 "C"	CUL-DE-SAC BACK OF CURB STATION
1+00.00 "K"	KNUCKLE BACK OF CURB STATION
(SZ)	SIGHT VISIBILITY RESTRICTION ZONE
1.50%	PROPOSED RATE & FLOW DIRECTION
12.34 TC	PROPOSED ELEVATION WITH DESCRIPTION
(12.34) TC	EXISTING ELEVATION WITH DESCRIPTION
	PROPOSED HANDICAP RAMP

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Avoid cutting underground utility lines. It's costly.
CALL
811
OR
1-800-227-2600

FAST
Call before you Underground
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
Call before you Overhead
1-702-227-2929

APPROVED FOR CONSTRUCTION
Dianne Dean for DJM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 07/06/17 PROJECT No.: 125391

107X5059

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : NONE

Triton Engineering
6757 W. Charleston Blvd.
Suite B
Las Vegas, Nevada 89146
Office: (702) 254-1480
Fax: (702) 254-3062
www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
GENERAL NOTES AND LEGEND

PROFESSIONAL ENGINEER – STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552
6-27-17

SHEET 2 OF 50 (37)

C.L.V. DWG.# 69184

CC HTE #17-11784

PROJ#:125391 AGR:116334 QS: 125-22-NE XC 11316

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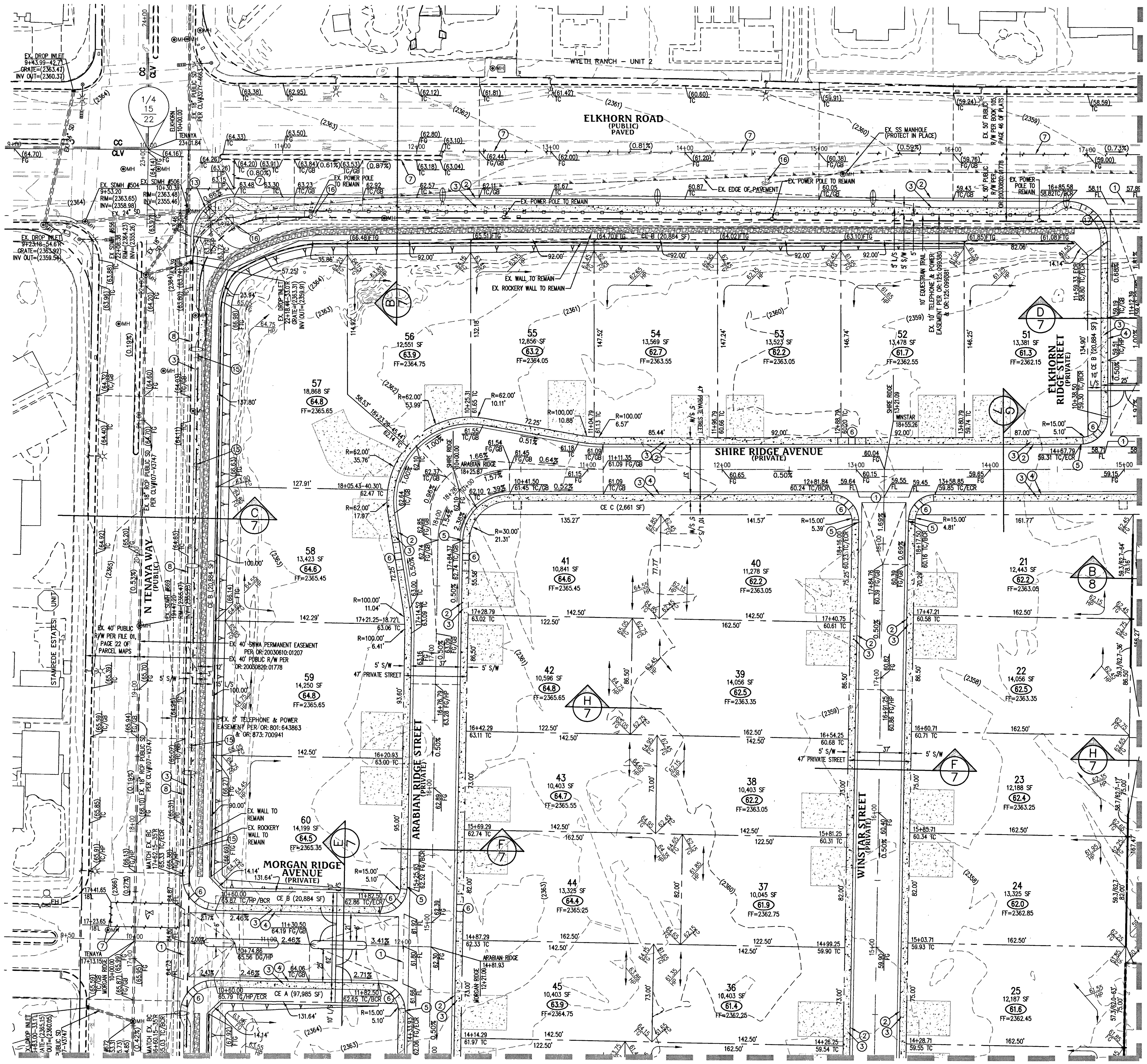

SEE SHEET 4

SEE SHEET 5

GRADING NOTES

1. ALL PROPOSED PAD ELEVATIONS AND SWALE ELEVATIONS ARE ROUGH GRADES. ALL OTHER PROPOSED ELEVATIONS ARE FINISHED GRADES.
2. THE GRADING PLANS SHALL BE AT THE PROJECT SITE THROUGHOUT THE COURSE OF CONSTRUCTION.
3. ALL GRADING SHALL BE PERFORMED IN CONFORMANCE WITH THE LINES, GRADES AND DETAILS AS SHOWN ON THESE PLANS. ANY DEVIATION FROM THESE PLANS WILL ONLY BE PERMITTED UPON WRITTEN APPROVAL FROM THE ENGINEER.
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5. ALL PLACEMENT OF OVERSIZED MATERIALS AND/OR FILL MATERIALS SHALL BE PER THE SOILS REPORT REFERENCED ON THIS PLAN.

FLOODZONE NOTE

THIS SITE IS LOCATED COMPLETELY WITHIN ZONE X PER FEMA MAP #32003C1765F, PANEL 1765F, DATED NOVEMBER 16, 2011 AND MAP #32003C1745E, PANEL 1745E, DATED SEPTEMBER 27, 2002. ZONE X IS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOODPLAIN.

SOILS INFORMATION

SOILS REPORT DATA

REPORT BY:	GEOTEK RESIDENTIAL, LLC
PROJECT No.:	12902-LVR
DATED:	APRIL 27, 2016

PHASE 1 CUT AND FILL DATA

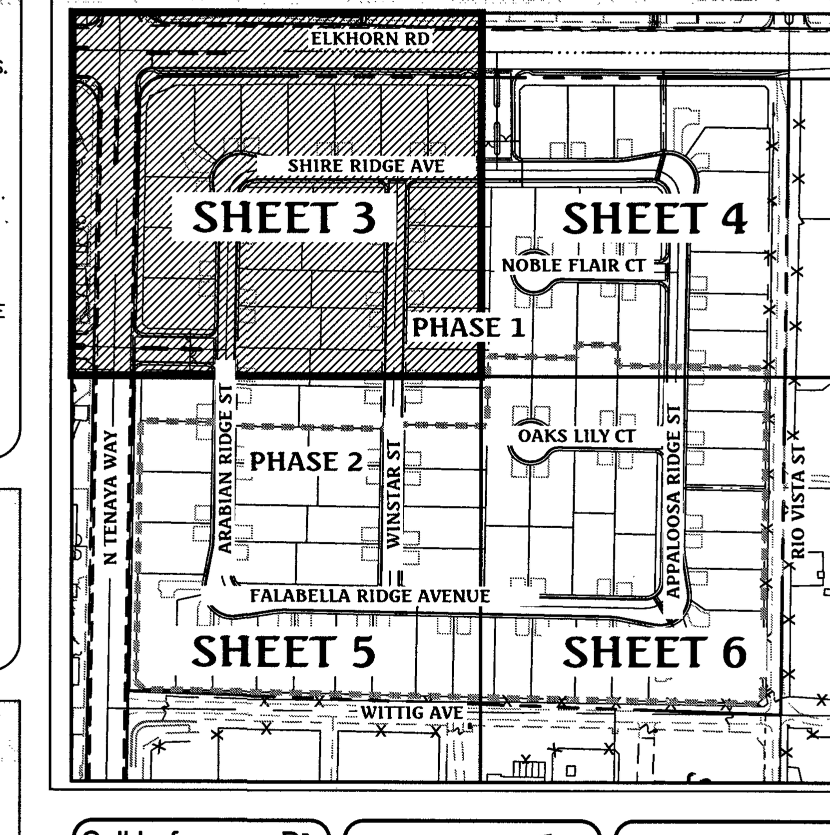
CUT TOTAL:	10,688 CY
FILL TOTAL:	62,863 CY
NET (FILL):	52,175 CY

ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.

THIS PROJECT WILL BE CONSTRUCTED WITH CONTINUOUS R-TYPE CURB ON THE FRONTAGE OF ALL LOTS

ALL SIDEWALK RAMP "A" AND "B" TRANSITION LENGTHS ARE EQUAL TO 8'

KEY MAP



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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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NORTH

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

GRADING LEGEND

(1395)	EX. MAJOR CONTOUR
	EX. MINOR CONTOUR
	BOUNDARY LINE
	STREET CENTERLINE
	EDGE OF PAVEMENT
	EXISTING CURB, GUTTER, & SIDEWALK
	PROPOSED CURB, GUTTER, & SIDEWALK
	PROPOSED AC PAVING
CC / CLV	CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
	EX. FENCE
	EX. BLOCK WALL
	PROPOSED RETAINING WALL
37.3/38.7-12'	TOP OF FOOTING / APPROX. WALL LENGTH / TOP OF RETAINING WALL
	PROPOSED SCARP

PUBLIC DRAINAGE EASEMENT

DRAINAGE IMPROVEMENTS:	PUBLIC	PRIVATE
18" STORM DRAIN	32 LF	
2.5' TYPE CM2 DROP INLET	1 EA	
DRAINAGE EASEMENT CONCRETE	8,175 SF	
DRAINAGE EASEMENT BOLLARD	9 EA	
DRAINAGE EASEMENT WROUGHT IRON	330 SF	

CONSTRUCTION NOTES

1. CONSTRUCT 8' WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL C, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.
13. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE II
14. EXISTING SIGN TO REMAIN
15. EXISTING SIGN TO BE RELOCATED
16. EXISTING SIGN TO BE REMOVED
17. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE III

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT. CLV# DS4823

James M Pearce 6-27-17
JAMES M. PEARCE, PE No. 9552 DATE:

107Y5059

PROFESSIONAL ENGINEER - STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552
6-27-17

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd. Suite B Las Vegas, Nevada 89146
Office: (702) 254-1480 Fax: (702) 254-3062 www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
GRADING PLAN I

SHEET 3 OF ~~37~~ 50

C.L.V. DWG.# 69184

CC HTE #17-11784

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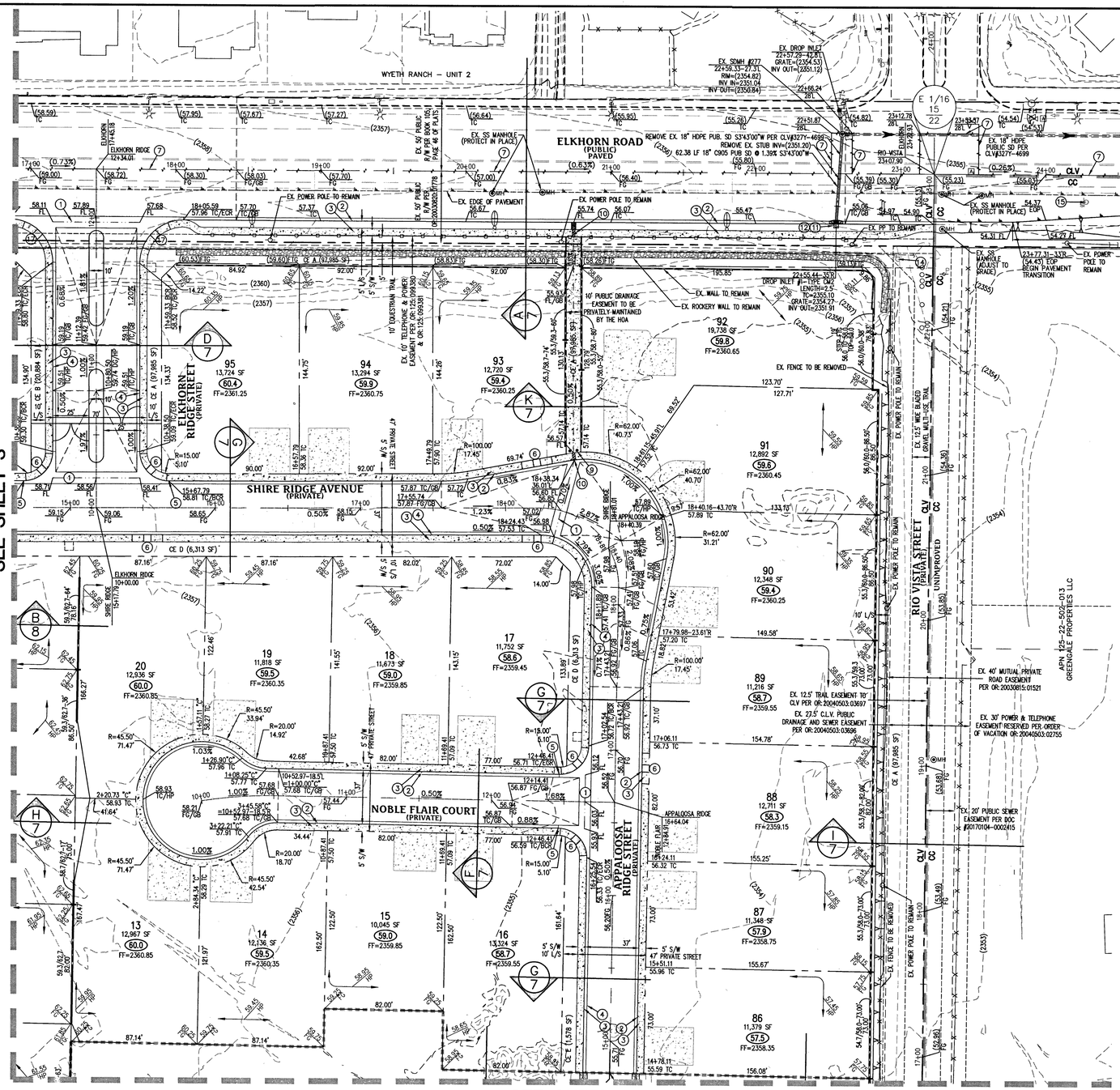

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6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
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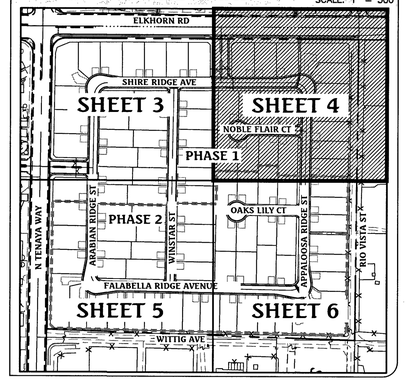
16. EXISTING SIGN TO BE REMOVED
17. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE III

KEY MAP

SCALE: 1" = 300'



GRADING LEGEND

- (1395) EX. MAJOR CONTOUR / EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- CC / CLV — CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- 37.3/38.7-12' — TOP OF FOOTING / APPROX. WALL LENGTH / TOP OF RETAINING WALL
- PROPOSED SCARP

ALL SIDEWALK RAMP "A" AND "B" TRANSITION LENGTHS ARE EQUAL TO 8'

SOILS INFORMATION

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REPORT BY: GEOTEK RESIDENTIAL, LLC
PROJECT No.: 12902-LVR
DATED: APRIL 27, 2016

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NET (FILL):	52,175 CY

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THIS PROJECT WILL BE CONSTRUCTED WITH CONTINUOUS R-TYPE CURB ON THE FRONTAGE OF ALL LOTS

PUBLIC DRAINAGE EASEMENT

DRAINAGE IMPROVEMENTS:	PUBLIC	PRIVATE
18" STORM DRAIN	32 LF	
2.5' TYPE CM2 DROP INLET	1 EA	
DRAINAGE EASEMENT CONCRETE	8,175 SF	
DRAINAGE EASEMENT BOLLARD	9 EA	
DRAINAGE EASEMENT WROUGHT IRON	330 SF	

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 28 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

FOR CLARK COUNTY JURISDICTION ONLY

CLARK COUNTY
DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT REVIEW
Acceptance of plans for filing

By _____
Acceptance of these plans for filing shall not be construed to be a permit for or an approval of any violation of any of the provisions of the state or county laws and/or specifications. Clark County shall be held free from damages which may result from the construction of the improvements from the engineering design depicted herein.

NOTE: Power poles and/or other existing facilities not in proper location based on proposed improvements shown hereon will be relocated at no expense to Clark County.

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT CLARK COUNTY FOR THIS PROJECT. HTE #17-6154

James M Pearce 6-27-17
JAMES M. PEARCE, PE No. 9552 DATE:

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT. CLV# DS4823

James M Pearce 6-27-17
JAMES M. PEARCE, PE No. 9552 DATE:

NORTH
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR 1-800-227-2600

FAST Call before you Underground 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
Call before you Overhead 1-702-227-2929

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
FM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd.
Suite B
Las Vegas, Nevada 89146
Office: (702) 254-1480
Fax: (702) 254-3062
www.tritonnv.com

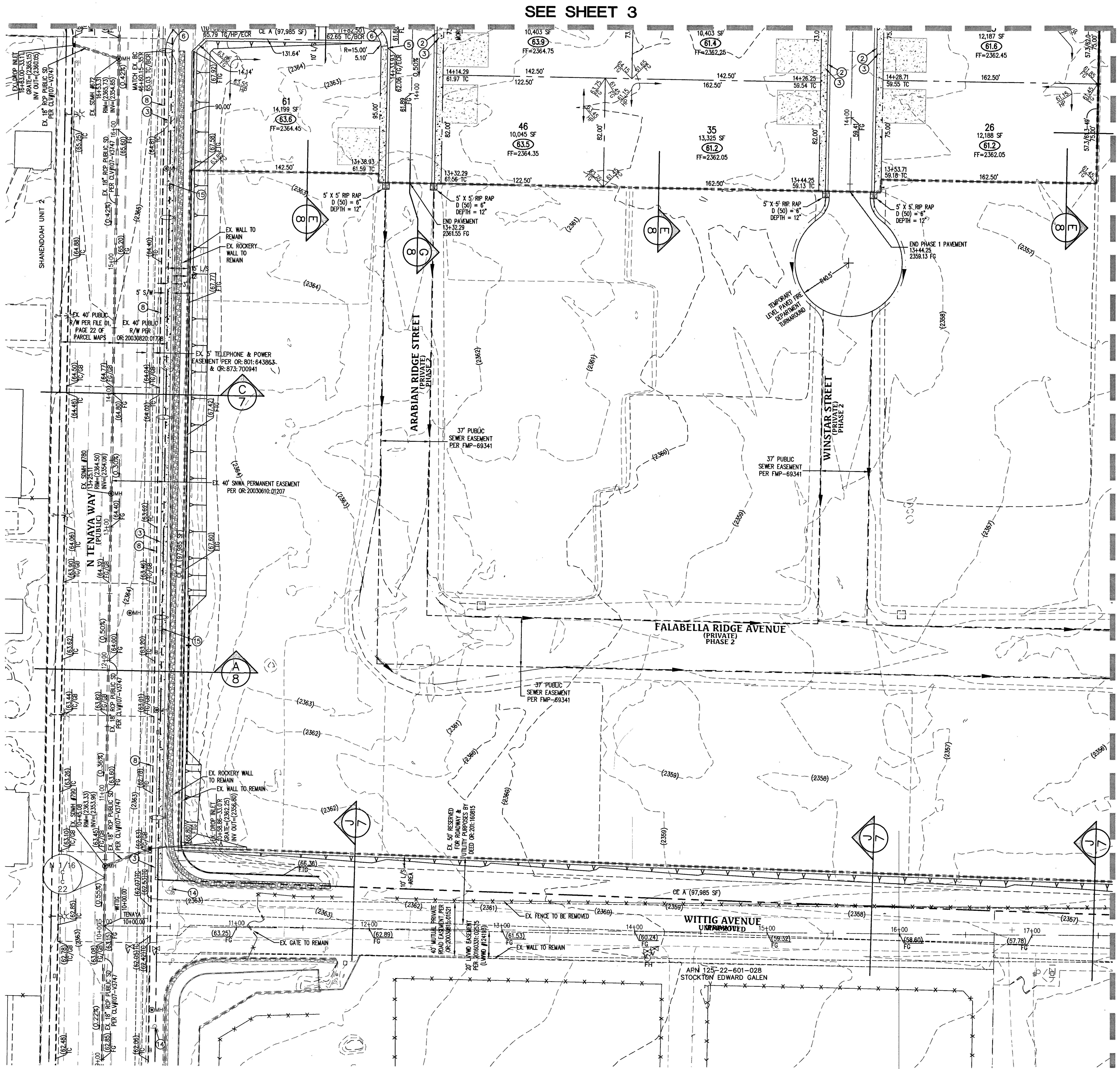
DR HORTON
ELKHORN 40 PHASE 1
GRADING PLAN II

PROFESSIONAL ENGINEER – STATE OF NEVADA – JAMES M. PEARCE – Exp. 12-31-17 – CIVIL – No. 9552 – 6-27-17

SHEET 4 OF 37
C.L.V. DWG.# 69184

Q:\Triton Drawings\007.108 Elkhorn Tenaya\DRAWINGS\Improvements\Phase1\02_007.108-ph1-imp-Grading.dwg dreese Tue, 27 Jun 2017 - 12:34pm

CC HTE #17-11784



GRADING NOTES

1. ALL PROPOSED PAD ELEVATIONS AND SWALE ELEVATIONS ARE ROUGH GRADES. ALL OTHER PROPOSED ELEVATIONS ARE FINISHED GRADES.
2. THE GRADING PLANS SHALL BE AT THE PROJECT SITE THROUGHOUT THE COURSE OF CONSTRUCTION.
3. ALL GRADING SHALL BE PERFORMED IN CONFORMANCE WITH THE LINES, GRADES AND DETAILS AS SHOWN ON THESE PLANS. ANY DEVIATION FROM THESE PLANS WILL ONLY BE PERMITTED UPON WRITTEN APPROVAL FROM THE ENGINEER.
4. ALL PADS ARE TO BE GRADED WITHIN ±0.3' OF THE ELEVATIONS AS SHOWN ON THE PLANS. GRADING IS NOT COMPLETE UNTIL THE ENGINEER HAS CERTIFIED THAT THE PADS HAVE BEEN GRADED IN SUBSTANTIAL CONFORMANCE TO THE PLANS.
5. ALL PLACEMENT OF OVERSIZED MATERIALS AND/OR FILL MATERIALS SHALL BE PER THE SOILS REPORT REFERENCED ON THIS PLAN.

FLOODZONE NOTE

THIS SITE IS LOCATED COMPLETELY WITHIN ZONE X PER FEMA MAP #32003C1765F, PANEL 1765F, DATED NOVEMBER 16, 2011 AND MAP #32003C1745E, PANEL 1745E, DATED SEPTEMBER 27, 2002. ZONE X IS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOODPLAIN.

SOILS INFORMATION

SOILS REPORT DATA

REPORT BY:	GEOTEK RESIDENTIAL, LLC
PROJECT No.:	12902-LVR
DATED:	APRIL 27, 2016

PHASE 1 CUT AND FILL DATA

CUT TOTAL:	10,688 CY
FILL TOTAL:	62,863 CY
NET (FILL):	52,175 CY

ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.

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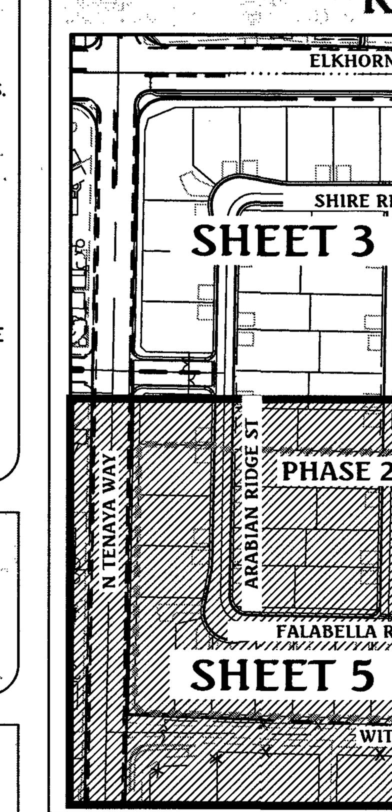
ALL SIDEWALK RAMP "A" AND "B" TRANSITION LENGTHS ARE EQUAL TO 8'

KEY MAP

SCALE: 1" = 300'



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NORTH

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

GRADING LEGEND

- EX. MAJOR CONTOUR (1395)
- EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- CC / CLV — CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- 37.3/38.7-12' — TOP OF FOOTING / APPROX. WALL LENGTH / TOP OF RETAINING WALL
- PROPOSED SCARP

PUBLIC DRAINAGE EASEMENT

DRAINAGE IMPROVEMENTS:	PUBLIC	PRIVATE
18" STORM DRAIN	32 LF	
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DRAINAGE EASEMENT CONCRETE	8,175 SF	
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DRAINAGE EASEMENT WROUGHT IRON	330 SF	

CONSTRUCTION NOTES

1. CONSTRUCT 8' WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL C, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.
13. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE II
14. EXISTING SIGN TO REMAIN
15. EXISTING SIGN TO BE RELOCATED
16. EXISTING SIGN TO BE REMOVED
17. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE III

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JAMES M. PEARCE, PE No. 9552 — DATE: 6-27-17

10745059

PROFESSIONAL ENGINEER - STATE OF NEVADA — JAMES M. PEARCE — Exp. 12-31-17 — CIVIL — No. 9552 — 6-27-17

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

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DR HORTON
ELKHORN 40 PHASE 1
GRADING PLAN III

SHEET 5 OF 50 (37 struck)

C.L.V. DWG.# 69184

CC HTE #17-11784

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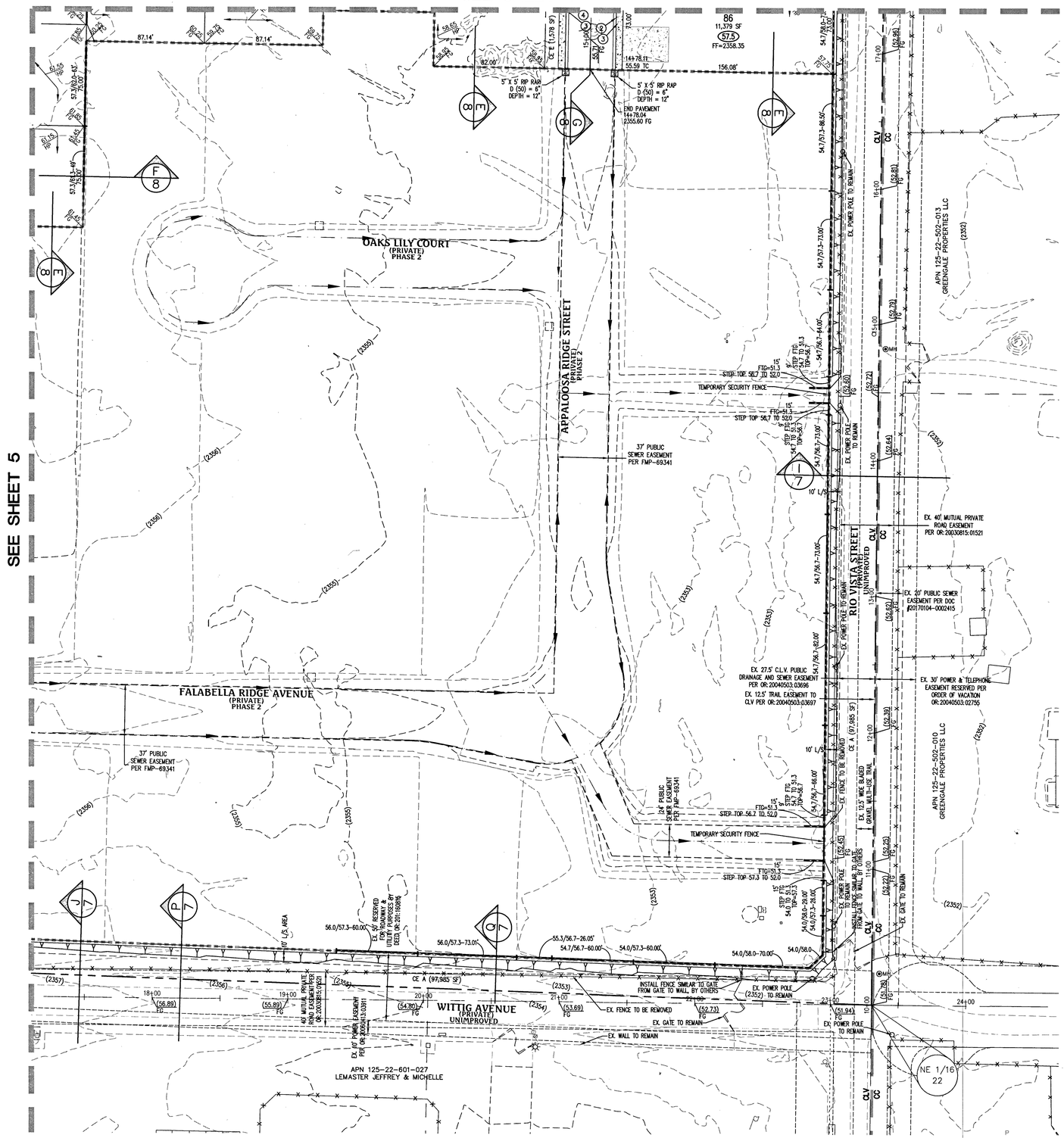

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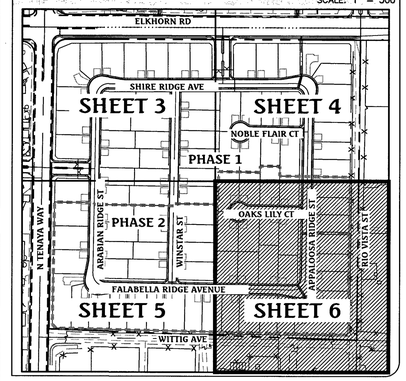

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JAMES M. PEARCE, PE No. 9552 — DATE: 6-27-17

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JAMES M. PEARCE, PE No. 9552 — DATE: 6-27-17

10745059

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd. Suite B Las Vegas, Nevada 89146
Office: (702) 254-1480 Fax: (702) 254-3062 www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
GRADING PLAN IV

PROFESSIONAL ENGINEER — STATE OF NEVADA — JAMES M. PEARCE — Exp. 12-31-17 CIVIL No. 9552 — 6-27-17

SHEET 6 OF 37

C.L.V. DWG.# 69184

CC HTE #17-11784

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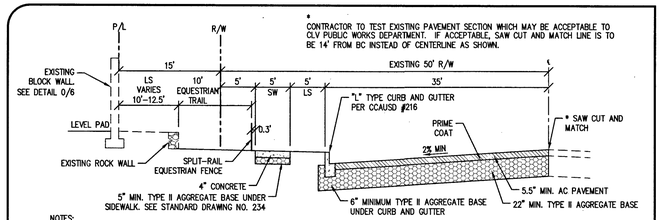
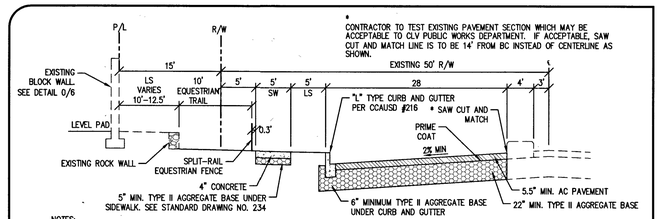


CONTRACTOR TO TEST EXISTING PAVEMENT SECTION WHICH MAY BE ACCEPTABLE TO CLV PUBLIC WORKS DEPARTMENT. IF ACCEPTABLE, SAW CUT AND MATCH LINE IS TO BE 14' FROM BC INSTEAD OF CENTERLINE AS SHOWN.

NOTES:
1. A.C. PAVEMENT TO BE 1/2" MAXIMUM ABOVE LIP OF GUTTER AFTER COMPACTION.
2. THE GRADE BREAK OCCURING IN THE CROSS SECTION SHALL FALL BETWEEN DRIVING LANES.
3. STRUCTURAL SECTION SHOWN IS BASED ON A SUBGRADE "R" VALUE OR 20. OTHER STRUCTURAL SECTIONS MAY BE REQUIRED BASED ON ENGINEERING ANALYSIS OF "R" OR "CBR" VALUES DETERMINED BY SOIL TESTING.

FOR APPROXIMATE STREET LIGHT AND EXISTING POWER POLE SETBACK LOCATIONS, SEE DETAIL R/6

A/7 STREET SECTION – ELKHORN ROAD
PER STD. DWG. NO 202 (NOT TO SCALE)



CONTRACTOR TO TEST EXISTING PAVEMENT SECTION WHICH MAY BE ACCEPTABLE TO CLV PUBLIC WORKS DEPARTMENT. IF ACCEPTABLE, SAW CUT AND MATCH LINE IS TO BE 14' FROM BC INSTEAD OF CENTERLINE AS SHOWN.

NOTES:
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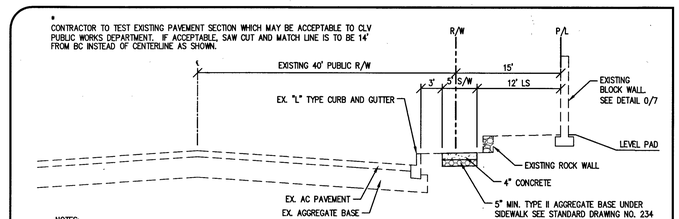
B/7 STREET SECTION – ELKHORN ROAD
PER STD. DWG. NO 202 (NOT TO SCALE)



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NOTES:
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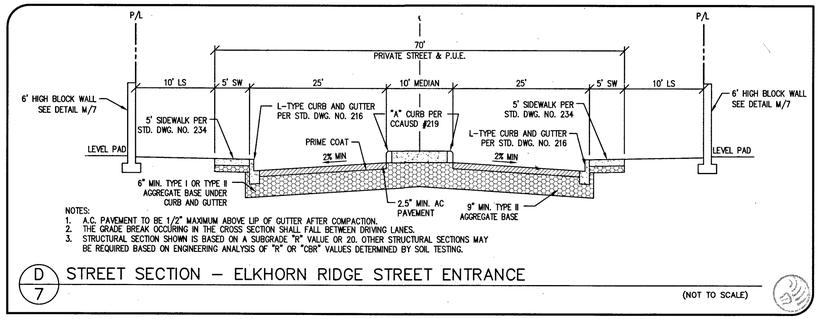
C/7 STREET SECTION – TENAYA WAY
PER STD. DWG. NO 205 (NOT TO SCALE)



NOTES:
1. A.C. PAVEMENT TO BE 1/2" MAXIMUM ABOVE LIP OF GUTTER AFTER COMPACTION.
2. THE GRADE BREAK OCCURING IN THE CROSS SECTION SHALL FALL BETWEEN DRIVING LANES.
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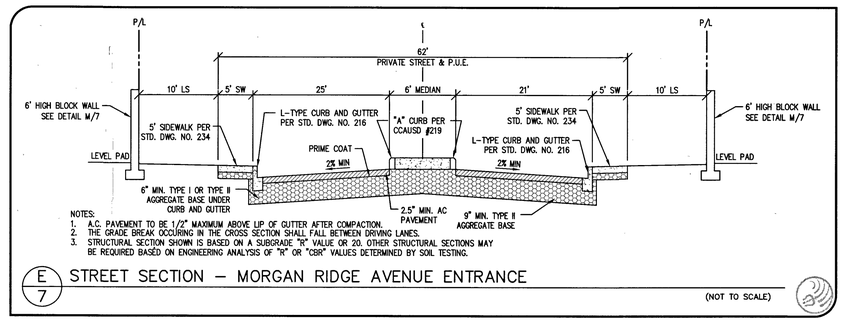
D/7 STREET SECTION – ELKHORN RIDGE STREET ENTRANCE
(NOT TO SCALE)



NOTES:
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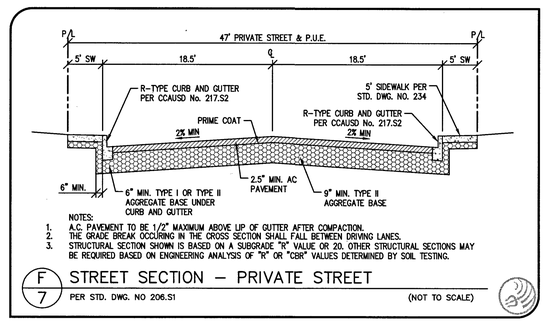
E/7 STREET SECTION – MORGAN RIDGE AVENUE ENTRANCE
(NOT TO SCALE)



NOTES:
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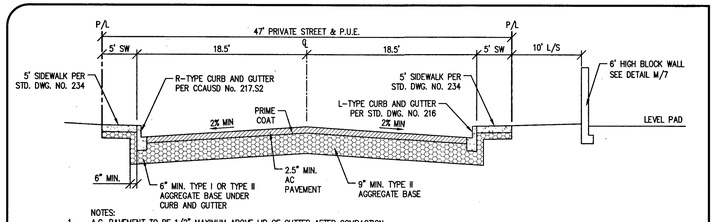
F/7 STREET SECTION – PRIVATE STREET
PER STD. DWG. NO 206.S1 (NOT TO SCALE)



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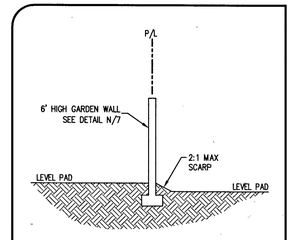
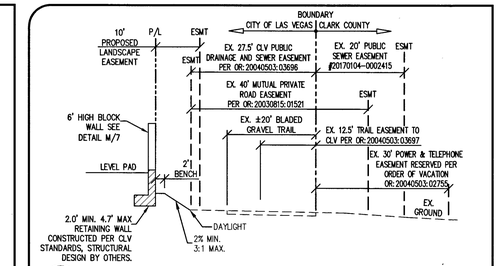
3. STRUCTURAL SECTION SHOWN IS BASED ON A SUBGRADE "R" VALUE OR 20. OTHER STRUCTURAL SECTIONS MAY BE REQUIRED BASED ON ENGINEERING ANALYSIS OF "R" OR "CBR" VALUES DETERMINED BY SOIL TESTING.

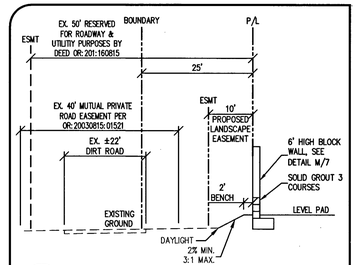
G/7 STREET SECTION – PRIVATE STREET
PER STD. DWG. NO 206.S1 (NOT TO SCALE)



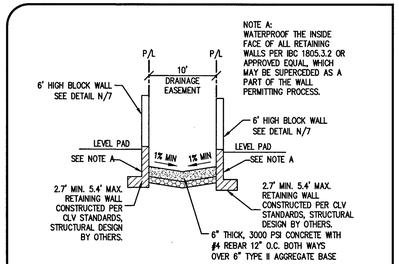
H/7 INTERIOR SECTION
(NOT TO SCALE)



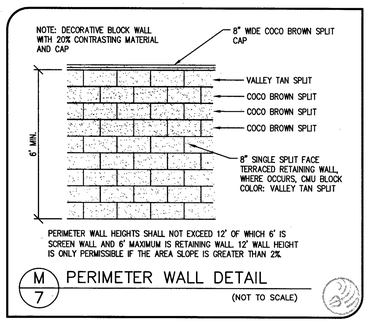
I/7 PERIMETER SECTION
(NOT TO SCALE)



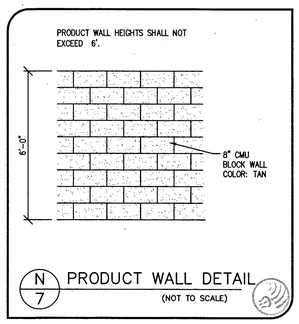
J/7 PERIMETER SECTION
(NOT TO SCALE)



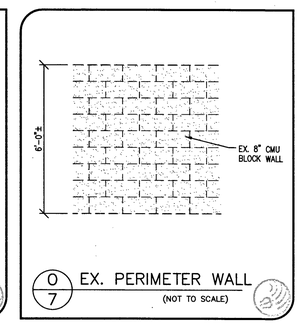
K/7 DRAINAGE EASEMENT SECTION
(NOT TO SCALE)



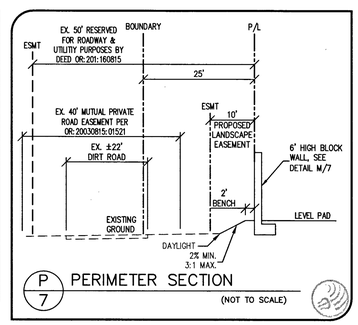
M/7 PERIMETER WALL DETAIL
(NOT TO SCALE)



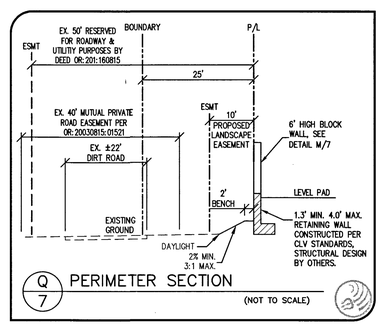
N/7 PRODUCT WALL DETAIL
(NOT TO SCALE)



O/7 EX. PERIMETER WALL
(NOT TO SCALE)



P/7 PERIMETER SECTION
(NOT TO SCALE)



Q/7 PERIMETER SECTION
(NOT TO SCALE)

Call before you Dig
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1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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1-702-227-2929

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 07/06/17 PROJECT No.: 125391
LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

10745059

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : AS NOTED

Triton Engineering
6757 W. Charleston Blvd.
Suite 13
Las Vegas, Nevada 89146
Office: (702) 254-1480
Fax: (702) 254-5062
www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
GRADING DETAILS I

PROFESSIONAL ENGINEER – STATE OF NEVADA – JAMES M. PEARCE – Exp. 12-31-17 – CIVIL – No. 9552 – 6-27-17

SHEET 7 OF 50 (57)
C.L.V. DWG.# 69184

PROJ#:125391 AGR:116334 QS: 125-22-NE XC 11316

CC HTE #17-11784

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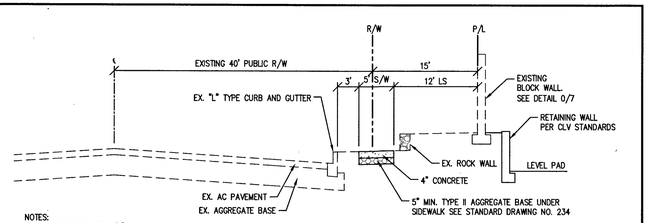

NOTES:
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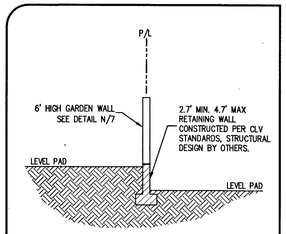
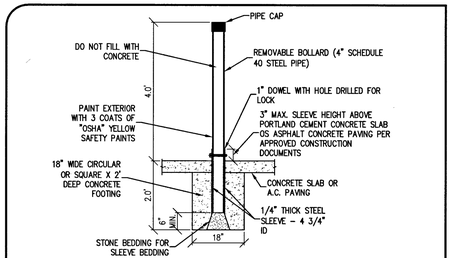
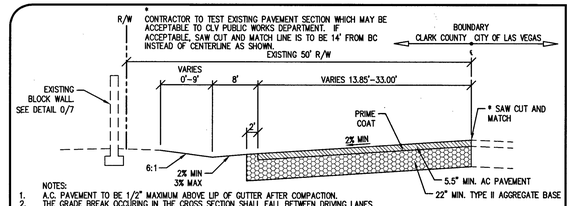
A/8 STREET SECTION – TENAYA WAY
PER STD. DWG. NO 205 (NOT TO SCALE)



B/8 INTERIOR SECTION
(NOT TO SCALE)



C/8 BOLLARD DETAIL (REMOVABLE, LOCKING)
DCSWCS SD-38 (NOT TO SCALE)



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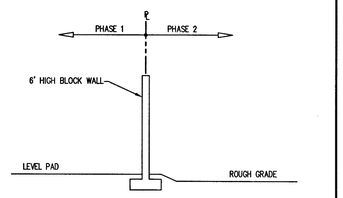
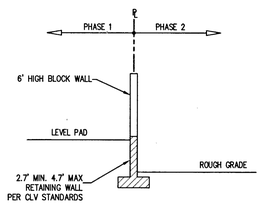
4. WITHIN CLARK COUNTY ALL AGGREGATE BASES SHALL BE COMPACTED PER GEOTECHNICAL REPORT BY GEOTEK RESIDENTIAL, LLC, PROJECT #12902-LVR, DATED: APRIL 27, 2016. PRELIMINARY PAVEMENT SECTIONS SHALL BE VERIFIED WITH THE FINAL PAVEMENT SECTION RECOMMENDATION REPORT (MPSR) PRIOR TO CONSTRUCTION. IF FINAL PAVEMENT SECTIONS ARE DIFFERENT, A REVISION TO THE IMPROVEMENT PLANS WILL BE REQUIRED.

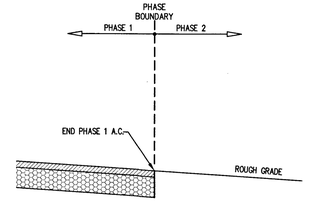
D/8 TRANSITION SECTION – ELKHORN ROAD
PER STD. DWG. NO 202 (NOT TO SCALE)



E/8 PHASE BOUNDARY SECTION
(NOT TO SCALE)



F/8 PHASE BOUNDARY SECTION
(NOT TO SCALE)



G/8 INTERIOR SECTION
(NOT TO SCALE)

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APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 6/28/17 PROJECT No.: 125391
LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

107X5059

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : AS NOTED

Triton Engineering
6757 W. Charleston Blvd. Suite B Las Vegas, Nevada 89146
Office: (702) 254-1480 Fax: (702) 254-3062 www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
GRADING DETAILS II

PROFESSIONAL ENGINEER – STATE OF NEVADA – JAMES M. PEARCE – Exp. 12-31-17 – CIVIL – No. 9552 – 6-27-17

SHEET 8 OF 50 37
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE XC 11316

CC HTE #17-11784

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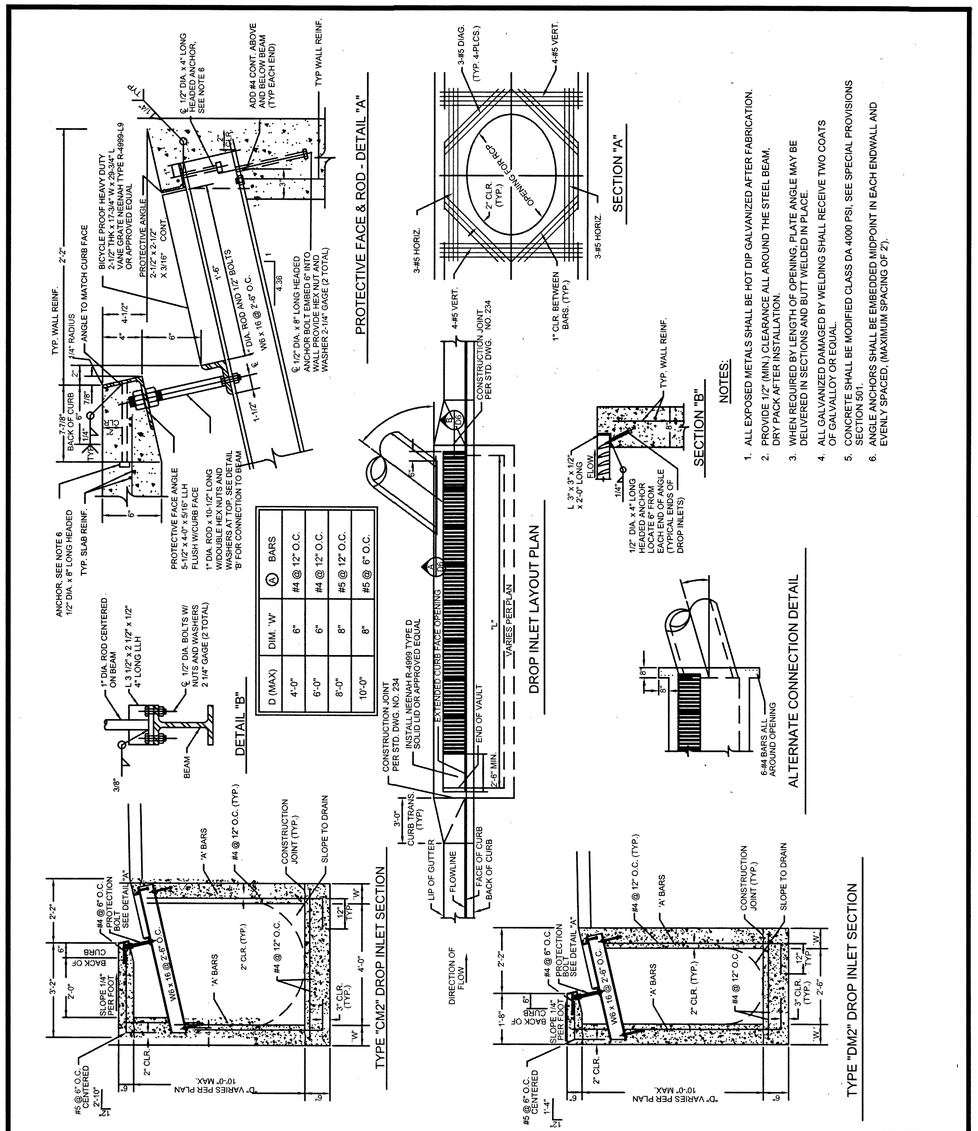


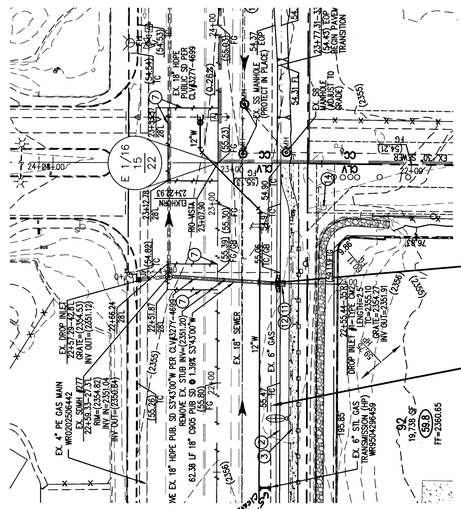
AGENCY APPROVED	B	C	H	L	M	N

SPECIFICATION REFERENCE	
501	CONCRETE
501	CONCRETE STRUCTURES
501	REINFORCING STEEL
501	STEEL

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE "C-D" MODIFIED
DROP INLET

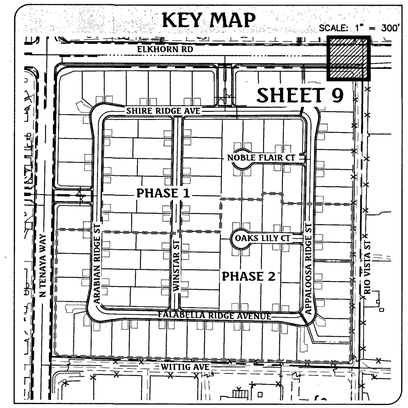
DATE 9-14-06 | DWG. NO. 412.1



STORM DRAIN (PUBLIC)
PLAN
SCALE: HORIZ. 1" = 40'

GAS NOTES
1. PROTECT IN PLACE EXISTING GAS MAIN.
2. CONTACT SOUTHWEST GAS TO INSTALL ROCK SHIELD.

CAUTION: HIGH-PRESSURE GAS!
CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.



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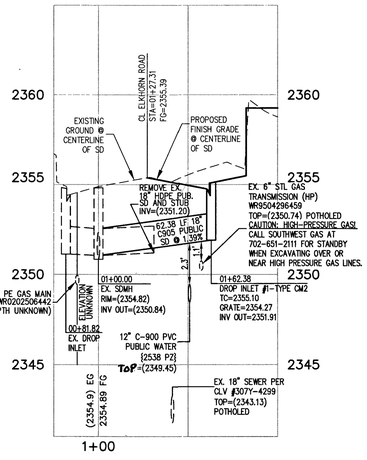
Call before you Overhead 1-702-227-2929

NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.



STORM DRAIN (PUBLIC)
PROFILE
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

GRADING LEGEND
- (1395) EX. MAJOR CONTOUR / EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- CC / CLV — CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- X X X — EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- 37.3/38.7-12' — TOP OF FOOTING / APPROX. WALL LENGTH / TOP OF RETAINING WALL
- PROPOSED SCARP

CONSTRUCTION NOTES
1. CONSTRUCT 8' WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL C, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.
13. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE II
14. EXISTING SIGN TO REMAIN
15. EXISTING SIGN TO BE RELOCATED
16. EXISTING SIGN TO BE REMOVED
17. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE III

PUBLIC DRAINAGE EASEMENT

DRAINAGE IMPROVEMENTS:	PUBLIC	PRIVATE
18" STORM DRAIN	32 LF	
2.5' TYPE CM2 DROP INLET	1 EA	
DRAINAGE EASEMENT CONCRETE	8,175 SF	
DRAINAGE EASEMENT BOLLARD	9 EA	
DRAINAGE EASEMENT WROUGHT IRON	330 SF	

BASIS OF BEARING
NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK
CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

DROP INLET NOTE
WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:

CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 07/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT. #DS4823

JAMES M. PEARCE, PE No. 9552 DATE: 6-27-17

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd. Suite B Las Vegas, Nevada 89146
Office: (702) 254-1480 Fax: (702) 254-5062 www.tritonnsg.com

DR HORTON
ELKHORN 40 PHASE 1
STORM DRAIN

PROFESSIONAL ENGINEER - STATE OF NEVADA - JAMES M. PEARCE - Exp. 12-31-17 - CIVIL - No. 9552 - 6-27-17

SHEET 9 OF 37
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 OS: 125-22-NE XC 11316

CC HTE #17-11784

10745059

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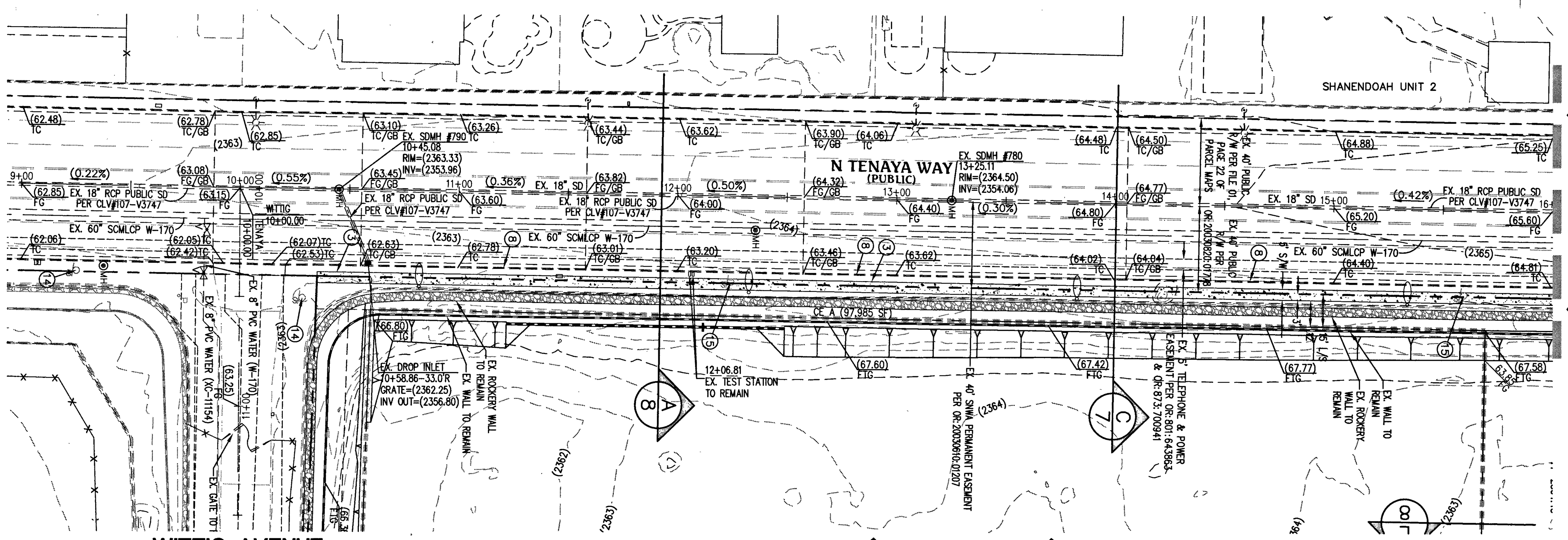
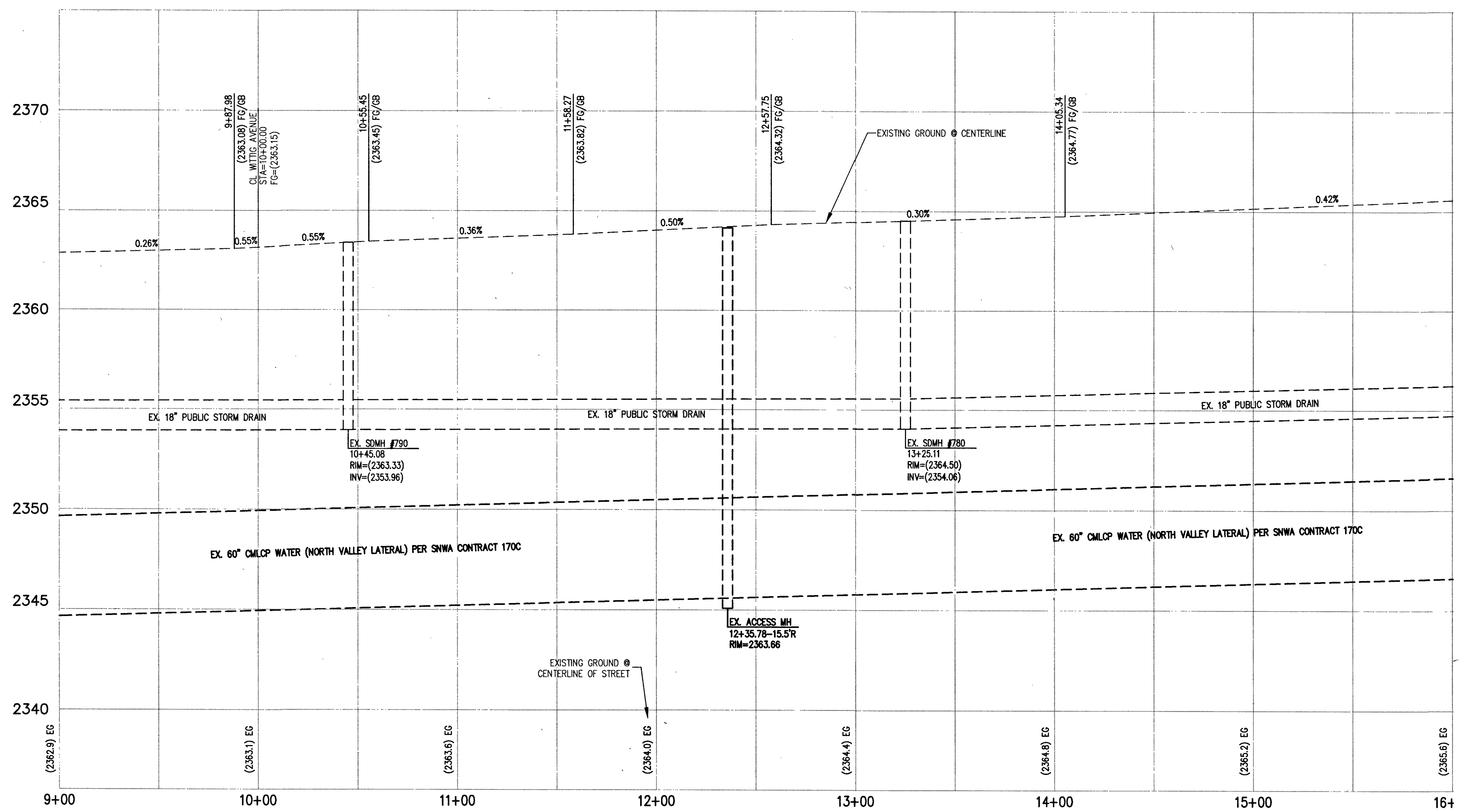


WITTIG AVENUE
(PRIVATE)
SEE SHEET 14

TENAYA WAY (PUBLIC)

PLAN

SCALE: HORIZ. 1" = 40'



TENAYA WAY (PUBLIC)

PROFILE

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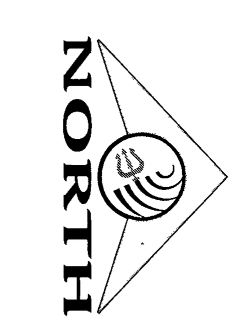
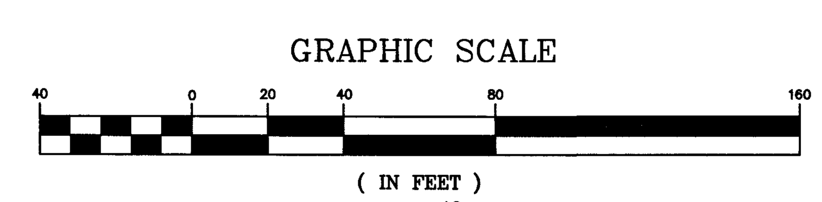




SNWA FIBER OPTIC CAUTION:

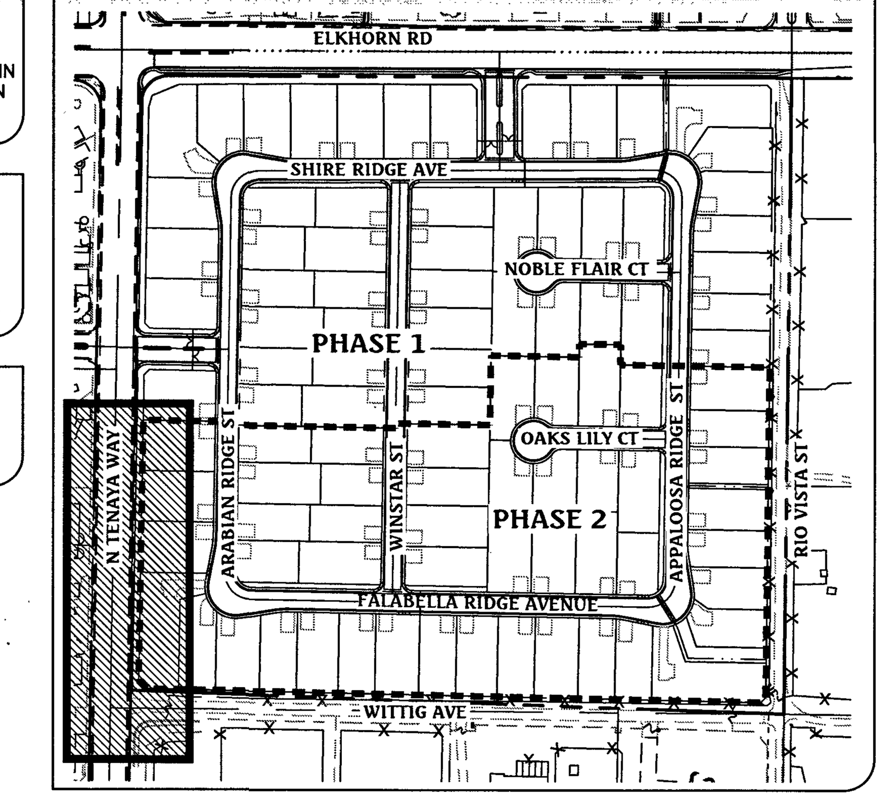
SNWA FO CONDUIT RUNS ALONG THE SIDE OF THE LVVWD PIPELINE IN THE PIPE ZONE, AT UNKNOWN DEPTH. FO CONDUIT LOCATION WITHIN THE TRENCH MAY VARY IN DEPTH AS REQUIRED TO MAINTAIN GRADUAL AND SLOPED RUNS TO PULL BOXES. TAKE CAUTION WHEN DIGGING IN TRENCH ZONE.

ANY EXCAVATION EXPOSING LVVWD FACILITIES 24" IN DIAMETER AND LARGER MUST REMAIN OPEN UNTIL INSPECTED BY LVVWD. NO BACKFILL MATERIAL IS TO BE PLACED IN THE EXCAVATION UNTIL APPROVED BY THE LVVWD INSPECTOR. ANY DAMAGE TO THE FACILITIES MUST BE REPORTED TO LVVWD IMMEDIATELY. CONTRACTOR TO CALL 258-7171 TO SCHEDULE LVVWD INSPECTION.

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

KEY MAP

SCALE: 1" = 300'



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GRADING LEGEND

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EX. MINOR CONTOUR
BOUNDARY LINE
STREET CENTERLINE
EDGE OF PAVEMENT
EXISTING CURB, GUTTER, & SIDEWALK
PROPOSED CURB, GUTTER, & SIDEWALK
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CC / CLV — CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
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EX. BLOCK WALL
PROPOSED RETAINING WALL
37.3/38.7–12' — TOP OF FOOTING, APPROX. WALL LENGTH, TOP OF RETAINING WALL
PROPOSED SCARP

APPROVED FOR CONSTRUCTION

Dianne Ocon for DHM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 07/06/17 PROJECT No.: 125391
LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR 1-800-227-2600

FAST Call before you Underground 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

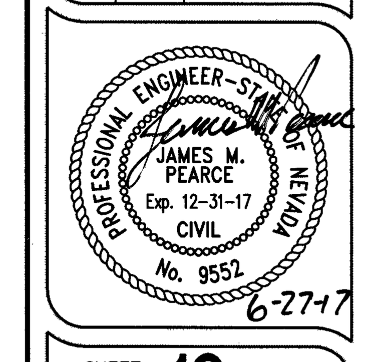
AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
Call before you Overhead 1-702-227-2929

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd.
Suite B
Las Vegas, Nevada 89146
Office: (702) 254-1480
Fax: (702) 254-3062
www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
TENAYA WAY I
(9+00 – 16+00)
PLAN AND PROFILE



SHEET 10 OF 50 (37 struck)
C.L.V. DWG.# 69184

PROJ#:125391 AGR:116334 QS: 125-22-NE XC 11316

10745059

CC HTE #17-11784

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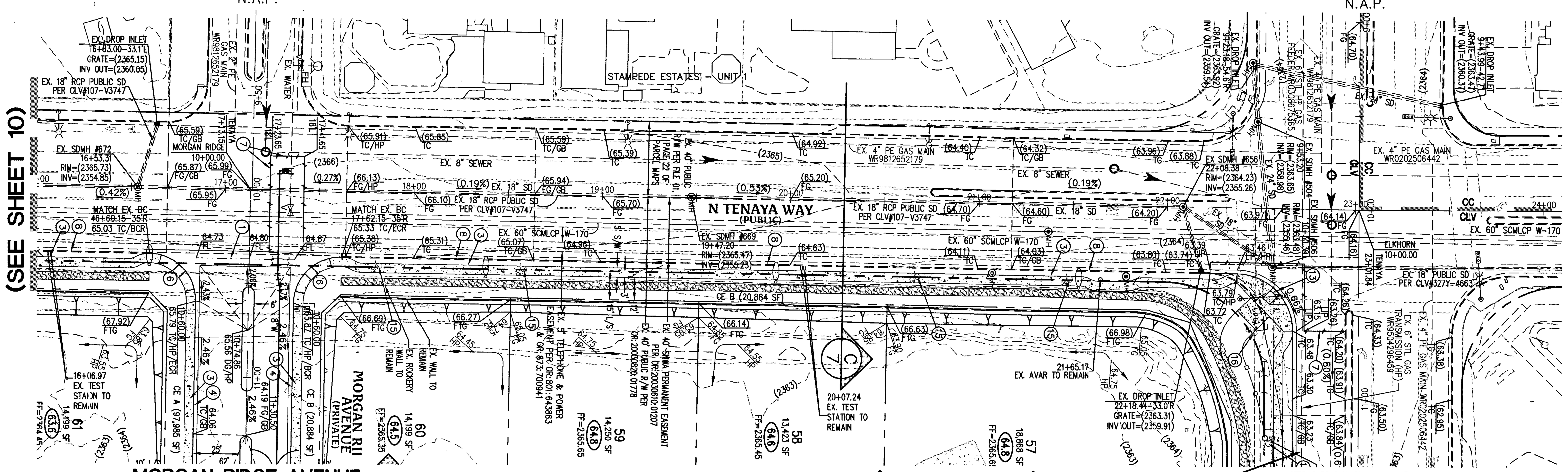


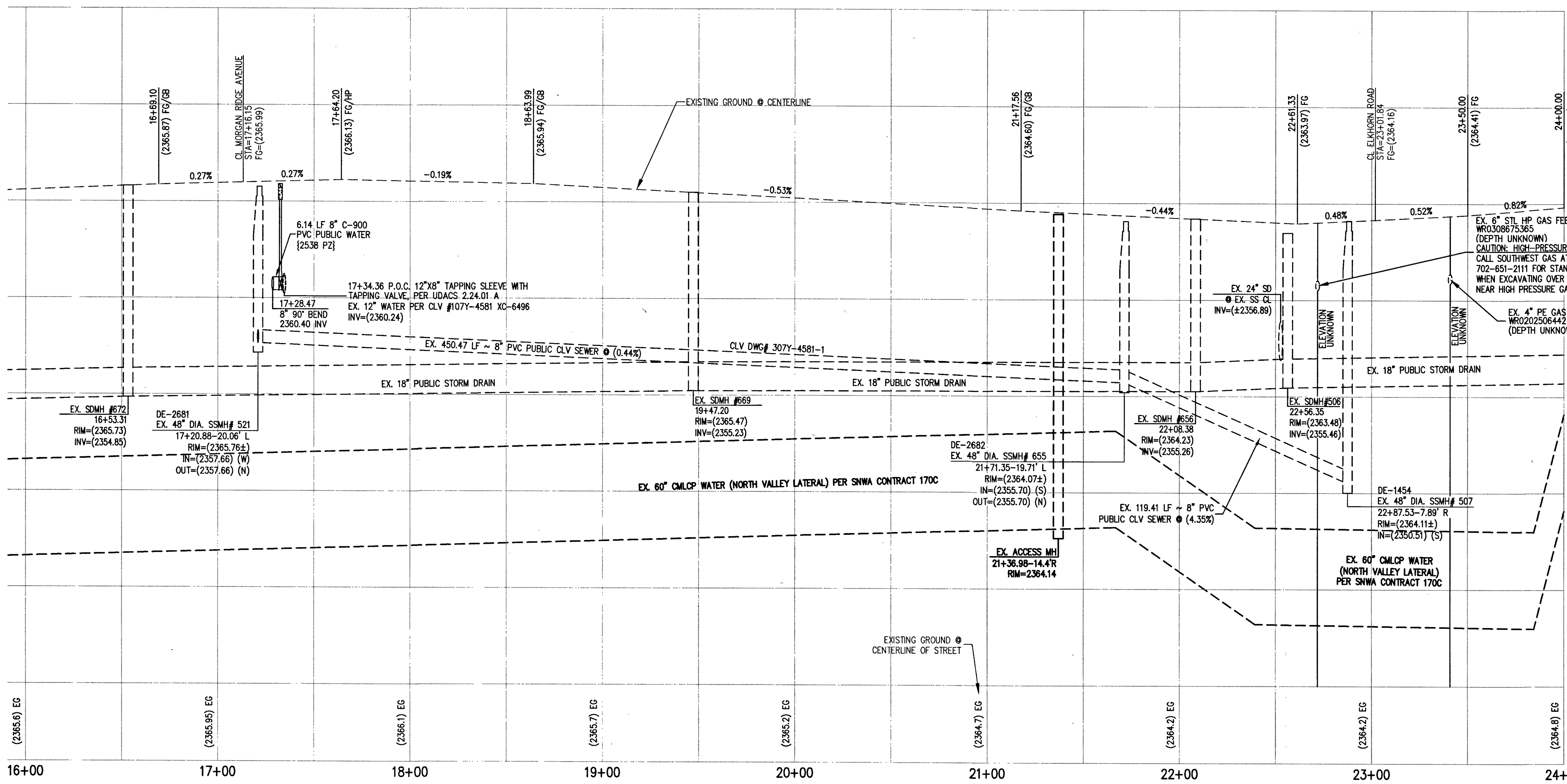
TENAYA WAY (PUBLIC)

PLAN

SCALE: HORIZ. 1" = 40'

CAUTION: HIGH-PRESSURE GAS!

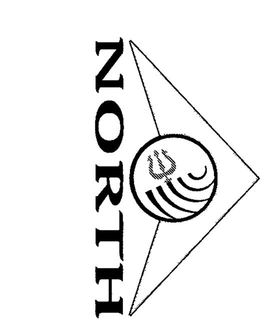
CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.



TENAYA WAY (PUBLIC)

PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

SNWA FIBER OPTIC CAUTION:

SNWA FO CONDUIT RUNS ALONG THE SIDE OF THE LVVWD PIPELINE IN THE PIPE ZONE, AT UNKNOWN DEPTH. FO CONDUIT LOCATION WITHIN THE TRENCH MAY VARY IN DEPTH AS REQUIRED TO MAINTAIN GRADUAL AND SLOPED RUNS TO PULL BOXES. TAKE CAUTION WHEN DIGGING IN TRENCH ZONE.

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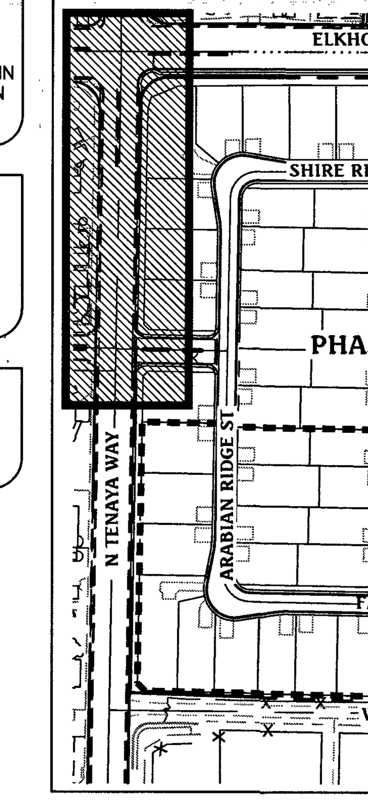
KEY MAP

SCALE: 1" = 300'



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7. SAWCUT AND MATCH EXISTING ASPHALT
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14. EXISTING SIGN TO REMAIN
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GRADING LEGEND

- (1395) EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
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APPROVED FOR CONSTRUCTION

Deanne Dean for DSM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 07/06/17 PROJECT No.: 125391

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DRAWN BY :
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DR HORTON
ELKHORN 40 PHASE 1
TENAYA WAY II
(16+00 – 24+00)
PLAN AND PROFILE

PROFESSIONAL ENGINEER – STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552
6-27-17

SHEET 11 OF 50/57

C.L.V. DWG.# 69184

107Y5059

CC HTE #17-11784

PROJ#:125391 AGR:116334 QS: 125-22-NE XC 11316

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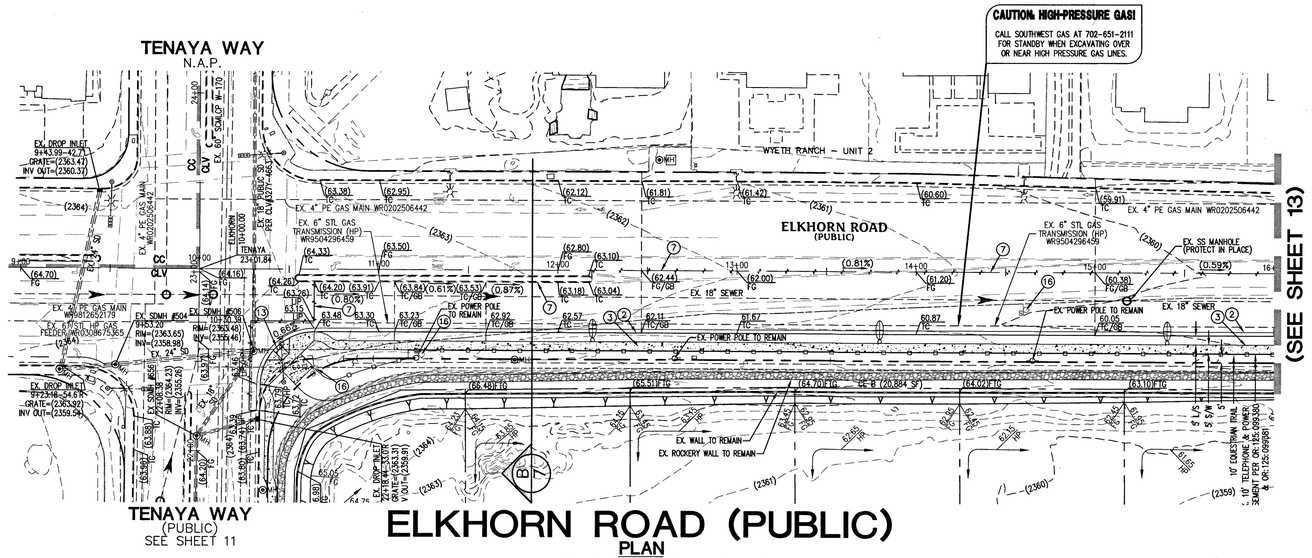
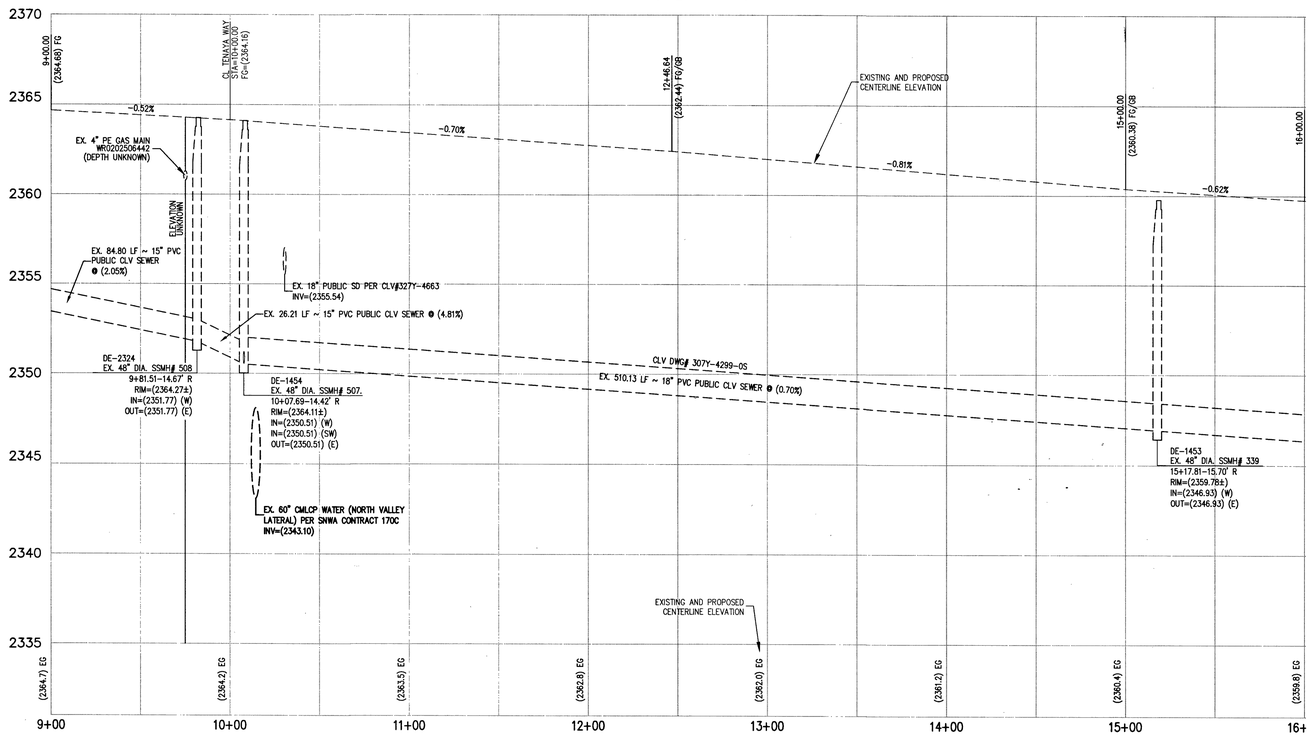


ELKHORN ROAD (PUBLIC)

PLAN

SCALE: HORIZ. 1" = 40'



ELKHORN ROAD (PUBLIC)

PROFILE

SCALE: HORIZ. 1" = 40'
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NORTH

GRAPHIC SCALE

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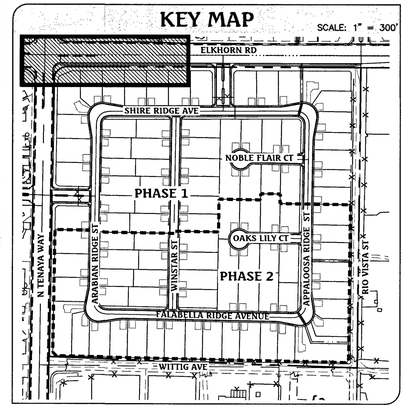

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 07/06/17 PROJECT No.: 125391

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DRAWN BY :
DESIGNED BY :
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SCALE : 1"=40'

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DR HORTON
ELKHORN 40 PHASE 1
ELKHORN ROAD I (9+00 - 16+00) PLAN AND PROFILE

PROFESSIONAL ENGINEER - STATE OF NEVADA - JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552 — 6-27-17

SHEET 12 OF 37 (50)
C.L.V. DWG.# 69184

PRO.J#:125391 AGR:116334 QS: 125-22-NE XC 11316

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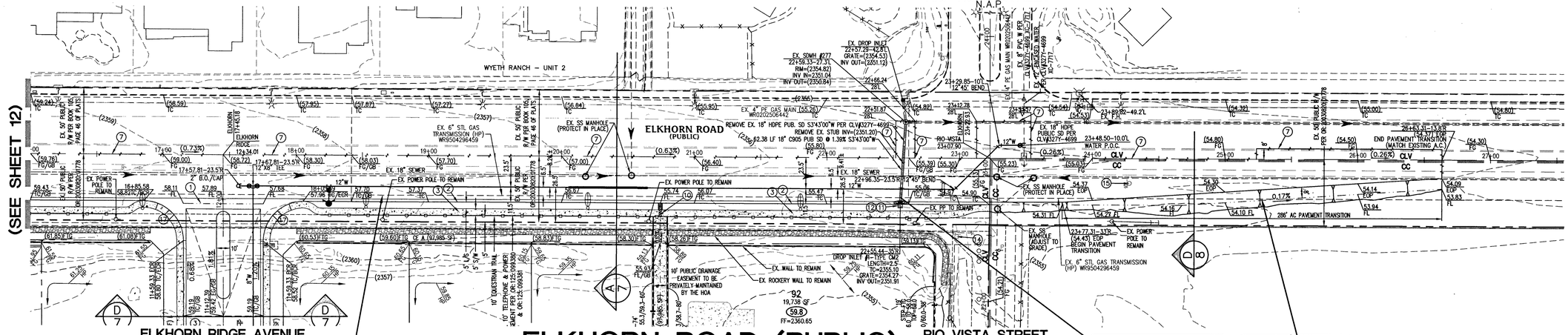
CC HTE #17-11784



ELKHORN ROAD (PUBLIC)
PLAN
SCALE: HORIZ. 1" = 40'

CAUTION: HIGH-PRESSURE GAS!
CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

GAS NOTES
1. PROTECT IN PLACE EXISTING GAS MAIN.
2. CONTACT SOUTHWEST GAS TO INSTALL ROCK SHIELD.

CAUTION: HIGH-PRESSURE GAS!
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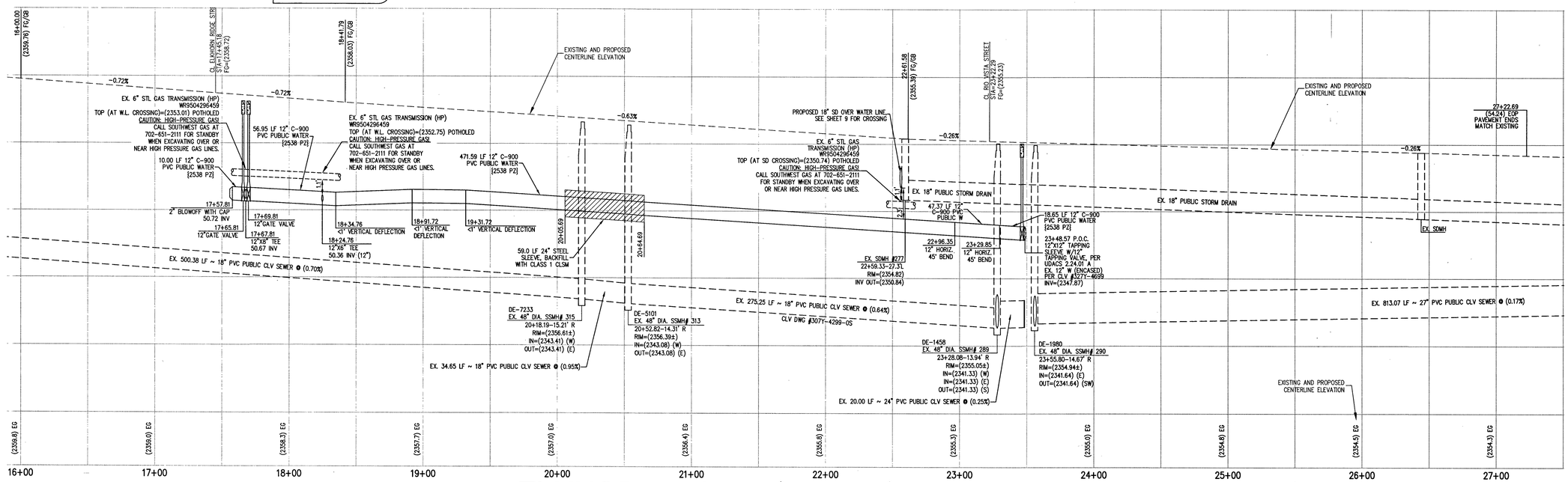
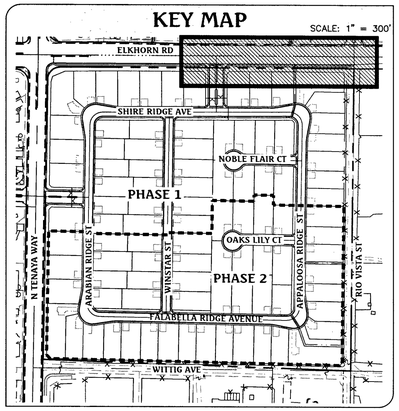


ELKHORN ROAD (PUBLIC)
PROFILE
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

KEY MAP
SCALE: 1" = 300'



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- PROPOSED SCARP

NOTE FOR EOR: DRY UTILITIES MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING. MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.

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(IN FEET)
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FOR CLARK COUNTY JURISDICTION ONLY
CLARK COUNTY
DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT REVIEW
Acceptance of plans for filing
By _____
Acceptance of these plans for filing shall not be construed to be a permit for or an approval of any violation of any of the provisions of the state or county laws and/or specifications. Clark County shall be held free from damages which may result from the construction of the improvements from the engineering design depicted herein.
NOTE: Power poles and/or other existing facilities not in proper location based on proposed improvements shown hereon will be relocated at no expense to Clark County.

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 07/06/17 PROJECT No.: 125391
LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

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SCALE : 1"=40'

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DR HORTON
ELKHORN 40 PHASE 1
ELKHORN ROAD II (16+00 – 27+50) PLAN AND PROFILE

PROFESSIONAL ENGINEER — STATE OF NEVADA — JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552 — 07/17

SHEET 13 OF 37
C.L.V. DWG.# 69184

PROJ.#:125391 ACR:116334 QS: 125-22-NE XC 11316

CC HTE #17-11784

10745059

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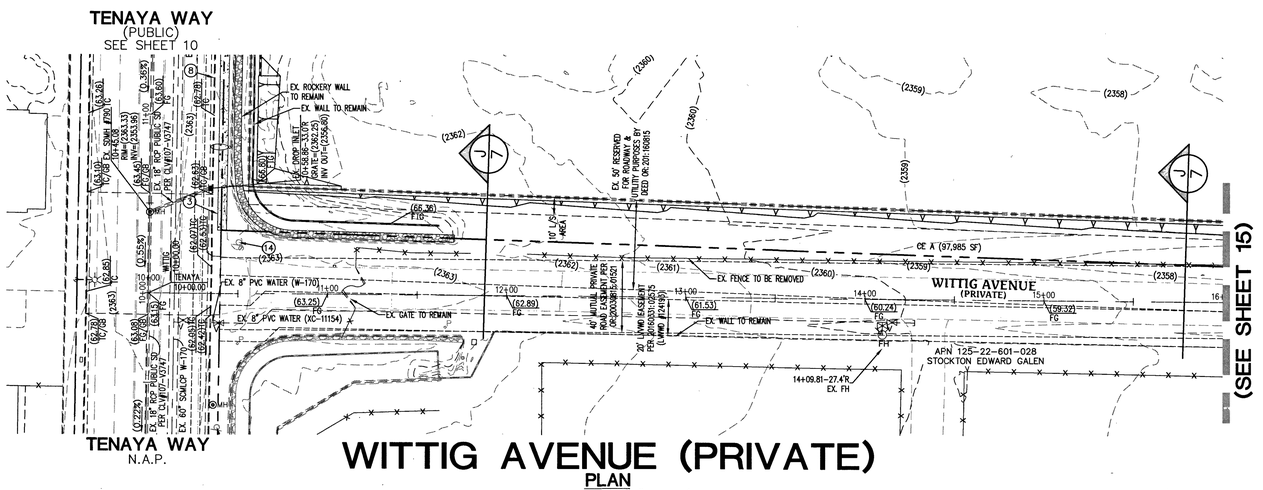
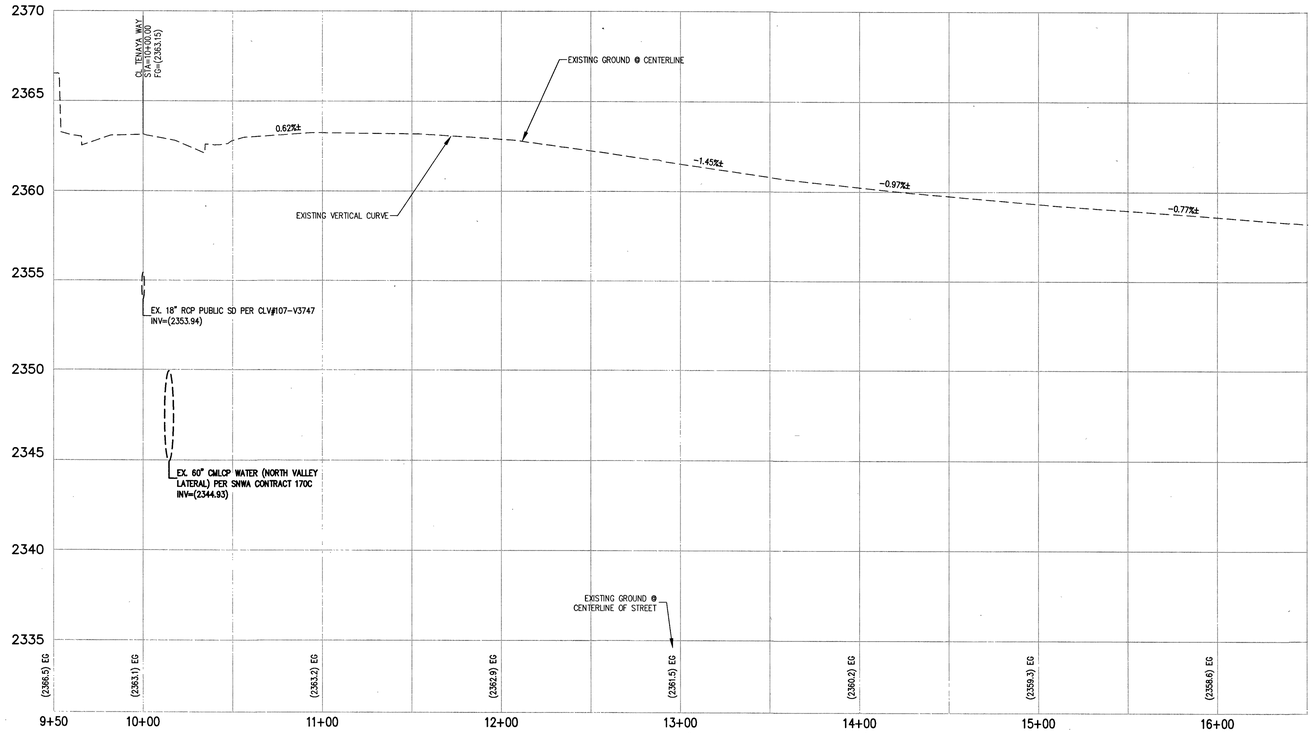


WITTIG AVENUE (PRIVATE)

PLAN

SCALE: HORIZ. 1" = 40'



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PROFILE

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SNWA FIBER OPTIC CAUTION:

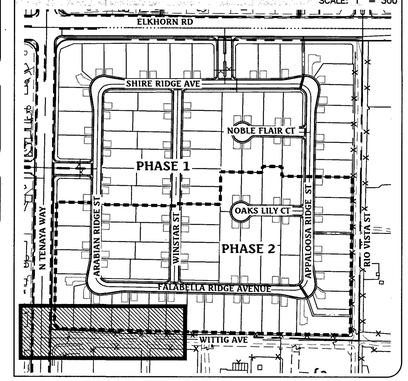
SNWA FO CONDUIT RUNS ALONG THE SIDE OF THE LVVWD PIPELINE IN THE PIPE ZONE, AT UNKNOWN DEPTH. FO CONDUIT LOCATION WITHIN THE TRENCH MAY VARY IN DEPTH AS REQUIRED TO MAINTAIN GRADUAL AND SLOPED RUNS TO PULL BOXES. TAKE CAUTION WHEN DIGGING IN TRENCH ZONE.

ANY EXCAVATION EXPOSING LVVWD FACILITIES 24" IN DIAMETER AND LARGER MUST REMAIN OPEN UNTIL INSPECTED BY LVVWD. NO BACKFILL MATERIAL IS TO BE PLACED IN THE EXCAVATION UNTIL APPROVED BY THE LVVWD INSPECTOR. ANY DAMAGE TO THE FACILITIES MUST BE REPORTED TO LVVWD IMMEDIATELY. CONTRACTOR TO CALL 258-7171 TO SCHEDULE LVVWD INSPECTION.

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

KEY MAP

SCALE: 1" = 300'



CONSTRUCTION NOTES

1. CONSTRUCT 8' WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL C, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.
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15. EXISTING SIGN TO BE RELOCATED
16. EXISTING SIGN TO BE REMOVED
17. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE III

GRADING LEGEND

- (1395) EX. MAJOR CONTOUR / EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
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- CC / CLV — CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- TOP OF FOOTING
- 37.3/38.7-12' — APPROX. WALL LENGTH / TOP OF RETAINING WALL
- PROPOSED SCARP

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 07/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

NORTH

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-227-2600

FAST
Call before you
Underground
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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Overhead
1-702-227-2929

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
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www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
WITTIG AVENUE I
(9+50 - 16+00)
PLAN AND PROFILE

PROFESSIONAL ENGINEER - STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552
6-27-17

SHEET 14 OF 50 / 347

C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE XC 11316

10775059

CC HTE #17-11784

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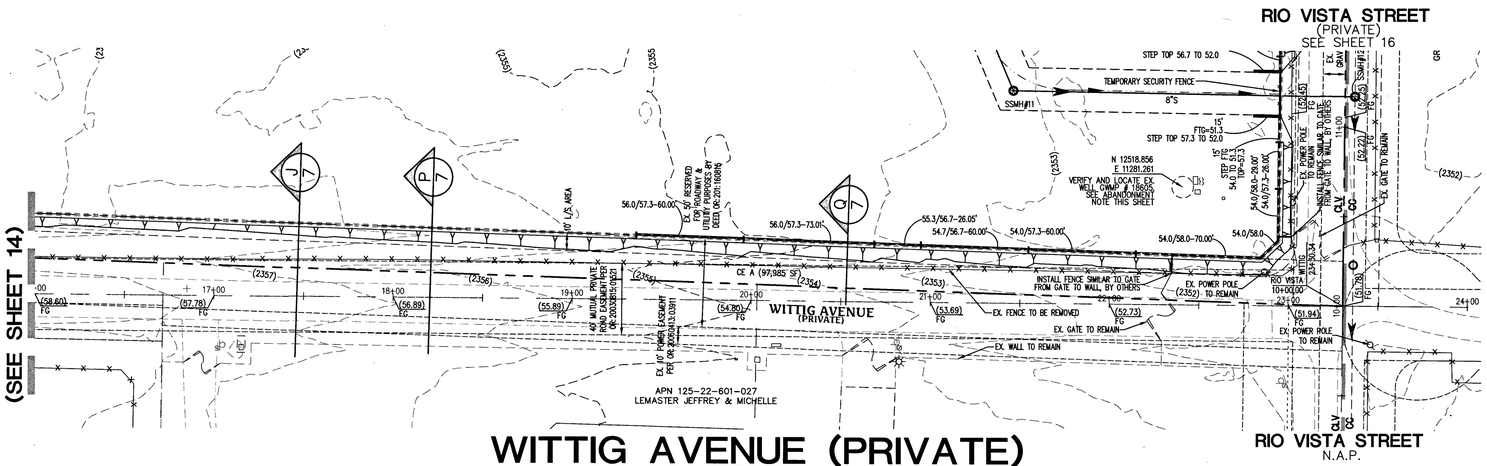
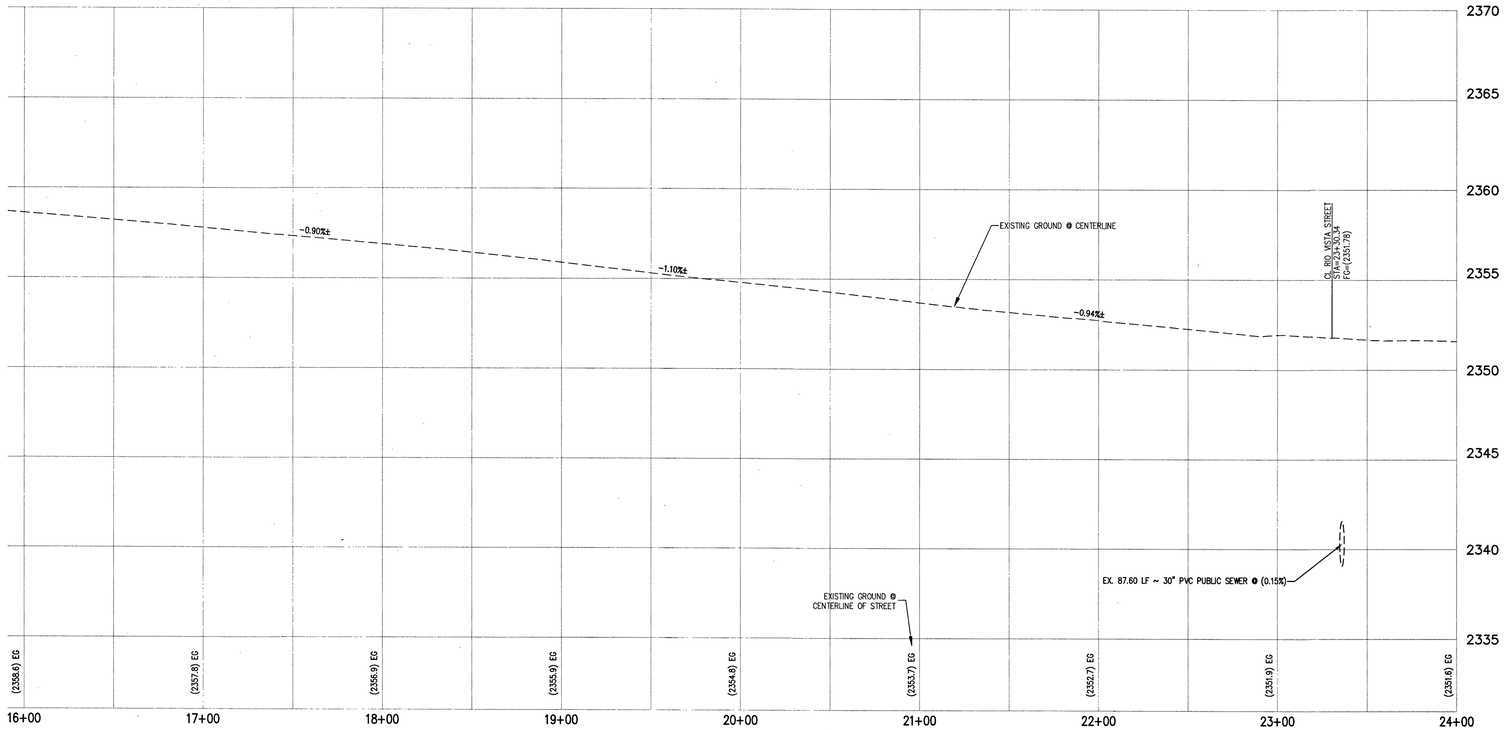


WITTIG AVENUE (PRIVATE)

PLAN

SCALE: HORIZ. 1" = 40'



WITTIG AVENUE (PRIVATE)

PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

NORTH

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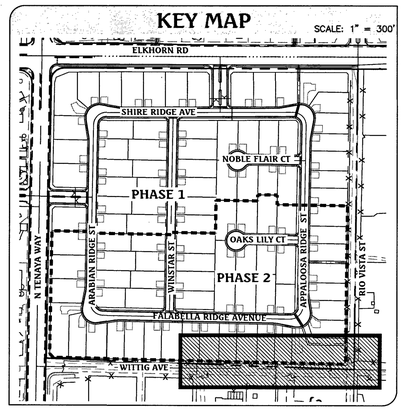
KEY MAP

SCALE: 1" = 300'



PRIVATE WELLS (WITH REVOCABLE RIGHTS) TO BE REMOVED FROM SERVICE

THE EXISTING PRIVATE WELL IS TO BE ABANDONED. THE DISTRICT WATER SERVICE WILL REMAIN IN THE OFF AND LOCKED POSITION UNTIL THE WELL HAS BEEN ABANDONED. THE STATE OF NEVADA DIVISION OF WATER RESOURCES (TELEPHONE NUMBER 702-486-2770) MAY BE CONTACTED FOR INFORMATION CONCERNING REQUIREMENTS AND PROCEDURES FOR ABANDONING WELLS. PROOF FROM THE STATE THAT THE WELL HAS BEEN ABANDONED AND IS NO LONGER FUNCTIONAL WILL BE REQUIRED AS A CONDITION OF PROJECT ACCEPTANCE AND SERVICE ACTIVATION.

GWMP# 18605
(ABANDONED PER WELL DRILLERS LOG REPORT #_____)

CONSTRUCTION NOTES

1. CONSTRUCT 8' WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL C, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
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- EDGE OF PAVEMENT
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- PROPOSED RETAINING WALL
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- PROPOSED SCARP

APPROVED FOR CONSTRUCTION

Jeanne Olson for DM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 04/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

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NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

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DR HORTON
ELKHORN 40 PHASE 1
WITTIG AVENUE II
(16+00 - 24+00)
PLAN AND PROFILE

PROFESSIONAL ENGINEER - STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552
6-27-17

SHEET 15 OF 39
C.L.V. DWG.# 69184

PRO.#:125391 AGR:116334 QS: 125-22-NE XC 11316

CC HTE #17-11784

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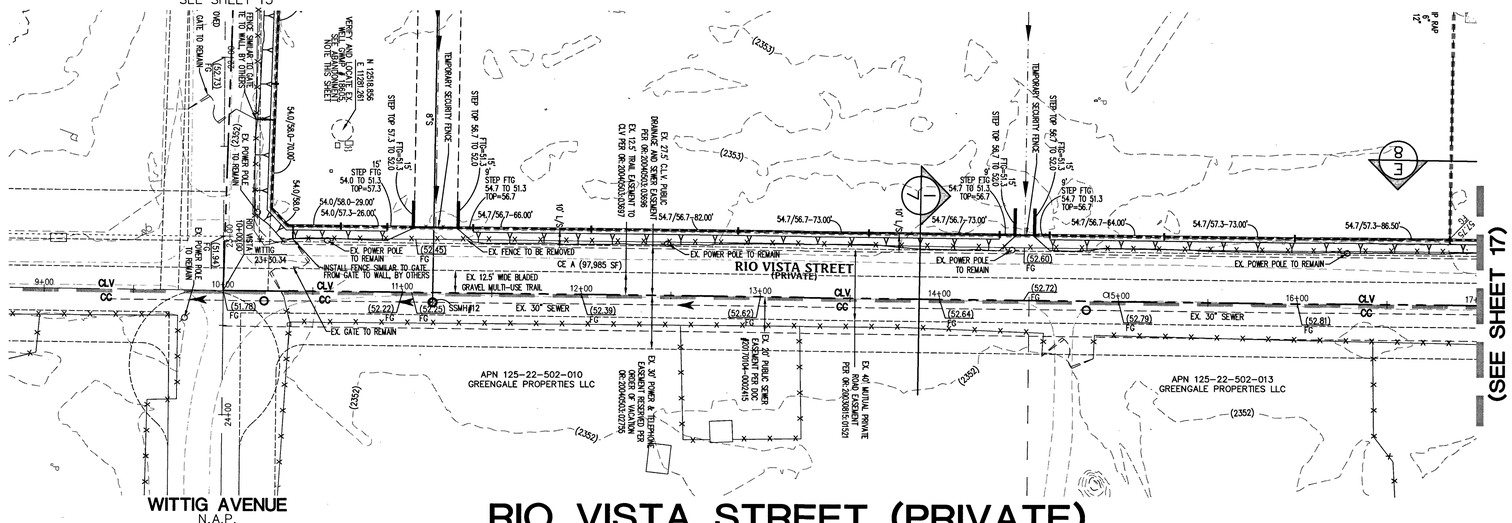


RIO VISTA STREET (PRIVATE)

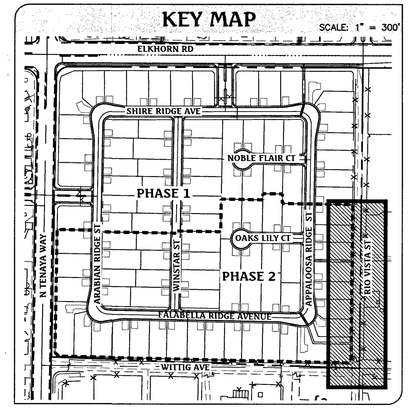
PLAN

SCALE: HORIZ. 1" = 40'

RIO VISTA STREET (PRIVATE)

PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



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GWMP# 18605

(ABANDONED PER WELL DRILLERS LOG REPORT #_____)

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- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
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- PROPOSED RETAINING WALL
- 37.3/38.7-12' — TOP OF FOOTING / APPROX. WALL LENGTH / TOP OF RETAINING WALL
- PROPOSED SCARP

APPROVED FOR CONSTRUCTION

Jeanine Dean for Jim

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 07/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

BASIS OF BEARING

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NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd. Suite B Las Vegas, Nevada 89146
Office: (702) 254-1480 Fax: (702) 254-3062 www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
RIO VISTA STREET I (9+50 - 17+00) PLAN AND PROFILE

PROFESSIONAL ENGINEER STATE OF NEVADA
JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552
6-27-17

SHEET 16 OF 39
C.L.V. DWG.# 69184

PROJ#:125391 AGR:116334 QS: 125-22-NE XC 11316

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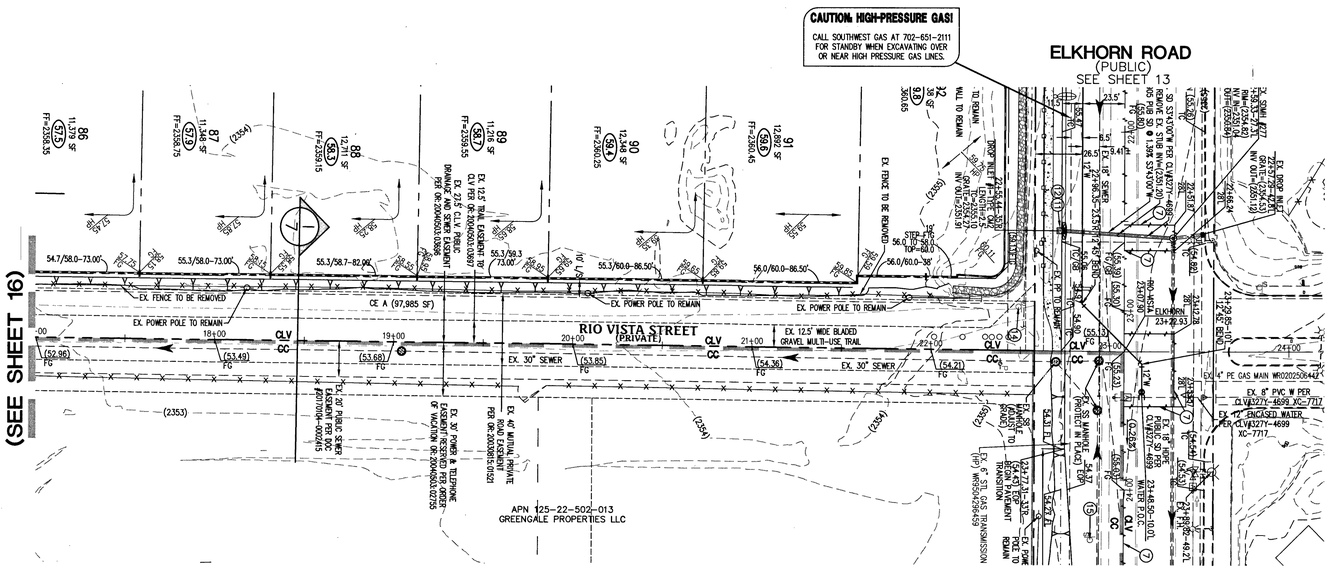
CC HTE #17-11784



RIO VISTA STREET (PRIVATE)

PLAN

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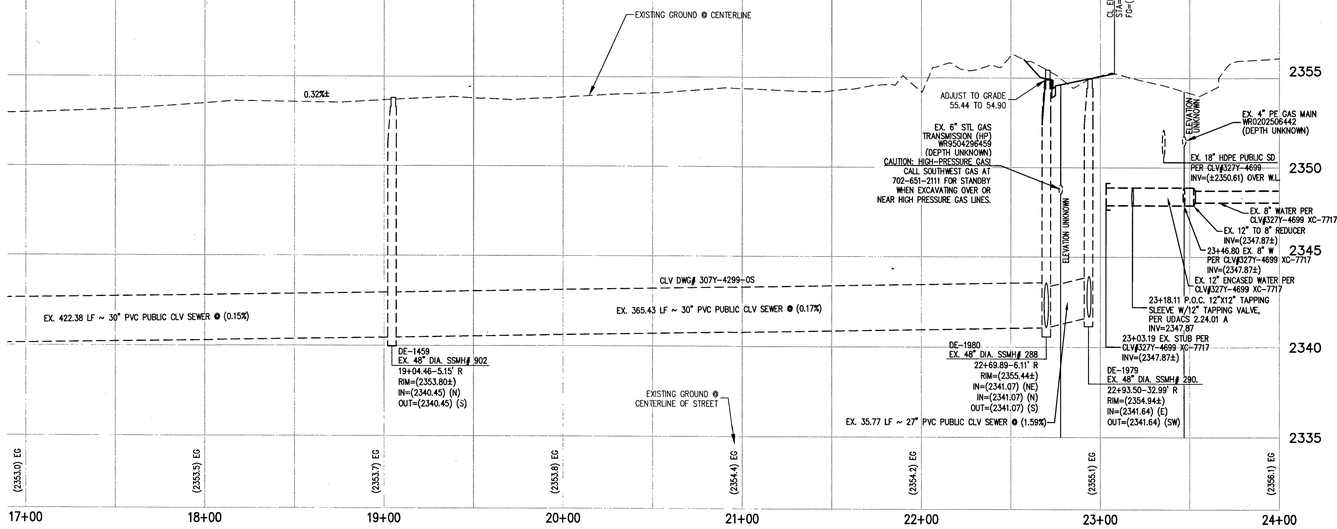


RIO VISTA STREET (PRIVATE)

PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

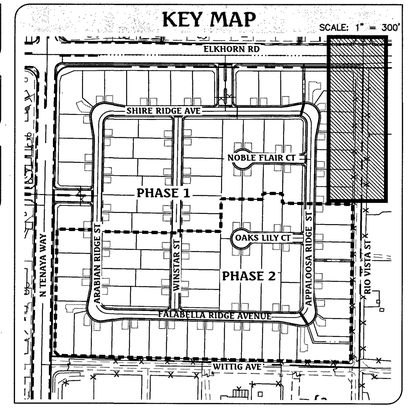
ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

NOTE FOR EOR: DRY UTILITIES MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING. MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.

KEY MAP

SCALE: 1" = 300'



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FOR CLARK COUNTY JURISDICTION ONLY

CLARK COUNTY
DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT REVIEW
Acceptance of plans for filing

By _____
Acceptance of these plans for filing shall not be construed to be a permit for or an approval of any violation of any of the provisions of the state or county laws and/or specifications. Clark County shall be held free from damages which may result from the construction of the improvements from the engineering design depicted herein.

NOTE: Power poles and/or other existing facilities not in proper location based on proposed improvements shown hereon will be relocated at no expense to Clark County.

APPROVED FOR CONSTRUCTION

Joanne Dorr for Jim
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 7/10/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

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DR HORTON
ELKHORN 40 PHASE 1
RIO VISTA STREET II
(17+00 - 24+00)
PLAN AND PROFILE

PROFESSIONAL ENGINEER — STATE OF NEVADA — JAMES M. PEARCE — Exp. 12-31-17 — CIVIL — No. 9552 — 6-27-17

SHEET 17 OF 50

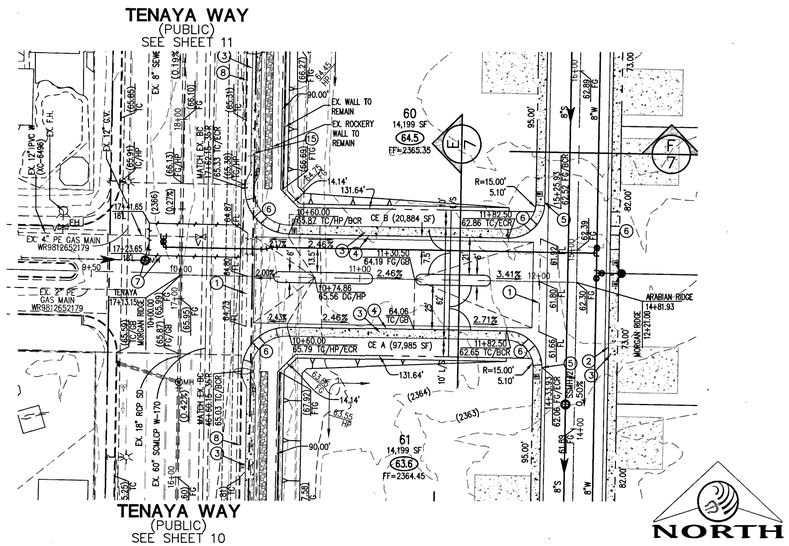
C.L.V. DWG.# 69184

PROJ#:125391 AGR:116334 QS: 125-22-NE XC:11316

10775059

Q:\Triton Drawings\007.108 Elkhorn Tenaya\DRAWINGS\Improvements\Phase1\05 007.108-ph1-imp-Profiles-offsite.dwg dreese Tue, 27 Jun 2017 - 12:58pm

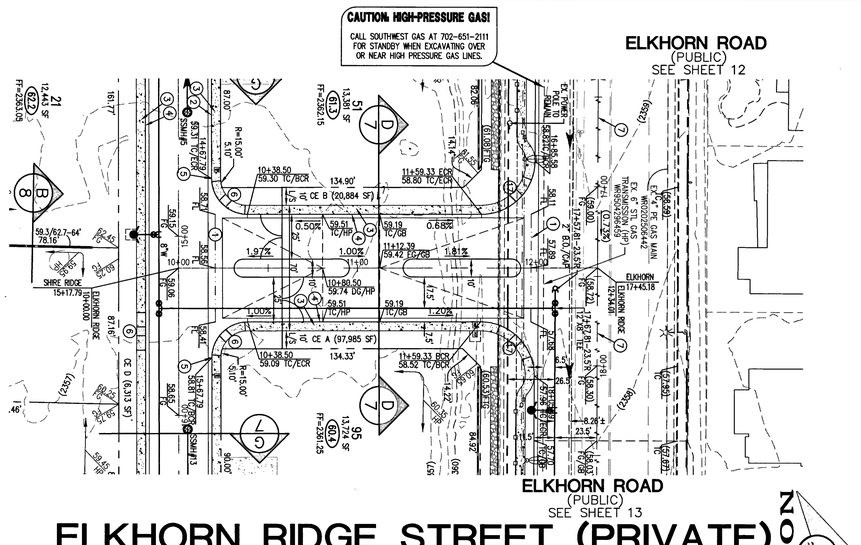
CC HTE #17-11784



MORGAN RIDGE AVENUE (PRIVATE)

PLAN

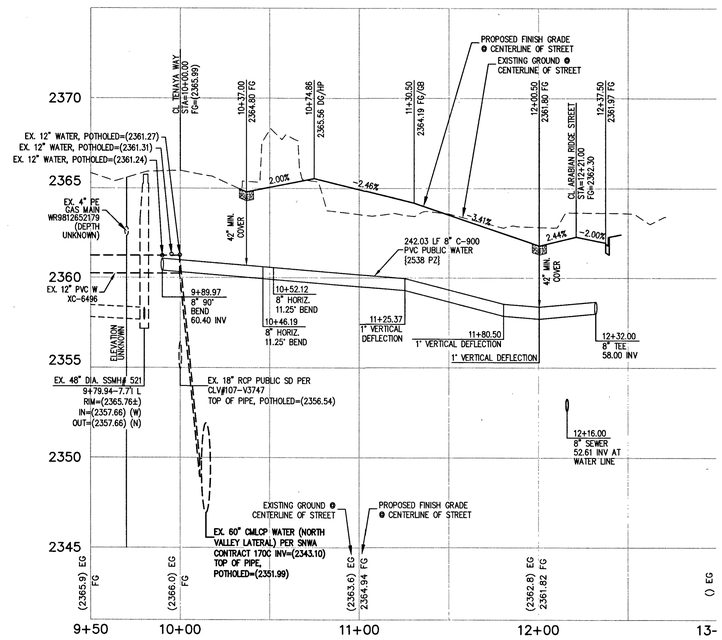
SCALE: HORIZ. 1" = 40'



ELKHORN RIDGE STREET (PRIVATE)

PLAN

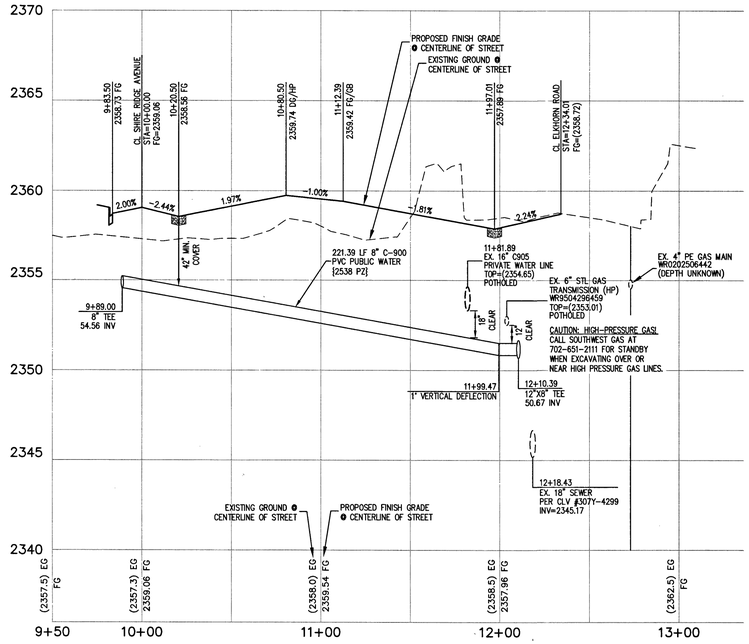
SCALE: HORIZ. 1" = 40'



MORGAN RIDGE AVENUE (PRIVATE)

PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



ELKHORN RIDGE STREET (PRIVATE)

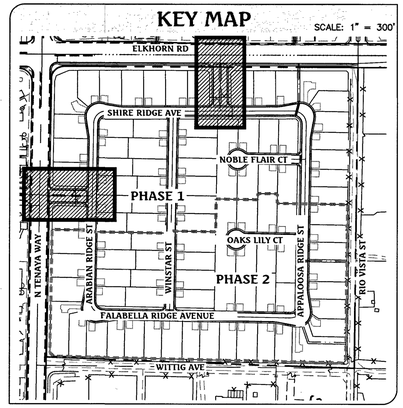
PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



SNWA FIBER OPTIC CAUTION:

SNWA FO CONDUIT RUNS ALONG THE SIDE OF THE LVVWD PIPELINE IN THE PIPE ZONE, AT UNKNOWN DEPTH. FO CONDUIT LOCATION WITHIN THE TRENCH MAY VARY IN DEPTH AS REQUIRED TO MAINTAIN GRADUAL AND SLOPED RUNS TO PULL BOXES. TAKE CAUTION WHEN DIGGING IN TRENCH ZONE.

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

CONSTRUCTION NOTES

1. CONSTRUCT 8' WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL C, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM-2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.
13. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE II
14. EXISTING SIGN TO REMAIN
15. EXISTING SIGN TO BE RELOCATED
16. EXISTING SIGN TO BE REMOVED
17. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE III

GRADING LEGEND

- (1395) EX. MAJOR CONTOUR / EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- CC / CLV CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- X X X EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- 37.3/38.7-12' TOP OF FOOTING / APPROX. WALL LENGTH / TOP OF RETAINING WALL
- PROPOSED SCARP

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

NOTE FOR EOR: DRY UTILITIES MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING. MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.

APPROVED FOR CONSTRUCTION

Jeanne Deon for DJM

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 07/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR 1-800-227-2600

FAST Call before you Underground 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd.
Suite B
Las Vegas, Nevada 89146
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www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
MORGAN RIDGE AVENUE (9+50 – 12+50)
ELKHORN RIDGE STREET (9+50 – 13+00)
PLAN AND PROFILE

PROFESSIONAL ENGINEER STATE OF NEVADA JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552 6-27-17

SHEET 18 OF 50 (37)
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE XC 11316

CC HTE #17-11784

10745059

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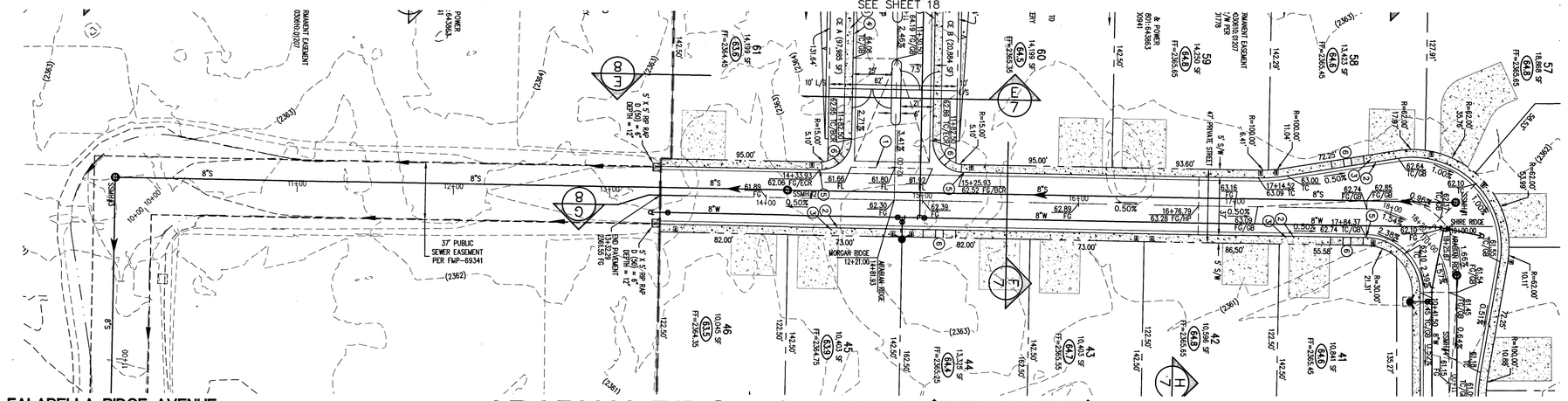

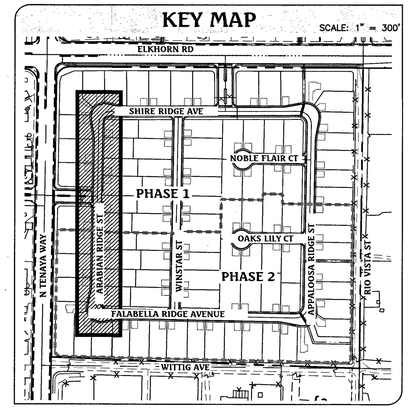

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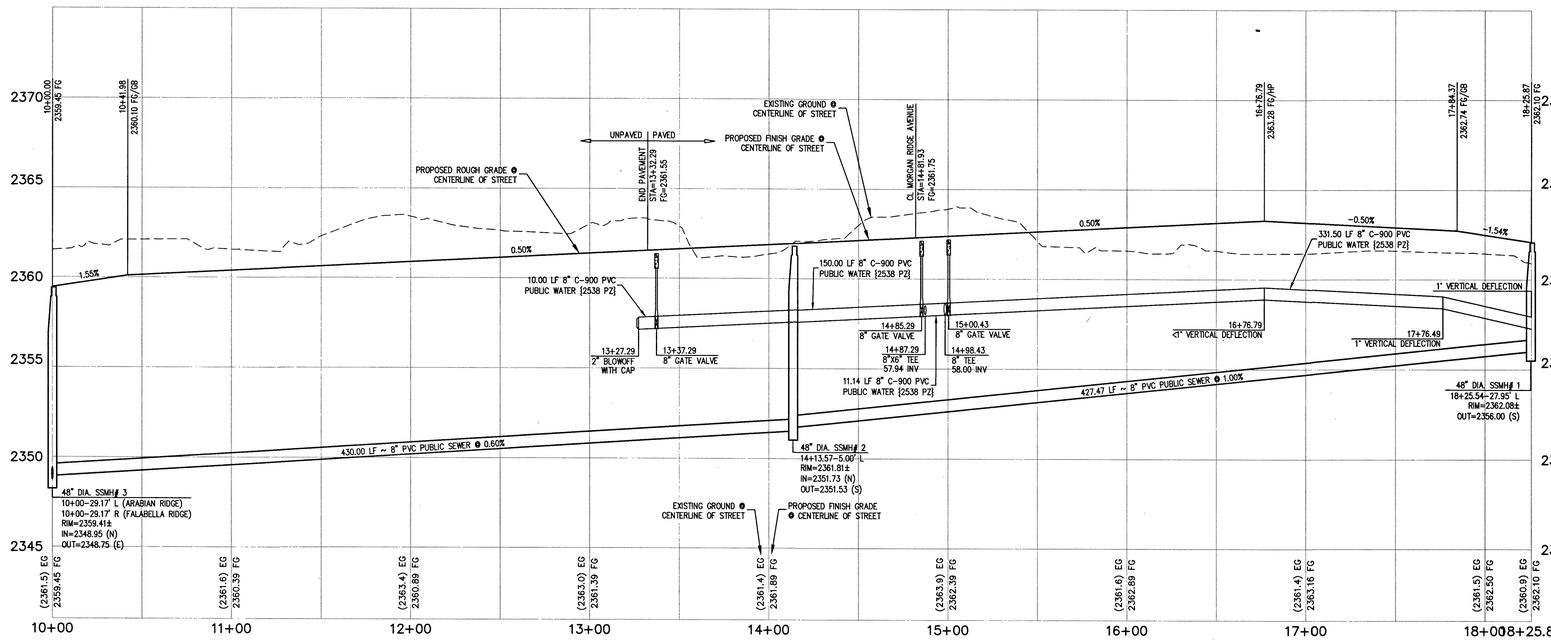

ARABIAN RIDGE STREET (PRIVATE)

PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

CONSTRUCTION NOTES

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2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL C, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
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14. EXISTING SIGN TO REMAIN
15. EXISTING SIGN TO BE RELOCATED
16. EXISTING SIGN TO BE REMOVED
17. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE III

GRADING LEGEND

- (1395) EX. MAJOR CONTOUR / EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- CC / CLV — CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- TOP OF FOOTING / APPROX. WALL LENGTH / TOP OF RETAINING WALL (37.3/38.7–12')
- PROPOSED SCARP

APPROVED FOR CONSTRUCTION

Joanne Dean for DM

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 07/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

BASIS OF BEARING

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ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
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Fax: (702) 254-3062
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DR HORTON
ELKHORN 40 PHASE 1
ARABIAN RIDGE STREET (10+00 – 18+25.87) PLAN AND PROFILE

PROFESSIONAL ENGINEER — STATE OF NEVADA — JAMES W. PEARCE — Exp. 12-31-17 — CIVIL — No. 9552 — 6-27-17

SHEET 19 OF 39
C.L.V. DWG.# 69184

PROJ#:125391 AGR:11633⁴ QS: 125-22-NE XC 11316

CC HTE #17-11784

10745058

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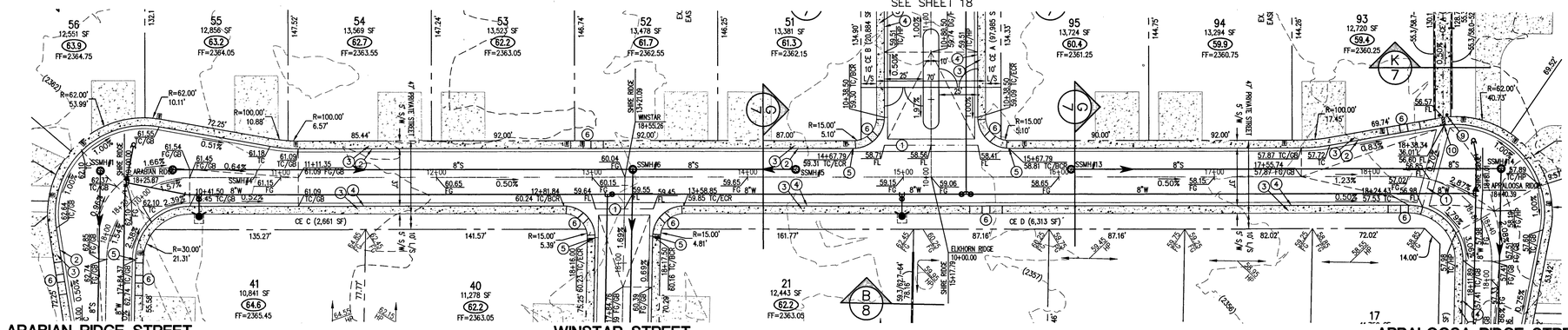
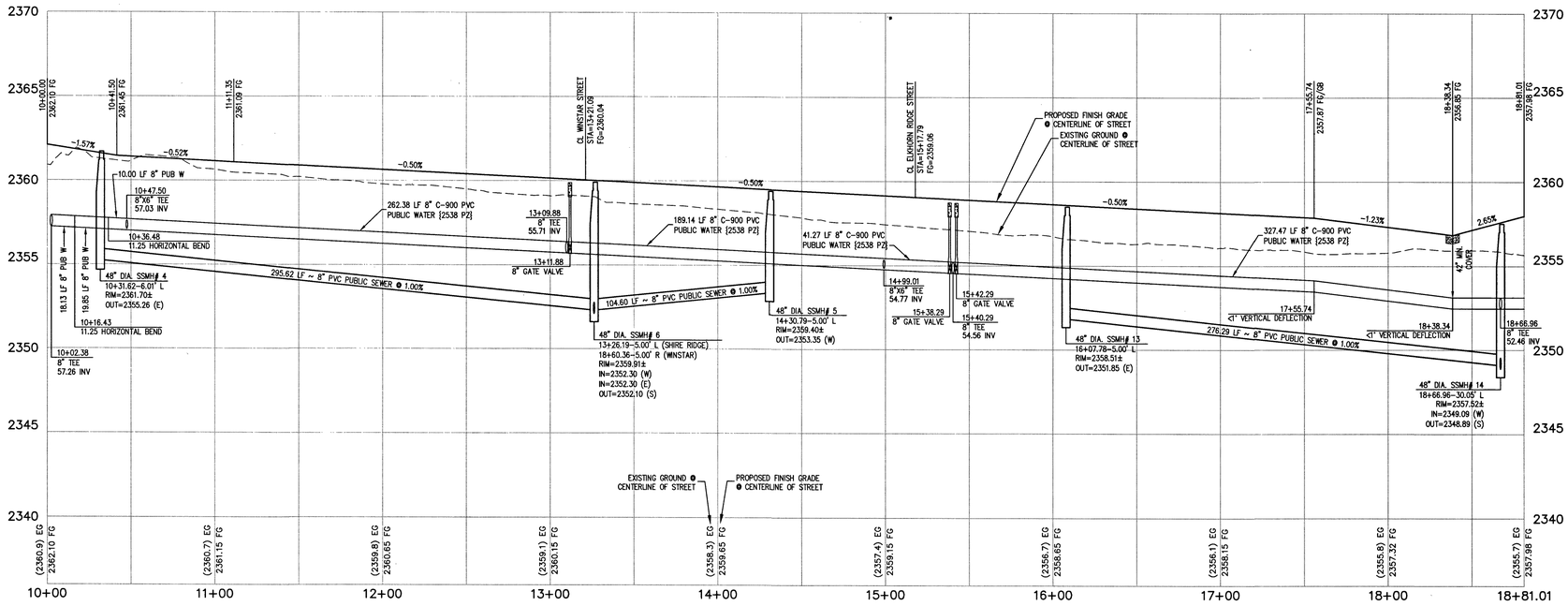


SHIRE RIDGE AVENUE (PRIVATE)

PLAN

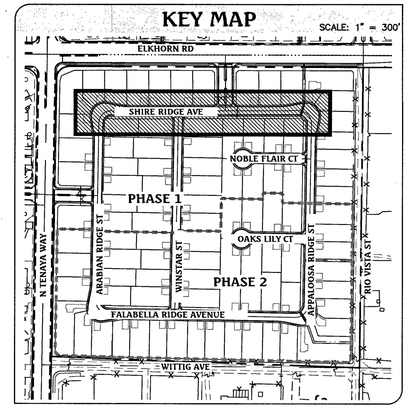
SCALE: HORIZ. 1" = 40'



SHIRE RIDGE AVENUE (PRIVATE)

PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



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GRADING LEGEND

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- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- 37.3/38.7-12' — TOP OF FOOTING / APPROX. WALL LENGTH / TOP OF RETAINING WALL
- PROPOSED SCARP

APPROVED FOR CONSTRUCTION

Joanne Dean for Tom

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 06/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

BASIS OF BEARING

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DRAWN BY :
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JOB NO. : 007.108
SCALE : 1"=40'

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SHIRE RIDGE AVENUE (10+00 - 18+81.01) PLAN AND PROFILE

PROFESSIONAL ENGINEER STATE OF NEVADA JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552 6-27-17

SHEET 20 OF 37
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE YC 11316

CC HTE #17-11784

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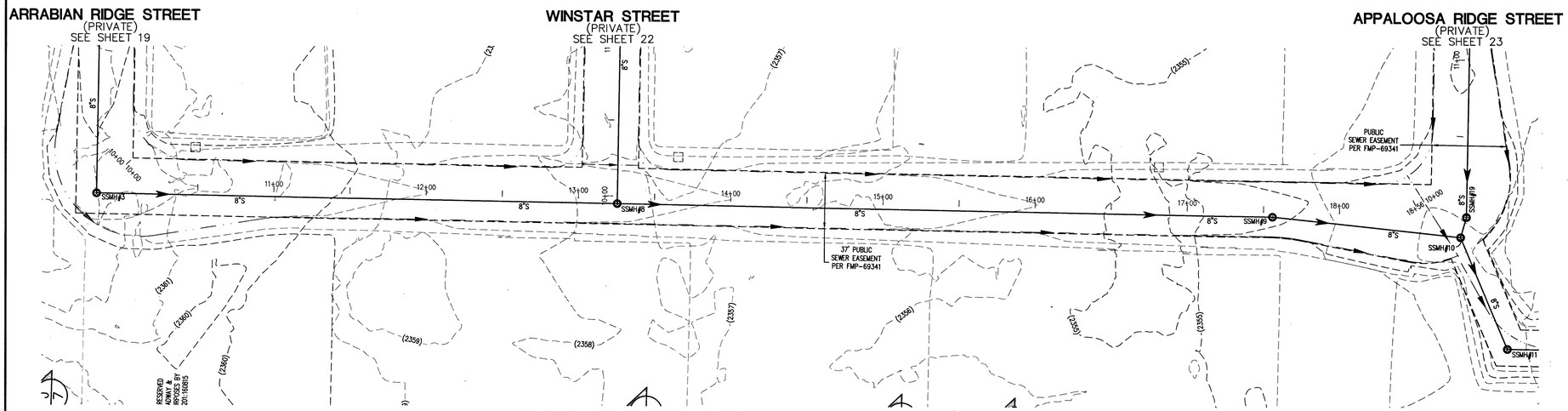
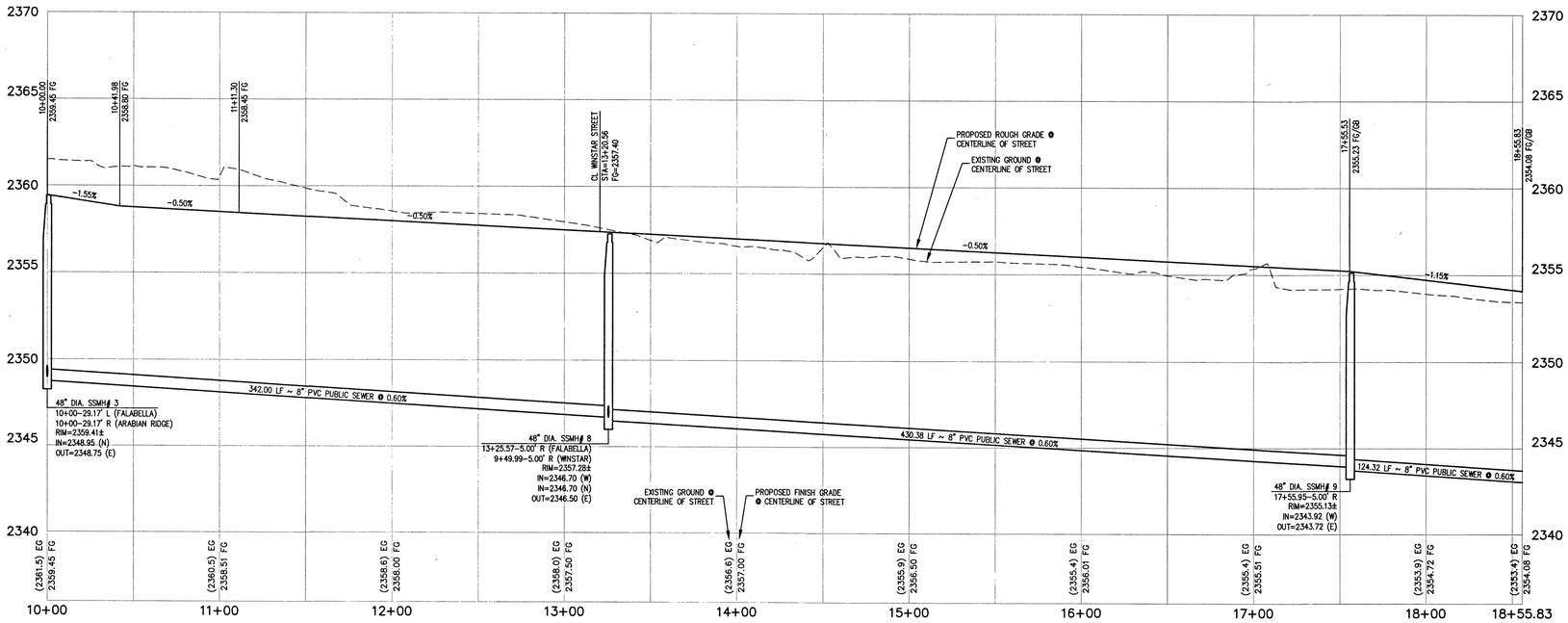


FALABELLA RIDGE AVENUE (PRIVATE)

PLAN

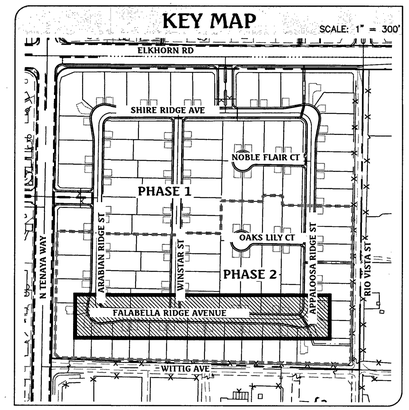
SCALE: HORIZ. 1" = 40'



FALABELLA AVENUE (PRIVATE)

PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



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- PROPOSED SCARP

APPROVED FOR CONSTRUCTION

Joanne Dean for DSM

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 06/06/17 PROJECT No.: 125391

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DESIGNED BY :
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ADA CHECKED :
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SCALE : 1"=40'

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DR HORTON
ELKHORN 40 PHASE 1
FALABELLA RIDGE AVENUE (10+00 - 18+55.83) PLAN AND PROFILE

PROFESSIONAL ENGINEER — JAMES M. PEARCE — Exp. 12-31-17 — CIVIL — No. 9552 — STATE OF NEVADA — 6-27-17

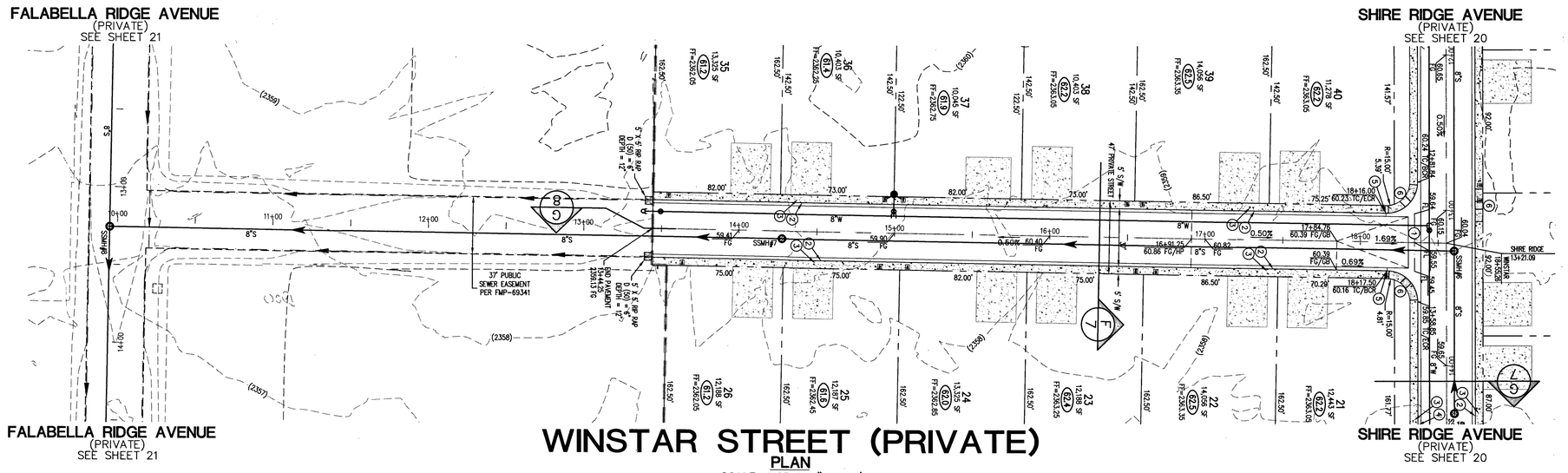
SHEET 21 OF 50
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE XC 11316

CC HTE #17-11784

10745059

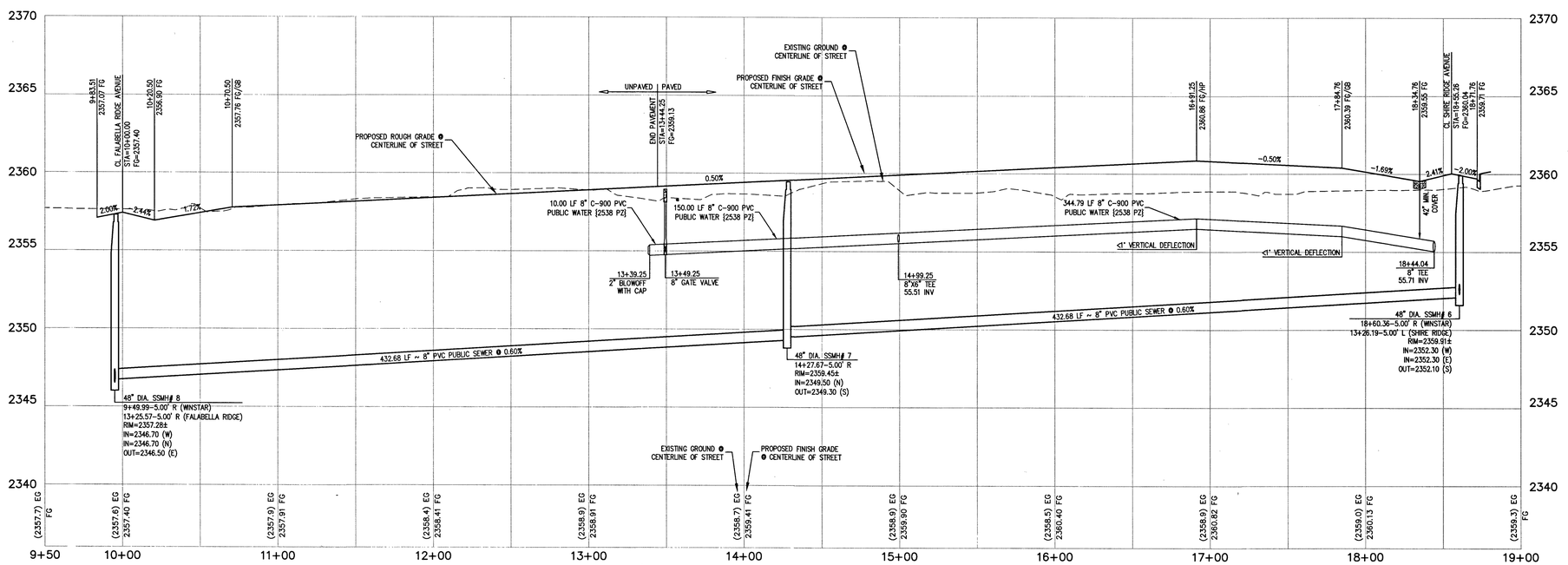
Q:\Triton Drawings\007.108 Elkhorn Tenaya\DRAWINGS\Improvements\Phase1\06 007.108-ph1-imp-Profiles-onsite.dwg dreese Tue, 27 Jun 2017 - 1:05pm



WINSTAR STREET (PRIVATE)

PLAN

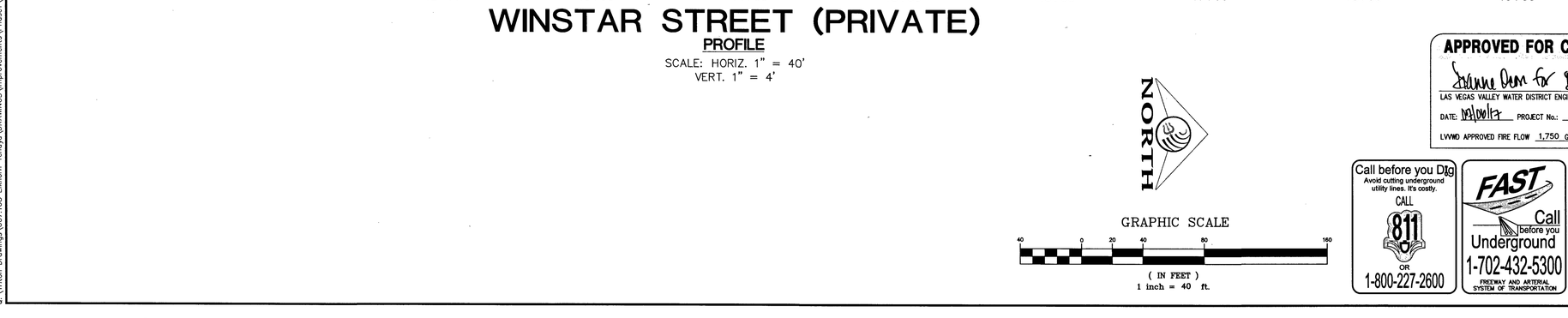
SCALE: HORIZ. 1" = 40'

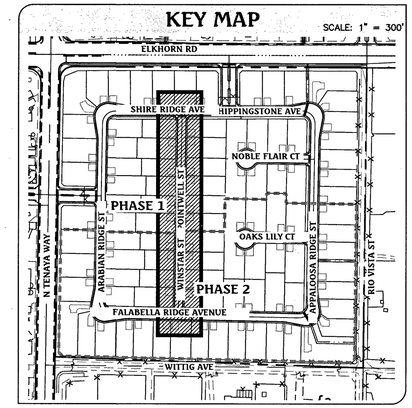


WINSTAR STREET (PRIVATE)

PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'





ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

CONSTRUCTION NOTES

1. CONSTRUCT 8" WIDE CROSS GUTTER, PER CCAUSD No. 228
2. CONSTRUCT "R" TYPE CURB AND GUTTER, PER CCAUSD No. 217.S2
3. CONSTRUCT 5' WIDE SIDEWALK, PER CCAUSD No. 234
4. CONSTRUCT "L" TYPE CURB AND GUTTER, PER CCAUSD No. 216
5. 5' TRANSITION FROM L-TYPE CURB/SPANDREL TO R-TYPE CURB
6. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE I
7. SAWCUT AND MATCH EXISTING ASPHALT
8. EXISTING CURB AND GUTTER TO REMAIN AND PROTECT IN PLACE
9. INSTALL REMOVABLE LOCKING BOLLARDS @ 5' O.C., PER DETAIL C, SHEET 8
10. CONSTRUCT SIDEWALK DRAIN, PER CCAUSD No. 236
11. CONSTRUCT TYPE CM2 DROP INLET, PER CCAUSD #412.1. SEE PROFILE AND DETAIL ON SHEET 9
12. STORM WATER STAMP TO BE LOCATED ADJACENT TO DROP INLET, PER CCAUSD #421.
13. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE II
14. EXISTING SIGN TO REMAIN
15. EXISTING SIGN TO BE RELOCATED
16. EXISTING SIGN TO BE REMOVED
17. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT, PER CCAUSD No. 235, CASE III

GRADING LEGEND

- (1395) EX. MAJOR CONTOUR / EX. MINOR CONTOUR
- BOUNDARY LINE
- STREET CENTERLINE
- EDGE OF PAVEMENT
- EXISTING CURB, GUTTER, & SIDEWALK
- PROPOSED CURB, GUTTER, & SIDEWALK
- PROPOSED AC PAVING
- CC / CLV — CLARK COUNTY/CITY OF LAS VEGAS BOUNDARY LINE
- X X X — EX. FENCE
- EX. BLOCK WALL
- PROPOSED RETAINING WALL
- 37.3/38.7–12' — TOP OF FOOTING / APPROX. WALL LENGTH / TOP OF RETAINING WALL
- PROPOSED SCARP

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 10/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR 1-800-227-2600

FAST Call before you Underground 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd.
Suite B
Las Vegas, Nevada 89146
Office: (702) 254-1480
Fax: (702) 254-3062
www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
WINSTAR STREET
(9+50 – 19+00)
PLAN AND PROFILE

PROFESSIONAL ENGINEER-STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552
6-27-17

SHEET 22 OF 59
C.L.V. DWG.# 69184

PROJ#:125391 AGR:116334 QS: 125-22-NE XC 11316

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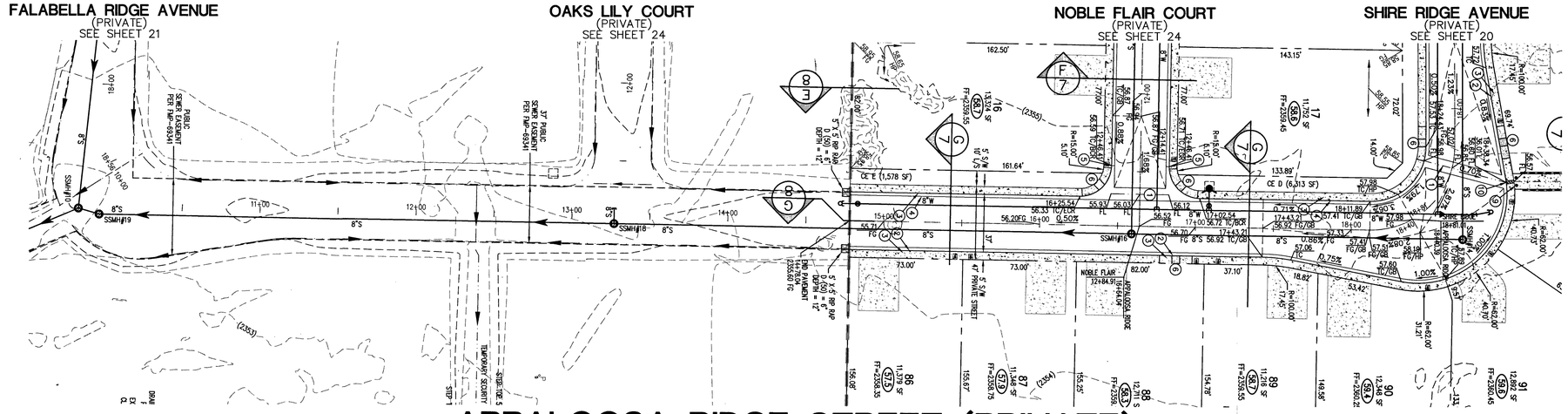
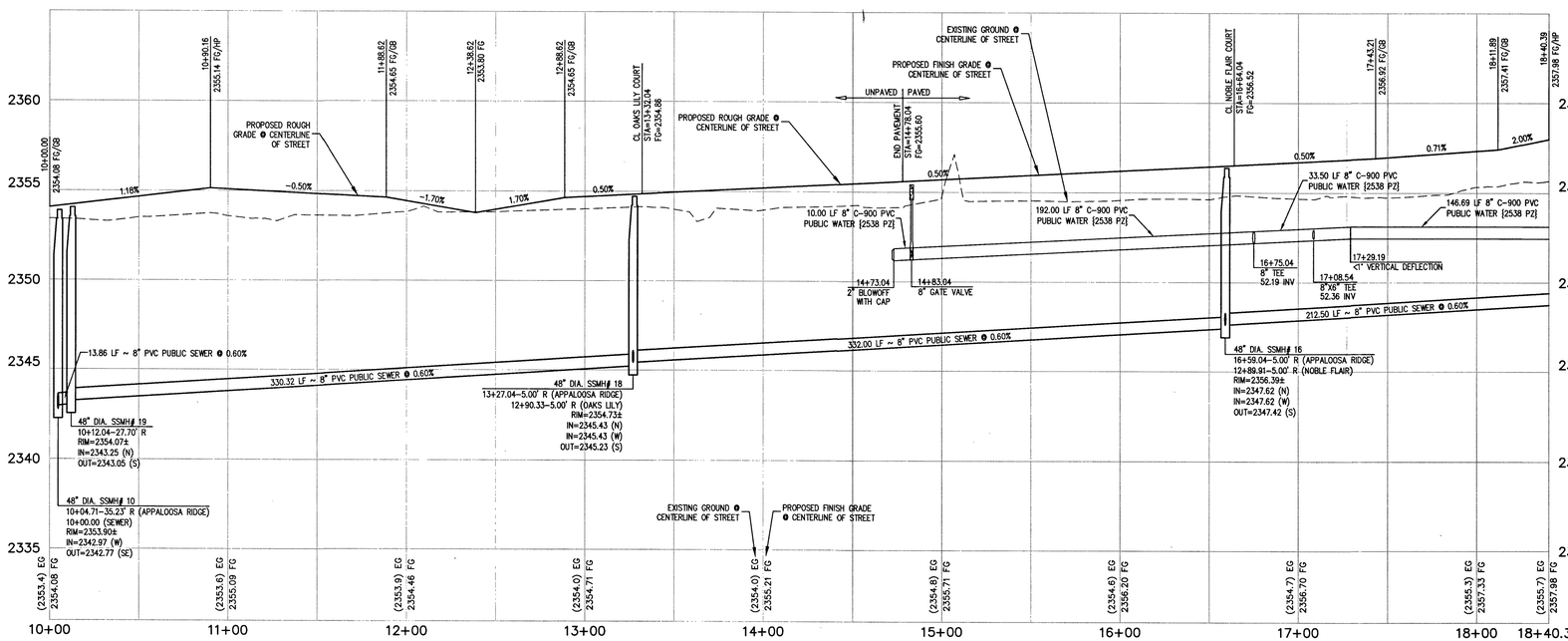
CC HTE #17-11784



PLAN

SCALE: HORIZ. 1" = 40'



PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

APPALOOSA RIDGE STREET (PRIVATE)

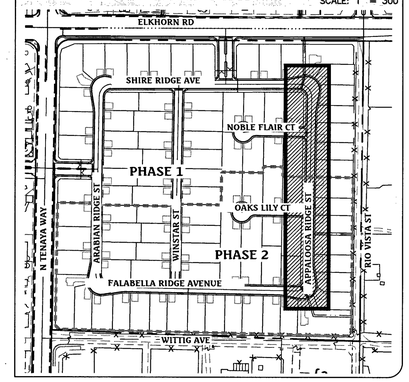
GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

KEY MAP

SCALE: 1" = 300'



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APPROVED FOR CONSTRUCTION

Joanne Oen for DJM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 07/06/17 PROJECT No.: 125391
LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

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JOB NO. : 007.108
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DR HORTON
ELKHORN 40 PHASE 1
APPALOOSA RIDGE STREET (10+00 – 18+40.39) PLAN AND PROFILE

PROFESSIONAL ENGINEER – STATE OF NEVADA – JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552 – 6-27-17

SHEET 23 OF 50 (37)
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE YC 11316

CC HTE #17-11784

10715059

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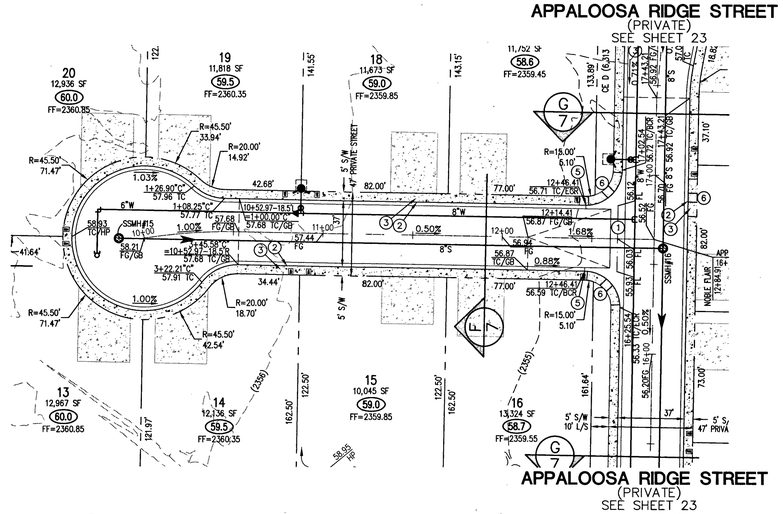
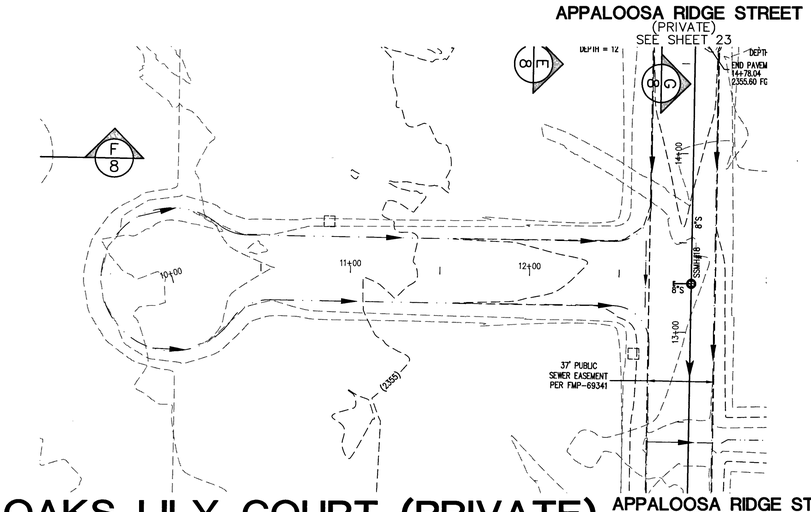
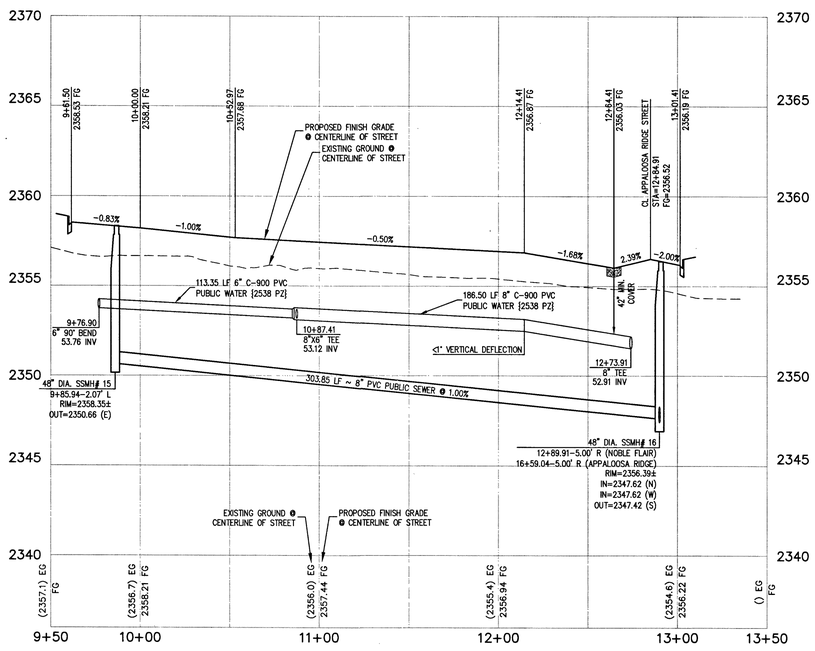




NOBLE FLAIR COURT (PRIVATE)

PLAN

SCALE: HORIZ. 1" = 40'



NOBLE FLAIR COURT (PRIVATE)

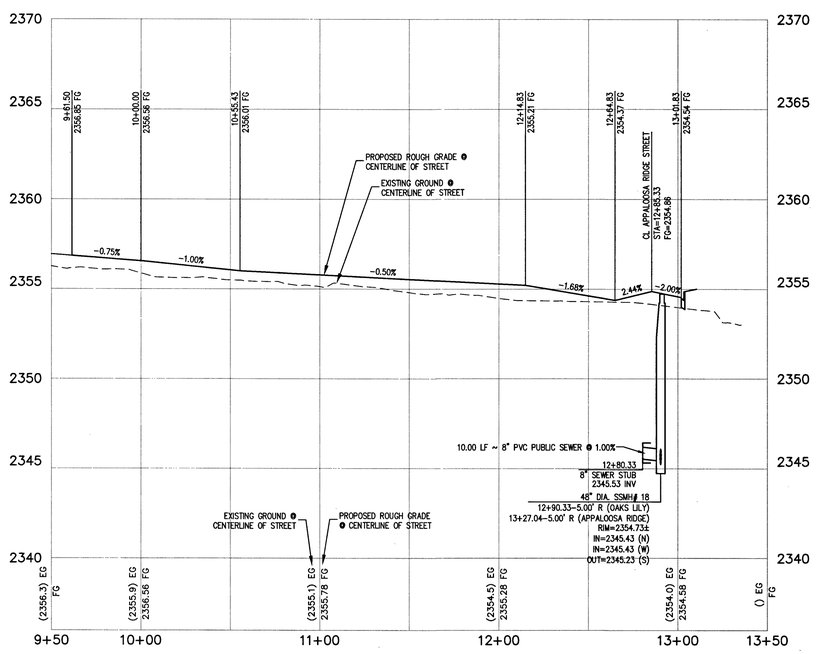
PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

OAKS LILY COURT (PRIVATE)

PLAN

SCALE: HORIZ. 1" = 40'



OAKS LILY COURT (PRIVATE)

PROFILE

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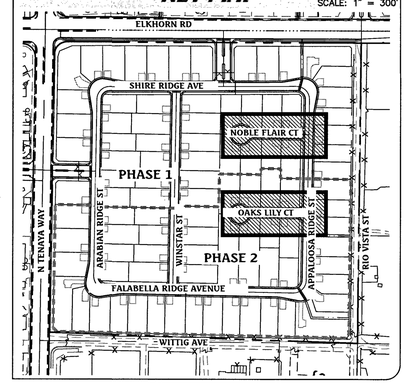
VERT. 1" = 4'

KEY MAP

SCALE: 1" = 300'



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- PROPOSED SCARP

APPROVED FOR CONSTRUCTION

Joanne Dean for JDM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 07/06/17 PROJECT No.: 125391
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NORTH

GRAPHIC SCALE

40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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NOBLE FLAIR COURT (9+50 – 13+50)
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PLAN AND PROFILE

PROFESSIONAL ENGINEER — STATE OF NEVADA — JAMES W. PEARCE — Exp. 12-31-17 — CIVIL — No. 9552 — 6-27-17

SHEET 24 OF 37
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE XC 11316

CC HTE #17-11784

10745059

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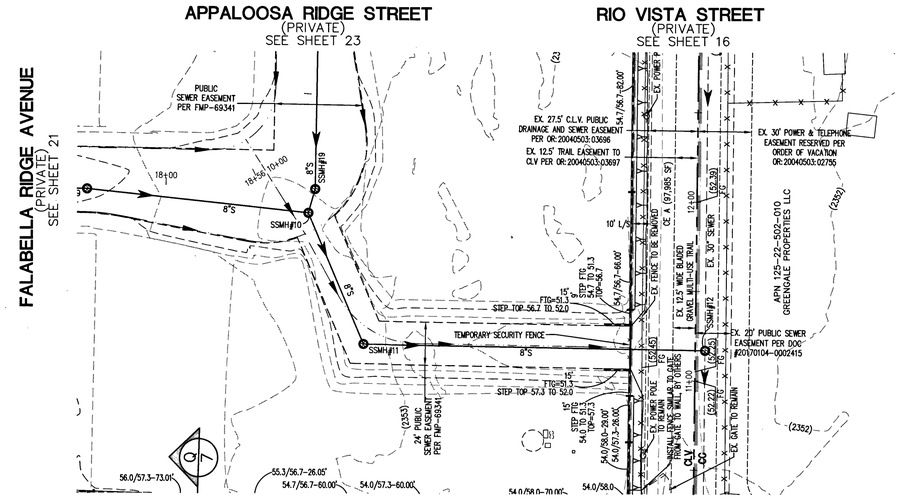
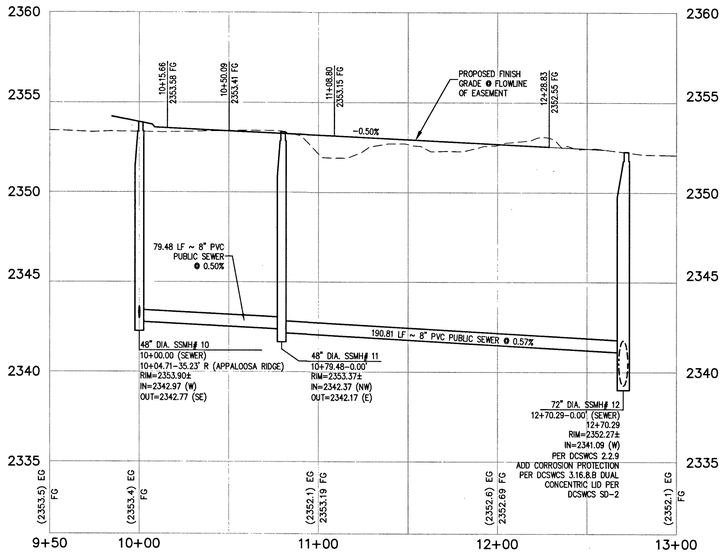


SEWER
PLAN
SCALE: HORIZ. 1" = 40'



SEWER
PROFILE
SCALE: HORIZ. 1" = 40'
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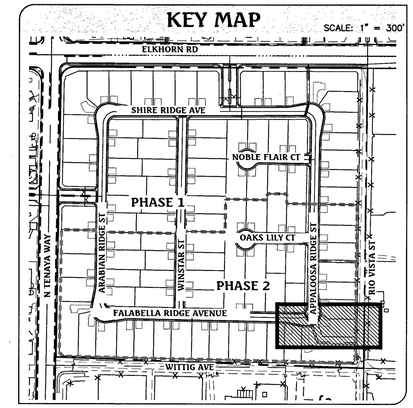

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Joanne Dean for DSM

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CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
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DR HORTON
ELKHORN 40 PHASE 1
SEWER (9+50 – 13+00) PLAN AND PROFILE

PROFESSIONAL ENGINEER STATE OF NEVADA JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552 6-27-17

SHEET 25 OF 30
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE XC 11316

Q:\Triton Drawings\007.108 Elkhorn Tenaya\DRAWINGS\Improvements\Phase1\06 007.108-ph1-imp-Profiles-onsite.dwg dresse Tue, 27 Jun 2017 - 1:09pm

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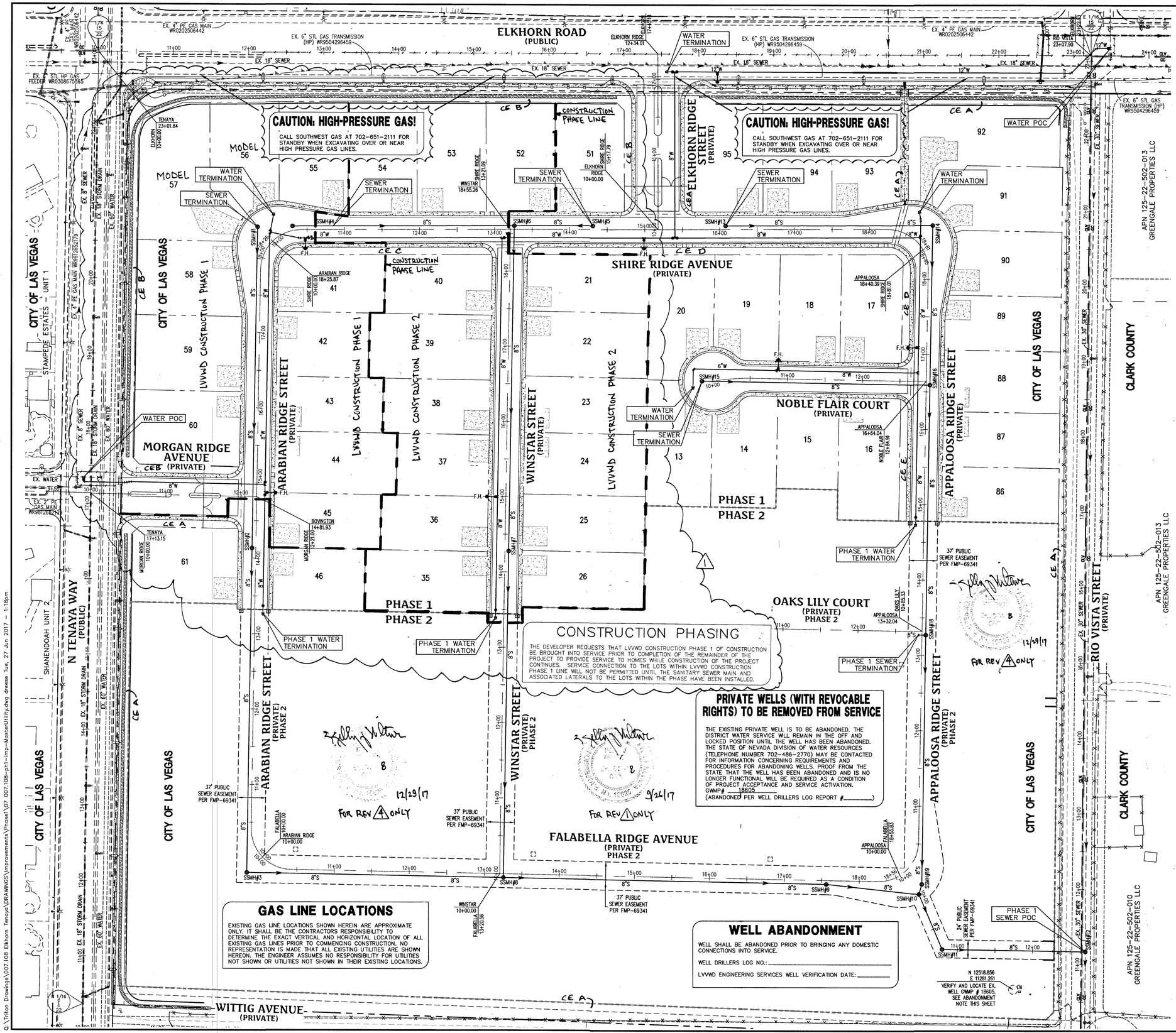
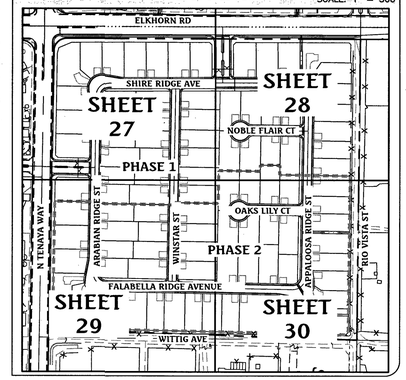
CC HTE #17-11784



KEY MAP

SCALE: 1" = 300'



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FAST Call before you Underground 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
Call before you Overhead 1-702-227-2929

NORTH
GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

FIRE FLOW CALCULATIONS

THE FIRE FLOW REQUIREMENT IS: 2,000 GALLONS PER MINUTE 20 PSI RESIDUAL PRESSURE.

BASED ON:

SQUARE FOOTAGE: (4)	5,285 SQUARE FEET
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS:	N/A SQUARE FEET
BUILDING HEIGHT:	21 FEET-7 3/4 INCHES
NUMBER OF STORIES:	1 FLOOR
TYPE OF CONSTRUCTION:	V-NON RATED
OCCUPANCY:	RESIDENTIAL
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	NO

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

FIRE DEPARTMENT APPROVAL

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM LVVWD.

APPROVED FOR CONSTRUCTION

Joanne Olson for DSM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 07/06/17 PROJECT No.: 125391
LVVWD APPROVED FIRE FLOW 2000 GPM @ 20 PSI RESIDUAL (4)

APPROVALS

Scott Lemon (4) 1/25/18
LAS VEGAS FIRE AND RESCUE 6/28/17 DATE

CONSTRUCTION PHASING

THE DEVELOPER REQUESTS THAT LVVWD CONSTRUCTION PHASE 1 OF CONSTRUCTION BE BROUGHT INTO SERVICE PRIOR TO COMPLETION OF THE REMAINDER OF THE PROJECT TO PROVIDE SERVICE TO HOMES WHILE CONSTRUCTION OF THE PROJECT CONTINUES. SERVICE CONNECTION TO THE LOTS WITHIN LVVWD CONSTRUCTION PHASE 1 LINE WILL NOT BE PERMITTED UNTIL THE SANITARY SEWER MAIN AND ASSOCIATED LATERALS TO THE LOTS WITHIN THE PHASE HAVE BEEN INSTALLED.

PRIVATE WELLS (WITH REVOCABLE RIGHTS) TO BE REMOVED FROM SERVICE

THE EXISTING PRIVATE WELL IS TO BE ABANDONED. THE DISTRICT WATER SERVICE WILL REMAIN IN THE OFF AND LOCKED POSITION UNTIL THE WELL HAS BEEN ABANDONED. THE STATE OF NEVADA DIVISION OF WATER RESOURCES (TELEPHONE NUMBER 702-486-2770) MAY BE CONTACTED FOR INFORMATION CONCERNING REQUIREMENTS AND PROCEDURES FOR ABANDONING WELLS. PROOF FROM THE STATE THAT THE WELL HAS BEEN ABANDONED AND IS NO LONGER FUNCTIONAL WILL BE REQUIRED AS A CONDITION OF PROJECT ACCEPTANCE AND SERVICE ACTIVATION.
GWMP# 18605
(ABANDONED PER WELL DRILLERS LOG REPORT #_____)

GAS LINE LOCATIONS

EXISTING GAS LINE LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING GAS LINES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR EXISTING LOCATIONS.

WELL ABANDONMENT

WELL SHALL BE ABANDONED PRIOR TO BRINGING ANY DOMESTIC CONNECTIONS INTO SERVICE.

WELL DRILLERS LOG NO.:_____

LVVWD ENGINEERING SERVICES WELL VERIFICATION DATE:_____

NO.	DESCRIPTION	DATE	APP'D
4	REVISE FIRE FLOW TO 2,000 GPM	12/29/17	JP
3	ADDED CONSTRUCTION PHASE LINES AND ISOLATION VALVE	9/22/17	JP
2		2/6/18	
1		10/5/17	

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=60'

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Suite B
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Fax: (702) 254-3062
www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
MASTER UTILITY PLAN

PROFESSIONAL ENGINEER - STATE OF NEVADA - JAMES M. PEARCE - Exp. 12-31-17 - CIVIL - No. 9552 - 6-27-17

SHEET 26 OF 50 (37)
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE XC 11316

CC HTE #17-11784

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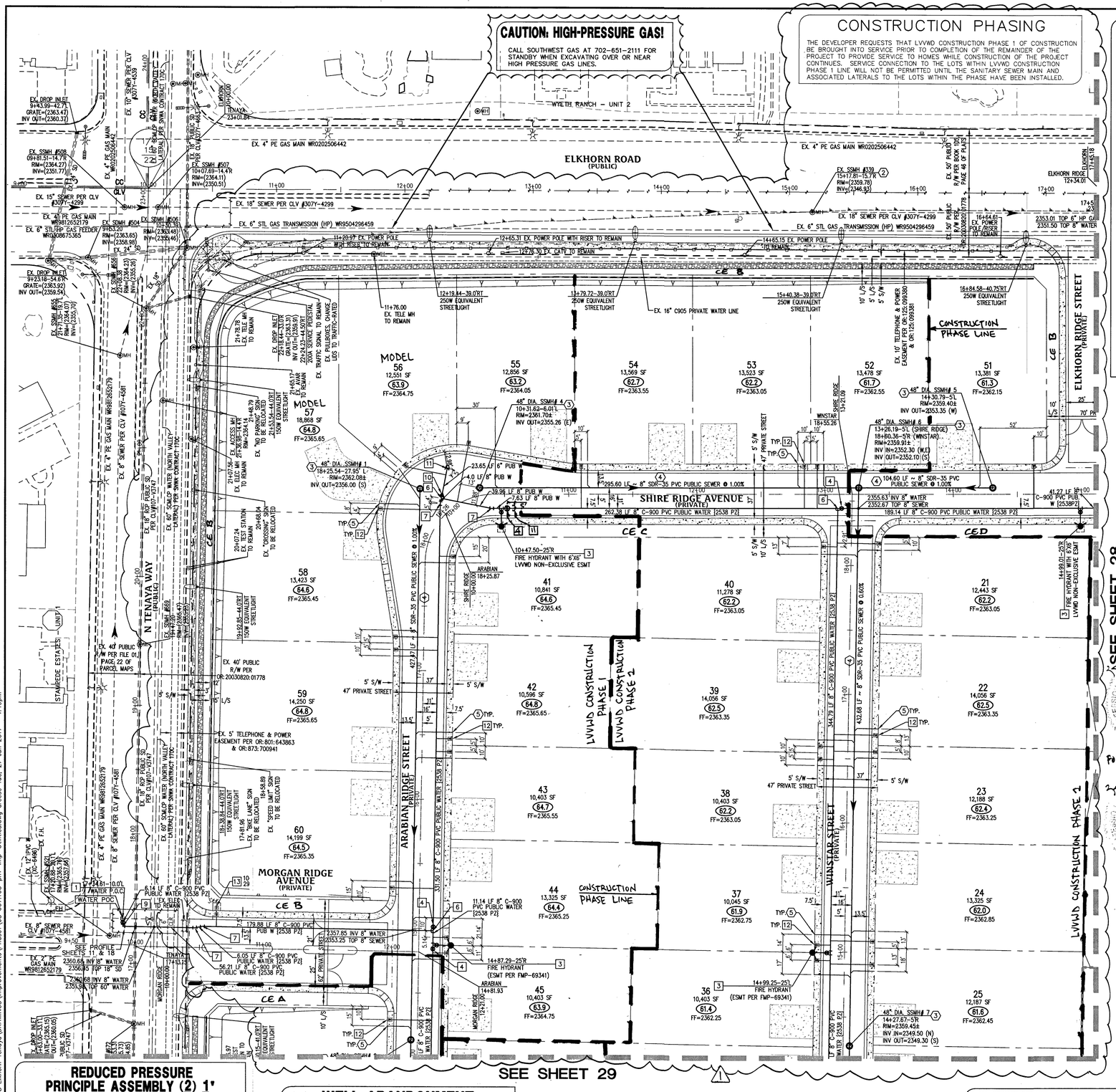
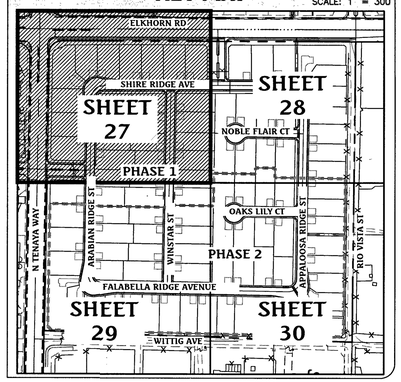


UTILITY LEGEND

- EX. GAS — EXISTING GAS
- EX. 10"S — EXISTING SEWER MAIN
- 8"S — PROPOSED SEWER MAIN
- PROPOSED SEWER LATERAL
- EX. 36"SD — EXISTING STORM DRAIN
- 36"SD — PROPOSED STORM DRAIN
- EX. 8"W — EXISTING WATER MAIN
- 8"W — PROPOSED WATER MAIN
- PROPOSEDWATER LATERAL WITH 3/4" METER
- EXISTING UTILITY MANHOLE
- PROPOSED UTILITY MANHOLE
- EXISTING VALVE
- PROPOSED VALVE
- PROPOSED REDUCER
- PROPOSED STANDARD FIRE HYDRANT WITH 6" LATERAL, 6" GATE VALVE, AND TEE
- BWV — BACK WATER VALVE
- PRV — PRESSURE REDUCING VALVE
- EXISTING STREET LIGHT
- FUTURE STREET LIGHT
- PROPOSED 100w HPS STREET LIGHT
- PROPOSED 150w HPS STREET LIGHT
- PROPOSED 200w HPS STREET LIGHT
- PROPOSED 250w HPS STREET LIGHT
- PROPOSED 400w HPS STREET LIGHT
- PROPOSED CONCRETE DRIVEWAY

KEY MAP

SCALE: 1" = 300'



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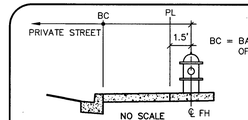
TYPICAL FIRE HYDRANT LOCATION DETAIL



FIRE HYDRANT TO BE INSTALLED PER UDACS PLATE No. 40, COND. G

NORTH
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

FIRE FLOW CALCULATIONS

THE FIRE FLOW REQUIREMENT IS: 2,000 GALLONS PER MINUTE 20 PSI RESIDUAL PRESSURE.

BASED ON:

SQUARE FOOTAGE:	5,285 SQUARE FEET
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS:	N/A SQUARE FEET
BUILDING HEIGHT:	21 FEET-7 3/4 INCHES
NUMBER OF STORIES:	1 FLOOR
TYPE OF CONSTRUCTION:	V-NON RATED
OCCUPANCY:	RESIDENTIAL
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	NO

WATER NOTES

1. POC – 12" X 8" TAPPING SLEEVE WITH TAPPING VALVE, PER UDACS PL No. 34, 39 & SEC. 2.24.01A
2. POC – 12" TAPPING SLEEVE WITH TAPPING VALVE, PER UDACS PLATE No. 34, 39 & SEC. 2.24.01A
3. FIRE HYDRANT ASSEMBLY (INCLUDING 6" LATERAL, 6" GATE VALVE AND 8" X 6" TEE), PER UDACS PLATE 40 CONDITION G
4. INSTALL GATE VALVE (SIZE PER PIPE), PER UDACS PLATE No. 30 AND 39
5. 12" X 8" TEE, PER UDACS PLATE No. 31
6. TEE (SIZE PER PIPE), UDACS PLATE No. 31
7. 11.25° BEND (SIZE PER PIPE), PER UDACS PLATE No. 31
8. 45° BEND (SIZE PER PIPE), PER UDACS PLATE No. 31
9. 90° BEND (SIZE PER PIPE), PER UDACS PLATE No. 31
10. INSTALL 8" X 6" REDUCER, PER UDACS PLATE No. 31
11. 2" BLOW OFF ASSEMBLY WITH CAP, PER UDACS PLATE No. 36
12. INSTALL 1" COPPER WATER SERVICE WITH 3/4" METER, PER UDACS PLATE No. 4 AND SEC 2.17.01
13. INSTALL 3/4" IRRIGATION METER WITH 1" RPPA, PER UDACS PLATE No. 4 AND 8 AND SEC 2.17.01, WITH 6"X6" LVVWD NON-EXCLUSIVE ESMT

SEWER NOTES

1. POC – INSTALL 72"ø MANHOLE WITH CAST-IN-PLACE BASE AND DUAL CONCENTRIC COVER, PER DCSWCS SD-2, SD-4 AND SD-7, CORROSION PROTECTION PER DCSWCS 3.16.8.8
2. EXISTING 48"ø MANHOLE TO BE PROTECTED IN PLACE AND ADJUSTED TO GRADE
3. INSTALL 48" MANHOLE WITH PRECAST BASE, PER DCSWCS SD-1A, SD-1B, SD-4, WITH SINGLE 24" LID
4. INSTALL 8" SDR-35 PVC SEWER PIPE, PER DCSWCS SD-15, SD-16 AND SD-17
5. INSTALL 4" SDR-35 PVC SEWER LATERAL WITH CURB MARKING, PER DCSWCS SD-22 AND SD-25

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

FIRE DEPARTMENT APPROVAL

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM LVVWD.

SNWA FIBER OPTIC CAUTION:

SNWA FO CONDUIT RUNS ALONG THE SIDE OF THE LVVWD PIPELINE IN THE PIPE ZONE, AT UNKNOWN DEPTH. FO CONDUIT LOCATION WITHIN THE TRENCH MAY VARY IN DEPTH AS REQUIRED TO MAINTAIN GRADUAL AND SLOPED RUNS TO PULL BOXES. TAKE CAUTION WHEN DIGGING IN TRENCH ZONE.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 04/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 2000 GPM @ 20 PSI RESIDUAL

4

APPROVALS

4 1/25/19 6/28/17

LAS VEGAS FIRE AND RESCUE — DATE

1017 5059

REDUCED PRESSURE PRINCIPLE ASSEMBLY (2) 1"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. 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. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

WELL ABANDONMENT

WELL SHALL BE ABANDONED PRIOR TO BRINGING ANY DOMESTIC CONNECTIONS INTO SERVICE.

WELL DRILLERS LOG NO.: _____

LVVWD ENGINEERING SERVICES WELL VERIFICATION DATE: _____

BACK WATER VALVE

BWV

BACKWATER VALVES REQUIRED PER U.P.C., LATEST EDITION, SECTION 710.0.

TOTAL LOTS REQUIRING BACKWATER VALVES = 0

PRESSURE REDUCING VALVE

PRV

LOTS WITHIN 2538 ZONE WITH A FINISH FLOOR ELEVATION LESS THAN 2353.4 WILL REQUIRE A PRV

TOTAL LOTS REQUIRING A PRV = 0

ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.

HAND DIGGING IS REQUIRED FOR ANY EXCAVATION WITHIN 2 FEET OF THE TOP OF THE EXISTING 60 INCH MLCP WATER MAIN AND EXTENDING 10' ON EITHER SIDE.

UTILITY CROSSING NOTE

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS OF POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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 MAXIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

NO.	DESCRIPTION	DATE	APP'D
4	REVISE FIRE FLOW TO 2,000 GPM - 2 HR	12/19/17	DESIGN
3	ADDED CONSTRUCTION PHASE LINES AND ISOLATION VALVE	9/26/17	DESIGN
2	1 5,000 GPM - 2 HR	6/28/17	DESIGN
1	1 5,000 GPM - 2 HR	5/26/17	DESIGN

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

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DR HORTON
ELKHORN 40 PHASE 1
UTILITY PLAN I

JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552 — 6-27-17

SHEET 27 OF 50 37
C.L.V. DWG.# 69184

PRO.#:125391 AGR:116334 QS: 125-22-NE XC 11316

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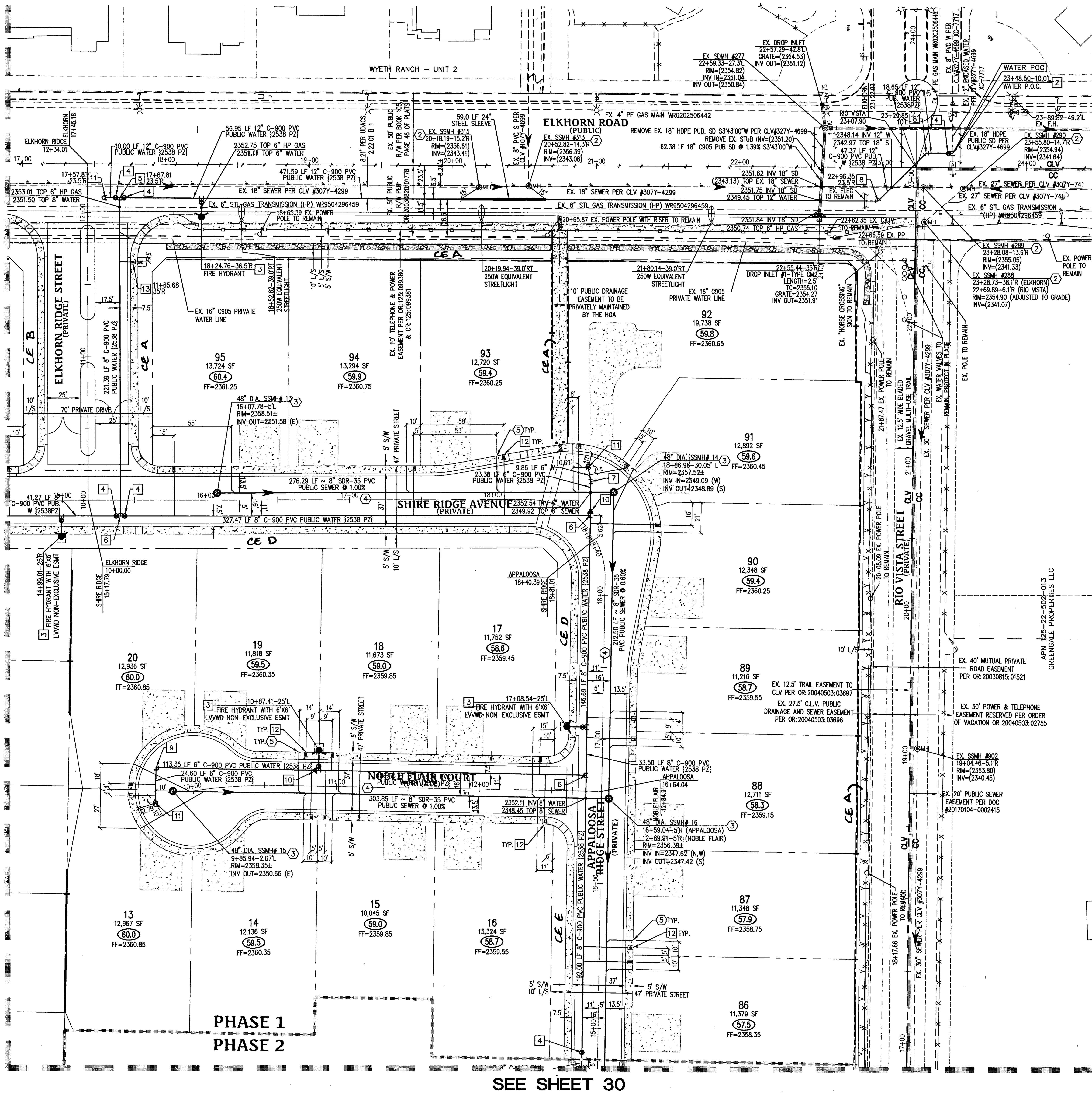
CC HTE #17-11784



UTILITY LEGEND

Symbol	Description
EX. GAS	EXISTING GAS
EX. 10"S	EXISTING SEWER MAIN
8"S	PROPOSED SEWER MAIN
	PROPOSED SEWER LATERAL
EX. 36"SD	EXISTING STORM DRAIN
36"SD	PROPOSED STORM DRAIN
EX. 8"W	EXISTING WATER MAIN
8"W	PROPOSED WATER MAIN
	PROPOSEDWATER LATERAL WITH 3/4" METER
	EXISTING UTILITY MANHOLE
	PROPOSED UTILITY MANHOLE
	EXISTING VALVE
	PROPOSED VALVE
	PROPOSED REDUCER
	PROPOSED STANDARD FIRE HYDRANT WITH 6" LATERAL, 6" GATE VALVE, AND TEE
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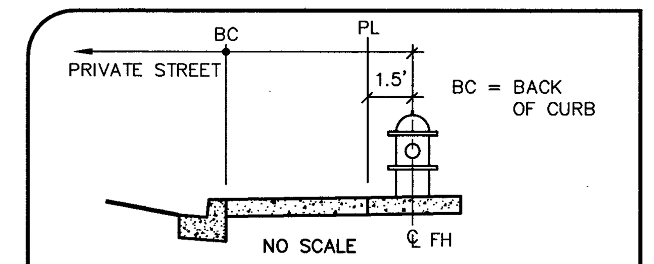
	FUTURE STREET LIGHT
	PROPOSED 100w HPS STREET LIGHT
	PROPOSED 150w HPS STREET LIGHT
	PROPOSED 200w HPS STREET LIGHT
	PROPOSED 250w HPS STREET LIGHT
	PROPOSED 400w HPS STREET LIGHT
	PROPOSED CONCRETE DRIVEWAY

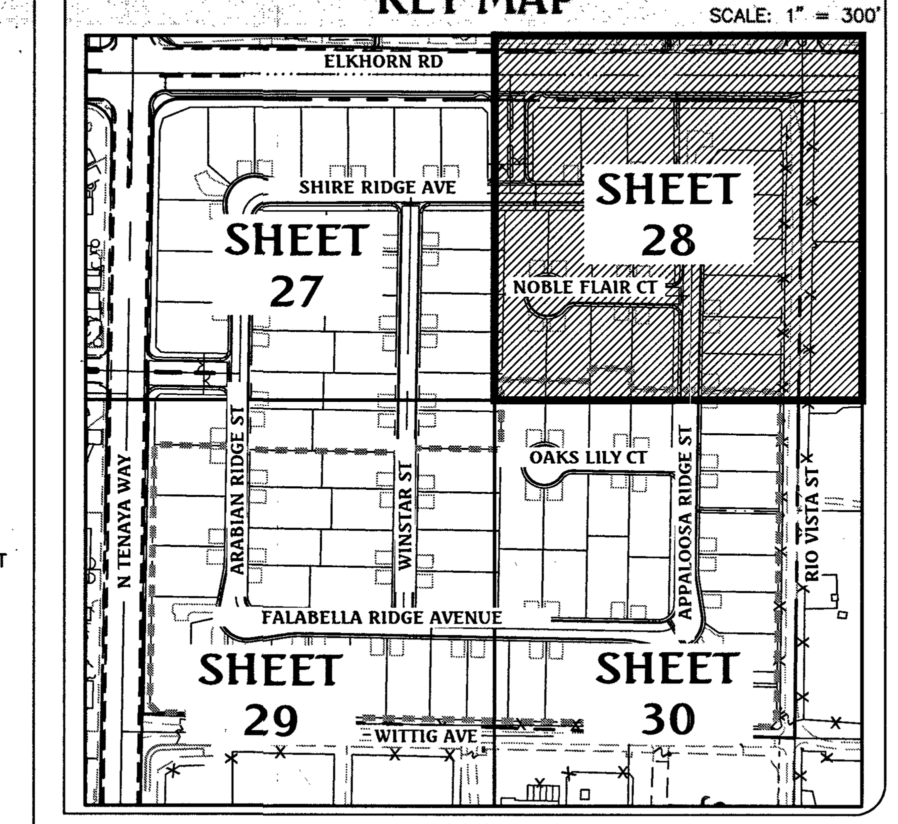


TYPICAL FIRE HYDRANT LOCATION DETAIL

FIRE HYDRANT TO BE INSTALLED PER UDACS PLATE No. 40, COND. G

KEY MAP

SCALE: 1" = 300'



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Call before you Overhead
1-702-227-2929

NORTH
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

Kelly Hilterbrand 8 12/29/17
FOR REV 4 ONLY

FIRE FLOW CALCULATIONS

THE FIRE FLOW REQUIREMENT IS: 2,000 GALLONS PER MINUTE 20 PSI RESIDUAL PRESSURE.

BASED ON:

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BUILDING HEIGHT:	21 FEET-7 3/4 INCHES
NUMBER OF STORIES:	1 FLOOR
TYPE OF CONSTRUCTION:	V-NON RATED
OCCUPANCY:	RESIDENTIAL
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	NO

WATER NOTES

1. POC – 12" X 8" TAPPING SLEEVE WITH TAPPING VALVE, PER UDACS PL No. 34, 39 & SEC. 2.24.01A
2. POC – 12" TAPPING SLEEVE WITH TAPPING VALVE, PER UDACS PLATE No. 34, 39 & SEC. 2.24.01A
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7. 11.25° BEND (SIZE PER PIPE), PER UDACS PLATE No. 31
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BASIS OF BEARING

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BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

FIRE DEPARTMENT APPROVAL

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM LVVWD.

APPROVED FOR CONSTRUCTION

[signature] for BSM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 07/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 2000 GPM @ 20 PSI RESIDUAL

APPROVALS

[signature] 4 1/25/18
[signature] 12/28/17
LAS VEGAS FIRE AND RESCUE — DATE

UTILITY CROSSING NOTE

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO **SECTION 2.22** OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS OF POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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WELL ABANDONMENT

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WELL DRILLERS LOG NO.: ____________

LVVWD ENGINEERING SERVICES WELL VERIFICATION DATE: ________

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

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HAND DIGGING IS REQUIRED FOR ANY EXCAVATION WITHIN 2 FEET OF THE TOP OF THE EXISTING 60 INCH MLCP WATER MAIN AND EXTENDING 10' ON EITHER SIDE.

(BWV) BACK WATER VALVE

BACKWATER VALVES REQUIRED PER U.P.C., LATEST EDITION, SECTION 710.0.

TOTAL LOTS REQUIRING BACKWATER VALVES = 0

(PRV) PRESSURE REDUCING VALVE

LOTS WITHIN 2538 ZONE WITH A FINISH FLOOR ELEVATION LESS THAN 2353.4 WILL REQUIRE A PRV

TOTAL LOTS REQUIRING A PRV = 0

REDUCED PRESSURE PRINCIPLE ASSEMBLY (2) 1"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. 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.
EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

NO.	DESCRIPTION	DATE	APP'D
4	REVISE FIRE FLOW TO 2,000 GPM 6/5/18 CLV SB	12/29/17	2/6/18

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd. Suite B Las Vegas, Nevada 89146
Office: (702) 254-1480 Fax: (702) 254-3062 www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
UTILITY PLAN II

PROFESSIONAL ENGINEER – STATE OF NEVADA – JAMES M. PEARCE – Exp. 12-31-17 – CIVIL – No. 9552 – 6-27-17

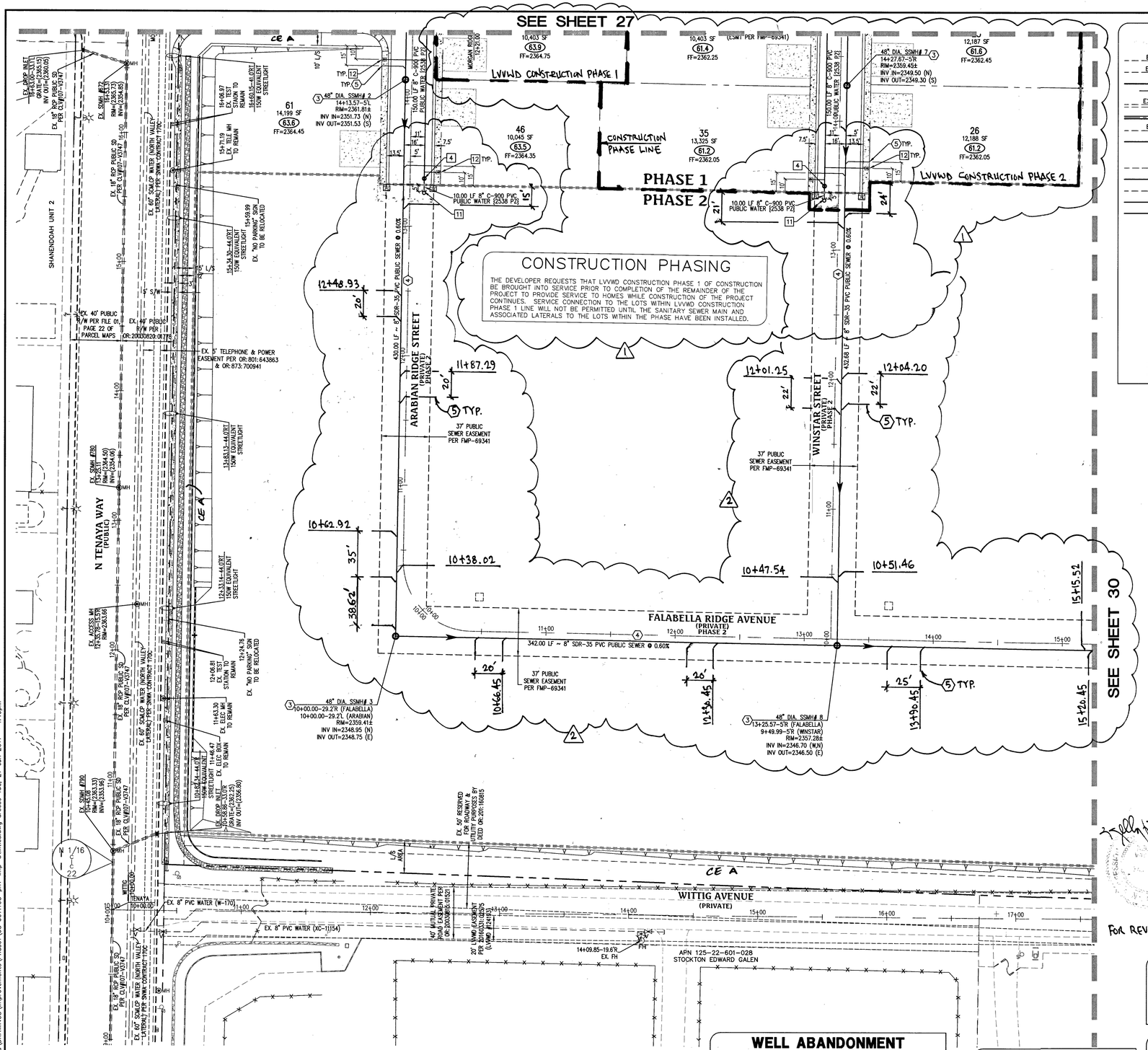
SHEET 28 OF 50 (37)
C.L.V. DWG.# 69184

PROJ#:125391 AGR:116334 QS: 125-22-NE XC 11316

10145059

CC HTE #17-11784

Q:\Triton Drawings\007.108 Elkhorn Tenaya\DRAWINGS\Improvements\Phase1\08 007.108-ph1-imp-Utilities.dwg dreese Tue, 27 Jun 2017 - 1:19pm

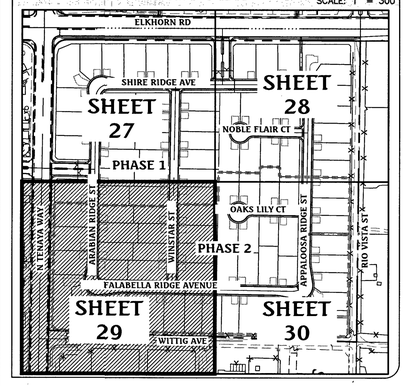


UTILITY LEGEND

- EX. GAS — EXISTING GAS
- EX. 10"S — EXISTING SEWER MAIN
- 8"S — PROPOSED SEWER MAIN
- PROPOSED SEWER LATERAL
- EX. 36"SD — EXISTING STORM DRAIN
- 36"SD — PROPOSED STORM DRAIN
- EX. 8"W — EXISTING WATER MAIN
- 8"W — PROPOSED WATER MAIN
- PROPOSEDWATER LATERAL WITH 3/4" METER
- EXISTING UTILITY MANHOLE
- PROPOSED UTILITY MANHOLE
- EXISTING VALVE
- PROPOSED VALVE
- PROPOSED REDUCER
- PROPOSED STANDARD FIRE HYDRANT WITH 6" LATERAL, 6" GATE VALVE, AND TEE
- BWV — BACK WATER VALVE
- PRV — PRESSURE REDUCING VALVE
- EXISTING STREET LIGHT
- FUTURE STREET LIGHT
- PROPOSED 100w HPS STREET LIGHT
- PROPOSED 150w HPS STREET LIGHT
- PROPOSED 200w HPS STREET LIGHT
- PROPOSED 250w HPS STREET LIGHT
- PROPOSED 400w HPS STREET LIGHT
- PROPOSED CONCRETE DRIVEWAY

KEY MAP

SCALE: 1" = 300'



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FAST Call before you Underground 1-702-432-5300 FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
Call before you Overhead 1-702-227-2929

NORTH
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

9/26/17
FOR REV 1 ONLY

WATER NOTES

1. POC – 12" X 8" TAPPING SLEEVE WITH TAPPING VALVE, PER UDACS PL No. 34, 39 & SEC. 2.24.01A
2. POC – 12" TAPPING SLEEVE WITH TAPPING VALVE, PER UDACS PLATE No. 34, 39 & SEC. 2.24.01A
3. FIRE HYDRANT ASSEMBLY (INCLUDING 6" LATERAL, 6" GATE VALVE AND 8" X 6" TEE), PER UDACS PLATE 40 CONDITION G
4. INSTALL GATE VALVE (SIZE PER PIPE), PER UDACS PLATE No. 30 AND 39
5. 12" X 8" TEE, PER UDACS PLATE No. 31
6. TEE (SIZE PER PIPE), UDACS PLATE No. 31
7. 11.25° BEND (SIZE PER PIPE), PER UDACS PLATE No. 31
8. 45° BEND (SIZE PER PIPE), PER UDACS PLATE No. 31
9. 90° BEND (SIZE PER PIPE), PER UDACS PLATE No. 31
10. INSTALL 8" X 6" REDUCER, PER UDACS PLATE No. 31
11. 2" BLOW OFF ASSEMBLY WITH CAP, PER UDACS PLATE No. 36
12. INSTALL 1" COPPER WATER SERVICE WITH 3/4" METER, PER UDACS PLATE No. 4 AND SEC 2.17.01
13. INSTALL 3/4" IRRIGATION METER WITH 1" RPPA, PER UDACS PLATE No. 4 AND 9 AND SEC 2.17.01, WITH 6"X6" LVVWD NON-EXCLUSIVE ESMT

SEWER NOTES

1. POC – INSTALL 72"ø MANHOLE WITH CAST-IN-PLACE BASE AND DUAL CONCENTRIC COVER, PER DCSWCS SD-2, SD-4 AND SD-7, CORROSION PROTECTION PER DCSWCS 3.16.8.8
2. EXISTING 48"ø MANHOLE TO BE PROTECTED IN PLACE AND ADJUSTED TO GRADE
3. INSTALL 48" MANHOLE WITH PRECAST BASE, PER DCSWCS SD-1A, SD-1B, SD-4, WITH SINGLE 24" LID
4. INSTALL 8" SDR-35 PVC SEWER PIPE, PER DCSWCS SD-15, SD-16 AND SD-17
5. INSTALL 4" SDR-35 PVC SEWER LATERAL WITH CURB MARKING, PER DCSWCS SD-22 AND SD-25

FIRE FLOW CALCULATIONS

THE FIRE FLOW REQUIREMENT IS: 2,000 GALLONS PER MINUTE 20 PSI RESIDUAL PRESSURE.

BASED ON:	
SQUARE FOOTAGE:	5,285 SQUARE FEET
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS:	N/A SQUARE FEET
BUILDING HEIGHT:	21 FEET–7 3/4 INCHES
NUMBER OF STORIES:	1 FLOOR
TYPE OF CONSTRUCTION:	V–NON RATED
OCCUPANCY:	RESIDENTIAL
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	NO

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

FIRE DEPARTMENT APPROVAL

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM LVVWD.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 07/06/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 2000 GPM @ 20 PSI RESIDUAL

APPROVALS

LAS VEGAS FIRE AND RESCUE — DATE 1/25/18

DATE 6/28/17

10745059

SNWA FIBER OPTIC CAUTION:

SNWA FO CONDUIT RUNS ALONG THE SIDE OF THE LVVWD PIPELINE IN THE PIPE ZONE, AT UNKNOWN DEPTH. FO CONDUIT LOCATION WITHIN THE TRENCH MAY VARY IN DEPTH AS REQUIRED TO MAINTAIN GRADUAL AND SLOPED RUNS TO PULL BOXES. TAKE CAUTION WHEN DIGGING IN TRENCH ZONE.

UTILITY CROSSING NOTE

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS OF POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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 MAXIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

WELL ABANDONMENT

WELL SHALL BE ABANDONED PRIOR TO BRINGING ANY DOMESTIC CONNECTIONS INTO SERVICE.

WELL DRILLERS LOG NO.: _____

LVVWD ENGINEERING SERVICES WELL VERIFICATION DATE: _____

ANY EXCAVATION EXPOSING LVVWD FACILITIES 24" IN DIAMETER AND LARGER MUST REMAIN OPEN UNTIL INSPECTED BY LVVWD. NO BACKFILL MATERIAL IS TO BE PLACED IN THE EXCAVATION UNTIL APPROVED BY THE LVVWD INSPECTOR. ANY DAMAGE TO THE FACILITIES MUST BE REPORTED TO LVVWD IMMEDIATELY. CONTRACTOR TO CALL 258-7171 TO SCHEDULE LVVWD INSPECTION.

BACK WATER VALVE (BWV)

BACKWATER VALVES REQUIRED PER U.P.C., LATEST EDITION, SECTION 710.0.

TOTAL LOTS REQUIRING BACKWATER VALVES = 0

PRESSURE REDUCING VALVE (PRV)

LOTS WITHIN 2538 ZONE WITH A FINISH FLOOR ELEVATION LESS THAN 2353.4 WILL REQUIRE A PRV

TOTAL LOTS REQUIRING A PRV = 0

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.

HAND DIGGING IS REQUIRED FOR ANY EXCAVATION WITHIN 2 FEET OF THE TOP OF THE EXISTING 60 INCH MLCP WATER MAIN AND EXTENDING 10' ON EITHER SIDE.

8 9/26/17 FOR REV 2 ONLY

8 12/29/17 FOR REV 4 ONLY

NO.	DESCRIPTION	DATE	APP'D
1	REVISE FIRE FLOW TO 2,000 GPM | 6|9	10/23/17	JMP
2	ADD SEWER LATERALS | 56 10-5.2.1	9/26/17	JMP
3	ADDED CONSTRUCTION PHASE LINES AND ISOLATION VALVE | BLDG - OFF | 56 10-5.2.1	9/26/17	JMP

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

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www.tritoneng.com

DR HORTON
ELKHORN 40 PHASE 1
UTILITY PLAN III

JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552 6-27-17

SHEET 29 OF 56/57
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE XC 11316

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CC HTE #17-11784

SEE SHEET 28

SEE SHEET 29

PHASE 1

PHASE 2

LVVWD CONSTRUCTION PHASE 2

CONSTRUCTION PHASING

THE DEVELOPER REQUESTS THAT LVVWD CONSTRUCTION PHASE 1 OF CONSTRUCTION BE BROUGHT INTO SERVICE PRIOR TO COMPLETION OF THE REMAINDER OF THE PROJECT TO PROVIDE SERVICE TO HOMES WHILE CONSTRUCTION OF THE PROJECT CONTINUES. SERVICE CONNECTION TO THE LOTS WITHIN LVVWD CONSTRUCTION PHASE 1 LINE WILL NOT BE PERMITTED UNTIL THE SANITARY SEWER MAIN AND ASSOCIATED LATERALS TO THE LOTS WITHIN THE PHASE HAVE BEEN INSTALLED.

ESTIMATE OF QUANTITIES FOR LVVWD CONSTRUCTION PHASE 1 ONLY

	PUBLIC	PRIVATE
WATER AND FIRE IMPROVEMENTS:		
6" WATER MAIN	24 LF	
8" WATER MAIN	644 LF	
12" WATER MAIN	0 LF	
WATER LATERAL	134 LF	
LANDSCAPE WATER SERVICE	1 EA	
WATER SERVICE TO LOTS	11 EA	
FIRE HYDRANT	2 EA	

ESTIMATE OF QUANTITIES FOR LVVWD CONSTRUCTION PHASE 2 ONLY

	PUBLIC	PRIVATE
WATER AND FIRE IMPROVEMENTS:		
6" WATER MAIN	0 LF	
8" WATER MAIN	767 LF	
12" WATER MAIN	0 LF	
WATER LATERAL	183 LF	
LANDSCAPE WATER SERVICE	0 EA	
WATER SERVICE TO LOTS	15 EA	
FIRE HYDRANT	1 EA	

OAKS LILY COURT (PRIVATE) PHASE 2

APPALOOSA RIDGE STREET (PRIVATE) PHASE 2

RIO VISTA STREET (PRIVATE)

FALABELLA RIDGE AVENUE (PRIVATE) PHASE 2

WITTIG AVENUE (PRIVATE)

86 11,379 SF 57.5 FF=2358.35

10.00 LF 8" C-900 PVC PUBLIC WATER [2538 PZ]

332.00 LF ~ 8" SDR-35 PVC PUBLIC SEWER @ 0.60%

48" DIA. SSMH# 18 13+27.04-5'R (APPALOOSA) 12+90.33-5'R (OAKS LILY) RIM=2354.73± INV IN=2345.43 (N) INV OUT=2345.23 (S)

12+80.33 8" SEWER STUB 2345.53 INV

10.00 LF ~ 8" SDR-35 PVC PUBLIC SEWER @ 1.00%

37' PUBLIC SEWER EASEMENT PER FMP-69341

48" DIA. SSMH# 19 10+12.04-27.7R RIM=2354.07± INV IN=2343.25 (N) INV OUT=2323.05 (S)

430.38 LF ~ 8" SDR-35 PVC PUB SEWER @ 0.60%

124.32 LF ~ 8" SDR-35 PVC PUBLIC SEWER @ 0.60% N83°50'14"W

13.86 LF ~ 8" SDR-35 PVC PUBLIC SEWER @ 0.60% N15°56'34"E

48" DIA. SSMH# 9 17+55.95-5'R RIM=2355.13± INV IN=2343.92 (W) INV OUT=2343.72 (E)

48" DIA. SSMH# 10 10+00.00-0' OFFSET (SEWER) 10+04.71-35.23'R (APPALOOSA) RIM=2353.90± INV IN=2342.97 (W) INV OUT=2342.77 (SE)

48" DIA. SSMH# 11 10+79.48-0' OFFSET RIM=2353.37± INV IN=2342.37 (NW) INV OUT=2342.17 (E)

190.81 LF ~ 8" SDR-35 PVC PUBLIC SEWER @ 0.57% S85°03'E

SEWER POC 72" DIA. SSMH# 12 PER DCSWCS 7.2.9 ADD CORROSION PROTECTION PER DCSWCS 3.16.8.B PER DCSWCS 2.2.10 II 12+70.29-0' (SEWER) 11+16.97-5.5'R (RIO VISTA) RIM=2352.27± INV IN=2341.09 (W) INV IN=(2339.31) (N) INV OUT=(2339.31) (S)

EX. SSMH #928 14+82.08-5.0'R RIM=(2352.32) INV=(2339.82)

EX. SSMH #968 10+22.92-5.5'R RIM=(2351.81) INV=(2339.11)

EX. 30" SEWER PER CLV #3077-4299

EX. 12.5' WIDE BLADED GRAVEL MULTI-USE TRAIL

EX. 40' MUTUAL PRIVATE ROAD EASEMENT PER OR:20030815:01521

EX. 120' PUBLIC SEWER EASEMENT PER DOC #20170104-0002415

EX. 27.5' C.L.V. PUBLIC DRAINAGE AND SEWER EASEMENT PER OR:20040503:03696

EX. 12.5' TRAIL EASEMENT TO CLV PER OR:20040503:03697

EX. 30' POWER & TELEPHONE EASEMENT RESERVED PER ORDER OF VACATION OR:20040503:02755

EX. 24' PUBLIC SEWER EASEMENT PER FMP-69341

EX. 50' RESERVED FOR ROADWAY & PUBLIC UTILITIES PER DEED OR:201:160815

EX. 10' POWER EASEMENT PER OR:20060413:03911

EX. TELE RISER TO REMAIN

EX. POWER POLE TO REMAIN

EX. WATER VALVE TO REMAIN

APN 125-22-502-013 GREENGALE PROPERTIES LLC

APN 125-22-502-010 GREENGALE PROPERTIES LLC

APN 125-22-601-027 LEMASTER JEFFREY & MICHELLE

N 12518.856 E 11281.261 VERIFY AND LOCATE EX. WELL CWMP # 18605 SEE ABANDONMENT NOTE THIS SHEET

NE 1/16 22

9/26/17 FOR REV 1 ONLY

9/26/17 FOR REV 2 ONLY

12/29/17 FOR REV 4 ONLY

UTILITY LEGEND

EX. GAS	EXISTING GAS
EX. 10"S	EXISTING SEWER MAIN
8"S	PROPOSED SEWER MAIN
	PROPOSED SEWER LATERAL
EX. 36"SD	EXISTING STORM DRAIN
36"SD	PROPOSED STORM DRAIN
EX. 8"W	EXISTING WATER MAIN
8"W	PROPOSED WATER MAIN
	PROPOSEDWATER LATERAL WITH 3/4" METER
	EXISTING UTILITY MANHOLE
	PROPOSED UTILITY MANHOLE
	EXISTING VALVE
	PROPOSED VALVE
	PROPOSED REDUCER
	PROPOSED STANDARD FIRE HYDRANT WITH 6" LATERAL, 6" GATE VALVE, AND TEE
BWV	BACK WATER VALVE
PRV	PRESSURE REDUCING VALVE
	EXISTING STREET LIGHT
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	PROPOSED 200w HPS STREET LIGHT
	PROPOSED 250w HPS STREET LIGHT
	PROPOSED 400w HPS STREET LIGHT
	PROPOSED CONCRETE DRIVEWAY

PRIVATE WELLS (WITH REVOCABLE RIGHTS) TO BE REMOVED FROM SERVICE

THE EXISTING PRIVATE WELL IS TO BE ABANDONED. THE DISTRICT WATER SERVICE WILL REMAIN IN THE OFF AND LOCKED POSITION UNTIL THE WELL HAS BEEN ABANDONED. THE STATE OF NEVADA DIVISION OF WATER RESOURCES (TELEPHONE NUMBER 702-486-2770) MAY BE CONTACTED FOR INFORMATION CONCERNING REQUIREMENTS AND PROCEDURES FOR ABANDONING WELLS. PROOF FROM THE STATE THAT THE WELL HAS BEEN ABANDONED AND IS NO LONGER FUNCTIONAL WILL BE REQUIRED AS A CONDITION OF PROJECT ACCEPTANCE AND SERVICE ACTIVATION.
GWMP# 18605
(ABANDONED PER WELL DRILLERS LOG REPORT #_____)

WELL ABANDONMENT

WELL SHALL BE ABANDONED PRIOR TO BRINGING ANY DOMESTIC CONNECTIONS INTO SERVICE.

WELL DRILLERS LOG NO.: _____

LVVWD ENGINEERING SERVICES WELL VERIFICATION DATE: _____

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

WATER NOTES

1. POC – 12" X 8" TAPPING SLEEVE WITH TAPPING VALVE, PER UDACS PL No. 34, 39 & SEC. 2.24.01A
2. POC – 12" TAPPING SLEEVE WITH TAPPING VALVE, PER UDACS PLATE No. 34, 39 & SEC. 2.24.01A
3. FIRE HYDRANT ASSEMBLY (INCLUDING 6" LATERAL, 6" GATE VALVE AND 8" X 6" TEE), PER UDACS PLATE 40 CONDITION G
4. INSTALL GATE VALVE (SIZE PER PIPE), PER UDACS PLATE No. 30 AND 39
5. 12" X 8" TEE, PER UDACS PLATE No. 31
6. TEE (SIZE PER PIPE), UDACS PLATE No. 31
7. 11.25° BEND (SIZE PER PIPE), PER UDACS PLATE No. 31
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9. 90° BEND (SIZE PER PIPE), PER UDACS PLATE No. 31
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13. INSTALL 3/4" IRRIGATION METER WITH 1" RPPA, PER UDACS PLATE No. 4 AND 8 AND SEC 2.17.01, WITH 6'X6' LVVWD NON-EXCLUSIVE ESMT

SEWER NOTES

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2. EXISTING 48"ø MANHOLE TO BE PROTECTED IN PLACE AND ADJUSTED TO GRADE
3. INSTALL 48" MANHOLE WITH PRECAST BASE, PER DCSWCS SD-1A, SD-1B, SD-4, WITH SINGLE 24" LID
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BACK WATER VALVE

BWV

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PRESSURE REDUCING VALVE

PRV

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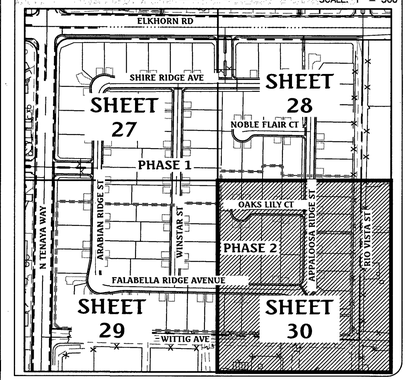
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

KEY MAP

SCALE: 1" = 300'



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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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Call before you Overhead 1-702-227-2929

NORTH
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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THE FIRE FLOW REQUIREMENT IS: 2,000 GALLONS PER MINUTE 20 PSI RESIDUAL PRESSURE.

BASED ON:	
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LARGEST AREA BETWEEN 4-HOUR SEPARATION WALLS:	N/A SQUARE FEET
BUILDING HEIGHT:	21 FEET-7 3/4 INCHES
NUMBER OF STORIES:	1 FLOOR
TYPE OF CONSTRUCTION:	V-NON RATED
OCCUPANCY:	RESIDENTIAL
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	NO

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

FIRE DEPARTMENT APPROVAL

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM LVVWD.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 01/16/17 PROJECT No.: 125391

LVVWD APPROVED FIRE FLOW 2000 GPM @ 20 PSI RESIDUAL

APPROVALS

LAS VEGAS FIRE AND RESCUE — DATE 1/25/18 (4) — 6/28/17

NO.	DESCRIPTION	DATE	APP'D
1	REVISE FIRE FLOW TO 2000 GPM, 6 HYDS @ 20 PSI	12/29/17	
2	ADD SEWER LATERALS	9/26/17	
3	ADDED CONSTRUCTION PHASE LINES AND ISOLATION VALVE & BLOW-OFF	9/14/17	
4		10/5/17	

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd. Suite B Las Vegas, Nevada 89146
Office: (702) 254-1480 Fax: (702) 254-3062 www.tritonmng.com

DR HORTON
ELKHORN 40 PHASE 1
UTILITY PLAN IV

PROFESSIONAL ENGINEER-STATE OF NEVADA JAMES M. PEARCE Exp. 12-31-17 CIVIL No. 9552 6-27-17

SHEET 30 OF 50/37
C.L.V. DWG.# 69184

PROJ.#:125391 AGR:116334 QS: 125-22-NE XC 11316

CC HTE #17-11784

10745059

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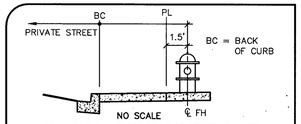
GENERAL UTILITY NOTES

1. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. 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 2.07.01 AND 2.07.02. FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED. ESN.059 REV. 09/10/09
3. NO FITTINGS SHALL FALL UNDER CURB, GUTTER AND/OR SIDEWALK (TYP.)
4. ALL EXISTING APPERTUNANCES, PROTECT IN PLACE, AND ADJUST TO FINISHED GRADE IF NECESSARY. ALL VALVES TO REMAIN IN SERVICE AT ALL TIMES.
5. MINIMUM 24" COVER DURING CONSTRUCTION PER UDACS SEC 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.
6. CONTRACTOR TO INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 15.
7. FOR ALL DRY AND UTILITY CROSSINGS MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING. MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.
8. ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.
9. ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS OF POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

UTILITY LEGEND

EX. GAS	EXISTING GAS
EX. 10"S	EXISTING SEWER MAIN
8"S	PROPOSED SEWER MAIN
	PROPOSED SEWER LATERAL
EX. 36"SD	EXISTING STORM DRAIN
36"SD	PROPOSED STORM DRAIN
EX. 8"W	EXISTING WATER MAIN
8"W	PROPOSED WATER MAIN
	PROPOSEDWATER LATERAL WITH 3/4" METER
	EXISTING UTILITY MANHOLE
	PROPOSED UTILITY MANHOLE
	EXISTING VALVE
	PROPOSED VALVE
	PROPOSED REDUCER
	PROPOSED STANDARD FIRE HYDRANT WITH 6" LATERAL, 6" GATE VALVE, AND TEE
BWV	BACK WATER VALVE
PRV	PRESSURE REDUCING VALVE
	EXISTING STREET LIGHT
	FUTURE STREET LIGHT
	PROPOSED 100w HPS STREET LIGHT
	PROPOSED 150w HPS STREET LIGHT
	PROPOSED 200w HPS STREET LIGHT
	PROPOSED 250w HPS STREET LIGHT
	PROPOSED 400w HPS STREET LIGHT
	PROPOSED CONCRETE DRIVEWAY

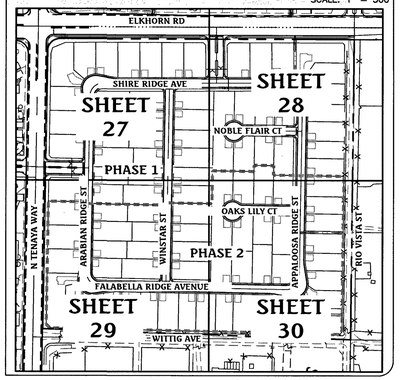


TYPICAL FIRE HYDRANT LOCATION DETAIL

FIRE HYDRANT TO BE INSTALLED PER UDACS PLATE No. 40, COND. G

KEY MAP

SCALE: 1" = 300'



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FAST Call before you Underground 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
Call before you Overhead 1-702-227-2929

NORTH
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

NOTE:
BACKFLOW PREVENTION IS REQUIRED FOR ALL LOTS UNTIL SUCH TIME THAT THE EXISTING WELL IS ABANDONED

FIRE DEPARTMENT APPROVAL

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM LVVWD.

APPROVED FOR CONSTRUCTION

Joanne Deon for BSM
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 07/06/17 PROJECT No.: 125391
LVVWD APPROVED FIRE FLOW 1,750 GPM @ 20 PSI RESIDUAL

APPROVALS

Scott Feimen 6/28/17
LAS VEGAS FIRE AND RESCUE DATE

1075059

NO.	DESCRIPTION	DATE	APP'D

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DR HORTON
ELKHORN 40 PHASE 1
UTILITY DETAILS

PROFESSIONAL ENGINEER — STATE OF NEVADA — JAMES M. PEARCE — Exp. 12-31-17 — CIVIL — No. 9552 — 6-27-17

SHEET 31 OF 50 (37)
C.L.V. DWG.# 69184

PROJ#:125391 AGR:116334 QS: 125-22-NE XC: 11316

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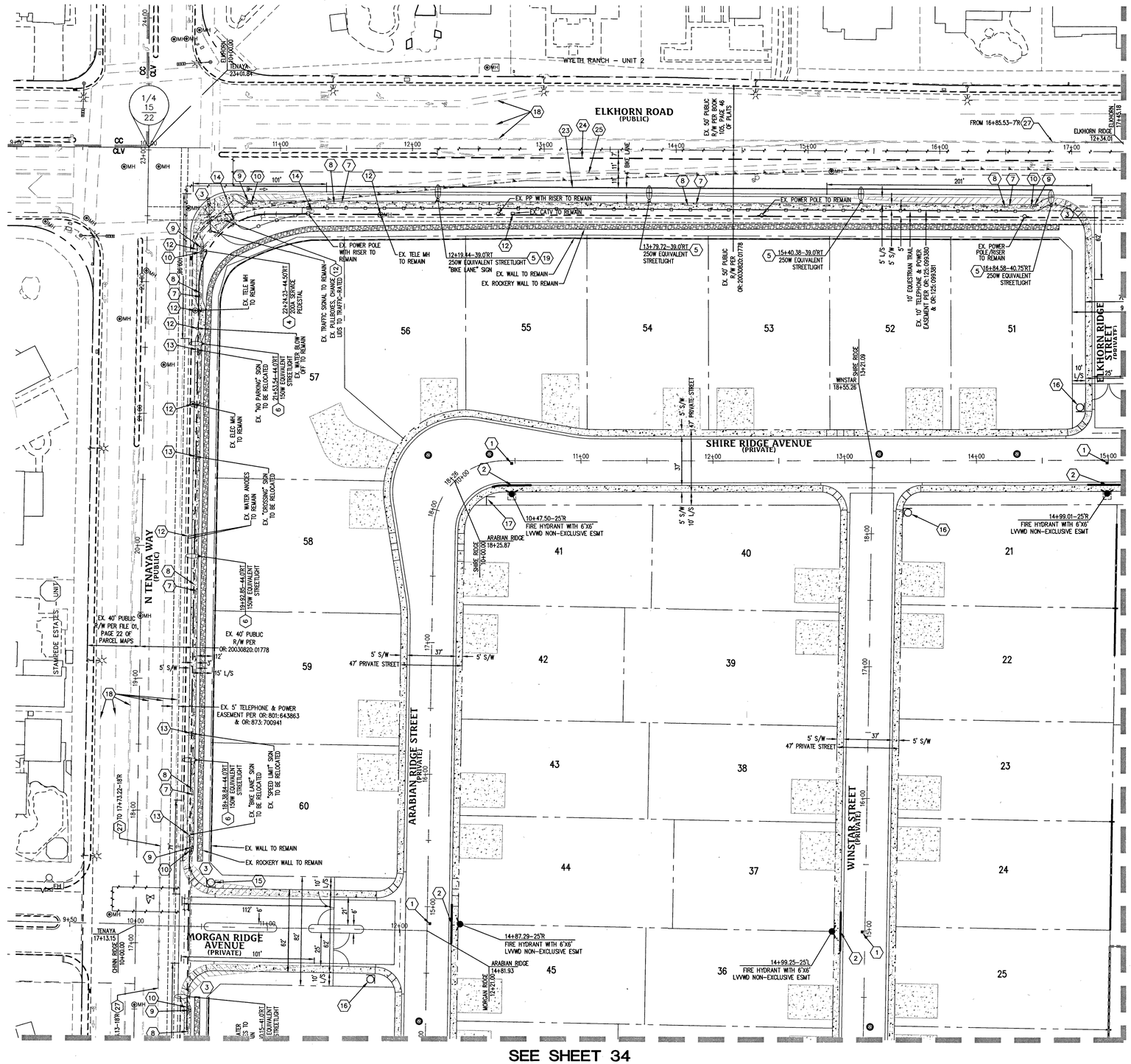
CC HTE #17-11784

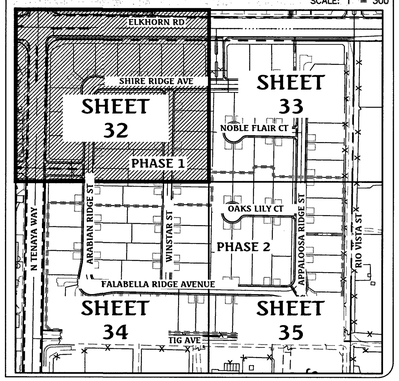


TRAFFIC NOTES

1. INSTALL BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER 18' FROM CURB FACE ADJACENT TO THE HYDRANT
2. INSTALL RED PAINT ON CURB (IN FRONT OF FIRE HYDRANT 15' IN EACH DIRECTION, CURB LENGTH PERMITTING)
3. SIGHT VISIBILITY ZONES INDICATED WITHIN HATCHED AREAS PER CCAUSD 201.2
4. INSTALL PUBLIC 200 AMP SERVICE PEDESTAL & FOUNDATION, PER CCAUSD #300, #331, #332.S2 AND #335.S2
5. INSTALL PUBLIC L.E.D. STREETLIGHT AND FOUNDATION (250 WATT EQUIVALENT) PER CCAUSD #314, #320 AND #321
6. INSTALL PUBLIC L.E.D. STREETLIGHT AND FOUNDATION (150 WATT EQUIVALENT) PER CCAUSD #314, #320 AND #321
7. INSTALL PUBLIC 2" STLT CONDUIT WITH (2)#4 & (1)#8 THW COPPER CONDUCTORS
8. INSTALL 4" FAST INTERCONNECT CONDUIT WITH #8 BARE TRACER WIRE & PULL CHORD.
9. INSTALL No. 3 1/2 CONCRETE PULLBOX WITH METAL COVER PER CCAUSD 326, 327 & 328
10. INSTALL P-30 PULLBOX WITH "FIBER OPTIC" INSCRIBED ON LID
11. STUB AND CAP CONDUIT 5' BEYOND BOUNDARY
12. EXISTING FACILITY TO REMAIN, ADJUST TO GRADE AS NECESSARY
13. EXISTING SIGN TO BE RELOCATED AS NECESSARY
14. EXISTING SIGN TO BE REMOVED
15. INSTALL 36" R1-1 STOP SIGN AND (2) 12" D-3 STREET NAME SIGNS
16. INSTALL 30" R1-1 STOP SIGN AND (2) 9" D-3 STREET NAME SIGNS (PRIVATE STREET NAME SIGNS TO BE WHITE LETTERING ON BROWN BACKGROUND)
17. INSTALL (2) 9" D-3 STREET NAME SIGNS (PRIVATE STREET NAME SIGNS TO BE WHITE LETTERING ON BROWN BACKGROUND)
18. EXISTING CENTERLINE/LANE LINE TO REMAIN
19. INSTALL R3-17 (BIKE LANE) SIGN ON STREETLIGHT POLE
20. INSTALL W4-2 (LANE REDUCTION TRANSITION) SIGN
21. INSTALL W9-2 (LANE ENDS) SIGN
22. INSTALL OM-3R SIGNS 2' FROM EDGE OF PAVEMENT AT 35' O.C. (9 TOTAL)
23. INSTALL 6" SOLID WHITE BIKE LANE LINE 4' FROM LIP OF GUTTER, PER CCAUSD 244.9
24. INSTALL TYPE 2 CENTERLINE, PER CCAUSD 244
25. INSTALL TYPE 4 LANE LINE, PER CCAUSD 244.1
26. END TYPE 4 LANE LINE
27. EXISTING CENTERLINE/LANE LINE TO BE OBLITERATED
28. 6" SOLID WHITE BIKE LANE LINE 5' FROM EDGE OF PAVEMENT, PER CCAUSD 244.9
29. INSTALL 6" WIDE WHITE PAINTED LINE
30. INSTALL 24" WIDE YELLOW CHEVRON STRIPES AT 25' O.C., PER CCAUSD 245
31. NOT USED
32. INSTALL 12" WIDE WHITE PAINTED LINE
33. INSTALL TYPE 1 CENTERLINE, PER CCAUSD 244
34. INSTALL RED PAINT ON CURB AS SHOWN
35. INSTALL R8-3I (NO PARKING FIRE LANE) SIGN
36. INSTALL W9-1R (RIGHT LANE ENDS) SIGN

KEY MAP

SCALE: 1" = 300'



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NORTH
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

LEGEND

- SIGHT VISIBILITY ZONE SEE CCAUSD #201.2 (NOTE: SEE THIS SHEET FOR DIMENSIONS)
- PROPOSED AC PAVING
- PROPOSED CONCRETE
- 200 AMP SERVICE PEDESTAL AND FOUNDATION
- L.E.D. STREETLIGHT – GE MODEL #ERS20H0EX5574GRAYEL OR EQUIVALENT (250 WATT EQUIVALENT)
- L.E.D. STREETLIGHT – GE MODEL #ERS10H0CX5404GRAY00B OR EQUIVALENT (150 WATT EQUIVALENT)
- 4" FAST INTERCONNECT CONDUIT WITH #8 WIRE & PULL CHORD.
- 2" STLT CONDUIT WITH (2)#4 & (1)#8 THW COPPER.

SVZ NOTE

NO WALLS, FENCES, SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES, FIRE HYDRANTS, TREES, AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM THE TOP OF CURB, OR WHERE NO CURB EXISTS, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE.

BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

APPROVALS

LAS VEGAS FIRE AND RESCUE — DATE 6/26/17

ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
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DR HORTON
ELKHORN 40 PHASE 1
TRAFFIC PLAN I

PROFESSIONAL ENGINEER – STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552
6-27-17

SHEET 32 OF 37
C.L.V. DWG.# 69184

CC HTE #17-11784

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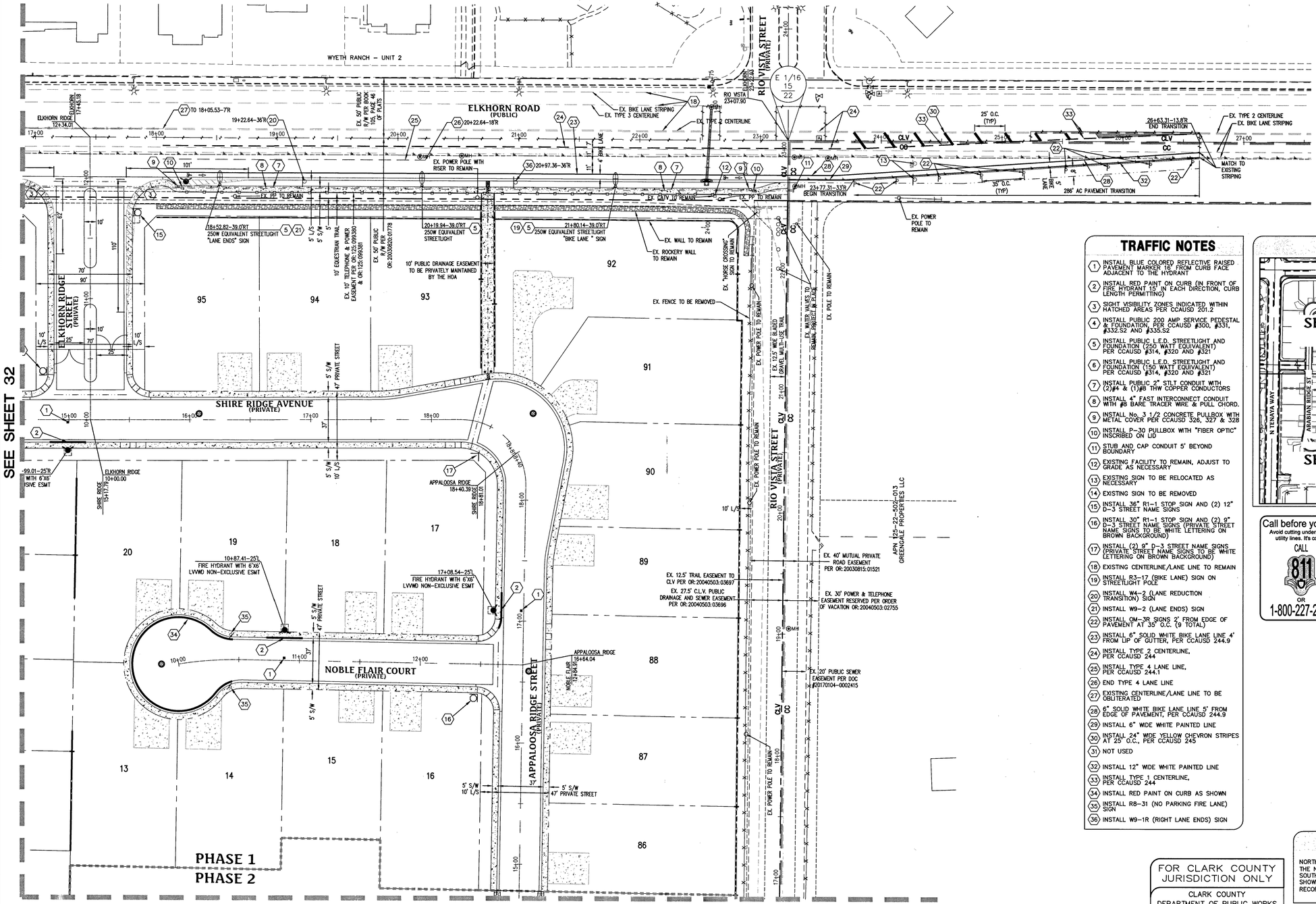

SIGN SALVAGE (CC)

REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS OR PAVEMENT MARKINGS), UNDER CITY OF LAS VEGAS' JURISDICTION, THAT ARE DISTURBED, DESTROYED, REMOVED OR MODIFIED BY TRENCHING ACTIVITY TO CLARK COUNTY'S SATISFACTION. ALL MATERIAL USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS OR WILL BE AN APPROVED EQUIVALENT.

CONTRACTOR SHALL EXERCISE CARE WITH ALL SALVAGED ITEMS AND SHALL ASSUME THAT ITEMS WILL BE USED AGAIN BY CLARK COUNTY. ALL SALVAGED EQUIPMENT SHALL HAVE ALL COMPONENTS INCLUDED AND DISASSEMBLED FROM THEIR MAIN COMPONENTS. ANY ITEMS TO BE RETURNED TO CLARK COUNTY TRAFFIC OPERATIONS SHALL INCLUDE A TRANSMITTAL FORM WITH THE CONTRACTOR'S COMPANY LETTERHEAD. THE TRANSMITTAL FORM SHALL INCLUDE THE ASSOCIATED PROJECT NAME AND NUMBER, AND A LIST OF ITEMS AND QUANTITIES OF ITEMS BEING RETURNED. CONTRACTOR SHALL CALL (702) 455-6000 TO MAKE AN APPOINTMENT FOR DROPPING OFF SALVAGED ITEMS.

TRAFFIC NOTES

1. INSTALL BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER 16' FROM CURB FACE ADJACENT TO THE HYDRANT
2. INSTALL RED PAINT ON CURB (IN FRONT OF FIRE HYDRANT 15' IN EACH DIRECTION, CURB LENGTH PERMITTING)
3. SIGHT VISIBILITY ZONES INDICATED WITHIN HATCHED AREAS PER CCAUSD 201.2
4. INSTALL PUBLIC 200 AMP SERVICE PEDESTAL & FOUNDATION, PER CCAUSD #300, #331, #332.S2 AND #335.S2
5. INSTALL PUBLIC L.E.D. STREETLIGHT AND FOUNDATION (250 WATT EQUIVALENT) PER CCAUSD #314, #320 AND #321
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11. STUB AND CAP CONDUIT 5' BEYOND BOUNDARY
12. EXISTING FACILITY TO REMAIN, ADJUST TO GRADE AS NECESSARY
13. EXISTING SIGN TO BE RELOCATED AS NECESSARY
14. EXISTING SIGN TO BE REMOVED
15. INSTALL 36" R1-1 STOP SIGN AND (2) 12" D-3 STREET NAME SIGNS
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18. EXISTING CENTERLINE/LANE LINE TO REMAIN
19. INSTALL R3-17 (BIKE LANE) SIGN ON STREETLIGHT POLE
20. INSTALL W4-2 (LANE REDUCTION TRANSITION) SIGN
21. INSTALL W9-2 (LANE ENDS) SIGN
22. INSTALL OM-3R SIGNS 2' FROM EDGE OF PAVEMENT AT 35' O.C. (9 TOTAL)
23. INSTALL 6" SOLID WHITE BIKE LANE LINE 4' FROM LIP OF GUTTER, PER CCAUSD 244.9
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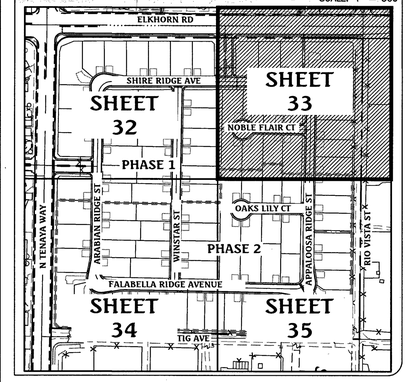
34. INSTALL RED PAINT ON CURB AS SHOWN
35. INSTALL R8-31 (NO PARKING FIRE LANE) SIGN
36. INSTALL W9-1R (RIGHT LANE ENDS) SIGN

KEY MAP

SCALE: 1" = 300'



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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
Call before you Overhead 1-702-227-2929

SIGN SALVAGE (CLV)

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BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

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APPROVALS

LAS VEGAS FIRE AND RESCUE — DATE 6/22/17

FOR CLARK COUNTY JURISDICTION ONLY

CLARK COUNTY
DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT REVIEW
Acceptance of plans for filing

By _____
Acceptance of these plans for filing shall not be construed to be a permit for or an approval of any violation of any of the provisions of the state or county laws and/or specifications. Clark County shall be held free from damages which may result from the construction of the improvements from the engineering design depicted herein.

NOTE: Power poles and/or other existing facilities not in proper location based on proposed improvements shown hereon will be relocated at no expense to Clark County.

NORTH
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

SVZ NOTE

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LEGEND

- SIGHT VISIBILITY ZONE SEE CCAUSD #201.2 (NOTE: SEE THIS SHEET FOR DIMENSIONS)
- PROPOSED AC PAVING
- PROPOSED CONCRETE
- 200 AMP SERVICE PEDESTAL AND FOUNDATION
- L.E.D. STREETLIGHT – GE MODEL #ERS20HXE5574GRAYEL OR EQUIVALENT (250 WATT EQUIVALENT)
- L.E.D. STREETLIGHT – GE MODEL #ERS10BXC5404GRAYDDB OR EQUIVALENT (150 WATT EQUIVALENT)
- 4" FAST INTERCONNECT CONDUIT WITH #8 WIRE & PULL CHORD.
- 2" STLT CONDUIT WITH (2)#4 & (1)#8 THW COPPER.

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SHEET 33 OF 50
C.L.V. DWG.# 69184

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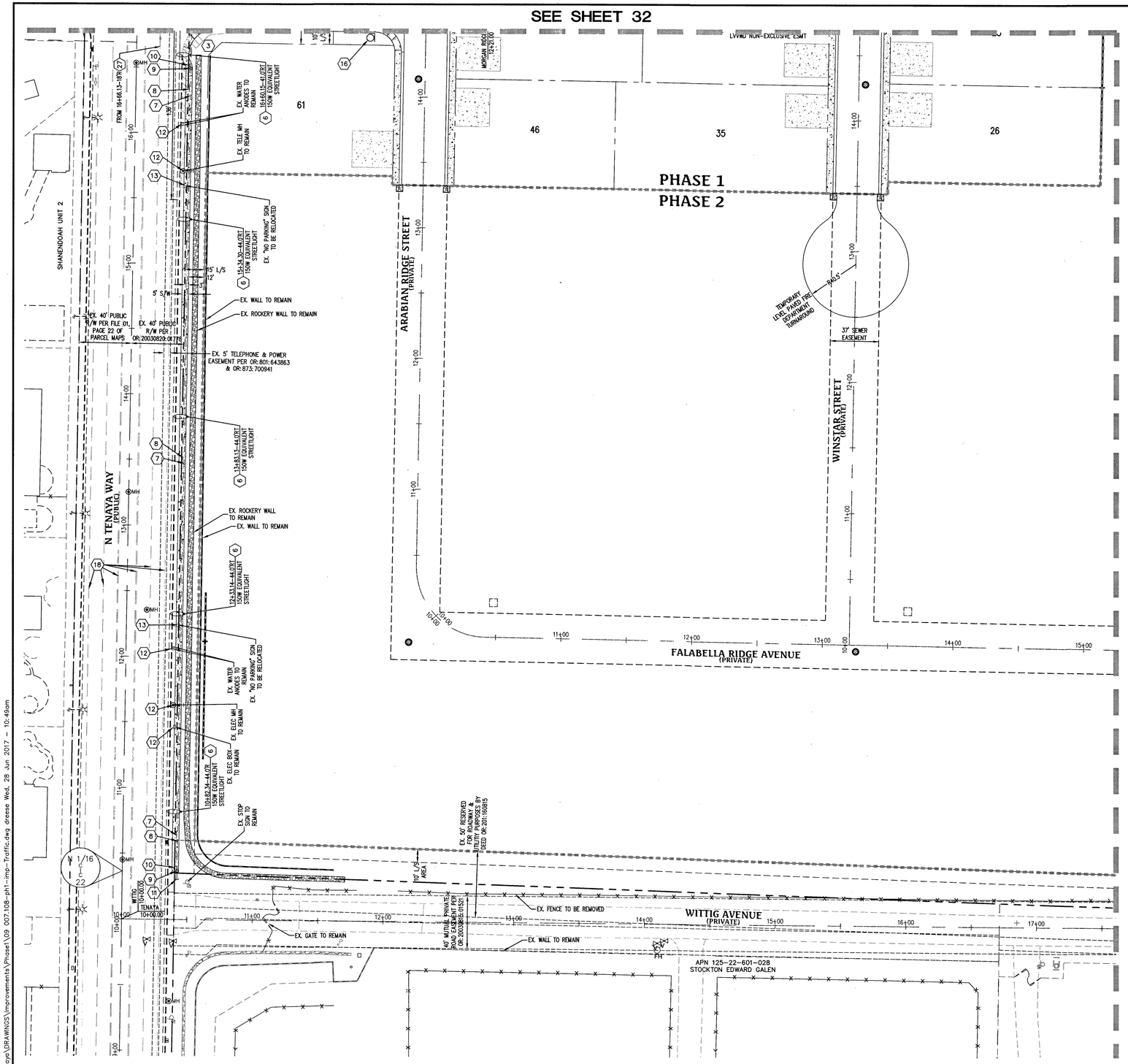

TRAFFIC NOTES

1. INSTALL BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER 18' FROM CURB FACE ADJACENT TO THE HYDRANT
2. INSTALL RED PAINT ON CURB (IN FRONT OF FIRE HYDRANT 15' IN EACH DIRECTION, CURB LENGTH PERMITTING)
3. SIGHT VISIBILITY ZONES INDICATED WITHIN HATCHED AREAS PER CCAUSD 201.2
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8. INSTALL 4" FAST INTERCONNECT CONDUIT WITH #8 BARE TRACER WIRE & PULL CHORD.
9. INSTALL No. 3 1/2 CONCRETE PULLBOX WITH METAL COVER PER CCAUSD 326, 327 & 328
10. INSTALL P-30 PULLBOX WITH "FIBER OPTIC" INSCRIBED ON LID
11. STUB AND CAP CONDUIT 5' BEYOND BOUNDARY
12. EXISTING FACILITY TO REMAIN, ADJUST TO GRADE AS NECESSARY
13. EXISTING SIGN TO BE RELOCATED AS NECESSARY
14. EXISTING SIGN TO BE REMOVED
15. INSTALL 36" R1-1 STOP SIGN AND (2) 12" D-3 STREET NAME SIGNS
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31. NOT USED
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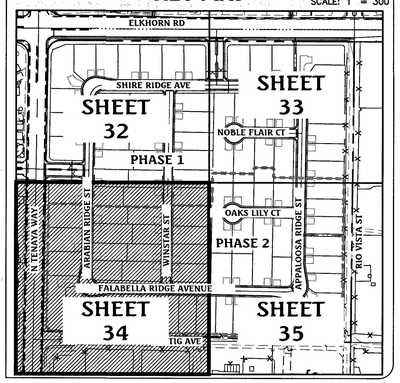
34. INSTALL RED PAINT ON CURB AS SHOWN
35. INSTALL R8-31 (NO PARKING FIRE LANE) SIGN
36. INSTALL W9-1R (RIGHT LANE ENDS) SIGN

KEY MAP

SCALE: 1" = 300'



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NORTH
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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- SIGHT VISIBILITY ZONE SEE CCAUSD #201.2 (NOTE: SEE THIS SHEET FOR DIMENSIONS)
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- 4" FAST INTERCONNECT CONDUIT WITH #8 WIRE & PULL CHORD.
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BASIS OF BEARING

NORTH 00°56'37" EAST, BEING THE BEARING OF THE WEST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 22, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 163, PAGE 26 OF SURVEYS.

BENCHMARK

CLARK COUNTY BENCHMARK STATION: 6LV90 15SSE6

RIVET AND PLATE IN TOP OF CURB AT THE NORTHWEST CORNER OF RIO VISTA AND ELKHORN ROAD.

ELEVATION = 717.800 METERS (NAVD'88 V.2003)
ELEVATION = 2354.98 US SURVEY FEET (NAVD'88 V.2003)

APPROVALS

LAS VEGAS FIRE AND RESCUE — DATE 6/28/17

ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.

10745059

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd. Office: (702) 254-1480
Suite 18 Fax: (702) 254-5062
Las Vegas, Nevada 89146 www.tritonvegas.com

DR HORTON
ELKHORN 40 PHASE 1
TRAFFIC PLAN III

JAMES W. PEARCE
Exp. 12-31-17
CIVIL
No. 9552
PROFESSIONAL ENGINEER – STATE OF NEVADA
6-27-17

SHEET 34 OF 50/77
C.L.V. DWG.# 69184

CC HTE #17-11784

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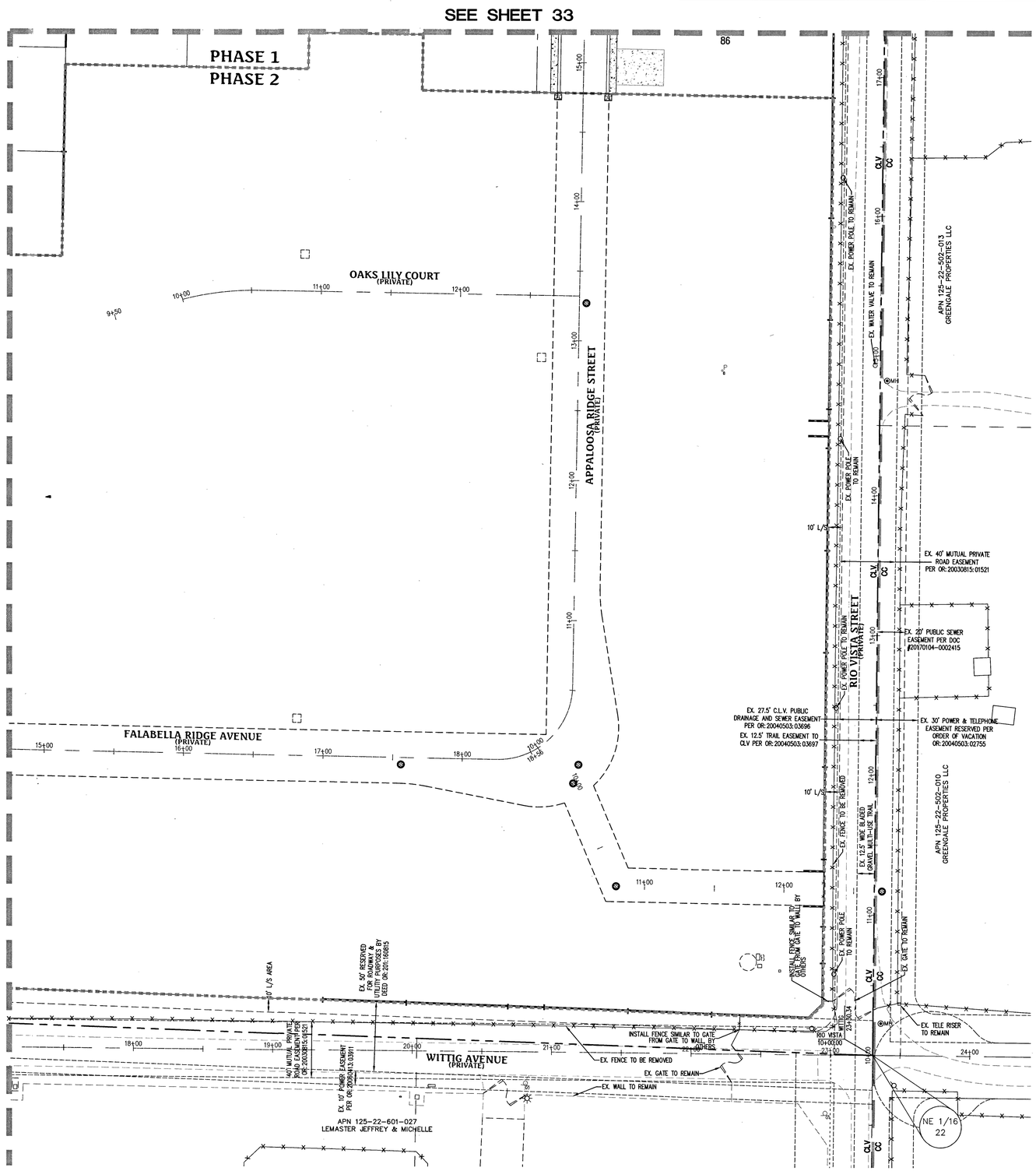

TRAFFIC NOTES

1. INSTALL BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER 18' FROM CURB FACE ADJACENT TO THE HYDRANT
2. INSTALL RED PAINT ON CURB (IN FRONT OF FIRE HYDRANT) 15' IN EACH DIRECTION, CURB LENGTH PERMITTING)
3. SIGHT VISIBILITY ZONES INDICATED WITHIN HATCHED AREAS PER CCAUSD 201.2
4. INSTALL PUBLIC 200 AMP SERVICE PEDESTAL & FOUNDATION, PER CCAUSD #300, #331, #332.S2 AND #335.S2
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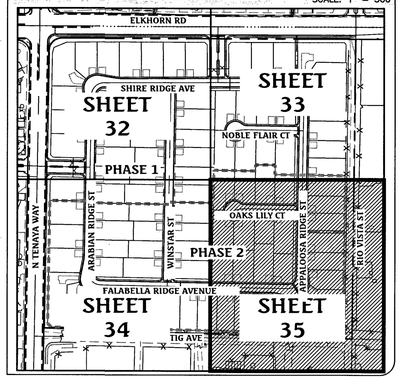
KEY MAP

SCALE: 1" = 300'



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GRAPHIC SCALE
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- SIGHT VISIBILITY ZONE SEE CCAUSD #201.2 (NOTE: SEE THIS SHEET FOR DIMENSIONS)
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- 4" FAST INTERCONNECT CONDUIT WITH #8 WIRE & PULL CHORD.
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LAS VEGAS FIRE AND RESCUE — DATE 6/28/17

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NO.	DESCRIPTION	DATE	APP'D

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DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : 1"=40'

Triton Engineering
6757 W. Charleston Blvd. Suite B Las Vegas, Nevada 89146
Office: (702) 254-1480
Fax: (702) 254-3062
www.tritonengr.com

DR HORTON
ELKHORN 40 PHASE 1
TRAFFIC PLAN IV

PROFESSIONAL ENGINEER – STATE OF NEVADA
JAMES M. PEARCE
Exp. 12-31-17
CIVIL
No. 9552
6-27-17

SHEET 35 OF 50 ~~37~~
C.L.V. DWG.# 69184

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10275059

CC HTE #17-11784

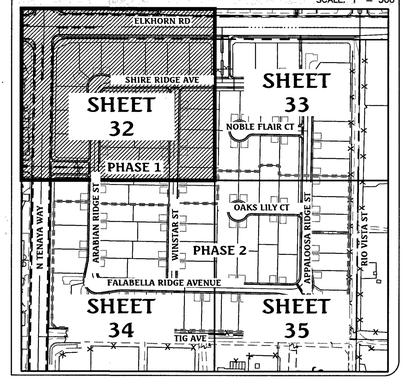
SIGN SALVAGE (CLV)

REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS OR PAVEMENT MARKINGS), UNDER CITY OF LAS VEGAS' JURISDICTION, THAT ARE DISTURBED, DESTROYED, REMOVED OR MODIFIED BY TRENCHING ACTIVITY TO CLV SATISFACTION. ALL MATERIAL USED SHALL MEET CLV SPECIFICATIONS OR WILL BE AN APPROVED EQUIVALENT.

CONTRACTOR SHALL EXERCISE CARE WITH ALL SALVAGED ITEMS AND SHALL ASSUME THAT ITEMS WILL BE USED AGAIN BY CLV. ALL SALVAGED EQUIPMENT SHALL HAVE ALL COMPONENTS INCLUDED AND DISASSEMBLED FROM THEIR MAIN COMPONENTS. ANY ITEMS TO BE RETURNED TO CLV SHALL INCLUDE A TRANSMITTAL FORM WITH THE CONTRACTOR'S COMPANY LETTERHEAD. THE TRANSMITTAL FORM SHALL INCLUDE THE ASSOCIATED PROJECT NAME AND NUMBER, AND A LIST OF ITEMS AND QUANTITIES OF ITEMS BEING RETURNED. CONTRACTOR SHALL CONTACT CITY OF LAS VEGAS TRAFFIC DEPARTMENT TO MAKE APPOINTMENT FOR RETURNING SALVAGED ITEMS.

KEY MAP

SCALE: 1" = 300'



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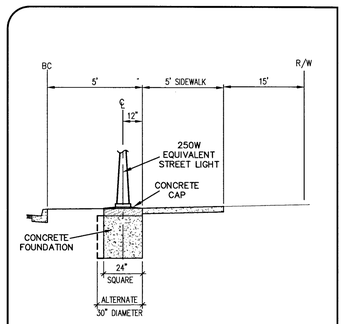
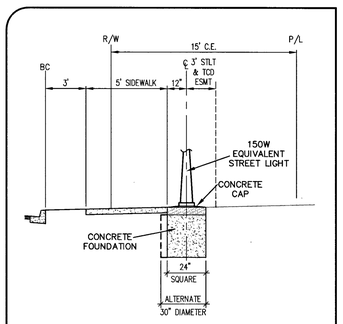
NORTH
GRAPHIC SCALE

40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

STREETLIGHT CIRCUIT CAPACITY VERIFICATION FOR CIRCUIT "A"				
IS THERE AN EXISTING SERVICE PEDESTAL IN THE FIELD (NOT PROPOSED) ADJACENT TO THIS PROPERTY THAT MIGHT BE ABLE TO BE USED TO POWER THIS PROJECTS STREETLIGHTS? (CIRCLE)		YES	CONTACT CITY OF LAS VEGAS TRAFFIC ENGINEERING DIVISION AT 702-229-6327 TO PERFORM CIRCUIT CAPACITY VERIFICATION.	
		NO	INSTALL A NEW SERVICE PEDISTAL.	
SERVICE PEDISTAL LOCATION: SOUTHEAST CORNER OF ELKHORN AND TENAYA				
CITY OF LAS VEGAS (COMPLETE IF EXISTING SERVICE):				
DATE OF CAPACITY VERIFICATION	–			
ENGINEER OF OFFSITE PLANS:				
PERSON WHO DID THE CALCULATIONS:	TRITION ENGINEERING			
CONSULTING ENGINEERING FIRM:	TRITION ENGINEERING			
CAPACITY CALCULATIONS				
1	CIRCUIT CAPACITY		60	AMPS
2	MAXIMUM CONTINUOUS CURRENT DRAW (80%)		48	AMPS
3	EXISTING CIRCUIT LOAD (ENTER 0 IF NEW)		0	AMPS
4	AVAILABLE (2 MINUS 3)		48	AMPS
PROPOSED LUMINAIRE LOAD TO CIRCUIT				
5	8	NUMBER OF 150W EQUIVALENT STLTS @ 1.0 AMPS/EA	8.0	AMPS
6	7	NUMBER OF 250W EQUIVALENT STLTS @ 1.5 AMPS/EA	10.5	AMPS
7		TOTAL PROPOSED ADDITIONAL LOAD (5 + 6)	18.5	AMPS
		REMAINING AVAILIBLE LOAD (4 MINUS 7)	29.5	AMPS



PRIVATE STREET STREET LIGHT LOCATION DETAIL
PER CCAUSD #320 & 321



PRIVATE STREET STREET LIGHT LOCATION DETAIL
PER CCAUSD #320 (MODIFIED) & 321

TRAFFIC SIGN GRAPHICAL DEPICTION

NOT TO SCALE

Main ST 400 — 9" (MINOR STREETS)	N Main ST 400 — 12" (MAJOR STREETS)
STOP — R1-1 — 30" — 36"	W4-2
LANE ENDS MERGE LEFT — W9-2	OM-3R
OM4-3	BIKE LANE — R3-17
RIGHT LANE ENDS — W9-1R	NO PARKING FIRE LANE — R8-31

LEGEND

- SIGHT VISIBILITY ZONE SEE CCAUSD #201.2 (NOTE: SEE THIS SHEET FOR DIMENSIONS)
- PROPOSED AC PAVING
- PROPOSED CONCRETE
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FOR CLARK COUNTY JURISDICTION ONLY

CLARK COUNTY
DEPARTMENT OF PUBLIC WORKS
DEVELOPMENT REVIEW
Acceptance of plans for filing

By _____

Acceptance of these plans for filing shall not be construed to be a permit for or an approval of any violation of any of the provisions of the state or county laws and/or specifications. Clark County shall be held free from damages which may result from the construction of the improvements from the engineering design depicted herein.

NOTE: Power poles and/or other existing facilities not in proper location based on proposed improvements shown hereon will be relocated at no expense to Clark County.

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APPROVALS

Scott Heinen 6/28/17
LAS VEGAS FIRE AND RESCUE — DATE

1075059

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DRAWN BY : –
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ADA CHECKED : –
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Triton Engineering
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ELKHORN 40 PHASE 1
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Exp. 12-31-17
CIVIL
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SHEET 36 OF 50 (37)
C.L.V. DWG.# 69184

CC HTE #17-11784

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ABBREVIATIONS

ABAN – ABANDON
AC – ASPHALTIC CONCRETE
AGGR – AGGREGATE
& – AND
APN – ASSESSOR PARCEL NUMBER
APPROX – APPROXIMATE
ASSY – ASSEMBLY
AVE – AVENUE

BC – BACK OF CURB
BCR – BACK OF CURVE RETURN
BK – BOOK/BACK
BLDG – BUILDING
BLK – BLOCK
BLM – BUREAU OF LAND MANAGEMENT
BLVD – BOULEVARD
BM – BENCHMARK
BO – BLOW OFF ASSEMBLY
BOC – BACK OF CURB
BOT – BOTTOM
BOW – BACK OF WALK
BRG – BEARING
BVC – BEGIN VERTICAL CURVE
BW – BACK OF WALK
BWV – BACK WATER VALVE
C/C – CENTER TO CENTER
C&G – CURB & GUTTER
CC – CLARK COUNTY
CCWRD – CLARK COUNTY WATER RECLAMATION DISTRICT
CE – COMMON ELEMENT
CI – CAST IRON
CIP – CAST IRON PIPE/ CAST IN PLACE
CIR – CIRCLE
CL OR C – CENTERLINE
CNLV – CITY OF NORTH LAS VEGAS
CO – COUNTY
COH – CITY OF HENDERSON
CONC – CONCRETE
CONT – CONTINUOUS
COORD – COORDINATE
CTR– CENTER
CV – CONTROL VALVE
Δ – DELTA ANGLE
D/W OR DWY – DRIVEWAY
DEPT – DEPARTMENT
DET – DETAIL
DEV – DEVELOPMENT
DG – DESIGN GRADE
DI – DROP INLET/DUCTILE IRON
DIA OR ø – DIAMETER
DIM – DIMENSION
DIP – DUCTILE IRON PIPE
DIR – DIRECTION
DIST – DISTANCE
DMH – DROP MANHOLE
DN – DOWN
DR – DRIVE
DWG – DRAWING

E – EAST/EDGE
EA – EACH
ECR – END OF CURVE RETURN
EG – EXISTING GROUND
ELEV – ELEVATION
EOS – EDGE OF SHOULDER
EP – EDGE OF PAVEMENT
EQ – EQUAL OR EQUATION
EQ SP – EQUALLY SPACED
ESMT – EASEMENT
EST – ESTIMATE
EVC – END OF VERTICAL CURVE
EXIST – EXISTING

F.A.S.T. – FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION
F/F – FACE TO FACE
FC – FACE OF CURB
FF – FINISHED FLOOR
FG – FINISHED GRADE
FH – FIRE HYDRANT
FIG – FIGURE
FL OR F – FLOW LINE
FLR – FLOOR
FN – FENCE
FND – FOUND
FOC – FACE OF CURB
FOW – FACE OF WALL
FPM – FEET PER MINUTE
FPS – FEET PER SECOND
FT – FOOT OR FEET
FTG – FOOTING
FUT – FUTURE

G/B – GRADE BREAK
GALV – GALVANIZED
GB – GRADE BREAK
GND – GROUND
GPD – GALLONS PER DAY
GPH – GALLONS PER HOUR
GPM – GALLONS PER MINUTE
GRD – GRADE
GRT – GRATE
GV – GATE VALVE

HORIZ – HORIZONTAL
HP – HIGH POINT
HPG – HIGH PRESSURE GAS
HT – HEIGHT
HWY – HIGHWAY

IN – INCH
INST – INSTALL
INT – INTERIOR
INV – INVERT
IRR – IRRIGATION

LB OR # – POUND
LEN OR L – LENGTH OF CURVATURE
LF – LINEAR FOOT
LG – LONG
LN – LANE
LT – LEFT/LIGHT
LVVWD – LAS VEGAS VALLEY WATER DISTRICT
LWR – LOWER

M – METER
MATL – MATERIAL
MAX – MAXIMUM
MECH – MECHANICAL
MFR – MANUFACTURER
MG – MILLION GALLONS
MGD – MILLION GALLONS PER DAY
MH – MANHOLE
MIN – MNIMUM
MISC – MISCELLANEOUS
MJ – MECHICAL JOINT
MKR – MARKER
ML – MORTAR LINED
MLC – MORTAR LINED & COATED
MVC – MIDDLE OF VERTICAL CURVE

N – NORTH
N/A – NOT APPLICABLE
NAP – NOT A PART
NDOT – NEVADA DEPARTMENT OF TRANSPORTATION
NE – NORTHEAST
NF – NORTH FACE
NG – NATURAL GROUNG
NO. OR # – NUMBER
NTS – NOT TO SCALE
NW – NORTHWEST

O/O – OUT TO OUT
OC – ON CENTER
OD – OUTSIDE DIAMETER
OF – OUTSIDE FACE
OHP – OVER HEAD POWER
OHTEL – OVER HEAD TELEPHONE
ORIG – ORIGINAL
OVFL – OVERFLOW

O/O – OUT TO OUT
OC – ON CENTER
OD – OUTSIDE DIAMETER
OF – OUTSIDE FACE
OHP – OVER HEAD POWER
OHTEL – OVER HEAD TELEPHONE
ORIG – ORIGINAL
OVFL – OVERFLOW

PL OR P – PROPERTY LINE
PAVMT – PAVEMENT
PB – PULL BOX
PC – POINT OF CURVE
PCC – POINT OF COMPOUND CURVE
PE – POLYETHYLENE
PED – PEDESTAL
PERM – PERMANENT
PERP – PERPENDICULAR
PH – PHASE
PI – POINT OF INTERSECTION
PKG – PACKAGE
PKWY – PARKWAY
PL – PLACE/PLATE/PARCEL LINE
PLT – PLATE (DRAWING)
POLY – POLYETHYLENE
PP – POWER POLE
PR – PAIR
PRC – POINT OF REVERSE CURVE/ PRECAST REINFORCED CONCRETE
PRELIM – PRELIMINARY
PROP – PROPOSED
PRV – PRESSURE REGULATING VALVE
PS – PUMP STATION
PSF – POUNDS PER SQUARE FOOT
PSI – POUNDS PER SQUARE INCH
PT – POINT/POINT OF TANGENT
PUE – PUBLIC UTILITY EASEMENT
PVI – POINT OF VERTICAL INTERSECTION
PVC – POLYVINYL CHLORIDE PIPE
QTR – QUARTER
QTY – QUANTITY

R – RADIUS
(R) – RADIAL
R/W – RIGHT OF WAY
RCB – REINFORCED CONCRETE BOX
RCP – REINFORCED CONCRETE PIPE
RD – ROAD
RED – REDUCER
REQD – REQUIRED
RET – RETURN
REV – REVISION OR REVERSE
ROW – RIGHT OF WAY
RPPA – REDUCED PRESSURE PRINCIPLE ASSYMBLY
RR – RAILROAD
RT – RIGHT

S – SOUTH/SLOPE
S/C – SAW CUT
SCCP – STEEL CYLINDER CONCRETE PIPE
SCH – SCHEDULE
SD – STORM DRAIN
SDMH – STORM DRAIN MANHOLE
SDWK – SIDEWALK
SE – SOUTHEAST
SEC – SECTION/SECOND
SEG – SEGMENT
SHLDR – SHOULDER
SHT – SHEET
SID – SPECIAL IMPROVEMENT DISTRICT
SIG – SIGNAL
SL – SLOPE
SLV – SLEEVE
SNWA – SOUTHERN NEVADA WATER AUTHORITY
SPEC(S) – SPECIFICATION(S)
SQ – SQUARE
SQ FT – SQUARE FOOT/FEET
SQ YD – SQUARE YARD
SS – SANITARY SEWER
ST – STREET
STA – STATION
STD – STANDARD
STL – STEEL
STLT – STREET LIGHT
SUR – SURVEY
SW – SIDEWALK OR SOUTHWEST
SY – SQUARE YARD
SYM – SYMBOL
SYS – SYSTEM

T&B – TOP & BOTTOM
TAN – TANGENT
TBM – TEMPORARY BENCH MARK
TC – TOP OF CURB
TD – TRENCH DRAIN
TEMP – TEMPORARY
THK – THICK(NESS)
THR BLK – THRUST BLOCK
TMH – TOP OF MANHOLE
TOF – TOP OF FOOTING
TOGR – TOP OF GRATE
TOP – TOP OF PIPE
TOR – TOP OF RIM
TOS – TOP OF SLAB
TOSW – TOP OF SIDEWALK
TOT – TOTAL
TOW – TOP OF WALL
TRC – TOP OF ROLL CURB
(TYP) – TYPICAL

UNO – UNLESS NOTED OTHERWISE
UPRR – UNION PACIFIC RAILROAD
USGS – UNITED STATES GEODETIC SURVEY
UTIL – UTILITY

V – VOLT OR VALVE
VAR – VARIES
VB – VALVE BOX
VCP – VITRIFIED CLAY PIPE
VC – VERTICAL CURVE
VEL – VELOCITY
VERT – VERTICAL
VG – VALLEY GUTTER
VOL – VOLUME
VPI – VERTICAL POINT OF INTERSECTION
W/ – WITH
W – WEST/WATER
W/O – WITH OUT
WD – WIDTH
WDN – WASTE DRAIN
WI – WROUGHT IRON
WL – WASTE LINE
WP – WORK POINT/WEATHER PROOF
WS – WATER SURFACE
WT – WEIGHT
WTR – WATER
WV – WATER VALVE
WWF – WELDED WIRE FABRIC
WWM – WELDED WIRE MESH

XFMR – TRANSFORMER
XFR – TRANSFER
XSEC – CROSS SECTION

YD – YARD
YLD – YIELD

CLARK COUNTY WATER RECLAMATION DISTRICT NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION; UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS, LATEST EDITION; THE UNIFORM STANDARDS FOR PUBLIC WORKS CONSTRUCTION OFF–SITE IMPROVEMENTS, CLARK COUNTY, NEVADA, AS AMENDED; AND THE UNIFORM PLUMBING CODE. CONTRACTOR SHALL ADVISE THE CONTROLLING AGENCY OF ANY CONFLICTS DISCOVERED BETWEEN THESE SPECIFICATIONS PRIOR TO PROCEEDING WITH THE WORK GOVERNED BY THE CONFLICTING REQUIREMENTS. THE ENGINEER AND/OR CONTRACTOR SHALL PROPOSE A RESOLUTION TO THE CONFLICT FOR REVIEW BY THE AGENCY PRIOR TO PERFORMING THE WORK AFFECTED BY THE CONFLICT. THE RESOLUTION SHALL GENERALLY BE IN THE MANNER THAT YIELDS THE HIGHER QUALITY AND/OR PERFORMANCE OF THE WORK. THE CONTROLLING AGENCY SHALL ISSUE WRITTEN APPROVAL FOR THE RESOLUTION OF THE CONFLICT WHICH SHALL BECOME A PART OF THE CONSTRUCTION DOCUMENTS FOR THE WORK.
2. THESE STANDARDS APPLY TO ALL CONSTRUCTION.
3. SEWER MAINS SHALL BE LAID INDIVIDUALLY IN TRENCHES THAT ARE INDEPENDENT FROM THE TRENCHES FOR OTHER UTILITIES.
4. ALL LATERALS SHALL BE LAID AT SLOPES NOT LESS THAN THE MINIMUM SLOPES SHOWN IN THESE SPECIFICATIONS.
5. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PERFORM CONSTRUCTION IN FULL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. SHOULD THE DEVELOPER, ENGINEER OR CONTRACTOR WISH TO MAKE CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS, SUCH CHANGES SHALL BE APPROVED BY THE AGENCY PRIOR TO CONSTRUCTION OF THE AFFECTED IMPROVEMENTS. CHANGES CONSTRUCTED WITHOUT AGENCY APPROVAL SHALL BE REMOVED BY THE CONTRACTOR AT ITS OWN EXPENSE AND THE WORK CONSTRUCTED AS DEPICTED IN THE APPROVED CONSTRUCTION DOCUMENTS.
6. SOIL TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 3.15 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION.
7. ALL AIR TESTING, VISUAL INSPECTIONS, SYSTEM CLEANING, DEFLECTION TESTING, TELEVISING, PRESSURE TESTING AND LEAKAGE TESTING SHALL BE IN ACCORDANCE WITH SECTION 3.19 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION.
8. CUT SHEETS CONFORMING TO SECTION 3.6 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CONTROLLING AGENCY FOR REVIEW BEFORE BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL AUTHORIZED BY THE AGENCY.
9. CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE AGENCY SHALL POSSESS A CLASS "A" LICENSE PER THE NEVADA STATE CONTRACTOR'S BOARD.
10. WHEN CONNECTING TO AN EXISTING STUB, CONTRACTOR SHALL CLEAN AND TEST BOTH THE NEW AND EXISTING PORTIONS OF THE LINE TO THE NEXT MANHOLE UPSTREAM/DOWNSTREAM.
11. ALL SANITARY SEWER MANHOLES SHALL BE LOCATED AND CONSTRUCTED SUCH THAT THEY ARE ACCESSIBLE TO CONVENTIONAL SEWER MAINTENANCE VEHICLES AT ALL TIMES AND UNDER ALL WEATHER CONDITIONS. THOSE MANHOLES INSTALLED ALONG ACCESS ROADS HAVING SINGLE POINTS OF ENTRY AND EGRESS (I.E. "DEAD–END ROADS") SHALL HAVE AT LEAST ONE LOCATION ALONG THE ACCESS ROAD HAVING SUFFICIENT WIDTH TO ALLOW TURN–AROUNDS OF VEHICLES HAVING INSIDE TURNING RADII OF 50–FEET.
12. ALL SEWER MAINS UNDER CONSTRUCTION SHALL HAVE A DEBRIS TRAP PER STANDARD DRAWING SD–30 AT THE POINT OF CONNECTION TO THE EXISTING SEWER SYSTEM UNTIL ALL CONSTRUCTION ACTIVITIES, INCLUDING FINAL TESTING, ARE COMPLETED AND THE SEWER IS READY FOR FINAL ACCEPTANCE BY THE AGENCY.
13. ALL MANHOLES UNDER CONSTRUCTION SHALL HAVE PLUGS PLACED IN THEIR OUTLET PIPES DURING ALL CONSTRUCTION ACTIVITIES TO PREVENT THE MIGRATION OF SEWER CONSTRUCTION DEBRIS DOWNSTREAM. THESE PLUGS MAY BE REMOVED FOR SHORT PERIODS AS NECESSARY TO ACCOMPLISH FINAL SEWER CLEANING AND TESTING TASKS PRIOR TO FINAL ACCEPTANCE OF THE IMPROVEMENTS.
14. PRIOR TO ANY SEWER MAIN BEING PLACED IN SERVICE AND AS A CONDITION OF FINAL ACCEPTANCE, ALL NEW SEWER MAINS SHALL BE TELEVISED IN ACCORDANCE WITH SECTION 3.19.1.E OF THE DESIGN STANDARDS.
15. IF ANY EXISTING MANHOLE HAVING A LINING SYSTEM IS BEING MODIFIED AS PART OF THE CONSTRUCTION OF THE NEW SANITARY SEWER, THAT LINING SYSTEM SHALL BE RESTORED TO ITS ORIGINAL CONDITION PRIOR TO THE MODIFICATIONS USING LINING MATERIALS AND SYSTEMS THAT ARE FULLY COMPATIBLE WITH THE ORIGINAL LINING.
16. FIELD–INSTALLED SEWER LINING SYSTEMS MAY NOT BE INSTALLED UNTIL AFTER ALL MANHOLE CONSTRUCTION TASKS ARE COMPLETED, INCLUDING BACKFILLING AND INITIAL GRADE ADJUSTMENTS, BUT PRIOR TO FINAL GRADE ADJUSTMENT.
17. NEW SEWERS HAVING GRADES OF 0.5 PERCENT OR LESS SHALL BE STAKED FOR CONSTRUCTION AT A MAXIMUM OF 25–FEET ON CENTER.
18. SEWER LATERALS SHALL BE CONNECTED TO SEWER MAINS ONLY. LATERALS MAY NOT BE CONNECTED TO SANITARY SEWER MANHOLES UNLESS APPROVED BY THE AGENCY.
19. SEWER PIPE MATERIAL, PIPE SPECIFICATION, WALL THICKNESS, INTERNAL DIAMETER AND PIPE SLOPE SHALL BE UNIFORM BETWEEN MANHOLES. CHANGES IN PIPE MATERIALS, SPECIFICATIONS, WALL THICKNESSES, INTERNAL DIAMETERS AND/OR PIPE SLOPES SHALL BE MADE AT MANHOLES ONLY.
20. LOCATOR RIBBON AND MARKER BALLS SHALL BE PLACED ABOVE ALL NEW SANITARY SEWERS, LATERALS AND FORCE MAINS IN ACCORDANCE WITH SECTION 3.14 OF THE DESIGN STANDARDS.
21. MANHOLE PROTECTION NOTE: WHEN ADJUSTING MANHOLES, THE CONTRACTOR SHALL INSTALL PLYWOOD COVERS IN SANITARY SEWER MANHOLE INVERTS AS WELL AS STEEL PLATE COVERS OVER MANHOLES (AFTER MANHOLE RINGS/FRAMES ARE REMOVED) TO PREVENT DEBRIS FROM ENTERING SEWER MANHOLES AND CORRESPONDING LINES. DEBRIS IN THE MANHOLES SHALL BE REMOVED PRIOR TO PLYWOOD REMOVAL. PLYWOOD AND STEEL COVERS FOR MANHOLES SHALL BE INSTALLED AND REMOVED IN THE PRESENCE OF CCWRD INSPECTOR. ALL DEBRIS DROPPED INTO THE SEWER MANHOLES AND CORRESPONDING LINES SHALL BE RETRIEVED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL CLEAN (E.G., JET VAC OR EQUIVALENT) THE DEBRIS OUT OF THE AFFECTED MANHOLES AND/OR SEWER LINES IN THE PRESENCE OF CCWRD INSPECTOR AND APPROVED BY THE CONSTRUCTION MANAGER.
22. MANHOLE ADJUSTMENTS SHALL BE PER DCSWCS, LATEST EDITION, PER SD4 AND SD5. IF CORROSION PROTECTION EXISTS ON MANHOLE CONCRETE SURFACES, CONTRACTOR SHALL PREPARE SURFACE AND REAPPLY IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. CCWRD INSPECTOR SHALL BE PRESENT DURING THE WORK, AT AGENCY DISCRETION. CONTRACTOR SHALL COORDINATE A MINIMUM OF 24 HOURS IN ADVANCE OF THE WORK.

DEPARTMENT OF PUBLIC WORKS TRAFFIC NOTES

1. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF–SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.

2. BEFORE ANY WORK IS STARTED IN THE RIGHT–OF–WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY GROUND MOUNTED STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING COUNTY STREETS IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.

3. ALL CONSTRUCTION SIGNING, BARRICADING AND PAVEMENT MARKINGS SHALL CONFORM TO THE NEVADA WORK ZONE TRAFFIC CONTROL HANDBOOK – 1986 AND TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.

4. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE COUNTY TRAFFIC MANAGER.

5. THE DEVELOPER SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL PERMANENT SIGNS SHOWN ON THE PLANS. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CLARK COUNTY AREA STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGNPOSTS SHALL BE INSTALLED IN ACCORDANCE WITH CLARK COUNTY AREA STANDARDS. ALL SIGNS SHALL USE CLASS VI SHEETING.

6. IF A PROPOSED STREET LIGHT STANDARD IS FIELD LOCATED TO WITHIN FIVE (5) FEET OF ANY SIGN SHOWN HEREON TO BE MOUNTED ON A SIGN POST, CHANGE SIGN MOUNTING TO ONE ON THE STREETLIGHT STANDARD.

7. PRIOR TO CONSTRUCTION, THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE CURRENT PLANNING DIVISION OF THE DEPARTMENT OF COMPREHENSIVE PLANNING.

8. ALL TRAFFIC SIGNAL POLE ASSEMBLIES, STEEL PEDESTAL FOR CABINETS AND STREET LIGHT POLES SHALL BE GALVANIZED PER ASTM A.123.

9. ALL STREET LIGHTING INSTALLATIONS EXCEPT NOTED ON THE STREET LIGHTING PLANS SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFF–SITE IMPROVEMENTS CLARK COUNTY AREA, NEVADA, LATEST EDITION OF EACH.

10. THE FOLLOWING CLARK COUNTY UNDERGROUND FACILITIES MAY BE LOCATED IN YOUR PROJECT AREA: STREET LIGHTING, TRAFFIC SIGNALS, AND FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.) INTERCONNECT CABLE. YOU MUST CONTACT CLARK COUNTY TRAFFIC MANAGEMENT DIVISION, OPERATIONS UNIT AT 455–6000 FOR LOCATIONS AT LEAST 48 HOURS PRIOR TO WORKING IN THE AREA. CLARK COUNTY IS NOT A MEMBER OF "CALL BEFORE YOU DIG" (UNDERGROUND SERVICE ALERT), AND A CALL TO THAT ORGANIZATION DOES NOT RELIEVE YOU OF LIABILITY FOR CLARK COUNTY FACILITIES.

11. F.A.S.T. INTERCONNECT CABLE POLICY IS IN EFFECT. INTERCONNECT CABLE MUST BE MAINTAINED AT ALL TIMES. DEVELOPER/CONTRACTOR SHALL PROVIDE TEMPORARY OVERHEAD INTERCONNECT CABLE WHILE PERMANENT CABLE IS BEING RELOCATED. TEMPORARY AERIAL INSTALLATION MUST BE ACCEPTABLE TO THE COUNTY TRAFFIC MANAGER AND TO F.A.S.T. ANY DAMAGE TO THIS CABLE IS DEEMED IN EMERGENCY BY F.A.S.T., CITY OF LAS VEGAS, CLARK COUNTY AND NDOT AND MUST BE REPAIRED IMMEDIATELY TO F.A.S.T. ACCEPTANCE. $2,500 PER DAY DAMAGES MAY BE ASSESSED AFTER 24 HOURS HAS ELAPSED FROM TIME OF BREAK OR DAMAGE.

12. ALL NEW OR REPLACEMENT TRAFFIC SIGNAL LOOPS SHALL BE INSTALLED USING CABLE–IN–DUCT WIRING, SHALL HAVE INDEPENDENT LEAD–IN WIRES FOR EACH LOOP FROM THE CONTROLLER TO THE PULL–BOX, AND EACH LEAD–IN SHALL BE INDIVIDUALLY TAGGED.

13. TRAFFIC SIGNAL PEDESTRIAN HEADS SHALL BE THE L.E.D. TYPE.

14. ELECTRICAL POWER SERVICE POINT LOCATION(S) FOR STREET LIGHTING AND TRAFFIC SIGNALS MUST BE INDICATED ON THE PLANS. IF CONNECTING TO AN EXISTING CIRCUIT, INDICATE LOCATION OF EXISTING SERVICE POINT FOR EACH CIRCUIT.

15. WHEN STREETLIGHTS ARE TO BE CONNECTED TO AN EXISTING CIRCUIT, THE ENGINEER MUST CERTIFY THAT THE EXISTING CIRCUIT IS CAPABLE OF HANDLING THE ADDITIONAL CIRCUIT LOAD.

16. CLARK COUNTY RESERVES THE RIGHT TO REJECT STREET LIGHT AND TRAFFIC SIGNAL POLES AND ASSEMBLIES WHICH HAVE A "STRIPED" APPEARANCE.

17. TWO WEEKS PRIOR TO BEGINNING OF CONSTRUCTION, MODIFICATION OR RELOCATION OF ANY TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CLARK COUNTY TRAFFIC MANAGEMENT DIVISION OF THE DATE THAT WORK WILL BEGIN.

18. THREE (3) NORMAL WORKING DAYS PRIOR TO TURN–ON OR COMPLETION OF MODIFICATION(S) TO A TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CLARK COUNTY TRAFFIC MANAGEMENT DIVISION THAT WORK IS BEING COMPLETED AND THE PROPOSED DATE OF COMPLETION.

FIRE DEPARTMENT NOTES

VIII. FIRE PREVENTION BUREAU GENERAL NOTES
UNIFORM GUIDELINES, INSTALLATION, AND SPECIFICATION OF FIRE HYDRANTS

A. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CLARK COUNTY FIRE CODE AS AMENDED, AND THE 2007 EDITION OF NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #24.

B. FIRE HYDRANTS AND WATER SUPPLIES FOR FIRE PROTECTION SHALL BE AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION IN ACCORDANCE WITH SECTION 1412 OF THE CLARK COUNTY FIRE CODE, AS AMENDED.

C. IF DURING CONSTRUCTION IT BECOMES NECESSARY TO CLOSE ANY CONTROL VALVE OR PLACE A HYDRANT OUT OF SERVICE, APPROVAL SHALL BE OBTAINED FROM THE FIRE PREVENTION BUREAU PRIOR TO PLACING THE HYDRANT OUT OF SERVICE.

D. PAINTING OF CURBS AND/OR STRIPING OF ASPHALT AREAS AND PROTECTION OF HYDRANTS FROM PHYSICAL INJURY SHALL BE PER THE FIRE HYDRANT INSTALLATION SPECIFICATIONS OF THE FIRE PREVENTION BUREAU.

E. NO FIRE HYDRANT SHALL BE LOCATED WITHIN 25 FEET OF ANY STRUCTURE, OR 6 FEET OF A DRIVEWAY, POWER POLE, LIGHT STANDARD, OR ANY OTHER OBSTRUCTION. FOR WALL, FENCE AND PLANTER LOCATIONS, A PERIMETER AROUND THE HYDRANT MEASURING A MINIMUM OF 3 FEET FROM ITS EXTERIOR SHALL BE MAINTAINED CLEAR OF ALL OBSTRUCTION AT ALL TIMES.

F. FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS, WITH A MINIMUM VEHICLE LOAD OF 18,000 POUNDS PER AXLE, AND SHALL BE SURFACED AND PAVED SO AS TO PROVIDE ALL–WEATHER DRIVING CAPABILITIES.
EXCEPTION: TEMPORARY ACCESS ROADS SERVING ONLY BUILDINGS UNDER CONSTRUCTION SHALL NOT BE REQUIRED TO BE PAVED, BUT SHALL COMPLY WITH ALL OTHER REQUIREMENTS OF SECTION 503.2.3 OF THE CLARK COUNTY FIRE CODE.

G. PRIOR TO ACCEPTANCE OF ANY FIRE SERVICE MAIN, A SATISFACTORY HYDROSTATIC TEST WITH PIPING JOINTS UNCOVERED MUST BE CONDUCTED. APPROVED PLANS, AN INSTALLATION PERMIT AND A CONTRACTOR'S MATERIALS AND TEST CERTIFICATE MUST BE PROVIDED AT TIME OF INSPECTION. SCHEDULE INSPECTION AT WWW.CLARKCOUNTYNV.GOV/DEPTS/DEVELOPMENT_SERVICES/FIRE_PREVENTION.

H. FIRE HYDRANTS SHALL BE LOCATED 4' TO 7' FROM BACK OF CURB AND A MINIMUM OF 6 FEET AWAY FROM TURNS.

I. BLUE REFLECTIVE MARKERS MUST BE INSTALLED BEFORE FINAL HYDRANT ACCEPTANCE CAN BE ATTAINED (SECTION C107 OF THE CLARK COUNTY FIRE CODE, AS AMENDED).

J. FIRE HYDRANTS THAT ARE PROPOSED FOR INSTALLATION IN PUBLIC WATER SYSTEMS SHALL BE IN ACCORDANCE WITH APPROVED FIRE HYDRANTS AS ALLOWED BY THE WATER PURVEYOR. HYDRANTS PROPOSED FOR INSTALLATION ON PRIVATE WATER SYSTEMS SHALL BE IN ACCORDANCE WITH APPROVED FIRE HYDRANTS AS ALLAOWED BY THE FIRE PREVENTION BUREAU.

STORMWATER MANAGEMENT NOTES

A) THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.

B) ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN **CLARK COUNTY TITLE 24.40** AND THE **LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.**

C) TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.

D) AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMP'S WEEKLY AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12

E) ACCUMULATED SEDIMENT IN BMP'S SHALL BE REMOVED WITHIN 7 DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50% OR MORE.

DEPARTMENT OF PUBLIC WORKS CONSTRUCTION NOTES

1. **INSPECTIONS ARE REQUIRED.** CALL 24 HOURS IN ADVANCE AT (702) 455–4610. YOUR PERMIT, APPROVED PLANS, AND BARRICADE PLANS FOR THIS WORK MUST BE ON THE JOB SITE AT ALL TIMES.

2. EXACT LOCATION OF ALL SAW–CUT LINES SHALL BE DETERMINED IN THE FIELD BY A CLARK COUNTY INSPECTOR.

3. CURB AND GUTTER WITH A GRADE OF LESS THAN 4/10 OF ONE PERCENT SHALL BE CONSTRUCTED BY FORMING. EACH JOINT SHALL BE CHECKED FOR GRADE PRIOR TO CONSTRUCTION AND WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION.

4. FINAL ASPHALTIC CONCRETE (AC) PAVEMENT SURFACES SHALL BE ONE–HALF (1/2") INCH ABOVE THE LIP OF THE GUTTER (INCLUDING OPEN GRADE).

5. ALL OFF–SITE IMPROVEMENT CONSTRUCTION SHALL CONFORM TO THE **UNIFORM STANDARD SPECIFICATIONS AND STANDARD DRAWINGS CLARK COUNTY AREA NEVADA** AND **CLARK COUNTY SUPPLEMENT TO UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS, LATEST REVISION.**

6. PRIVATE STREETS, CURB & GUTTER, AND VALLEY GUTTERS REFLECTED ON THESE PLANS ARE TO BE INSPECTED BY A CLARK COUNTY INSPECTOR.

7. WHEEL CHAIR RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS SHALL BE DETERMINED IN THE FIELD BY A CLARK COUNTY INSPECTOR.

8. PROPER SIGNS, BARRIERS, BARRICADES AND LIGHTS SHALL BE PLACED AND MAINTAINED IN ACCORDANCE WITH THE LATEST **MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.** TRAFFIC, SCHOOL, OR STREET SIGNS OF ANY KIND ARE NOT TO BE MOVED FOR ANY REASON WITHOUT FIRST COORDINATING WITH THE DEPARTMENT OF PUBLIC WORKS OFF–SITE INSPECTOR AT (702) 455–4610.

9. THIS PLAN DOES NOT AUTHORIZE CLOSURE OF ANY ROAD OR STREET.

10. NO OPEN TRENCH SHALL BE ALLOWED ACROSS ANY STREET OR WITHIN TEN (10) FEET OF ANY TRAVEL–WAY, EXCEPT WHEN WORK IS IN ACTUAL PROGRESS. AREAS COVERED BY ACCEPTABLE STEEL PLATE ARE NOT TO BE CONSTRUED AS A TRENCH. NO OPEN TRENCH IS PERMITTED IN EXCESS OF 500 FEET OR LENGTH NECESSARY TO ACCOMMODATE PIPE INSTALLATION IN A SINGLE DAY, WHICHEVER IS GREATER. ALL TRENCH CROSSINGS AND BACKFILL SHALL MEET THE STANDARD SPECIFICATION UNLESS OTHERWISE STATED.

11. A TEMPORARY PATCH IS TO BE IN PLACE AT THE END OF EACH WORK DAY WHERE THE BACKFILL IN THE TRENCH HAS BEEN COMPLETED AND PRIOR TO OPENING THE WORK AREA BACK TO TRAFFIC AND IS TO BE MAINTAINED BY THE PERMITTEE. A PERMANENT PATCH IS TO BE IN PLACE WITHIN THIRTY (30) DAYS AFTER THE INSTALLATION OF THE TEMPORARY PATCH.

12. COMPACTION TESTS ARE REQUIRED.

NO.	DESCRIPTION	DATE	APP'D

DATE : 06/27/17
PM : J. PEARCE
DRAWN BY :
DESIGNED BY :
CHECKED BY :
ADA CHECKED :
JOB NO. : 007.108
SCALE : NONE

Triton Engineering
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DR HORTON
ELKHORN 40 PHASE 1
CLARK COUNTY GENERAL NOTES

PROFESSIONAL ENGINEER – STATE OF NEVADA
JAMES M. PEARCE
Exp. 12–31–17
CIVIL
No. 9552
6-27-17

SHEET 37 OF ~~37~~ 50
C.L.V. DWG.# 69184

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107Y5059

CC HTE #17–11784

Q:\Triton Drawings\007.108 Elkhorn Tenaya\DRAWINGS\Improvements\Phase1\10 007.108–ph1–imp–CCNotes.dwg dreese Tue, 27 Jun 2017 – 1:33pm

LANDSCAPE ARCHITECTURE: **SUNSTATE STUDIOS**

LANDSCAPE ARCHITECTURE
& LAND PLANNING
5080 Cameron Street, Las Vegas, NV89138
702-798-1776
www.sunstatestudios.com

PROJECT: # Elkhorn 40
Streetscape & Common Area
Henderson, Nevada

DEVELOPER: # D.R. Horton
Whitney Ranch Dr. #141
Henderson, NV 89014

SHEET INDEX:

SHEET NO:	DRAWING NO:	SHEET TITLE:
1	LA-0	Cover Sheet
2	LA-1	Planting Plan
3	LA-2	Planting Plan
4	LA-3	Planting Plan
5	LA-4	Planting Plan
6	LA-5	Planting Details, Legend & Notes
7	LA-6	Details
8	LA-7	Irrigation Plan
9	LA-8	Irrigation Plan
10	LA-9	Irrigation Plan
11	LA-10	Irrigation Plan
12	LA-11	Irrigation Details, Legend & Notes
13	LA-13	Irrigation Details

APPROVALS

I agree to comply with the requirements of the landscape regulations and submit a complete landscape documentation package.

Landscape Architect: Thinh Tran, RLA #820 — Date

Development Services/Project Owner — Date

VICINITY MAP N.T.S

D·R·HORTON America's Builder
1081 Whitney Ranch DR. #141
Henderson, NV 89014

PROJECT NAME
Elkhorn 40
Streetscape & Common Area
Elkhorn Rd & Rio Vista St
APN:125-22-501-001 36.53

REVISIONS

No.	Date	Description
	04-07-2017	100% REVIEW
	07-12-2017	100%

SHEET TITLE
Cover Sheet

Scale: n.t.s.
Date drawn: 03-14-2017
Drawn by: FD/LT/TT
Designed by: LT/TT
Approved by: TT
Job Number: 800145

Sheet No. 01
Drawing No. LA-0

10785059 L-69184

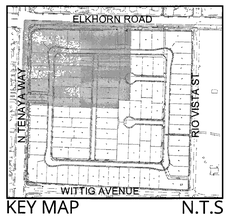
NOTE:
- SEE SHEET LA-5 FOR PLANTING DETAILS LEGEND & NOTES
- SEE SHEET LA-7 TO LA-10 FOR IRRIGATION PLANS
- SEE SHEET LA-12 FOR IRRIGATION DETAILS

KEYNOTES

1	SHRUB PLANTING	LA-5
2	3/4" ROCK MULCH THOUGH OUT PLANTING AREA	LA-5
3	TREE PLANTING	LA-5
4	ROOT BARRIER	LA-5
5	GROUND COVER	LA-5
6	PALM PLANTING	LA-5
7	LANDSCAPE GRANITE BOULDER	LA-6
8	VAPOR BARRIERS	LA-6
9	LANDSCAPE UPLIGHT	LA-6
10	LANDSCAPE LIGHTING	LA-6
11	HORSE TRAIL	LA-6
12	HORSE TRAIL VINYL FENCING	LA-6
13	EXISTING PLANTING TO BE REMOVED	LA-5
14	EXISTING PLANTING TO REMAIN	LA-5
15	EXISTING PLANTING TO BE RELOCATED	LA-5
16	RELOCATED WASHINGTONIA ROBUSTA	LA-5
17	CONCRETE SIDEWALK PER CIVIL PLANS	

NOTE:
PER THE GEOTECH REPORT 12902-LVR BY GEOTEK RESIDENTIAL, LLC OF APRIL 27, 2016 IT IS RECOMMENDED TO INSTALL ROOT AND VAPOR BARRIERS TO STRUCTURE WITHIN PLANTING AREA. WITHOUT VAPOR BARRIER, ALL PLANTING MATERIAL TO INSTALL MIN. 5' AWAY FROM ANY STRUCTURE.

NORTH
0 30' 60'
SCALE 1"=30'-0"



KEY MAP N.T.S

D·R HORTON
America's Builder
1081 Whitney Ranch DR. #141
Henderson, NV 89014

PROJECT NAME
Elkhorn 40
Streetscape & Common Area
Elkhorn Rd & Rio Vista St
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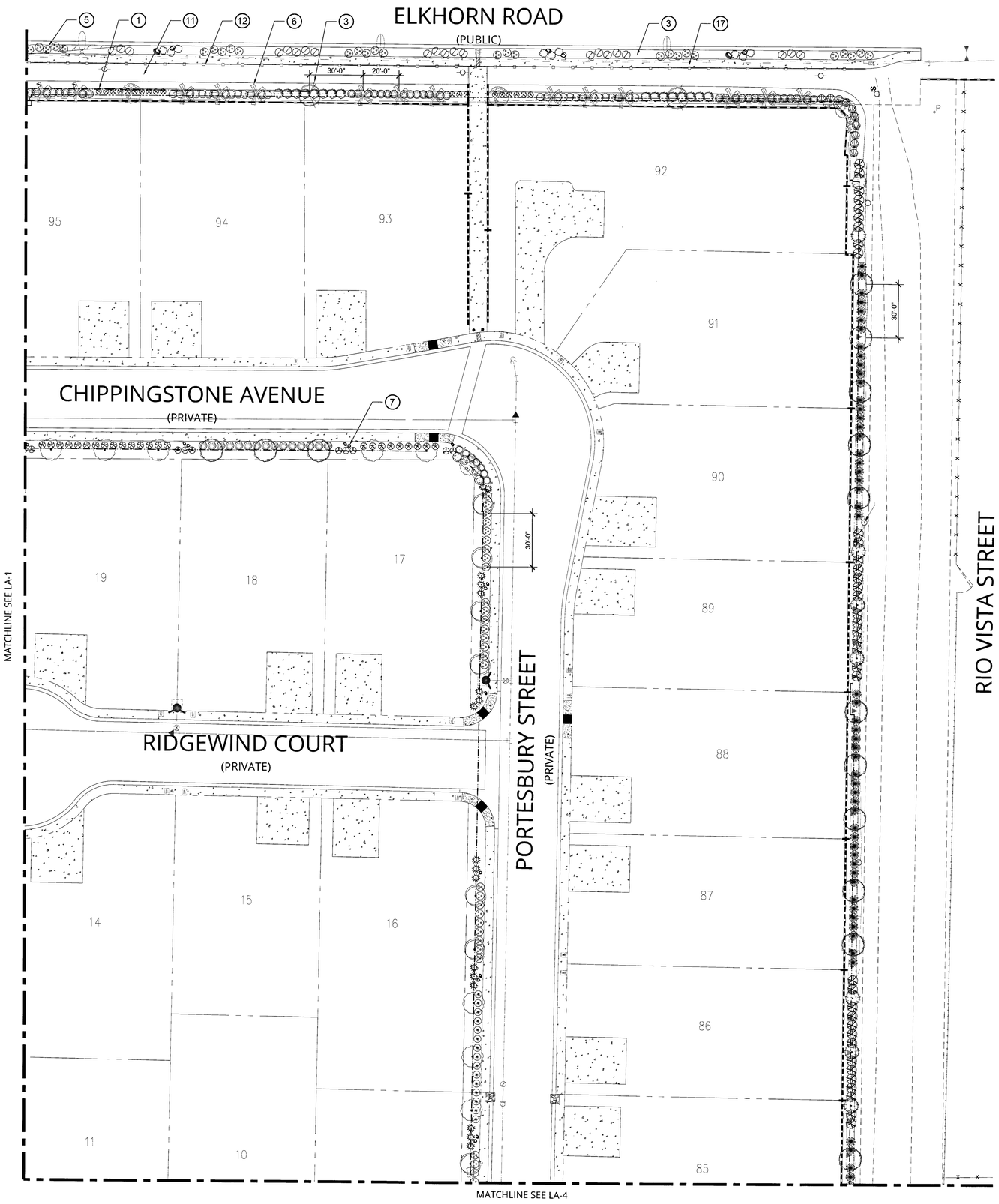
REVISIONS	
No.	Date / Description
	04-07-2017 100% REVIEW
	07-12-2017 100%

SHEET TITLE
Planting Plan

Scale: 1"=30'-0"
Date drawn: 03-14-2017
Drawn by: FD/LT/TT
Designed by: LT/TT
Approved by: TT
Job Number: 800145

Sheet No. 02
Drawing No. LA-1

10745059 L-69184



NOTE:
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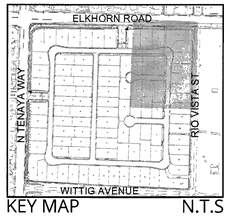


KEY MAP N.T.S

D·R·HORTON
America's Builder
1081 Whitney Ranch DR. #141
Henderson, NV 89014

STATE OF NEVADA
LANDSCAPE ARCHITECT
Expires 6/30/18
04/24/18

PROJECT NAME
Elkhorn 40
Streetscape & Common Area
Elkhorn Rd & Rio Vista St
APN:125-22-501-001 36.53

REVISIONS

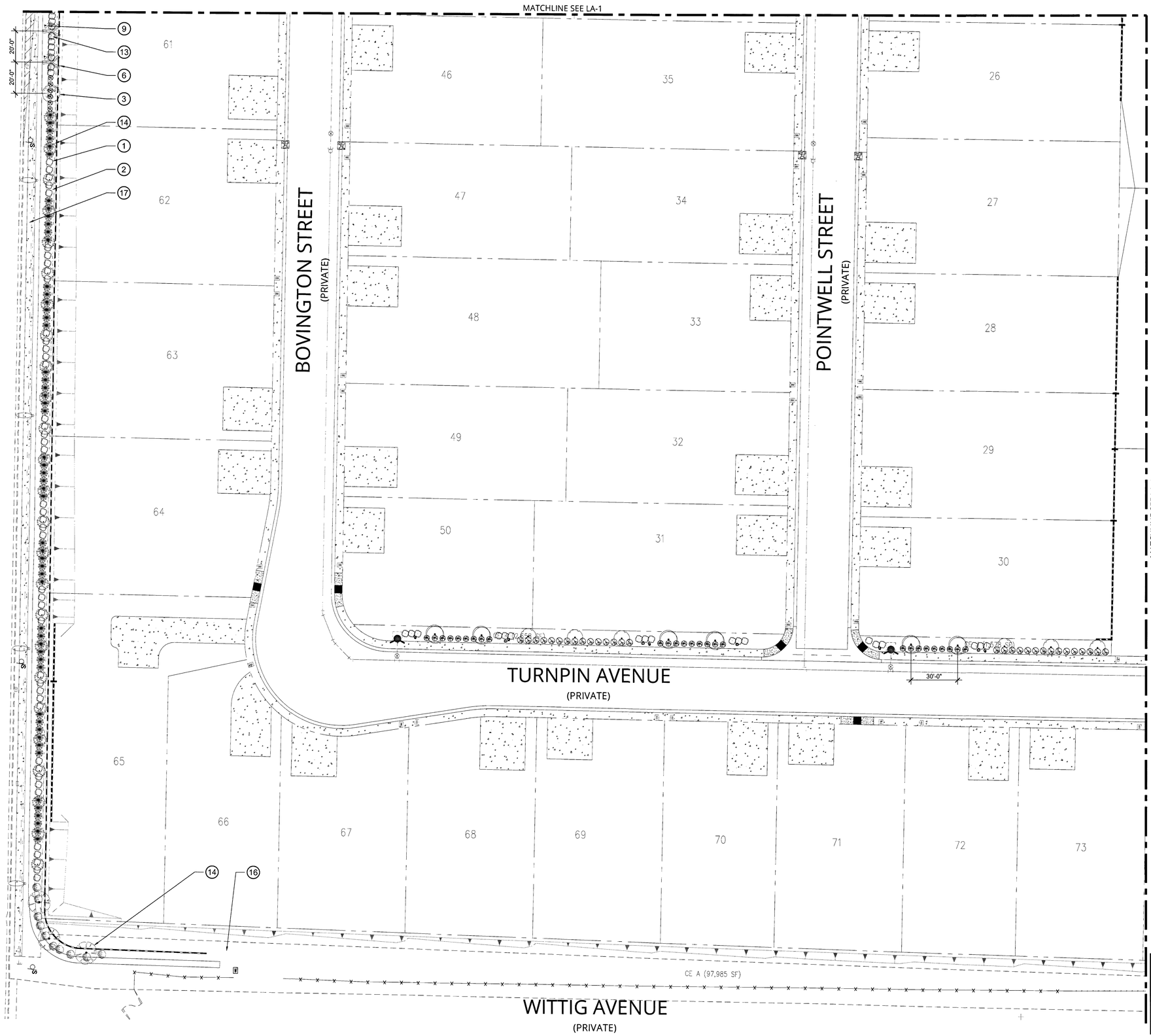
No.	Date	Description
	04-07-2017	100% REVIEW
	07-12-2017	100%

SHEET TITLE
Planting Plan

Scale: 1"=30'-0"
Date drawn: 03-14-2017
Drawn by: FD/LT/TT
Designed by: LT/TT
Approved by: TT
Job Number: 800145

Sheet No. 03
Drawing No. LA-2

10745059 L-69184



NOTE:
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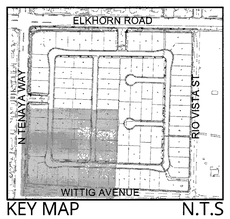

KEY MAP N.T.S

AVOID HITTING OVERHEAD POWER LINES. IT'S SURELY CALL BEFORE YOU DIG OVERHEAD
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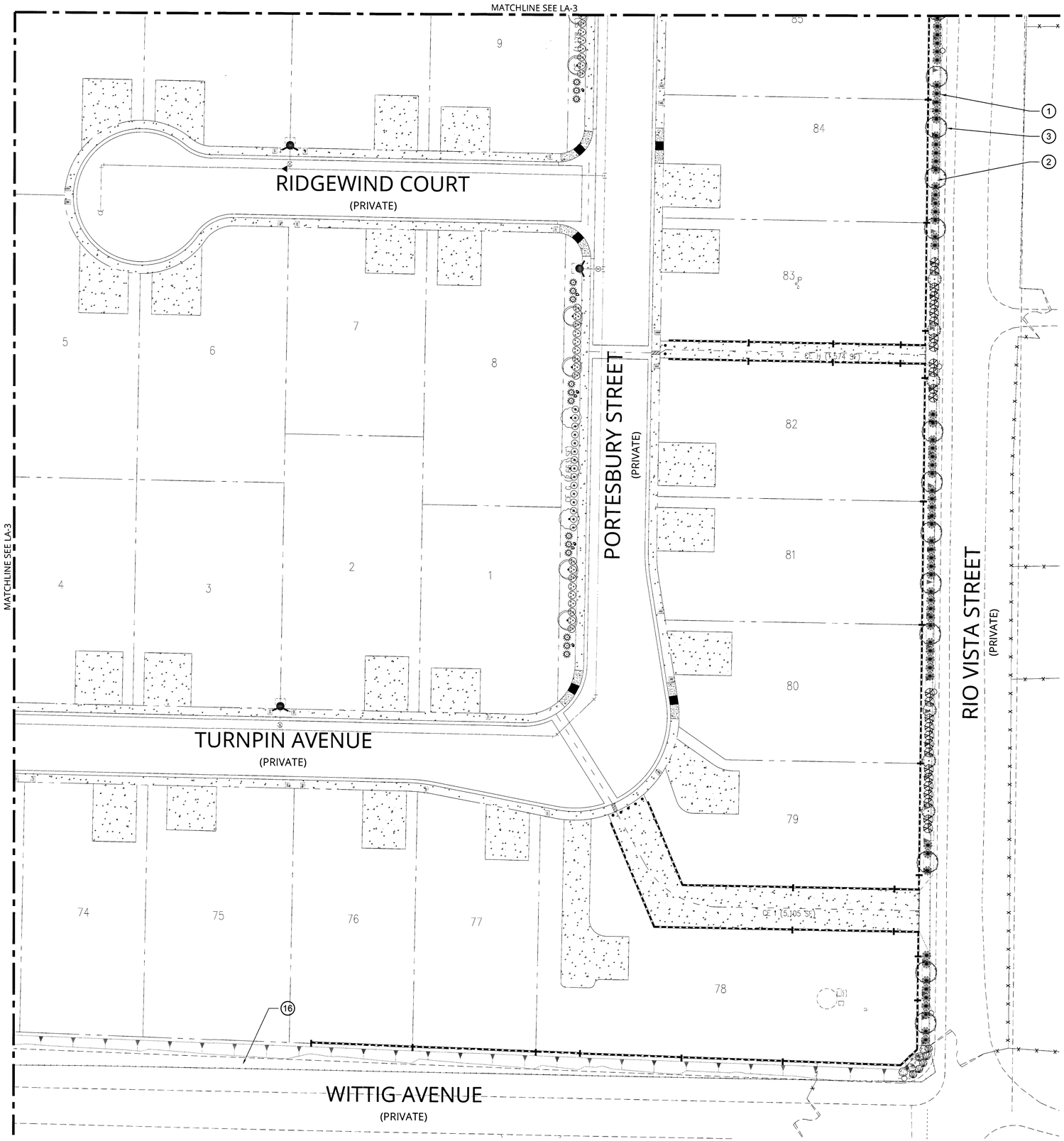
SHEET TITLE
Planting Plan

Scale: 1"=30'-0"
Date drawn: 03-14-2017
Drawn by: FD/LT/TT
Designed by: LT/TT
Approved by: TT
Job Number: 800145

Sheet No. 04
Drawing No. LA-3

10745059 L-61184



NOTE:
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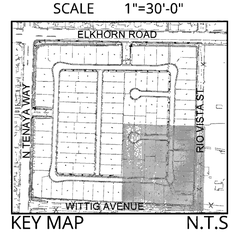

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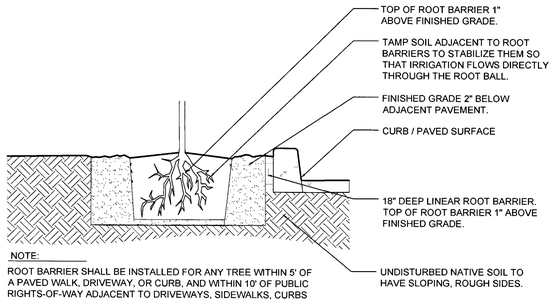
	07-12-2017	100%

SHEET TITLE
Planting Plan

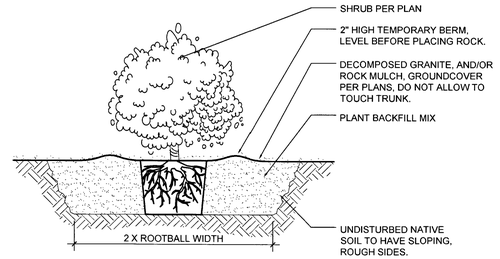
Scale: 1"=30'-0"
Date drawn: 03-14-2017
Drawn by: FD/LT/TT
Designed by: LT/TT
Approved by: TT
Job Number: 800145

Sheet No. 05
Drawing No. LA-4

10745059 L-69184



ROOT BARRIER 4
SCALE: N.T.S.



SHRUB PLANTING DETAIL 1
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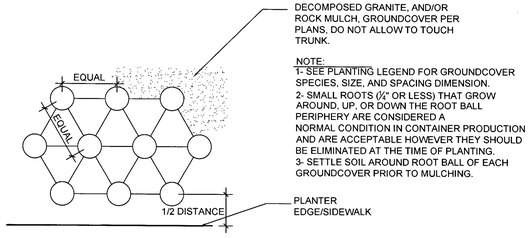
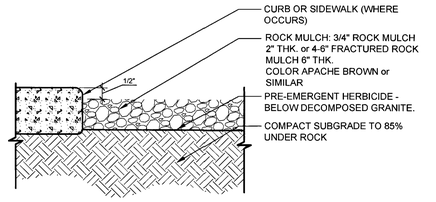


GROUND COVER 5
SCALE: N.T.S.



ROCK MULCH 2
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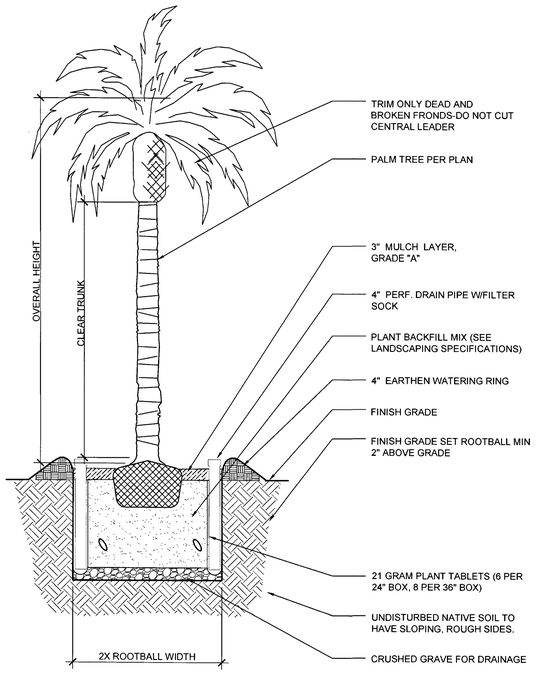
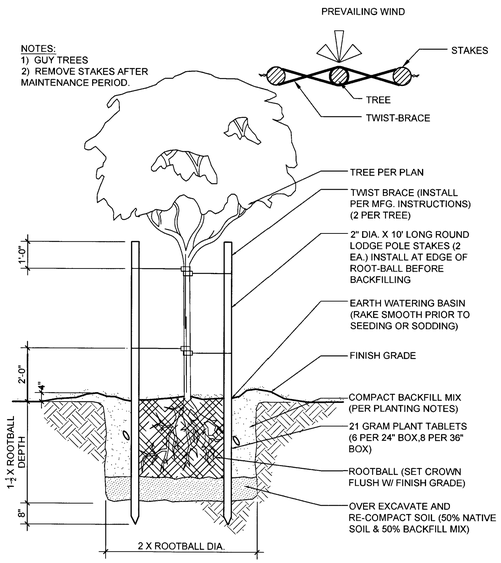


PALM PLANTING DETAIL 7
SCALE: N.T.S.



TREE PLANTING DETAIL 3
SCALE: N.T.S.

LANDSCAPE PLANTING LEGEND

NOTE:
- SEE SHEET LA-2 TO LA-4 FOR PLANTING PLANS
- SEE SHEET LA-7 TO LA-10 FOR IRRIGATION PLANS
- SEE SHEET LA-12 FOR IRRIGATION DETAILS

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	PHOENIX DACTYLIFERA	DATE PALM	16' BTH	12
	WASHINGTONIA ROBUSTA	MEXICAN FAN PALM	12' BTH	82
	CERCIDIUM-PARKINSONIA HYBRID	MUSEUM PALO VERDE	24" BOX	24
	VITEX AGNUS-CASTUS	CHASTE TREE	24" BOX	14
	PROSOPIS CHILENIS	CHILEAN MESQUITE	24" BOX	4
	CHILOPSIS LINEARIS	DESERT WILLOW	24" BOX	27
	ACACIA STENOPHYLLA	SHOESTRING ACACIA	24" BOX	34
	ULMUS PARVIFOLIA	CHINESE ELM	24" BOX	18
	LAGERSTROEMIA	CRAPE MYRTLE	24" BOX	6
	PINUS ELDARICA	MONDELL PINE	24" BOX	52
	FEIJOA SELLOWIANA	PINEAPPLE GUAVA	15 GAL STD.	69
	TECOMA STANS	ARIZONA YELLOW BELLS	15 GAL	106
	FEIJOA SELLOWIANA	PINEAPPLE GUAVA	5 GAL	50
	MUHLENBERGIA CAPILLARIS	REGAL MIST GRASS	5 GAL	86
	MYRTUS BOETICA	TWISTED MYRTLE	5 GAL	266
	PYRACANTHA COCCINEA 'LOWBOY'	LOWBOY PYRACANTHA	5 GAL	63
	CHRYSACTINIA MEXICANA	DAMIANITA	5 GAL	97
	HESPERALOE PARVIFLORA	RED YUCCA	5 GAL	77
	CAESALPINIA PULCHERRIMA	RED BIRDS OF PARADISE	5 GAL	140
	PENNISETUM SETACEUM RUBRAM	PURPLE FOUNTAIN GRASS	5 GAL	225
	LEUCOPHYLLUM FRUTESCENS	TEXAS SAGE	5 GAL	32
	SALVIA CLEVELANDII	CHAPARRAL SAGE	5 GAL	112
	CALLISTEMON CITRINUS 'Little John'	BOTTLE BRUSH 'Little John'	5 GAL	47
	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	5 GAL	40
	ENCELIA FARINOSA	BRITTLE BUSH	5 GAL	37
	SENNA ARTEMISIOIDES	FEATHERY CASSIA	5 GAL	198
	NERIUM OLEANDER	COMPACT ORLEANDER	5 GAL	64
X	EXISTING PLANTING		TO BE REMOVED	--
	EXISTING PLANTING DEATH PINUS ELDARICA TO BE REPLACED WITH REMOVED PINUS ELDARICA		TO REMAIN	--

SYMBOL	SIZE - FINISH	QUANTITY
	3/4" GRANITE ROCK MULCH - APACHE BROWN OR EQUAL	APROX. 62000 SF
	24x24x24" GRANITE BOULDER - APACHE BROWN OR EQUAL	61
	LANDSCAPE UPLIGHT- 15295 AZ BY KICHLER OR EQUAL	4 EA
	LANDSCAPE UPLIGHT- 15250 ARCH BRONZE BY KICHLER OR EQUAL	24 EA - ONE PER PALM

NOTE: ALL LIGHT FIXTURES TO INSTALL WITHIN PLANTING AREA.

GENERAL LANDSCAPE PLANTING NOTES

1. CONTRACTOR TO EVALUATE EXISTING CONDITION PRIOR BIDDING!
2. CONTRACTOR TO REVIEW SOIL REPORT PRIOR BIDDING.
3. PLANT QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE OWNER. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PLANT QUANTITIES AS THEY APPEAR ON THE PLAN.
4. ALL TREES PLANTED WITHIN FIVE (5) FEET OF HARDSCAPE SHALL RECEIVE DEEP ROOT BARRIERS.
5. ALL TREE & SHRUB MATERIAL SPECIFIED MUST MEET STANDARD INDUSTRY SPECIFICATIONS FOR THE CONTAINER SIZE INDICATED. IF CONTRACTOR CANNOT LOCATE MATERIAL OF ACCEPTABLE SIZE AT THE TIME OF INSTALLATION, CONTACT CONSTRUCTION MANAGER FOR SPECIES SUBSTITUTION; DOWN-SIZING OR SUBSTITUTION OF PLANT MATERIAL WITHOUT PRIOR APPROVAL OF CONSTRUCTION MANAGER IS NOT PERMISSIBLE.
6. TREE LOCATIONS SHOWN ON PLANS MAY REQUIRE ADJUSTMENTS IN THE FIELD. WHENEVER FEASIBLE, TREES SHOULD BE PLANTED A MINIMUM OF TEN (10) FEET FROM ALL UNDERGROUND UTILITIES, STREETLIGHTS, HYDRANTS, AND OUT OF DRAINAGE FLOW LINES. VERIFY WITH SOUTHERN NEVADA PRACTICES. SHOULD THIS NOT BE POSSIBLE, CONTACT THE CONSTRUCTION MANAGER FOR DECISION ON PLACEMENT.
7. SHRUB AREAS SHALL RECEIVE 2" MINIMUM THICK LAYER OF DECORATIVE CRUSHED ROCK. COLOR TO BE DETERMINED BY LANDSCAPE ARCHITECT.
8. ALL PLANTS SHALL BE INSTALLED PER PLANTING DETAILS PROVIDED IN THESE PLAN. PLANT MATERIAL SHALL NOT BE ROOT BOUND. FIVE GALLON PLANTS AND LARGER SHALL HAVE BEEN GROWN IN CONTAINERS FOR A MINIMUM OF 6 MONTHS AND MAXIMUM OF TWO YEARS. PLANTS SHALL EXHIBIT HEALTHY GROWTH AND BE FREE OF DISEASES AND PESTS.
9. PLANT BACKFILL SHALL BE 75% REJECT SAND AND 25% MULCH. SOIL TEST MAY BE RECOMMENDED PRIOR TO PLANTING.
10. STAKE ALL TREES PER DETAIL. REMOVE NURSERY STAKES AND TIES FROM ALL CONTAINER STOCK.
11. ALL SODDED LAWNS SHALL HAVE CONCRETE MOW CURB OR SHOVEL CUT HEADER AS PER PLAN.
12. VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS ON THE SITE PRIOR TO ISSUANCE OF ANY BIDS, OR PROCEEDING WITH ANY CONSTRUCTION.
13. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES, WHICH OCCUR BETWEEN THE EXISTING CONDITIONS AND THE CONSTRUCTION DRAWINGS, SO THEY MAY BE CORRECTED PRIOR TO INSTALLATION. CONSTRUCTION MANAGER SHALL CONTACT LANDSCAPE ARCHITECT WITH ANY DISCREPENCES.
14. THE CONTRACTOR SHALL CARRY OUT THE FULL INTENT OF THE PLANS, DETAILS AND SPECIFICATIONS, USING WORKMANSHIP IN A MANNER IN ACCORDANCE WITH THE BEST METHODS OF THE TRADE.
15. THE CONTRACTOR SHALL NOT MAKE ANY CHANGES OR DEVIATIONS FROM THE FINAL DRAWINGS WITHOUT THE PERMISSION OF THE CONSTRUCTION MANAGER.
16. THE CONTRACTOR IS TO PROVIDE CONTINUOUS INSPECTIONS DURING CONSTRUCTION AND SHALL COORDINATE AND BE RESPONSIBLE FOR THE ACTIONS OF HIS OR HER SUBCONTRACTORS.
17. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER A MINIMUM OF 48 HOURS PRIOR TO THE GOVERNING AUTHORITY'S FINAL INSPECTION AND ANY OTHER WARRANTED SITE VISITS.
18. THE CONTRACTOR SHALL WARRANT ALL WORK AGAINST DEFECTIVE MATERIAL AND WORKMANSHIP FOR 90 DAYS FROM DATE OF FINAL APPROVAL, UNLESS OTHERWISE NOTED. THE CONTRACTOR AGREES TO REPLACE ANY DEFECTIVE MATERIAL AND/OR WORKMANSHIP AT NO ADDITIONAL COST TO THE OWNER.

D·R·HORTON® America's Builder
1081 Whitney Ranch DR. #141
Henderson, NV 89014

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REVISIONS

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SHEET TITLE
Planting Details, Legend & Notes

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Drawn by: FD/LT/TT
Designed by: LT/TT
Approved by: TT
Job Number: 800145

Sheet No. 06
Drawing No. LA-5

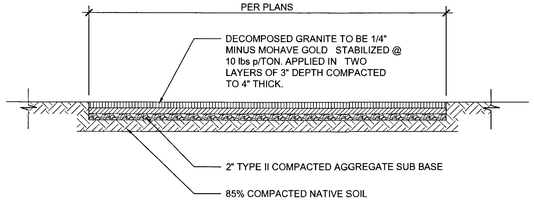
10745059 L-69184

NOTE: CONTRACTOR TO INSTALL PER MANUFACTURER'S SPECIFICATION

KICHLER 15250 ARCH. BRONZE
AVAILABLE AT http://www.kichler.com OR EQUAL

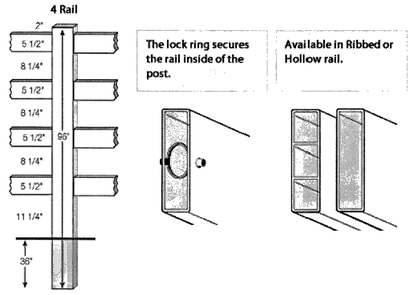
ACCENT UP LIGHT
SCALE: N.T.S.

10



HORSE TRAIL
SCALE: 1/2"=1'-0"

11



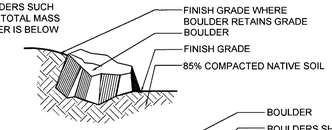
NOTE: FENCE TO INSTALL PER MANUFACTURER'S SPECIFICATION

CERTAGRAIN - 4 RAIL HORSE FENCE - WHITE
AVAILABLE AT http://www.avinylfence.com OR EQUAL

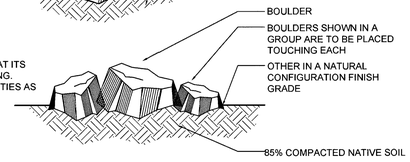
HORSE TRAIL VINYL FENCING
SCALE: N.T.S.

12

NOTES:
PLACE ALL BOULDERS SUCH THAT 1/4 OF THE TOTAL MASS OF EACH BOULDER IS BELOW FINISH GRADE.

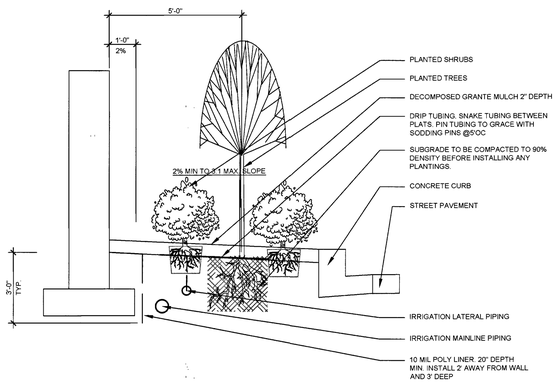


NOTES
1) ORIENT TREE AT ITS ORIGINAL BEARING.
2) LOOSEN WIRE TIES AS TREE GROWS.



GRANITE BOULDERS
SCALE: N.T.S.

7



VAPOR BARRIERS
SCALE: N.T.S.

8

NOTE: CONTRACTOR TO INSTALL PER MANUFACTURER'S SPECIFICATION

KICHLER 15295AZT
AVAILABLE AT http://www.kichler.com OR EQUAL

LANDSCAPE UPLIGHT
SCALE: N.T.S.

9

D·R·HORTON
America's Builder
1081 Whitney Ranch DR. #141
Henderson, NV 89014

9/11/17

PROJECT NAME
Elkhorn 40
Streetscape & Common Area
Elkhorn Rd & Rio Vista St
APN:125-22-501-001 36.53

REVISIONS

No.	Date	Description
	04-07-2017	100% REVIEW
	07-12-2017	100%

SHEET TITLE
Details

Scale: n.t.s.
Date drawn: 03-14-2017
Drawn by: FD/LT/TT
Designed by: LT/TT
Approved by: TT
Job Number: 800145

Sheet No. 07
Drawing No. LA-6

10745059 L-69184

ELKHORN ROAD
(PUBLIC)

CHIPPINGSTONE AVENUE
(PRIVATE)

N TENAYA WAY
(PUBLIC)

BOVINGTON STREET
(PRIVATE)

POINTWELL STREET
(PRIVATE)

MATCHLINE SEE LA-8

MATCHLINE SEE LA-7

NOTE:
- SEE SHEET LA-5 FOR PLANTING DETAILS LEGEND & NOTES
- SEE SHEET LA-2 TO LA-5 FOR PLANTING PLANS
- SEE SHEET LA-12 FOR IRRIGATION DETAILS

KEYNOTES

1	IRRIGATION CONTROLLER	LA-12
2	RESIDENTIAL IRRIGATION CONTROLLER	LA-12
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14	STUB OUT MAINLINE FOR FUTURE USE (TYP.)	
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16	SIDEYARDS SHALL BE IRRIGATED AND MAINTAINED BY HOMEOWNER. CONTROLLER, SHALL BE SERVICED IN GARAGE AND INSTALL ADDITIONAL SLEEVE FOR WIRES FROM CONTROLLER TO VALVES.	

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NORTH
0 30' 60'
SCALE 1"=30'-0"

KEY MAP N.T.S

AVOID HITTING OVERHEAD POWER LINES. IT'S EASY!
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

Call before you Dig
Call 811
1-800-227-2800
1-702-455-7544

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Sheet No. 08
Drawing No. LA-7

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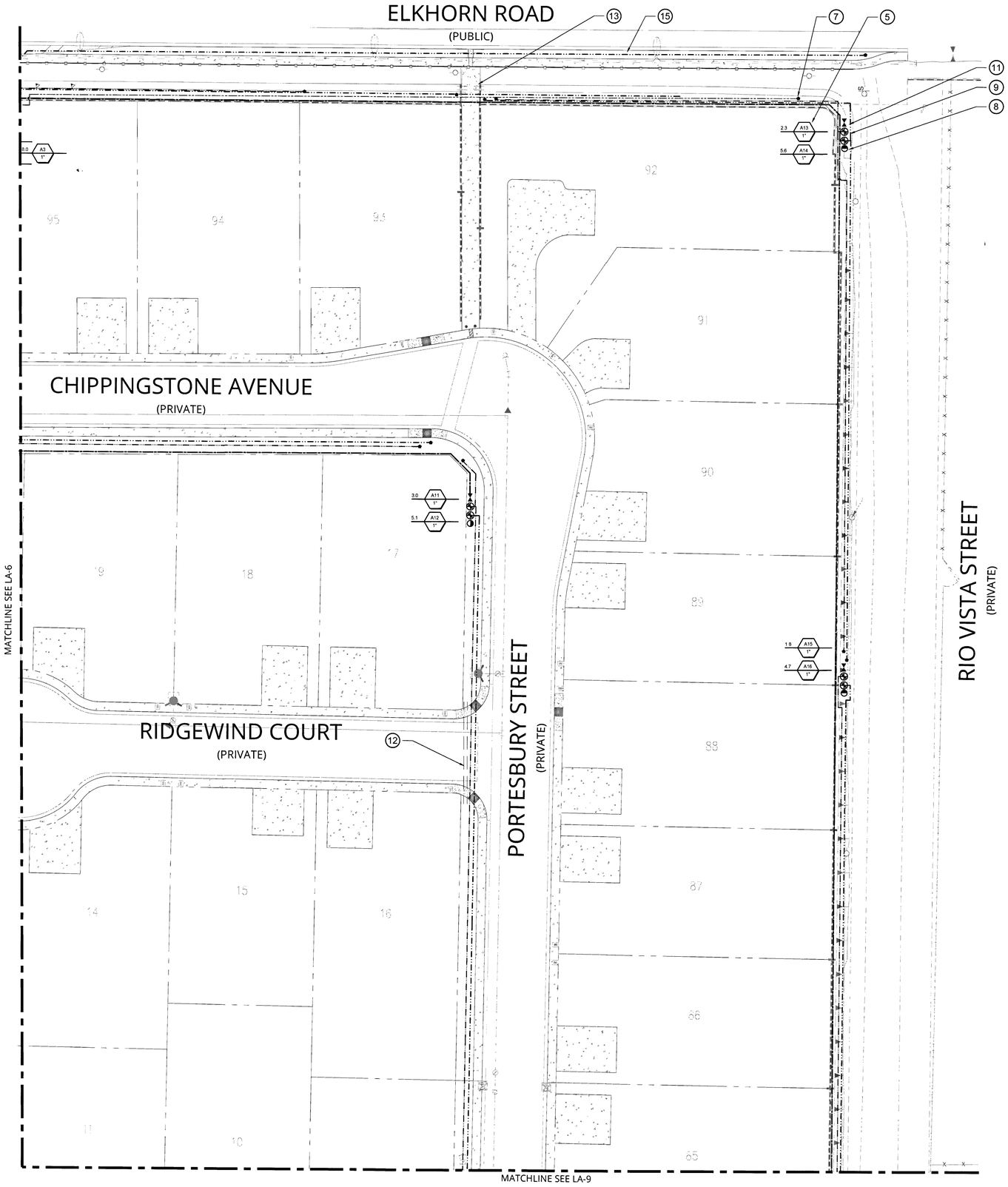

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SCALE 1"=30'-0"

KEY MAP N.T.S

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3/06/17

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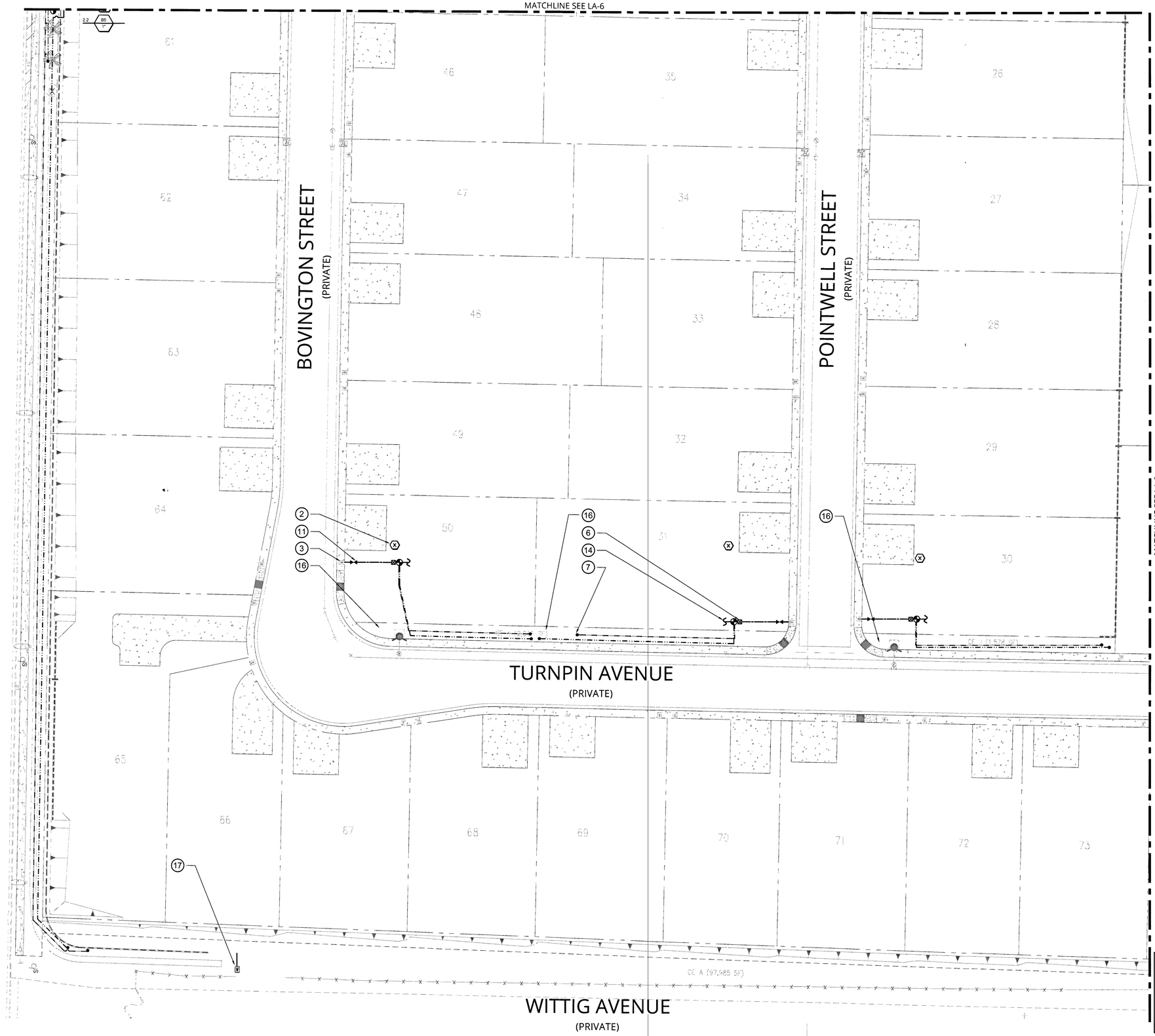
Sheet No. 09
Drawing No. LA-8

10785059 L-69184



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17	METER PER CIVIL ENGINEER PLANS. IRRIGATION OF WITTIG AVE. BY OTHERS.	

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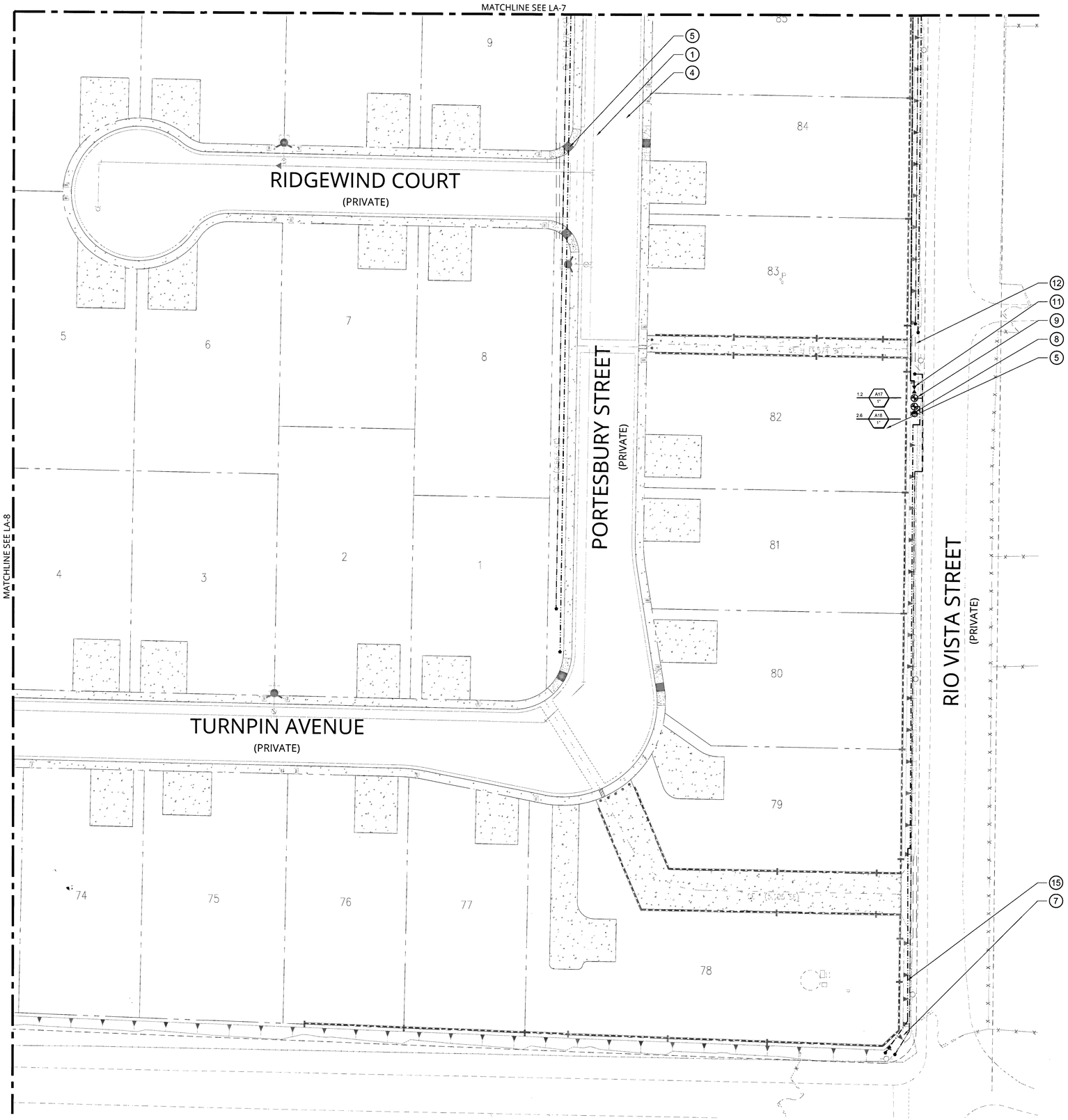
Approved by: TT
Job Number: 800145

Sheet No. 10
Drawing No. LA-9

107 5059 L-69184



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Sheet No. 11
Drawing No. LA-10

10745059 L-69184

GENERAL LANDSCAPE IRRIGATION NOTES

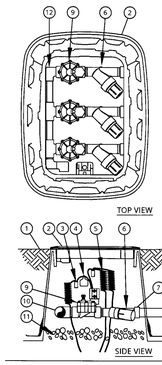
1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. CONTRACTOR TO VERIFY PRESSURE ON-SITE AND NOTIFY LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO INSTALLATION OR ORDERING OF MATERIALS. IF CONTRACTOR FAILS TO NOTIFY THE PROPER PARTY, THE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR ALL NECESSARY SYSTEM ALTERATIONS REQUIRED TO FACILITATE AN EFFICIENT AND OPERATIONAL SYSTEM. THIS IRRIGATION SYSTEM REQUIRES A MINIMUM OF 65 TO 75 PSI WATER PRESSURE AT WATER METER.
4. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
5. THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULL IRRIGATION COVERAGE OF ALL PLANT MATERIAL INCLUDING TURF. SINGLE LINES SHOWN MAY REPRESENT MULTIPLE LINES OF CONDUIT, PVC WATER LINES OR PVC SLEEVES DEPENDING ON INSTALLATION DESIGN REQUIREMENTS.
6. DO NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
8. LOCATION OF EXISTING ELECTRICAL AND WATER CONNECTIONS (POC) MAY ALTER LAYOUT SHOWN FIELD VERIFICATION OF EXISTING UTILITIES REQUIRED PRIOR TO INSTALLATION.
9. ACTUAL LOCATION FOR THE INSTALLATION OF THE BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
10. CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE TO THE END OF THE MAINLINE RUN IN TWO DIRECTIONS FROM THE CONTROLLER.
11. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE TWICE THE DIAMETER OF THE PIPE CARRIED. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
12. ALL QUICK COUPLER VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER VALVES WITHIN 18" OF HARDSCAPE.
13. ALL VALVES SHALL NOT EXCEED MANUFACTURES SPECIFICATIONS.
14. VALVE BOXES TO BE BRANDED WITH CONTROLLER AND STATION NUMBER
15. SUPPLY THE FOLLOWING MATERIAL TO THE OWNER: TWO WRENCHES FOR DISASSEMBLY AND ADJUSTING OF EACH TYPE OF SPRINKLER HEAD AND VALVE SUPPLIED.TWO KEYS FOR EACH OF THE CONTROLLERS. TWO VALVE BOX KEYS.
16. FLUSH CAPS SHALL BE PLACED IN A VALVE BOX AT THE END OF ALL LATERALS.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING OF ASPHALT AND CONCRETE AS REQUIRED FOR SLEEVE INSTALLATION ACCORDING TO THE IRRIGATION SCHEDULE.
18. FLUSHING OF ALL LINES PRIOR TO INSTALLATION OF SPRINKLERS AND EMITTERS IS REQUIRED.
19. CONTROLLER TO BE INSTALLED AS PER MANUFACTURERS SPECIFICATIONS. CONTROLLER SIZE AND QUANTITIES TO BE DETERMINED BY THE VALVE REQUIREMENTS AND POINT OF CONNECTIONS.ALL ELECTRICAL CONNECTIONS SHALL BE MADE AT THE REMOTE CONTROL VALVE BOXES, CONTROLLER ENCLOSURES AND VALVE BOXES SPECIFICALLY FOR ELECTRICAL CONNECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL WIRING FROM THE CIRCUIT BREAKER AT THE 120 VOLT SOURCE LOCATION TO AUTOMATIC CONTROLLER. CONTROLLER WIRES THAT ARE DIRECT BURIED SHALL BE #14 OR BETTER, BUNDLED OR WRAPPED A MINIMUM OF EVERY TWELVE (12') FEET. DURING INSTALLATION WIRES SHALL HAVE A 24" LOOP TIED IN ALL DIRECTION CHANGES GREATER THAT 30 DEGREES AND BE UNTIED PRIOR TO TRENCH FILL IN.
20. ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
21. BACKFLOW DEVICES SHALL BE A MINIMUM OF TWO (2') FEET FROM THE WATER METER AND BE THE SAMESIZE AS THE METER SERVICE LINE.
22. PRIOR TO PLACING ANY IRRIGATION SYSTEM IN SERVICE, AN NEVADA CERTIFIED BACKFLOW DEVICE TESTER SHALL TEST THE BACKFLOW PREVENTION DEVICE AND GIVE A COPY OF THE PASSED TEST RESULTS TO THE PROPER GOVERNING AGENCIES. AFTER INITIAL TESTING, ALL BACKFLOW DEVICES SHALL BE TESTED ANNUALLY.

GENERAL LANDSCAPE IRRIGATION MAINTENANCE SPECIFICATIONS

1. CONTRACTOR IS RESPONSIBLE TO PROGRAM CONTROLLERS IN ORDER TO APPLY ADEQUATE MOISTURE TO MAINTAIN VIGOROUS PLANT GROWTH IN LANDSCAPE AREAS, OR AS REQUIRED BY THE LANDSCAPE ARCHITECT DUE TO TEMPERATURE DIFFERENCES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR TURNING OFF CONTROLLERS DURING INCLEMENT WEATHER.
3. CONTRACTOR SHALL BE RESPONSIBLE TO REGULARLY INSPECT AND EXAMINE THE SPRINKLER SYSTEM WITH RESPECT TO PROPER FUNCTION AND MUST CLEAN HEADS TO ASSURE PROPER FUNCTION.
4. THE CONTRACTOR SHALL INFORM THE OWNER IMMEDIATELY OF ANY PARTS WHICH NEED REPAIR OR REPLACEMENT RESULTING FROM THEFT OR VANDALISM. REPLACEMENT COSTS COSTS DUE TO VANDALISM OR THEFT WILL BE BORNE BY THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT COSTS DUE TO DAMAGE RESULTING FROM HIS OPERATIONS.
6. CONTRACTOR SHALL PERFORM ALL REPAIRS, REPLACEMENTS, STRAIGHTENING, RAISING, ETC., OF THE SPRINKLER SYSTEM AS IS APPLICABLE TO RISERS AND SPRINKLER HEADS. ANY REPAIR OR REPLACEMENT MUST CONFORM TO TYPE AND KIND CURRENTLY BEING USED. ANY DEVIATION MUST BE APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT.
7. ALL PAVED AREAS SHALL BE KEPT FREE OF TRASH AND DEBRIS AND WILL BE SWEPT, VACUUMED, WASHED, OTHERWISE CLEANED EACH VISIT TO ASSURE A CLEAN AND NEAT APPEARANCE.
8. PROTECT BUILDINGS FROM WATER SPLASHING AND SOIL STAINING.

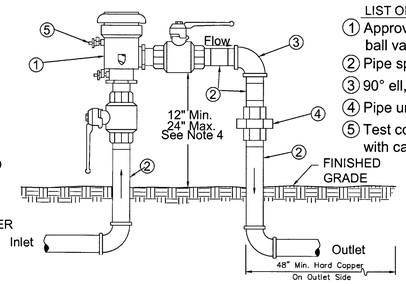
DRIP SYSTEM NOTES:

1. ALL LATERAL LINES FOR DRIP SYSTEM SHALL BE PVC AS SHOWN IN THE LEGEND. POLY TUBING SHALL BE CONNECTED TO THE PVC LATERAL LINES IN LOCATIONS ALONG THE LATERAL LINE ROUTE IN QUANTITIES AND LOCATIONS REQUIRED BY THE PLANT GROUPS AND THE MAXIMUM POLY TUBING RUN AS INDICATED IN THE DETAILS.
2. CONNECT POLY TUBING TO PVC AS PER DETAILS AND ROUTE TUBING THROUGH PLANT MASSES. INSERT DRIP EMITTERS INTO TUBING AS CLOSE AS POSSIBLE TO PLANT MATERIALS, ROUTE 1/4" TUBING FROM EMITTER TO PLANT, MAX. DISTANCE 6 FT. STAKE ALL DRIP TUBING TO GRADE USING WIRE STAKES. COVER ALL DRIP TUBING COMPLETELY WITH MULCH SPECIFIED ON LANDSCAPE PLANS.
3. AT ALL RAISED PLANTER, PROVIDE 1" PVC SLEEVES THROUGH MASONRY FOR DRIP IRRIGATION LINES.
4. CONTRACTOR TO PROVIDE THE QUANTITY OF EMITTERS BASED ON THE ACTUAL PLANT COUNT AND THE EMITTER LEGEND SHOWN ABOVE. ANY REFERENCE TO EMITTER QUANTITIES ON THESE PLANS IS FOR DESIGN USE ONLY. ALL EMITTER TUBE OUTLETS SHALL HAVE A BUG CAP AND PLASTIC TUBING STAKE INSTALLED. VERIFY THE ACTUAL PLANT QUANTITIES AND SIZES FROM THE LANDSCAPE PLANS PRIOR TO BIDDING OR STARTING WORK.
5. DRIP SYSTEM HAS BEEN DESIGNED TO ACCOMMODATE THE UPSIZING OF EMITTERS TO COMPENSATE FOR FUTURE PLANT GROWTH. MAINTENANCE PERSONNEL SHALL UPGRADE EMITTER SIZES AS REQUIRED TO PROVIDE ADEQUATE WATER FOR HEALTHY PLANT GROWTH.



1 FINISH GRADE
2 STANDARD VALVE BOX WITH COVER: RAIN BIRD VB-STD
3 WATERPROOF CONNECTION: RAIN BIRD DB SERIES
4 VALVE ID TAG
5 30-INCH LINEAR LENGTH OF WIRE, COILED
6 PRESSURE REGULATING FILTER: RAIN BIRD PRF-075-RBY (INCLUDED IN XCZ-075-PRF KIT)
7 PVC SCH 40 FEMALE ADAPTOR
8 LATERAL PIPE
9 REMOTE CONTROL VALVE: RAIN BIRD LVF-075 (INCLUDED IN XCZ-075-PRF KIT)
10 PVC SCH 40 TEE OR ELL TO MANIFOLD
11 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
12 MANIFOLD PIPE AND FITTINGS

DRIP CONTROL ZONE KIT (2)



INLET AS CLOSE TO SERVICE CONNECTION AS POSSIBLE (IMMEDIATELY AFTER WATER METER). HARD COPPER ON INLET SIDE.

LIST OF MATERIALS
1. Approved pressure vacuum breaker assembly, ball valves included.
2. Pipe spool, type "L" hard copper, 1/2" thru 2".
3. 90° ell, copper, 1/2" thru 2".
4. Pipe union, brass or copper.
5. Test cocks with brass plugs or adaptors with caps installed. (2 required)

BACKFLOW PREVENTER (1)

GENERAL NOTES
1. BACKFLOW ASSEMBLIES MUST BE TESTED BY A CERTIFIED TESTER THAT IS RECOGNIZED BY THE REVIEWING AGENCY.
2. PRESSURE VACUUM BREAKERS MUST BE INSTALLED AT LEAST 12" ABOVE ALL DOWNSTREAM PIPING.
3. IF THIS DISTANCE EXCEEDS 24 INCHES, A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY MUST BE UTILIZED.
4. COPPER FITTINGS SHALL BE CONNECTED WITH LEAD FREE SOLDER JOINTS.
5. FINISHED GRADE UNDERNEATH THE BACKFLOW PRE- VENTER SHALL BE AT 95% COMPACTION.
6. ALL NIPPLES TO BE COPPER OR BRASS.
7. INLET / OUTLET PIPING MUST BE TYPE "K" HARD COPPER.
8. CALL FOR UNDERGROUND INSPECTION BEFORE BACKFILLING TRENCH.
9. APPROVALS FOR BACKFLOW ASSEMBLIES MUST HAVE SEAL APPROVAL FROM THE AMERICAN SOCIETY OF SANITATION ENGINEERS.

NOTE:
- SEE SHEET LA-5 FOR PLANTING DETAILS LEGEND & NOTES
- SEE SHEET LA-2 TO LA-5 FOR PLANTING PLANS
- SEE SHEET LA-12 FOR IRRIGATION DETAILS

IRRIGATION SCHEDULE

EMITTERS

SYMBOL	DESCRIPTION	PAT.	RAD.	PSI	GPM/GPH	MANUFACTURER	
NOT SHOWN	EMITTER	DRIP	-	7		TORO DPJ	1/4" TORO BLUE STRIPE LINE
NOT SHOWN	EMITTER	DRIP	-	7		TORO DPJ	1/4" TORO BLUE STRIPE LINE

PLANT EMITTER LEDGEND

PLANT SIZE	# OF EMITTERS
1 GALLON	2
5 GAL. & LARGER SHRUBS	2
15 GAL. & LARGER SHRUBS	2
24" BOX & LARGER TREES	8

EQUIPMENT

SYMBOL	DESCRIPTION	MODEL
A	IRRIGATION CONTROLLER	RAINBIRD ESP12LXMEF
X	RESIDENTIAL IRRIGATION CONTROLLER	HUNTER X-COREi
	BALL VALVE	NIBCO T-113
	RESIDENTIAL BALL VALVE (3/4")	
	DRIP VALVE WITH PRESSURE REGULATOR	RAINBIRED XCZ-100-PRB-COM OR XCZ-150-COM
	DRIP CONTROL ZONE KIT- INSTALL (2) ROOT WATERING SYSTEM FOR PALM TREE	RAINBIRED XCZ-100-PRB-COM OR XCZ-150-COM
	DRIP CONTROL ZONE KIT	RAINBIRDXCZ-075-PRF 3/4" CONTROL
	QUICK COUPLER VALVE	RAINBIRD 44 LRC
	FLUSH VALVE	FCH-L-FIPT
	BACKFLOW PREVENTER	FEBCO 825YA
A B C	VALVE KEY A = GPM B = VALVE SEQUENCE NUMBER C = VALVE SIZE	
M	IRRIGATION METER & RPPA PER CIVIL PLANS	PER BUILDER
M	RESIDENTIAL IRRIGATION METER PER CIVIL PLANS	PER BUILDER

PIPE AND WIRE

SYMBOL	MANUFACTURER - MODEL NUMBER	NOTE	
	MAINLINE: PVC SCH. 40 (2" MIN) - SEE CHART FOR SIZE	PIPE SIZING CHART - SCH. 40 PVC /OR CL200	
	LATERAL SHRUB LINE: 3/4" MIN CL 200 - SEE CHART FOR SIZE	GALLONS PER MINUTE	PIPE SIZE
	LATERAL TREE LINE: 3/4" MIN CL 200 - SEE CHART FOR SIZE	0-8	3/4"
	LATERAL PALM LINE: 3/4" POLY - SEE CHART FOR SIZE	8-12	1"
	MAINLINE SLEEVES, PVC SCH. 40 - 2 TIMES (2X) DIA. OF MAINLINE PIPE BEING USED; UNLESS OTHERWISE NOTED; MIN. 4"	12-22	1.25"
	LATERAL SLEEVES, PVC SCH. 40 - 2 TIMES (2X) DIA. OF LATERAL PIPE BEING USED; UNLESS OTHERWISE NOTED; MIN. 2"	22-35	1.50"
		35-50	2"
	NOT SHOWN-POLY		
	IRRIGATION SLEEVES PER UTILITY PLANS		
NOT SHOWN	CONTROL WIRE, UF DIRECT BURIAL, SOLID COPPER, 12 GA. COMMON, 14 GA. PILOT		

D·R·HORTON® America's Builder
1081 Whitney Ranch DR. #141
Henderson, NV 89014

PROJECT NAME
Elkhorn 40
Streetscape & Common Area
Elkhorn Rd & Rio Vista St
APN:125-22-501-001 36.53

REVISIONS

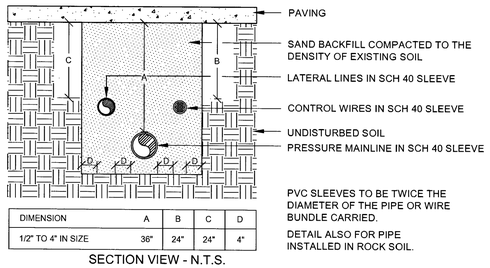
No.	Date	Description
	04-07-2017	100% REVIEW
	07-12-2017	100%

SHEET TITLE
Irrigation Details, Legend & Notes

Scale: n.t.s.
Date drawn: 03-14-2017
Drawn by: FD/LT/TT
Designed by: LT/TT
Approved by: TT
Job Number: 800145

Sheet No. 12
Drawing No. LA-11

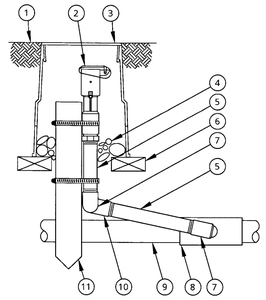
10745059 L-69184



DIMENSION	A	B	C	D
1/2" TO 4" IN SIZE	36"	24"	24"	4"

SECTION VIEW - N.T.S.

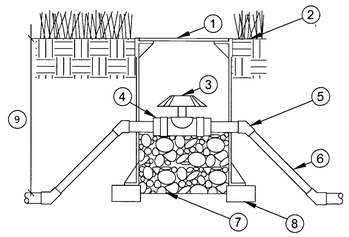
SLEEVE INSTALLATION 13
SCALE: N.T.S.



1. FINISH GRADE/TOP OF MULCH
2. QUICK-COUPLING VALVE
3. VALVE BOX WITH COVER 6-INCH SIZE
4. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
5. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
6. BRICK (1 OF 2)
7. PVC SCH 40 STREET ELL
8. PVC SCH 40 TEE OR ELL
9. PVC MAINLINE PIPE
10. PVC SCH 40 ELL
11. 2" x 2" REDWOOD STAKE W/STAINLESS STEEL GEAR CLAMPS OR EQUIVALENT SUPPORT SYSTEM

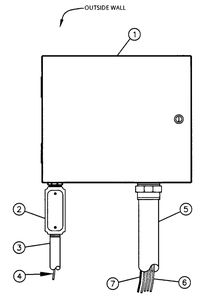
NOTES:
FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.

QUICK-COUPLING VALVE 9
SCALE: N.T.S.



1. NDS PLASTIC VALVE BOX, WITH LOCKING "T"
2. FINISH GRADE
3. BALL VALVE
4. INTEGRAL UNIONS
5. PVC SCH. 40, 45° ELL (TYP)
6. PVC PRESSURE MAINLINE PIPE (SEE SPECS.)
7. 1 CU. FT. PEA GRAVEL
8. 2X4 BRICK BLOCKING
9. DEPTH-SEE SPECIFICATIONS

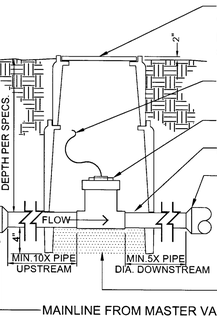
BALL VALVE 5
SCALE: N.T.S.



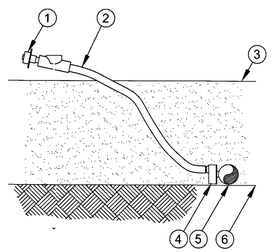
1. IRRIGATION CONTROLLER: CONTROLLER WITH FLOW SMART MODULE IN METAL CABINET WITH OUTSIDE WALL MOUNT. INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RE COMMENDATIONS.
2. JUNCTION BOX
3. 1-INCH CONDUIT AND FITTINGS TO POWER SUPPLY POWER SUPPLY WIRE
4. POWER SUPPLY WIRE
5. 2-INCH CONDUIT AND FITTINGS FOR STATION WIRES
6. MASTER VALVE AND REMOTE CONTROL VALVE WIRES
7. FLOW SENSOR SIRE (PE 39,89 OR 54) TO FLOW SENSOR

NOTES:
1. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE USED IN CONTROLLER.
2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 4O PVC CONDUIT FOR BELOW GRADE CONDITIONS.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.

CONTROLLER 1
SCALE: N.T.S.



FLOW SENSOR 14
SCALE: N.T.S.



1. DIFFUSER BUG CAP
2. 1/4 - INCH VINYL DISTRIBUTION TUBING
3. TOP OF MULCH
4. SINGLE-OUTLET EMITTER
5. XERIGATION TUBING
6. FINISH GRADE

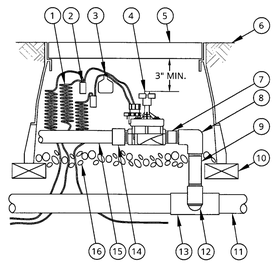
EMITTER QUANTITIES

PLANT SIZE	QTY.
15Gal-24" Box	8-2 GPH
1-5 Gal.	2-1 GPH

NOTES:
USE RAIN BIRD BUG GUN MODEL EMA-BG TO INSERT EMITTER DIRECTLY INTO XERI-TUBE OR RAIN TUBE TUBING.

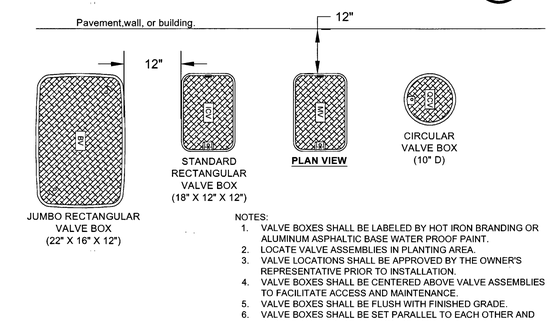
DRIP EMITTER 10
SCALE: N.T.S.

1. DIFFUSER BUG CAP



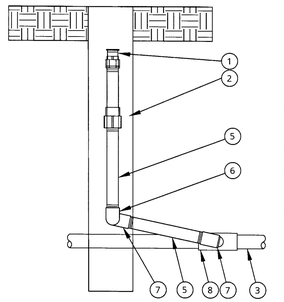
1. 30-INCH LINEAR LENGTH OF WIRE, COILED
2. WATER PROOF CONNECTION
3. DO NOT DRINK ID TAG
4. REMOTE CONTROL VALVE
5. VALVE BOX WITH GREEN COVER
6. FINISH GRADE/TOP OF MULCH
7. PVC SCH 80 NIPPLE (CLOSE)
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4)
11. PVC MAINLINE PIPE
12. SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND SCH 40 ELL
13. PVC SCH 40 TEE OR ELL
14. PVC SCH 40 MALE ADAPTER
15. PVC LATERAL PIPE
16. 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

DRIP VALVE WITH PRESSURE REGULATOR 6
SCALE: N.T.S.

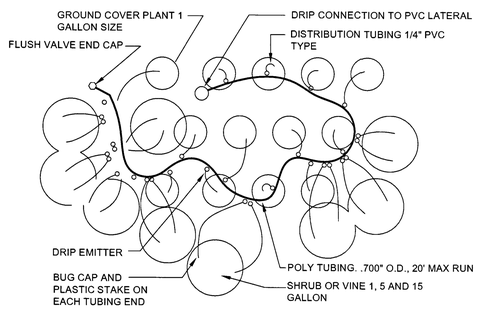


NOTES:
1. VALVE BOXES SHALL BE LABELED BY HOT IRON BRANDING OR ALUMINUM ASPHALTIC BASE WATER PROOF PAINT.
2. LOCATE VALVE ASSEMBLIES IN PLANTING AREA.
3. VALVE LOCATIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
4. VALVE BOXES SHALL BE CENTERED ABOVE VALVE ASSEMBLIES TO FACILITATE ACCESS AND MAINTENANCE.
5. VALVE BOXES SHALL BE FLUSH WITH FINISHED GRADE.
6. VALVE BOXES SHALL BE SET PARALLEL TO EACH OTHER AND PERPENDICULAR TO THE EDGE OF PAVEMENT.
7. SEE OTHER IRRIGATION DETAILS FOR FURTHER INFORMATION.

VALVE BOX PLACEMENT 2
SCALE: N.T.S.

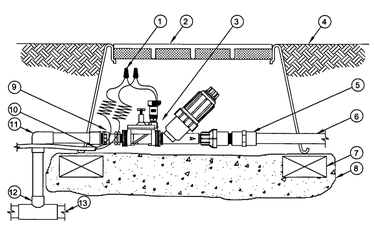


RESIDENTIAL CONTROLLER 16
SCALE: N.T.S.



DEEP WATERING DEVICE FOR PALM TREE 15
SCALE: N.T.S.

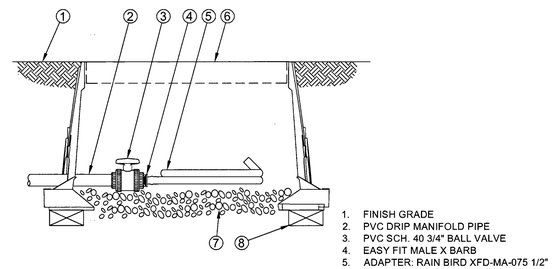
DRIPLINE LAYOUT 11
SCALE: N.T.S.



1. WIRE CONNECTORS
2. VALVE BOX WITH COVER 12" SIZE
3. DIG LEIT 3/4" REMOTE CONTROL VALVE ASSEMBLY MODEL P52-075 (30 PSI)
4. FINISH GRADE TOPFINISH GRADE/TOP 3/4" FEMALE NPT
5. COUPLING x SLIP
6. PVC LATERAL LINE
7. BRICK SUPPORT AT EACH CORNER
8. PEA GRAVEL SUMP MINIMUM 3"
9. SWIVEL FITTING DIG MODEL 23-004 1" F X 3/4" M
10. CONTROL WIRE TO OTHER VALVE
11. PVC SCH 40 90 DEGREE ELL
12. SCH 40 TEE
13. MAIN SUPPLY LINE

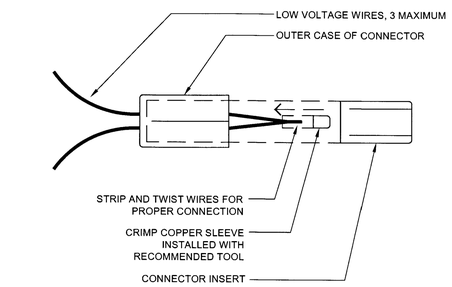
WHEN USED WITH SOLAR CONTROLLER

DRIP CONTROL ZONE KIT 7
SCALE: N.T.S.



1. FINISH GRADE
2. PVC DRIP MANIFOLD PIPE
3. PVC SCH. 40 3/4" BALL VALVE
4. EASY FIT MALE X BARB
5. ADAPTER: RAIN BIRD XFD-MA-075 1/2" SALCO TUBING
6. 10-INCH VALVE BOX WITH COVER
7. 3-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL
8. BRICK (1 OF 2)

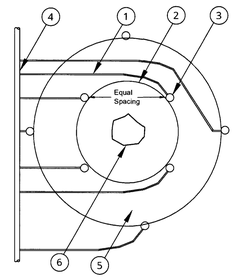
FLUSH VALVE 3
SCALE: N.T.S.



WIRE CONNECTION 12
SCALE: N.T.S.

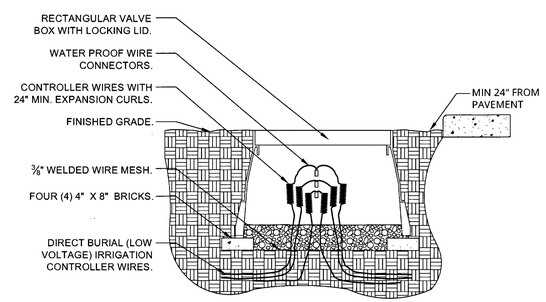
NOTES:
INSTALL EMITTERS EQUALLY SPACED AROUND ROOTBALL. EMITTERS MUST BE VISIBLE AND NO GREATER THAN 1-1/2 INCH ABOVE MULCH LAYER. DETAIL REPRESENTS TYPICAL INSTALLATION, INSTALL PRESSURE COMPENSATING DRIP EMITTERS TO TREES PER SCHEDULE.

DRIP AND EMITTER TUBING MUST BE BURIED 12" DEEP. EMITTER TUBING SHALL BE EXTENDED TO SURFACE ONLY AT ROOTBALL OF PLANT.



1. EMITTER TUBING-72"
2. 2. MAXIMUM LENGTH
3. ROOT BALL
4. EMITTER-STAKE TO EDGE OF ROOTBALL
5. DRIP TUBING
6. MULCH LAYER
7. TREE TRUNK

TREE DRIPLINE LAYOUT 8
SCALE: N.T.S.



ELECTRICAL PULL BOX (LOW VOLTAGE) 4
SCALE: N.T.S.

D·R·HORTON® America's Builder
1081 Whitney Ranch DR. #141
Henderson, NV 89014

PROJECT NAME
Elkhorn 40
Streetscape & Common Area
Elkhorn Rd & Rio Vista St
APN:125-22-501-001 36.53

REVISIONS

No.	Date	Description
	04-07-2017	100% REVIEW
	07-12-2017	100%

SHEET TITLE
Irrigation Detail

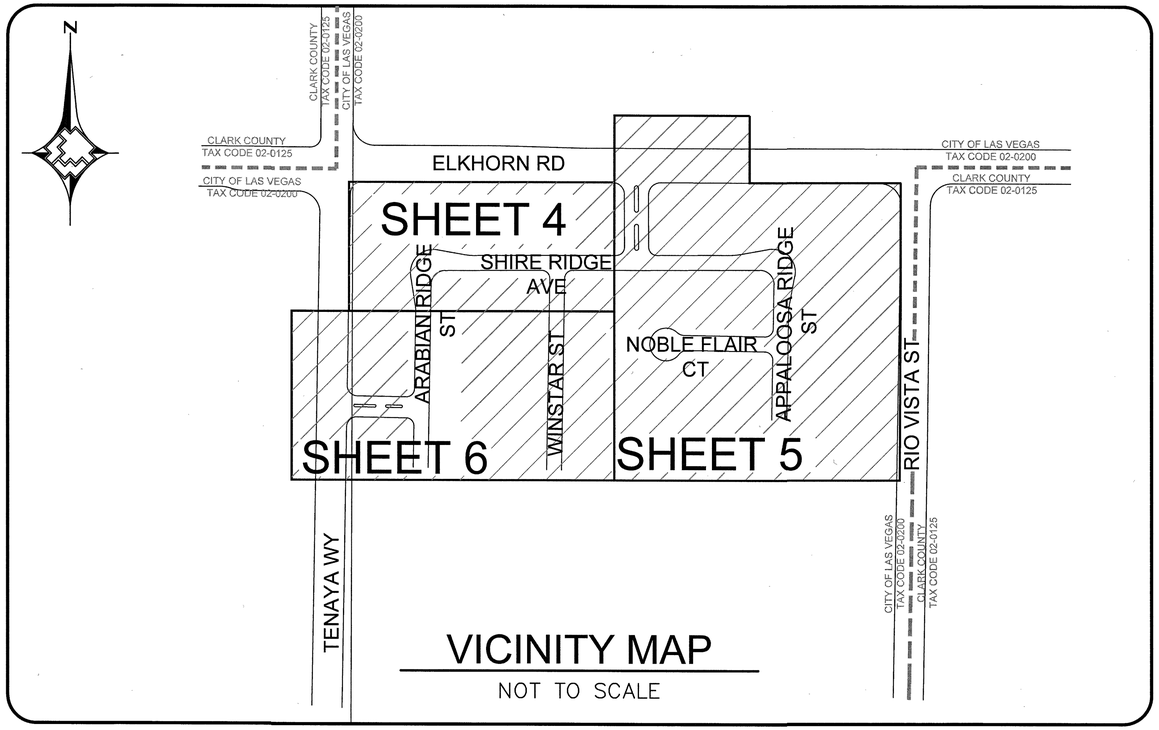
Scale: n.t.s.
Date drawn: 03-14-2017
Drawn by: FD/LT/TT
Designed by: LT/TT
Approved by: TT
Job Number: 800145

Sheet No. 13
Drawing No. LA-12

10785059 L-69184

SOUTHWEST GAS CORPORATION

ELKHORN 40 PHASE I
CITY OF LAS VEGAS, NV
WR #3369762



VICINITY MAP

NOT TO SCALE

LEGEND

- EXISTING GAS LINE
- GAS LINE TO BE ABANDONED
- EXISTING GAS SERVICE
- PROPOSED MAIN GAS LINE (NEW)
- PROPOSED SERVICE LATERAL (NEW)
- PROPOSED SERVICE LINE (NEW)
- RIGHT OF WAY LINE
- STREET CENTERLINE
- PROPERTY LINE
- BACK OF CURB
- TAX CODE BOUNDARY
- MATCHLINE
- PAVEMENT CUT AND REPAIR
- EXISTING ANODELESS RISER
- EXISTING ANODE RISER
- EXISTING GAS LIGHT
- EXISTING GAS VALVE
- STL (1) PE (1) PROPOSED MAIN CALL OUT
- [1] ABANDONED FACILITIES CALL OUT
- (12) GAS DIMENSIONS
- EXCESS FLOW VALVE

SHEET INDEX

1. COVER SHEET
2. ABBREVIATIONS & NOTES
3. MATERIALS & SIGNATURES - PE
4. DESIGN PLAN
5. DESIGN PLAN
6. DESIGN PLAN
7. TYPICAL SWPPP BMPs DETAILS

Total footage located in Public ROW 184'

APPROVED FOR CONSTRUCTION

THIS APPROVAL IS FOR WORK IN CLV R/W OR CLV EASEMENTS ONLY. OBTAINING PERMISSIONS OR EASEMENTS FOR WORK SHOWN ON PRIVATE PROPERTY IS THE RESPONSIBILITY OF THE UTILITY.

APPROVAL DATE

811 Know what's **below.** **Call** before you dig.

AVOID HITTING OVERHEAD POWER LINES IT'S A LOT! CALL BEFORE YOU DO OVERHEAD 1-702-593-6111

CUSTOMER 47

Hansen _____ Dwg _____

NO.	DESCRIPTION	BY	DATE	APPVD.
1.				
2.				
3.				
4.				

REVISIONS

SOUTHWEST GAS CORPORATION

PROPERTY UNITS

TAX CODES	UNIT NO.	UNIT TYPE	PROPOSED INSTL.	PROPOSED RETIRED	COMPLETED INSTL.	COMPLETED RETIRED
SEE SHEET 3						

AS-BUILT DRAWING-PRESSURE TEST DATA

PIPE DIA. _____ TEST MEDIUM: ☐ AIR ☐ NITROGEN ☐ WATER ☐ SOAP — TEST METHOD: ☐ GAUGE ☐ CHART — GAUGE/PRESS REC SN#

PIPE LENGTH _____

PIPE TYPE _____

MIN. DURATION _____

TEST PRES. (PSIG): (MAX) _____ (MIN) _____

TIME: (START) _____ (STOP) _____

DATE: (START) _____ (STOP) _____

PERFORMED BY: _____

SWG VERIFIED BY: _____

SEE SHEET 3

INDIVIDUAL PERFORMING VISUAL INSPECTION
VISUAL INSPECTION CERTIFICATION
I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLVENT CEMENT, MECHANICAL JOINTS, AND WELDS THAT I HAVE PERFORMED

NAME _____ DATE _____

SEE SHEET 3

AS-BUILTS ACCEPTED BY _____ DATE _____

POSTED BY _____ DATE _____

POSTING QC'D BY _____ DATE _____

CONSTRUCTION

INSPECTOR _____

FOREMAN _____

REVIEWED BY _____

SEE SHEET 3

PERMIT INFORMATION

CITY OF LAS VEGAS
TAX CODE: 02-0200

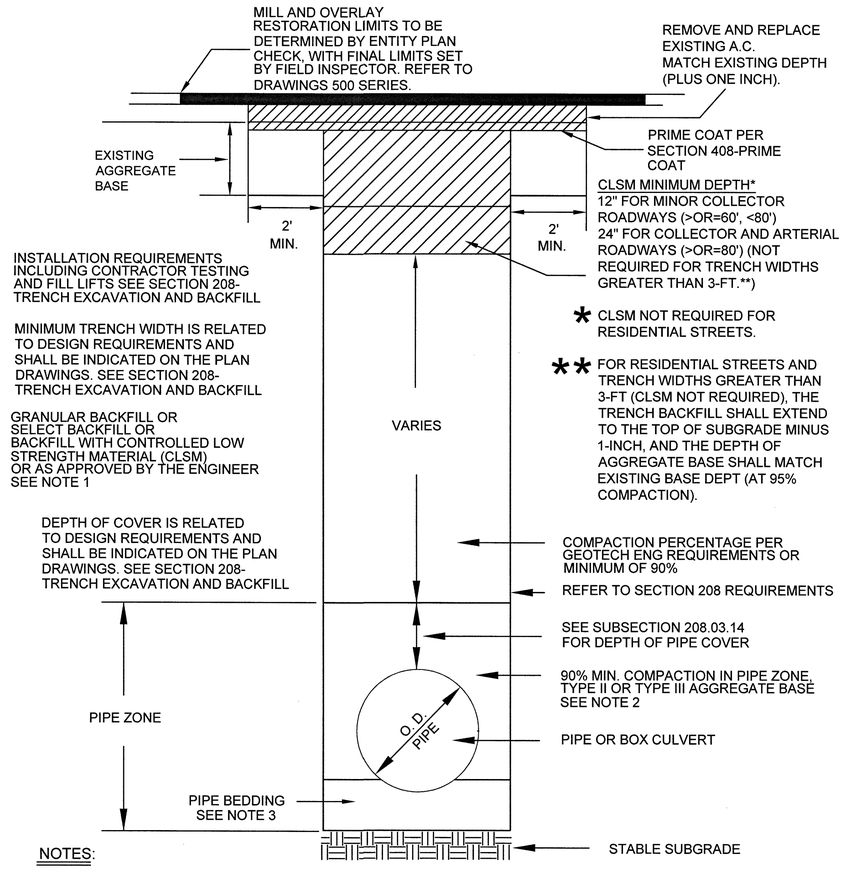
ISOLATION AREA	W.R. NO.
DIST_365	3369762
LOCATION	ATLAS #/TILE #
SEC 22 T19S R60E M.D.M.	x597y560

ENGINEER/TECH: TAMI GARCIA		PHONE: 702-365-2152
ACCOUNT REP: MATT MINDER		PHONE: 520-794-6454
PROJECT CONTACT: CHRISTOPHER FOLEY		PHONE: 702-232-8248
SHEET NO: 1 OF 7	SCALE: NTS	DATE: 12/29/17
DWN. BY: BC&F	CHKD. BY:	APPVD. BY:

TITLE

ELKHORN 40 PHASE I
COVER SHEET

10745059
SHEET 51 of 57
CLV # 69184



NOTES:

1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING, SUBGRADE AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE ENTITY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.

RTC STD DWG 503

811 Know what's **below.** **Call** before you dig.

ABBREVIATIONS

AB	ABANDONED
AC	ASPHALTIC CONCRETE
ACP	ASBESTOS CEMENT PIPE
AIM	AREA ISOLATION MODULE
BLVD	BOULEVARD
BM	BENCHMARK
BMI	BLACK MOUNTAIN INDUSTRIAL
BO	BLOW OFF
BTU	BRITISH THERMAL UNIT
BWC	BASIC WATER COMPANY
COBC	CITY OF BOULDER CITY
CC	CLARK COUNTY
CCAUSD	CLARK COUNTY AREA UNIFORM STANDARD DRAWING
CCRFCD	CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT
CCWRD	CLARK COUNTY WATER RECLAMATION DISTRICT
CIP	CAST IRON PIPE
CL	CENTERLINE
CLV	CITY OF LAS VEGAS
CNLV	CITY OF NORTH LAS VEGAS
COH	CITY OF HENDERSON
CP	CATHODIC PROTECTION
DET	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
DIMP	DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM
DNR	DOES NOT REGISTER
DWG	DRAWING
EFV	EXCESS FLOW VALVE
EG	EXISTING GROUND
EHDD	EFFECTIVE HEATING DEGREE DAY
ELEC	ELECTRICAL
ELEV	ELEVATION
EMRS	ELECTRONIC MAPPING RECORDS SYSTEM
EPR	ELECTRONIC PRESSURE RECORDERS
ESMT	EASEMENT
EX	EXISTING
FERC	FEDERAL ENERGY REGULATORY COMMISSION
FOS	FACILITY OUT OF SERVICE
FH	FIRE HYDRANT
GIR	GAS INFRASTRUCTURE REPLACEMENT
GPR	GAS PRESSURE REGULATOR
HCA	HIGH CONSEQUENCE AREA
HDD	HEATING DEGREE DAY
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH PRESSURE
HERS	HOME ENERGY RATING SYSTEM
HOP	HISTORIC OPERATING PROCEDURE
HVTT	HIGH VOLUME TAPPING TEE
ID	INSIDE DIAMETER
IN	INCH(ES)
IPS	IRON PIPE SIZE
IS	IDENTIFIED SITE
JT	JOINT TRENCH
KRG	KERN RIVER GAS COMPANY
LDCPE	LARGE DIAMETER COILED POLYETHYLENE PIPE
LVVWD	LAS VEGAS VALLEY WATER DISTRICT
MAOP	MAXIMUM ALLOWABLE OPERATING PRESSURE
MCFH	THOUSAND CUBIC FEET PER HOUR
MH	MANHOLE
MOP	MAXIMUM OPERATING PRESSURE
MSA	METER SET ASSEMBLY
MVP	MAPPING VERIFICATION PROCEDURE
NAP	NOT A PART
NDOT	NEVADA DEPARTMENT OF TRANSPORTATION
NTSB	NATIONAL TRANSPORTATION SAFETY BOARD
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OHP	OVERHEAD POWER
P	POWER
PAOP	POTENTIAL ALLOWABLE OPERATING PRESSURE
PCC	PORTLAND CEMENT CONCRETE
PE	POLYETHYLENE PIPE
PH	POT HOLE
PHMSA	PIPELINE & HAZARDOUS MATERIALS SAFETY ADMINISTRATION
PL	PROPERTY LINE
PIC	POTENTIAL IMPACT CIRCLE
PLS	PRESSURE LIMITING STATION
PP	POWER POLE
PQF	PREQUALIFIED FITTING
PVC	POLYVINYL CHLORIDE
RAM	RISK ASSESSMENT MODEL
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FOOT
SHT	SHEET
SHP	STEEL HIGH PRESSURE PIPE
SMYS	SPECIFIED MAXIMUM YIELD STRENGTH
SNWA	SOUTHERN NEVADA WATER AUTHORITY
SS	SANITARY SEWER
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STRENGTH TEST DRAWING
STL	STEEL
SWG	SOUTHWEST GAS
TEL	TELEPHONE
TB	THRUST BLOCK
TOP	TOP OF PIPE
TP	TEST POINT
TRIMP	TRANSMISSION INTEGRITY MANAGEMENT PROGRAM
UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS
UOC	UNUSUAL OPERATING CONDITIONS
UOP	UNIT OF PROPERTY
UPRR	UNION PACIFIC RAILROAD
USD	UNIFORM STANDARD DRAWING
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VG	VALLEY GUTTER
VSP	VINTAGE STEEL PIPE
W	WATER
WMS	WORK MANAGEMENT SYSTEM
WR	WORK REQUEST
WT	WALL THICKNESS
WV	WATER VALVE
YD	YARD(S)

CONSTRUCTION NOTES

1. SUGGESTED GAS LOCATIONS ARE TO CLEAR SUBSTRUCTURES LOCATE IN FIELD.
2. ALL PIPELINE CONSTRUCTION SHALL CONFORM TO APPLICABLE JURISDICTION SPECIFICATIONS.
3. DO NOT SCALE THIS DRAWING.
4. SEE AC'S FOR SERVICE REPLACEMENT.
5. CHANGE IN PROPOSED MAIN LOCATION MUST BE AUTHORIZED BY SWG ENGINEER PRIOR TO INSTALLATION.
6. GAS MAINS SHALL BE PURGED PER OPERATIONS MANUAL.
7. ABANDONED SERVICE NO ACTION REQUIRED.
8. REPLACE ALL ACTIVE SERVICES INCLUDING AA, PVC, M7000 PE, M8000 PE, EXCEPT WHERE EXISTING M8100 PE SERVICES ARE VERIFIED, INSPECTED, AND APPROVED FOR TIE-OVER BY SWG INSPECTOR.
9. EXISTING SERVICES, VERIFICATION, AND INSPECTION REQUIRED FROM MAIN TO RISER. TIE INTO NEW MAIN IF APPROVED BY SWG INSPECTOR. REPLACE ALL AA, PVC, M7000 PE, AND M8000 PE SERVICES. M8100 PE SERVICES TO BE VERIFIED, INSPECTED AND APPROVED BY SWG INSPECTOR.
10. EXISTING SERVICE, UNKNOWN TYPE, SIZE, AND LOCATION TO BE VERIFIED.
11. REPLACEMENT SERVICES TO BE SINGLE OR BRANCHED. NO CROSS-LOT REPLACEMENT SERVICES PERMITTED.
12. REPLACE ALL ANODE RISERS WITH ANODELESS RISERS.
13. ALL EXISTING UTILITY LOCATION TO BE VERIFIED PRIOR TO START OF CONSTRUCTION.
14. CONTACT ENGINEERING FOR BYPASS INFORMATION.
15. ALL MAIN TIE-INS REQUIRING TEES ARE TO BE FULL-FLOW TEES UNLESS OTHERWISE STATED.
16. ALL SHORING REQUIREMENTS SHALL CONFORM TO APPLICABLE PORTIONS OF THE OPERATIONS MANUAL.
17. REQUEST FOR SURVEYING AND/OR STAKING WILL BE SUBMITTED TO ENGINEERING 72 HOURS IN ADVANCE, MINIMUM.
18. TRENCHING AND BACKFILL TO CONFORM WITH RTC STANDARD 503 AND STANDARD SPECIFICATIONS 208.
19. MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING.
20. MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.
21. "ANY EXCAVATION EXPOSING LVVWD FACILITIES 24" IN DIAMETER AND LARGER MUST REMAIN OPEN UNTIL INSPECTED BY LVVWD. NO BACKFILL MATERIAL IS TO BE PLACED IN THE EXCAVATION UNTIL APPROVED BY THE LVVWD INSPECTOR. ANY DAMAGE TO THE FACILITIES MUST BE REPORTED TO LVVWD IMMEDIATELY. CONTRACTOR TO CALL (702) 258-7171 TO SCHEDULE LVVWD INSPECTION."

RTC NOTES:

PAVEMENT REPAIR SHALL CONFORM TO RTC:

A1 500.5

A2 503

NO.	DESCRIPTION	BY	DATE	APPVD.
1.				
2.				
3.				
4.				

REVISIONS

SOUTHWEST GAS CORPORATION

TAX CODES	UNIT NO.	UNIT TYPE	INSTL. (PROPOSED)	RETIRED (PROPOSED)	INSTL. (COMPLETED)	RETIRED (COMPLETED)

PROPERTY UNITS

SEE SHEET 3

AS-BUILT DRAWING-PRESSURE TEST DATA

PIPE DIA. _____ TEST MEDIUM: ☐ AIR ☐ NITROGEN ☐ WATER ☐ SOAP — TEST METHOD: ☐ GAUGE ☐ CHART

PIPE LENGTH _____

PIPE TYPE _____ GAUGE/ PRESS REC SN# _____

MIN. DURATION _____

TEST PRES. (PSIG): (MAX) _____ (MIN) _____

TIME: (START) _____ (STOP) _____

DATE: (START) _____ (STOP) _____

PERFORMED BY: _____

SWG VERIFIED BY: _____

SEE SHEET 3

INDIVIDUAL PERFORMING VISUAL INSPECTION

VISUAL INSPECTION CERTIFICATION

I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLVENT CEMENT, MECHANICAL JOINTS, AND WELDS THAT I HAVE PERFORMED

NAME _____ DATE _____

SEE SHEET 3

AS-BUILTS ACCEPTED BY _____ DATE _____

POSTED BY _____ DATE _____

POSTING QC'D BY _____ DATE _____

CONSTRUCTION

INSPECTOR _____

FOREMAN _____

REVIEWED BY _____

SEE SHEET 3

PERMIT INFORMATION

CITY OF LAS VEGAS

TAX CODE: 02-0200

ISOLATION AREA	W.R. NO.
DIST_365	3369762
LOCATION	**ATLAS #/TILE #**
SEC 22 T19S R60E M.D.M.	x597y560

ENGINEER/TECH: TAMI GARCIA		PHONE: 702-365-2152
ACCOUNT REP: MATT MINDER		PHONE: 520-794-6454
PROJECT CONTACT: CHRISTOPHER FOLEY		PHONE: 702-232-8248
SHEET NO: 2 OF 7	SCALE: NTS	DATE: 12/29/17
DWN. BY: BC&F	CHKD. BY:	APPVD. BY:

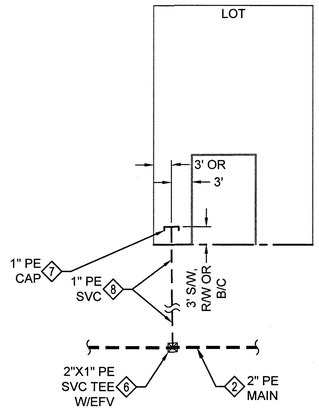
TITLE

ELKHORN 40 PHASE I
ABBREVIATIONS AND NOTES

SHEET 52 OF 57

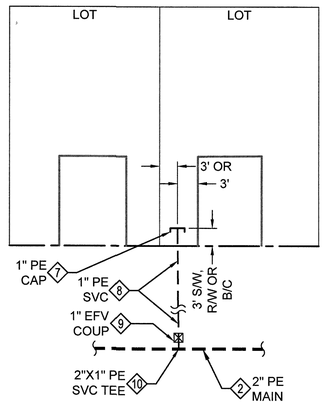
1074.50.69

CLV #G9184



A TYPICAL RESIDENTIAL SERVICE LATERAL DETAIL

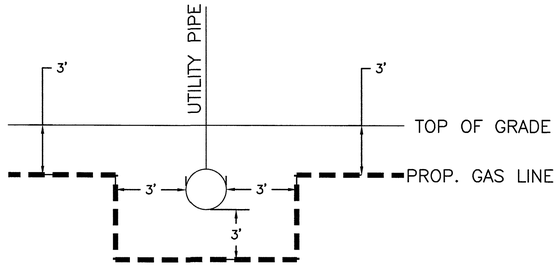
NOT TO SCALE



B TYPICAL RESIDENTIAL SERVICE LATERAL DETAIL

NOT TO SCALE

MATERIAL LIST FOR PROPOSED DISTRIBUTION FACILITIES				
ITEM#	QTY. (DESIGN)	QTY. (AS-BUILT)	STOCK ID#	DESCRIPTION
1	2		160-8174	4" X 2" HVTT
2	3,179'		100-5101	2" PE MAIN
3	4		140-3074	2" PE TEE
4	2		140-3067	2" PE 90° ELBOW
5	4		140-3060	2" PE CAP
6	7		160-8394	2"X1" SERVICE TEE WITH EFV (1800)
7	27		850-8773	1" PE CAP
8	683'		101-8526	1" PE SVC
9	20		160-8405	1" EFV COUPLING
10	20		160-8551	2" X 1" SERVICE TEE



TYPICAL UTILITY CROSSING DETAIL

NOT TO SCALE

CATHODIC PROTECTION NOTES:

1. NO STEEL WITHIN PROJECT LIMITS. NO CP ACTION REQUIRED.

PURGE PLAN WAS COMPLETED IN ACCORDANCE WITH THE OPERATIONS MANUAL GUIDELINES BY:

PRINT:_____ DATE:_____

SIGNATURE:_____

VISUAL INSPECTION (OQ/PJQ)

_____ _____

_____ _____

_____ _____

_____ _____

SIGNATURE _____

DATE _____

Know what's **below.** **Call** before you dig.

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY!
CALL BEFORE YOU DO OVERHEAD
1-702-593-6111

AS-BUILT DRAWING-PRESSURE TEST DATA

		TEST MEDIUM	TEST METHOD
PIPE DIA.		☐ AIR	☐ GAUGE
PIPE LENGTH		☐ NITROGEN	☐ CHART
PIPE TYPE		☐ WATER	GAUGE/
MIN. DURATION		☐ SOAP	PRESS REC SN#
	START		END
TEST PRES. (PSIG)			
TIME			
DATE			
PERFORMED BY			

SYSTEM D_N_VALLEY_CEN_W

DR. NO. 21DR10002552

SEGMENT M.A.O.P. N/A

SYSTEM M.A.O.P. 60 psig

SYSTEM M.O.P. 55 psig

NO.	DESCRIPTION	BY	DATE	APPVD.
1.				
2.				
3.				
4.				

REVISIONS

SOUTHWEST GAS CORPORATION

TAX CODES	UNIT NO.	UNIT TYPE	INSTL.	RETIRED	INSTL.	RETIRED
			PROPOSED		COMPLETED	
	3760102	2" PE	3,179'			
	3800101	1" PE	683'			

PROPERTY UNITS

AS-BUILT DRAWING-PRESSURE TEST DATA

		TEST MEDIUM	TEST METHOD
PIPE DIA.		☐ AIR	☐ GAUGE
PIPE LENGTH		☐ NITROGEN	☐ CHART
PIPE TYPE		☐ WATER	GAUGE/
MIN. DURATION		☐ SOAP	PRESS REC SN#

TEST PRES. (PSIG): (MAX)_____ (MIN)_____

TIME: (START)_____ (STOP)_____

DATE: (START)_____ (STOP)_____

PERFORMED BY: _____

SWG VERIFIED BY: _____

INDIVIDUAL PERFORMING VISUAL INSPECTION
VISUAL INSPECTION CERTIFICATION
I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLVENT CEMENT, MECHANICAL JOINTS, AND WELDS THAT I HAVE PERFORMED

NAME _____ DATE _____

AS-BUILTS ACCEPTED BY _____ DATE _____

POSTED BY _____ DATE _____

POSTING QC'D BY _____ DATE _____

CONSTRUCTION

INSPECTOR _____

FOREMAN _____

REVIEWED BY _____

PERMIT INFORMATION

CITY OF LAS VEGAS
TAX CODE: 02-0200

ISOLATION AREA	W.R. NO.
DIST_365	3369762
LOCATION	ATLAS #/TILE #
SEC 22 T19S R60E M.D.M.	x597y560

ENGINEER/TECH: TAMI GARCIA		PHONE: 702-365-2152
ACCOUNT REP: MATT MINDER		PHONE: 520-794-6454
PROJECT CONTACT: CHRISTOPHER FOLEY		PHONE: 702-232-8248
SHEET NO: 3 OF 7	SCALE: NTS	DATE: 12/29/17
DWN. BY: BC&F	CHKD. BY:	APPVD. BY:

TITLE

ELKHORN 40 PHASE I MATERIALS AND SIGNATURES - PE

SHEET 53 OF 57

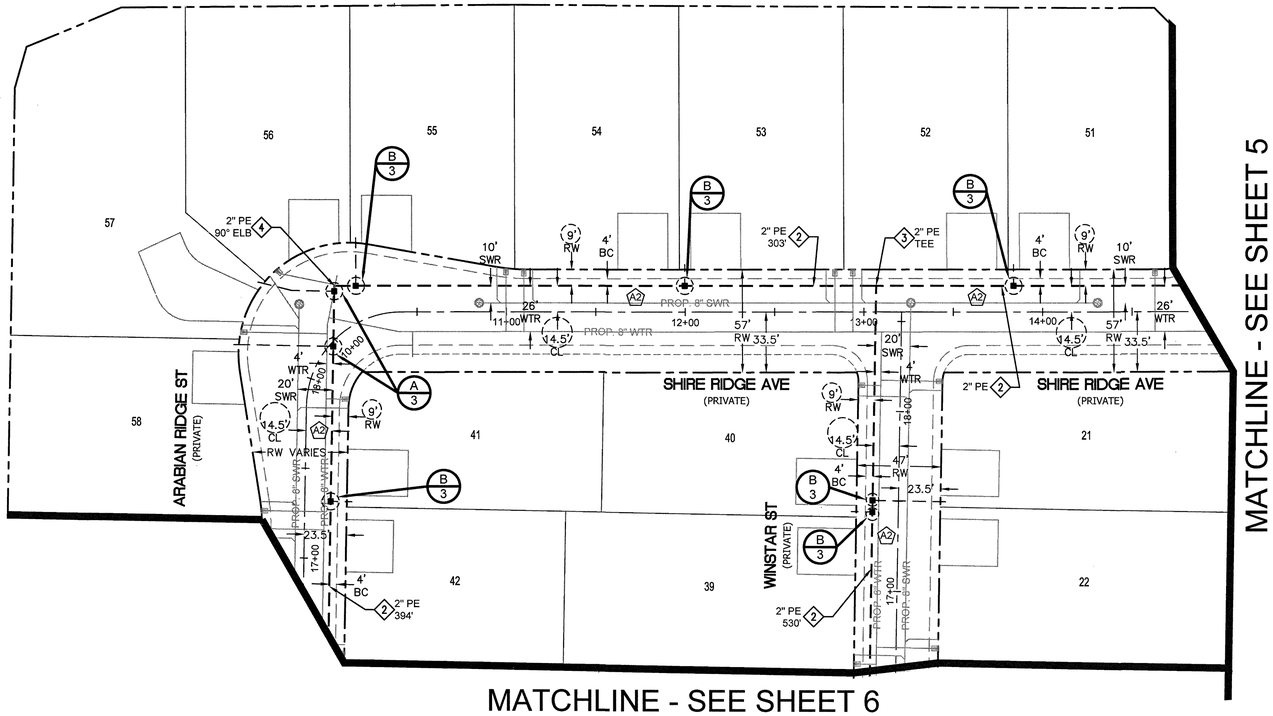
10745059

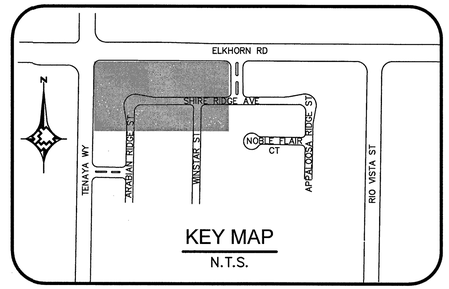
CLV # 69184

N

0 40

1" = 40'





MATERIAL LIST FOR PROPOSED DISTRIBUTION FACILITIES

ITEM#	QTY. (AS-BUILT)	STOCK ID#	DESCRIPTION
1		160-8174	4" X 2" HVTT
2		100-5101	2" PE MAIN
3		140-3074	2" PE TEE
4		140-3067	2" PE 90° ELBOW
5		140-3060	2" PE CAP
6		160-8394	2"X1" SERVICE TEE WITH EFV (1800)
7		850-8773	1" PE CAP
8		101-8526	1" PE SVC
9		160-8405	1" COUPLING W/EFV
10		160-8551	2" X 1" SERVICE TEE

RTC NOTES:

PAVEMENT REPAIR SHALL CONFORM TO RTC:

A1 500.5

A2 503

Know what's **below.** **Call** before you dig.

1-702-593-6111

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

CALL BEFORE YOU DO OVERHEAD

NO.	DESCRIPTION	BY	DATE	APPVD.
1.				
2.				
3.				
4.				

REVISIONS

SOUTHWEST GAS CORPORATION

TAX CODES	UNIT NO.	UNIT TYPE	INSTL. (PROPOSED)	RETIRED (PROPOSED)	INSTL. (COMPLETED)	RETIRED (COMPLETED)

PROPERTY UNITS

SEE SHEET 3

AS-BUILT DRAWING-PRESSURE TEST DATA

TEST MEDIUM: ☐ AIR ☐ NITROGEN ☐ WATER ☐ SOAP

TEST METHOD: ☐ GAUGE ☐ CHART GAUGE/PRESS REC SN#

PIPE DIA. _____
PIPE LENGTH _____
PIPE TYPE _____
MIN. DURATION _____
TEST PRES. (PSIG): (MAX) _____ (MIN) _____
TIME: (START) _____ (STOP) _____
DATE: (START) _____ (STOP) _____
PERFORMED BY: _____
SWG VERIFIED BY: _____

SEE SHEET 3

INDIVIDUAL PERFORMING VISUAL INSPECTION

VISUAL INSPECTION CERTIFICATION

I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLVENT CEMENT, MECHANICAL JOINTS, AND WELDS THAT I HAVE PERFORMED

NAME _____ DATE _____

SEE SHEET 3

AS-BUILTS ACCEPTED BY _____ DATE _____
POSTED BY _____ DATE _____
POSTING QC'D BY _____ DATE _____

CONSTRUCTION

INSPECTOR _____
FOREMAN _____
REVIEWED BY _____

SEE SHEET 3

PERMIT INFORMATION

CITY OF LAS VEGAS
TAX CODE: 02-0200

ISOLATION AREA	W.R. NO.
DIST_365	3369762
LOCATION	ATLAS #/TILE #
SEC 22 T19S R60E M.D.M.	x597y560

ENGINEER/TECH: TAMI GARCIA		PHONE: 702-365-2152
ACCOUNT REP: MATT MINDER		PHONE: 520-794-6454
PROJECT CONTACT: CHRISTOPHER FOLEY		PHONE: 702-232-8248
SHEET NO: 4 OF 7	SCALE: 1"=40'	DATE: 12/29/17
DWN. BY: BC&F	CHKD. BY:	APPVD. BY:

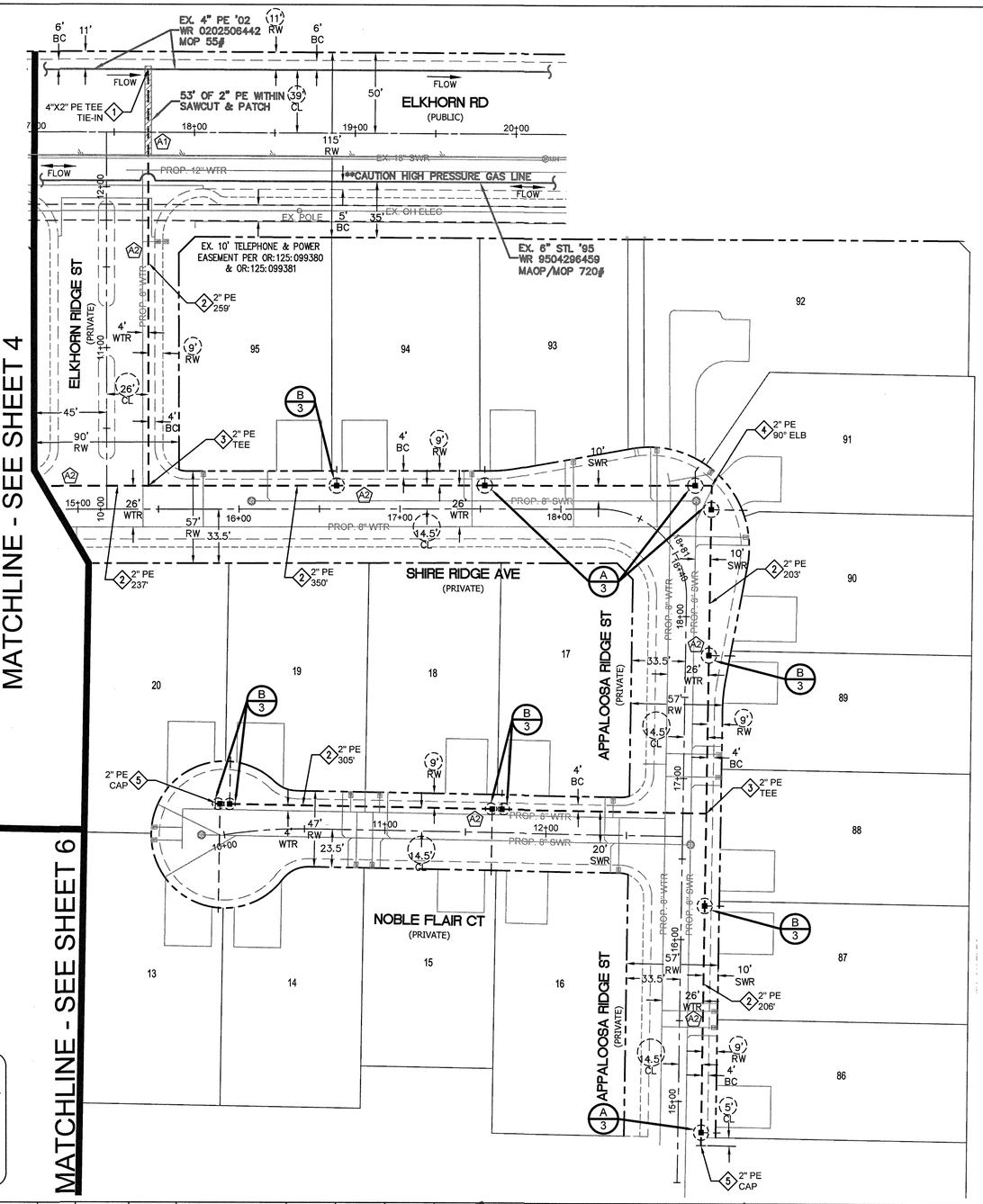
TITLE

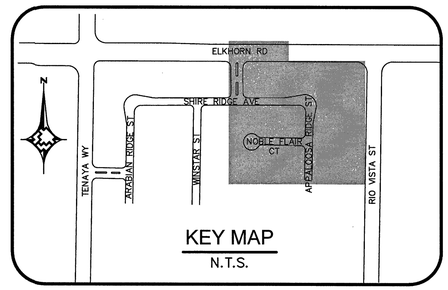
ELKHORN 40 PHASE I DESIGN PLAN

1027&059

SHEET 54 of 57

CLV #69184





MATERIAL LIST FOR PROPOSED DISTRIBUTION FACILITIES

ITEM#	QTY. (AS-BUILT)	STOCK ID#	DESCRIPTION
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2		100-5101	2" PE MAIN
3		140-3074	2" PE TEE
4		140-3067	2" PE 90° ELBOW
5		140-3060	2" PE CAP
6		160-8394	2"X1" SERVICE TEE WITH EFV (1800)
7		850-8773	1" PE CAP
8		101-8526	1" PE SVC
9		160-8405	1" COUPLING W/EFV
10		160-8551	2" X 1" SERVICE TEE

RTC NOTES:

PAVEMENT REPAIR SHALL CONFORM TO RTC:

A1 500.5

A2 503

Know what's **below.** **Call** before you dig.

1-702-593-6111

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD

NO.	DESCRIPTION	BY	DATE	APPVD.
1.				
2.				
3.				
4.				

REVISIONS

SOUTHWEST GAS CORPORATION

TAX CODES	UNIT NO.	UNIT TYPE	INSTL. PROPOSED	RETIRED PROPOSED	INSTL. COMPLETED	RETIRED COMPLETED

PROPERTY UNITS

SEE SHEET 3

AS-BUILT DRAWING-PRESSURE TEST DATA

PIPE DIA. _____ TEST MEDIUM: ☐ AIR ☐ NITROGEN ☐ WATER ☐ SOAP — TEST METHOD: ☐ GAUGE ☐ CHART ☐ GAUGE/PRESS REC SN#

PIPE LENGTH _____

PIPE TYPE _____

MIN. DURATION _____

TEST PRES. (PSIG): (MAX) _____ (MIN) _____

TIME: (START) _____ (STOP) _____

DATE: (START) _____ (STOP) _____

PERFORMED BY: _____

SWG VERIFIED BY: _____

INDIVIDUAL PERFORMING VISUAL INSPECTION
VISUAL INSPECTION CERTIFICATION
I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLVENT CEMENT, MECHANICAL JOINTS, AND WELDS THAT I HAVE PERFORMED

NAME _____ DATE _____

AS-BUILTS ACCEPTED BY _____ DATE _____

POSTED BY _____ DATE _____

POSTING QC'D BY _____ DATE _____

CONSTRUCTION

INSPECTOR _____

FOREMAN _____

REVIEWED BY _____

PERMIT INFORMATION

CITY OF LAS VEGAS
TAX CODE: 02-0200

ISOLATION AREA	W.R. NO.
DIST_365	3369762

LOCATION	ATLAS #/TILE #
SEC 22 T19S R60E M.D.M.	x597y560

ENGINEER/TECH: TAMI GARCIA		PHONE: 702-365-2152
ACCOUNT REP: MATT MINDER		PHONE: 520-794-6454
PROJECT CONTACT: CHRISTOPHER FOLEY		PHONE: 702-232-8248
SHEET NO: 5 OF 7	SCALE: 1"=40'	DATE: 12/29/17
DWN. BY: BC&F	CHKD. BY:	APPVD. BY:

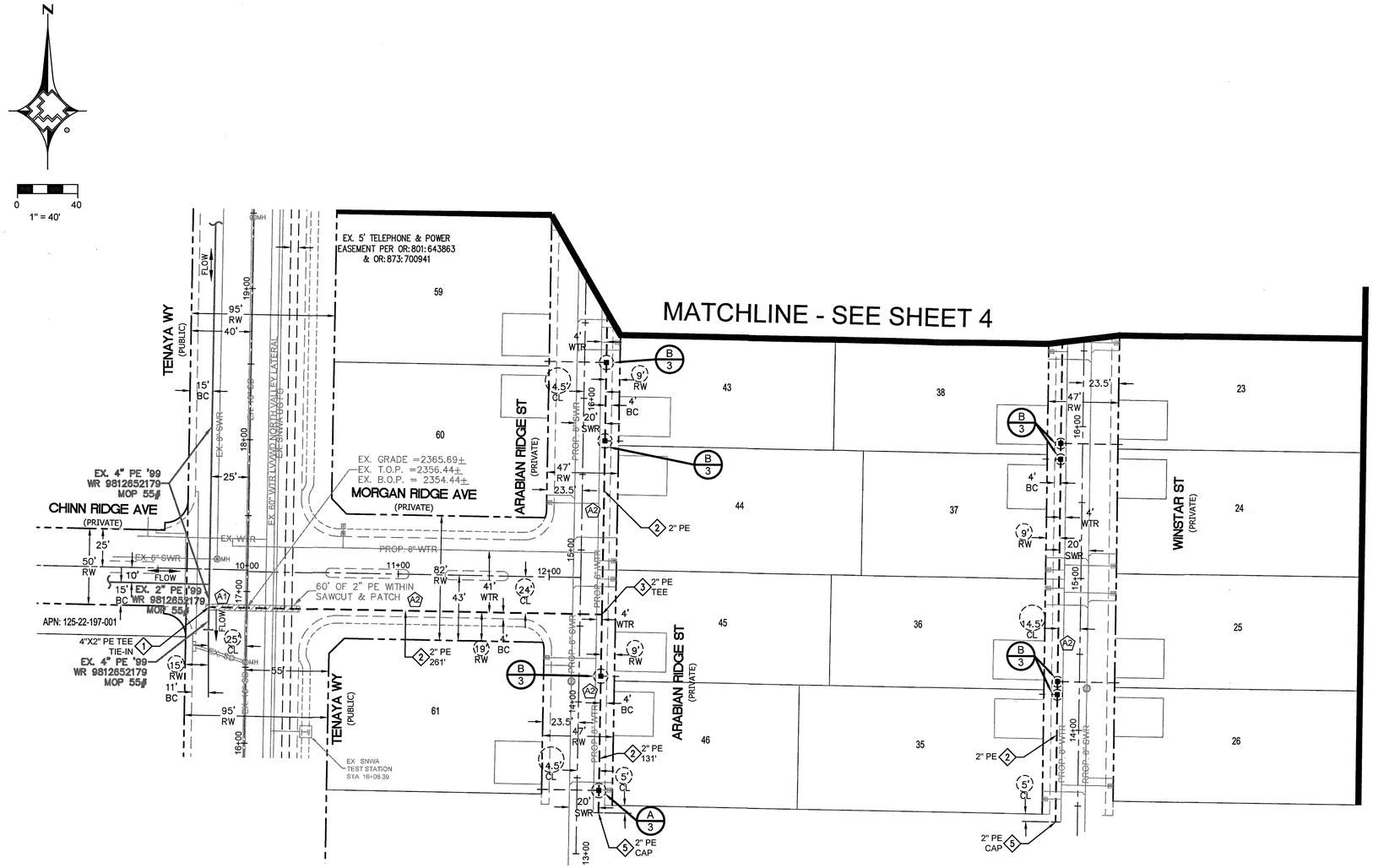
TITLE

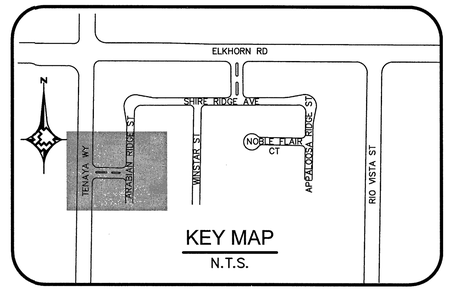
ELKHORN 40 PHASE I DESIGN PLAN

SHEET 55 OF 57

10745059

CLV #69184





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9		160-8405	1" COUPLING W/EFV
10		160-8551	2" X 1" SERVICE TEE

RTC NOTES:

PAVEMENT REPAIR SHALL CONFORM TO RTC:

A1 500.5

A2 503

Know what's **below.** **Call** before you dig.

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD
1-702-593-6111

NO.	DESCRIPTION	BY	DATE	APPVD.
1.				
2.				
3.				
4.				

REVISIONS

SOUTHWEST GAS CORPORATION

TAX CODES	UNIT NO.	UNIT TYPE	INSTL. PROPOSED	RETIRED PROPOSED	INSTL. COMPLETED	RETIRED COMPLETED

PROPERTY UNITS

SEE SHEET 3

AS-BUILT DRAWING-PRESSURE TEST DATA

TEST MEDIUM: ☐ AIR ☐ NITROGEN ☐ WATER ☐ SOAP
TEST METHOD: ☐ GAUGE ☐ CHART GAUGE/PRESS REC SN#

PIPE DIA. _____
PIPE LENGTH _____
PIPE TYPE _____
MIN. DURATION _____
TEST PRES. (PSIG): (MAX) _____ (MIN) _____
TIME: (START) _____ (STOP) _____
DATE: (START) _____ (STOP) _____
PERFORMED BY: _____
SWG VERIFIED BY: _____

SEE SHEET 3

INDIVIDUAL PERFORMING VISUAL INSPECTION
VISUAL INSPECTION CERTIFICATION
I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLVENT CEMENT, MECHANICAL JOINTS, AND WELDS THAT I HAVE PERFORMED

NAME _____ DATE _____

SEE SHEET 3

AS-BUILTS ACCEPTED BY _____ DATE _____
POSTED BY _____ DATE _____
POSTING QC'D BY _____ DATE _____

CONSTRUCTION

INSPECTOR _____
FOREMAN _____
REVIEWED BY _____

SEE SHEET 3

PERMIT INFORMATION

CITY OF LAS VEGAS
TAX CODE: 02-0200

ISOLATION AREA	W.R. NO.
DIST_365	3369762
LOCATION	ATLAS #/TILE #
SEC 22 T19S R60E M.D.M.	x597y560

ENGINEER/TECH: TAMI GARCIA		PHONE: 702-365-2152
ACCOUNT REP: MATT MINDER		PHONE: 520-794-6454
PROJECT CONTACT: CHRISTOPHER FOLEY		PHONE: 702-232-8248
SHEET NO: 6 OF 7	SCALE: 1"=40'	DATE: 12/29/17
DWN. BY: BC&F	CHKD. BY:	APPVD. BY:

TITLE

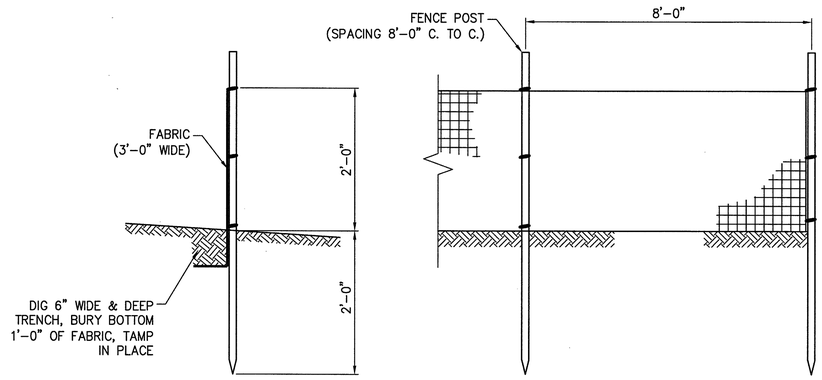
ELKHORN 40 PHASE I DESIGN PLAN

10745059

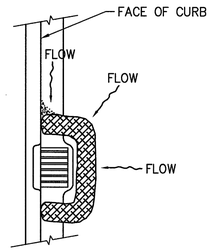
SHEET 56 OF 57

CLV #69184

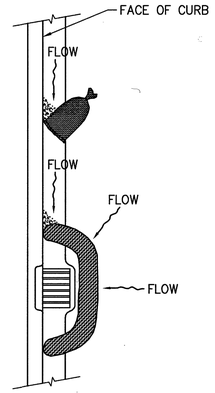
TYPICAL SWPPP BMPs DETAILS



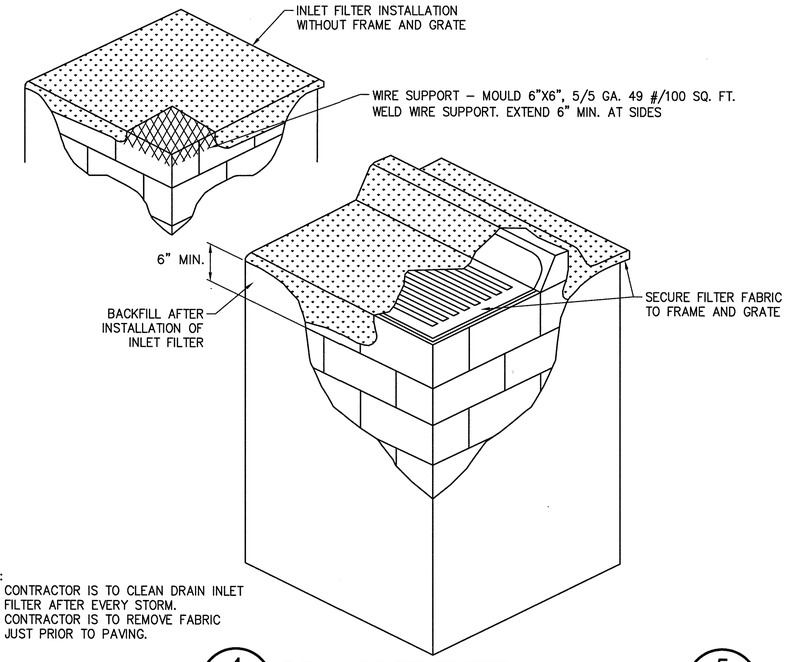
1/7 **SILT FENCE**
NOT TO SCALE



2/7 **FIBER ROLL**
NOT TO SCALE

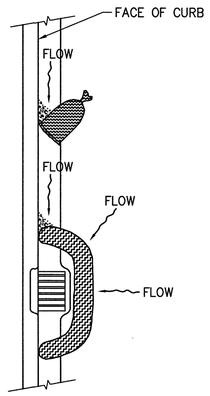


3/7 **SAND BAG / ROLL**
NOT TO SCALE

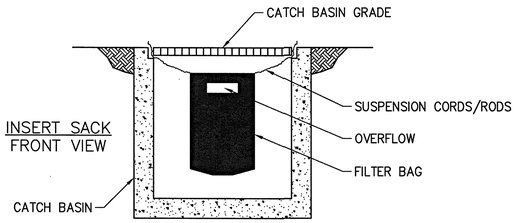


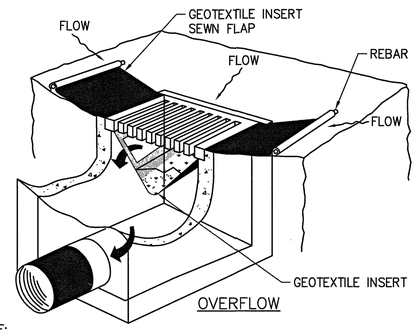
NOTE:
1. CONTRACTOR IS TO CLEAN DRAIN INLET FILTER AFTER EVERY STORM.
2. CONTRACTOR IS TO REMOVE FABRIC JUST PRIOR TO PAVING.

4/7 **DRAIN INLET FILTER**
NOT TO SCALE



5/7 **GRAVEL BAG / ROLL**
NOT TO SCALE





NOTE:
RECESSED CURB INLET MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS.
SIZE OF FILTER FABRIC INLET SACK TO BE DETERMINED BY MANUFACTURER.

6/7 **SEDIMENT FILTER BAG**
NOT TO SCALE

STORMWATER NOTES

1. SOUTHWEST GAS CORPORATION, IT'S CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL INSTALL ONE OF THE APPROPRIATE BMPS FOR THE PROTECTION OF EXISTING STORM DRAIN INLETS, WITHIN OR SIGNIFICANTLY NEAR ANY IMPROVED RIGHT-OF-WAY, FROM DEBRIS AND SEDIMENT RESULTING FROM CONSTRUCTION OF NATURAL GAS FACILITIES.
2. SOUTHWEST GAS CORPORATION, IT'S CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM, USING BEST MANAGEMENT PRACTICES DETAILED ON THIS SHEET.
3. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF SOUTHWEST GAS CORPORATION, IT'S CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE LISTED BMPS ON THIS SHEET DO NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE CLARK COUNTY CODE - CHAPTER 24.40/STORM SEWER SYSTEM DISCHARGE AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
4. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

Know what's **below.** **Call** before you dig.

NO.	DESCRIPTION	BY	DATE	APPVD.
1.				
2.				
3.				
4.				

REVISIONS

SOUTHWEST GAS CORPORATION

TAX CODES	UNIT NO.	UNIT TYPE	PROPOSED INSTL.	PROPOSED RETIRED	COMPLETED INSTL.	COMPLETED RETIRED

PROPERTY UNITS

SEE SHEET 3

AS-BUILT DRAWING-PRESSURE TEST DATA

PIPE DIA. _____ TEST MEDIUM ☐ AIR ☐ NITROGEN ☐ WATER ☐ SOAP TEST METHOD ☐ GAUGE ☐ CHART ☐ GAUGE/ PRESS REC SN#

PIPE LENGTH _____

PIPE TYPE _____

MIN. DURATION _____

TEST PRES. (PSIG): (MAX) _____ (MIN) _____

TIME: (START) _____ (STOP) _____

DATE: (START) _____ (STOP) _____

PERFORMED BY: _____

SWG VERIFIED BY: _____

SEE SHEET 3

INDIVIDUAL PERFORMING VISUAL INSPECTION
VISUAL INSPECTION CERTIFICATION
I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLVENT CEMENT, MECHANICAL JOINTS, AND WELDS THAT I HAVE PERFORMED

NAME _____ DATE _____

SEE SHEET 3

AS-BUILTS ACCEPTED BY _____ DATE _____

POSTED BY _____ DATE _____

POSTING QC'D BY _____ DATE _____

CONSTRUCTION

INSPECTOR _____

FOREMAN _____

REVIEWED BY _____

SEE SHEET 3

PERMIT INFORMATION

CITY OF LAS VEGAS
TAX CODE: 02-0200

ISOLATION AREA	W.R. NO.
DIST_365	3369762
LOCATION	**ATLAS #/TILE #**
SEC 22 T19S R60E M.D.M.	x597y560

ENGINEER/TECH: TAMI GARCIA		PHONE: 702-365-2152
ACCOUNT REP: MATT MINDER		PHONE: 520-794-6454
PROJECT CONTACT: CHRISTOPHER FOLEY		PHONE: 702-232-8248
SHEET NO: 7 OF 7	SCALE: NTS	DATE: 12/29/17
DWN. BY: BC&F	CHKD. BY:	APPVD. BY:

TITLE

ELKHORN 40 PHASE I
TYPICAL SWPPP BMPs DETAILS

SHEET 57 OF 57
10745059
CLV # 69184