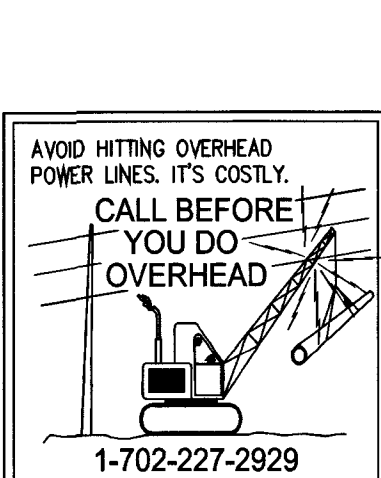
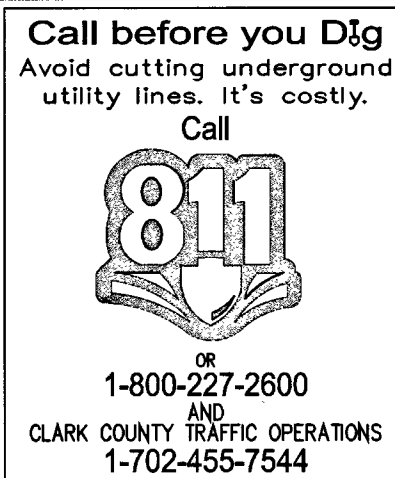


CITY OF LAS VEGAS GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST EDITION. THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA, NEVADA", LATEST 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".
- 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 CLYD PLAN 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 INTERFERENCES 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.
- 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.
- ALL CONSTRUCTION SHALL BE SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
- TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM #28 DARS. MIX DESIGN TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
- PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
- EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
- AC PAVEMENT TO BE ONE-HALF INCH (1/2") ABOVE UP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
- CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER CLARK COUNTY AREA UNIFORM STANDARD DRAWING 216.
- SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE CONSTRUCTED IN THE FIELD BY A CITY INSPECTOR.
- 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 TRANSITIONS TO BE AS SHOWN ON PLANS.
- ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY WRIGHT ENGINEERS, PROJECT NO. 161321, NOVEMBER 8, 2016 APPROVED BY CITY ENGINEER. AND AS SHOWN ON THESE PLANS.
- 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.
- 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. 25B.380 & CITY OF LAS VEGAS TITLE 16.
- 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:
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.
- ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT-OF-WAY.
- 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.
- 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.
- 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 CONSTRUCTION OF ANY ROAD BASE.
- 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 A DROP INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERAL THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF A SEWER SERVICE LATERALS TO THE SEWER AND WHERE THE SEWER SERVICE LATERALS EXIST 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 CERTAINIES 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 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 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.
- CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.
- A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

CITY OF LAS VEGAS SEWER NOTES

- 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.
- 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.
- CHISEL "S" OR "O" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
- POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
- 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.
- 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 "S" SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
- WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
- 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.
- 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.
- INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.



CITY OF LAS VEGAS GRADING NOTES

- IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES.
- CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
- THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
- THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
- CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

	HORIZONTAL	VERTICAL	COMPACTION
A. PAVEMENT AREA SUBGRADE	0.1+	+0.0' TO -0.1'	SEE SOILS REPORT
B. ENGINEERED FILL	0.5+	+0.1' TO -0.1'	SEE SOILS REPORT

COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE AND COPIES OF TEST RESULTS WILL BE PROVIDED TO THE CITY.
- ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
- THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
- FOR CONSTRUCTION SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC, SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
- IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

CITY OF LAS VEGAS TRAFFIC NOTES

- ALL CONSTRUCTION SIGNING, BARRICADEING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
- THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
- 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 STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER FIRST GRADING WORK IS COMPLETED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
- WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCLOSED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
- 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 CITY TRAFFIC ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.
- WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE FEET (5') OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.
- ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC INTO 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.
- STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO ENSURE THE SAFETY OF THE PUBLIC IN OR THROUGH THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED TRAFFIC CONTROL TECHNICIAN OR MSA WORK ZONE SAFETY SPECIALIST SET-UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHTS OF WAY.
- WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE A MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET AND TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
- GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE NO. IS 828-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
- ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
- THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECTS OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITION MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SIGNING. THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DEPICTING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE MODIFYING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

CITY OF LAS VEGAS STREETLIGHT NOTES

- ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST EDITION, AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST EDITION, AND "SUMMERLIN IMPROVEMENT STANDARDS", LATEST EDITION.
- NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS (ETC.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC/ELECTRICAL FIELD OPERATIONS DIVISION AND THE CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623.10.03 (E) OF THE SPECIFICATIONS.
- ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
- ALL STREET LIGHTING CONDUITS STUB SHALL HAVE AT LEAST ONE GREEN #10 THW WIRE INSTALLED, AS TRACER WIRE. WHEN "EMPTY" CONDUIT IS COMPLETELY INSTALLED FROM PB TO PB, IT SHALL HAVE A MINIMUM OF 2 #4 AND 1 #8 THW WIRE WITH THE ENDS TAPED OR "SAFE OFF" PRIOR TO FINAL INSPECTION.
- ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE WITHIN THE UNDERPASS WITH THE USD 320A.
- AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TFO PRIOR TO ANY PREFINAL INSPECTION. THE AS-BUILT DRAWINGS NEED TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
- SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE PLANS.
- IT SHALL BE ASSUMED THAT IN THE ABSENCE OF AN EXISTING, WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUIT.
- WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED AT NO EXPENSE TO THE CITY OF LAS VEGAS.
- THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.
- THE DEVELOPER/OWNER WILL BE REQUIRED TO SUPPLY POWER TO ALL NEW PUBLIC STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE OR PROJECT COMPLETION. THE DEVELOPER/OWNER WILL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH THE INSTALLATION, CONSTRUCTION, ENERGIZING, MAINTENANCE, AND OPERATIONAL COSTS OF SAID STREET LIGHTS PRIOR TO PROJECT COMPLETION. REFER TO THE PLAN FOR ANY NEW SERVICE REQUIREMENT. THE TRANSFER OF OWNERSHIP FROM THE DEVELOPER/OWNER TO THE CITY OF LAS VEGAS FOR ALL NEW PUBLIC STREET LIGHTS AND/OR SERVICES INSTALLED UNDER THIS PLAN DESIGN WILL BE IN CONJUNCTION WITH THIS PROJECT COMPLETION. COORDINATE ALL MAINTENANCE AND OPERATIONAL TRANSFERS WITH THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TEFO) 702-229-6331.

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

- 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 SPECIFICATION.
- ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICTS - APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
- A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTOR MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [FC 106.7.12]
- 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 ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [FC 3310, 3312]
- TO IDENTIFY THE FIRE HYDRANT LOCATIONS, CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF STREET ADJACENT TO THE FIRE HYDRANTS [FC 507.5.7.3]
- 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 TEST WITH PRIOR FIRE PREVENTION APPROVAL. [FC 106.3]
- ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE UL LISTED A.W.W.A. APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [FC 507.2.1, NFPA 24]
- PAINTING OF THE 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. [FC 507]
- PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED. [FC 507.5.7.1]
- PRIOR TO THE FINAL OCCUPANCY, A FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [FC 507]
- FIRE HYDRANTS SPACING SHALL BE AS FOLLOWS: [FC C102.1]
RESIDENTIAL - 500 FEET UNSPRINKLERED, 600 FEET SPRINKLERED.
COMMERCIAL - 300 FEET UNSPRINKLERED, 400 FEET SPRINKLERED.
- 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 MAXIMUM 1,000 FOOT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN OVERSIS OR HAVE FOUR 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 FEET ON AN ALTERNATING BASIS. [FC C102.8]
- NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
- NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [FC C102.12]
- A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FEET, AS MEASURED BY AN APPROVED ROUTE. [FC C102.4]
- THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FEET, AS MEASURED BY AN APPROVED ROUTE. [FC C102.7]
- THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FEET. [FC C102.6]
- THE 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. [FC C104]
- 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. [FC 503.2.3]
- 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 FEET PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6% [FC 503.2.7, 503.2.8]
- THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FEET OUTSIDE AND 28 FEET INSIDE TURNING RADIUS. [FC 503.2.4]
- VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL BE NOT LESS THAN 13 FEET 6 INCHES. [FC 503.2.1]
- 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 FEET WIDE, FLOW LINE TO THE FLOW LINE, WHERE PARKING IS PERMITTED ON ONE SIDE OF THE FIRE APPARATUS ROAD, NOT LESS THAN 24 FEET WIDE, FLOW LINE TO FLOW LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LINES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [FC 503.2.1.1]
- A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FEET FROM A FIRE DEPARTMENT VEHICLE ACCESS. THIS DISTANCE COULD BE INCREASED TO 250 FEET IF THE BUILDING IS SPRINKLERED. [FC 503.1.1] SFC 503.1.1
- 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 FEET. COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT OR EXCEEDING 60,000 SQUARE FEET IN AREA. [FC 503.1.2]
- ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LINES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND AREA HAVING A MINIMUM DIAMETER OF 81 FEET. [FC 503.2.5]
- 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 100 FEET ALONG ALL 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 FEET OR LESS THAN 6 FEET FROM ROADWAY SURFACE ON EITHER SIDE OF THE FIRE LANE. IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [FC 503.3]
- ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE FC 503.6 AND IFC APPROVED M.

LAS VEGAS VALLEY WATER DISTRICT (LVWD) STANDARD NOTES

LVWD PROJECT #125847

NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVWD. FOLLOWING WATER PLAN APPROVAL, THE CONTRACTOR SHALL BE GIVEN 10 TO THE LVWD 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 LVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.

- ALL WORK SHALL CONFORM TO LVWD STANDARD PLANS, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM STANDARDS FOR POTABLE WATER SYSTEMS (UDACS), THE LATEST EDITION OF THE UDACS SHALL SUPERSEDE ANY CONTENTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
- ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
- A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE PROVIDED BY THE LVWD.
- ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVWD APPROVED SERVICE SADDLES.
- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
- ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
- ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
- ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVWD DISTRIBUTION SYSTEM.
- THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
- ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01 AND APPROVED BY THE LVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
- ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVWD PRE-APPROVED MATERIALS AND MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
- TELEPHONE "CALL BEFORE YOU DIG" AT 811 OR 1-800-227-2600.
- THE INSTALLATION OF LAS VEGAS VALLEY WATER DISTRICT (LVWD) 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 LVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF AN 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 ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS. IF NO EXISTENCE, OR THE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ABUTTING A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVWD DURING THE REPAIR OR OPERATION OF THE FACILITIES WILL BE REPLACED WITH APPROVED MATERIALS. THE REPAIR PLAN FURNISH COMPLETE PATCH. THE LVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION, OF ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.
- NO LEAD COMPLIANCE NOTE: TO COMPLY WITH 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 REUSED.

DEVIATIONS FROM STANDARDS

NONE.

SPECIAL NOTE

IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED WHICH IS NOT SHOWN ON THESE PLANS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY OF LAS VEGAS DEPT. OF PUBLIC WORKS. TEMPORARY CONSTRUCTION ITEMS INCLUDE: PAVEMENT TRANSITIONS, PROTECTIVE DITCHES AND BERMS, ROAD SIGNS AND BARRICADES, ETC.

- A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE PROVIDED BY THE LVWD.
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- NO LEAD COMPLIANCE NOTE: TO COMPLY WITH 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 REUSED.

LEGEND

	PROPOSED SCARPING
	LOT LINES
	PROPOSED CONTOURS
	EXISTING INDEX CONTOURS (5' INTERVAL)
	PROPOSED CONTOURS
	EXISTING INTERMEDIATE CONTOURS (1' INTERVAL)
	BOUNDARY
	GRADE BREAK
	STREET CENTERLINE
	RETAINING WALL
	PAD ELEVATION
	FINISH FLOOR ELEVATION
	SIDEWALK, CURB & GUTTER
	DIRECTION OF FLOW
	EXISTING SPOT GRADE
	PROPOSED SPOT GRADE
	FUTURE GRADE
	LOT NUMBER
	LOT LINE DIMENSION
	PROPOSED AC PAVEMENT
	EXISTING PAVEMENT TO REMAIN

QUANTITIES

DRAINAGE		PUBLIC	PRIVATE
1. 24" RCP SD	LF	16	-
2. 20"x46" HERCP	LF	10	-
3. 20" TYPE CM2 DI	EA	3	-
4. 18" RCP SD	LF	16	-
5. CONCRETE LINER CHANNEL	SF	2,410	-

SEWER SYSTEM

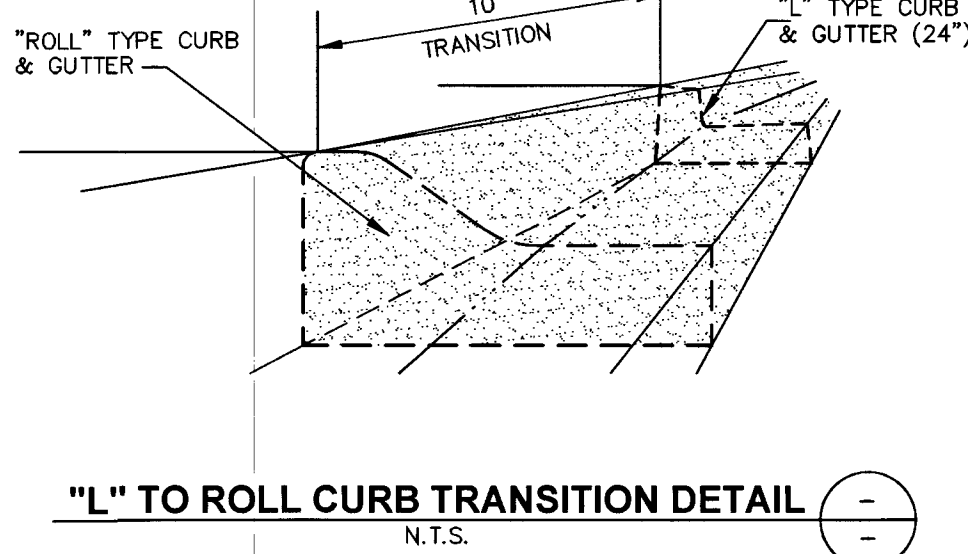
1. 8" PVC SEWER PIPE	LF	814.6	-
2. 41 PVC SEWER LATERAL (PRIVATE)	LF	-	272
3. STANDARD 48" SEWER MANHOLE	EA	4	-
4.			
5.			

WATER SYSTEM

1. INSTALL 1" SERVICE SADDLE CONNECTION W/ CORP STOP PER U.D.A.C.S. PLATE 4	EA	13	-
2. FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 41 (DEEP)	EA	2	-
3. 6" PVC WATER PIPE (CLASS 150)	LF	98.4	-
4. 8" PVC WATER PIPE (CLASS 150)	LF	532.1	-
5. 10" PVC WATER PIPE (CLASS 150)	LF	-	-
6. 12" PVC WATER PIPE (CLASS 150)	LF	-	-
7. 8" DUCTILE IRON PIPE	LF	25	-
8. 10" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	-	-
9. 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	-	-
10. 6" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	-	-
11. 10" REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA)	EA	-	-

LEGEND

PROPOSED SCARPING	0.50%	DIRECTION OF FLOW
LOT LINES	(76.69)	EXISTING SPOT GRADE
PROPOSED SAWCUT	10	PROPOSED SPOT GRADE
EXISTING INDEX CONTOURS (5' INTERVAL)	76.69	PROPERTY LINE DIMENSION
EXISTING INTERMEDIATE CONTOURS (1' INTERVAL)	100.00	
FINISH GRADE CONTOUR (1' INTERVAL)		AC PAVEMENT
BOUNDARY		RIP RAP
GRADE BREAK		
STREET CENTERLINE		
DRAINAGE EASEMENT		
EX. PATENT EASEMENT		
RETAINING WALL		
PAD ELEVATION		
FINISH FLOOR ELEVATION		
SEAWALK, CURB & GUTTER		
AC TO BE REMOVED		



LIST OF BONDABLE DRAINAGE QUANTITIES:

DRAINAGE	PUBLIC	PRIVATE
1. 24" RCP SD	LF 16	-
2. 29"x45" HERCP	LF 10	-
3. 20" TYPE CM2 DI	EA 2	-
4. 10" TYPE CM2 DI	EA 1	-
5.		
6. CONCRETE VALLEY GUTTER (DRAINAGE EASE.)	SF 2,410	-
7. CONC. SOLID GROUTING ON WALLS (DE)	LF 363	-

SIGHT VISIBILITY ZONE 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 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. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPED MEDIANS.

EARTHWORK QUANTITIES

CUT (NET): 7,240.1 CY
FILL (NET): 8,214.4 CY
IMPORT: 374.3 CY

THIS INFORMATION SHOULD BE USED FOR BIDDING PURPOSES ONLY. ALL CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THEIR OWN EARTHWORK QUANTITIES. THESE ESTIMATES ARE SUBJECT TO CHANGE BASED ON SITE SPECIFIC GEOTECHNICAL EVALUATIONS.

GEOTECHNICAL REPORT

REPORT PREPARED BY: GEOTEK
PROJ. NO.: 12727-LV
DATED: FEB. 22, 2016

PAD, FINISH FLOOR ELEVATION NOTE:

THE FINISH FLOOR ELEVATION IS TO BE CONSTRUCTED AS NOTED ON THIS PLAN. THE PAD ELEVATION IS A FUNCTION OF THE REQUIRED FINISH FLOOR ELEVATION LESS THE STRUCTURAL SECTION OF THE SLAB, BASE AND SUB BASE MATERIAL DETERMINED BY THE STRUCTURAL ENGINEER ASSIGNED TO THIS PROJECT. ALL SUB GRADE, SUBSURFACE, SOIL PREPARATION AND GEOTECHNICAL ENGINEERING PARAMETERS ARE DICTATED BY THE FOLLOWING REPORT

REPORT #12727-LV BY GEOTEK
STAMPED & DATED: FEB. 22, 2016

FLOOD ZONE NOTE:

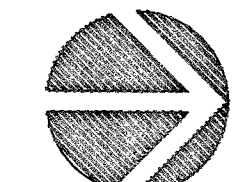
ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM), COMMUNITY PANEL 1745E OF 4090, MAP NUMBER 32003C1745E, EFFECTIVE SEPTEMBER 27, 2002, SITE IS LOCATED WITHIN ZONE "X"(UNSHADED). ZONE "X"(UNSHADED) IS DESCRIBED AS AN AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

STORMWATER MANAGEMENT NOTES:

- A) THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR 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 AREA EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs 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 BMPs 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.

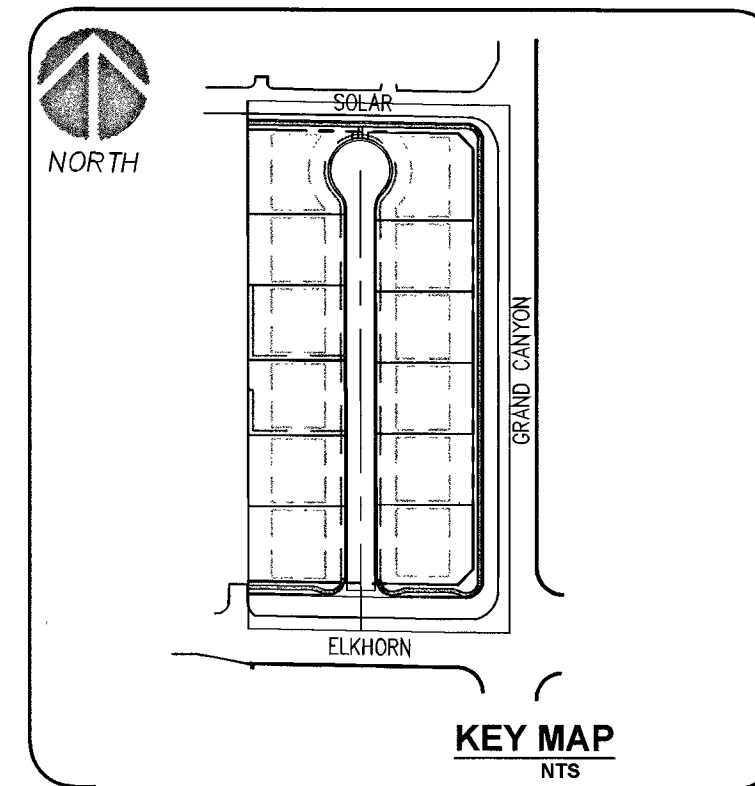
APPROVED FOR CONSTRUCTION

PROJECT NO: 125847 FIRST APPROVED DATE: 12/19/17



NORTH
GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.



BENCHMARK

CITY OF LAS VEGAS BENCHMARK ID: GLV90 1854

RIVET AND PLATE IN THE TOP OF CURB, NORTHEAST CORNER OF GRAND CANYON DRIVE AND ELKHORN AVENUE.

ELEVATION= 2756.91 FEET / 815.556 METERS
(NAD 88 DATUM)

BASIS OF BEARINGS

NORTH 89°07'00" WEST, BEING THE BEARING OF THE CENTERLINE OF ELKHORN AVENUE AND THE NORTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, N.D.M., CLARK COUNTY, NEVADA, BY FILE 76, PAGE 49 OF PARCEL MAPS, OFFICIAL RECORDS OF CLARK COUNTY, NEVADA.

GRADING NOTES

- 1) INSTALL "L" TYPE CURB AND GUTTER PER CAUSD #216
- 2) INSTALL 30" ROLL CURB PER CAUSD #217.1, 217.251
- 3) CONSTRUCT 10-FT "L" CURB TO ROLL CURB TRANSITION PER DETAIL THIS SHEET
- 4) SAWCUT AND MATCH EXISTING PAVEMENT. DUE TO THE EXISTING FIELD CONDITIONS AND VARYING SLOPES THE LENGTH AND WIDTH OF SAWCUT AND PATCH TO BE DETERMINED BY THE INSPECTOR IN THE FIELD. WIDTHS MAY VARY.
- 5) INSTALL 8-FT CROSS GUTTER PER CAUSD #228.
- 6) INSTALL SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES PER CAUSD NO. 235. A & B EQUAL 8-FEET UNLESS OTHERWISE NOTED.
- 7) INSTALL CONCRETE SIDEWALK (4" THICK OVER 6" TYPE 2 AGGREGATE BASE) PER CAUSD #234.
- 8) INSTALL 2.0" AC OVER 4.0" TYPE II, OVER 9" TYPE I AGGREGATE BASE
- 9) INSTALL 3.0" AC OVER 4.0" TYPE II, OVER 12" TYPE I AGGREGATE BASE
- 10) INSTALL 4.5" AC OVER 4.0" TYPE II, OVER 12" TYPE I AGGREGATE BASE
- 11) SIGHT VISIBILITY ZONE.
- 12) CONSTRUCT RETAINING WALL, HEIGHT PER PLAN, STRUCTURAL DESIGN BY OTHERS.
- 13) CONSTRUCT STORM DRAIN DROP INLET LENGTH AND TYPE PER PLAN PER USDOCA DRAWING NO. 421 (STORMWATER QUALITY MANAGEMENT STAMP AND SIGN DETAIL).
- 14) INSTALL TYPE II AGGREGATE. TRANSITION GRADING FROM ASPHALT TO EXISTING DRIVEWAY. SEE SHEET N-1 FOR LEGEND, GENERAL NOTES, AND QUANTITIES.

GRADING NOTES

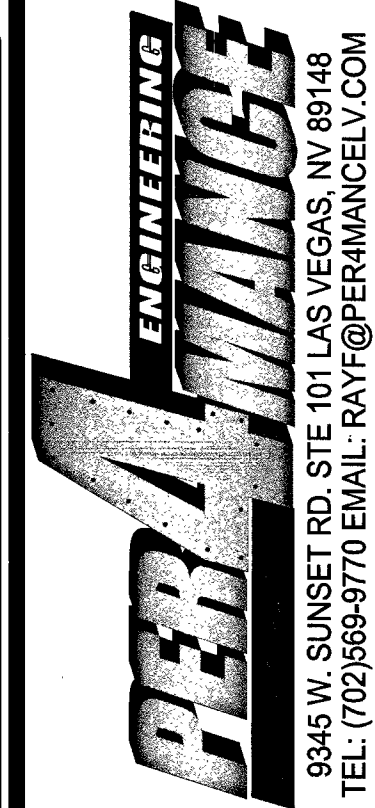
1. PERMANENCE ENGINEERING SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY IN THE PLANS OR CONDITIONS IN THE FIELD.
2. ALL WORK TO BE PERFORMED OUTSIDE OF THE PROJECT BOUNDARY AND ON PRIVATE PROPERTY SHALL NOT BE PERFORMED UNTIL WRITTEN PERMISSION AND EASEMENT HAVE BEEN OBTAINED FROM THE OFFSITE OWNER AND GIVEN TO THE CLARK COUNTY.
3. FOR AREAS THAT ARE FLATTER THAN 3:1 SLOPE, OR LESS THAN 1' ELEVATION DIFFERENCE, SCARPS ARE NOT SHOWN ON PLAN FOR CLARITY PURPOSES.
4. ALL SLOPE AREAS SHALL HAVE A MINIMUM ONE FOOT SHOULDER NEXT TO WALL PRIOR TO STARTING SLOPE.
5. THERE SHALL BE NO GRUBBING, GRADING OR CLEARING PRIOR TO THE APPROVAL OF THE CIVIL IMPROVEMENT PLANS AND FINAL GRADING PLANS BY THE PUBLIC WORKS DIRECTOR AND THE ISSUANCE OF A GRADING PERMIT. GRUBBING, GRADING AND CLEARING ARE TO OCCUR ONLY WITHIN THE AREAS IDENTIFIED ON THE APPROVED GRADING PLAN.
6. ALL PORTIONS OF THE SITE OR LOT TO BE LEFT UNGRADED ARE TO REMAIN UNDISTURBED AREAS AND ARE NOT TO BE USED FOR STOCKPILING OF MATERIALS OR EXCESS FILL.
7. DRIVEWAYS PER THE GRADING PLANS SHALL NOT EXCEED 4.0% MAX DRIVEWAY SLOPES.
8. FOR ALL TRUNCATED NUMBERS ADD 2700'-FT TO THE ELEVATION.

DRAINAGE STUDY NOTE:

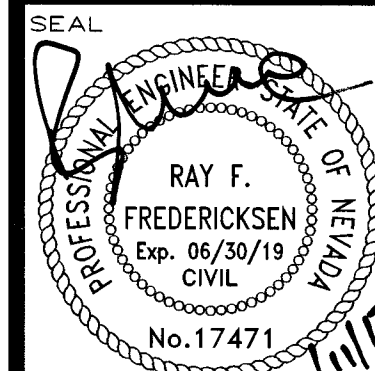
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE AT CITY OF LAS VEGAS FOR THIS PROJECT. DS4891

BY: R. F. FREDERICKSON 12/19/17
RAY F. FREDERICKSON, P.E. No.17471 DATE

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DEVELOPER:
THW ENTERPRISES
9205 W. RUSSELL RD., STE. 235
LAS VEGAS, NV 89148
ATTN: DUSTIN MANNING
PH (702) 929-3131



DESIGNED BY:
RFF

DRAWN BY:
RFF

CHECKED BY:
RFF

SCALE:
1"=30'

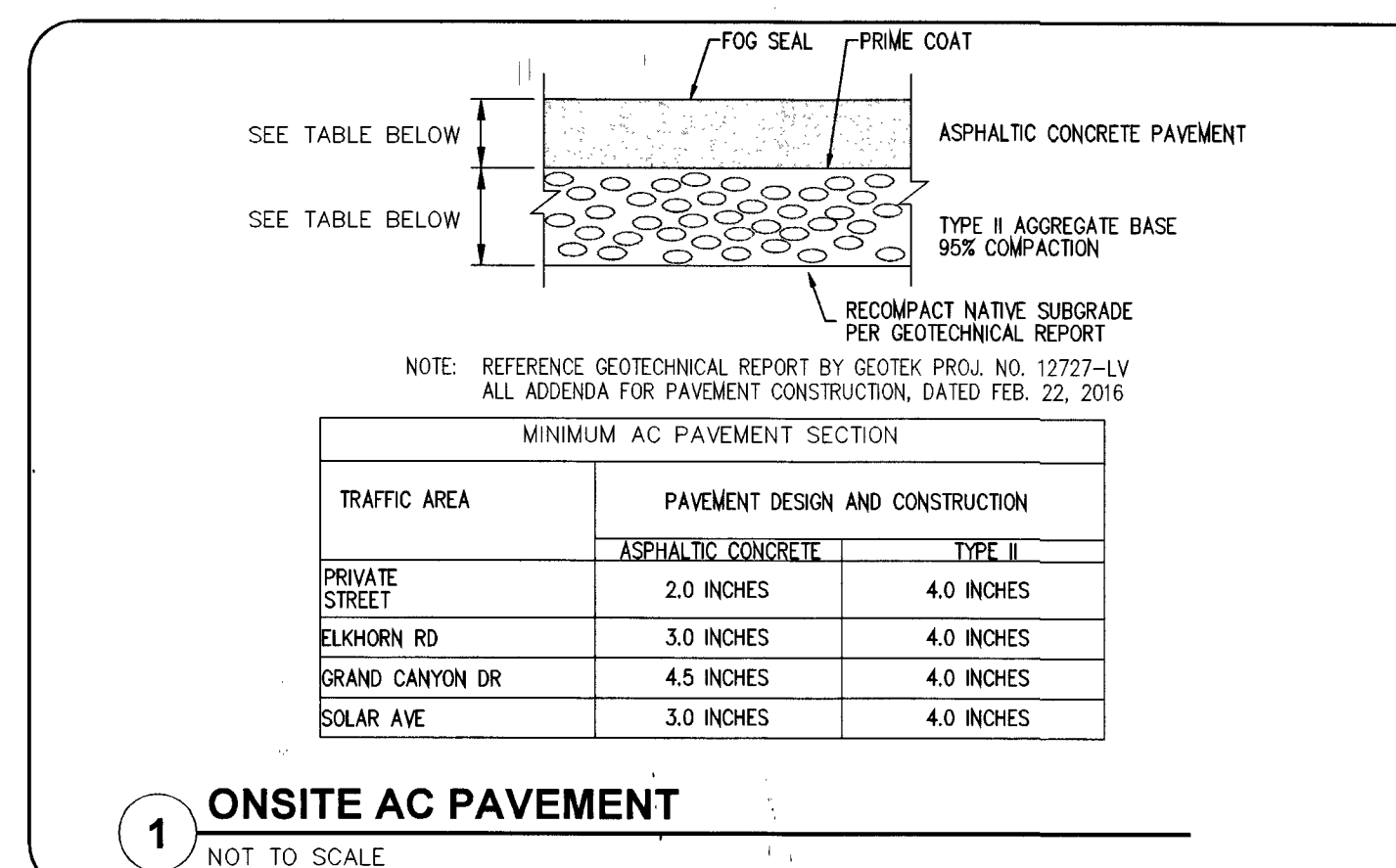
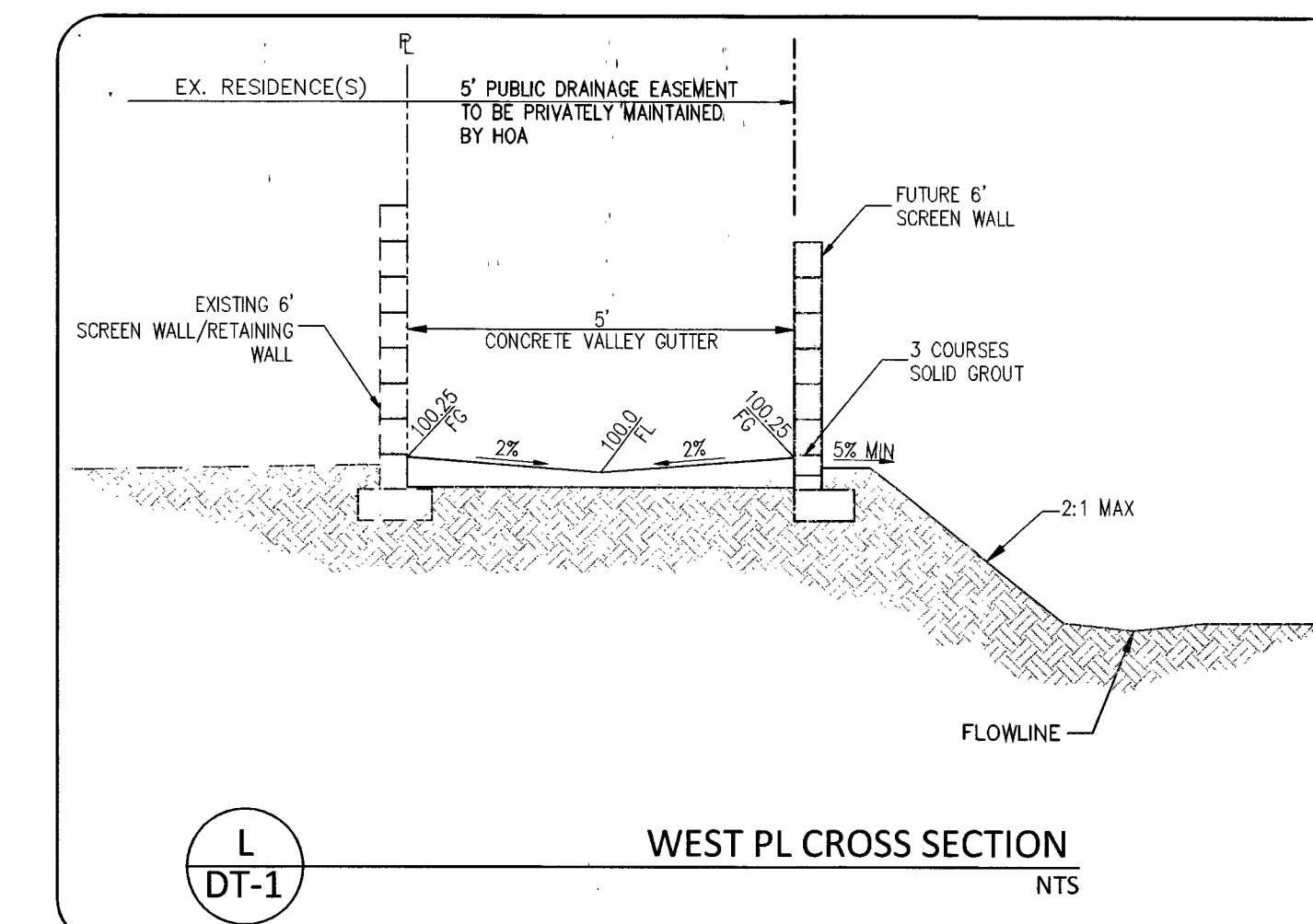
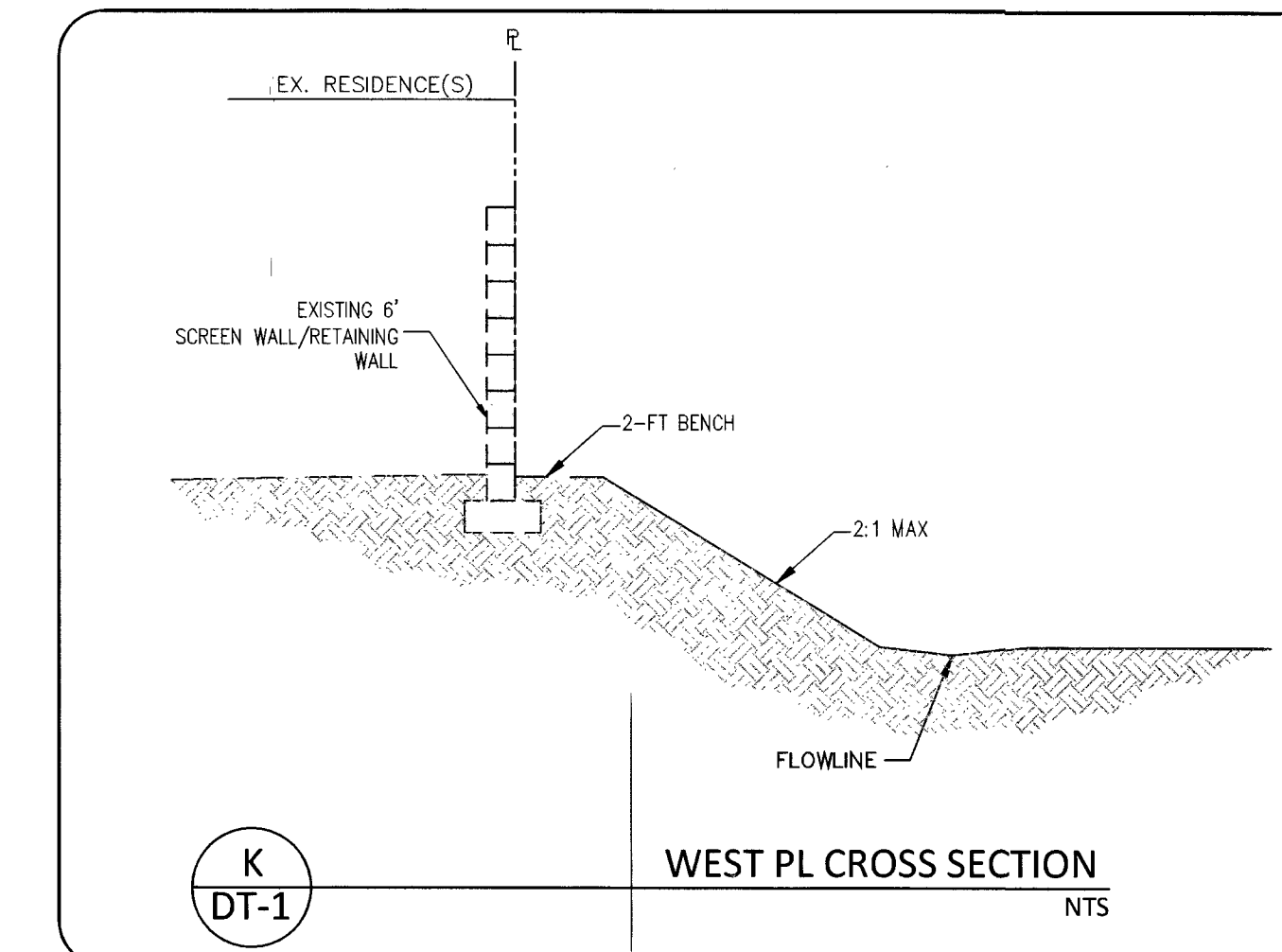
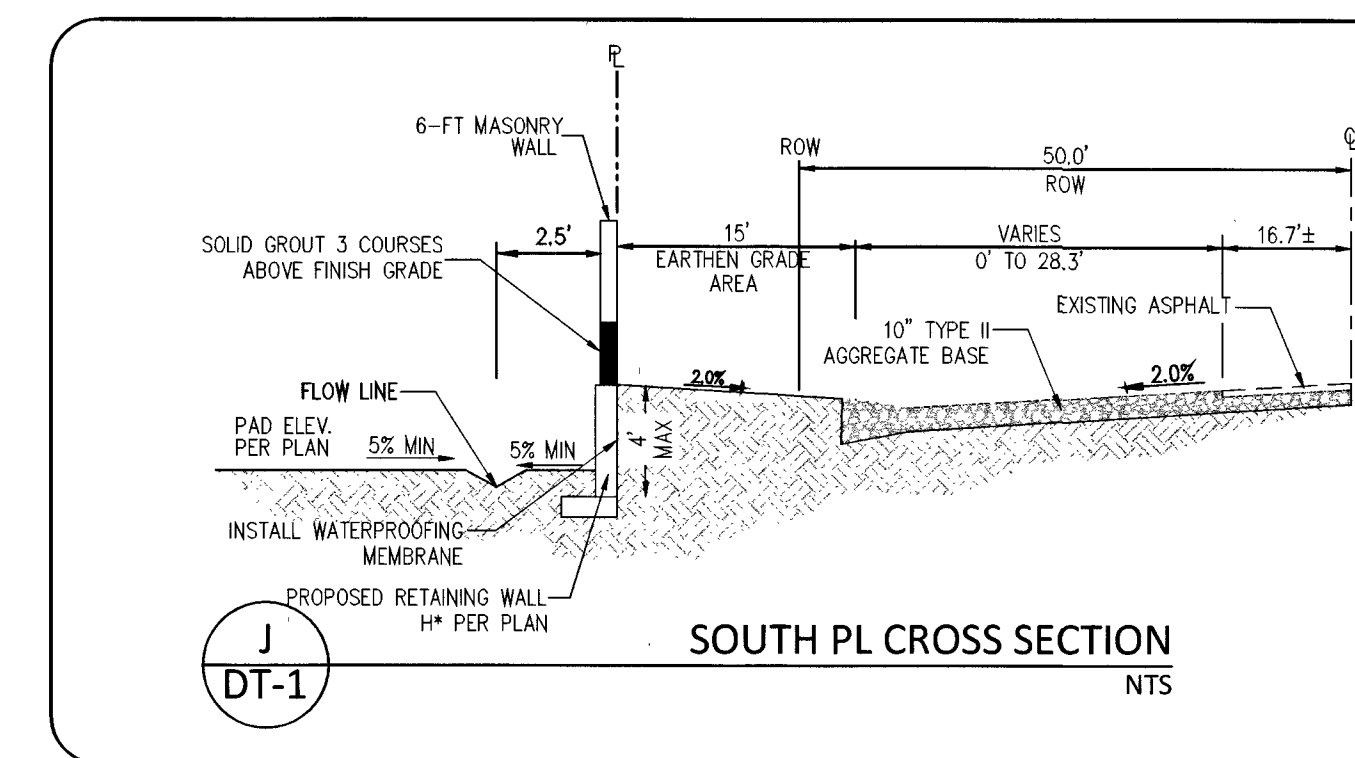
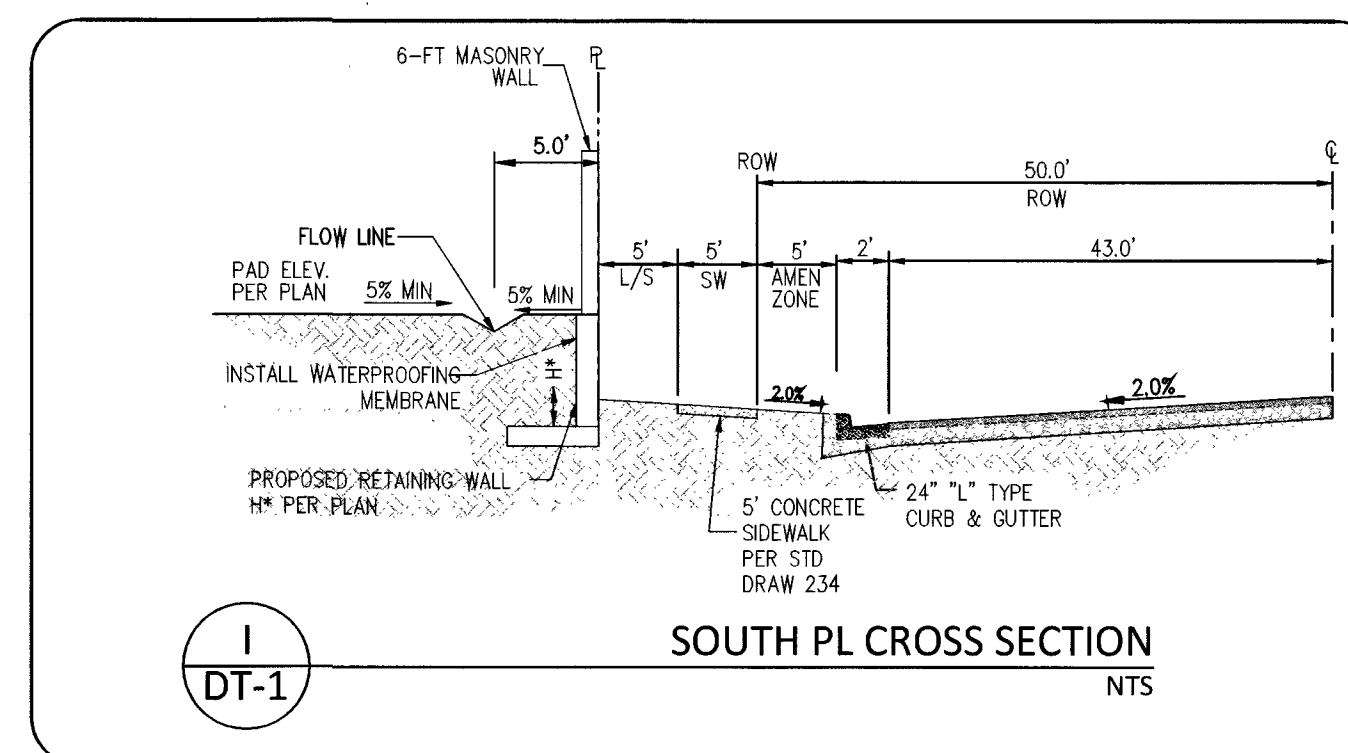
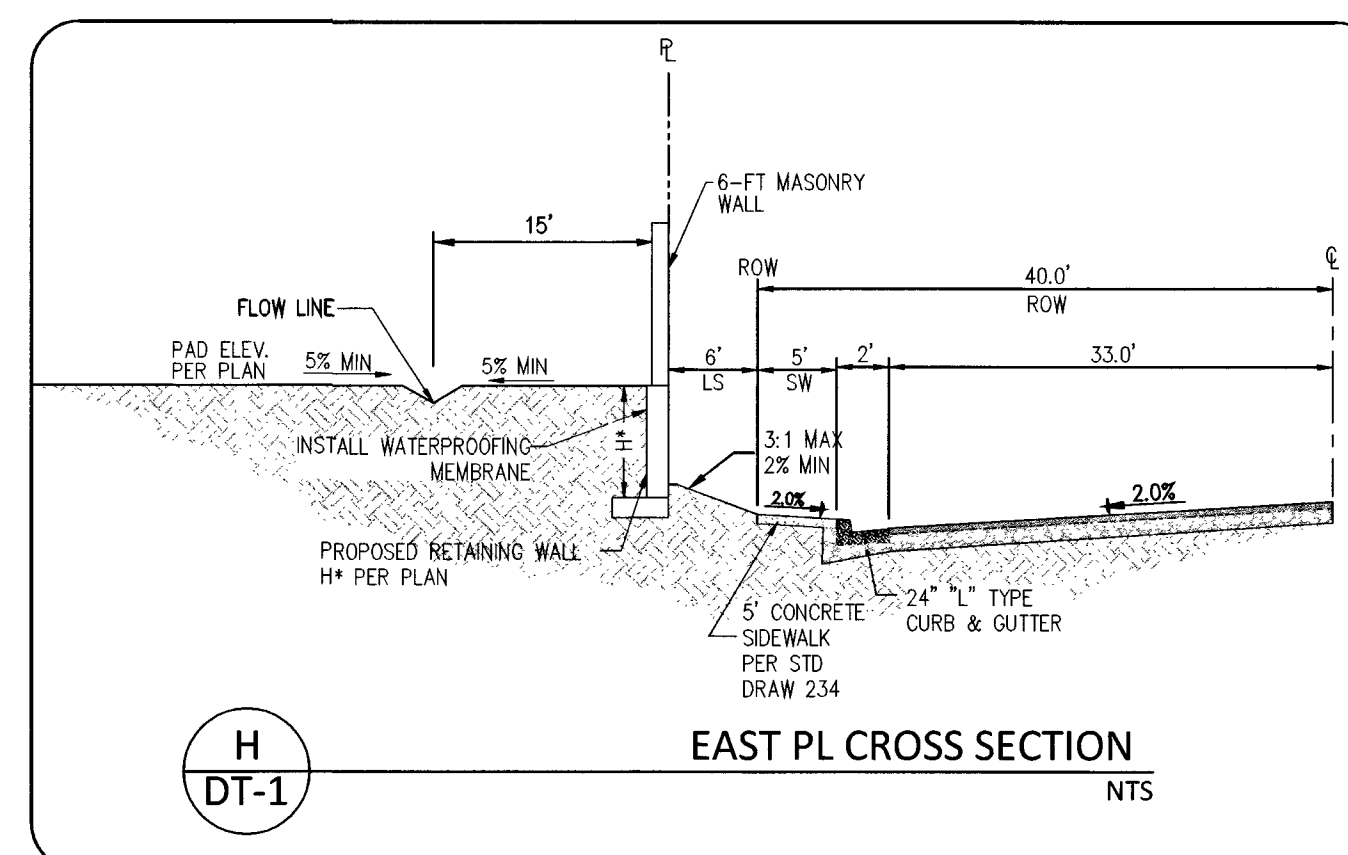
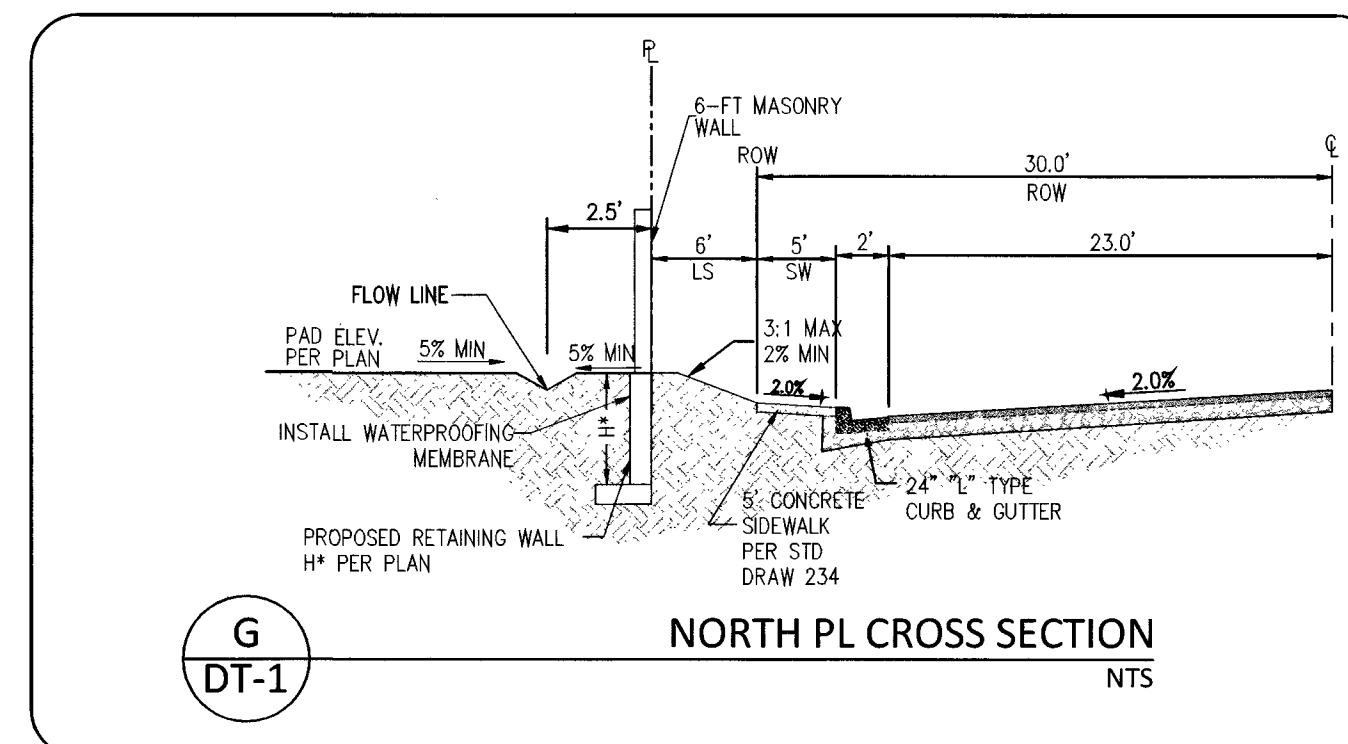
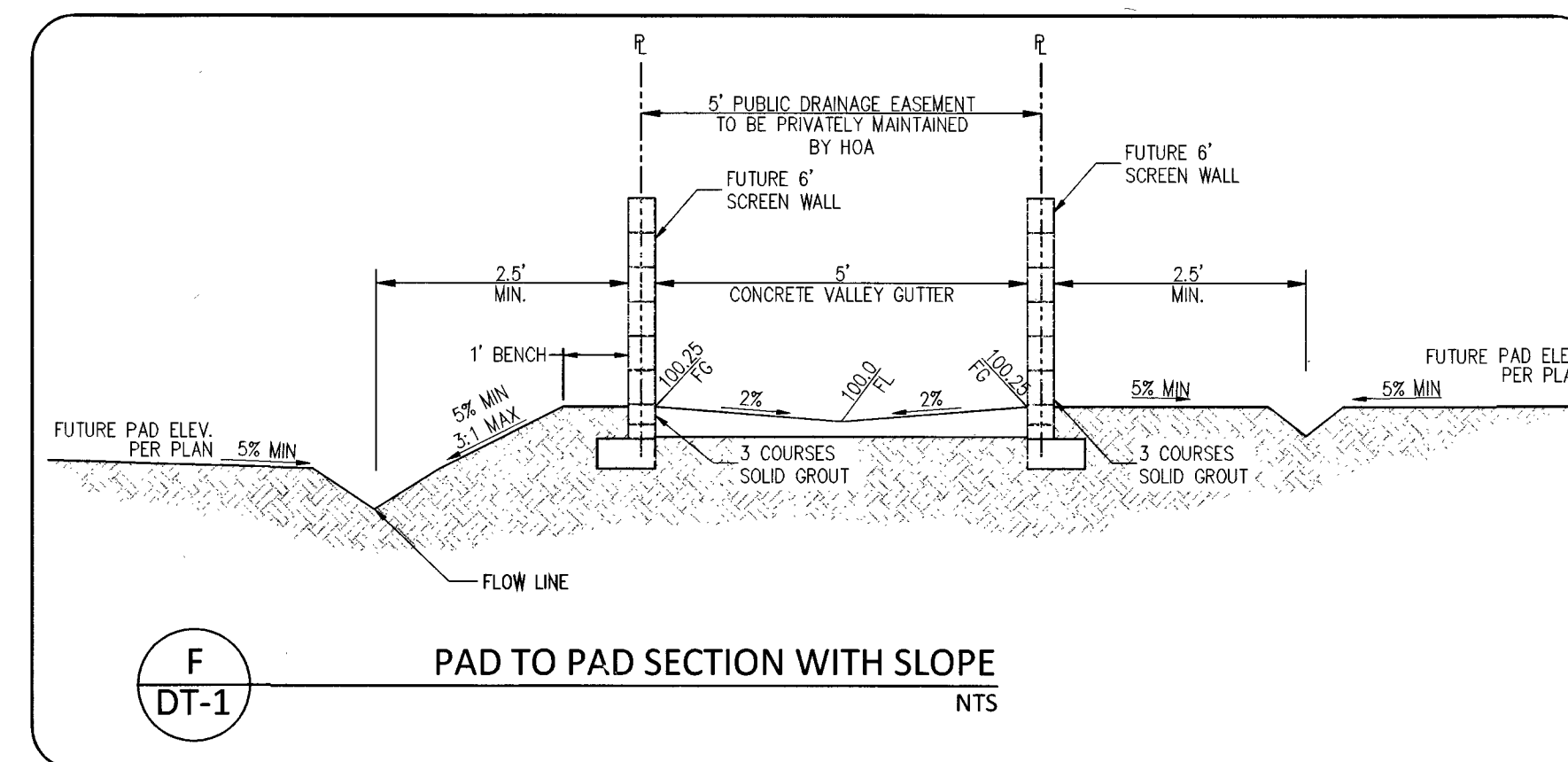
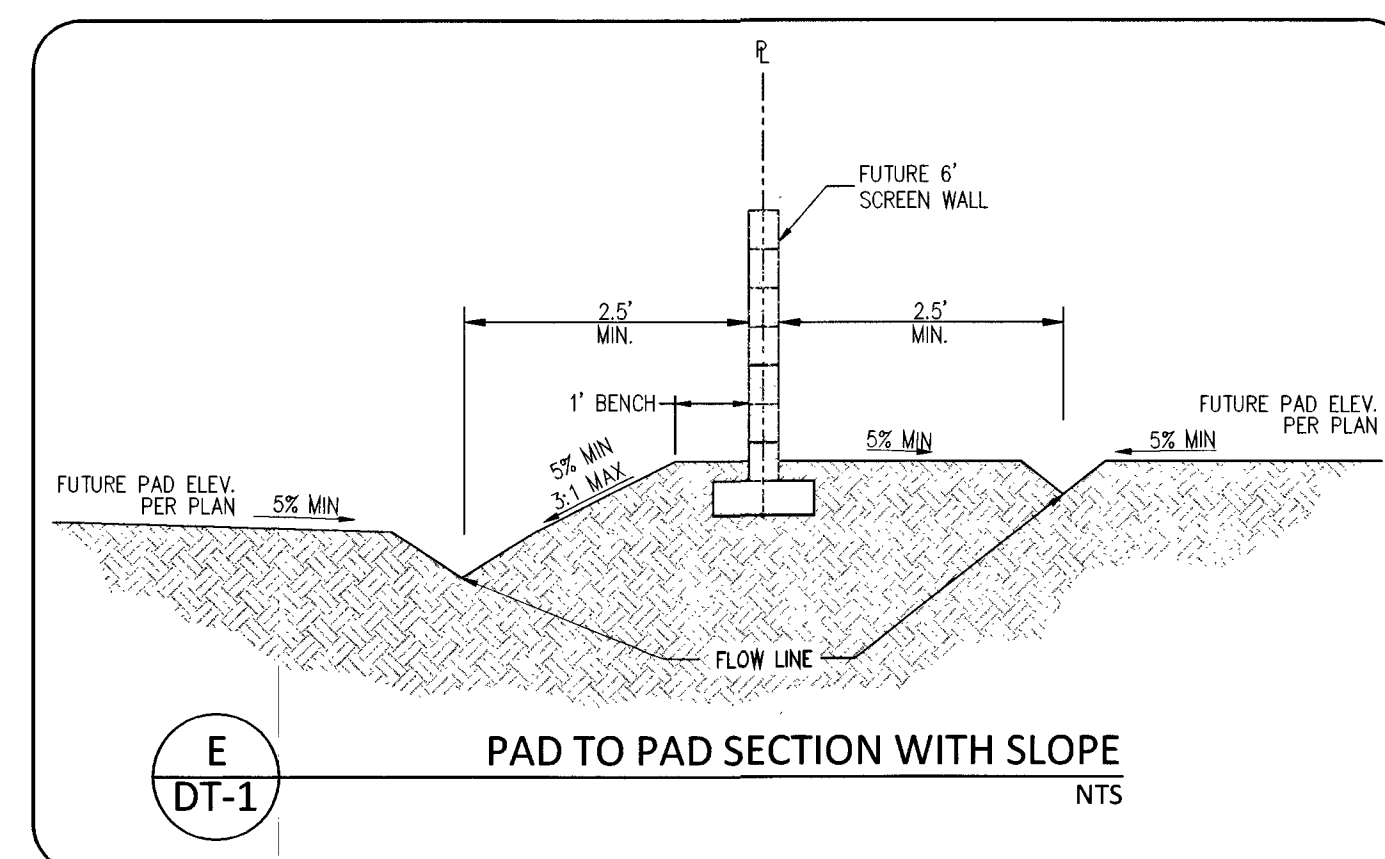
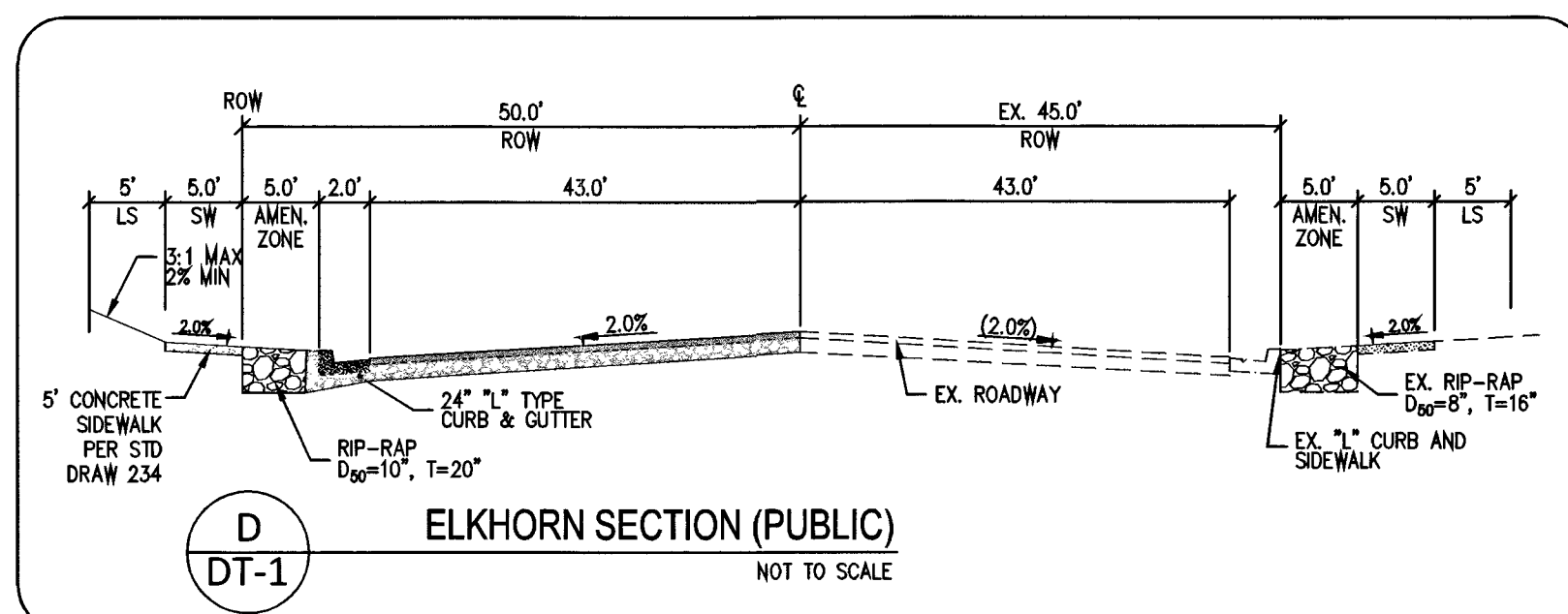
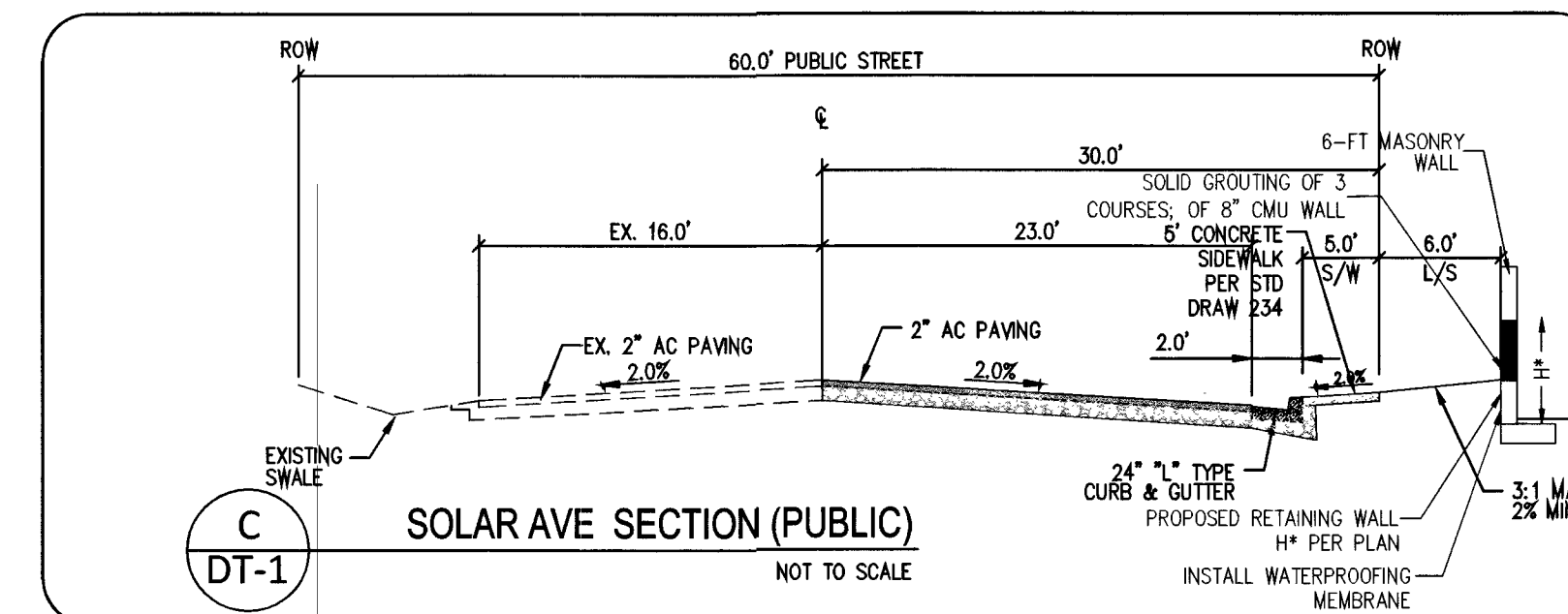
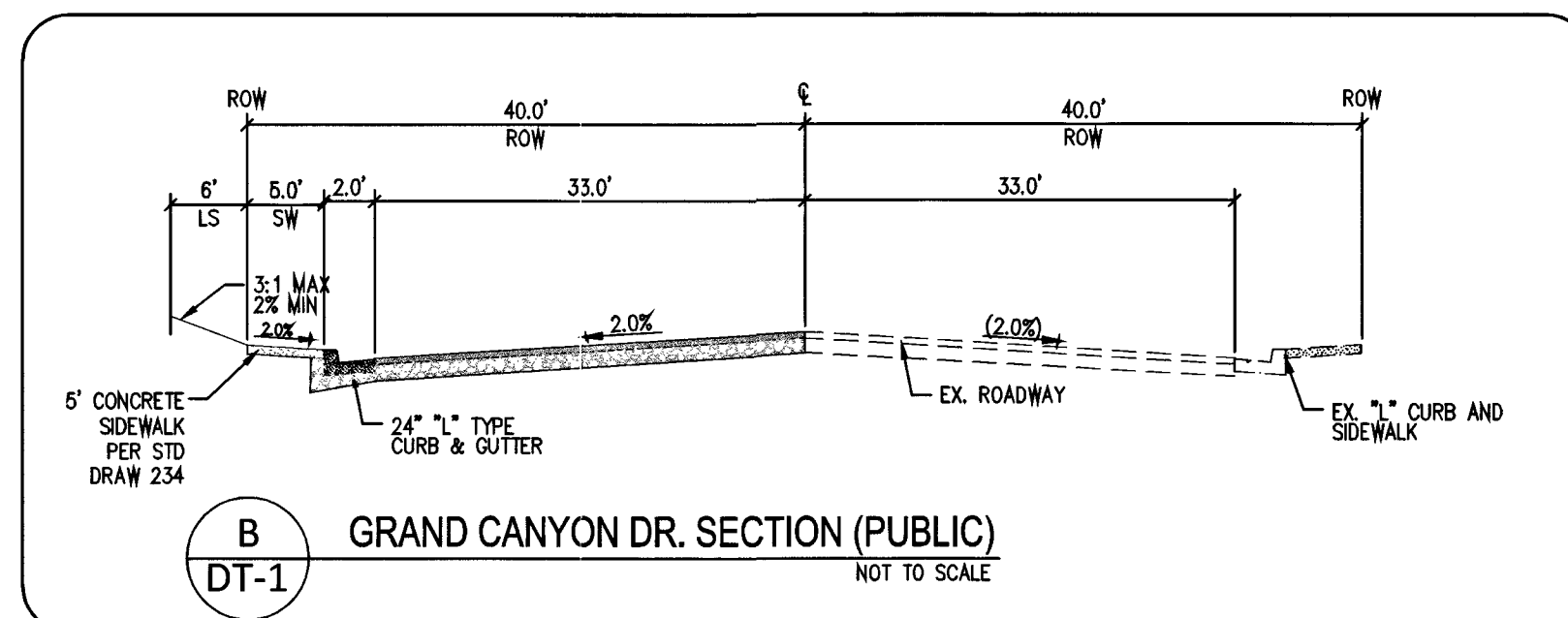
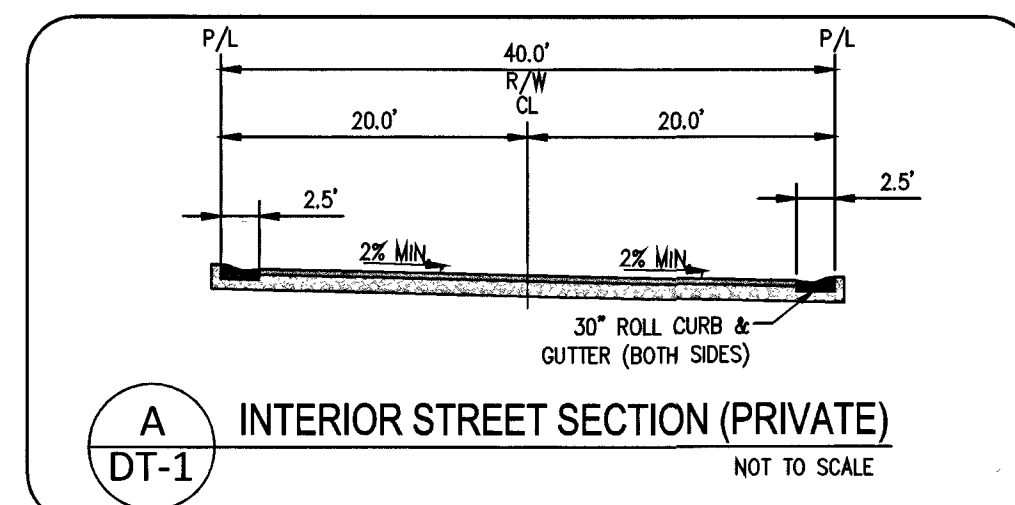
PROJECT DATE:
DECEMBER 11, 2017

SHEET
GP-1

3 OF 13

CLV #L17-00900

10755071



MINIMUM AC PAVEMENT SECTION		
TRAFFIC AREA	PAVEMENT DESIGN AND CONSTRUCTION	
	ASPHALTIC CONCRETE	TYPE II
PRIVATE STREET	2.0 INCHES	4.0 INCHES
ELKHORN RD	3.0 INCHES	4.0 INCHES
GRAND CANYON DR	4.5 INCHES	4.0 INCHES
SOLAR AVE	3.0 INCHES	4.0 INCHES

NO.	REVISION	BY	DATE	APP.	DATE
1					
2					
3					
4					
5					
6					

ELKHORN & GRAND CANYON
12 LOT SINGLE FAMILY RESIDENTIAL DEVELOPMENT
CITY OF LAS VEGAS
SHEET: 2

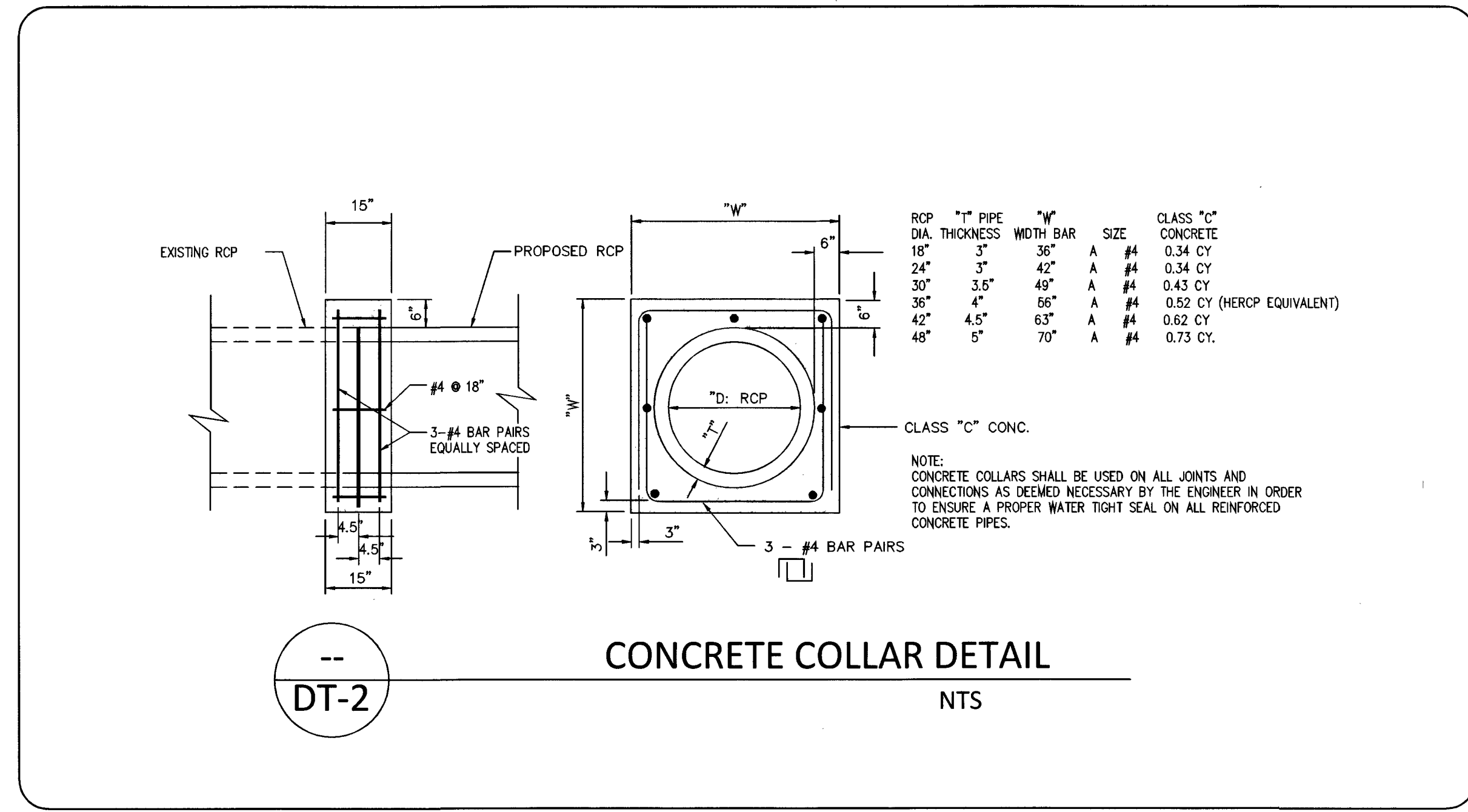
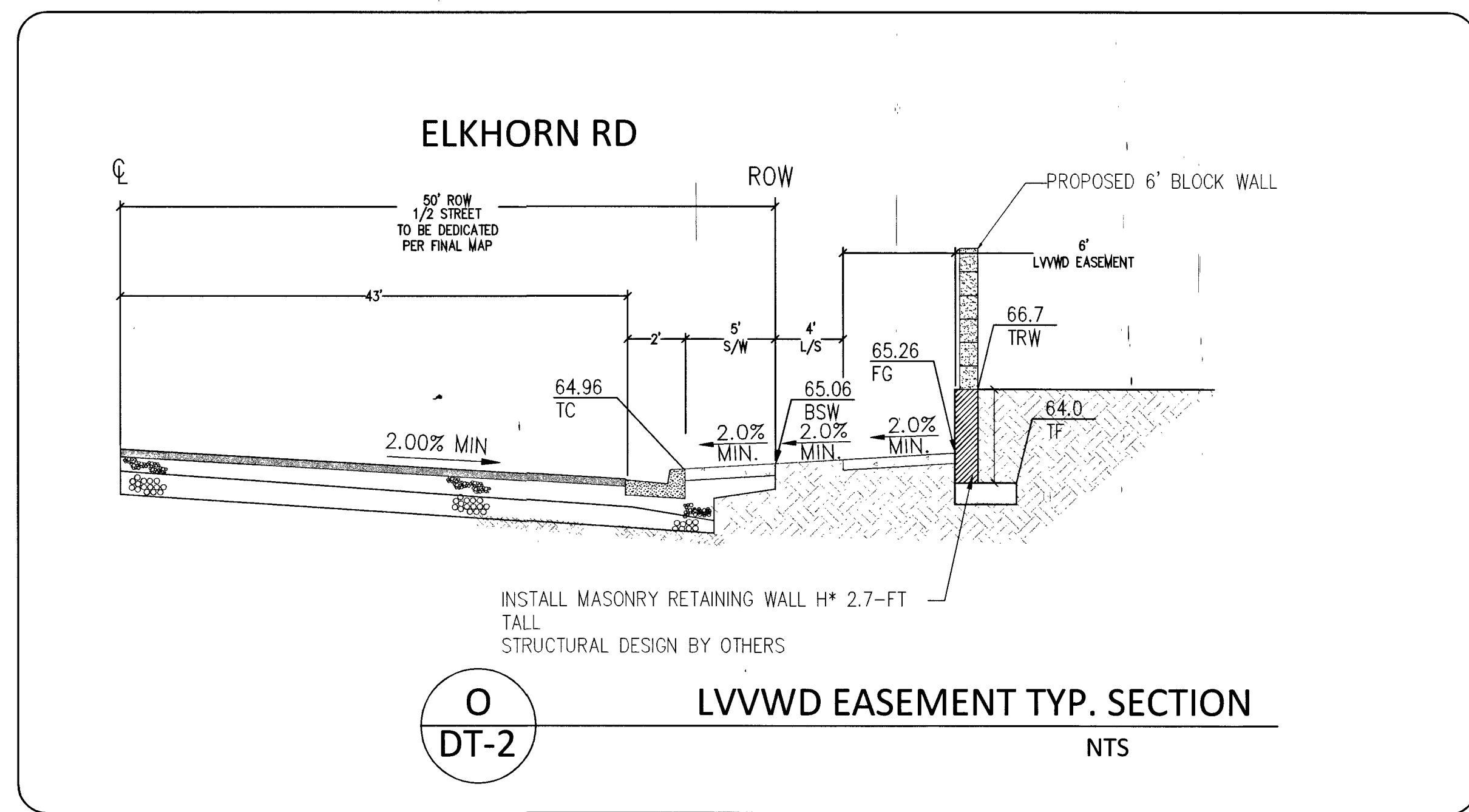
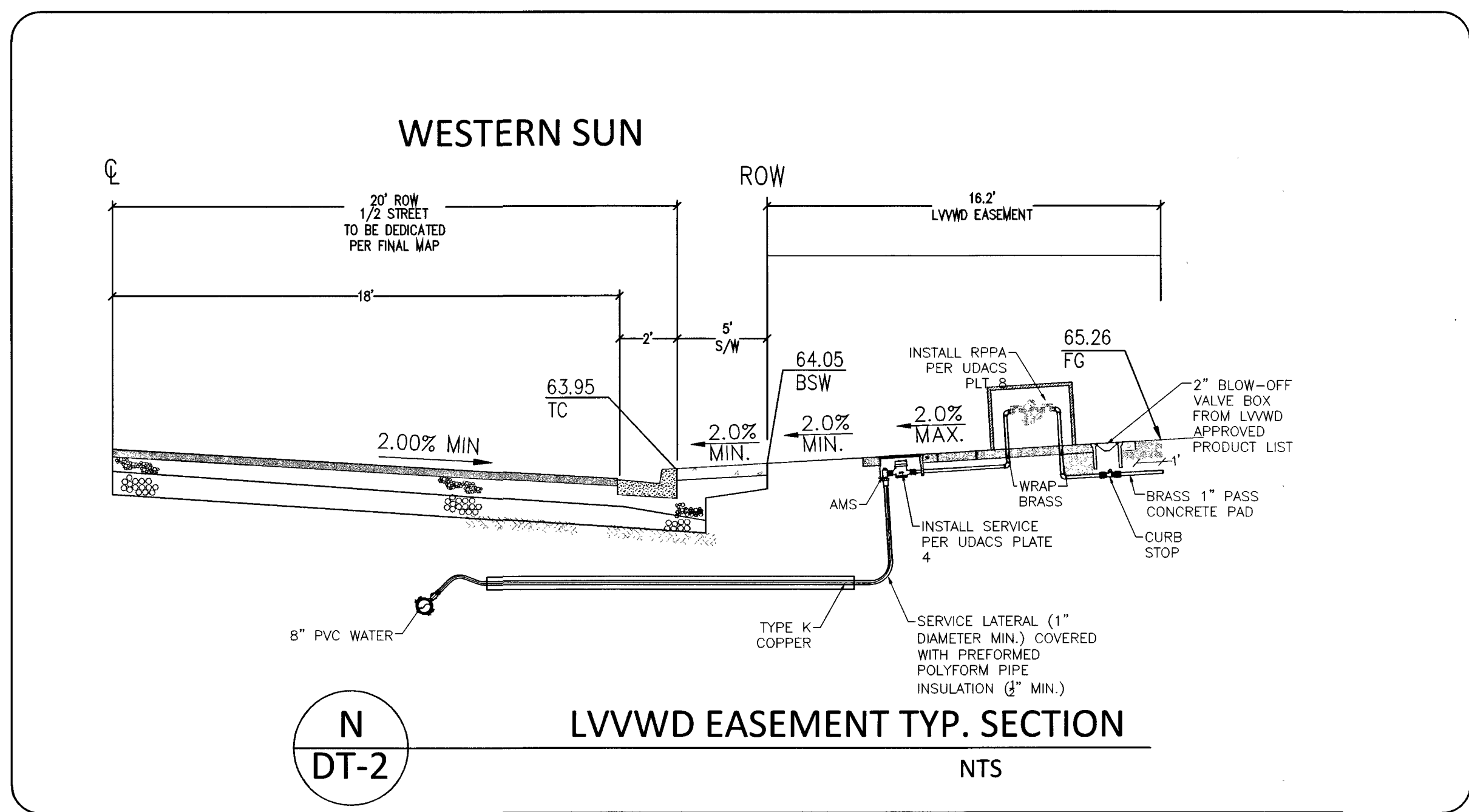
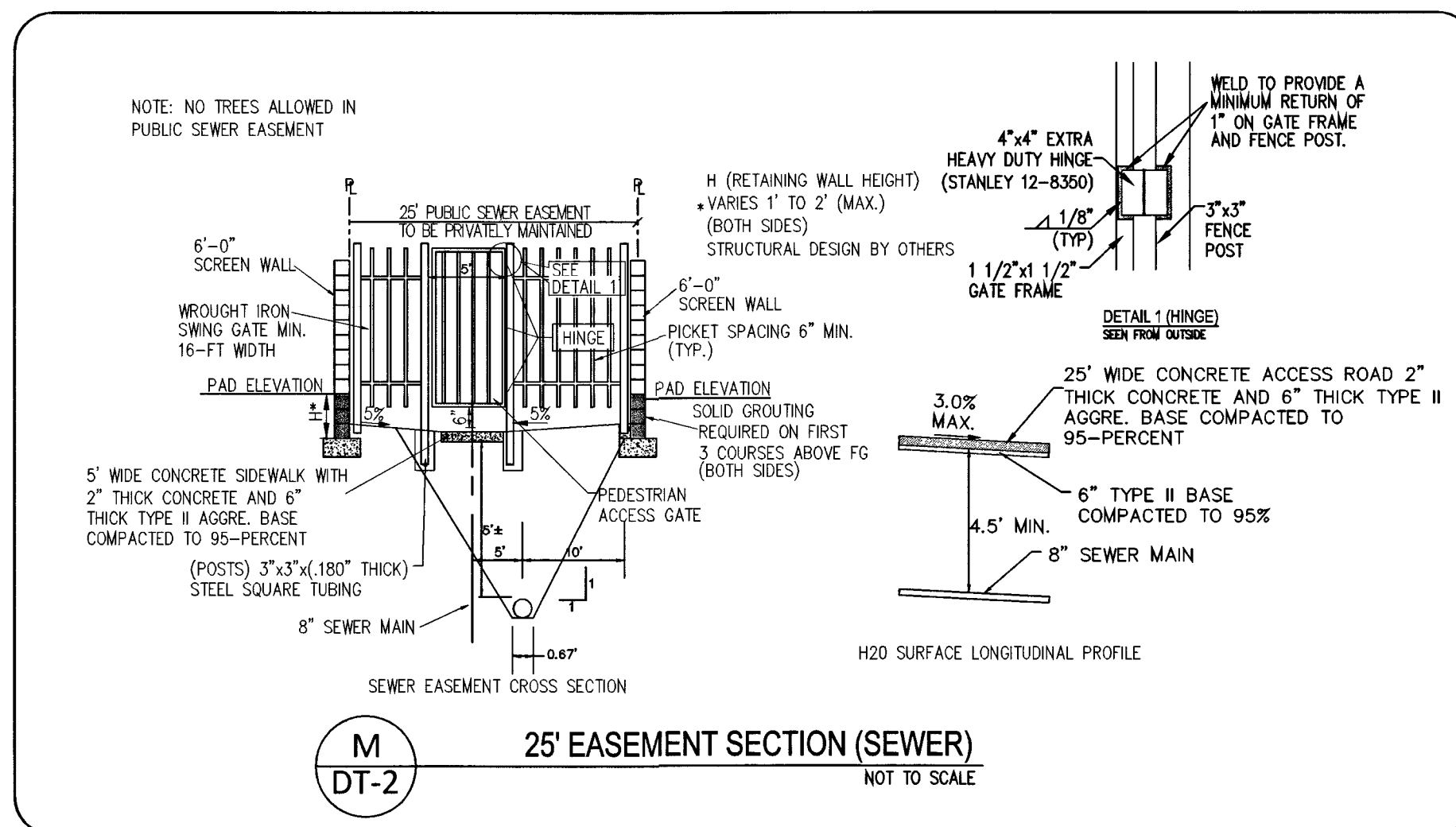
PERFORMANCE
ENGINEERING
9345 W. SUNSET RD. STE 101 LAS VEGAS, NV 89148
TEL: (702) 669-9770 EMAIL: RAY.F@PERFORMANCE.COM

DEVELOPER:
THW ENTERPRISES
9205 W. RUSSELL RD., STE. 235
LAS VEGAS, NV 89148
ATTN: DUSTIN MANNING
PH (702) 929-3131

DESIGNED BY:
RFF
DRAWN BY:
RFF
CHECKED BY:
RFF
SCALE:
1" = 30'
PROJECT DATE:
DECEMBER 11, 2017

SHEET
DT-2
5 OF 13
CLV #L17-00900
10745071

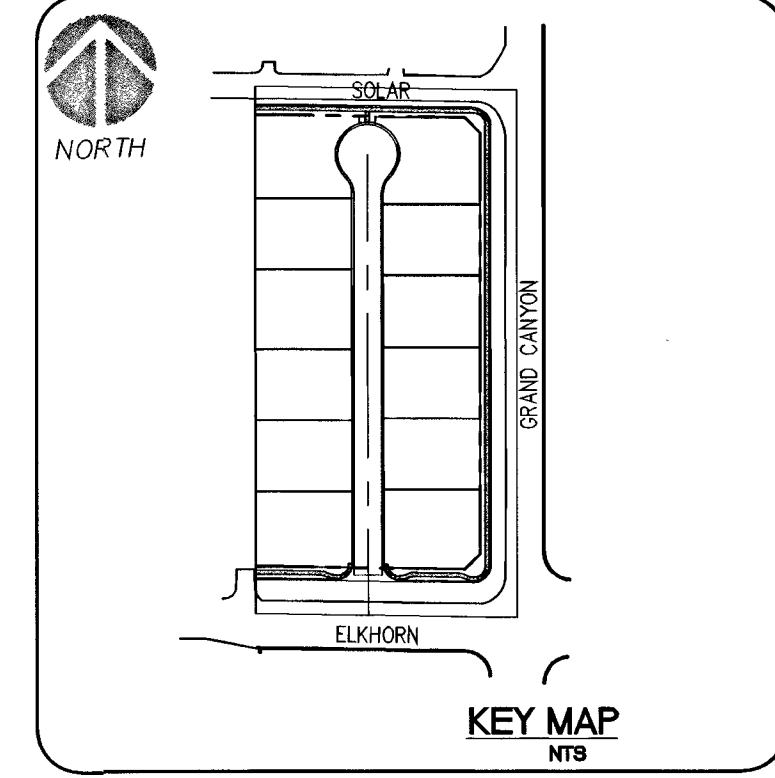
APPROVED FOR CONSTRUCTION
Disahi For
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 12/19/17 PROJECT NO. 125847
LVVWD APPROVED FIRE FLOW 2,000 GPM AT 20 PSI RESIDUAL



FAST
Call before you dig
UnderGround
1-702-432-5300
FIREWAY AND ARTERIAL
SYSTEM OF TRANSPORTATION

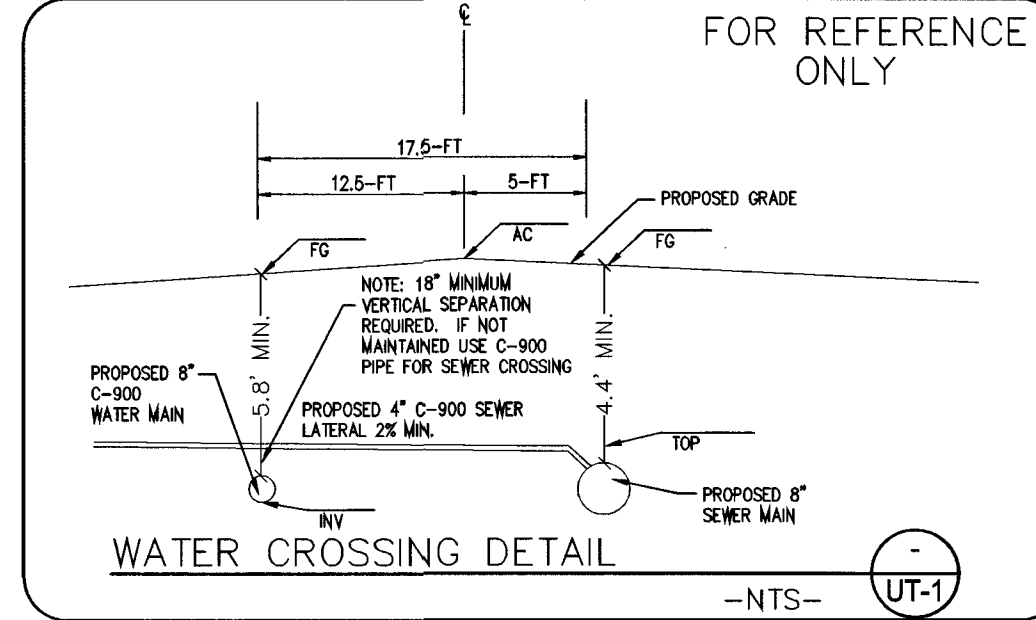
CALL BEFORE YOU DIG
AVOID CUTTING UNDERGROUND
UTILITY LINES ITS COSTLY.
CALL
811
1-800-227-2600

CALL BEFORE YOU DO
OVERHEAD
AVOID HITTING OVERHEAD
POWER LINES ITS COSTLY.
CALL
1-702-227-2929

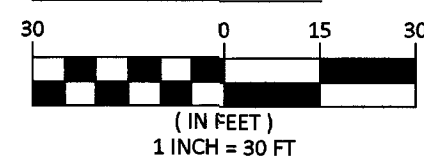


METER BOX NOTE

METER BOXES SHALL NOT BE LOCATED IN DRIVEWAY OR STREETS
PER UDACS 2.18.04(A) & PLATE NO. 3.



GRAPHIC SCALE



BASIS OF BEARINGS

NORTH 89°07'00\"/>

BENCHMARK

CITY OF LAS VEGAS BENCHMARK ID: 18S4

RIVET AND PLATE IN THE TOP OF CURB, NORTHEAST CORNER OF
GRAND CANYON DRIVE AND ELKHORN ROAD.

ELEVATION = 2756.91 FEET / 815.556 METERS
(NAVD 88 DATUM)

SEWER CONSTRUCTION NOTES

NO.	ITEM
1	**SS STD PER DESIGN AND CONSTRUCTION STANDARDS WASTEWATER COLLECTION SYSTEMS, LATEST EDITION
2	INSTALL 8\"/>
3	INSTALL 4\"/>
4	INSTALL 48-INCH SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4&SD-9 WITH 24\"/>
5	SAWCUT, TRENCH, BACKFILL AND RESTORATION PER CCAUSD #500.5, #500.3, AND #503
6	NEW MANHOLES TO HAVE PRECAST BASE
7	EX. SEWER MANHOLE, PROTECT IN PLACE, ADJUST R/W PER DCSWCS SD-4 & SD-5 IF APPLICABLE.
8	INSTALL 4\"/>

WATER CONSTRUCTION NOTES

NO.	ITEM
1	UDACS: UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS, CURRENT EDITION
2	INSTALL PVC WATER LINE (C-900, CL-150) PER UDACS PLATE NO. 17.
3	WET TAP AND CONNECT TO EXISTING WATER LINE PER UDACS PLATE NO. 34, 35 & SEC 2.24.01.B.
4	INSTALL FIRE HYDRANT ASSEMBLY WITH GATE VALVE PER UDACS PLATE NO. 39 & 41
5	INSTALL GATE VALVE (SAME SIZE AS LINE) PER UDACS PLATE No. 30 & 39
6	INSTALL CAP W/2\"/>
7	INSTALL 8\"/>
8	INSTALL 1\"/>
9	INSTALL 8\"/>
10	INSTALL 1\"/>
11	INSTALL 1\"/>
12	SAWCUT, TRENCH, BACKFILL AND RESTORATION PER CCAUSD #500.5, #500.3, AND #503
13	INSTALL TWO (2) 4\"/>
14	INSTALL 1\"/>
15	INSTALL 1\"/>
16	INSTALL CURB STOP

PUBLIC QUANTITIES

ITEM	DESCRIPTION	QUANTITY	PER
1	8\"/>	814.6	LF
2	4\"/>	420	LF
3	48\"/>	4	EA
4	6\"/>	98.4	LF
5	6\"/>	532.1	LF
6	8\"/>	25	LF
7	1\"/>	243.8	LF
8	FIRE HYDRANT	2	EA
9	8\"/>	2	EA
10	8\"/>	1	EA
11	6\"/>	1	EA
12	1\"/>	1	EA
13	1\"/>	1	EA

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS:

12 UNITS x 250 GPD/UNIT	=	3,000 GPD
TOTAL AVERAGE CONTRIBUTION	=	3,000 GPD
TOTAL PEAK FLOW= 0.0030 x 3.50 (PEAK FACTOR) x 1.25	=	0.0131 MGD

- (BWV) INSTALL SEWER BACKWATER VALVE
- (PRV) INSTALL PRESSURE REDUCING VALVE

DEPTH OF COVER DURING CONSTRUCTION

MAINTAIN MINIMUM TWENTY-FOUR (24) INCH COVER PER UDACS SEC 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.

FOR ALL DRY UTILITY CROSSINGS

- MAINTAIN MINIMUM 12\"/>
- MAINTAIN MINIMUM 3\"/>
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KNICKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

CUT OFF WALLS

NO CUT-OFF WALLS ARE BEING PROPOSED WITH THIS PROJECT.

THE DISTRICT CAN NOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHOULD ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCE IS AVAILABLE.

FIRE FLOW INFORMATION BLOCK

USE/OCCUPANCY	RESIDENTIAL
TYPE OF CONSTRUCTION (BC)	TYPE V-N
FIRE FLOW	2,000 GPM @ 20 PSI
AUTOMATIC SPRINKLERS	YES (N)
NFPA	13 / 13R / 13D
ESFR	YES (N)
SQUARE FOOTAGE	6,200 S.F. (MAX)
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	35' MAX
# OF STORIES INCLUDING BASEMENT	2
UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.	YES (N)
# OF HYDRANTS INSTALLED	2

METER SIZE NOTE

LVVWD WILL NOT SIGN OFF ON THE BUILDING PERMIT WITHOUT VERIFICATION OF THE FIXTURE UNITS TO ENSURE THE 1-INCH METER WILL MEET THE DEVELOPMENT NEED BASED ON THE 3RD EDITION OF THE UDACS - "TABLE A". SHOULD IT BE DETERMINED THAT THE 1-INCH IS NOT ADEQUATE, THE SERVICE LATERAL MUST BE CUT AND CAPPED AT THE MAIN AND A NEW LATERAL THAT MATCHES THE SIZE OF THE REQUIRED METER MUST BE INSTALLED.

WATER MAIN JOINT DEFLECTION (PVC 4\"/>

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

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

EASEMENT WITH TREES, SHRUBS, DECORATIVE ROCKS, BLOCK WALL OR FENCE TREES, SHRUBS, OR DECORATIVE ROCKS, AND ANY BLOCK WALL OR OTHER FENCE MATERIAL, SHALL BE DESIGNED AND CONSTRUCTED AROUND THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS TO THE VAULT(S), BACKFLOW ASSEMBLIES, AND PIPING FROM THE ADJACENT RIGHT-OF-WAY.

DEEP FIRE HYDRANT INSTALLATION: FIRE HYDRANT(S) TO BE INSTALLED IN ACCORDANCE WITH THE UDACS STANDARD PLATE NO. 41, SECTION 2.21.01.

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

NOTE: INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 15.

NOTE: ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.12.040.

- NOTES:**
- REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS OR PAVEMENT MARKINGS) UNDER CLARK COUNTY JURISDICTION THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITY TO CLARK COUNTY SATISFACTION. ALL MATERIALS USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS, OR WILL BE AN APPROVED EQUIVALENT.
 - IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR WILL HIRE AN IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATIONS NO. 623 G.01.02.
 - CONTRACTOR SHALL CONTACT CLARK COUNTY TRAFFIC OPERATIONS @ 455-7511 TO SCHEDULE COUNTY TRAFFIC STAFF TO LOCATE UNDERGROUND STREETLIGHTING AND SIGNAL FACILITIES IN THE PROJECT AREA. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED PRIOR TO THIS OPERATION. HOURS OF OPERATION ARE: 6:30AM - 3:00PM, MONDAY THROUGH FRIDAY, EXCLUDING HOLIDAYS.
 - TRENCH BACKFILL PER CCAUSD STD. DWG. NO. 503 AND 504.1.

ELKHORN & GRAND CANYON
12 LOT SINGLE FAMILY RESIDENTIAL DEVELOPMENT
CITY OF LAS VEGAS
SHEET:

PERFORMANCE
ENGINEERING
9345 W. SUNSET RD. STE. 101 LAS VEGAS, NV 89148
TEL: (702) 566-9770 EMAIL: RAY@PERMANANCELV.COM

DEVELOPER:

THM ENTERPRISES
9208 W. RUSSELL RD., STE. 235
LAS VEGAS, NV 89148
ATTN: DUSTIN MANNING
PH (702) 929-3131

APPROVED FOR CONSTRUCTION
RAY F. FREDERICKSEN
CIVIL
No. 17471
12/11/17

DESIGNED BY:

RFF

DRAWN BY:

RFF

CHECKED BY:

RFF

SCALE:

1"=30'

PROJECT DATE:

DECEMBER 11, 2017

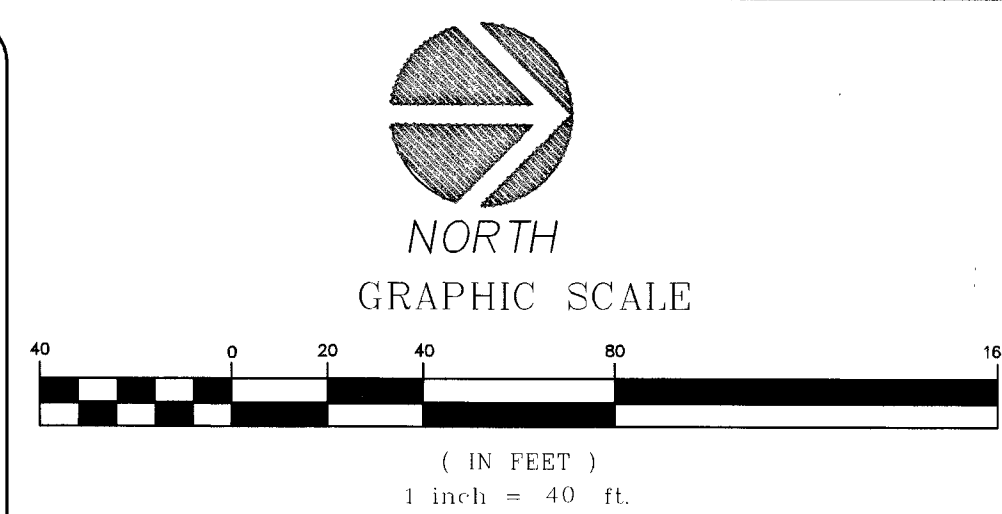
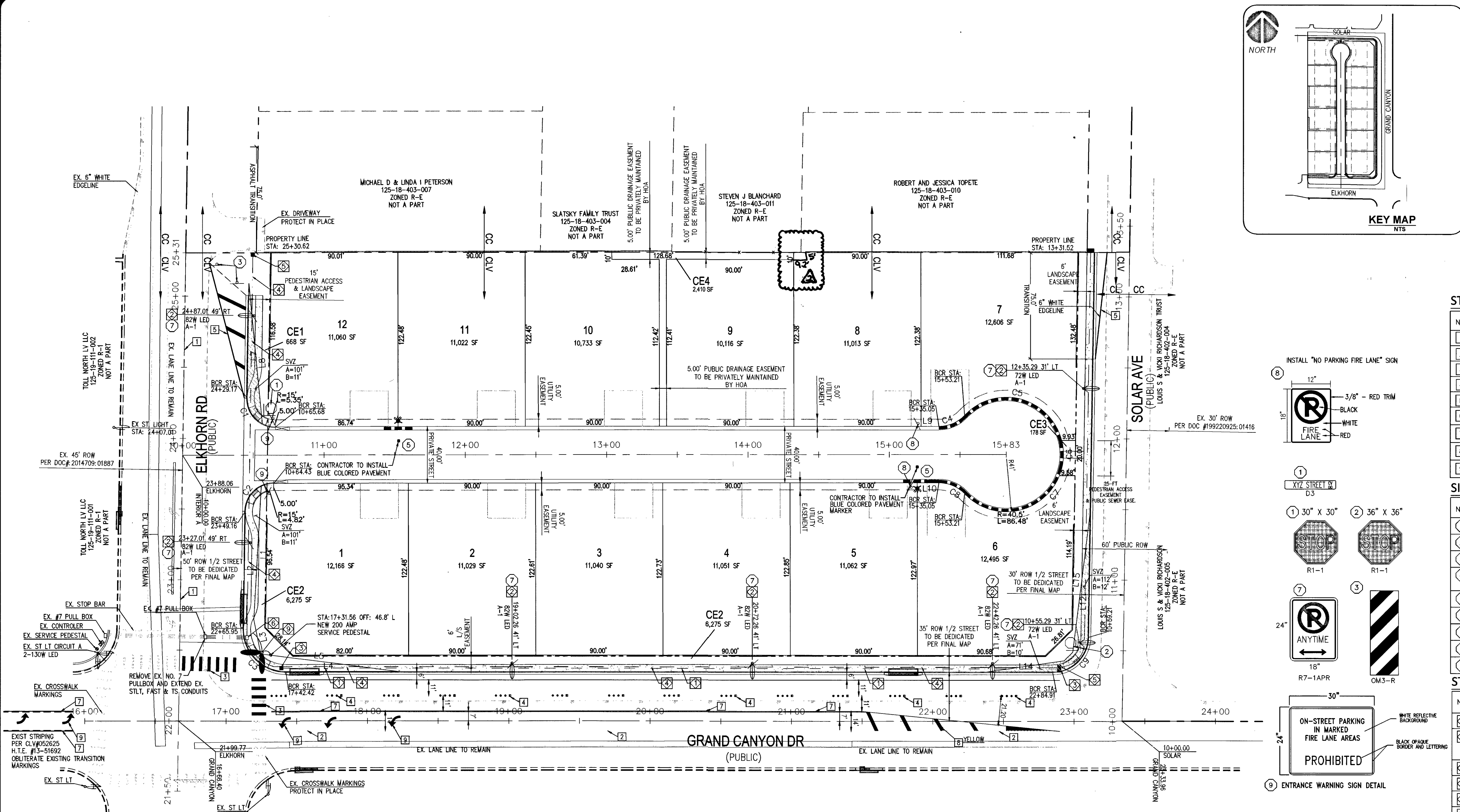
SHEET

UT-1

6 OF 13

CLV #L17-00900

10745071



BENCHMARK
CITY OF LAS VEGAS BENCHMARK ID: 6LV90 1854
RIVET AND PLATE IN THE TOP OF CURB, NORTHEAST CORNER OF GRAND CANYON DRIVE AND ELKHORN AVENUE.
ELEVATION= 2756.91 FEET / 815.556 METERS
(NAVD 88 DATUM)
BASIS OF BEARINGS
NORTH 89°07'00\"/>

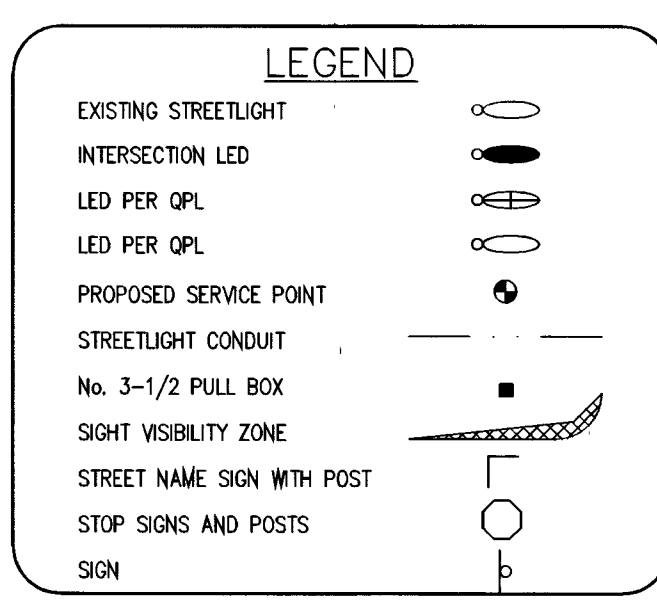
- STRIPING CONSTRUCTION NOTES**
- | NO. | ITEM | CCAUSS: UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA. |
|-----|---|--|
| 1 | INSTALL TYPE 1 CENTERLINE PER CCAUSS NO. 244 | |
| 2 | EXISTING CONTINUOUS LEFT TURN LANE STRIPING TO REMAIN | |
| 3 | INSTALL STOP BAR AND CROSSWALK PER CCAUSS STD DWG No. 254 | |
| 4 | INSTALL TYPE 4 LANE LINE PER USDOCCA DWG. No. 244.1 USING AGENCY APPROVED MATERIALS | |
| 5 | INSTALL 6-INCH SOLID WHITE LINE USING PAINT OR TAPE | |
| 6 | INSTALL PAVEMENT MARKING USING REFLECTIVE PAINT OR TAPE | |
| 7 | INSTALL TYPE 2 CENTERLINE PER CCAUSS NO. 244 | |
| 8 | INSTALL TRANSITION STRIPING PER CCAUSS STD DWG No. 245 | |
| 9 | INSTALL TURN LANE AND ARROW PAVEMENT MARKINGS PER CCAUSS NO. 246 | |

- SIGNAGE CONSTRUCTION NOTES**
- | NO. | ITEM | CCAUSS: UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA. |
|-----|----------------|--|
| 1 | INSTALL 30\"/> | |

- STREETLIGHT CONSTRUCTION NOTES**
- | NO. | ITEM | CCAUSS: UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA. |
|-----|---|--|
| 1 | INSTALL 4\"/> | |
| 2 | INSTALL 72 WATT LED STREET LIGHT ASSEMBLY WITH LOCKING HAND HOLE COVER, PER USDOCCA DWG. No. 314, 320 AND 321 (POLE HANDHOLE COVER SHALL BE WELDED SHUT) | |
| 3 | INSTALL \"P30\" PULLBOX W/ \"FIBER OPTIC\" INSCRIBED ON LID PER CCAUSS 6230.03.01 | |
| 4 | INSTALL 1-1/4\"/> | |
| 5 | INSTALL 3-1/2\"/> | |
| 6 | INSTALL NO. 7 PULL BOX PER USDOCCA DWG. No. 707 | |
| 7 | INSTALL TWO (2) 4-INCH PVC CONDUITS FOR IRRIGATION PURPOSES | |
| 8 | NOT USED | |
| 9 | INSTALL TRAFFIC SIGNAL POLE WITH TWO (2) - 400 WATT EQUIVALENT LED STREET LIGHTS AND RELATED APPURTENANCES FOR SIGNALIZED INTERSECTION PER USDOCCA No. 889 (1 of 2) WITH 200 AMP SERVICE PEDESTAL | |

- GENERAL NOTES:**
- ALL WORK SHALL BE IN ACCORDANCE WITH UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA.
 - ALL STREET LIGHTING CONDUIT IS 1-1/4\"/>
 - ALL STREETLIGHT ASSEMBLIES ARE 250 W HIGH LED UNLESS NOTED OTHERWISE.
 - FOR NEW CURB AND SIDEWALK CONSTRUCTION, ITS CONDUIT SHALL BE CONSTRUCTED BEHIND CURB UNDER SIDEWALK

CITY OF LAS VEGAS FIRE DEPARTMENT APPROVAL
BY: *[Signature]* DATE: 12/12/17
APPROVAL OF THESE PLANS 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.
FIRE FLOW: 2,000 GPM AT 20 PSI RESIDUAL



SIGHT VISIBILITY ZONE NOTE:
NO WALLS, FENCES, SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES, FIRE HYDRANTS, TREES AND STREETLIGHT 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 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. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPED MEDIANS.

FIRE HYDRANT PAVEMENT MARKER NOTE:
INSTALL BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ADJACENT TO THE FIRE HYDRANT ON ALL IMPROVED FIRE APPARATUS ACCESS ROADWAYS WITH HARD SURFACES, INCLUDING BOTH PUBLIC AND PRIVATE ROADS, STREET, AND FIRE LANES.
• ON ROADWAYS WITH NO PARKING PERMITTED ON THE HYDRANT SIDE; EIGHT (8) FEET FROM THE FACE OF THE CURB ON THE HYDRANT SIDE.
• ON ROADWAYS WITH PARKING PERMITTED ON THE HYDRANT SIDE; (16) FEET FROM THE FACE OF THE CURB ON THE HYDRANT SIDE.

FIRE LANE NOTES:
INSTALL RED PAINT ON ALL CURBS ADJACENT TO FIRE LANE ON BOTH SIDES OF THE ROADWAY. USE WHITE PAINT TO STENCIL \"FIRE LANE - NO PARKING\" EVERY 50 FEET ALONG RED CURB.
MINIMUM INSIDE RADIUS = 28' FACE OF CURB
MINIMUM OUTSIDE RADIUS = 52' FACE OF CURB
• EXISTING/PROPOSED FIRE HYDRANT
• BLUE REFLECTIVE MARKER FOR FIRE HYDRANTS
24\"/>

STREETLIGHT CIRCUIT CAPACITY VERIFICATION FOR CIRCUIT "B-EXIST." SUNSET RD.			
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 PROJECT'S STREETLIGHTS? (CIRCLE)	YES	CONTACT CLARK COUNTY TRAFFIC OPERATIONS AT 702-455-6000 TO PERFORM CIRCUIT CAPACITY VERIFICATION	
	NO	INSTALL A NEW PEDESTAL	
SERVICE PEDESTAL LOCATION: NWC GRAND CANYON & ELKHORN			
(COMPLETE IF EXISTING SERVICE)			
CLARK COUNTY			
DATE OF CAPACITY VERIFICATION			
PERSON WHO DID THE VERIFICATION			
OFF-SITE PLANS ENGINEER			
PERSON WHO DID THE CALCULATIONS		RAY FREDERICKSEN, P.E.	
CONSULTING ENGINEERING FIRM		PERAMANCE 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)	48.0	AMPS
PROPOSED LUMINAIRE LOAD TO CIRCUIT: A-1			
5	7 NUMBER OF 82 WATT LED STLTs @ 0.7 AMPS/EA	4.9	AMPS
6	2 NUMBER OF 130 WATT SED TLTS @ 1.0 AMPS/EA	2.0	AMPS
7	TOTAL PROPOSED ADDITIONAL LOAD (5+6)	6.9	AMPS
REMAINING AVAILABLE LOAD (4 MINUS 7)		41.1	AMPS

LINE TABLE			CURVE TABLE					
Line #	Length	Direction	Curve #	Length	Radius	Delta	Chord Direction	Chord Length
L1	94.67	S86° 47' 08.53"E	C1	22.08	20.00	63.26	N59° 15' 19"E	20.98
L2	83.21	S89° 07' 00.00"E	C2	22.08	20.00	63.26	S57° 29' 19"E	20.98
L3	24.78	S78° 31' 20.17"W	C3	47.59	30.00	90.89	N45° 26' 20"E	42.75
L4	79.54	N0° 00' 21.00"W	C4	20.34	25.00	46.61	N23° 23' 09"W	19.78
L5	98.17	S7° 20' 26.66"W	C5	86.43	40.50	122.28	S14° 26' 59"W	70.94
L7	80.67	S89° 07' 00.00"E	C6	20.21	40.50	28.59	S89° 53' 06"W	20.00
L8	99.15	S84° 30' 48.39"W	C7	86.48	40.50	122.34	N14° 38' 53"W	70.96
L9	12.62	N0° 04' 03.06"W	C8	20.34	25.00	46.61	S23° 13' 09"W	19.78
L10	15.37	S0° 05' 00.19"E	C9	38.87	25.00	89.09	N44° 33' 02"W	35.07
L12	67.41	N89° 05' 43.00"W						
L14	46.40	S0° 00' 21.00"E						
L15	98.81	S82° 54' 22.61"E						

- NOTES:**
- REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS OR PAVEMENT MARKINGS) UNDER CITY OF LAS VEGAS JURISDICTION THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITY TO CITY OF LAS VEGAS SATISFACTION. ALL MATERIALS USED SHALL MEET CITY'S SPECIFICATIONS, OR WILL BE AN APPROVED EQUIVALENT.
 - IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR WILL HIRE AN INSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATIONS No. 625 G.01.02.
 - CONTRACTOR SHALL CONTACT CITY OF LAS VEGAS TRAFFIC OPERATIONS @ 702-229-1000 TO SCHEDULE CITY TRAFFIC STAFF TO LOCATE UNDERGROUND STREETLIGHTING AND SIGNAL FACILITIES IN THE PROJECT AREA. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED PRIOR TO THIS OPERATION. HOURS OF OPERATION ARE: 6:30AM - 3:00PM, MONDAY THROUGH FRIDAY, EXCLUDING HOLIDAYS.
 - TRENCH BACKFILL PER CCAUSS STD. DWG. No. 503 AND 500.4, AND 500.5.

FIRE TRUCK TURNING RADIUS
SCALE: NOT TO SCALE

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY. CALL BEFORE YOU DO OVERHEAD.

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEMS. IT'S COSTLY. CALL BEFORE YOU DO UNDERGROUND.

Call before you Dig
Avoid cutting underground utility lines. It's costly. Call.

BY DATE/APP. DATE

REVISION

NO.

EXTEND TO INTD LOTS

ELKHORN & GRAND CANYON
CITY OF LAS VEGAS
SHEET: 12 LOT SINGLE FAMILY RESIDENTIAL DEVELOPMENT

STREETLIGHT AND TRAFFIC CONTROL PLAN

DESIGNED BY: RFF

DRAWN BY: RFF

CHECKED BY: RFF

SCALE: 1\"/>

PROJECT DATE: DECEMBER 11, 2017

SHEET TR-1 7 OF 13

CLV #L17-00900

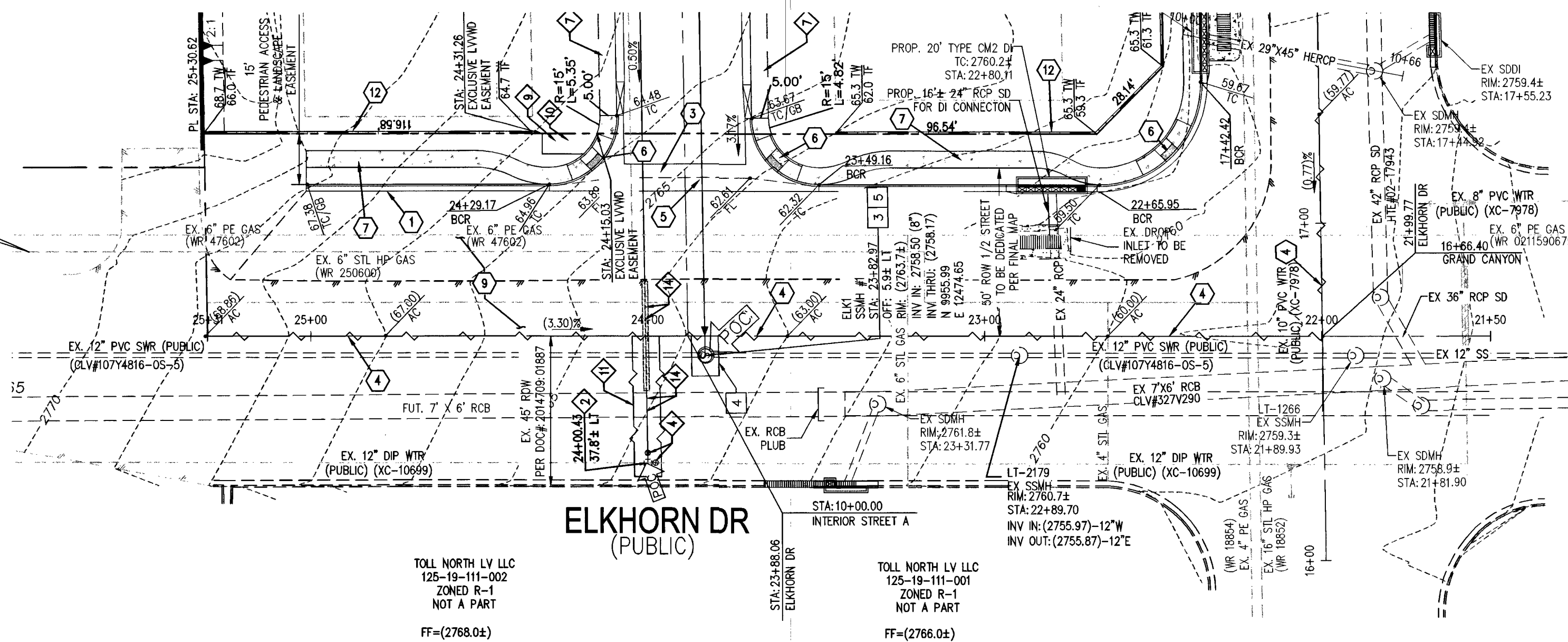
1075071

PERAMANCE ENGINEERING

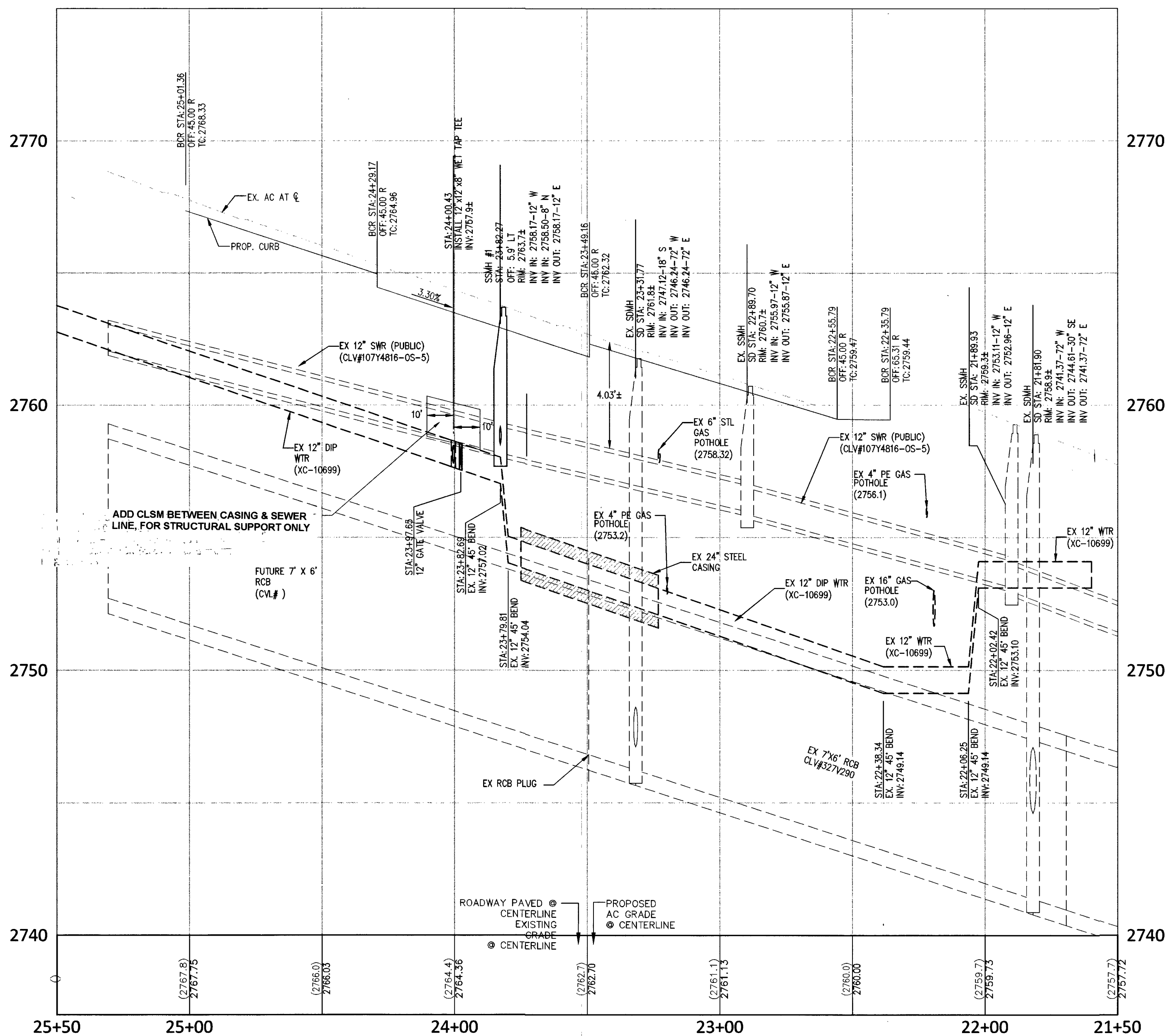
RAY F. FREDERICKSEN
Exp. 06/30/19
CIVIL
No. 17471

THM ENTERPRISES
9205 W. RUSSELL RD., STE. 235
LAS VEGAS, NV 89148
ATTN: DUSTIN MANNING
PH (702) 929-3131

CAUTION:
HIGH PRESSURE GAS!
CONTACT SOUTHWEST GAS AT 702-400-1789
FOR STANDBY WHEN EXCAVATING OVER
OR NEAR HIGH PRESSURE GAS LINES



PLAN VIEW
SCALE: 1"=30'



PROFILE VIEW
H: 1"=30'
V: 1"=3'

BENCHMARK

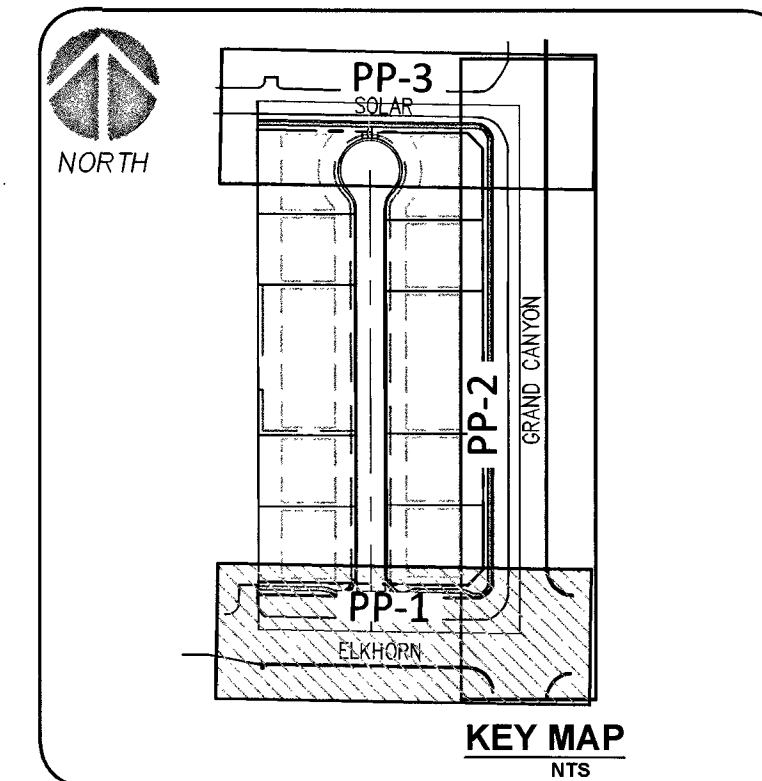
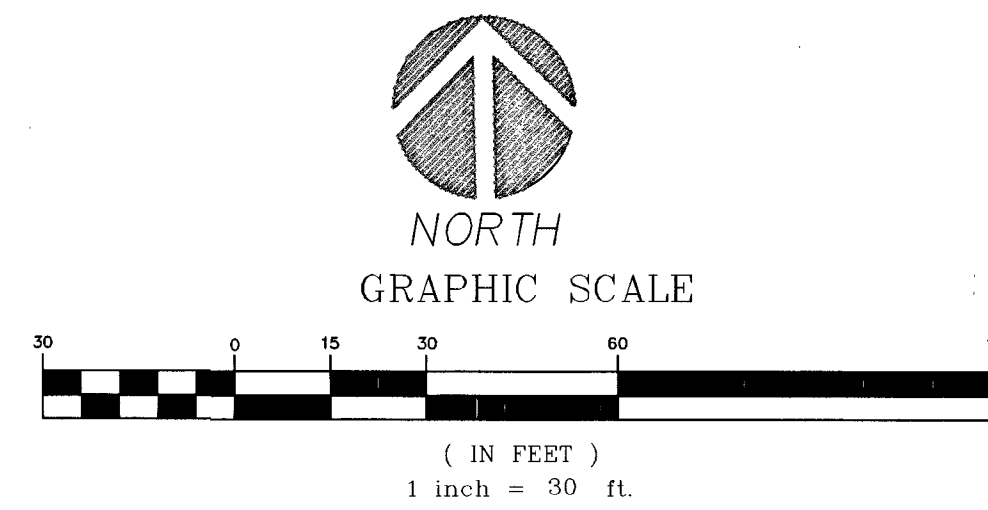
CITY OF LAS VEGAS BENCHMARK ID: 6LV90 1854

RIVET AND PLATE IN THE TOP OF CURB, NORTHEAST CORNER OF GRAND CANYON DRIVE AND ELKHORN AVENUE.

ELEVATION= 2756.91 FEET / 815.556 METERS
(NAVD 88 DATUM)

BASIS OF BEARINGS

NORTH 89°07'00" WEST, BEING THE BEARING OF THE CENTERLINE OF ELKHORN AVENUE AND THE NORTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 50 EAST, W.D.M., CLARK COUNTY, NEVADA, BY FILE 76, PAGE 49 OF PARCEL MAPS, OFFICIAL RECORDS OF CLARK COUNTY, NEVADA.



GRADING NOTES

1. INSTALL "L" TYPE CURB AND GUTTER PER CCAUSD #216
2. INSTALL 30" ROLL CURB PER CCAUSD #217.1, 217.251
3. CONSTRUCT 10-FT "L" CURB TO ROLL CURB TRANSITION PER DETAIL THIS SHEET
4. SAWCUT AND MATCH EXISTING PAVEMENT. DUE TO THE EXISTING FIELD CONDITIONS AND VARYING SLOPES THE LENGTH AND WIDTH OF SAWCUT AND PATCH TO BE DETERMINED BY THE INSPECTOR IN THE FIELD. WIDTHS MAY VARY.
5. INSTALL 8-FT CROSS GUTTER PER CCAUSD #228.
6. INSTALL SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES PER CCAUSD NO. 235. A & B EQUAL 8-FEET UNLESS OTHERWISE NOTED.
7. INSTALL CONCRETE SIDEWALK (4" THICK OVER 6" TYPE 2 AGGREGATE BASE) PER CCAUSD #234.
8. INSTALL 2.0" AC OVER 4.0" TYPE II, OVER 9" TYPE I AGGREGATE BASE
9. INSTALL 3.0" AC OVER 4.0" TYPE II, OVER 12" TYPE I AGGREGATE BASE
10. INSTALL 4.5" AC OVER 4.0" TYPE II, OVER 12" TYPE I AGGREGATE BASE
11. SIGHT VISIBILITY ZONE.
12. CONSTRUCT RETAINING WALL, HEIGHT PER PLAN. STRUCTURAL DESIGN BY OTHERS
13. CONSTRUCT STORM DRAIN DROP INLET LENGTH AND TYPE PER PLAN PER UDSCA DRAWING NO. 421 (STORMWATER QUALITY MANAGEMENT STAMP AND SIGN DETAIL)
14. INSTALL TYPE II AGGREGATE. TRANSITION GRADING FROM ASPHALT TO EXISTING DRIVEWAY

SEE SHEET N-1 FOR LEGEND, GENERAL NOTES, AND QUANTITIES

SEWER CONSTRUCTION NOTES

- | NO. | ITEM | *SS STD PER DESIGN AND CONSTRUCTION STANDARDS WASTEWATER COLLECTION SYSTEMS, LATEST EDITION |
|-----|---|---|
| 1 | INSTALL 8" C-900 PVC SEWER LINE PER DCSWCS DWG. NO. SD-17. | |
| 2 | INSTALL 4" PVC (PRIVATE) SEWER LATERAL PER DCSWCS DWG. NO. SD-22. | |
| 3 | INSTALL 48-INCH SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4&50-9 W/24" SINGLE LID. | |
| 4 | SAWCUT, TRENCH, BACKFILL AND RESTORATION PER CCAUSD #500.5, #500.3, AND #503 | |
| 5 | NEW MANHOLES TO HAVE PRECAST BASE | |
| 6 | EX. SEWER MANHOLE, PROTECT IN PLACE, ADJUST RIM PER DCSWCS SD-4 & SD-5 IF APPLICABLE. | |

WATER CONSTRUCTION NOTES

- | NO. | ITEM | UDACS: UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS, CURRENT EDITION |
|-----|---|---|
| 1 | INSTALL PVC WATER LINE (C-900, CL-150) PER UDACS PLATE NO. 17. | |
| 2 | WET TAP AND CONNECT TO EXISTING WATER LINE PER UDACS PLATE NO. 34, 39 & SEC. 2.24.01.B. | |
| 3 | INSTALL FIRE HYDRANT ASSEMBLY WITH GATE VALVE PER UDACS PLATE, NO. 39 & 41. | |
| 4 | INSTALL GATE VALVE (SAME SIZE AS LINE) PER UDACS PLATE NO. 30 & 39 | |
| 5 | INSTALL CAP W/2" B.O. (SAME SIZE AS LINE) PER UDACS PLATE 36 | |
| 6 | INSTALL 8" x 6" REDUCER, PER UDACS PLATE 30. | |
| 7 | INSTALL 1" METER PER UDACS PLATE 3. (DOMESTIC) | |
| 8 | INSTALL 8" x 6" TEE PER UDACS PLATE 31. | |
| 9 | INSTALL 1" RPPA PER UDACS PLATE 8 (IRRIGATION) | |
| 10 | INSTALL 1" METER PER UDACS PLATE 4 (IRRIGATION) | |
| 11 | SAWCUT, TRENCH, BACKFILL AND RESTORATION PER CCAUSD #500.5, #500.3, AND #503 | |
| 12 | INSTALL TWO (2) 4" IRRIGATION SLEEVES | |
| 13 | INSTALL 1" SERVICE SADDLE WITH CORP STOP PER UDACS PLATE 4 FOR IRRIGATION PURPOSES | |
| 14 | INSTALL 45" DIP BEND. | |

APPROVED FOR CONSTRUCTION
DISHAR
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO: 125847 FIRST APPROVED DATE: 12/19/17

NO.	REVISION	BY	DATE	APP.	DATE
1					
2					
3					
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5					
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8					
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10					
11					
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ELKHORN & GRAND CANYON
CITY OF LAS VEGAS

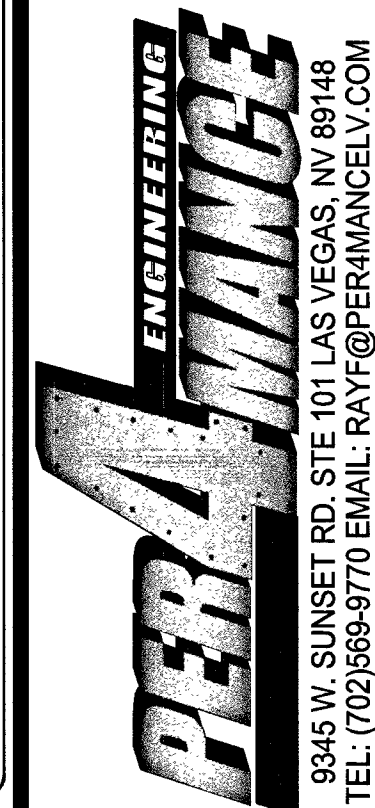
12 LOT SINGLE FAMILY RESIDENTIAL DEVELOPMENT

NEVADA

SHEET:

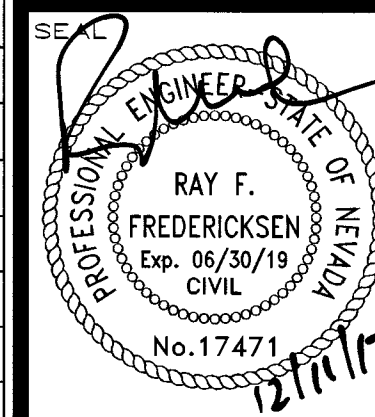
PLAN AND PROFILE

ELKHORN RD



DEVELOPER:

THM ENTERPRISES
9205 W. RUSSELL RD., STE. 235
LAS VEGAS, NV 89148
ATTN: DUSTIN MANNING
PH (702) 929-3131



DESIGNED BY:

RFF

DRAWN BY:

RFF

CHECKED BY:

RFF

SCALE:

1"=30'

PROJECT DATE:

DECEMBER 11, 2017

SHEET

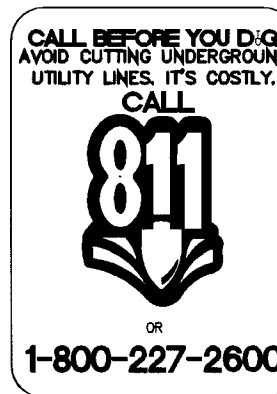
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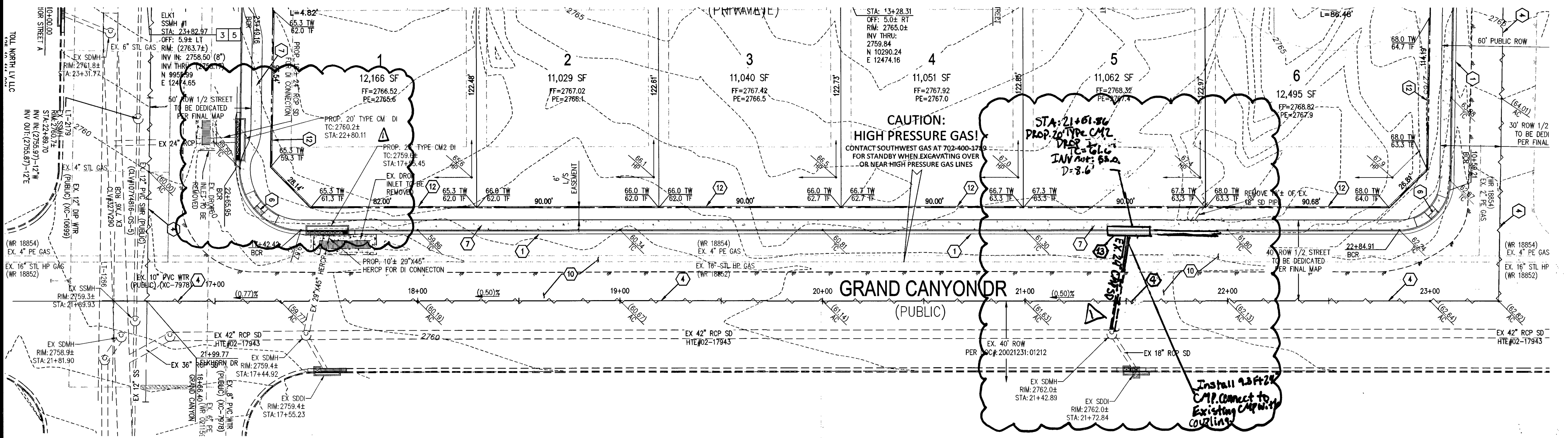
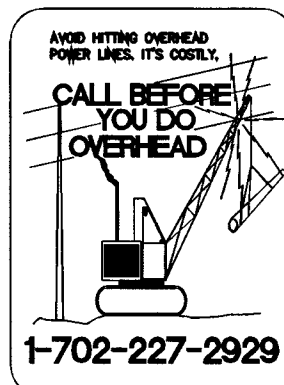
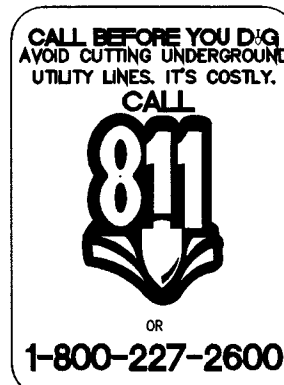
8 OF 13

CLV #L17-00900

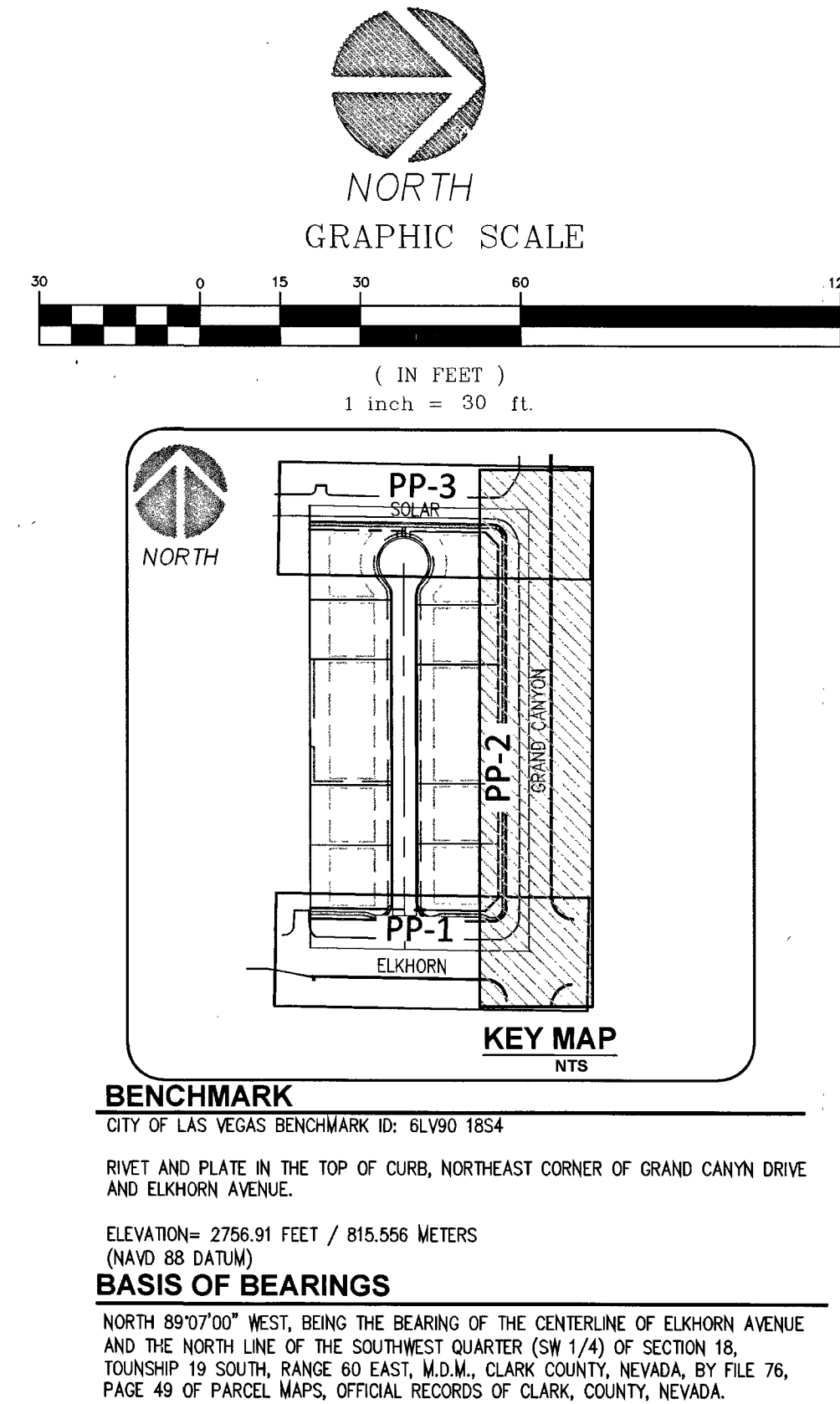
10785071

PROJ#:125847 AGR:116505 QS:125-18-SW XC 11933





PLAN VIEW
SCALE: 1"=30'



- GRADING NOTES**
1. INSTALL 1" TYPE CURB AND GUTTER PER CCAUSD #216
 2. INSTALL 30" ROLL CURB PER CCAUSD #217.1, 217.251
 3. CONSTRUCT 10-FT 1" CURB TO ROLL CURB TRANSITION PER DETAIL THIS SHEET
 4. SAWCUT AND MATCH EXISTING PAVEMENT. DUE TO THE EXISTING FIELD CONDITIONS AND VARYING SLOPES THE LENGTH AND WIDTH OF SAWCUT AND PATCH TO BE DETERMINED BY THE INSPECTOR IN THE FIELD. WIDTHS MAY VARY.
 5. INSTALL 8-FT CROSS GUTTER PER CCAUSD #228
 6. INSTALL SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES PER CCAUSD NO. 235. A & B EQUAL 8-FEET UNLESS OTHERWISE NOTED.
 7. INSTALL CONCRETE SIDEWALK (4" THICK OVER 6" TYPE 2 AGGREGATE BASE) PER CCAUSD #234
 8. INSTALL 2.0" AC OVER 4.0" TYPE II, OVER 9" TYPE I AGGREGATE BASE
 9. INSTALL 3.0" AC OVER 4.0" TYPE II, OVER 12" TYPE I AGGREGATE BASE
 10. INSTALL 4.5" AC OVER 4.0" TYPE II, OVER 12" TYPE I AGGREGATE BASE
 11. SIGHT VISIBILITY ZONE.
 12. CONSTRUCT RETAINING WALL, HEIGHT PER PLAN, STRUCTURAL DESIGN BY OTHERS
 13. CONSTRUCT STORM DRAIN DROP INLET LENGTH AND TYPE PER PLAN, PER USDOCA DRAWING NO. 421 (STORMWATER QUALITY MANAGEMENT STAMP AND SIGN DETAIL)
 14. INSTALL TYPE II AGGREGATE TRANSITION GRADING FROM ASPHALT TO EXISTING DRIVEWAY SEE SHEET W-1 FOR LEGEND, GENERAL NOTES, AND QUANTITIES
- SEWER CONSTRUCTION NOTES**
- *SS STD PER DESIGN AND CONSTRUCTION STANDARDS WASTEWATER COLLECTION SYSTEMS, LATEST EDITION
- | NO. | ITEM |
|-----|--|
| 1 | INSTALL 8" C-900 PVC SEWER LINE PER DCSWCS DWG. NO. SD-17. |
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| 3 | INSTALL 48-INCH SEWER MANHOLE PER DCSWCS SD-1A, SD-1B, SD-4&50-9 W/24" SINGLE LID. |
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| 6 | EX. SEWER MANHOLE, PROTECT IN PLACE, ADJUST RIM PER DCSWCS SD-4 & SD-5 IF APPLICABLE |
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- | NO. | ITEM |
|-----|--|
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| 2 | WET TAP AND CONNECT TO EXISTING WATER LINE PER UDACS PLATE NO. 34, 39 & SEC 2.24.01.B. |
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| 14 | INSTALL 45 DIP BEND. |

PROFILE VIEW
H: 1"=30'
V: 1"=3'

APPROVED FOR CONSTRUCTION
DISHARI
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO: 125847 FIRST APPROVED DATE: 12/19/17

BY DATE APP: DATE

REVISION

NO. REVISION

ELKHORN & GRAND CANYON
CITY OF LAS VEGAS BENCHMARK ID: 6LV90 1854
RIVET AND PLATE IN THE TOP OF CURB, NORTHEAST CORNER OF GRAND CANYON DRIVE AND ELKHORN AVENUE.
ELEVATION= 2756.91 FEET / 815.556 METERS
(NAVD 88 DATUM)
BASIS OF BEARINGS
NORTH 89°07'00" WEST, BEING THE BEARING OF THE CENTERLINE OF ELKHORN AVENUE AND THE NORTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, BY FILE 76, PAGE 49 OF PARCEL MAPS, OFFICIAL RECORDS OF CLARK COUNTY, NEVADA.

PERFORMANCE ENGINEERING
9345 W. SUNSET RD. STE 101 LAS VEGAS, NV 89148
TEL: (702) 569-9770 EMAIL: RAY@PERMANCVEL.COM

DEVELOPER:
THW ENTERPRISES
9205 W. RUSSELL RD., STE. 235
LAS VEGAS, NV 89148
ATTN: DUSTIN MANNING
PH (702) 929-3131

DESIGNED BY:
RFF

DRAWN BY:
RFF

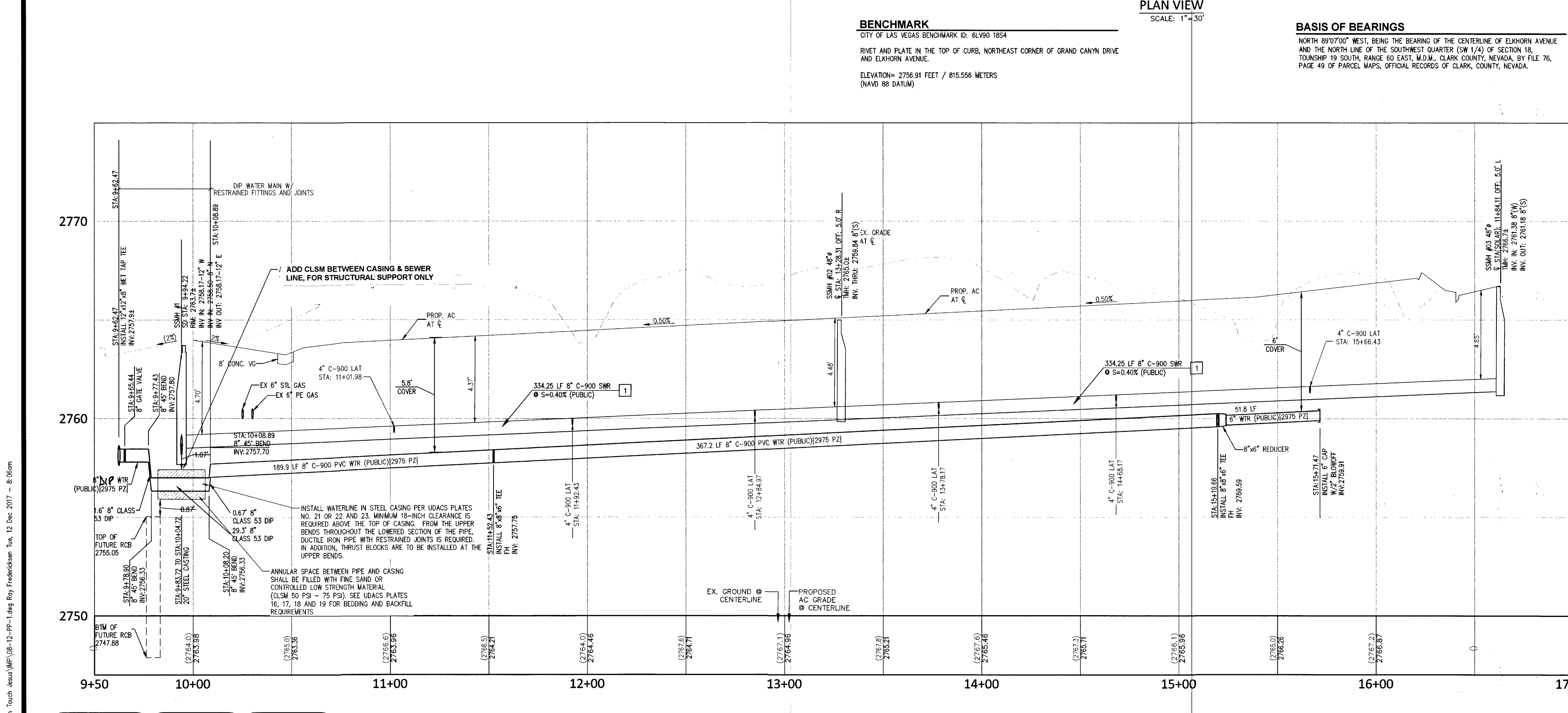
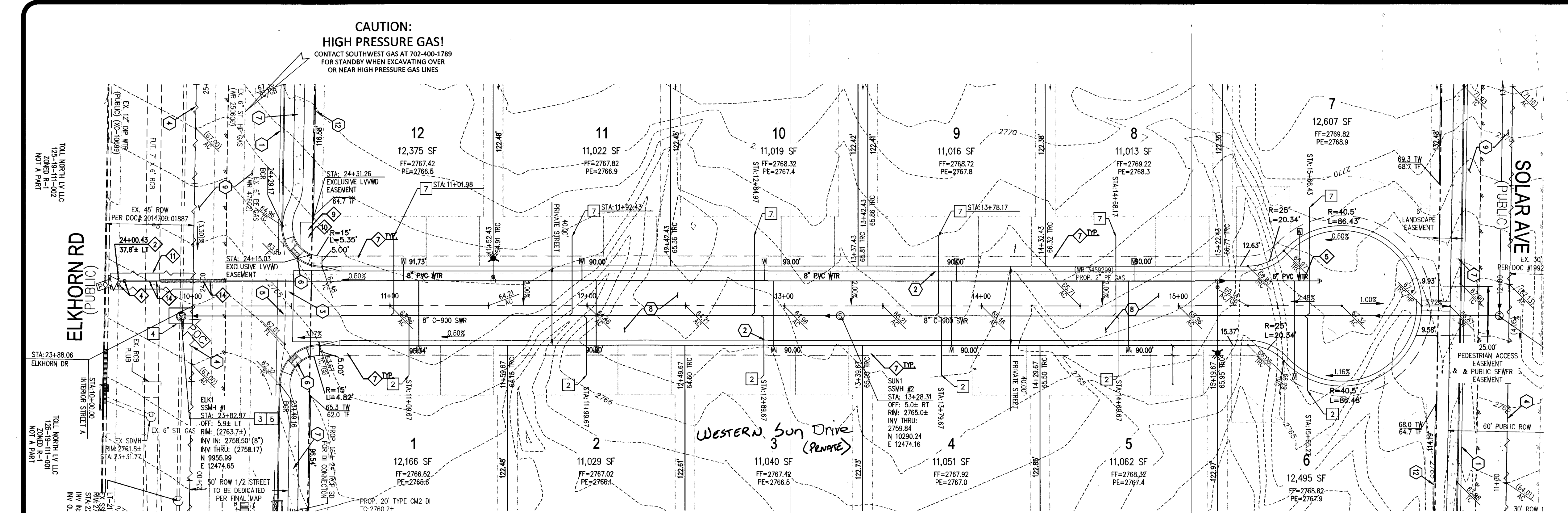
CHECKED BY:
RFF

SCALE:
1"=30'

PROJECT DATE:
DECEMBER 11, 2017

SHEET
PP-2
9 OF 13
CLV #L17-00900
101X5071

PROJ#125847 AGR:16505 QS:125-18-SW XC 11393



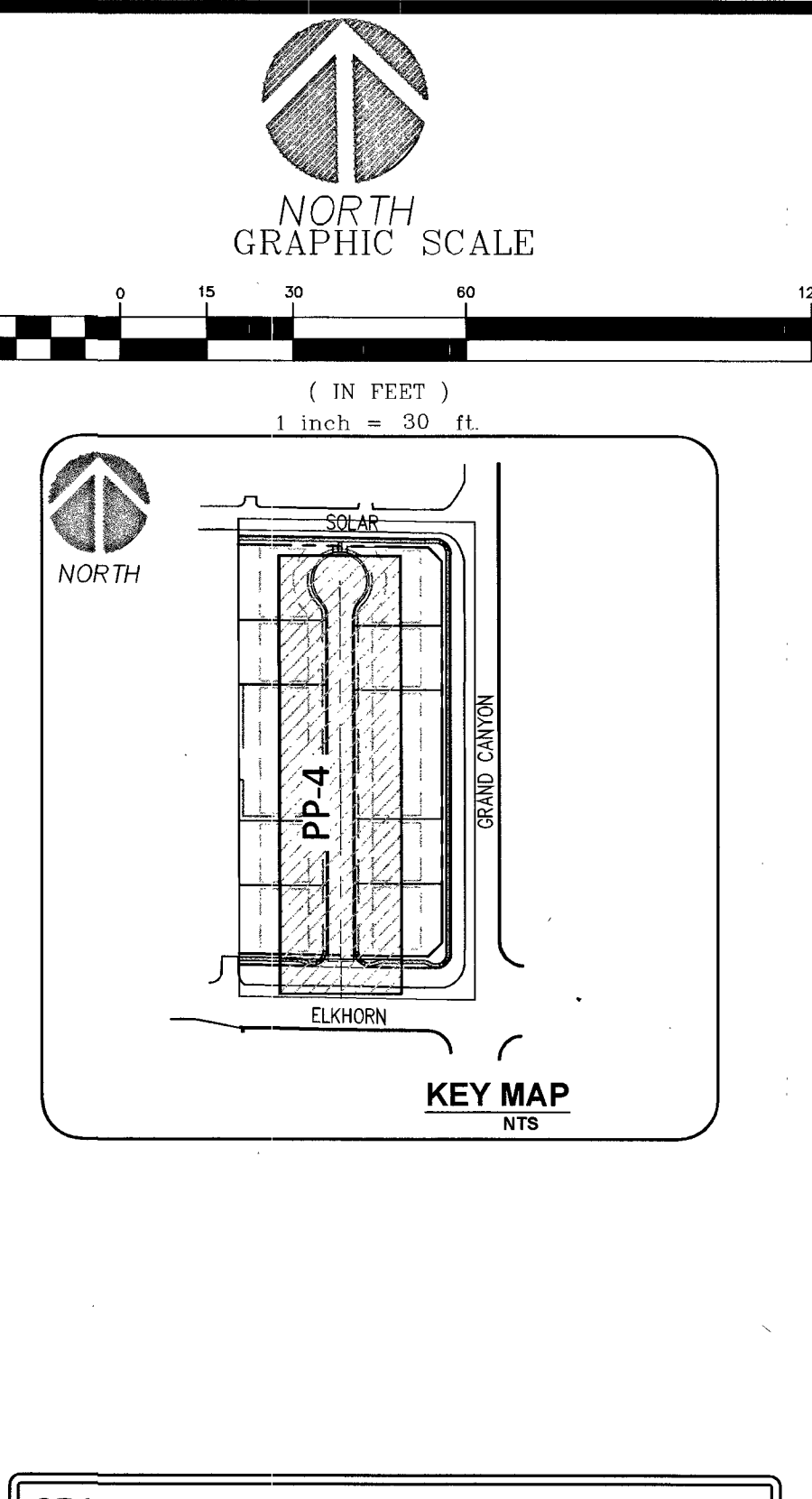
FAST
Call before you dig
UnderGround
1-702-432-5300

811
CALL BEFORE YOU DIG
1-800-227-2600

AVOID WITHIN OWNERS POWER LINES. ITS COSTLY.
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

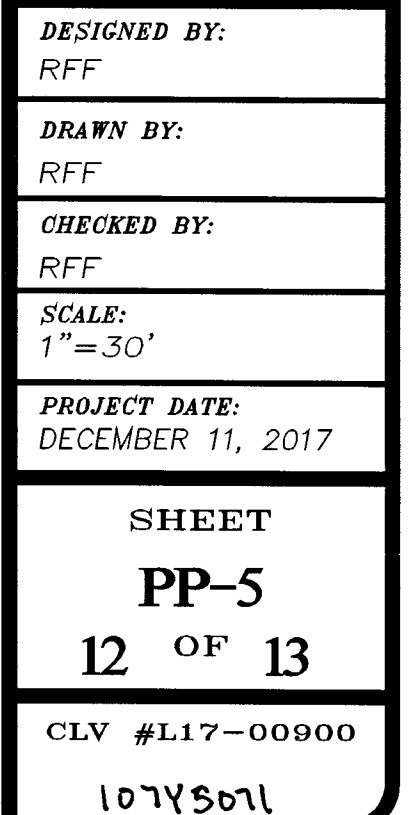
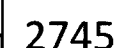
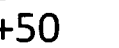
PROFILE VIEW
H: 1"=30'
V: 1"=3'

APPROVED FOR CONSTRUCTION
[Signature]
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO: 125847 FIRST APPROVED DATE: 12/19/17

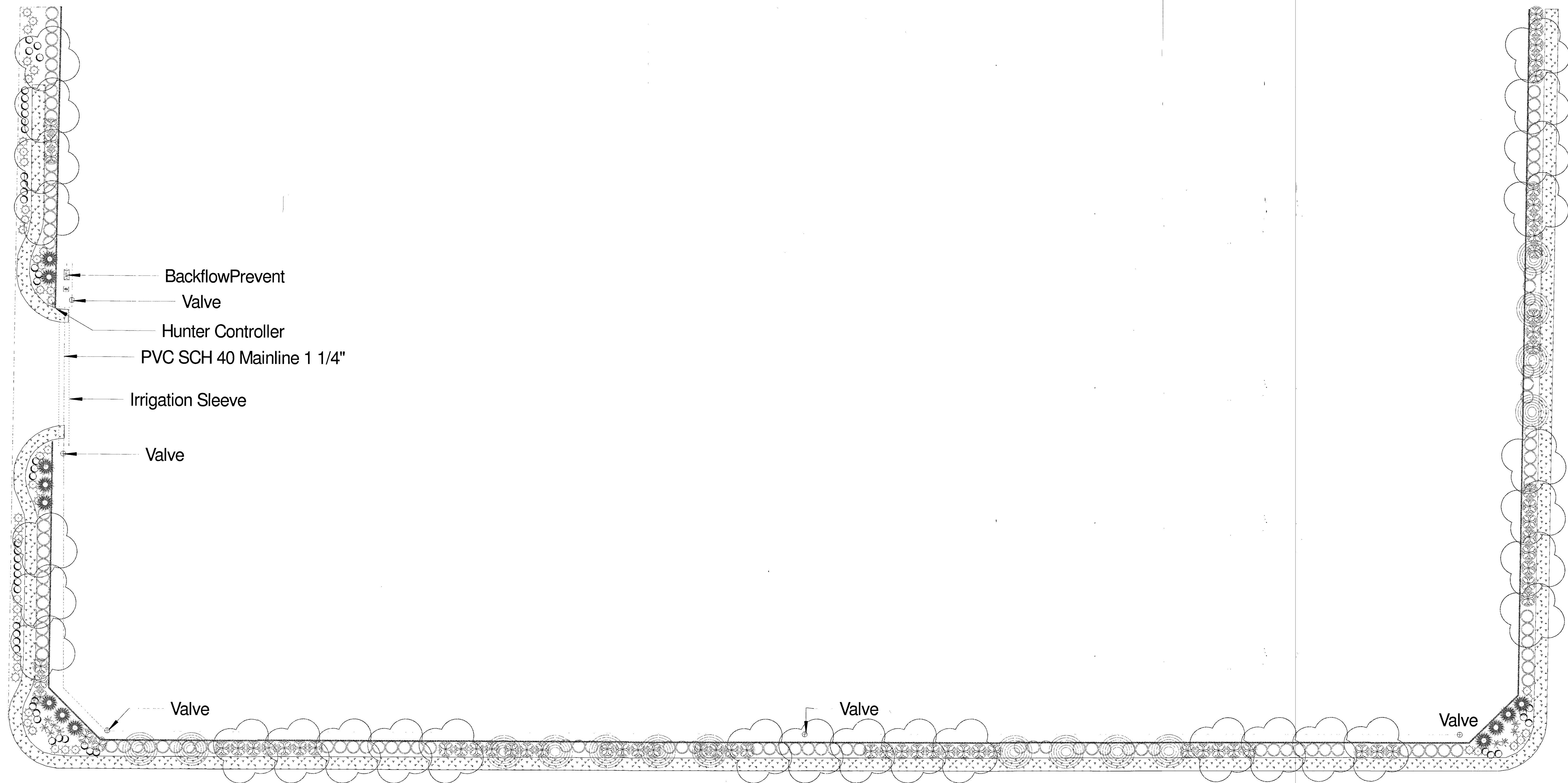


- GRADING NOTES**
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- SEWER CONSTRUCTION NOTES**
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| 3 | INSTALL 48-INCH SEWER MANHOLE PER DCSWCS 30-1A, 30-1B, 30-1C, 30-1D, 30-1E, 30-1F, 30-1G, 30-1H, 30-1I, 30-1J, 30-1K, 30-1L, 30-1M, 30-1N, 30-1O, 30-1P, 30-1Q, 30-1R, 30-1S, 30-1T, 30-1U, 30-1V, 30-1W, 30-1X, 30-1Y, 30-1Z, 30-2A, 30-2B, 30-2C, 30-2D, 30-2E, 30-2F, 30-2G, 30-2H, 30-2I, 30-2J, 30-2K, 30-2L, 30-2M, 30-2N, 30-2O, 30-2P, 30-2Q, 30-2R, 30-2S, 30-2T, 30-2U, 30-2V, 30-2W, 30-2X, 30-2Y, 30-2Z, 30-3A, 30-3B, 30-3C, 30-3D, 30-3E, 30-3F, 30-3G, 30-3H, 30-3I, 30-3J, 30-3K, 30-3L, 30-3M, 30-3N, 30-3O, 30-3P, 30-3Q, 30-3R, 30-3S, 30-3T, 30-3U, 30-3V, 30-3W, 30-3X, 30-3Y, 30-3Z, 30-4A, 30-4B, 30-4C, 30-4D, 30-4E, 30-4F, 30-4G, 30-4H, 30-4I, 30-4J, 30-4K, 30-4L, 30-4M, 30-4N, 30-4O, 30-4P, 30-4Q, 30-4R, 30-4S, 30-4T, 30-4U, 30-4V, 30-4W, 30-4X, 30-4Y, 30-4Z, 30-5A, 30-5B, 30-5C, 30-5D, 30-5E, 30-5F, 30-5G, 30-5H, 30-5I, 30-5J, 30-5K, 30-5L, 30-5M, 30-5N, 30-5O, 30-5P, 30-5Q, 30-5R, 30-5S, 30-5T, 30-5U, 30-5V, 30-5W, 30-5X, 30-5Y, 30-5Z, 30-6A, 30-6B, 30-6C, 30-6D, 30-6E, 30-6F, 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ELKHORN RD



Planting Legend

Common Name	Size	Qty
Shrub, Cacti		
Sotol	5 Gal.	9
Shrub, Evergreen Broadleaf		
Bush Germander	5 Gal.	48
Lantana, New Gold	5 Gal.	46
Ligustrum	5 Gal.	68
Sage, Texas Ranger	5 Gal.	107
Tree, Evergreen		
Acacia	24" Box	29
Blueberry Tree, Japanese	24" Box	12
Pine, Mondale	24" Box	15

Notes:

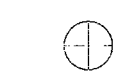
- All Planting Areas to be covered with 3/4" Gold Rock
- Irrigation is to be Design Build by Contractor
- All Planting within 5' of Hardscape to have Root Barrier
- Point of Connection to be provided by Touchstone Homes

Irrigation Notes

- All Mainline to be 1 1/4" PVC SCH 40
- All Lateral Line to be 3/4" PVC SCH 40 and 1/2" Poly
- All emitters to be DPJ08 using a punch and Barb System
- All irrigation lines are drawn Diagramatic and should be installed in landscape planters



1" Backflow Preventer



1" Irrigation Control Valve



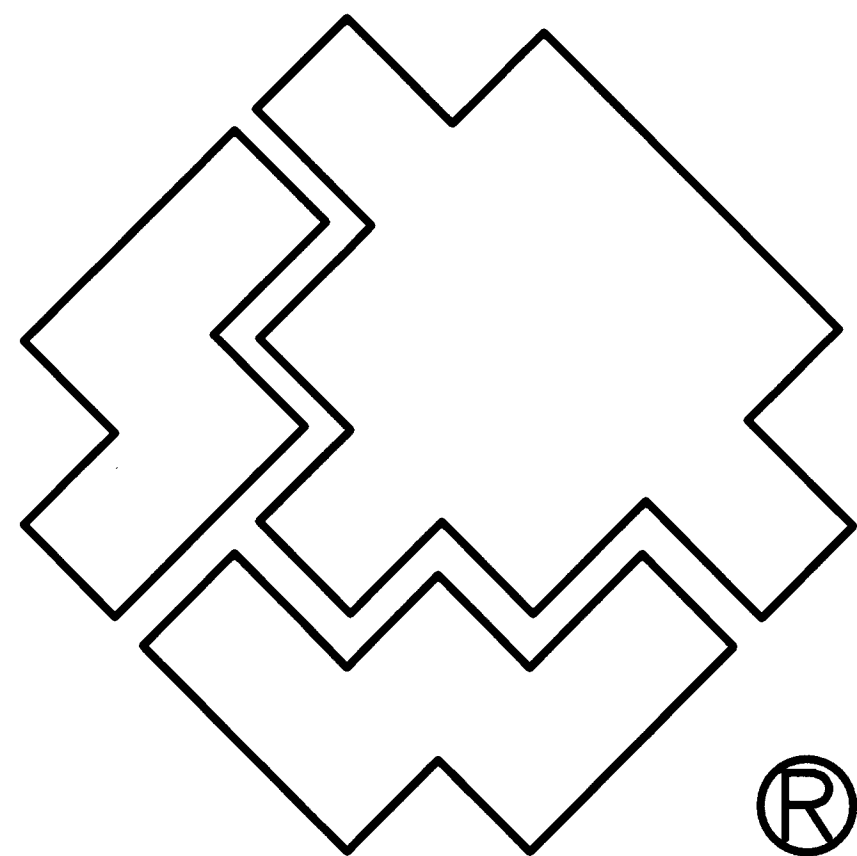
Hunter Irrigation Controller

Landscape Design by: Bryan Vellinga
Greenscapes of Nevada LLC

Landscape Plan:
Elkhorn and Grand Canyon

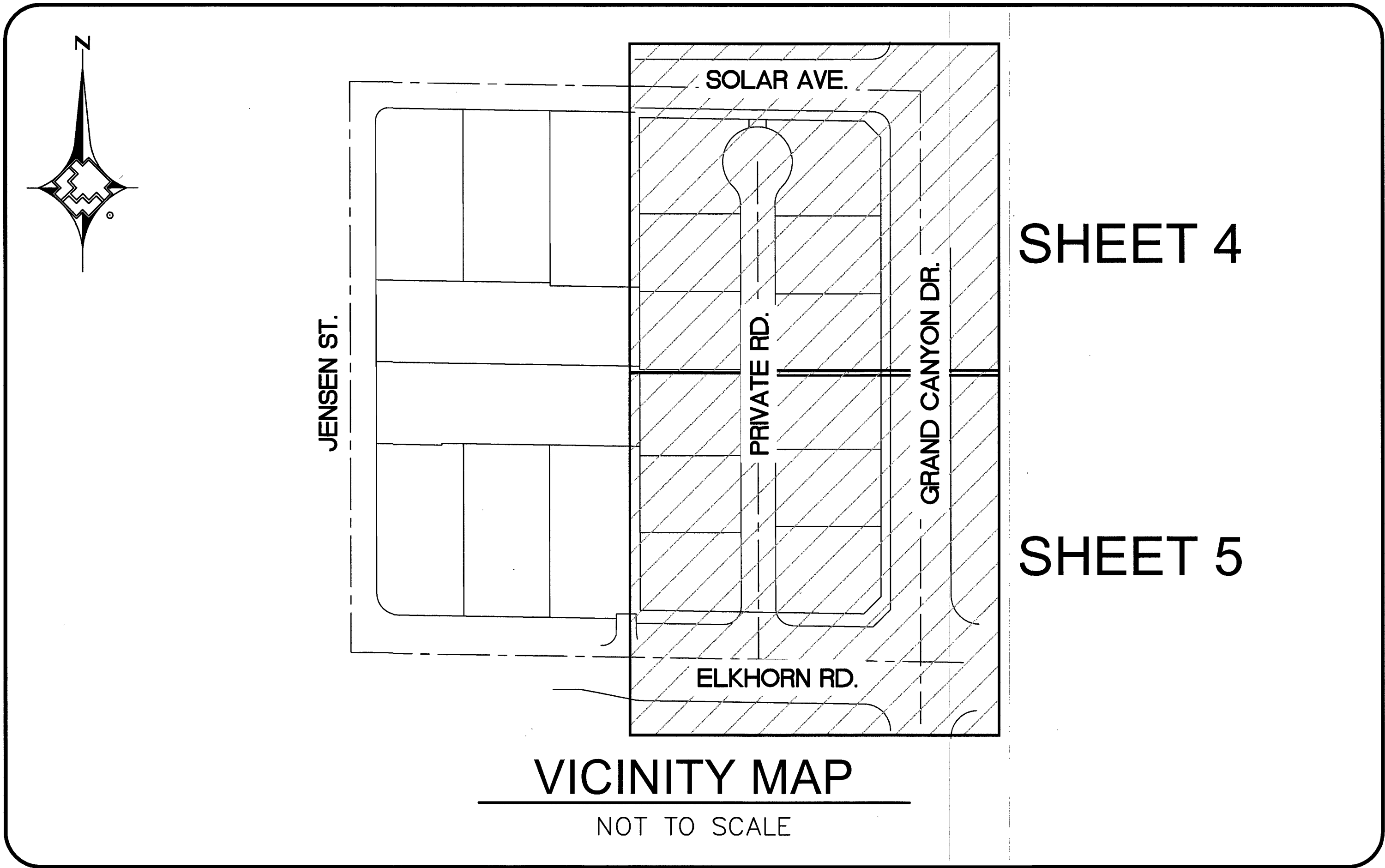
Scale:
1" = 20'

Revision #:
Date: 12/5/2017



SOUTHWEST GAS CORPORATION

S ELKHORN AND GRAND CANYON
CITY OF LAS VEGAS, NV
WR #3459299



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
	MATCHLINE
	EXISTING ANODELESS RISER
	EXISTING ANODE RISER
	EXISTING GAS LIGHT
	EXISTING GAS VALVE
STL (1)	PROPOSED MAIN CALL OUT
PE (1)	ABANDONED FACILITIES CALL OUT
(12)	GAS DIMENSIONS
	EFV

SHEET INDEX

1. COVER SHEET
2. ABBREVIATIONS & NOTES
3. MATERIALS & SIGNATURES
4. DESIGN PLAN
5. DESIGN PLAN
6. DETAIL SHEET C
7. TYPICAL SWPPP BMP DETAILS SHEET



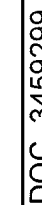
**PRELIMINARY
NOT FOR
CONSTRUCTION**

DATE: _____ BY: _____

CUSTOMERS 12

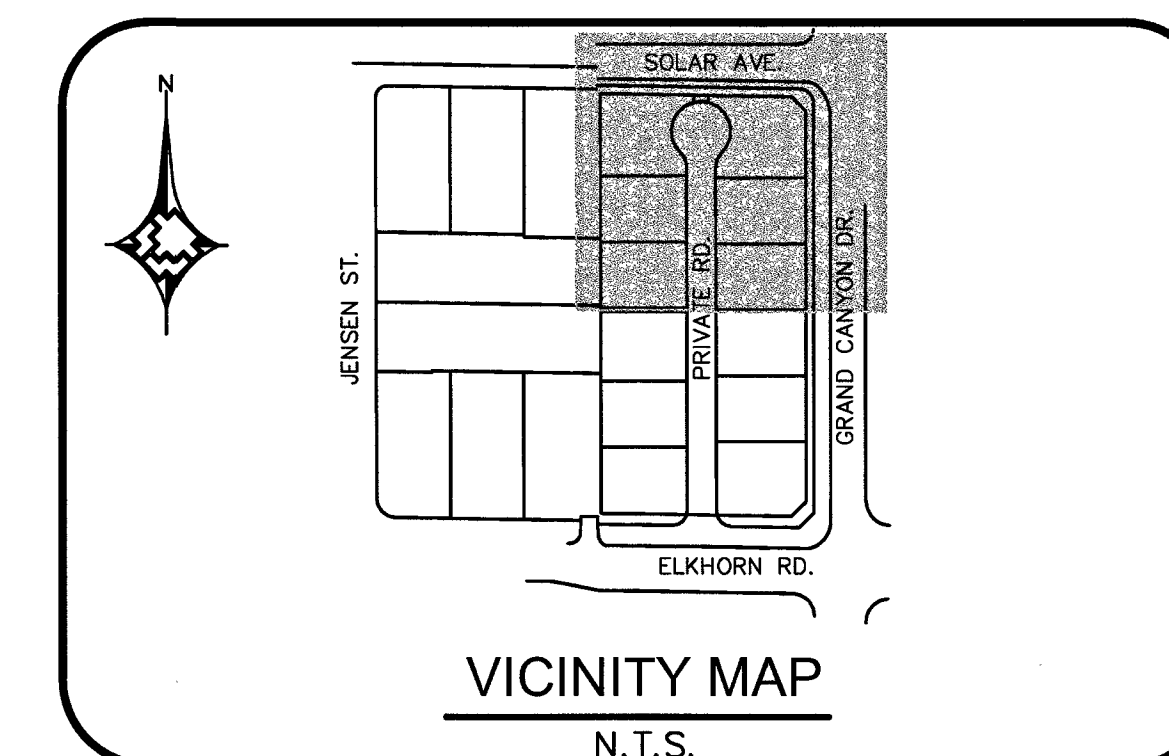
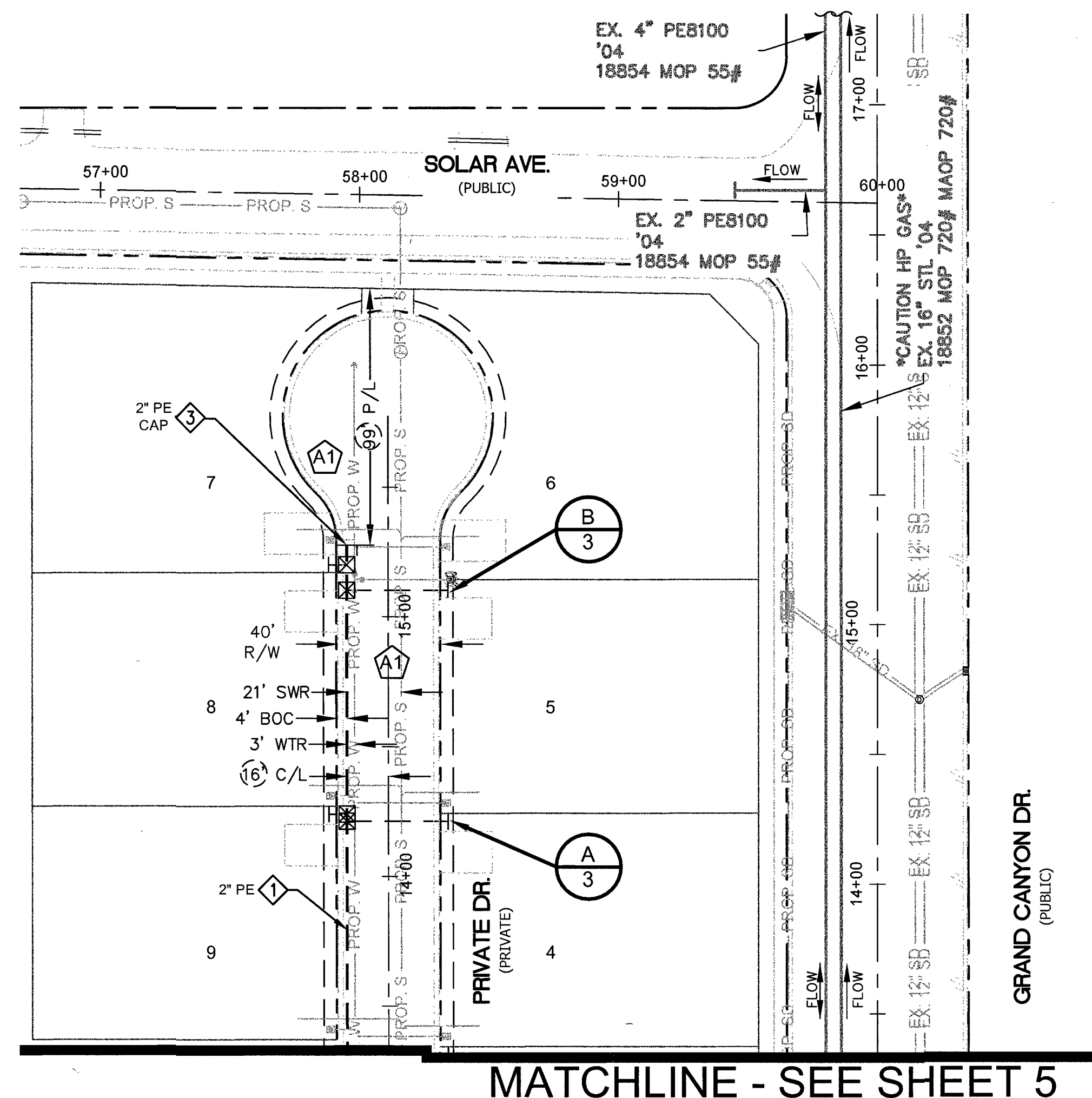
1. _____				AS-BUILT DRAWING-PRESSURE TEST DATA				VISUAL INSPECTION CERTIFICATION				CONSTRUCTION				ISOLATION AREA		W.R. NO.		ENGINEER/TECH: KAELEN TANIGAWA				PHONE: 702-365-2291	
2. _____				TEST MEDIUM TEST METHOD				I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLWELD CEMENT, MECHANICAL JOINTS, AND WELDS THAT I HAVE PERFORMED				INSPECTOR				ISO_21_DIST_327		3459299		ACCOUNT REP: MAX HUGHES				PHONE: 702-755-6426	
3. _____				PIPE DIA. _____				NAME _____ DATE _____				FOREMAN								PROJECT CONTACT: DAVE WAGNER				PHONE: 702-258-4447	
4. _____				PIPE LENGTH _____								REVIEWED BY								SHEET NO: 1 OF 7				SCALE: NTS	
NO. _____				PIPE TYPE _____																DWN. BY: SEI				CHKD. BY: _____	
REVISIONS				MIN. DURATION _____																DATE: 09/15/2017				APPVD. BY: _____	
				TEST PRES. (PSIG) _____																TITLE				S ELKHORN AND GRAND CANYON	
				TIME _____																SEC 18				COVER SHEET	
				DATE _____																T19S R60E				117-00900	
				PERFORMED BY _____																M.D.M.				10785071	
				PROPERTY UNITS																					
				TAX CODES																					
				UNIT NO.																					
				UNIT TYPE																					
				INSTL. RETIRED																					
				PROPOSED COMPLETED																					

DOC_3459299





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



MATERIAL LIST FOR PROPOSED DISTRIBUTION FACILITIES		
ITEM#	STOCK ID#	DESCRIPTION
①	100-5101	2" PE MAIN
②	160-8175	6"x2" PE HVTT
③	140-3060	2" PE CAP
④	160-8577	2"x1" PE TAPPING TEE W/1200 EFV
⑤	101-8526	1" PE SERVICE
⑥	850-8773	1" PE CAP
⑦	160-8394	2"X1 PE TAPPING TEE W/1800 EFV

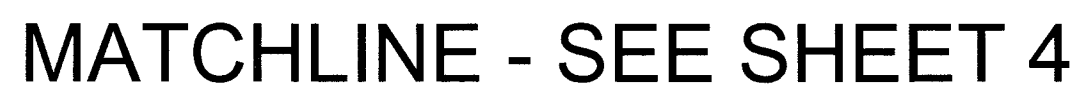
HIGH PRESSURE NOTE:
CAUTION: HIGH PRESSURE GAS!!! CALL
SOUTHWEST GAS AT 702-400-1789 FOR
STANDBY WHEN EXCAVATING OVER
OR NEAR HIGH PRESSURE GAS LINES
48 HOURS PRIOR TO CONSTRUCTION.

RTC NOTES:
PAVEMENT REPAIR SHALL CONFORM TO RTC:

A1 503

A2 500.5

[illegible]



ITEM#	STOCK ID#	DESCRIPTION
1	100-5101	2" PE MAIN
2	160-8175	6"x2" PE HVTT
3	140-3060	2" PE CAP
4	160-8577	2"x1" PE TAPPING TEE W/1200 EFV
5	101-8526	1" PE SERVICE
6	850-8773	1" PE CAP
7	160-8394	2"X1 PE TAPPING TEE W/1800 EFV

HIGH PRESSURE NOTE:
CAUTION: HIGH PRESSURE GAS!!! CALL
SOUTHWEST GAS AT 702-400-1789 FOR
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48 HOURS PRIOR TO CONSTRUCTION.

RTC NOTES:

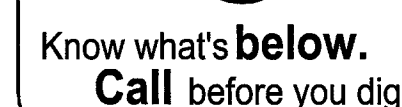
PAVEMENT REPAIR SHALL CONFORM TO RTC:

A1 503

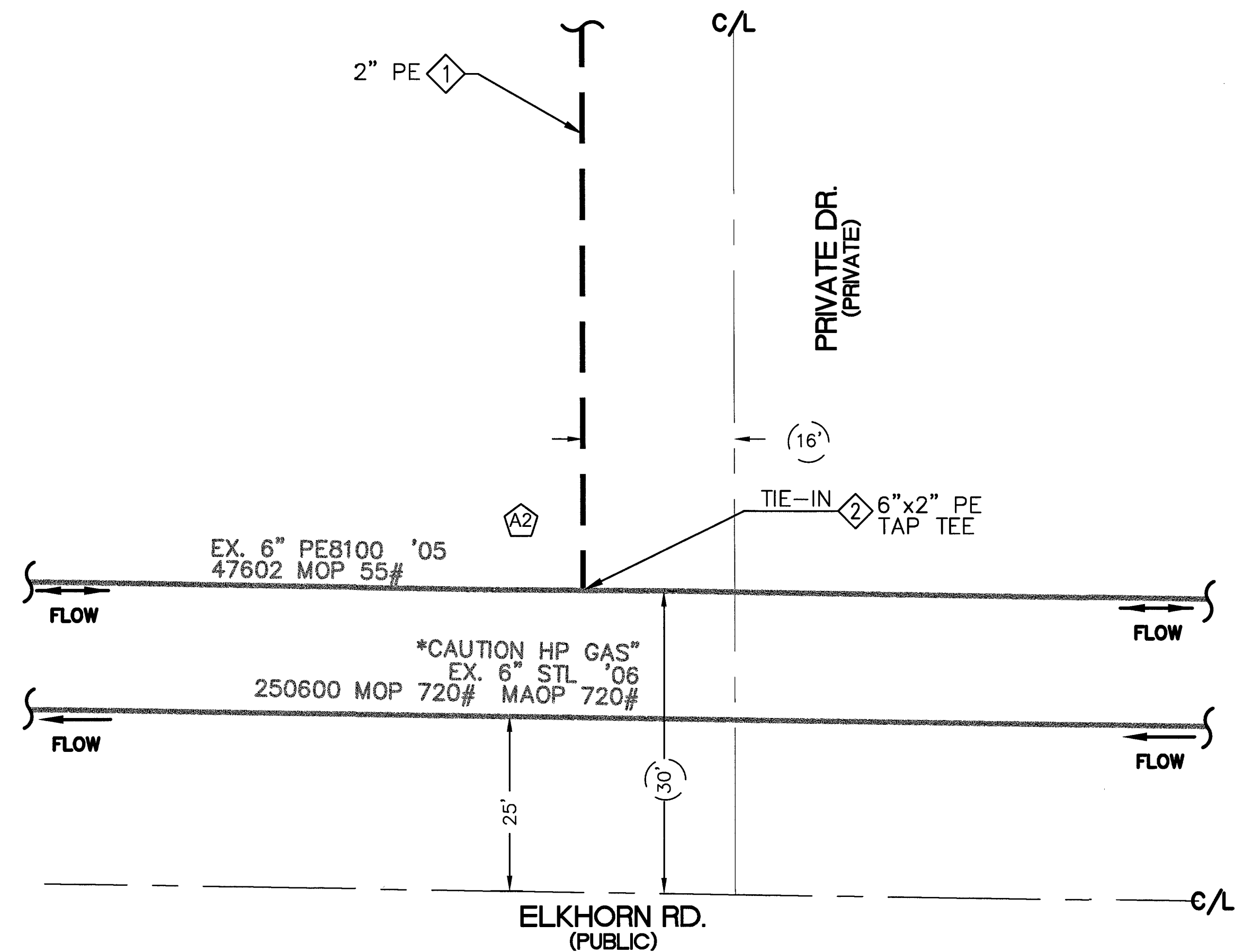
A2 500.5

**PRELIMINARY
NOT FOR
CONSTRUCTION**

DATE: _____ BY: _____

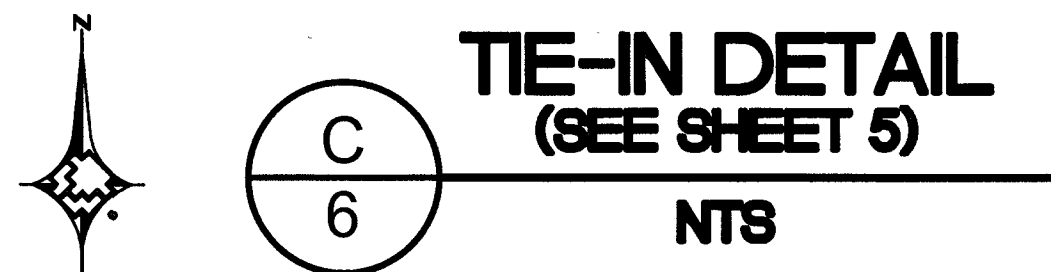
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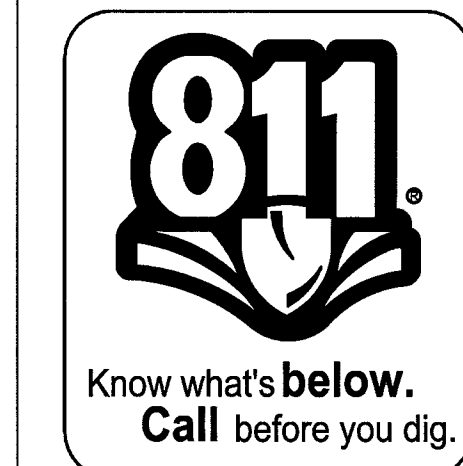
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48 HOURS PRIOR TO CONSTRUCTION.



PRELIMINARY
NOT FOR
CONSTRUCTION

RTC NOTES:
PAVEMENT REPAIR SHALL CONFORM TO RTC:
A1 503
A2 500.5

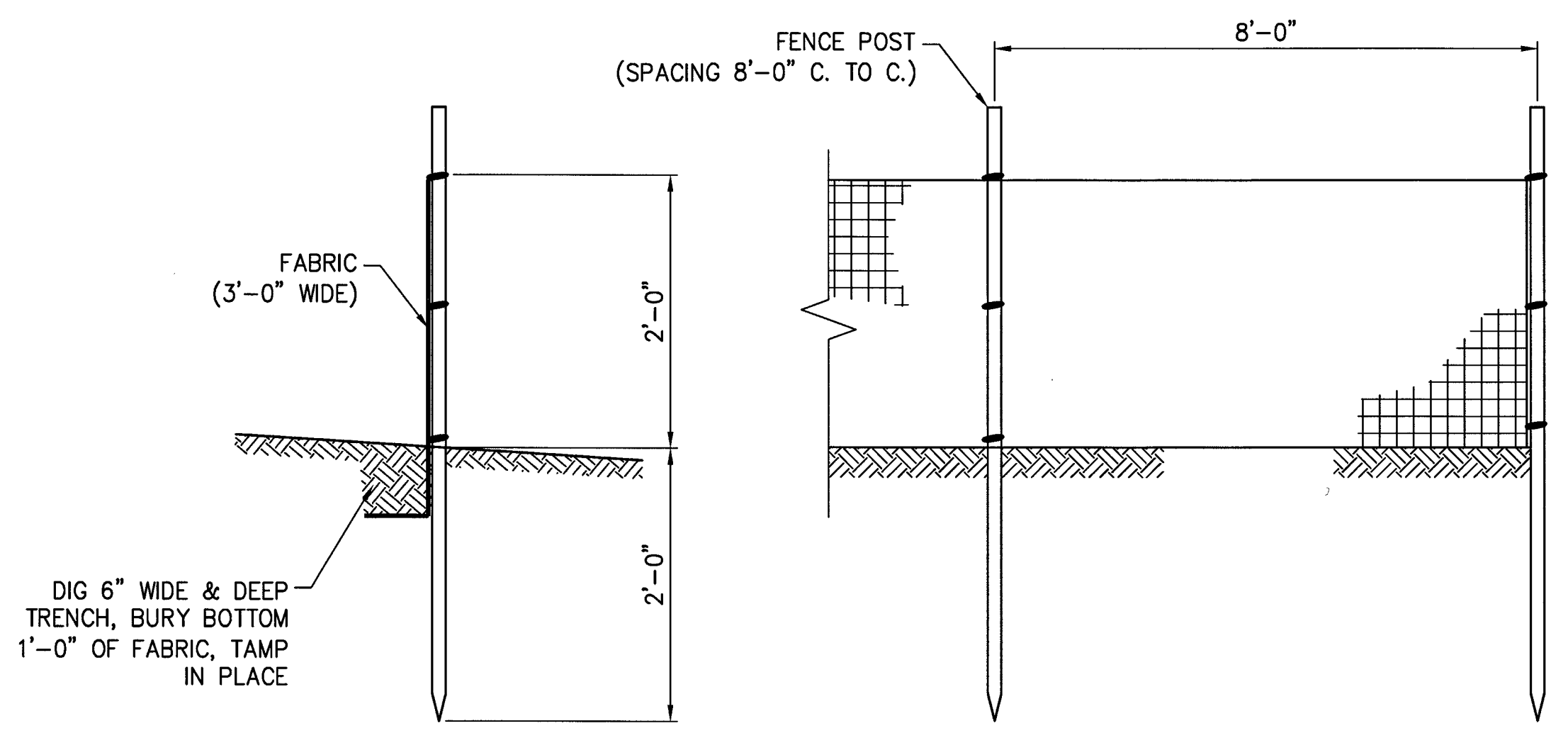


DATE: _____ BY: _____

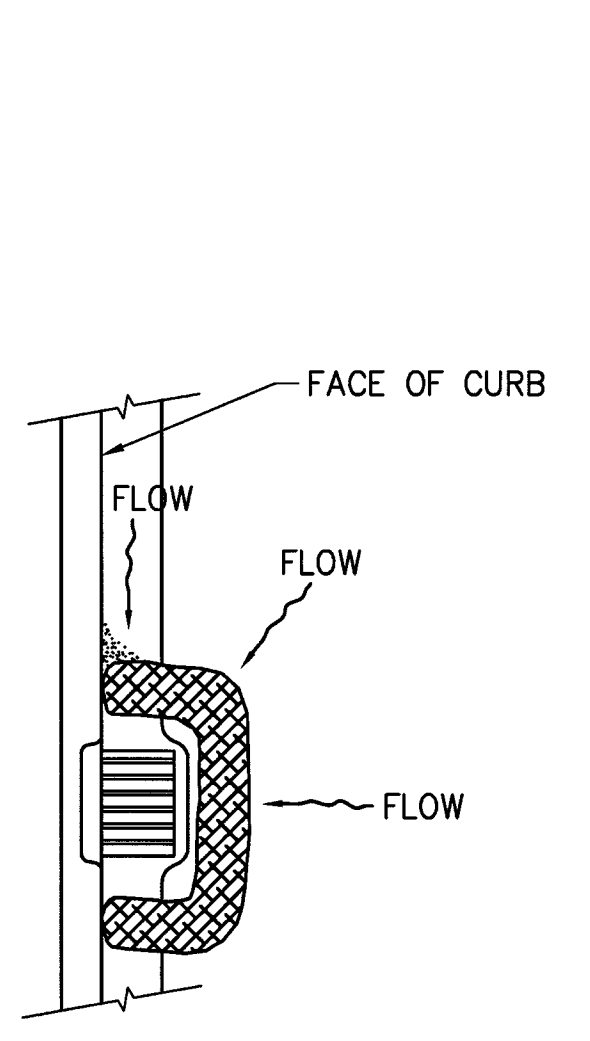
1. _____				AS-BUILT DRAWING-PRESSURE TEST DATA				VISUAL INSPECTION CERTIFICATION				CONSTRUCTION		ISOLATION AREA		W.R. NO.		ENGINEER/TECH: KAE LAN TANIGAWA		PHONE: 702-365-2291	
2. _____				TEST MEDIUM TEST METHOD				I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLVENT CEMENT, MECHANICAL JOINTS, AND WELDS THAT HAVE PERFORMED				INSPECTOR _____		ISO_21_DIST_327		3459299		ACCOUNT REP: MAX HUGHES		PHONE: 702-755-6426	
3. _____				PIPE DIA. _____				NAME _____ DATE _____				FOREMAN _____						PROJECT CONTACT: DAVE WAGNER		PHONE: 702-258-4447	
4. _____				PIPE LENGTH _____				PIPE TYPE _____				REVIEWED BY _____						SHEET NO: 6 OF 7		SCALE: NTS	
NO. DESCRIPTION BY DATE APPVD.				MIN. DURATION _____				TEST PRES. (PSIG) _____				PERMIT INFORMATION		LOCATION		ATLAS #/TILE #		DWN. BY: SEI		CHKD. BY: _____	
REVISIONS				TAX CODES UNIT NO. UNIT TYPE INSTL. RETIRED INSTL. RETIRED				AS-BUILT'S ACCEPTED BY _____ DATE _____				CLARK COUNTY TAX CODE 02-0200		SEC 18 T19S R60E		x579y560		APPVD. BY: _____		DATE: 09/15/2017	
SOUTHWEST GAS CORPORATION				PROPERTY UNITS				PERFORMED BY _____										TITLE		S ELKHORN AND GRAND CANYON	
																				DETAIL SHEET	
																				L17-00900 10725071	

3459299

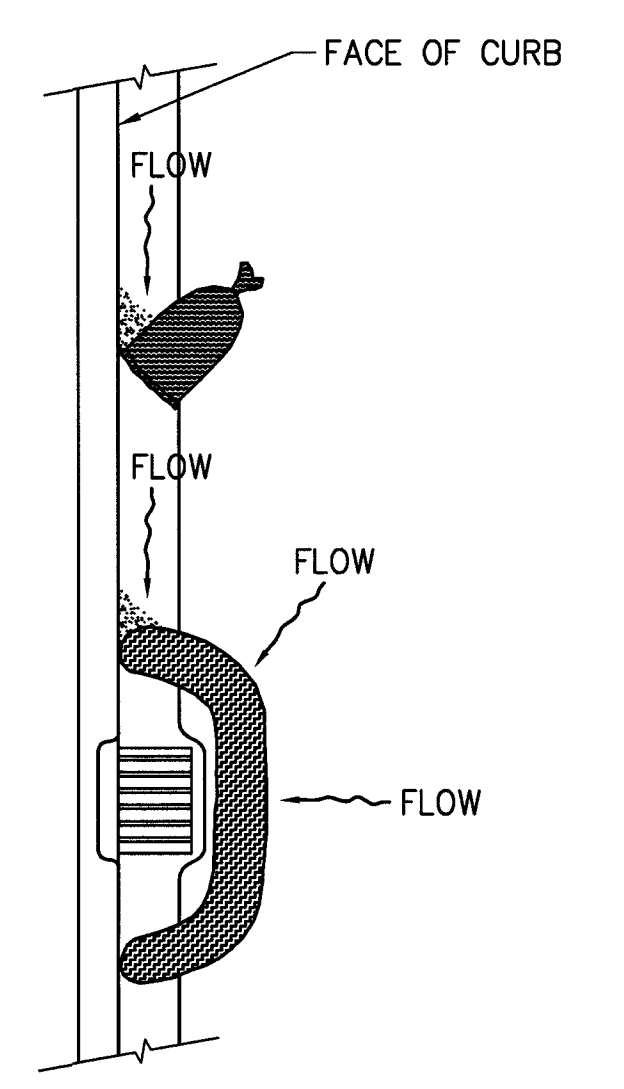
TYPICAL SWPPP BMP DETAILS



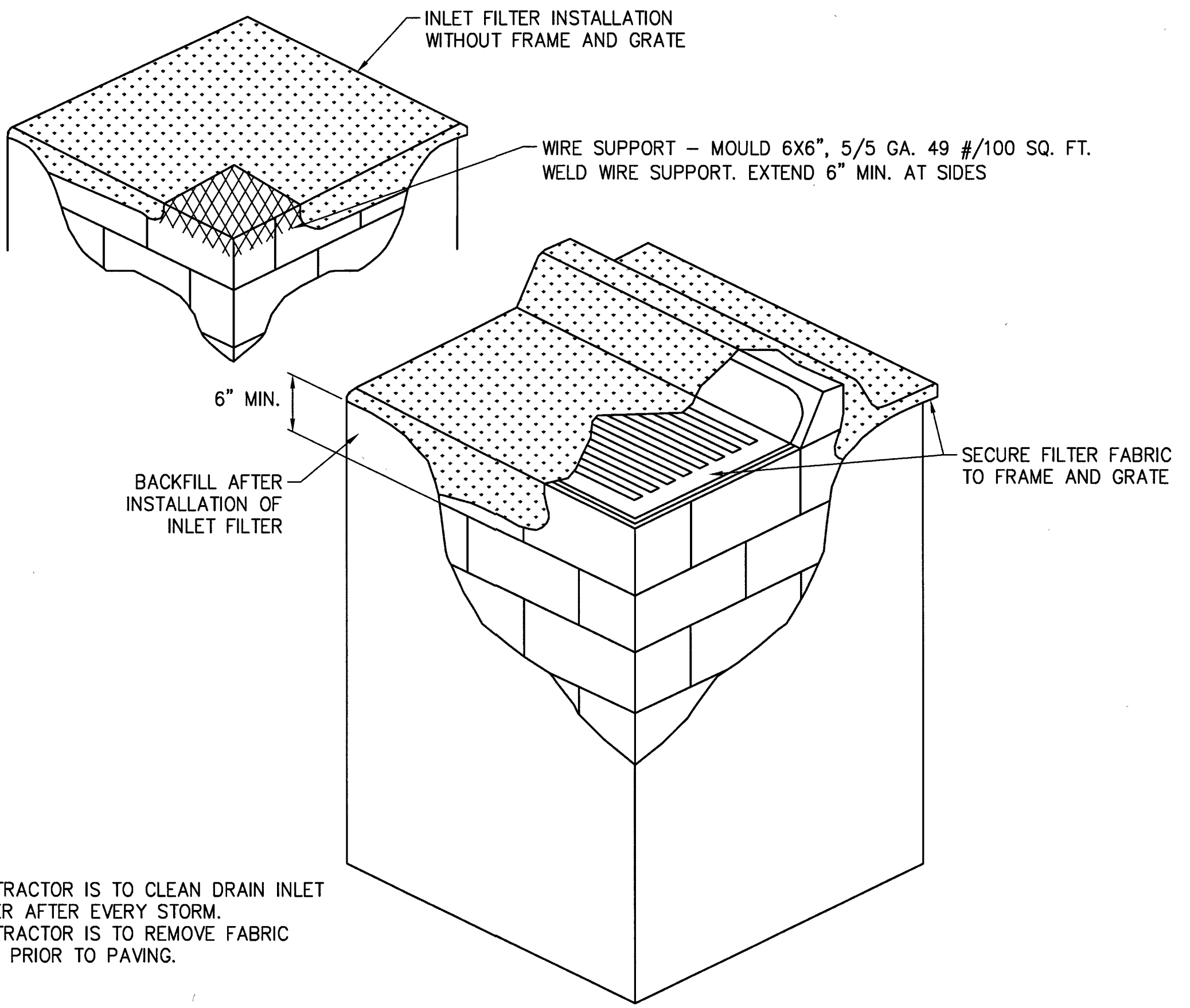
1 SILT FENCE
N.T.S.



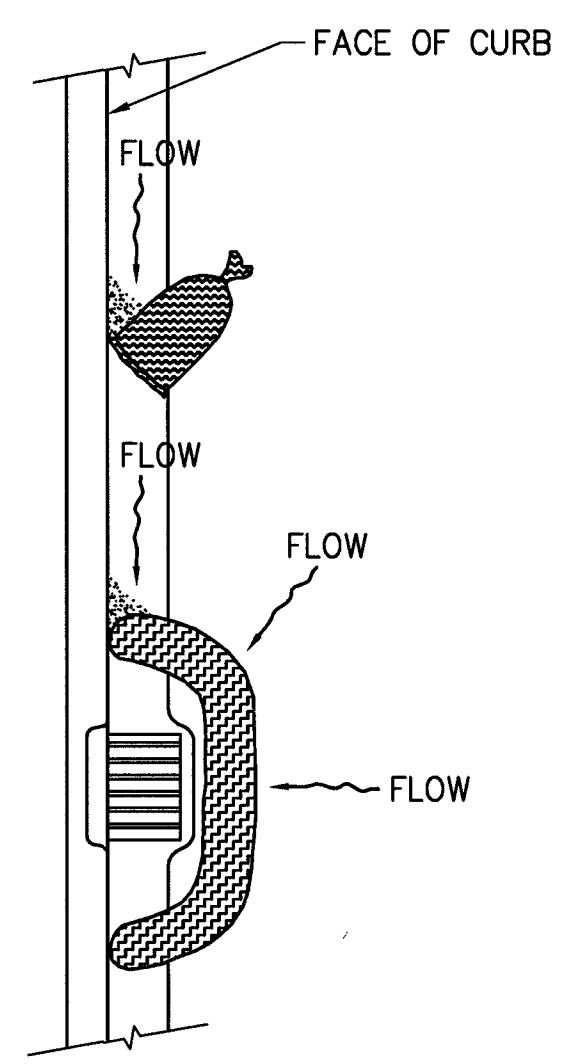
2 FIBER ROLL
N.T.S.



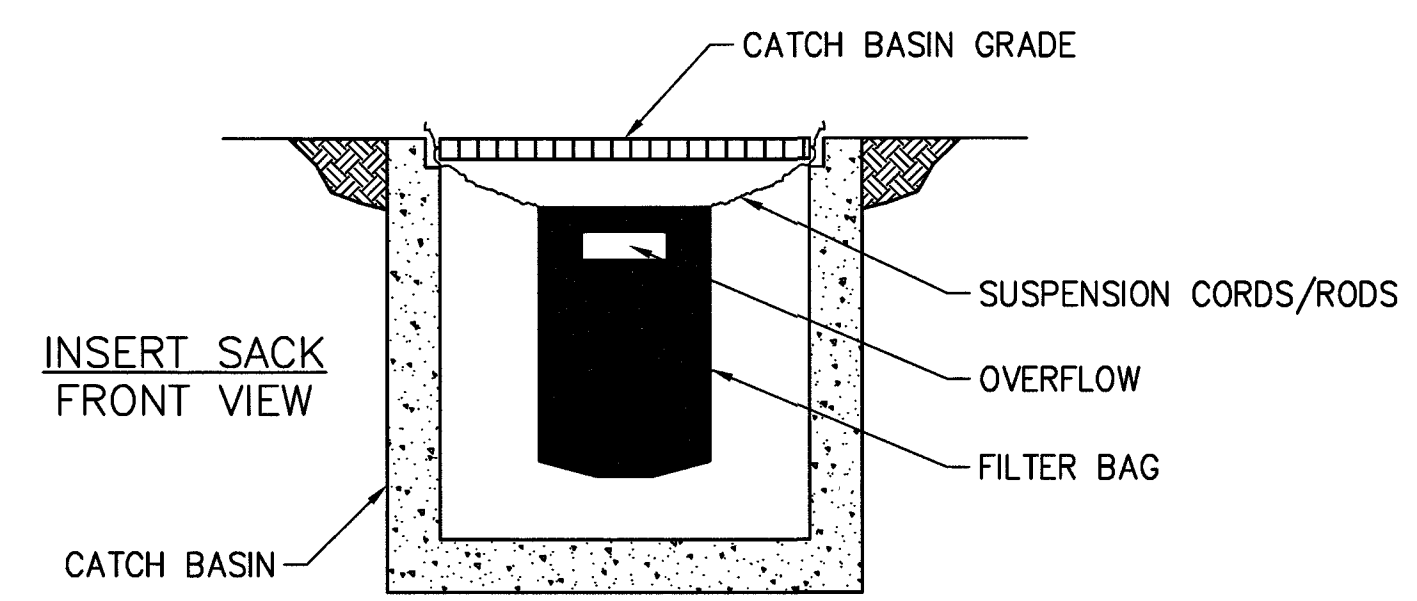
3 SAND BAG/ ROLL
N.T.S.



4 DRAIN INLET FILTER
N.T.S.



5 GRAVEL BAG/ ROLL
N.T.S.



6 SEDIMENT FILTER BAG
N.T.S.

SWPPP NOTES

1. SOUTHWEST GAS CORPORATION, ITS 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, ITS 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, ITS 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 THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

NOTE:
1. CONTRACTOR IS TO CLEAN DRAIN INLET FILTER AFTER EVERY STORM.
2. CONTRACTOR IS TO REMOVE FABRIC JUST PRIOR TO PAVING.

NOTE:
RECESSED CURB INLET MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACK TO BE DETERMINED BY MANUFACTURER.

PRELIMINARY
NOT FOR
CONSTRUCTION



DATE: _____ BY: _____

REVISIONS				PROPERTY UNITS				AS-BUILT DRAWING-PRESSURE TEST DATA				VISUAL INSPECTION CERTIFICATION				CONSTRUCTION				ISOLATION AREA				W.R. NO.				ENGINEER/TECH: KAELEN TANIGAWA				PHONE: 702-365-2291											
1. _____				2. _____				3. _____				4. _____				I HAVE VISUALLY INSPECTED ALL HEATED FUSIONS, SOLVENT CEMENT, MECHANICAL JOINTS, AND WELDS THAT HAVE PERFORMED				INSPECTOR _____				ISO_21_DIST_327				3459299				ACCOUNT REP: MAX HUGHES				PHONE: 702-755-6426							
NO. _____				DESCRIPTION _____				BY _____				DATE _____				APPVD _____				NAME _____				DATE _____				FOREMAN _____				PROJECT CONTACT: DAVE WAGNER				PHONE: 702-258-4447							
REVISIONS				TAX CODES _____				UNIT NO. _____				UNIT TYPE _____				INSTL. RETIRED				PRESS REC SN# _____				REVIEWED BY _____				SHEET NO: 7 OF 7				SCALE: NTS				DATE: 09/15/2017							
SOUTHWEST GAS CORPORATION				PROPOSED _____				COMPLETED _____				TEST PRES. (PSIG) _____				TIME _____				DATE _____				PERFORMED BY _____				LOCATION: SEC 18 T19S R60E				ATLAS #/TILE # x579y560				CHKD. BY: _____				APPVD. BY: _____			
SOUTHWEST GAS CORPORATION				PROPERTY UNITS				TEST MEDIUM _____				TEST METHOD _____				AS-BUILTS ACCEPTED BY _____				DATE _____				CITY OF LAS VEGAS				TAX CODE 02-0200				M.D.M.				TITLE: S ELKHORN AND GRAND CANYON				TYPICAL SWPPP BMP DETAILS SHEET			
SOUTHWEST GAS CORPORATION				PROPERTY UNITS				TEST MEDIUM _____				TEST METHOD _____				AS-BUILTS ACCEPTED BY _____				DATE _____				CITY OF LAS VEGAS				TAX CODE 02-0200				M.D.M.				TITLE: S ELKHORN AND GRAND CANYON				TYPICAL SWPPP BMP DETAILS SHEET			