DEPARTMENT OF PUBLIC WORKS

Mayor:
CAROLYN G. GOODMAN

Mayor Pro Tem:
BRIAN KNUDSEN

City Council:
CEDRIC CREAR
VICTORIA SEAMAN
OLIVIA DIAZ
FRANCIS ALLEN-PALENSKE
NANCY E. BRUNE

City Manager:
JORGE CERVANTES, P.E., P.T.O.E.

Director of Public Works:
MIKE JANSSEN, P.E., P.T.O.E.

City Engineer:
ROSA A. CORTEZ, P.E.

Funded By:
CITY OF LAS VEGAS

DESIGN CONSULTANTS:

CIVIL:	GCW ENGINEERING
ARCHITECTURAL:	N/A
STRUCTURAL:	N/A
MECHANICAL:	N/A
PLUMBING:	N/A
ELECTRICAL:	IMEG CORP.
WATER RESOURCE DEVELOPMENT:	DIXON HYDROLOGIC PLLC

Peter Smiecinski

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Date: 2023.03.31 16:34:49-07'00'

FLOYD LAMB PARK REPLACEMENT WELL 174A

ISSUE FOR BIDS
MARCH 2023

Reviewed By:

3/2/23
PUBLIC WORKS PROJECT MANAGER — DATE

REVISIONS | NO. | DATE | SHEET

PREPARED BY
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PROFESSIONAL ENGINEER

DATE: 3/2/2023

TITLE: FLOYD LAMB PARK REPLACEMENT WELL 174A
SHEET: COVER SHEET

PREPARED FOR: CITY OF LAS VEGAS
BID # 23.691111.09 | DATE: 3/2/23 | DESIGNED BY: AW
PLANS LIB #650.144 | DRAWN BY: AW
SUBMITTAL STAGE: ISSUE FOR BIDS | CHECKED BY: PS

SHEET CV
1 OF 15
DRAWING NO.

3/7/23 P:\PROJECTS\650\E\165\DWG\7_PRODUCTION\1 CV.DWG

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 (1/2") 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 INSPECTOR 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 A.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.
16. 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.
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. AFTER HAUNCHING AND PRIOR TO BACKFILL OPERATIONS WHICH WOULD COVER SANITARY SEWER AND STORM DRAIN FACILITIES, CONTRACTOR IS REQUIRED TO SCHEDULE CLV OPEN-TRENCH UTILITY SURVEY INSPECTION FOR DETERMINATION OF FINAL LOCATION COORDINATES. FACILITIES TO BE LOCATED BY CLV SHALL INCLUDE AT A MINIMUM 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, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS.
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 SEPTEMBER 2022

CITY OF LAS VEGAS GRADING NOTES

1. 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.
2. 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 SHOWN.
3. 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.
4. 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.
5. 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.
6. 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.

7. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
8. 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.
9. THE CONTRACTOR 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.
10. 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 AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

REVISED SEPTEMBER 2022

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 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.
11. SEWER SERVICES AS APPROVED ON THIS PLAN, ARE INTENDED SPECIFICALLY FOR THE LOT AND USE SHOWN, AND ARE NOT INTENDED TO SERVE ADDITIONAL PARCELS OR STRUCTURES WHICH MAY BE CREATED IN THE FUTURE. IN THE EVENT THAT THE PARCEL AND/OR LOTS SHOWN ON THIS PLAN ARE FURTHER DIVIDED TO CREATE ADDITIONAL PARCELS OR LOTS, THE OWNER IS REQUIRE TO PROVIDE SEPARATE SEWER SERVICES TO EACH.

REVISED SEPTEMBER 2022

CITY OF LAS VEGAS STREET LIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION (USS), AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA" (USD), LATEST REVISION.
2. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS.
3. LUMINAIRES SHALL BE MARKED TO INDICATE INSTALLATION ORENTATION, AND SHALL HAVE EXTERNAL LABELS PER ANSI C136 THAT INDICATE WATTAGE AND ARE CLEARLY VISIBLE FROM STREET LEVEL.
4. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS, ETC., LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE USS.
5. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
6. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN No. #8 AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
7. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN COMPLIANCE WITH USD NO. 320A WHEN POLE IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
8. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
9. SERVICE POINTS SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICEPOINTS SHALL BE SHOWN ON THE PLANS.
10. NEW STREELIGHT SERVICES SHALL BE 200 AMP PADMOUNT AND SHALL PROVIDE CAPACITY FOR 20 OR 24 AVAILABLE CIRCUITS.
11. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREETLIGHTING 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.
12. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

REVISED SEPTEMBER 2022

CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
2. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
3. 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 ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
4. WHEN A DESIGNATED "SUGGESTED ROUTE TO SCHOOL" IS ENCROACHED 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.
5. 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.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW TRAFFIC SIGNS SHALL UTILIZE TYPE XI RETROREFLECTIVE SHEETING IN ACCORDANCE WITH CCAUSS 627 AND 716 AND SHALL HAVE AN ANTI-GRAFFITI PROTECTIVE OVERLAY FILM THAT IS A MATCHING COMPONENT TO, AND OF THE SAME MANUFACTURER AS THE RETROREFLECTIVE SHEETING TO WHICH IT IS APPLIED. 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.
7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5') FEET 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.
8. 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 HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR IMSA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.
11. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC). IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE # 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.
14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
15. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. 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 OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

REVISED SEPTEMBER 2022

CITY OF LAS VEGAS FIBER OPTIC NETWORK NOTES

1. RIGHT OF WAY 80 FEET OR WIDER, FURNISH AND INSTALL TWO 4-INCH PVC CONDUITS WITH #8 AWG THW GREEN BOND GROUNDS ON BOTH SIDES OF THE ROADWAY.
2. FOR RIGHT OF WAY LESS THAN 80 FEET, FURNISH AND INSTALL TWO 4-INCH PVC CONDUITS WITH #8 AWG THW GREEN BONDS GROUND ON SIDE OF THE ROADWAY.
3. PROVIDE 4-INCH CONDUIT CONNECTIONS WITH #8 AWG THW GREEN BOND GROUND CROSSING THE STREET AND CONNECT TO THE 4 INCH CONDUIT ON EACH SIDE OF THE STREET WITH P30 PULL BOXES, EXCEPT WHEN ADJACENT TO A TRAFFIC SIGNAL CONTROLLER CABINET INSTALL A TYPE 200 SPLICE VAULT.
4. FURNISH AND INSTALL P30 PULL BOX PER USDCCA STD. DWG. NO. 761 AT EACH NON-SIGNALIZED INTERSECTION WITH "FIBER OPTIC CLV" INSCRIBED ON COVER.
5. FURNISH AND INSTALL TYPE 200 SPLICE VAULT PER USDCCA STD. DWG. 762 AT EACH SIGNALIZED INTERSECTION WITH "FIBER OPTIC CLV" INSCRIBED ON COVER.
6. PROVIDE ONE 4-INCH CONDUIT CONNECTION BETWEEN TYPE 200 FIBER OPTIC CLV SPLICE VAULT AND RTC-FAST TRAFFIC SIGNAL TYPE 200 SPLICE VAULT WHEN APPLICABLE.
7. FURNISH AND INSTALL HOFFMAN U6969APP TELECOM CABINET OR APPROVED EQUAL. TELECOM CABINET SHALL BE POLE MOUNTED PER CABINET MOUNTING DETAIL WITH FINISH COLOR SPECIFIED BY THE CITY OF LAS VEGAS.
8. TELECOM CABINET WILL BE POWERED FROM TRAFFIC SIGNAL SERVICE PEDESTAL WITH TWO DEDICATED 20 AMP CIRCUITS. EACH CIRCUIT WILL BE LANDED ON A POWER STRIP IN CABINET. PROVIDE CONDUIT AND CONDUCTOR BETWEEN SERVICE PEDESTAL AND TELECOM CABINET.
9. MOUNT TELECOM CABINET 6 INCHES ABOVE TRAFFIC SIGNAL MAST ARM HANDLE HOLE ON TRAFFIC SIGNAL SHAFT (APPROXIMATELY 19 FEET).
10. FURNISH AND INSTALL 72 STRAND FIBER OPTIC CABLE AND #8 AWG THW GREEN BOND GROUND ON ONE SIDE OF THE STREET FOR CLV FIBER OPTIC COMMUNICATIONS NETWORK.
11. FURNISH AND INSTALL 12 STRAND CDCA FROM THE TYPE 200 VAULT TO THE POLE MOUNTED TELECOM CABINET. CITY OF LAS VEGAS TO PROVIDE FIBER SPLICE DETAILS.
12. ETHERNET SWITCH WILL BE PROVIDED BY THE OWNER AFTER CONSTRUCTION HAS STARTED. THE CONTRACTOR WILL BE REQUIRED TO PICK UP AND INSTALL THE SWITCH IN EACH TELECOM CABINET AS SHOWN ON THE CONTRACT DRAWINGS AND AS DIRECTED BY THE ENGINEER.

REVISED FEB 18, 2020

CITY OF LAS VEGAS FIRE AND RESCUE NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6631 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 § 105.6.15
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 ORDER 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 § C102.10
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. FOR SYSTEMS REQUIRED TO HAVE TWO (2) SOURCES OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. FOR SYSTEMS PERMITTED TO HAVE ONE SOURCE OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 3 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. 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 33 FT WITH PARKING ON BOTH SIDES MEASURED TO FACE OF CURB. NOT LESS THAN 28 FT WIDE WITH PARKING RESTRICTED TO ONE SIDE MEASURED TO FACE OF CURB. NOT LESS THAN 24 FT WIDE WITH NO PARKING ON EITHER SIDE MEASURED TO FACE OF CURB. 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. IFC § 503.1.1
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 200 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD- ENDS OR A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. CLV REGULATION AND MOU
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. CLV REGULATION
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. IFC § 503.6
29. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS, OR HAVING FOUR OR MORE TRAVEL LANES AND A TRAFFIC COUNT OF MORE THAN 30,000 VEHICLES PER DAY, ALL HYDRANTS BEING UTILIZED TO DELIVER FIRE FLOW TO THE PROPOSED LOCATION SHALL BE LOCATED ON THE SAME SIDE OF THE STREET AS THE PROPOSED DEVELOPMENT. CLV REGULATION

REVISED FEBUARY 4, 2019

WATER STANDARD NOTES

1. 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.**
2. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 1 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.
3. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE CITY OF LAS VEGAS.
4. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
5. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
6. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
7. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE **2010** EDITION OF THE UDACS.
8. ALL WATER FACILITIES AND APPURTENANCES SHALL BE DISINFECTED, PRESSURE TESTED, AND HAVE ACCEPTABLE PASSING HEALTH WATER SAMPLE OBTAINED, PRIOR TO OPERATION AND USE.
9. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE CITY OF LAS VEGAS PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
10. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD APPROVED PRODUCT'S LIST (APL) FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS BY SUBMITTING SHOP DRAWINGS.
11. TELEPHONE **USA NORTH** 811 "CALL BEFORE YOU DIG" AT "811" OR 1-800-642-2444
12. **NO LEAD COMPLIANCE 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 REUSED.**
13. **DRY UTILITY NOTES**: MAINTAIN A MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSINGS. MAINTAIN A MINIMUM OF 3' PARALLEL SEPARATION.
14. WELL MATERIALS, DESIGN, AND INSTALLATION PER NAC 534.
15. WELL 174A DESIGNED AS NON-POTABLE SOURCE TO SERVICE EXISTING ON-SITE LAKE.

FENCING NOTE

SEE SHEET GN-03 FOR TEMPORARY SOUND WALL PLAN, CITY OF LAS VEGAS TO INSTALL PERMANENT FENCE AROUND WELL AND EXPOSED APPURTENANCES.

REVISIONS

NO.	DATE	SHEET

PREPARED BY

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PETER D.B. SMIECINSKI
Exp. 6/30/2024
CIVIL
No. 25215

DATE: 3/2/2023

TITLE
FLOYD LAMB PARK REPLACEMENT WELL 174A

SHEET
GENERAL NOTES

PREPARED FOR
CITY OF LAS VEGAS

BID # 23.691111.09
DATE: 3/2/23
PLANS LIB #650.144
DESIGNED BY: AW
DRAWN BY: AW
SUBMITTAL STAGE: ISSUE FOR BIDS
CHECKED BY: PS

SHEET
GN-01

DRAWING NO.

F:\PROJECTS\400\412-683\DWG\7. PRODUCTION\2 GN-01.DWG
3/1/23

CLV TRAFFIC SIGNAL NOTES

1. ALL WORK PERFORMED ON ANY TRAFFIC SIGNAL COMPONENT MUST BE UNDER THE DIRECT ON-SITE SUPERVISION OF AN IMSA CERTIFIED TECHNICIAN. THE LEVEL OF CERTIFICATION REQUIRED SHALL BE LEVEL II.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL EXISTING UTILITIES. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES TO VERIFY IN THE FIELD THE LOCATIONS OF THEIR INSTALLATIONS 72 HOURS PRIOR TO CONSTRUCTION.

CALL-BEFORE-YOU-OVERHEAD	1-702-227-2929
CALL-BEFORE-YOU-DIG	1-800-642-2444
STREETLIGHTS	1-702-229-6331
F.A.S.T.	1-702-432-5300

3. ALL TRAFFIC SIGNAL INSTALLATIONS SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS SPECIFICATIONS AND SPECIAL PROVISIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, VOLUMES I AND II, ADOPTED BY THE REGIONAL TRANSPORTATION COMMISSION APRIL 8, 1992 WITH ALL SUBSEQUENT REVISIONS. BRACKET MOUNTED (SIDE-MOUNTED) VEHICLE SIGNAL ASSEMBLIES WITH 2 OR MORE SIGNAL HEADS SHALL HAVE AN ADDITIONAL ELBOW AS SHOWN IN UNIFORM STANDARD DRAWING NUMBER 863 AND SHOWN AS OPTION B IN UNIFORM STANDARD DRAWING NUMBER 844, AND SHALL HAVE A MENERALLAC SUPPORT AS SHOWN IN UNIFORM STANDARD DRAWING NUMBER 863 IF ONE OF THE SIGNAL HEADS CONTAINS 4 OR MORE SIGNAL MODULES.
4. SERVICE SHALL HAVE 1-60 AMP SINGLE POLE BREAKER FOR SIGNAL, AND ONE 40 AMP SINGLE POLE BREAKERS FOR STREET LIGHTS. SERVICE SHALL BE 200 AMP PADMOUNT AND SHALL HAVE A CAPACITY OF 20 OR 24 CIRCUITS.
5. LINE SIDE OF METER TO BE WIRED WITH THREE #3/0 AWG THW. LOAD SIDE SHALL BE WIRED WITH FOUR #4 AWG THW (2 BLACK, 2 WHITE) AND ONE #8 AWG THW (GREEN).
6. LUMINAIRES ON ALL SIGNAL POLES SHALL BE L.E.D. AS APPROVED BY THE CITY OF LAS VEGAS (CLV). DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS. INTERSECTION LIGHTING SHALL MEET THE REQUIREMENTS OF UNIFORM STANDARD DRAWING NUMBER 300.S3. EACH LUMINAIRE SHALL HAVE AN INDIVIDUAL 1000 WATT P.E. CONTROL. FOR LUMINAIRES THERE SHALL BE 2(TWO)-#4 AWG THW CONDUCTORS FROM THE SERVICE TO THE CABINET. IN THE CABINET, THE #4 AWG THW CONDUCTORS SHALL BRANCH OFF INTO #10 AWG THW CONDUCTORS INDIVIDUALLY FUSED WITH 10 AMP FUSES. THERE SHALL BE NO SPLICES BETWEEN THE CABINET AND LUMINAIRE FIXTURES.
7. LUMINAIRES SHALL BE MARKED TO INDICATE INSTALLATION ORIENTATION, AND SHALL HAVE EXTERNAL LABELS PER ANSI C136.15 THAT INDICATE WATTAGE AND ARE CLEARLY VISIBLE FROM STREET LEVEL. TRAFFIC SIGNAL LUMINAIRES INSTALLED ADJACENT TO RESIDENTIAL HOUSING SHALL BE INSTALLED WITH MANUFACTURER PROVIDED HOUSE-SIDE SHIELDS.
8. THE INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE WIRED TO THE LUMINAIRES PHOTO CELL FOR CONTROL WITH #10 AWG THW COPPER STRANDED WIRE (TYPICAL). THE SIGN SHALL BE WIRED TO THE LUMINAIRE DIRECTLY ABOVE IT. IN THE EVENT THERE IS NO LUMINAIRE ON THE TRAFFIC SIGNAL POLE, THE 1000 WATT P.E. CONTROL SHALL BE MOUNTED ON THE POLE CAP. ALL NEW ILLUMINATED STREET NAME SIGNS SHALL HAVE LIGHT EMITTING DIODE (LED) LAMPS PER SECTION 623 T.02.16 OF THE SPECIAL PROVISIONS.
9. CHECK CONDUIT AND CABLE SCHEDULE FOR CONDUIT, CABLE, AND WIRE SIZE. VERIFY ALL EXISTING CONDUIT RUNS.
10. ALL PULLBOXES SHALL BE IN ACCORDANCE WITH UNIFORM STANDARD DRAWINGS NO. 705, NO. 706, AND NO. 707.
11. TRAFFIC SIGNAL CABLE SHALL BE 15 OR 25 CONDUCTOR #14 AWG SOLID (TYPICAL) CABLE AND SHALL CONFORM TO IMSA SPEC. NO. 20-1.
12. PEDESTRIAN PUSH BUTTONS SHALL BE AUDIBLE TACTILE "POLARA iNAVIGATOR" TYPE (2-WIRE PEDESTRIAN PUSHBUTTON SYSTEM WITH iN2 PUSH BUTTON STATIONS AND SHELF-MOUNT BIU CONTROL UNIT WITH SDLC CABLE) IN ACCORDANCE WITH CITY OF LAS VEGAS SPECIAL PROVISIONS AND SECTION 623 OF THE CCA USS. PUSH BUTTON SIGNS SHALL BE R10-3e PER MUTCD, 2009 EDITION, WITH FULL MOUNTING BRACKETS, AS MODIFIED BY THE MANUFACTURER TO FIT ON A 9"X12" SIGN, AND SHALL BE PORCELAIN-ENAMELED METAL. ALL PUSH BUTTONS TO BE MOUNTED 42" ABOVE SIDEWALK. THE MAXIMUM HORIZONTAL REACH DISTANCE IS TO BE 10". SIDEWALK RAMPS WILL BE ACCORDING TO U.S.D. No. 235 (1-4) LATEST EDITION. WHEN AN EXISTING SIGNAL WITH EXISTING AUDIBLE-TACILE PUSH BUTTONS IS MODIFIED, THE CONTRACTOR SHALL VERIFY NEW PEDESTRIAN PUSH BUTTONS OR CABINET EQUIPMENT MATCHES THE MANUFACTURE AND MODEL OF ANY EXISTING EQUIPMENT SCHEDULED TO REMAIN, TO PROVIDE A FULLY FUNCTIONING SYSTEM. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL CABINET EQUIPMENT, INCLUDING THE PEDESTRIAN PUSH BUTTON CONTROL UNIT, INTERFACE PANEL AND ANY REQUIRED HARNESSES, TO PROVIDE A FULLY FUNCTIONING SYSTEM.
13. THE ROUTING AND TERMINATION OF CONDUITS AND THE PLACING OF POLES AND CABINETS SHALL BE AS INDICATED ON THE PLANS. ALL CHANGES SHALL BE APPROVED BY THE ENGINEER.
14. MAST ARM R10-12 SIGNS TO BE ADJACENT (NO GAP) TO THE M-5 SIGNAL HEAD. WHERE FLASHING YELLOW ARROW LEFT TURN SIGNALS ARE USED, A MAST ARM R10-12F "LEFT TURN YIELD ON FLASHING YELLOW ARROW" SIGN SHALL BE MOUNTED ADJACENT TO THE M-4 SIGNAL HEAD.
15. TRAFFIC SIGNAL CABINET SHALL BE A TYPE VIII CABINET UNLESS OTHERWISE SPECIFIED IN THE PLANS. THIS IS COMMONLY REFERRED TO AS AN "R" CABINET. THE CABINET SHALL CONFORM TO THE CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS AND THE CITY OF LAS VEGAS SPECIAL PROVISIONS AND SHALL BE A NEMA TS2-TYPE2 CABINET. INSTALL CABINET NEAR THE R.O.W. LINE OR AS SHOWN ON THE DRAWINGS. THE TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE EQUIPPED WITH 16 LOAD BAY POSITIONS AND SHALL BE A 64 DETECTOR CHANNEL R CABINET WITH RACK-MOUNTED DETECTION. THE CABINET SHALL CONTAIN A 764 OPTICOM PHASE SELECTOR, WITH A 768 AUXILIARY INTERFACE PANEL MOUNTED IN THE CABINET AND FULLY WIRED FOR GREEN SENSE CAPABILITIES. THE CABINET SHALL BE EITHER: MODEL R-44 CAB, TS2-2, LAS VEGAS, 64CH DET, PART # M73650 FROM MCCAIN, INC.; MODEL MOBOTREX LAS VEGAS TS2-TYPE2 16 POS., 64 CH. DET, DRAWING # TF4216TLV01 REV 3 FROM SIERRA TRANSPORTATION AND TECHNOLOGIES; OR MODEL TS2-2 HW 16 POSITION HORIZONTAL CITY OF LAS VEGAS CABINET, PART # 34413G12-02-06 FROM ECONOLITE CONTROL PRODUCTS, INC. ALL CABINETS SHALL BE PROVIDED WITH A COMPLETE SET OF FOUR BUS INTERFACE UNITS, POWER SUPPLY AND SDLC CABLES TO PROVIDE A FULLY FUNCTIONING SYSTEM. CABINET POWER SUPPLIES SHALL BE RENO A&E MODEL CPS-TS2-LED, PEEK MODEL PS101, OR ECONOLITE PS-200. BIU'S SHALL BE RENO A&E MODEL 1240, PEEK MODEL BUS INTERFACE UNIT 82-1886-01, OR ECONOLITE PART # 160-1018-501.
16. THE CONTRACTOR SHALL SUPPLY A MALFUNCTION MANAGEMENT UNIT (MMU) TO THE CITY OF LAS VEGAS TRAFFIC SIGNAL REPAIR SHOP A MINIMUM OF FOURTEEN DAYS PRIOR TO SIGNAL TURN-ON OR PRIOR TO CONVERTING TO A NEW PHASING SCHEME, FOR TESTING AND PROGRAMMING PURPOSES. THE MMU SHALL BE A MODEL MMU-1600GE AS MANUFACTURED BY RENO A&E, OR APPROVED EQUAL. THE CONTRACTOR SHALL DELIVER THE MMU TO AND PICKUP THE CONTROLLER AT 2985 RONEMUS DRIVE. CONTRACTOR SHALL NOTIFY TRAFFIC ENGINEERING FIELD OPERATIONS (702-229-6331) SEVEN DAYS PRIOR TO PICK UP. THE CITY, AT ITS DISCRETION, MAY PROVIDE A DIFFERENT MODEL MMU FOR INITIAL TURN-ON, IN WHICH CASE CITY PERSONNEL WILL SWAP THE MMU AFTER THE PROJECT IS ACCEPTED.
17. CONTRACTOR SHALL POTHOLE SIGNAL POLE LOCATIONS PRIOR TO ORDERING OF POLES.
18. ALL MAST ARMS TO BE HOT-DIP GALVANIZED BY THE MANUFACTURER THE MAST ARM IS TO BE FABRICATED WITH END TENON ONLY. THE END TENON SHALL BE FACTORY INSTALLED AND THE REMAINING TENONS SHALL BE FABRICATED IN THE FIELD AT THE LOCATION SHOWN ON THE PLANS OR AS DIRECTED BY THE TRAFFIC ENGINEER AND/OR HIS AUTHORIZED REPRESENTATIVE. FOR TENON FABRICATION DETAILS SEE CLARK COUNTY AREA U.S.D. NO. 808 SHEET 2. ALL WELDING SHALL CONFORM TO AWS D 2.0, "SPECIFICATION FOR WELDED HIGHWAYS AND RAILWAY BRIDGES," AND TO ANY ADDITIONAL REQUIREMENTS OF SECTION 623 OF THE SPECIFICATIONS. ALL EXPOSED WELDS, SHALL BE PAINTED AS PROVIDED FOR REPAIRING DAMAGED GALVANIZED SURFACES.
19. ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL HAVE LIGHT EMITTING DIODE (LED) TYPE INDICATIONS, IN CONFORMANCE TO CITY OF LAS VEGAS SPECIAL PROVISIONS AND TO SECTION 623 OF THE CCA USS. ALL PEDESTRIAN SIGNAL FACES SHALL PROVIDE "WALKING PERSON", "HAND", AND "COUNTDOWN" MESSAGES AS PROVIDED BY DURALIGHT MODEL #JXM-400-VIEIL OR DIALIGHT MODEL #430-6479-001X, OR APPROVED EQUAL. THE "COUNTDOWN" MESSAGE SHALL NOT FLASH. WHERE EXISTING SIGNALS ARE MODIFIED, THE CONTRACTOR SHALL VERIFY THAT LED PEDESTRIAN INDICATIONS FOR A SPECIFIC PHASE ARE OF THE SAME MANUFACTURE SO THAT THEY FUNCTION CORRECTLY, OR SHALL REPLACE ALL COUNTDOWN PEDESTRIAN INDICATIONS FOR THAT PHASE.
20. VIDEO DETECTION SYSTEMS SHALL BE TS2 COMPATIBLE AND SHALL INPUT DETECTOR CALLS TO THE CONTROLLER THROUGH AN SDLC CABLE. SYSTEMS WILL BE EITHER ITERIS EDGE 2-1IN PROCESSORS WITH VRACK5-PS, EDGE2-TS2-IM-PAK AND EDGECONNECT PAK, (IP ADDRESSABLE); PEEK VIDEOTRAK IQ (WITH ETHERNET PORT AND SDLC); ECONOLITE AUTOSCOPE VISION SYSTEM WITH COMM MANAGER AND MINI DETECTION PROGRAMMING KIT MOUNTED IN THE CABINET. WHEN VIDEO DETECTION IS SPECIFIED ON THE TRAFFIC SIGNAL PLANS. ALL VIDEO DETECTION SYSTEMS WILL BE STAND ALONE SYSTEMS TO INCLUDE ALL NECESSARY EQUIPMENT TO PROGRAM THE VIDEO DETECTION SYSTEM. A PROGRAMMING "MOUSE", KEYPAD OR LAPTOP COMPUTER (IF REQUIRED FOR PROGRAMMING THE VIDEO DETECTION SYSTEM) AND APPROPRIATE SOFTWARE WILL BE SUPPLIED WITH EACH VIDEO SYSTEM. PERSONAL COMPUTERS (PCs) MAY NOT BE SUBSTITUTED FOR LAPTOPS. A VIDEO MONITOR (COLOR FLAT SCREEN) 9" TO 13" WILL BE SUPPLIED WITH EACH VIDEO DETECTION SYSTEM. EACH VIDEO CAMERA WILL HAVE POWER AND VIDEO CABLE DIRECTLY FROM THE CABINET. COAXIAL CABLE WILL BE TYPE 8281 (SOLID CENTER CONDUCTOR). CAMERAS THAT USE A PREFABRICATED CABLE INTEGRATING POWER AND VIDEO INTO A SINGLE WEATHERPROOF CONNECTOR ARE ACCEPTABLE. "BNC" ARE THE ONLY ACCEPTABLE TERMINATION OF COAXIAL CABLES. CAMERAS WILL BE MOUNTED PER MANUFACTURER'S RECOMMENDATIONS AND PER CLV TRAFFIC ENGINEER APPROVAL. VIDEO CAMERAS SHALL BE COLOR AND SHALL BE MOUNTED ON A MINIMUM 6 FOOT RISER ON THE SIGNAL MAST ARM WITH EXTENSION BRACKETS (TYPE AG-0175-74-62 OR EQUIVALENT). THE LOCATION OF THE CAMERA ON THE MAST ARM SHALL BE APPROVED BY THE TEFO TRAFFIC SIGNAL SUPERVISOR. A VIDEO FILTER (CX06-BNYC OR EQUIVALENT) WILL BE INSTALLED IN THE SIGNAL CABINET FOR EACH CAMERA VIDEO INPUT WHEN COAX IS USED. VIDEO DETECTION PROCESSORS AND COMMUNICATIONS CARDS SHALL BE PROVIDED WITH THE LATEST VERSIONS OF THE MANUFACTURER'S SOFTWARE. THE CONTRACTOR SHALL AIM CAMERAS AND PROGRAM AND CONFIGURE THE VIDEO DETECTION PROCESSORS TO PROVIDE A FULLY FUNCTIONING SYSTEM.

CLV TRAFFIC SIGNAL NOTES - CONTINUED

21. WHERE NEW LOOPS WILL BE OVERLAID WITH NEW PAVEMENT, LOOP DETECTORS SHALL BE PREFORMED LOOPS AS MANUFACTURED BY RENO A & E LOOP SYSTEMS AND ALL LOOPS SHALL BE INSTALLED IN THE ROADWAY PRIOR TO PLACEMENT OF THE FINAL PAVEMENT LIFT. WHERE NEW LOOPS ARE INSTALLED THAT ARE NOT OVERLAID WITH NEW PAVEMENT, LOOPS SHALL BE CABLE-IN-DUCT PER SECTION 623 T.02.04.C OF THE CITY OF LAS VEGAS SPECIAL PROVISIONS. LOOP LEAD-IN CABLE SHALL BE 6-PAIR 18 AWG MULTIPLE CONDUCTOR CABLE AS SPECIFIED IN SECTION 623T.02.04 OF THE CLV SPECIAL PROVISIONS. ALL WIRING HARNESSES, RACK POSITIONS, AND LOOP LEAD-IN CABLE SHALL BE CLEARLY MARKED AS TO THE APPROPRIATE PHASE AND LETTER DESIGNATION TO WHICH IT BELONGS AS SHOWN ON THE TRAFFIC SIGNAL PLANS. LOOPS SHALL BE LOCATED AS SHOWN ON THE TRAFFIC SIGNAL PLANS AND APPROVED BY THE CLV TRAFFIC ENGINEERING DIVISION PRIOR TO INSTALLATION. REFER TO SECTION 623T.02.04 OF THE CLV SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
22. OPTICAL PREEMPTION UNITS WILL BE GLOBAL TRAFFIC TECHNOLOGIES (ENCODING CAPABLE), MODEL 764 OPTICOM PHASE SELECTOR INSTALLED IN A MODEL 760 RACK WITH A MODEL 768 AUXILIARY INTERFACE PANEL (AIP) MOUNTED IN THE CABINET AND FULLY WIRED FOR GREEN SENSE CAPABILITIES. OPTICAL SENSORS WILL BE MODEL 721 WITH ONE DETECTOR PER DIRECTION, UNLESS SHOWN OTHERWISE IN THE PLANS, AND WILL BE INTERFACED TO THE TRAFFIC SIGNAL CONTROLLER CABINET WITH M-138 CABLE. THE SOUTHBOUND OPTICOM DETECTOR SHALL BE WIRED TO INPUT PREEMPTS ON CHANNEL 1 IN THE PHASE SELECTOR, EASTBOUND ON CHANNEL 2, NORTHBOUND ON CHANNEL 3, AND WESTBOUND ON CHANNEL 4, UNLESS VARIATIONS ARE APPROVED BY THE TRAFFIC SIGNAL SUPERVISOR. WHEN 764 PHASE SELECTORS ARE ADDED TO A CABINET WITHOUT A 768 AIP, THE CONTRACTOR SHALL INSTALL AND WIRE A NEW 768 AIP.
23. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY CONSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE CITY.
24. INTERCONNECT CABLE SHALL BE AS SHOWN IN THE WIRE SCHEDULE.
25. THE CONTRACTOR SHALL INSTALL CROSSWALKS, STOP BARS, STRIPING AND SIGNS AS IDENTIFIED ON THE PLANS.
26. WHERE THE PLANS CALL FOR REMOVAL AND SALVAGE OF EXISTING TRAFFIC SIGNAL EQUIPMENT, THE CONTRACTOR SHALL CALL 702-229-6331 TO SPEAK TO A TRAFFIC FIELD SUPERVISOR TO ARRANGE FOR DELIVERY TIMES AND LOCATIONS.
27. THE CONTRACTOR SHALL MAINTAIN EXISTING SIGNALS THROUGH THE LIFE OF THE PROJECT PER SECTION 623 G.03.01N OF THE CLV SPECIAL PROVISIONS.

REVISED DECEMBER 1, 2021

SOUTHERN NEVADA - SOUTHWEST GAS CORPORATION GENERAL NOTES

1. IN THE EVENT OF NATURAL GAS EMERGENCIES CALL 911 AND 1-877-860-6020
2. MINIMAL HORIZONTAL AND VERTICAL CLEARANCES BETWEEN NATURAL GAS FACILITIES AND ANY UNDERGROUND UTILITIES AND/OR STRUCTURES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, COMMUNICATIONS, AND ELECTRIC SHALL BE AT LEAST 12-INCHES OR GREATER AS DICTATED BY LOCAL CODES AND STANDARDS.
   a) ANY DEVIATION FROM SPECIFIED MINIMUM CLEARANCES MUST BE APPROVED BY ALL AFFECTED UTILITIES AND/OR MUNICIPALITIES
3. FOR VALVE ADJUSTMENT CONTACT 702-528-7881 14 DAYS PRIOR TO CONSTRUCTION
4. IN THE EVENT OF A NATURAL GAS CONFLICT WITH PROPOSED UTILITIES AND/OR STRUCTURES CONTACT 702-365-2099
5. FOR STANDBY WHEN EXCAVATING (INCLUDING SAW CUTTING AND PAVEMENT REMOVAL) OVER OR NEAR HIGH PRESSURE GAS LINES CONTACT 702-278-8451 48 HOURS PRIOR TO CONSTRUCTION.

ESTIMATED QUANTITIES

ITEM NAME	QUANTITIY	UNIT
6" DIP (FLxFL, FLxPE, & PExPE)	523	LF
6" GV (FLxFL)	2	EACH
6" CV (FLxFL)	1	EACH
6" PROPELLER WATER METER	1	EACH
90° (FLxFL)	1	EACH
90° (MJxMJ)	4	EACH
8"x8"x6" TEE (FLxFL)	1	EACH
6"x6"x6" TEE (FLxFL)	1	EACH
6" SOLID SLEEVE ADAPTER	1	EACH
2" AIR AND VACUUM VALVE WITH DRAIN SUMP	1	EACH
SAMPLING PORT	1	EACH
TEST PORT WITH REMOVABLE ROSSUM SAND TESTER	1	EACH
WELL VENT	1	EACH
WELL ASSEMBLY	1	LS
6" CONCRETE PAD	5	S.Y.
ADJUSTABLE PIPE SUPPORT	2	EACH
6" FCA	2	EACH
ASPHALT PATCH	200	LF
RECYCLED ASPHALT MILLING OVERLAY (WIDTH TO BE DETERMINED BY CONTRACTOR)	258	LF
CONCRETE PATCH	40	LF

NOTE: QUANTITIES PROVIDED FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM QUANTITIES FOR BID.

LEGEND

- CONTOUR - MAJOR
- CONTOUR - MINOR
- CENTERLINE
- PROFILE GRADE LINE
- EDGE OF PAVEMENT
- FLOWLINE
- BACK OF CURB
- SIDEWALK
- RIGHT OF WAY LINE
- PROPERTY LINE
- PATCH / SAWCUT LINE
- GRADE BREAK
- CONDUIT - FIBER (NEW)
- CONDUIT - FIBER (EX.)
- CONDUIT - PHONE (NEW)
- CONDUIT - PHONE (EX.)
- CONDUIT - POWER (NEW)
- CONDUIT - POWER (EX.)
- CONDUIT - SGLT (NEW)
- CONDUIT - SGLT (EX.)
- CONDUIT - CATV (NEW)
- CONDUIT - CATV (EX.)
- CONDUIT - TSIG (NEW)
- CONDUIT - TSIG (EX.)
- PIPE - IRRIGATION (NEW) SMALLER THAN 12"
- PIPE - IRRIGATION (EX.) SMALLER THAN 12"
- PIPE - NATURAL GAS (NEW) SMALLER THAN 12"
- PIPE - NATURAL GAS (EX.) SMALLER THAN 12"
- PIPE - NATURAL GAS (NEW) 12" AND LARGER
- PIPE - NATURAL GAS (EX.) 12" AND LARGER
- PIPE - SANITARY SEWER (NEW) SMALLER THAN 12"
- PIPE - SANITARY SEWER (EX.) SMALLER THAN 12"
- PIPE - SANITARY SEWER (EX.) ABANDONED
- PIPE - STORM (NEW) SMALLER THAN 12"
- PIPE - STORM (EX.) SMALLER THAN 12"
- PIPE - STORM (NEW) 12" AND LARGER
- PIPE - STORM (EX.) 12" AND LARGER
- PIPE - WATER (NEW) SMALLER THAN 12"
- PIPE - WATER (EX.) SMALLER THAN 12"
- PIPE - WATER (NEW) 12" AND LARGER
- PIPE - WATER (EX.) 12" AND LARGER

- ASPHALT (REMOVAL/PATCH)
- ASPHALT (EXISTING)
- CONCRETE (SLEEVE UNDER)
- CONCRETE (EXISTING)
- CONCRETE (REMOVAL/PATCH)
- LANDSCAPING (NEW)
- ADA RAMP (NEW)
- EXISTING BUILDING
- AUTHORIZATION TO ENTER PROPERTY (AEP)

SYMBOLS

- ANTENNA / TOWER
- AREA LIGHT
- BENCHMARK
- BLOW OFF
- BUS SHELTER
- CABINET
- FIRE HYDRANT
- HC PARKING SYMBOL
- IRR. CONTROLER
- LOOP DETECTOR
- MANHOLE
- METER (BOX)
- METER (PEDISTAL)
- PALM TREE
- PULLBOX
- SHRUB
- SIDEWALK RAMP
- SIGN
- STREET LIGHT
- STORM DRAIN INLET
- SURVEY MONUMENT
- TRAFFIC PED. SIGNAL
- TRAFFIC SIGNAL POLE
- TREE
- UTILITY POLE
- UTILITY POLE GUY WIRE
- VALVE
- VAULT
- WHEEL STOP

ABBREVIATIONS

@	AT	IRR	IRRIGATION
ABAN	ABANDONED	L	LENGTH
AC	ASPHALTIC CONCRETE	LF	LINEAL FOOT, LINEAR FEET
ACP	ASBESTOS CEMENT PIPE	LT	LEFT
AEP	AUTHORIZATION TO ENTER PROPERTY	LVWD	LAS VEGAS VALLEY WATER DISTRICT
AMS	ARTERIAL MANAGEMENT SYSTEM	MH	MANHOLE
APPROX	APPROXIMATE	MLCP	MULTI-LAYER COMPOSITE PIPE
AVAR	AIR VALVE ASSEMBLY	MTR	METER
B/C, BC	BACK OF CURB	NAC	NEVADA ADMINISTRATIVE CODE
BCR	BEGIN OF CURB RETURN (AT B/C)	NDOT	NEVADA DEPT OF TRANSPORTATION
BM	BENCHMARK	NTS	NOT TO SCALE
BOT	BOTTOM	NV	NV ENERGY
BR	BACK OF RAMP	OHP	OVERHEAD POWER LINE
BP	BACK FLOW PREVENTER	OHU	OVERHEAD UTILITIES
C & G	CURB AND GUTTER	PB	PULL BOX
CALC'D	CALCULATED	PC	POINT OF CURVATURE
CATV, TV	CABLE TELEVISION	P.I.P.	PROTECT IN PLACE
CC	CLARK COUNTY	PCNC	POINT ON CURVE
CCPW	CLARK COUNTY PUBLIC WORKS	PP	POWER POLE
CIPP	CURED-IN-PLACE PIPE	PRC	POINT OF REVERSE CURVE
℄, CL	CENTERLINE	PT	POINT OF TANGENCY
CLSM	CONTROLLED LOW STRENGTH MATERIAL	℄ , PL	PROPERTY LINE
		R	RADIUS
CLV	CITY OF LAS VEGAS	RT	RIGHT
CMP	CORRUGATED METAL PIPE	R/W, R.O.W.	RIGHT OF WAY
CONC	CONCRETE	SCCP	STEEL CYLINDER CONCRETE PIPE
COND	CONDUCTOR	SD, STRM	STORM DRAIN
CPM	CAPITAL PROJECT MANAGEMENT	SF	SQUARE FOOT
		SP	SPECIAL PROVISIONS
CV	CHECK VALVE	SS, SSWR	SANITARY SEWER
D, DIA	DIAMETER	STA	STATION
DCSWCS	DESIGN & CONSTRUCTION STDS FOR WASTEWATER COLLECTION SYSTEMS	STD	STANDARD
		SLGT, SL	STREET LIGHT
		SV	SPRINKLER VALVE
DG	DECOMPOSED GRANITE	S/W	SIDEWALK
DI	DROP INLET	SWG	SOUTHWEST GAS
DIP	DUCTILE IRON PIPE	SY	SQUARE YARD
DW, DWY	DRIVEWAY	T, TELE	TELEPHONE
DWG	DRAWING	TC	TOP OF CURB
ECR	END OF CURB RETURN (AT B/C)	TCE	TEMP. CONSTRUCTION EASEMENT
ELEC, E	ELECTRIC		
ELEV	ELEVATION	TEMP.	TEMPORARY
EOP, EP	EDGE OF PAVEMENT	TRANS.	TRANSITION
EX	EXISTING	TRC	TOP OF RAMP CURB
FAST	FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (INTERCONNECT)	TSIG	TRAFFIC SIGNAL
		TYP.	TYPICAL
		UDACS	UNIFORM DESIGN & CONSTRUCTION STDS FOR POTABLE WATER DISTRIBUTION SYSTEMS
FC	FACE OF CURB		
FD	FOUND		
FG	FINISHED GRADE		
FH, HYD	FIRE HYDRANT	UG	UNDERGROUND
FT	FOOT, FEET	USD	UNIFORM STANDARD DRAWING
G, NGAS	GAS	USS	UNIFORM STD SPECIFICATIONS
GM	GAS METER	VERT.	VERTICAL SCALE
GV	GATE VALVE	W, WTR, WATR	WATER LINE
GW	GUY WIRE	WC	WHEEL CHAIR
HP	HIGH PRESSURE	WM	WATER METER
HOR.	HORIZONTAL SCALE	WV	WATER VALVE
INT	INTERSECTION	W/	WITH
		Δ	INCLUDED DELTA ANGLE

CALL BEFORE CONSTRUCTION

BEFORE YOU DIG	NORTHERN CALIFORNIA AND NEVADA	811 OR 800-642-2444
BEFORE YOU UNDERGROUND	CLARK COUNTY TRAFFIC OPERATIONS	702-455-7511 AND 702-432-5300
	CITY OF LAS VEGAS T.E.F.O.	702-229-6331
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929

REVISIONS | NO. | DATE | SHEET

PREPARED BY
GCW ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

PROFESSIONAL ENGINEER — STATE OF NEVADA — PETER D.B. SMIECINSKI — Exp. 6/30/2024 — CIVIL — No. 25215

DATE: 3/2/2023

TITLE
FLOYD LAMB PARK
REPLACEMENT WELL 174A

SHEET
GENERAL NOTES AND ABBREVIATIONS

PREPARED FOR
CITY OF LAS VEGAS

BID # 23.691111.09	DATE: 3/2/23	DESIGNED BY: AW	
PLANS LIB #650.144		DRAWN BY: AW	
SUBMITTAL STAGE: ISSUE FOR BIDS		CHECKED BY: PS	

SHEET
GN-02
3 OF 15
DRAWING NO.

F:\PROJECTS\ASWA\E-685\DWG\1 PRODUCTION\2 DI-07.DWG
3/1/23

NORTH

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1" = 50'
(VERIFY SCALE - PLANS MAY HAVE BEEN REDUCED)

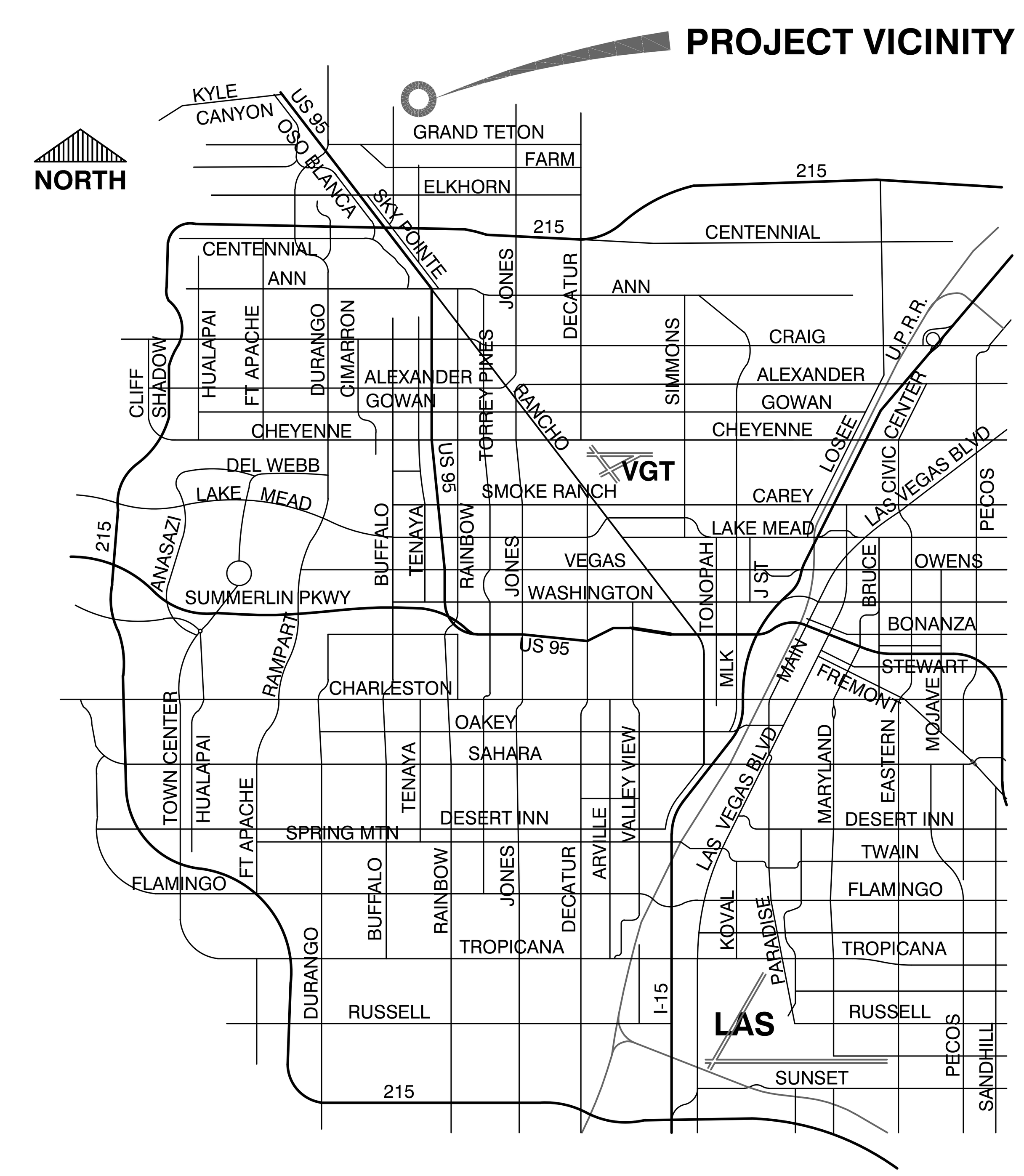
NOTES

1. CONTRACTOR(S) MUST COORDINATE DRILL RIG AND CONSTRUCTION EQUIPMENT PATH REQUIREMENTS WITH CLV.
2. CONTRACTOR TO PROTECT IN PLACE ANY EXISTING CONCRETE CURB AND GUTTER, FLATWORK, AND SIDEWALK AND REPLACE ANY DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS. COORDINATE ANY NECESSARY REMOVAL AND REPLACEMENT WITH CLV.
3. CONTRACTOR TO REPLACE ANY DAMAGED LANDSCAPE OR PARK FEATURES IN KIND. THE CITY OF LAS VEGAS WILL BE RESPONSIBLE FOR THE RESTORATION OF GRASS AREAS, TO INCLUDE ANY UNDERGROUND IRRIGATION.
4. CONTRACTOR TO MINIMIZE DISTURBANCE TO GRASS AREAS.
5. CONTRACTOR COORDINATE WITH CLV PARKS MAINTENANCE TO LOCATE AND PROTECT EXISTING SPRINKLER SYSTEM IN GRASS AREAS.
6. FINAL LAYOUT OF TEMPORARY FENCING TO BE FIELD VERIFIED AND APPROVED BY CLV. INGRESS AND EGRESS TO THE PARK SHALL NOT BE BLOCKED.
7. CONTRACTOR TO EXERCISE EXTREME CAUTION NEAR EXISTING AND HISTORIC STRUCTURES. COORDINATE ALL CONSTRUCTION ACTIVITIES WITH CITY OF LAS VEGAS
8. EXTENTS OF TEMPORARY CONSTRUCTION FENCING SHALL INCLUDE AREA FOR STAGING, CUTTINGS STORAGE, AND CASING STORAGE

SHEET INDEX

VICINITY MAP

NOT TO SCALE



REVISIONS

NO.	DATE	SHEET

PREPARED BY

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PROFESSIONAL ENGINEER STATE OF NEVADA
PETER D.B. SMIECINSKI
Exp. 6/30/2024
CIVIL
No. 25215

DATE: 3/29/2023

TITLE

FLOYD LAMB PARK REPLACEMENT WELL 174A

SHEET

PROJECT AREA MAP & INDEX

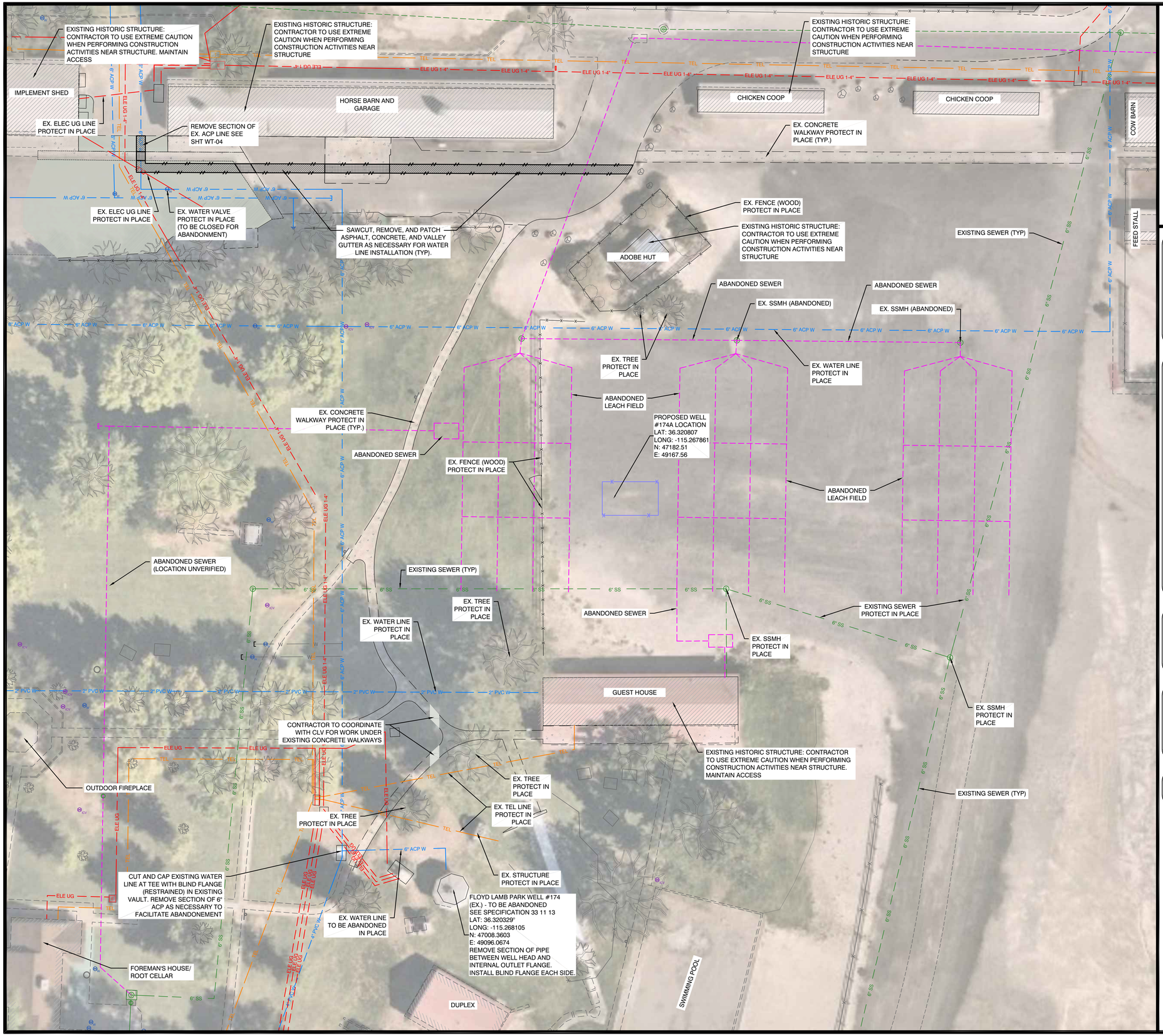
PREPARED FOR
CITY OF LAS VEGAS

BID # 23.69111.09 | DATE: 3/2/23
PLANS LIB #650.144 | DESIGNED BY: AW
SUBMITTAL STAGE: ISSUE FOR BIDS | DRAWN BY: AW
CHECKED BY: PS

SHEET

GN-03

DRAWING NO.



NORTH

GRAPHIC SCALE

20 0 10 20 10

(IN FEET)

1" = 20'

(VERIFY SCALE - PLANS MAY HAVE BEEN REDUCED)

CALL BEFORE CONSTRUCTION

BEFORE YOU DIG	USA NORTH	811 OR 800-642-2444
BEFORE YOU UNDERGROUND	CLARK COUNTY TRAFFIC OPERATIONS	702-455-7511 AND 702-432-5300
	CITY OF LAS VEGAS T.E.F.O.	702-229-6331
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929

BASIS OF BEARINGS: NORTH 89°03'27 WEST, BEING THE NORTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 29, TOWNSHIP 20 SOUTH, RANGE 61 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN IN FINAL MAP OF K-LAS VEGAS, BOOK 61 PAGE 50 OF RECORDED PLATS, CLARK COUNTY RECORDS.

BENCHMARK: CITY OF LAS VEGAS VERTICAL BENCHMARK 13LV0129W6
RIVET & PLATE IN TOP OF CURB, SW CORNER LORENZI PARK ENTRANCE AND WASHINGTON AVE.
ELEVATION: 2102.00 FEET (NAVD 88)
640.691 METERS

HORIZONTAL DATUM AND COORDINATE SYSTEM: BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88)

NOTES

1. CONTRACTOR(S) MUST COORDINATE DRILL RIG AND CONSTRUCTION EQUIPMENT PATH REQUIREMENTS WITH CLV.
2. CONTRACTOR TO PROTECT IN PLACE ALL CONCRETE CURB AND GUTTER AND FLATWORK. COORDINATE ANY NECESSARY REMOVAL AND REPLACEMENT WITH CLV. REPLACE ANY DAMAGED LANDSCAPE OR PARK FEATURES IN KIND.
3. CONTRACTOR TO MINIMIZE DISTURBANCE TO THE GRASS AREA.
4. CONTRACTOR COORDINATE WITH CLV PARKS MAINTENANCE TO LOCATE AND PROTECT EXISTING SPRINKLER SYSTEM IN GRASS AREA. COORDINATE SHUTDOWNS AND TESTING WITH CLV.
5. SEE SHEET EL-04 FOR DEMO OF ELECTRICAL ELEMENTS.
6. CONTRACTOR TO PROTECT IN PLACE ANY EXISTING CURBS AND SIDEWALK AND REPLACE ANY DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS. THE CITY OF LAS VEGAS WILL BE RESPONSIBLE FOR THE RESTORATION OF THE GRASS AREA, TO INCLUDE ANY UNDERGROUND IRRIGATION.
7. CONTRACTOR TO EXERCISE EXTREME CAUTION NEAR EXISTING AND HISTORIC STRUCTURES. COORDINATE ALL CONSTRUCTION ACTIVITIES NEAR STRUCTURE WITH CITY OF LAS VEGAS
8. EXTENTS OF TEMPORARY CONSTRUCTION FENCING SHALL INCLUDE AREA FOR STAGING, CUTTINGS STORAGE, AND CASING STORAGE
9. AERIAL IMAGE IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY AERIAL IMAGERY AND CURRENT OBSTRUCTIONS PRIOR TO CONSTRUCTION.

EXISTING UTILITY NOTE:

EXISTING UTILITIES SHOWN HEREIN ARE APPROXIMATE ONLY AND MAY NOT SHOW ALL EXISTING FACILITIES WITHIN THE PROJECT AREA. CONTRACTOR MUST FIELD VERIFY AND POTHOLE EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO BEGINNING CONSTRUCTION. ALL EXISTING UTILITIES MUST BE PROTECTED IN PLACE DURING CONSTRUCTION UNLESS OTHERWISE NOTED ON DRAWINGS. CONTACT UTILITY COMPANIES AT LEAST 24 HOURS PRIOR TO INTERRUPTION OF SERVICE.

ABANDONMENT OF EXISTING PIPELINES AND APPURTENANCES NOTE:

ABANDONMENT INCLUDES REMOVAL OF ABOVE-GROUND PIPE, FITTINGS, AND APPURTENANCES WHERE INDICATED. CONTRACTOR SHALL CUT EXISTING WATER MAIN, INSTALL CAP ON ABANDONED PORTION OF PIPE WHERE APPLICABLE, AND ABANDON EXISTING VALVES IN THE CLOSED POSITION.

PERFORM ACP ABANDONMENT, CUTTING, AND REMOVAL IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

LEACH FIELD NOTE:

EXISTING LEACH FIELD ABANDONED PER CLV BID # 20-75081 (DRAWING NO. 650.97-5). CONTRACTOR TO VERIFY LIMITS PRIOR TO CONSTRUCTION.

REVISIONS | NO. | DATE | SHEET

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PETER D.B. SMIECINSKI
Exp. 6/30/2024
CIVIL
No. 25215
STATE OF NEVADA
PROFESSIONAL ENGINEER

DATE: 3/2/2023

TITLE: FLOYD LAMB PARK REPLACEMENT WELL 174A

SHEET: SITE CIVIL DEMOLITION PLAN I

PREPARED FOR: CITY OF LAS VEGAS

BID # 23.691111.09 | DATE: 3/2/23 | DESIGNED BY: AW | DRAWN BY: AW | CHECKED BY: PS

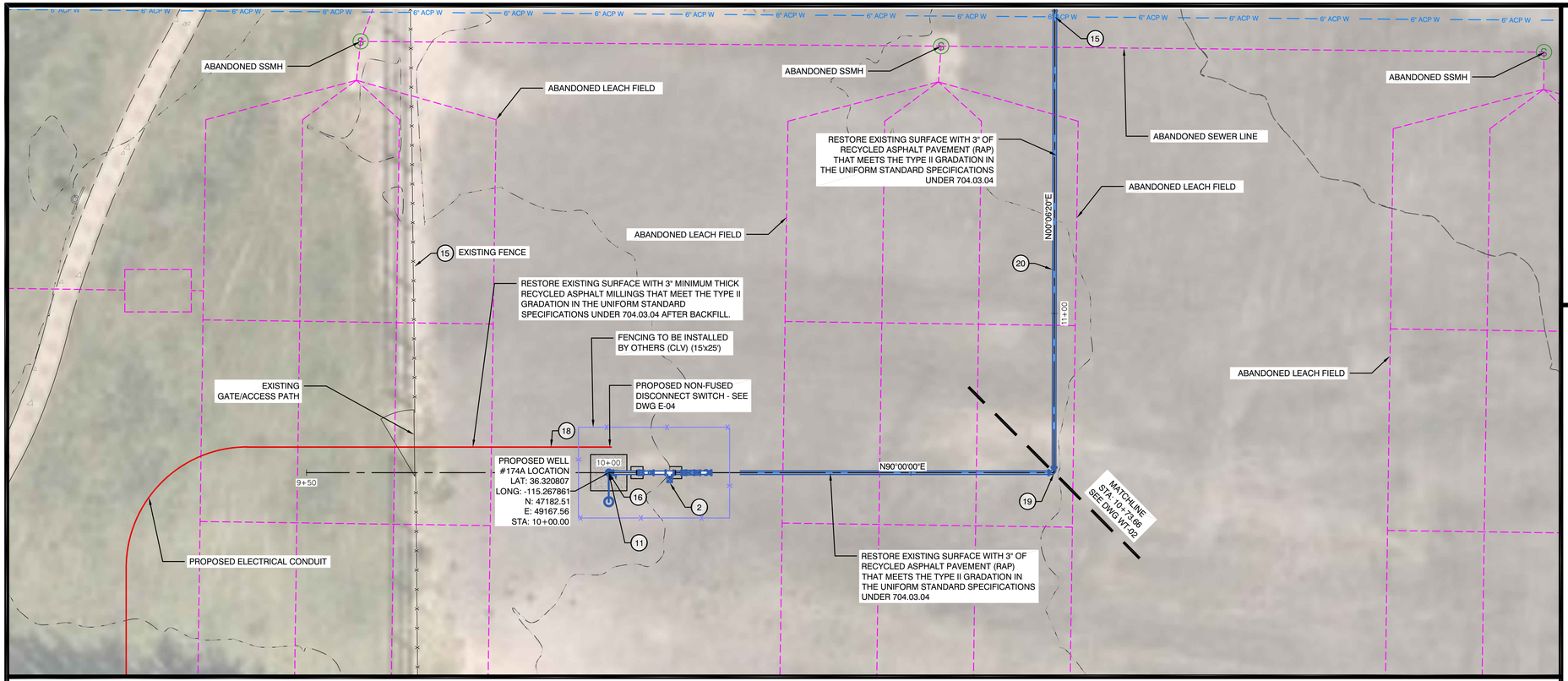
PLANS LIB #650.144 | SUBMITTAL STAGE: ISSUE FOR BIDS

SHEET DM-01

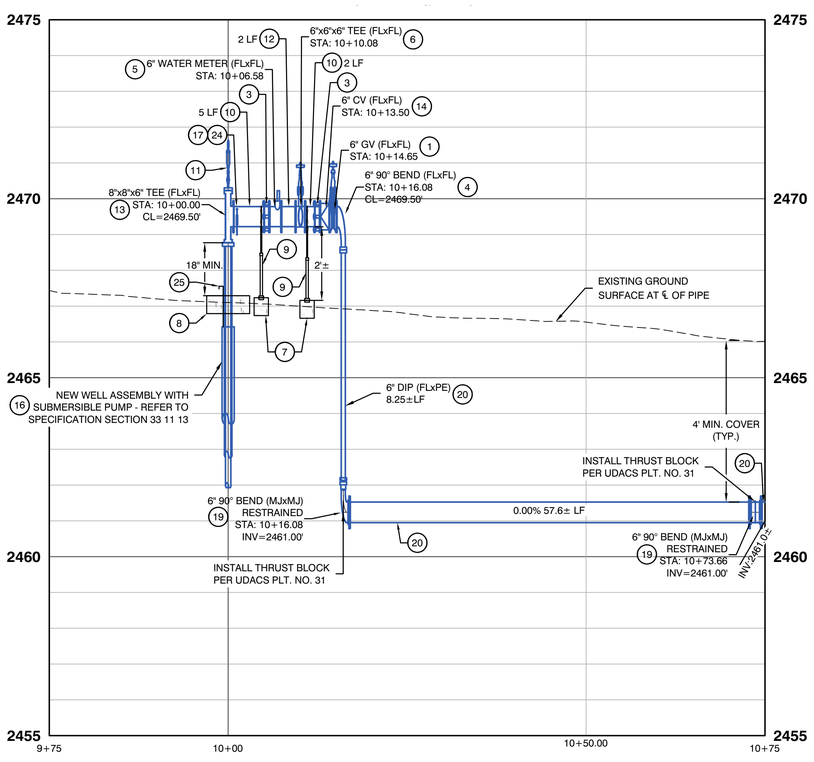
5 OF 15

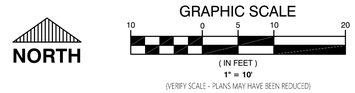
DRAWING NO.

3/1/23 F:\PROJECTS\40HVE\E-483.DWG\01 PRODUCTION\4 DM-01.DWG



HORIZ SCALE: 1"=10'
VERT SCALE: 1"=2'





CALL BEFORE CONSTRUCTION

BEFORE YOU DIG	USA NORTH	811 OR 800-642-2444
BEFORE YOU UNDERGROUND	CLARK COUNTY TRAFFIC OPERATIONS	702-455-7511 AND 702-432-5300
	CITY OF LAS VEGAS T.E.F.O.	702-229-6331
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929

CONSTRUCTION KEY NOTES

1. INSTALL 6" GATE VALVE, FL x FL.
2. INSTALL 6" GATE VALVE WITH BLIND FLANGE.
3. INSTALL 6" FLANGED COUPLING ADAPTER (RESTRAINED).
4. INSTALL 6" DIP 90° BEND, FL x FL.
5. INSTALL 6" PROPELLER FLOW TUBE WATER METER, FL X FL, ENSURE LAMINAR FLOW REQUIREMENTS PER MFR.
6. INSTALL 6x6" DIP TEE, FL X FL.
7. INSTALL PIPE SUPPORT PAD PER DETAIL 1, DWG CD-01.
8. INSTALL WELL HEAD CONCRETE PAD PER DETAIL 1, DWG CD-01.
9. INSTALL ADJUSTABLE PIPE SUPPORT AS NEEDED PER DETAIL 3, DWG CD-01.
10. INSTALL 6" DIP SPOOL, FL X PE.
11. INSTALL 2" AIR AND VACUUM VALVE AND DRAIN SUMP; SEE DETAIL 2, DWG CD-01.
12. INSTALL 6" DIP SPOOL, FL x FL.
13. INSTALL 8"x8"x6" DIP DISCHARGE TEE AND WELL CAP.
14. INSTALL 6" FLANGED SWING CHECK VALVE.
15. PROTECT IN PLACE.
16. INSTALL NEW WELL ASSEMBLY WITH SUBMERSIBLE PUMP PER SPECIFICATION SECTION 33 11 13. PIPING PER PROFILE.
17. INSTALL 3/4" CORP STOP WITH REMOVABLE ROSSUM SAND TESTER AT SPRINGLINE PER DETAIL 6, DWG CD-01.
18. NEW BELOW GRADE FEEDER INSTALLATION PER E SHEETS. ALL WORK SHALL BE COORDINATED WITH CITY OF LAS VEGAS FACILITIES ENGINEERING PERSONNEL PRIOR TO COMMENCEMENT OF WORK.
19. INSTALL 6" DIP 90° BEND, MJ xMJ (RESTRAINED).
20. INSTALL 6" DIP PER UDACS PLT NO. 15 & 16.
21. CUT AND REMOVE 20± LF OF EXISTING 6" ACP PER SPECIFICATION SECTION 02 83 13.
22. CUT EXISTING 6" ACP WATER LINE AND INSTALL 6" CAP. INSTALL THRUST BLOCK BETWEEN CAP AND NEW 90 PER UDACS PLT. NO. 31.
23. CONNECT TO EXISTING 6" ACP WITH SOLID SLEEVE TRANSITION FITTING PER SPECIFICATION SECTION 33 10 02.
24. INSTALL SAMPLING PORT AT TOP OF DISCHARGE PIPE PER DETAIL 5, DWG CD-01.
25. INSTALL VENT PER DETAIL 4, DWG CD-01.
26. ASPHALT PATCH PER SPECIFICATION SECTION 31 20 00.
27. SAWCUT, REMOVE, AND PATCH EXISTING CONCRETE PAD PER SPECIFICATION SECTION 03 30 00. MATCH EXISTING CONCRETE THICKNESS OR MINIMUM PATCH SECTION 4" CONCRETE OVER 6" TYPE II; WHICHEVER IS GREATER.
28. TURN VALVE TO "CLOSED" POSITION.

BASIS OF BEARINGS: SOUTH 89°31'05" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 4, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN IN FILE 114, PAGE 14 OF PARCEL MAPS ON FILE AT THE CLARK COUNTY RECORDER'S OFFICE.

BENCHMARK: CITY OF LAS VEGAS VERTICAL CONTROL POINT "5LV908NEE6", BEING A RIVET & PLATE IN TOP OF CURB AT SW CORNER OF BRENT LN. & DURANGO.
ELEVATION: 2530.43 FEET (NAVD 88)
771.28 METERS

CITY OF LAS VEGAS VERTICAL CONTROL (DATE RE-OBSERVED: 2008)
BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) & GEOID 18

EXISTING UTILITY NOTE:
EXISTING UTILITIES SHOWN HEREIN ARE APPROXIMATE ONLY AND MAY NOT SHOW ALL EXISTING FACILITIES WITHIN THE PROJECT AREA. CONTRACTOR MUST FIELD VERIFY AND POTHOLE EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO BEGINNING CONSTRUCTION. ALL EXISTING UTILITIES MUST BE PROTECTED IN PLACE DURING CONSTRUCTION UNLESS OTHERWISE NOTED ON DRAWINGS. CONTACT UTILITY COMPANIES AT LEAST 24 HOURS PRIOR TO INTERRUPTION OF SERVICE.

LEACH FIELD NOTE:
EXISTING LEACH FIELD ABANDONED PER CLV BID # 20-75081 (DRAWING NO. 650.97-5). CONTRACTOR TO VERIFY LIMITS PRIOR TO CONSTRUCTION.

NOTE TO CONTRACTOR:
1) ALL UNDERGROUND PIPING TO BE MECHANICALLY RESTRAINED MINIMUM 15' EACH SIDE OF FITTING.
2) ALL PIPE LENGTHS ARE GIVEN AS CENTER OF FITTING TO CENTER OF FITTING.
3) DISCHARGE PIPING TO REMAIN IN PLACE BETWEEN GRAVEL PACK (AIR LIFT) DEVELOPMENT AND TEST PUMP DEVELOPMENT.
4) CLV TO PROVIDE FENCING AROUND WELL AFTER COMPLETION OF WELL CONSTRUCTION.
5) AERIAL IMAGE IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY AERIAL IMAGERY AND CURRENT OBSTRUCTIONS PRIOR TO CONSTRUCTION.

REVISIONS | SHEET | DATE | NO.

PREPARED BY
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gcwengineering.com

PROFESSIONAL ENGINEER STATE OF NEVADA
PETER D.B. SMIECINSKI
Exp. 6/30/2024
CIVIL
No. 25215

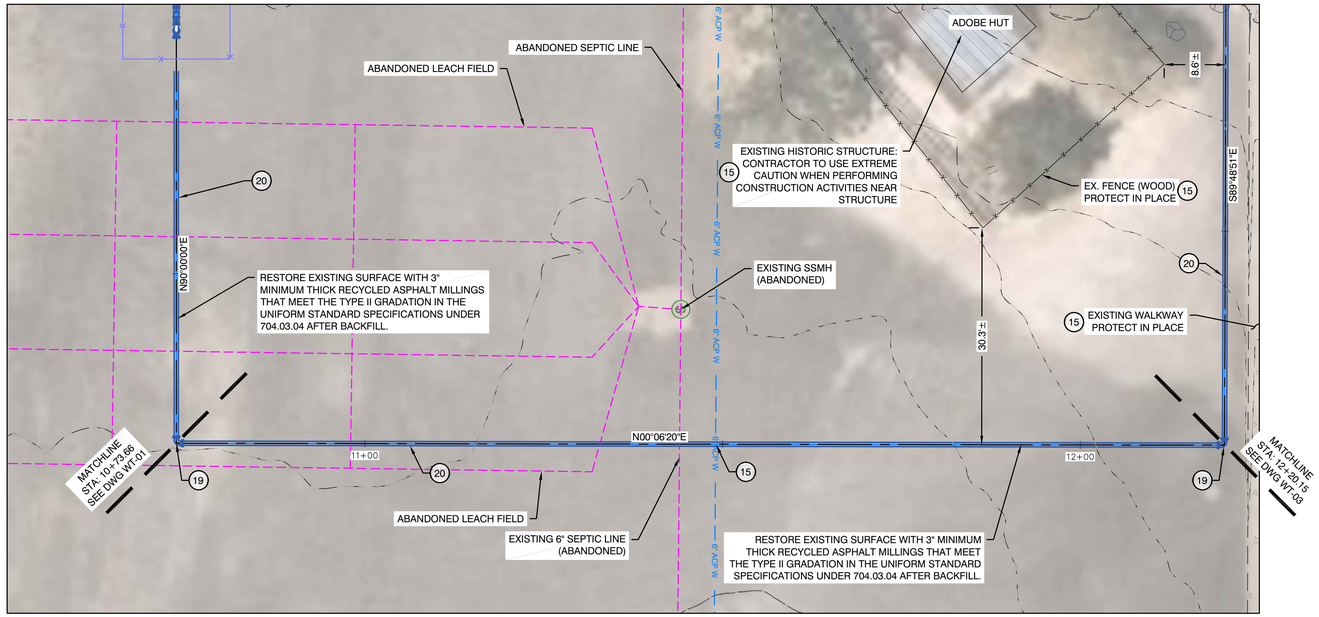
DATE: 3/2/2023

TITLE: FLOYD LAMB PARK REPLACEMENT WELL 174A
SHEET: WATER PLAN AND PROFILE I

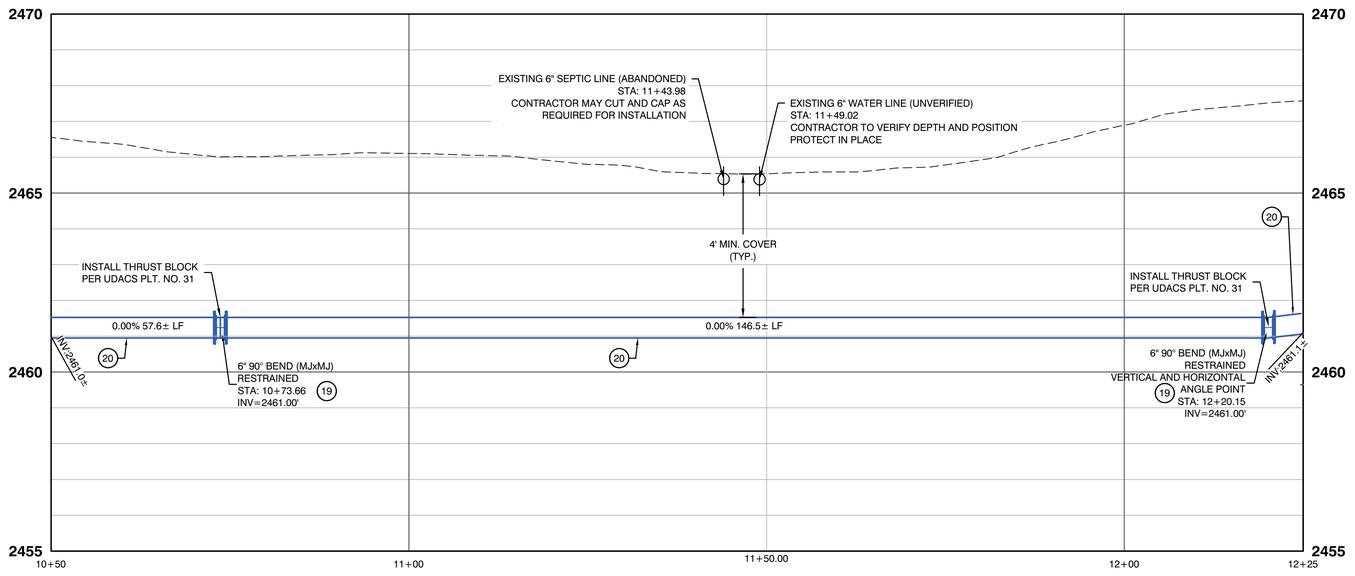
PREPARED FOR: CITY OF LAS VEGAS
DATE: 3/2/23
BID # 23.691111.09
PLANS LIB #650.144
DESIGNED BY: AW
DRAWN BY: AW
CHECKED BY: PS
SUBMITTAL STAGE: ISSUE FOR BIDS

SHEET WT-01
6 OF 15
DRAWING NO.

3/1/23 F:\PROJECTS\400\401-483\DWG\7-PRODUCTION\3-WT-01.DWG



HORIZ SCALE: 1"=10'
VERT SCALE: 1"=2'



NORTH

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1" = 10'
(VERIFY SCALE - PLANS MAY HAVE BEEN REDUCED)

CALL BEFORE CONSTRUCTION

BEFORE YOU DIG	USA NORTH	811 OR 800-642-2444
BEFORE YOU UNDERGROUND	CLARK COUNTY TRAFFIC OPERATIONS	702-455-7511 AND 702-432-5300
	CITY OF LAS VEGAS T.E.F.O.	702-229-6331
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929

CONSTRUCTION KEY NOTES

1. INSTALL 6" GATE VALVE, FL x FL.
2. INSTALL 6" GATE VALVE WITH BLIND FLANGE.
3. INSTALL 6" FLANGED COUPLING ADAPTER (RESTRAINED).
4. INSTALL 6" DIP 90° BEND, FL x FL.
5. INSTALL 6" PROPELLER FLOW TUBE WATER METER, FL X FL, ENSURE LAMINAR FLOW REQUIREMENTS PER MFR.
6. INSTALL 6x6" DIP TEE, FL X FL.
7. INSTALL PIPE SUPPORT PAD PER DETAIL 1, DWG CD-01.
8. INSTALL WELL HEAD CONCRETE PAD PER DETAIL 1, DWG CD-01.
9. INSTALL ADJUSTABLE PIPE SUPPORT AS NEEDED PER DETAIL 3, DWG CD-01.
10. INSTALL 6" DIP SPOOL, FL X PE.
11. INSTALL 2" AIR AND VACUUM VALVE AND DRAIN SUMP; SEE DETAIL 2, DWG CD-01.
12. INSTALL 6" DIP SPOOL, FL x FL.
13. INSTALL 8"x8"x6" DIP DISCHARGE TEE AND WELL CAP.
14. INSTALL 6" FLANGED SWING CHECK VALVE.
15. PROTECT IN PLACE.
16. INSTALL NEW WELL ASSEMBLY WITH SUBMERSIBLE PUMP PER SPECIFICATION SECTION 33 11 13. PIPING PER PROFILE.
17. INSTALL 3/4" CORP STOP WITH REMOVABLE ROSSUM SAND TESTER AT SPRINGLINE PER DETAIL 6, DWG CD-01.
18. NEW BELOW GRADE FEEDER INSTALLATION PER E SHEETS. ALL WORK SHALL BE COORDINATED WITH CITY OF LAS VEGAS FACILITIES ENGINEERING PERSONNEL PRIOR TO COMMENCEMENT OF WORK.
19. INSTALL 6" DIP 90° BEND, MJ xMJ (RESTRAINED).
20. INSTALL 6" DIP PER UDACS PLT NO. 15 & 16.
21. CUT AND REMOVE 20± LF OF EXISTING 6" ACP PER SPECIFICATION SECTION 02 83 13.
22. CUT EXISTING 6" ACP WATER LINE AND INSTALL 6" CAP. INSTALL THRUST BLOCK BETWEEN CAP AND NEW 90 PER UDACS PLT. NO. 31.
23. CONNECT TO EXISTING 6" ACP WITH SOLID SLEEVE TRANSITION FITTING PER SPECIFICATION SECTION 33 10 02.
24. INSTALL SAMPLING PORT AT TOP OF DISCHARGE PIPE PER DETAIL 5, DWG CD-01.
25. INSTALL VENT PER DETAIL 4, DWG CD-01.
26. ASPHALT PATCH PER SPECIFICATION SECTION 31 20 00.
27. SAWCUT, REMOVE, AND PATCH EXISTING CONCRETE PAD PER SPECIFICATION SECTION 03 30 00. MATCH EXISTING CONCRETE THICKNESS OR MINIMUM PATCH SECTION 4" CONCRETE OVER 6" TYPE II; WHICHEVER IS GREATER.
28. TURN VALVE TO "CLOSED" POSITION.

BASIS OF BEARINGS: SOUTH 89°31'05" EAST, BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 4, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN IN FILE 114, PAGE 14 OF PARCEL MAPS ON FILE AT THE CLARK COUNTY RECORDER'S OFFICE.

BENCHMARK: CITY OF LAS VEGAS VERTICAL CONTROL POINT "5LV908NEE6", BEING A RIVET & PLATE IN TOP OF CURB AT SW CORNER OF BRENT LN. & DURANGO.
ELEVATION: 2530.43 FEET (NAVD 88)
771.28 METERS

CITY OF LAS VEGAS VERTICAL CONTROL (DATE RE-OBSERVED: 2008)
BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) & GEOID 18

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LEACH FIELD NOTE:
EXISTING LEACH FIELD ABANDONED PER CLV BID # 20-75081 (DRAWING NO. 650.97-5). CONTRACTOR TO VERIFY LIMITS PRIOR TO CONSTRUCTION.

NOTE TO CONTRACTOR:
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3) DISCHARGE PIPING TO REMAIN IN PLACE BETWEEN GRAVEL PACK (AIR LIFT) DEVELOPMENT AND TEST PUMP DEVELOPMENT.
4) CLV TO PROVIDE FENCING AROUND WELL AFTER COMPLETION OF WELL CONSTRUCTION.
5) AERIAL IMAGE IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY AERIAL IMAGERY AND CURRENT OBSTRUCTIONS PRIOR TO CONSTRUCTION.

REVISIONS | NO. | DATE | SHEET

PREPARED BY
GCW ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

PROFESSIONAL ENGINEER STATE OF NEVADA
PETER D.B. SMIECINSKI
Exp. 6/30/2024
CIVIL
No. 25215

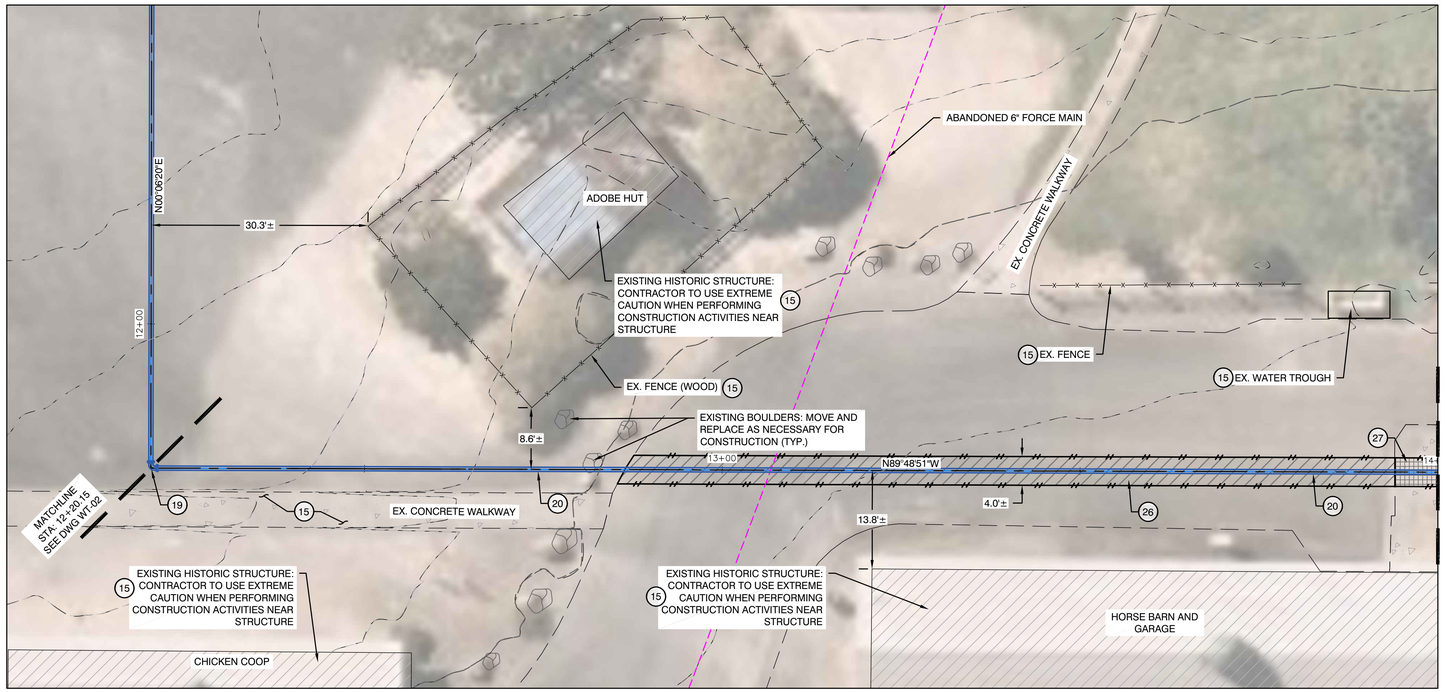
DATE: 3/2/2023

TITLE: FLOYD LAMB PARK REPLACEMENT WELL 174A
SHEET: WATER PLAN AND PROFILE II

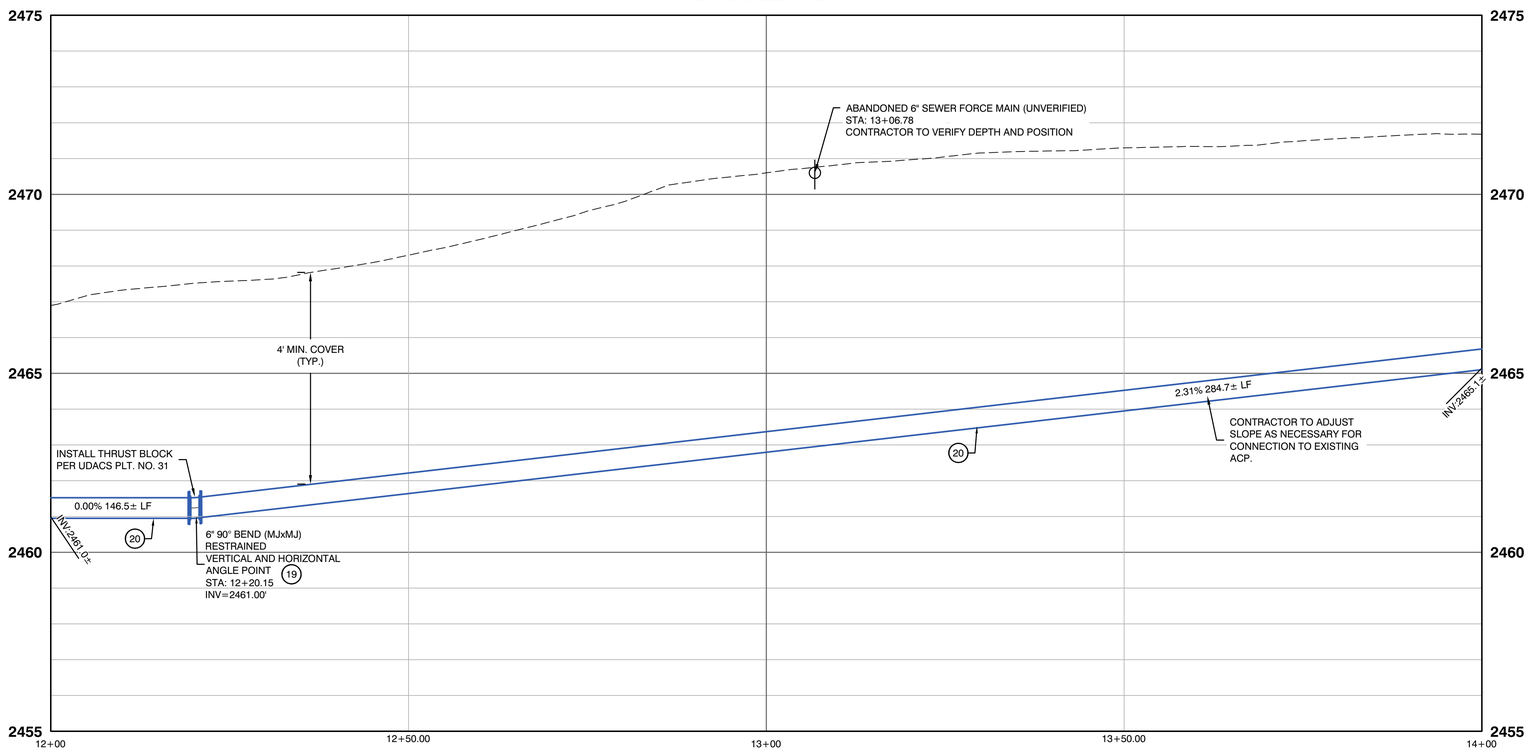
PREPARED FOR: CITY OF LAS VEGAS
BID # 23.691111.09 | DATE: 3/2/23 | DESIGNED BY: AW | DRAWN BY: AW | CHECKED BY: PS
PLANS LIB #650.144 | SUBMITTAL STAGE: ISSUE FOR BIDS

SHEET WT-02
7 OF 15
DRAWING NO.

3/1/23 F:\PROJECTS\ADMIN\2-BID\3WGV PRODUCTION\1 WT-01.DWG



HORIZ SCALE: 1"=10'
VERT SCALE: 1"=2'



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	CITY OF LAS VEGAS T.E.F.O.	702-229-6331
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929

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BENCHMARK: CITY OF LAS VEGAS VERTICAL CONTROL POINT "5LV908NEE6", BEING A RIVET & PLATE IN TOP OF CURB AT SW CORNER OF BRENT LN. & DURANGO.
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CITY OF LAS VEGAS VERTICAL CONTROL (DATE RE-OBSERVED: 2008)
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REVISIONS | NO. | DATE | SHEET

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gcwengineering.com

PETER D.B. SMIECINSKI
Exp. 6/30/2024
CIVIL
No. 25215
STATE OF NEVADA
PROFESSIONAL ENGINEER

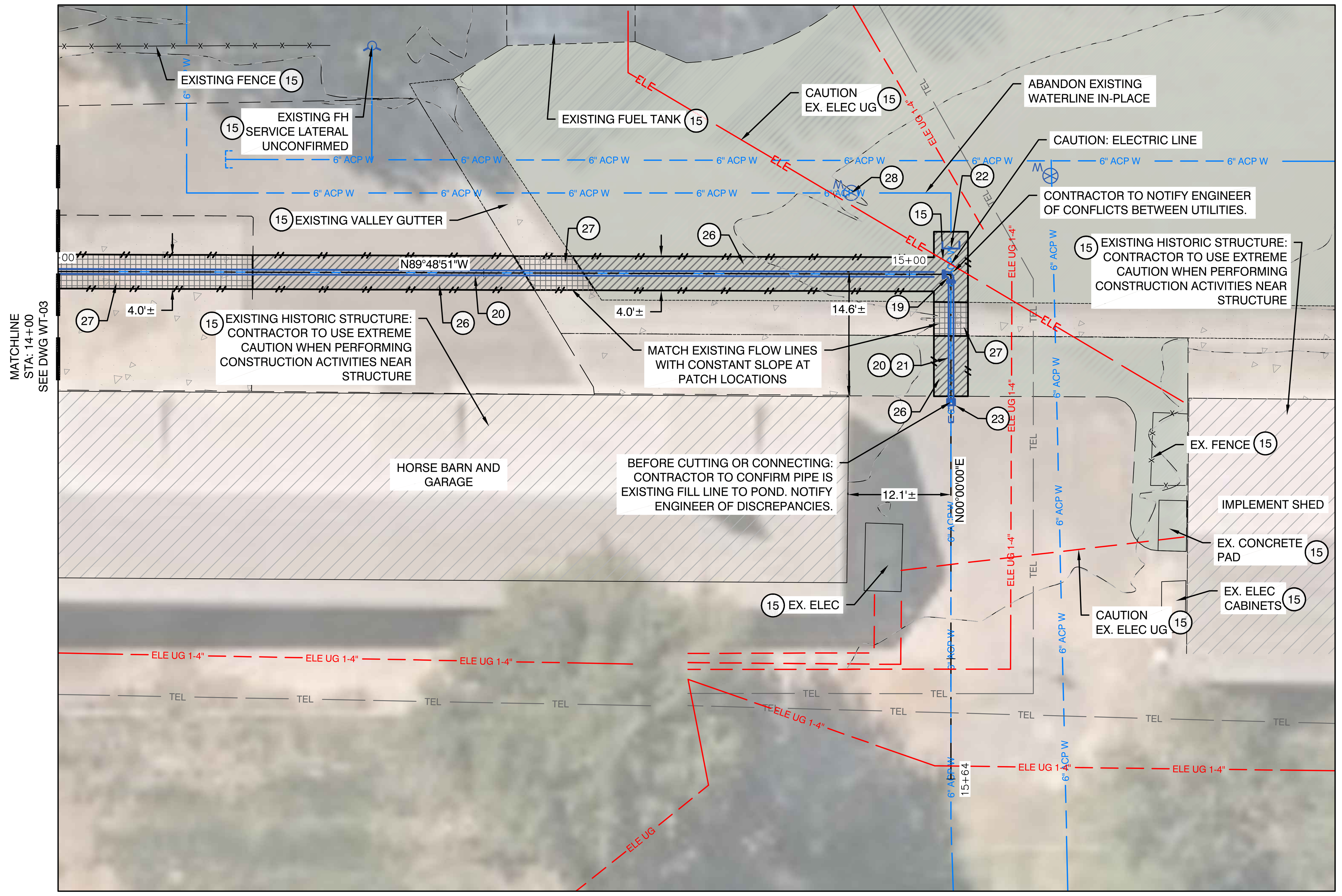
DATE: 3/2/2023

TITLE: FLOYD LAMB PARK REPLACEMENT WELL 174A
SHEET: WATER PLAN AND PROFILE III

PREPARED FOR: CITY OF LAS VEGAS
BID # 23.691111.09 | DATE: 3/2/23 | DESIGNED BY: AW | DRAWN BY: AW | CHECKED BY: PS
PLANS LIB #650.144 | SUBMITTAL STAGE: ISSUE FOR BIDS

SHEET WT-03
8 OF 15
DRAWING NO.

3/1/23 P:\PROJECTS\WATAE\683\DWG\7 PRODUCTION\1 WT-01.DWG



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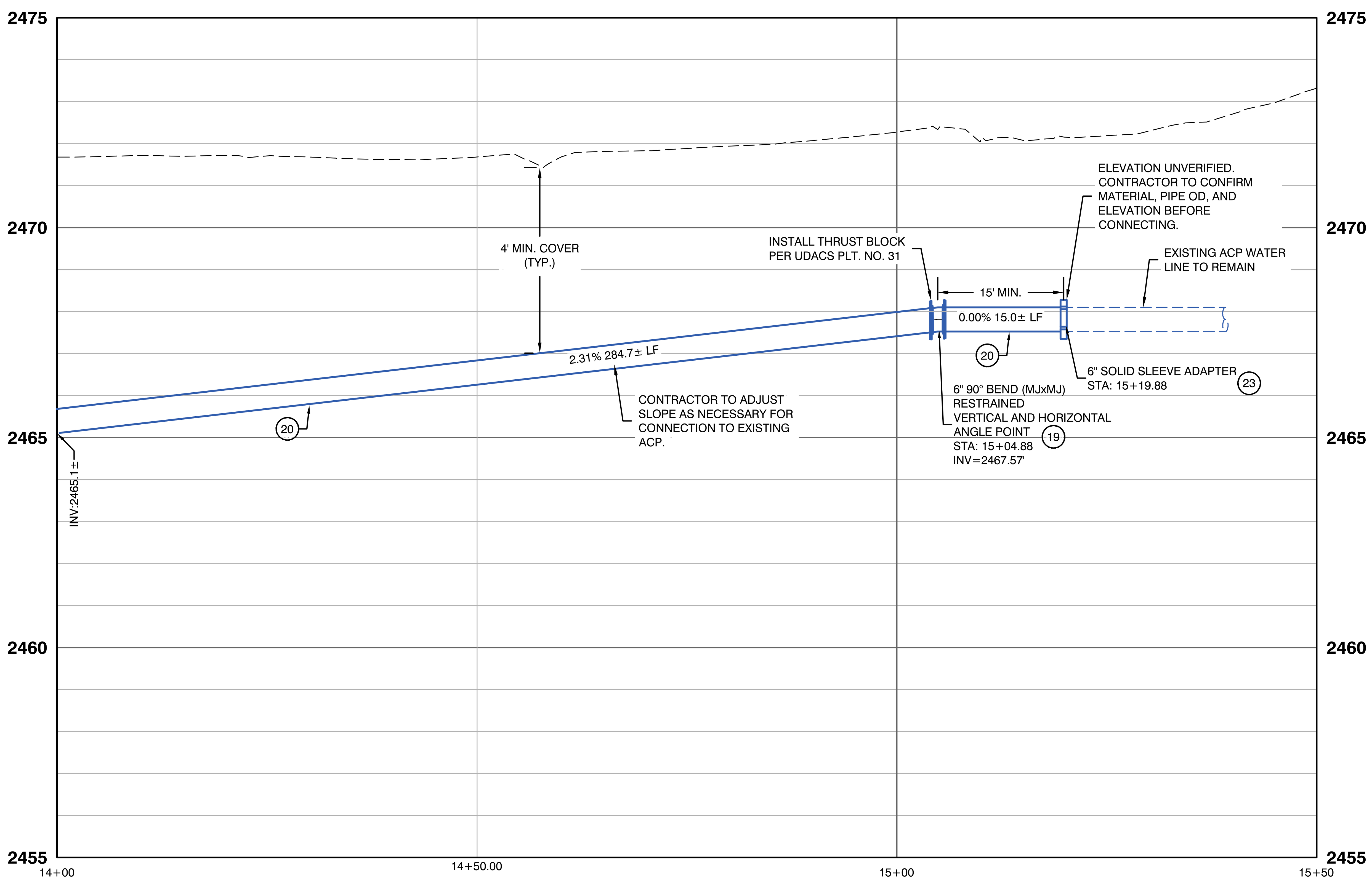

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PROFESSIONAL ENGINEER STATE OF NEVADA
PETER D.B. SMIECINSKI
Exp. 6/30/2024
CIVIL
No. 25215
DATE: 3/2/2023

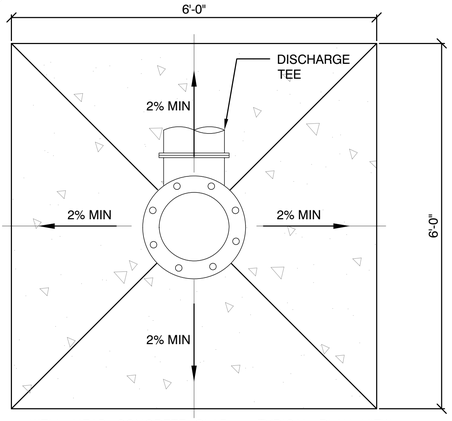
TITLE
FLOYD LAMB PARK REPLACEMENT WELL 174A

SHEET
WATER PLAN AND PROFILE IV

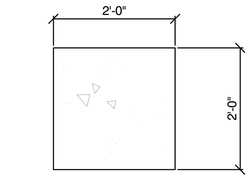
PREPARED FOR
CITY OF LAS VEGAS
BID # 23.69111.09
PLANS LIB #650.144
DATE: 3/2/23
DESIGNED BY: AW
DRAWN BY: AW
SUBMITTAL STAGE: ISSUE FOR BIDS
CHECKED BY: PS

SHEET
WT-04
9 OF 15
DRAWING NO.

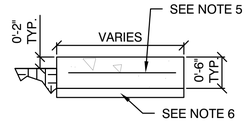
F:\PROJECTS\400\402-683\DWG\2 PRODUCTION\03 WT-01.DWG 3/7/23



WELL HEAD CONCRETE SLAB – TYPICAL PLAN VIEW



PIPE SUPPORT CONCRETE SLAB – TYPICAL PLAN VIEW



TYPICAL SLAB SECTION

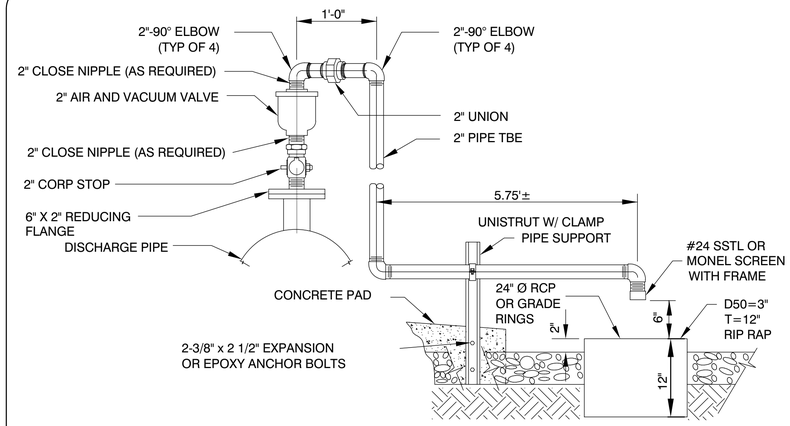
NOTES

1. CONCRETE SLAB MUST BE MINIMUM OF 6" THICK AND THE WELL HEAD SLAB MUST SLOPE AWAY FROM THE PEDESTAL AT A MINIMUM OF 2% IN ALL DIRECTIONS
2. SLAB MUST EXTEND A MINIMUM OF 2' FROM WELL CASING IN ALL DIRECTIONS
3. CONTRACTOR IS RESPONSIBLE FOR ENSURING NECESSARY ELECTRICAL CONDUIT IS IN PLACE BEFORE INSTALLATION OF CONCRETE PAD
4. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF f'c=4,500 PSI AND A MAXIMUM WATER TO CEMENT RATIO, BY WEIGHT, OF 0.45. USE TYPE V CEMENT PER ASTM C-150. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS NOTED OTHERWISE. MAXIMUM AGGREGATE SHALL NOT EXCEED 1-1/2".
5. REBAR: NO. 4 - 12 O.C. EACH WAY. ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 3" WHERE CONCRETE IS CAST AGAINST SOIL AND 2" ELSEWHERE, UNLESS NOTED OTHERWISE.
6. 6" COMPACTED TYPE II BASE OVER 6" SCARIFIED AND COMPACTED SUBGRADE.

CONCRETE PAD DETAIL

NOT TO SCALE

1 CD-01

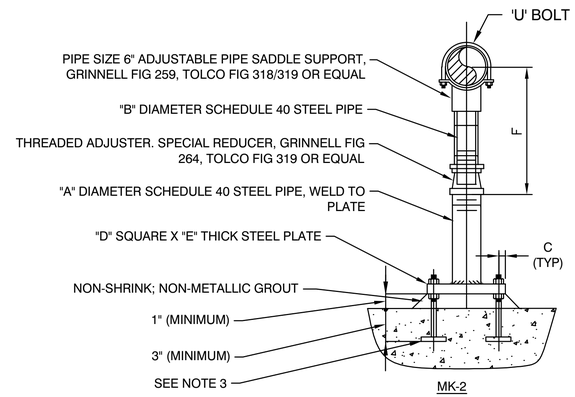


NOTES:
1. ALL PIPE AND ELBOWS SHALL BE GALVANIZED STEEL IN ACCORDANCE WITH ASTM A53 FOR STANDARD WEIGHT. FITTINGS SHALL BE GALVANIZED MALLEABLE IRON. GALVANIZED PIPE SHALL BE FOR ABOVE GROUND INSTALLATION ONLY.

AIR AND VACUUM VALVE

NOT TO SCALE

2 CD-01



MK-2

DIMENSION IN INCHES							
NOMINAL PIPE SIZE	A	B	C	D	E	F (APPROX)	
						(MINIMUM)	(MAXIMUM)
6"	3"	*2-1/2" to 3"	1-1/8"	7-1/2"	1/2"	11-9/16"	15-1/4"

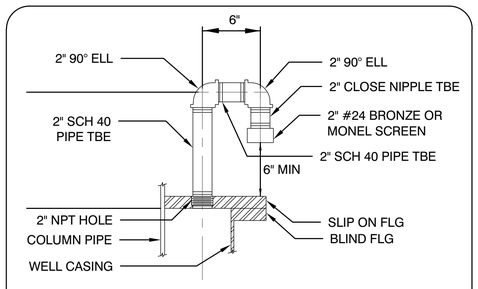
* SEE MANUFACTURER

NOTES:
1. GALVANIZE ALL PARTS AFTER FABRICATION.
2. THIS PIPE SUPPORT IS LIMITED TO PIPE FROM 2 1/2" DIAMETER TO 36" DIAMETER INCLUSIVE.
3. GALVANIZED ANCHOR BOLT OR CONCRETE ANCHOR WITH TWO NUTS AND ONE LOCKWASHER. PROVIDE BAR 1/4" X 1/2" X 4" WELDED TO BOLT. (TYP OF 4)

ADJUSTABLE PIPE SUPPORT

NOT TO SCALE

3 CD-01



NOTE:
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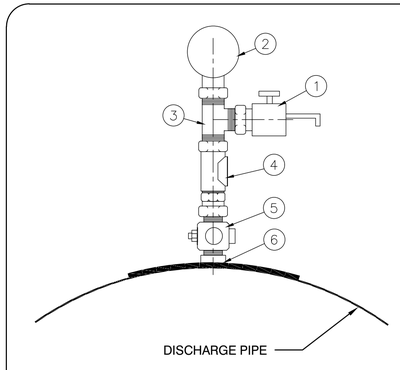
VENT PIPE

NOT TO SCALE

4 CD-01

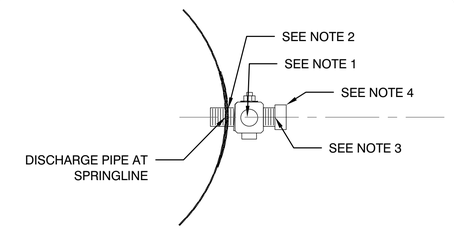


COMPONENT DESCRIPTIONS	
ITEM	DESCRIPTION
1	3/4" PLAIN END SPIGOT WITH 1" x 3/4" BUSHING
2	PRESSURE GAUGE; LIQUID FILLED & RATED FOR OUTDOOR EXPOSURE, 0-150 PSI RANGE, BUSHINGS OR ADAPTERS AS REQUIRED
3	1" MALE THREADED BRASS TEE
4	1" FEMALE THREADED DUAL CHECK VALVE BACKFLOW PREVENTER
5	1" CORP STOP
6	1" SERVICE SADDLE

SAMPLING PORT INSTALLATION DETAIL

NOT TO SCALE

5 CD-01



NOTES:
1. 1" CORPORATION STOP
2. 1" SERVICE SADDLE
3. CONTRACTOR TO PROVIDE REMOVABLE ROSSUM SAND TESTER PER SPECIFICATION SECTION 33 11 13
4. 1" CAP; MATERIAL TO MATCH CORPORATION STOP

ROSSUM SAND TESTER

NOT TO SCALE

6 CD-01

REVISIONS | NO. | DATE | SHEET

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CIVIL
No. 25215

DATE: 3/2/2023

TITLE: FLOYD LAMB PARK REPLACEMENT WELL 174A

SHEET: CIVIL DETAILS I

PREPARED FOR: CITY OF LAS VEGAS

BID # 23.691111.09 | PLANS LIB #650.144 | DATE: 3/2/23 | SUBMITTAL STAGE: ISSUE FOR BIDS | DESIGNED BY: AW | DRAWN BY: AW | CHECKED BY: PS

SHEET CD-01

10 OF 15

DRAWING NO.

3/7/23 F:\PROJECTS\400\485.483\DWG\1_PRODUCTION\6.CD-01.DWG

PRODUCTION WATER DISCHARGE PLAN
SCALE: 1"=60'

WELL STARTUP DISCHARGE WATER NOTE:

SEE SPECIFICATION SECTION 33 11 13 REGARDING DISCHARGE PERMIT REQUIREMENTS AND PROCEDURES FOR WELL STARTUP.

TRAFFIC CONTROL NOTE:

CONTRACTOR IS REQUIRED TO HAVE AN APPROVED TRAFFIC CONTROL PERMIT WITH THE CITY OF LAS VEGAS ASSOCIATED WITH THE DISCHARGE PIPING IN THE PUBLIC RIGHT OF WAY. THE APPROVED TRAFFIC CONTROL MEASURE SHALL STAY IN PLACE UNTIL DISCHARGE PIPING IS REMOVED.

F:\PROJECTS\400\412-683\DWG\7. PRODUCTION\7 CD-02.DWG
3/1/23

REVISIONS

NO.	DATE	SHEET

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CIVIL
No. 25215
DATE: 3/2/2023

TITLE
FLOYD LAMB PARK REPLACEMENT WELL 174A

SHEET
CIVIL DETAILS II

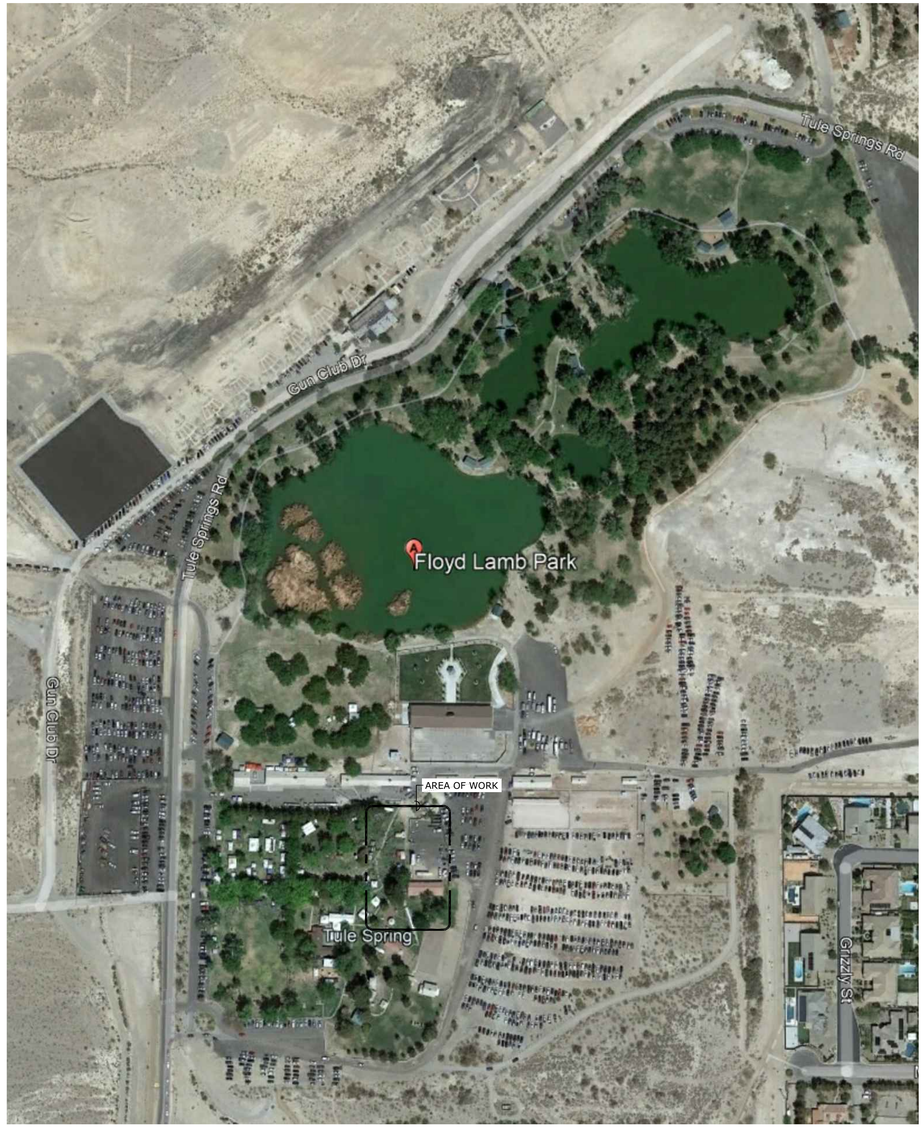
PREPARED FOR
CITY OF LAS VEGAS

BID # 23.691111.09 | DATE: 3/2/23
PLANS LIB #650.144 | DESIGNED BY: AW
SUBMITTAL STAGE: | DRAWN BY: AW
ISSUE FOR BIDS | CHECKED BY: PS

SHEET
CD-02
11 OF 15
DRAWING NO.

DRAWING INDEX

SHEET NUMBER	SHEET TITLE	ISSUE FOR BIDS DATE: 03-02-2023	**	**	**	**
E-01	SYMBOL LIST AND SITE OVERVIEW PLAN	●				
E-02	ELECTRICAL SPECIFICATIONS	●				
E-03	SINGLE-LINE DIAGRAM	●				
E-04	SITE ELECTRICAL PLAN	●				
	TOTAL	6				



A / E-01 SITE OVERVIEW PLAN
NTS

NORTH

ELECTRICAL SYMBOL LIST

NOTE: THIS IS A MASTER SCHEDULE. NOT ALL SYMBOLS AND/OR ABBREVIATIONS CONTAINED HEREIN MAY APPEAR ON THE DRAWINGS.
SHEETS AND/OR DESCRIPTIONS IN THESE PLANS AND DIAGRAMS SHALL SUPERSEDE THIS SYMBOL LIST (SYMBOL DEFINITION, FUNCTION, MOUNTING HEIGHTS, ETC. MOUNTING HEIGHTS SHALL BE TO CENTER OF THE BOX U.O.N)

ABBREVIATIONS

A, AMPS	AMPERES
AL	ALUMINUM
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFCI	ARC FAULT INTERRUPTER DEVICE
AIC	AMPERE INTERRUPTION CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
BKBD	BACKBOARD
C, C.	CONDUIT (W/ PULL CORD IF OTHERWISE EMPTY)
CU	COPPER
DIA.	DIAMETER
DIST	DISTRIBUTION
DH,H	DAYLIGHT HARVESTING
DMR	DIMMER
EVSE	ELECTRIC VEHICLE SUPPLY EQUIPMENT
(E)	EXISTING TO REMAIN
F	FUSE (DUAL-ELEMENT, TIME DELAY UON)
(F)	FUTURE
FBO	FURNISHED BY OTHERS
FF&E	FIXTURES, FURNISHINGS & EQUIPMENT
FPEN	FUSE PER EQUIPMENT NAMEPLATE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER DEVICE
G, GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
ID	INSIDE DIMENSION
IG	ISOLATED GROUND
K	KCMIL (EXAMPLES 300 KCMIL = 300K)
LCP	LIGHTING CONTROL PANEL
(N)	NEW
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OD	OUTSIDE DIMENSION
P	POLES
P-, PNL	PANEL
PH	PHASE
(R)	EXISTING - RELOCATE
RCP	ROOM CONTROL PANEL
REQD	REQUIRED
RGS	RIGID GALVANIZED STEEL
SPD	SURGE PROTECTIVE DEVICE (AKA TVSS)
SVC	SERVICE
SWBD	SWITCHBOARD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION (AKA SPD)
UNSW	UNSWITCHED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
W	WIRES
WP	WEATHERPROOF (NEMA 3R)
(X)	EXISTING - REMOVE
T-, XFMR	TRANSFORMER
30/3	AMPS/POLES REPRESENTATION (EXAMPLE: 30/3=30A,3P)

ELECTRICAL TAGS

- SHEET NOTE DESIGNATION
- 1002 — FEEDER DESIGNATION
- FB** — FLOORBOX / POKE-THROUGH DESIGNATION (SEE FLOORBOX / POKE-THROUGH SCHEDULE)
- PB** — PULLBOX DESIGNATION (SEE PULLBOX SCHEDULE)
- T15 , T300 — TRANSFORMER DESIGNATION (SEE TRANSFORMER SCHEDULE)
- FC * — MECHANICAL EQUIPMENT DESIGNATION
- CONNECTED: KVA (A)
DEMAND: KVA (A)
STANDBY: KVA (A) — DISTRIBUTION EQUIPMENT LOAD SUMMARY

LIGHT FIXTURES

- LIGHT FIXTURE - CEILING SURFACE MOUNTED. (DRAWN TO APPROXIMATE SHAPE AND SCALE OR ENLARGED FOR CLARITY)
- LIGHT FIXTURE - CEILING RECESSED MOUNTED. (DRAWN TO APPROXIMATE SHAPE AND SCALE OR ENLARGED FOR CLARITY)
- LIGHT FIXTURE - PENDANT, CHAIN, STEM OR CABLE SUSPENDED. (DRAWN TO APPROXIMATE SHAPE AND SCALE OR ENLARGED FOR CLARITY)
- LINEAR WALL BRACKET
- WALL SCONCE
- STEP LIGHT
- STRIP LIGHT FIXTURE - SURFACE MOUNTED
- STRIP LIGHT FIXTURE - PENDANT, CHAIN, STEM OR CABLE SUSPENDED
- STRIP LIGHT FIXTURE - WALL MOUNTED
- CONTINUOUS LIGHT FIXTURE ASSEMBLY - TAPE, NARROW CHANNEL, TUBE, ETC.

(LENGTH AS INDICATED)

- EXIT SIGNS - FACES (FILLED IN), ARROWS, AND MOUNTING AS INDICATED ON PLANS
- EMERGENCY LIGHTING UNIT - CEILING SURFACE OR RECESSED MOUNTED PER SCHEDULE
- EMERGENCY LIGHTING UNIT - WALL MOUNTED. LOCATE 12" BELOW CEILING UON. (10' MAX. UON)

LIGHT FIXTURES TAGS AND MODIFIERS

- WALL-WASH OR ACCENT.
- FIXTURE AND/OR EQUIPMENT ON EMERGENCY POWER.
- A - 1a — A - LIGHT FIXTURE TYPE, SEE SCHEDULE
1 - NUMBER INDICATES CIRCUIT NUMBER
a - LOWER-CASE LETTER INDICATES SWITCH LEG
- A - 1 - z1 — z1 - LOWER-CASE "z" W/ NUMBER INDICATES CONTROL ZONE.

SWITCHES @ +46" UON (DECORA STYLE UON)

$	SWITCH - SINGLE POLE
$2	SWITCH - TWO POLE
$3	SWITCH - THREE-WAY
$4	SWITCH - FOUR-WAY
$X	SWITCH - EMERGENCY (W/VOLTAGE BARRIER FROM NORMAL POWER DEVICES)
$P	SWITCH - PILOT LIGHT (CONFIRM LIT POSITION)
$K	SWITCH - KEY OPERATED
$C	SWITCH - MOMENTARY CONTACT: SPDT CENTER OFF UON
$M	MANUAL MOTOR STARTER: POLES AS INDICATED, HEATERS AS REQD.
$T	COUNTDOWN TIMER SWITCH: DURATION AS INDICATED
D	DIMMER SWITCH - SLIDER TYPE: 600W UON - MATCH FIXTURE CONTROL REQUIREMENTS (0-10V OR ELV UON) NOTE: 0-10V REQUIRES 2/C #18 STRANDED SHIELDED CONTROL WIRE. RUN SEPARATE FROM POWER WIRING.
(PE)	PHOTOCELL SWITCH: 1500W, WP W/ ADJUSTABLE LIGHT GATE UON

OCCUPANCY / VACANCY SWITCHES @ +46" UON

NOTE: (ALL DUAL-TECHNOLOGY WITH INTEGRAL OR ADJACENT POWER PACK)

M	SWITCH - SPST
[M]	SWITCH - SPST CEILING MOUNTED
M2	SWITCH - DPDT 2-CHANNEL HI-LOW CONTROL
MD	SWITCH - SPST DIMMER 0-10V OR W/ 10V-ELV POWER PACK ADAPTER
MP	SWITCH - SPST W/ AMBIENT LIGHT SENSOR (DAYLIGHT HARVESTING)
M2P	SWITCH - DPDT W/ AMBIENT LIGHT SENSOR
MDP	SWITCH - SPST DIMMER W/ AMBIENT LIGHT SENSOR 0-10V OR W/ 10V-ELV POWER PACK ADAPTER
(PE)	LOCAL-ONLY PHOTOCELL W/ INTEGRAL DIMMER (0-10V OR ELV W/ POWER PACK ADAPTER AS REQD)

(ADJUSTABLE PICKUP LEVEL FOR DAYLIGHT HARVESTING)

LIGHTING CONTROL SYSTEM - DEVICES @ +46" UON

- MS — MASTER LIGHTING CONTROL STATION
- OV — SYSTEM OCCUPANCY/VACANCY SENSOR
- RCP# — ROOM CONTROLLER PANEL
- SYSTEM LIGHTING CONTROL STATION
- PS — SYSTEM PHOTOCELL SENSOR - CEILING UON

EQUIPMENT, CONTROLS & CONNECTIONS

- SWITCHBOARD / SWITCHGEAR
- PANELBOARD - FLUSH, SURFACE
- TRANSFORMER
- GROUNDING BUS BAR
- VFD — VARIABLE FREQUENCY DRIVE
- E — ENCLOSED CIRCUIT BREAKER
- F, N — DISCONNECT SWITCH: 30/3 UON. F=FUSED (FPEN), N=NONFUSED
- RELAY
- CONTACTOR W/ INTEGRAL HOA SELECTOR
- MOTOR STARTER W/ INTEGRAL CONTROL TRANSFORMER, PILOT LIGHT & HOA SELECTOR
- COMBINATION STARTER & FUSIBLE DISCONNECT, 30/3, SIZE 1 UON
- SINGLE-PHASE MOTOR CONTROL ASSEMBLY: HP-RATED SWITCH AND POWER RELAY - 20/1 UON
- JUNCTION BOX - SIZE PER NEC REQUIREMENTS
- PB** — PULLBOX - SIZE AND LOCATION AS SCHEDULED (OTHERWISE AS REQUIRED BY CODE)
- CONTROL STATION - FUNCTION AS INDICATED, +46" UON
- SHUNT TRIP STATION - +72" AFF UON
- MOTOR
- SIGN — SIGN OUTLET
- EQUIPMENT PACKAGE - TYPE AS INDICATED
- CEILING FAN OUTLET (PROVIDE 5X STRUCTURAL BACKING)

SPECIALTY EQUIPMENT

- DOUBLE EV / SINGLE EV — ELECTRIC VEHICLE EVSE CHARGING STATION, LEVEL 2 UON, PEDESTAL MOUNT UON
- SAME AS ABOVE EXCEPT WALL MOUNT - ADA-COMPLIANT MOUNTING.
- COMBINATION INTERCONNECTABLE SMOKE/CO DETECTOR W/INTEGRAL HORN, STROBE & BACK-UP BATTERY.

FEEDERS AND CIRCUITING

———	ABOVE FLOOR OR GRADE	—P—	PRIMARY
- - -	BELOW FLOOR OR GRADE	—S—	SECONDARY
—o	TURN UP	—C—	COMMUNICATIONS
—•	TURN DOWN		SERVICE GROUND POINT
E—	STUB OUT & CAP	—SO—	SEAL-OFF FITTING

- TICS = NUMBER OF CIRCUIT WIRES IF MORE THAN TWO (/ = ISOLATED OR REDUNDANT GROUND WIRE)
- A-1,3,5 — HOMERUN: REPRESENTATION (EXAMPLE: 6#12 + 1#12 GROUND WIRE IN MIN. 3/4" C. UON TO PANEL 'A', CIRCUITS 1,3,5)

POWER RECEPTACLES @ +18" UON (DECORA STYLE UON)

- CLG. OR CASEWORK WALL — DUPLEX
- DUPLEX - INTEGRAL GFCI CIRCUITRY
- DUPLEX - HALF SWITCHED WITH "CONTROLLED" TEXT OR "⏻" SYMBOL ENGRAVING ON RECEPTACLE FACE
- DUPLEX - DOUBLE
- DUPLEX - DOUBLE W/ INTEGRAL GFCI CIRCUITRY
- DUPLEX - ISOLATED GROUND (ORANGE FACE) NEMA 5-20R/IG
- DUPLEX - WITH DUAL 200mA USB CHARGING PORTS
- H — DUPLEX - HOSPITAL GRADE (GREEN DOT) NEMA 5-20R/HG
- RECEPTACLE - SINGLE REGRESSED (CLOCK STYLE) HEIGHT AS INDICATED
- RECEPTACLE - SPECIAL (RATING AS INDICATED)
- A — RECEPTACLE - 30A. 125/250V. NEMA 14-30R (CLOTHES DRYER TYPE)
- B — RECEPTACLE - 50A. 125/250V. NEMA 14-50R (DOMESTIC RANGE TYPE)
- C — RECEPTACLE - 30A. 125/250V. NEMA L14-30R (TWIST LOCK TYPE)
- TP — TELE-POWER POLE (+ UON)
- SURFACE RACEWAY SYSTEM

RECEPTACLES & OUTLETS - MOUNTING AND ASSEMBLIES

- DEVICE MOUNTED IN OR ABOVE COUNTER BACKSPLASH MAX HEIGHT TO BE +46" UON (PER ADA)
- SD — DEVICES MOUNTED IN MULTIPLE UNDER COMMON COVERPLATE. MAX HEIGHT TO BE +46" UON (PER ADA)

FLOOR BOXES

NOTE: BASIC BOXES ARE SHOWN: ROUND PLASTIC BOX, IN CONCRETE SLAB, DECORA-STYLE DEVICES, FLUSH FLIP-LID OUTLET COVERS, FLANGED UNIVERSAL COVER PLATE (COLOR AS DIRECTED BY ARCHITECT)

- DUPLEX (DOUBLE-DUPLEX): HUBBELL #S1PFB-S1SP SERIES UON
- VOICE / DATA OUTLET (2 PORTS) - W/ 1" LOW VOLTAGE CONDUIT TO ACCESSIBLE ATTIC. HUBBELL #S1PFB-S1SP SERIES UON
- COMBINATION DUPLEX +2 PORT VOICE / DATA - W 1" LOW VOLTAGE CONDUIT TO ACCESSIBLE ATTIC HUBBELL #S1PFB-S1SP-SL21M SERIES UON
- FB** — FB — SPECIAL PURPOSE FLOOR BOX - TYPE AS SCHEDULED

LOW VOLTAGE SYSTEMS OUTLETS @ +18" UON

NOTE: THESE SYMBOLS ARE FOR OUTLETS OF GENERIC INSTALLATIONS. W/O FORMAL LOW VOLTAGE SYSTEMS DESIGN. IF COMMUNICATIONS/ITS SYSTEM DESIGN IS ISSUED FOR THIS PROJECT, THOSE SYMBOL'S AND REQUIREMENTS SHALL GOVERN.

- CLG. OR CASEWORK WALL — COMMUNICATION (VOICE/DATA) OUTLET (4-11/16" X 2-1/8" BOX W/ 1"C. TO ACCESSIBLE ATTIC UON)
- HC — HIGH CAPACITY COMMUNICATION (VOICE/DATA) OUTLET (5" SQUARE X 3" BOX W/ 1-1/4"C. TO ACCESSIBLE ATTIC UON)
- TELEVISION OUTLET (4-11/16" X 2-1/8" BOX W/ 1"C. TO ACCESSIBLE ATTIC UON)
- COMBINATION TV OUTLET (COAX + DATA) (5" SQUARE X 3" BOX W/ 1-1/4"C. TO ACCESSIBLE ATTIC UON)
- M — MICROPHONE OUTLET (4-11/16" X 2-1/8" BOX W/ 1"C. TO ACCESSIBLE ATTIC UON)
- VC — VOLUME CONTROL OUTLET (4-11/16" X 2-1/8" BOX W/ 1"C. TO ACCESSIBLE ATTIC UON)
- S — SPEAKER OUTLET INSTALL BACK BOX (FURNISHED BY OTHERS UON)

ACCESS CONTROL OUTLETS

NOTE: THESE SYMBOLS ARE FOR OUTLETS OF GENERIC INSTALLATIONS. W/O FORMAL ACCESS CONTROL DESIGN. IF ACCESS CONTROL DESIGN IS ISSUED FOR THIS PROJECT, THOSE SYMBOLS AND REQUIREMENTS SHALL GOVERN.

- CLG. OR CASEWORK WALL — KC — KC — INITIATING DEVICE OUTLET @ +46" UON (KEYPAD, CARD SWIPE, REQUEST-TO-EXIT, MOTION SENSOR, ETC.)
- AC — ACTUATION DEVICE IN OR NEAR DOOR FRAME UON (STRIKE, LATCH, ELECTROMAGNET, MOTOR, ETC.)

David J. Melroy III

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PROFESSIONAL ENGINEER STATE OF NEVADA — DAVID MELROY — EXP: 12/31/2023 — ELECTRICAL — NO. 010379
03-02-2023

TITLE
FLOYD LAMB PARK
REPLACEMENT WELL 174A

SHEET
SYMBOL LIST AND
SITE OVERVIEW PLAN

PREPARED FOR
CITY OF LAS VEGAS

BID # 23.691111.09	DATE: 03-02-2023	DESIGNED BY: IMEG	CHECKED BY: PE
PLANS LIB # 650.144		DRAWN BY: IMEG	
SUBMITTAL STAGE: ISSUE FOR BIDS			

SHEET
E-01
12 OF 15
DRAWING NO.

2/28/23 \\FILES\ACTIVE\PROJECTS\2022\22005814.00\ARTLAB\ESIGN\CAD\ELEC\E-01.DWG

ELECTRICAL SPECIFICATIONS

PART ONE - GENERAL

1.1. THE WORK: ALL WORK SHALL BE NEW UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE THE WORK SHOWN ON THE DRAWINGS AND SPECIFIED FOR ITS INDIVIDUAL SECTIONS OF WORK. THE WORD "WORK" IS DEFINED AS ALL LABOR, TRANSPORTATION, MATERIAL, EQUIPMENT, TOOLS, INSTALLATION, SUPERVISION AND ANY OTHER INCIDENTAL ITEMS OR SERVICES NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE COMPLETE SYSTEMS, WHICH SHALL BE PROVIDED BY THIS CONTRACTOR WHETHER OR NOT SPECIFICALLY INDICATED OR NOTED.

1.2. RESPONSIBILITY: THIS CONTRACTOR IS SOLELY RESPONSIBLE FOR THE ACTIONS OF ITS PERSONNEL, SUPPLIERS, AND SUB-CONTRACTORS. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PERFORMANCE OF ALL WORK AS MAY BE REQUIRED TO ACCOMMODATE OR SUPPORT THE ELECTRICAL WORK. EXAMPLES: PAINTING, STRUCTURAL SUPPORTS, CUTTING AND PATCHING, EXCAVATION AND BACKFILL, CONCRETE PADS, ROOF JACKS, ETC. REQUIRING THIS CONTRACTOR'S ENGAGEMENT OF APPROPRIATE TRADES TO PERFORM SUCH WORK FOR THE PROPER INSTALLATION AND OPERATION OF COMPLETE ELECTRICAL SYSTEMS.

1.3. MINIMUM REQUIREMENTS: THESE SPECIFICATIONS ESTABLISH THE MINIMUM REQUIREMENTS FOR THE WORK AND MATERIALS, EQUIPMENT AND METHODS TO BE PROVIDED. THE DRAWINGS MAY INDICATE REQUIREMENTS WHICH EXCEED THESE MINIMUMS.

1.4. GENERAL CONDITIONS: ALL GENERAL CONDITIONS, SPECIAL REQUIREMENTS OR GENERAL REQUIREMENTS OF THE CONSTRUCTION SPECIFICATIONS ARE MADE PART OF THIS SPECIFICATION AND HAVE THE SAME FORCE AND EFFECT AS IF COMPLETELY REPRODUCED.

1.5. DEFINITIONS:

AHJ:	AUTHORITY HAVING JURISDICTION.
ASSEMBLY:	AN INSTALLATION OR SYSTEM OF MULTIPLE COMPONENTS REQUIRING MULTIPLE CONNECTIONS. (EXAMPLES: TRASH COMPACTOR, MOTORIZED DOOR, HVAC SPLIT SYSTEM, ETC.).
EQUAL:	ACCEPTED BY THE ENGINEER AS EQUAL.
FF&E:	FURNISHINGS, FIXTURES AND EQUIPMENT - PROVIDED BY OTHERS AT JOBSITE. RECEIVE, PROTECT, STORE, ASSEMBLE, INSTALL AND CONNECT. PROVIDE MINIMUM 5x STRUCTURAL BACKING. (EXAMPLES: CHANDELIERS, PROJECTORS, ETC.).
PROVIDE:	FURNISH, INSTALL, ACTIVATE, AND COMMISSION.

1.6. CODES: ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC) AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

1.7. DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND SCHEMATIC IN NATURE, AND INDICATE THE TYPE, SIZE, ARRANGEMENT AND LOCATIONS OF MATERIALS AND EQUIPMENT. WORK INCLUDES CERTAIN COMPONENTS, APPURTENANCES, AND RELATED SPECIALTIES THAT MAY NOT BE SHOWN. PROVIDE ALL NECESSARY ITEMS TO COMPLETE THE WORK ACCORDING TO INDUSTRY STANDARDS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO REQUIRE FINISHED WORK, TESTED AND READY FOR OPERATION. DO NOT SCALE DRAWINGS. ARRANGEMENT OF EQUIPMENT AND ROUTING OF FEEDERS AND BRANCH CIRCUITING SHALL BE PLUMB AND AT RIGHT ANGLES TO BUILDING CONSTRUCTION, AND MAY REQUIRE MODIFICATION DUE TO UNFORESEEN CONDITIONS REQUIRING ONSITE REVISIONS DURING CONSTRUCTION. (SEE ALSO "BIDDING").

1.8. COORDINATION: THIS PROJECT REQUIRES A HIGH LEVEL OF COORDINATION AND COOPERATION WITH OWNER, ARCHITECT, OTHER TRADES, VENDORS, AND SPECIALTY CONTRACTORS. CAREFULLY EXAMINE ALL CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, SHOP DRAWINGS, ETC. FOR ALL GENERAL CONSTRUCTION, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND SPECIALTY CONTRACTOR WORK. PRIOR TO ROUGH-IN, COORDINATE THE WORK WITH ALL OTHER TRADES, TAKING RESPONSIBILITY FOR THE PROPER FITTING OF MATERIAL INTO THE BUILDING AS PLANNED WITHOUT INTERFERENCE WITH OTHER WORK. ESTABLISH AND VERIFY LOCATIONS, HEIGHTS, CONNECTION METHODS, ETC. WITH EQUIPMENT INSTALLER (AND OWNER, ARCHITECT, AND/OR INTERIOR DESIGNER FOR FF&E ITEMS), AND MAKE REASONABLE MODIFICATIONS IN THE LAYOUTS NEEDED TO PREVENT CONFLICTS WITH OTHER TRADES IN ORDER TO PROVIDE ACCESS FOR THE PROPER EXECUTION OF THE WORK.

1.9. IDENTICAL: ALL WORK REQUIRED FOR IDENTICAL ITEMS AND ASSEMBLIES OF THE PROJECT SHALL BE PROVIDED, ALTHOUGH EACH SPECIFIC IDENTICAL ITEM MAY NOT BE SHOWN IN DETAIL.

1.10. VERIFICATION: CHECK AND VERIFY ALL SIZES, DIMENSIONS, AND CONDITIONS BEFORE STARTING ANY WORK. ANY DEVIATION(S) OR PROBLEM(S) SHALL BE TRANSMITTED TO THE ENGINEER FOR REVIEW.

1.11. CONNECTIONS: CONNECT ALL EQUIPMENT, SYSTEMS, AND ASSEMBLIES PROVIDED BY OTHERS INCLUDING CONTROLS, SAFETY DEVICES AND INTERCONNECTIONS. EXCEPTION: DO NOT INTERCONNECT THE CONTROL SYSTEMS OF THOSE MECHANICAL AND PLUMBING SYSTEMS WHICH ARE SPECIFICALLY NOTED TO BE THE RESPONSIBILITY OF THOSE TRADES. PROVIDE FUSIBLE DISCONNECT SWITCHES AND MOTOR STARTERS FOR ALL EQUIPMENT EXCEPT THOSE ITEMS WHICH ARE SPECIFICALLY LISTED WITH INTEGRAL STARTERS/DISCONNECT SWITCHES. WHERE STARTERS AND/OR DISCONNECT SWITCHES ARE FURNISHED TOGETHER WITH EQUIPMENT, RECEIVE, INSTALL, AND CONNECT THOSE ITEMS.

1.12. SUBMITTAL: SUBMIT TO THE ENGINEER COMPLETE ELECTRONIC SETS OF SHOP DRAWINGS AND TECHNICAL DATA SHEETS FOR ALL EQUIPMENT AND MATERIALS SPECIFIED HEREIN. THE ENGINEER SHALL REVIEW SHOP DRAWINGS AND TECHNICAL DATA SHEETS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND ISSUE A WRITTEN ASSESSMENT TO THE OWNER PRIOR TO COMMENCEMENT OF WORK. THE ENGINEER'S FAILURE TO CORRECT ERRORS IN THE SUBMITTAL SHALL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATION TO PERFORM THE WORK AS SHOWN AND/OR SPECIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENGINEERING FEES NECESSARY TO CHANGE PROJECT DOCUMENTS BASED ON ALTERNATE SUBMITTAL PACKAGES/ EQUIPMENT SUBSTITUTIONS.

1.13. AS-BUILT: UPON COMPLETION OF CONSTRUCTION, SUPPLY THE ENGINEER WITH AS-BUILT DOCUMENTS ACCURATELY SHOWING THE MATERIALS AND EQUIPMENT AS INSTALLED. PROVIDE OPERATION AND MAINTENANCE MANUAL(S) CONTAINING APPROVED SHOP DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTION FOR SWITCHGEAR, LIGHTING FIXTURES, CONTROLS, AND SPECIALTY EQUIPMENT.

1.14. GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER (LONGER IF REQUIRED BY GENERAL AND/OR SPECIAL CONDITIONS). IN ADDITION, THE INSTALLATION SHALL BE GUARANTEED TO PERFORM AS SPECIFIED AND FULFILL EACH AND EVERY REQUIREMENT OF THE DRAWINGS AND SPECIFICATIONS WHEN OPERATED IN ACCORDANCE WITH THE CONTRACTOR'S INSTRUCTIONS. SHOULD THE INSTALLATION IN ANY WAY FAIL TO DO SO, THE CONTRACTOR WILL, WITHOUT DELAY AND WITHOUT COST TO THE OWNER, PROVIDE WHATEVER ADDITIONAL EQUIPMENT, MATERIAL, AND LABOR REQUIRED TO CORRECT THE DEFICIENCY AND COMPLY WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. WHERE SPECIFIED EQUIPMENT HAS A LONGER GUARANTEE PERIOD, THE TERMS OF THAT GUARANTEE SHALL GOVERN (EXAMPLE: LED SYSTEM WITH 5 YEAR GUARANTEE). INCANDESCENT LAMPS ARE EXEMPT BUT SHALL BE NEW AND UNUSED AT THE TIME OF FINAL ACCEPTANCE.

BIDDING

1.15. SITE VISIT: CONTRACT DOCUMENTS INDICATE NEW WORK TO BE PERFORMED AND DO NOT PURPORT TO SHOW ALL EXISTING CONDITIONS. VISIT THE SITE PRIOR TO SUBMITTING A BID TO BECOME FAMILIAR WITH EXISTING CONDITIONS. COMPARE THE WORK SPECIFIED IN THE CONTRACT DOCUMENTS AGAINST EXISTING CONDITIONS, AND IDENTIFY AND ANNOTATE ALL WORK OR CONDITIONS THAT ARE DIFFERENT FROM THE CONTRACT DOCUMENTS OR THEIR INTENT. UPON DISCOVERY, IMMEDIATELY NOTIFY AND REPORT IN WRITING ANY DISCREPANCIES TO THE ENGINEER. NO EXTRAS OR CHANGE ORDERS WILL BE ALLOWED FOR FAILURE TO PERFORM THE PRE-BID SITE VISIT.

1.16. BIDDING: THE CIVIL, ARCHITECTURAL, MECHANICAL, AND/OR OTHER DISCIPLINE'S DRAWINGS MAY CONTAIN DETAILED DESCRIPTIONS, CIRCUITING, AND CONNECTION REQUIREMENTS WHICH ARE PART OF THIS CONTRACTOR'S RESPONSIBILITIES. DO NOT SUBMIT BIDS ON THIS PROJECT PRIOR TO REVIEWING ALL PROJECT DRAWINGS, SPECIFICATIONS, AND ADDENDA.

PART TWO - PRODUCTS

2.1. MATCH EXISTING: EXISTING EQUIPMENT AND SYSTEMS SHALL BE CONSIDERED A MINIMUM STANDARD TO BE MET, IF NOT OTHERWISE EXCEEDED BY THESE PLANS AND SPECIFICATIONS. NEW MATERIALS AND EQUIPMENT SHALL MATCH EXISTING IN APPEARANCE AND FUNCTION.

2.2. EXISTING SWITCHGEAR: CHANGES TO EXISTING PANELBOARDS AND DISTRIBUTION EQUIPMENT SHALL BE MADE WITH MATCHING COMPONENTS. NEW CIRCUIT PROTECTIVE DEVICES SHALL BE MANUFACTURER-CERTIFIED AS COMPATIBLE WITH EXISTING EQUIPMENT, AND SHALL EQUAL OR EXCEED EQUIPMENT FAULT CURRENT (AIC) RATINGS.

2.3. EQUIPMENT STANDARDS: ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). EQUIPMENT SHALL BE CONSTRUCTED TO NEMA STANDARDS AND SHALL BE LABELED FOR THEIR INTENDED PURPOSE BY A RECOGNIZED TESTING AGENCY ACCEPTABLE TO THE AHJ (U.L., CSA, ETL, ETC.).

2.4. ACCEPTABLE MANUFACTURERS AND SUPPLIERS: WHERE EQUIPMENT AND MATERIALS ARE NOT SPECIFIED BY NAME THEY ARE DEEMED TO GENERIC, SUBJECT TO THE REQUIREMENTS LISTED HEREIN. THESE MANUFACTURERS ARE CONSIDERED CAPABLE OF OFFERING EQUIVALENT PRODUCTS. MINIMUM STANDARD IN ALL INSTANCES IS COMMERCIAL GRADE:

SWITCHGEAR:	EATON, GENERAL ELECTRIC, SIEMENS, SQUARE D
LIGHT FIXTURES:	ACUITY, COOPER, HUBBELL, THOMAS
WIRING DEVICES:	HUBBELL, LEVITON, LEGRAND, WIREMOLD

2.5. CIRCUITING: ALL WIRING SHALL BE IN CONDUIT, CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL INSULATED THROAT SET SCREW FITTINGS MAY BE USED IN DRY, PROTECTED INTERIOR LOCATIONS. PVC SCHEDULE 40 SHALL BE USED BELOW GRADE AT MINIMUM -24". WRAPPED RIGID ELBOWS AND RISERS SHALL BE USED FOR ALL THROUGH-GRADE TRANSITIONS AND STUB-UPS. RGS OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN ALL LOCATIONS WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE. IMC OR RIGID CONDUIT BELOW GRADE SHALL BE HALF-LAP WRAPPED WITH 20 MIL PVC TAPE. TYPE ENT RACEWAY IS NOT ALLOWED. CONNECT RECESSED AND SUSPENDED LIGHTING FIXTURES, MOTORIZED AND/OR VIBRATING EQUIPMENT WITH STEEL FLEX OR SEALTITE CONDUIT. ALL CONDUIT SHALL HAVE PULL CORD IF OTHERWISE EMPTY.

2.6. MC CABLE: THE USE OF MC CABLE IS NOT SUITABLE OR PERMISSIBLE FOR THIS PROJECT.

2.7. WIRING: ALL WIRE SHALL BE COPPER, STRANDED IN SIZES #8 AWG AND LARGER. INSULATION SHALL BE TYPE THWN OR THHN. SINGLE PHASE BRANCH CIRCUITS SHALL INCLUDE A SEPARATE NEUTRAL WIRE WITH EACH PHASE WIRE. NEUTRAL SHALL BE WHITE WITH COLOR STRIPE MATCHING COLOR OF PHASE WIRE.

2.8. FUSES AND CIRCUIT BREAKERS: FUSES AND CIRCUIT BREAKERS SHALL BE SIZED PER ACTUAL RESPECTIVE APPLICATION (i.e., MOTOR CIRCUIT PROTECTOR, GROUND FAULT CIRCUIT INTERRUPTER, ARC FAULT CIRCUIT INTERRUPTER, ETC.). FUSES SHALL BE DUAL ELEMENT, CURRENT-LIMITING, AND SHALL BE INTERCHANGEABLE BETWEEN FRAME SIZES WITH STANDARD FACTORY FUSE REDUCERS. PROVIDE LOCKABLE SPARE FUSE CABINET WITH (3) SPARE FUSES OF EACH SIZE USED.

2.9. DISTRIBUTION SWITCHGEAR: SWITCHGEAR SHALL HAVE COPPER BUS AND HEAVY GAUGE HOUSINGS. SWITCHGEAR IN LOCATIONS OTHER THAN LOCKED ELECTRIC ROOMS SHALL HAVE LOCKABLE COVERS. SWITCHGEAR SHALL HAVE NO LESS THAN 20% SPARE BUSSED AND USABLE SPACE, MEASURED AS A PERCENTAGE OF THE SPACE OCCUPIED BY SPECIFIED CIRCUIT BREAKERS, SWITCHES, ETC.

2.10. SERVICE SWITCHGEAR: IN ADDITION TO THE ABOVE, SERVICE SWITCHGEAR SHALL MEET THE REQUIREMENTS OF THE SERVING UTILITY.

2.11. PANELBOARDS: PANELS SHALL HAVE COPPER BUS AND HARDWARE, BOLT-ON CIRCUIT BREAKERS, FLUSH MONO-FLAT TRIM, PIANO HINGED DOORS AND COVER (DOOR-IN-DOOR) WITH LOCKABLE MASTER-KEYED FLUSH LATCHES. FLUSH-MOUNTED PANELS SHALL HAVE EMPTY CONDUITS STUBBED TO ACCESSIBLE ATTIC SPACE: (1) 3/4" CONDUIT FOR EACH THREE (3) SPARE/SPACE CIRCUITS.

2.12. SAFETY SWITCHES: SWITCHES SHALL BE GENERAL DUTY UP TO 250 VOLTS, HEAVY DUTY ABOVE 250 VOLTS. FUSIBLE SWITCHES SHALL BE FUSED PER THE NAMEPLATE REQUIREMENTS OF THE EQUIPMENT BEING CONNECTED.

2.13. MOTOR STARTERS: STARTERS SHALL BE MINIMUM NEMA SIZE 1 WITH INTEGRAL CONTROL TRANSFORMER, RED NEON "RUN" PILOT LIGHT AND "ON-OFF-AUTO" SELECTOR SWITCH ON COVER. OVERLOAD DEVICES SHALL BE SIZED PER THE NAMEPLATE AMPERAGE OF THE EQUIPMENT BEING CONTROLLED.

2.14. CONTACTORS: CONTACTORS SHALL BE ELECTRICALLY-HELD WITH "ON-OFF-AUTO" SELECTOR SWITCH ON COVER.

2.15. RATINGS: ALL ELECTRICAL EQUIPMENT SHALL BE FULLY RATED FOR BRACING IN EXCESS OF THE MAXIMUM AVAILABLE FAULT CURRENT CALCULATED AND SHOWN AT THE EQUIPMENT CONNECTION POINT WITHIN THE DISTRIBUTION SYSTEM. MINIMUM RATING SHALL BE 10K AIC.

2.16. WIRING DEVICES: WIRING DEVICES (SWITCHES, RECEPTACLES, ETC.) SHALL BE SPECIFICATION GRADE, MINIMUM 20-AMP RATED. WIRING DEVICES EXPOSED TO THE ELEMENTS SHALL HAVE WEATHERPROOF-IN-USE LOCKABLE COVERS. RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.

2.17. TRANSFORMERS: TRANSFORMERS SHALL BE TYPE TP-1 MINIMUM, WITH ALUMINUM WINDINGS, RATED FOR 150°C RISE (UNLESS OTHERWISE NOTED), MOUNTED ON RUBBER-IN-SHEAR VIBRATION ISOLATORS, CONNECTED WITH FLEXIBLE CONDUIT. PUBLISHED AND MEASURED NOISE RATING SHALL NOT EXCEED NEMA TP-20 MAXIMUM.

2.18. TAMPERPROOF: ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE DEMONSTRATED TO BE TAMPERPROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PAD LOCKABLE.

PART THREE - EXECUTION

3.1. GROUNDING: GROUND ALL EQUIPMENT AND SYSTEM NEUTRAL IN ACCORDANCE WITH THE REQUIREMENTS OF NEC ARTICLE 250. PROVIDE CODE-SIZED EQUIPMENT GROUNDING CONDUCTOR IN ALL FEEDERS AND BRANCH CIRCUIT RACEWAYS. WHERE ISOLATED GROUNDS ARE INDICATED, PROVIDE INSULATED CONDUCTOR (GREEN WITH YELLOW STRIPE).

3.2. DEMOLITION: PROVIDE COMPLETE ELECTRICAL DEMOLITION - REMOVE EXISTING OUTLETS AND EQUIPMENT IN CONFLICT WITH NEW CONDITIONS. EXISTING CONDUITS REMOVED FROM SERVICE MAY BE ABANDONED IN PLACE IF IN A CONCEALED LOCATION. REMOVE ALL WIRE FROM ABANDONED RACEWAYS. CONTRACTOR SHALL ENSURE CONTINUITY OF EXISTING CIRCUITING PASSING THROUGH DEMOLITION AREAS - EXTEND AND/OR RELOCATE AS NECESSARY. SHIFT OR RELOCATE EXISTING EQUIPMENT AND CIRCUITING AS REQUIRED TO ACCOMMODATE NEW WORK.

3.3. EXISTING SWITCHGEAR: REUSE EXISTING SWITCHGEAR AND PANELBOARDS IN PLACE WHERE SO INDICATED - MODIFY AS REQUIRED TO ACCOMMODATE NEW REQUIREMENTS. PROVIDE NEW CIRCUIT BREAKERS AND/OR FUSES AS REQUIRED WITH AIC RATING TO MEET OR EXCEED THAT OF EXISTING DEVICES. REARRANGE EXISTING CIRCUITS WITHIN PANELS TO AGREE WITH NEW PANEL SCHEDULES. TRACE AND IDENTIFY ALL EXISTING CIRCUITS ON NEW TYPED AS-BUILT PANEL SCHEDULES.

3.4. EXISTING OUTLETS: EXISTING OUTLETS AND CIRCUITING NOT IN CONFLICT WITH NEW CONDITIONS SHALL REMAIN. EXTEND OUTLETS TO NEW SURFACES, CAULK AND PROVIDE JUMBO PLATES AS REQUIRED TO PRESENT A SERVICEABLE AND FINISHED APPEARANCE.

3.5. TEMPORARY CONSTRUCTION POWER: PROVIDE TEMPORARY ELECTRICAL POWER DISTRIBUTION AND LIGHTING AS REQUIRED FOR ALL TRADES THAT REQUIRE SERVICE DURING THE COURSE OF THIS PROJECT IN COMPLIANCE WITH ALL NEC AND OSHA REQUIREMENTS. OWNER SHALL NOT BE RESPONSIBLE FOR TEMPORARY POWER CHARGES.

3.6. LOCATIONS: INDICATED LOCATIONS OF ALL OUTLETS AND EQUIPMENT ARE SUBJECT TO CHANGE. SHIFT/RELOCATE/RECONFIGURE ANY OUTLET, EQUIPMENT OR CONNECTION POINT UP TO 10' AS DIRECTED BY ENGINEER AT NO ADDED COST.

3.7. WORKMANSHIP: THE WORK SHALL BE INSTALLED PARALLEL AND AT RIGHT ANGLES TO THE BUILDING LINES, LEVEL AND PLUMB. THE WORK SHALL BE WELL SUPPORTED AND SOLIDLY MOUNTED. DRESS AND TIE WIRING IN PANELBOARDS AND SWITCHGEAR. THE WORK SHALL BE LEFT CLEAN WITH NO DIRT, DENTS, ABRASIONS, PAINT SPLATTERS, OR OTHER IRREGULARITIES.

3.8. SUPPORTS AND HANGERS: PROVIDE 3" HIGH HOUSEKEEPING CONCRETE PAD BENEATH FLOOR MOUNTED EQUIPMENT, EXTENDING 3" BEYOND EQUIPMENT FOOTPRINT. SUPPORT AND ALIGN ALL RACEWAYS, CABINETS, BOXES, BACK BOXES, FIXTURES, AND EQUIPMENT FROM STRUCTURE. SECURE ALL SUPPORTING METHODS BY MEANS OF TOGGLE BOLTS IN HOLLOW MASONRY, EXPANSION BOLTS IN SOLID MASONRY, CONCRETE PRESET INSERTS OR EXPANSION BOLTS IN CONCRETE, MACHINE SCREWS OR BOLTS IN METAL, AND WOOD SCREWS IN WOOD CONSTRUCTION. ALL SUPPORTING SYSTEMS AND COMPONENTS SHALL BE RATED FOR A MINIMUM OF FIVE (5) TIMES THE ACTUAL LOAD.

3.9. SLEEVES AND PENETRATIONS: PENETRATIONS OF ALL SURFACES SHALL BE PROVIDED WITH SLEEVES THAT SHALL BE SEALED WITH LIKE MATERIALS AND SHALL BE FINISHED WITH ESCUTCHEON PLATES. PENETRATIONS BELOW GRADE LEVEL SHALL BE WATERTIGHT. PENETRATIONS AT EXTERIOR WALLS SHALL BE WEATHERPROOF. ROOF PENETRATIONS SHALL BE FLASHED AND COUNTER FLASHED.

3.10. EXPANSION AND CONTRACTION: RACEWAYS PASSING THROUGH BUILDING EXPANSION JOINTS, ON ROOF, AND IN AREAS OF TEMPERATURE VARIATIONS GREATER THAN 30°F SHALL BE INSTALLED WITH EXPANSION FITTINGS.

3.11. IDENTIFICATION: IDENTIFY ALL EQUIPMENT, SWITCHBOARD CIRCUITS AND ELECTRICALLY-CONNECTED EQUIPMENT WITH ENGRAVED NAMEPLATES. BOXES SHALL BE MARKED WITH PANEL AND CIRCUIT NUMBERS (PERMANENT PEN ACCEPTABLE ABOVE CEILING). NAMEPLATES SHALL BE FASTENED WITH A MINIMUM OF TWO (2) SCREWS. PANEL DIRECTORIES SHALL BE TYPED. CONDUCTORS SHALL BE TAGGED WITH CIRCUIT NUMBERS AT SOURCE, JUNCTION BOXES, AND ALL OUTLET BOXES WITH PERMANENT ADHESIVE MARKER STRIP. IDENTIFY WIRING DEVICES WITH SELF ADHESIVE CLEAR SATIN FINISH LABELS WITH SOURCE AND CIRCUIT NUMBER.

3.12. ELECTRICALLY-OPERATED EQUIPMENT: VERIFICATION AND SUBSTITUTION: FEEDERS AND OVER-CURRENT DEVICES (INCLUDING STARTERS, DISCONNECTS, ETC.) HAVE BEEN DESIGNED BASED ON INFORMATION PROVIDED BY THE RESPONSIBLE CONSULTANT AND/OR DESIGNATED SUPPLIER. PRIOR TO ROUGH-IN, COORDINATE WITH THE APPROPRIATE TRADE AND/OR INSTALLER TO DETERMINE THAT THE ACTUAL NAMEPLATE ELECTRICAL REQUIREMENTS MATCH THIS DESIGN. ALL ADDITIONAL ELECTRICAL COSTS RELATED TO THE CONNECTION OF EQUIPMENT WHICH VARIES FROM THE ORIGINAL SPECIFICATIONS SHALL BE RESOLVED WITHIN THE CONSTRUCTION TEAM AT NO ADDITIONAL COST TO THE OWNER.

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PROFESSIONAL ENGINEER - STATE OF NEVADA
DAVID MERCH
EXP: 12/31/2023
ELECTRICAL
NO. 010379
03-02-2023

REVISIONS | NO. | DATE | SHEET

TITLE: FLOYD LAMB PARK REPLACEMENT WELL 174A

SHEET: ELECTRICAL SPECIFICATIONS

PREPARED FOR: CITY OF LAS VEGAS

BID # 23.691111.09 | DATE: 03-02-2023 | DESIGNED BY: IMEG | DRAWN BY: IMEG | CHECKED BY: PE

PLANS LIB # 650.144 | SUBMITTAL STAGE: ISSUE FOR BIDS

SHEET E-02
13 OF 15
DRAWING NO.

2/28/23 \\FILES\ACTIVE\PROJECTS\2022\22009814\00\VIRTUALDESIGN\2-ADI\ELEC-02.DWG

VOLTAGE DROP CALCULATION

WIRE SIZING CALCULATION
2017 NEC Article 310

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Full Load Amperage ..............  : 96
Source Voltage ..................  : 480
Length of Run (Feet) ............  : 675
Load Duty .......................  : Continuous

Conductor Application ..........  : Conductors in Raceway, Cable or Earth
Conductor Ampacity Table .......  : NEC Table 310-15(B)(16)
Conductor Type .................  : RHW-2  Copper
Conductor Location .............  : Dry/Wet
Conductor Insulation Temperature : 90 °C

Ambient Temperature ............  : 26-30 °C =    78-86 °F

Terminal Temperature Rating ....  : 75 °C

Circuit Type : Three Phase 3 Wire (3 phase conductors)

Qty. of Circuit Current-Carrying Conductors  : 3

Conductor Requirement:
Full Load Amps ...........  : 96.0
Load Duty Multiplier .....  : 1.25
Ambient Temp. Multiplier .  : 1.0
Qty. Conductors Multiplier  : 1.0
-----------------------------------
Required Conductor Ampacity: 120.0

Terminal Requirement:
Full Load Amps ...........  : 96.0
Load Duty Multiplier .....  : 1.25
-----------------------------------
Required Terminal Ampacity : 120.0

Selected Conductor:
Conductor Ampacity .......  : 175.0
Ambient Temp. Derate .....  : 1.0
Qty. Conductors Derate ...  : 1.0
-----------------------------------
Adjusted Ampacity ........  : 175.0

SELECTED CONDUCTOR SIZE : 2/0 Awg

      0.866 x 2 x Ohms/MilFt x Length x Amps    0.866 x 2 x 0.0967 x 675 x 120.0
VD = ---------------------------------------- = ---------------------------------- = 10.85
            1000 x Qty Wires per Phase                      1000 x 1


Volts At Load Terminals......  : 469.15
Actual Percent Voltage Drop .  : 2.26
```

SINGLE-LINE NOTES

1. ALL SWITCHGEAR, PANELBOARDS, ETC. ARE TO BE UL LISTED FOR THEIR LOCATION AND INTENDED USE. ALL EQUIPMENT SHALL BE BRACED FOR FAULT CURRENT RATINGS ASSOCIATED WITH THEIR VOLTAGE AND LOCATION WITHIN THE SYSTEM.
2. ALL EQUIPMENT, FEEDERS, CIRCUITS, SERVICES, ETC. SHALL BE GROUNDED PER NEC ARTICLE 250.
3. ALL FEEDERS ARE BASED ON COPPER CONDUCTORS AND SHALL CARRY A SEPARATE GROUNDING CONDUCTOR.
4. PANELBOARDS SHALL BE OF PANELBOARD CONSTRUCTION WITH COPPER BUSSING, BOLT-ON CIRCUIT BREAKERS, FACTORY INSTALLED MAIN (WHERE INDICATED), DEAD FRONT COVER WITH LOCKABLE DOOR, AND TYPED PANEL DIRECTORY.
5. ALL ELECTRICAL EQUIPMENT (i.e. SWITCHBOARDS, PANELBOARDS, DISCONNECTS, STARTERS, ETC.) SHALL HAVE A NAMEPLATE. THE NAMEPLATE SHALL BE PHENOLIC WITH ENGRAVED WHITE LETTERS AND SHALL PROVIDE THE FOLLOWING INFORMATION:

   LINE 1 - "EQUIPMENT NAME"
   LINE 2 - "FED FROM ..."
   LINE 3 - "VOLTAGE, AMPACITY, PHASE"
   LINE 4 - "DATE INSTALLED"

   NAMEPLATES SHALL BE SIZED BASED ON THE FOLLOWING:

   SWITCHBOARDS, DISTRIBUTION BOARDS, TRANSFORMERS:
   LINE 1 = 1/2" LETTERS, LINES 2, 3, & 4 = 1/4" LETTERS

   PANELBOARDS, MOTOR CONTROL CENTERS, DISCONNECTS, STARTERS, ETC:
   LINE 1 = 3/8" LETTERS, LINES 2, 3, & 4 = 1/4" LETTERS

   NAMEPLATE COLORS SHALL BE AS FOLLOWS:

   BLACK = NORMAL POWER
   RED = LIFE SAFETY/EMERGENCY POWER
   BLUE = STANDBY POWER
   GREEN = INVERTOR POWER

   ALL NAMEPLATES SHALL BE FASTENED WITH A MINIMUM OF TWO (2) SCREWS. NO SELF ADHESIVE NAMEPLATES ARE ALLOWED.
6. ALL CONDUCTORS HAVE BEEN REVIEWED FOR VOLTAGE DROP. CONTRACTOR IS TO NOTIFY ENGINEER IF FIELD CONDITIONS SUBSTANTIALLY INCREASE CONDUCTOR LENGTH.
7. ALL FLOOR-STANDING EQUIPMENT LOCATED AT GRADE OR BELOW SHALL HAVE A MINIMUM 4" HIGH HOUSEKEEPING PAD INSTALLED UNDER THEM. PAD SHALL EXTEND 4" BEYOND EQUIPMENT FOOTPRINT IN ALL DIRECTIONS. THE INSTALLATION OF A PAD SHALL ALSO APPLY TO EQUIPMENT THAT MIGHT BE SUSCEPTIBLE TO WATER DAMAGE THAT IS LOCATED IN AREAS OTHER THAN AT GRADE.
8. PROVIDE ALL ASSOCIATED COSTS FOR THIRD PARTY TESTING OF ALL EQUIPMENT, CONDUCTORS, GROUND FAULT, ETC. PROVIDE ALSO AN ARC FLASH ANALYSIS OF ELECTRICAL SYSTEMS DESIGNED HEREIN, ALONG WITH ALL REQUISITE SPECIFIC HAZARDS CATEGORY LABELING.

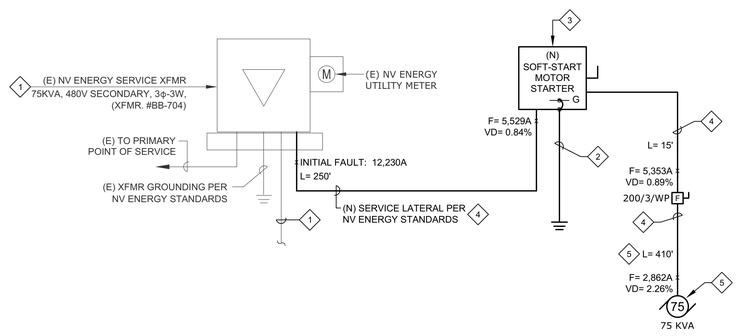
NOTE: WITH THE ADDITION OF ELECTRICAL EQUIPMENT REQUIRED DURING THE COURSE OF THIS WORK, A SERVICE OUTAGE WILL BE NECESSARY. THE EXISTING ELECTRICAL METER AND NV ENERGY OWNED SERVICE FEEDERS ARE INTENDED TO REMAIN UNDISTURBED, HOWEVER THE ELECTRICAL CONTRACTOR WILL NEED TO COORDINATE WITH NV ENERGY THE TEMPORARY DISCONNECTION OF POWER TO THE EXISTING SERVICE TRANSFORMER. THIS COORDINATION SHALL OCCUR AT THE ONSET OF THE PROJECT TO ENSURE THIS SERVICE SHUTDOWN DOES NOT ADVERSELY IMPACT THE PROJECT SCHEDULE. SINCE THE SERVICE TRANSFORMER IDENTIFIED IN THESE PLANS IS NOT BELIEVED TO SERVE DISTRIBUTION OTHER THAN THIS REPLACEMENT WELL, ELECTRICAL SERVICE CAN AND SHOULD BE DISCONNECTED EARLY DURING THE PROJECT AND SHALL REMAIN DISCONNECTED UNTIL AFTER NEW ELECTRICAL EQUIPMENT IS INSTALLED. NOTIFY ENGINEER IMMEDIATELY IN THE EVENT IT IS FOUND THAT EXISTING TRANSFORMER SERVES ADDITIONAL DISTRIBUTION OTHER THAN THE EXISTING WELL #174.

GENERAL NOTES:

1. THIS PROJECT IS BEING CONSTRUCTED ON A HISTORIC SITE. THE UTMOST CARE SHALL BE TAKEN TO LEAVE UNDISTURBED AND PROTECT IN PLACE ALL EXISTING STRUCTURES, INCLUSIVE OF PATHWAYS; ALL REQUISITE TRENCHING FOR ELECTRICAL INSTALLATIONS SHALL BE DONE WITH BORING BENEATH EXISTING PATHWAYS SUCH THAT THEY REMAIN UNDAMAGED.
2. MINIMUM EQUIPMENT A.I.C. RATINGS ARE 14K A.I.C. @ 480/277V AND 10K A.I.C. @ 208/120V UNLESS OTHERWISE NOTED.
3. THE DESIGN PROFESSIONAL HAS PERFORMED ALL REQUIRED SHORT CIRCUIT CALCULATIONS AND THE A.I.C. RATINGS INDICATED FOR EACH DEVICE ARE ADEQUATE TO PROTECT THE EQUIPMENT AND THE ELECTRICAL SYSTEM.
4. THE DESIGN PROFESSIONAL HAS PERFORMED ALL THE REQUIRED VOLTAGE DROP CALCULATIONS FOR ALL FEEDERS PER 2017 NATIONAL ELECTRICAL CODE ARTICLE 210.19(A)(1), FPN NO. 4.

SHEET NOTES:

1. EXISTING NV ENERGY SERVICE TRANSFORMER IS BELIEVED TO PRESENTLY SERVE ONLY THE EXISTING WELL #174 WHICH IS BEING ABANDONED IN PLACE. EXISTING SERVICE LATERAL CONDUCTORS SHALL BE REMOVED WITH EXISTING CONDUITS TO REMAIN IN PLACE, AND NEW CONDUCTORS SHALL BE CONNECTED FOR A NEW SERVICE LATERAL TO NEW PUMP EQUIPMENT AS SHOWN IN PLAN (REFERENCE SHEET 'E-04'). COORDINATE WITH NV ENERGY AT ONSET OF PROJECT.
2. PROVIDE #1/0 BC CONCRETE ENCASED GROUNDING ELECTRODE WITH CADWELD TO 10' COPPER-CLAD DRIVEN GROUND ROD, INSTALLED IN ACCORDANCE WITH NEC ARTICLES 250.52(A)(3) AND 250.53 ALONG WITH CORRESPONDING SO. NEVADA AMMENDMENTS.
3. PROVIDE SOFT-START MOTOR STARTER PANEL, SQUARE D "ENCLOSED 48 SOFT STARTER" #8639-48UMH4N-C06A07 OR EQUIVALENT. THIS MOTOR STARTER PANEL SHALL HAVE THE FOLLOWING CHARACTERISTICS/OPTIONS, IMPERATIVE TO SUPPORTING THIS PROJECT'S SPECIFIC REQUIREMENTS:
   - 75 HORSEPOWER RATING @ 460V, 3ϕ, 60Hz
   - NEMA 3R ENCLOSURE
   - SERVICE ENTRANCE RATED
   - CIRCUIT BREAKER OR FUSIBLE DISCONNECT (125/3)
   - PHASE LOSS DETECTION AND PROTECTION
   - OVER- AND UNDER-LOAD PROTECTION
   - BYPASS MODE WITH ACTIVE THERMAL OVERLOAD PROTECTION
   - HAND-OFF-AUTO SELECTOR SWITCH
   - RUN (RED) AND OFF (GREEN) LIGHTS
   - HIGH AMBIENT TEMPERATURE RATING (+50°C)
   - INTEGRAL ETHERNET IP CARD
   - INTEGRAL 1.5 KVA 480 TO 208/120V TRANSFORMER FOR SIGNALING INTERFACE PROVISION
4. 2 1/2"C - #2/0-3C RHW-2 CU W/ 1#6 RHW-2 CU GND. CONDUCTORS SHALL BE RATED FOR SUBMERSIBLE INSTALLATIONS. BELOW-GRADE CONDUIT INSTALLATIONS SHALL BE PVC SCHEDULE 40 WITH RGS RISERS, PVC WRAPPED (SEE ELECTRICAL SPECIFICATIONS, SHEET 'E-02'). ABOVE-GRADE INSTALLATION FROM MOTOR STARTER/DISCONNECT SWITCH TO WELL HEAD SHALL BE RGS OR IMC.
5. PROVIDE CONNECTION AS REQUIRED TO SUBMERSIBLE WELL PUMP MOTOR. ENSURE FEEDER IS ROUTED WITHIN WELL CASING SO AS TO AVERT DAMAGE AS PUMP AND MOTOR ARE LOWERED. COORDINATE WITH WELL DRILLING CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. (NOTE: FEEDER LENGTH ACCOUNTS FOR A DEPTH OF UP TO 400' FROM GRADE LEVEL TO THE SUBMERSIBLE PUMP MOTOR. NOTIFY ENGINEER IN THE EVENT DEPTH IS DETERMINED TO BE GREATER UPON DRILLING.)



A / E-03 SINGLE-LINE DIAGRAM
NTS

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03-02-2023

NO.	DATE	SHEET	REVISIONS

PREPARED FOR
CITY OF LAS VEGAS

BID # 23.691111.09 | DATE: 03-02-2023 | DESIGNED BY: IMEG
PLANS LIB # 650.144 | DRAWN BY: IMEG
SUBMITTAL STAGE: ISSUE FOR BIDS | CHECKED BY: PE

TITLE
FLOYD LAMB PARK
REPLACEMENT WELL 174A

SHEET
SINGLE-LINE DIAGRAM

SHEET
E-03
14 OF 15
DRAWING NO.

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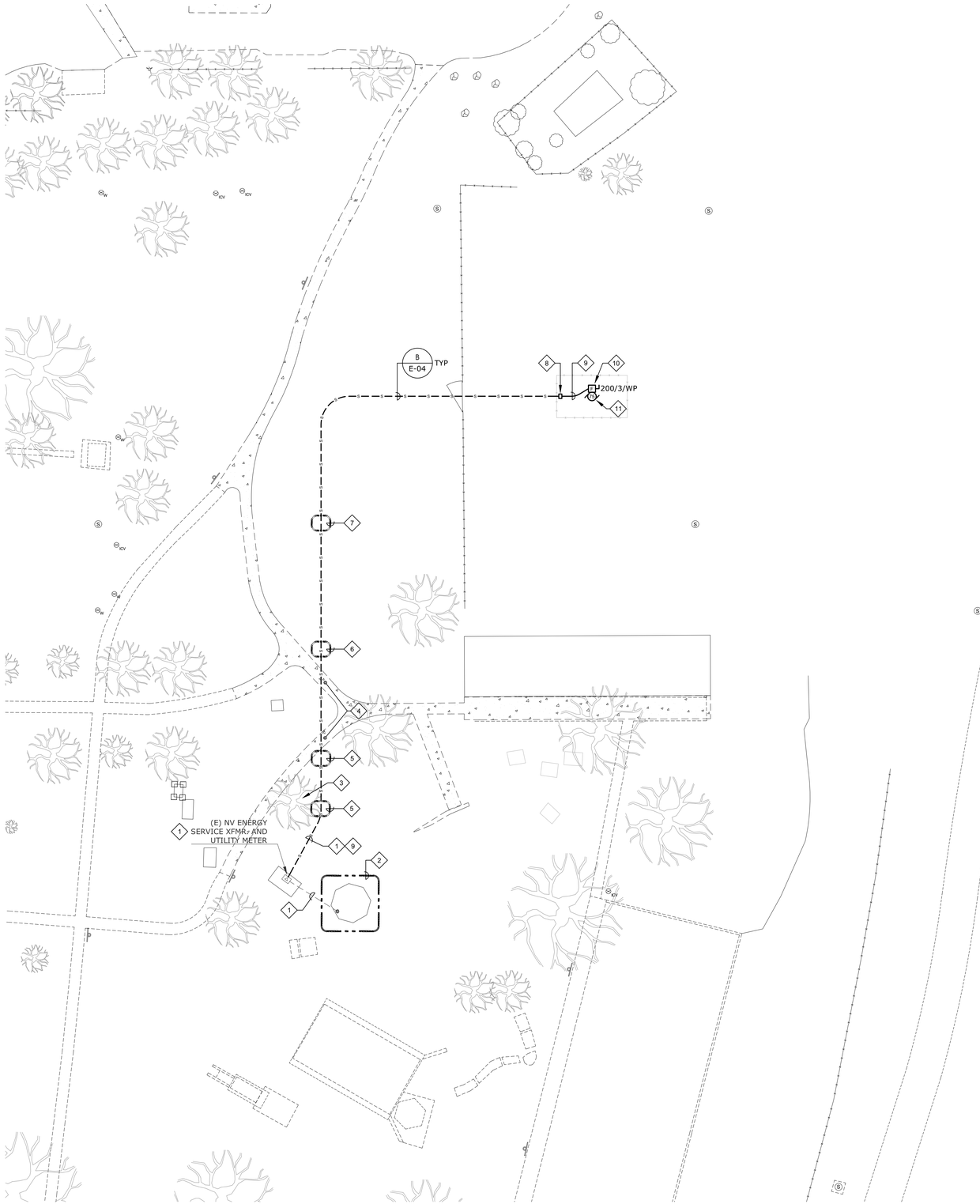
2/28/23 V:\FILES\ACTIVE\PROJECTS\2022\22005814.00\VIRTUALDESIGN\CAD\E1\CE-03.DWG



A E-04 SITE ELECTRICAL PLAN

1" = 20'-0"

0' 5' 10' 20' 40'

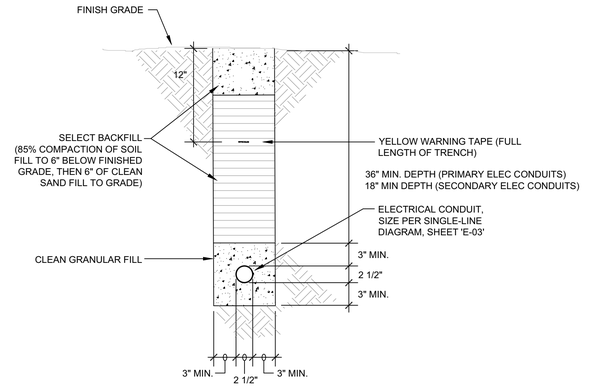
NORTH

GENERAL NOTES:

1. THIS PROJECT IS BEING CONSTRUCTED ON A HISTORIC SITE. THE UTMOST CARE SHALL BE TAKEN TO LEAVE UNDISTURBED AND PROTECT IN PLACE ALL EXISTING STRUCTURES, INCLUSIVE OF PATHWAYS; ALL REQUISITE TRENCHING FOR ELECTRICAL INSTALLATIONS SHALL BE DONE WITH BORING BENEATH EXISTING PATHWAYS SUCH THAT THEY REMAIN UNDAMAGED.
2. ALL NEW CONDUIT SHALL BE MINIMUM 1" UNLESS OTHERWISE NOTED, AND CARRY A GREEN GROUND CONDUCTOR SIZED PER CODE.
3. PROVIDE PULLSTRING IN CONDUIT IF OTHERWISE EMPTY.
4. MULTI-WIRE BRANCH CIRCUITS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NEC ARTICLE 210.4 AND RELATED SECTIONS.
5. COORDINATE WITH WELL DRILLER TO ENSURE CONDUIT FOR ALL NECESSARY CONTROL WIRING IS INSTALLED AND WIRING TERMINATED AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
6. PRIOR TO COMMENCEMENT OF WORK, REVIEW CIVIL PLANS FOR IDENTIFICATION OF ALL POTENTIAL CONFLICTS WITH ELECTRICAL INSTALLATIONS WHICH MAY NOT BE IDENTIFIED ON THIS PLAN.

SHEET NOTES:

1. EXISTING NV ENERGY SERVICE TRANSFORMER IS BELIEVED TO PRESENTLY SERVE ONLY THE EXISTING WELL #174 WHICH IS BEING ABANDONED IN PLACE. EXISTING SERVICE LATERAL CONDUCTORS SHALL BE REMOVED WITH EXISTING CONDUITS TO REMAIN IN PLACE, AND NEW CONDUCTORS SHALL BE CONNECTED FOR A NEW SERVICE LATERAL TO NEW PUMP EQUIPMENT AS SHOWN IN PLAN. COORDINATE WITH NV ENERGY AT ONSET OF PROJECT.
2. EXISTING HISTORIC PUMP HOUSE SHALL REMAIN WITH INTERIOR PUMP AND SERVICE EQUIPMENT LEFT UNDISTURBED.
3. EXISTING TREE OF HISTORICAL PROMINENCE - CARE SHALL BE TAKEN DURING TRENCHING AND SERVICE LATERAL INSTALLATION TO ENSURE ROOT SYSTEM IS NOT DAMAGED.
4. EXISTING CONCRETE PATHWAY OF HISTORICAL PROMINENCE - CARE SHALL BE TAKEN DURING TRENCHING AND SERVICE LATERAL INSTALLATION TO ENSURE IT REMAINS UNDAMAGED.
5. APPROXIMATE LOCATION OF EXISTING TELEPHONE LINE INSTALLED BELOW GRADE - CARE SHALL BE TAKEN DURING TRENCHING AND SERVICE LATERAL INSTALLATION TO ENSURE IT REMAINS UNDAMAGED.
6. APPROXIMATE LOCATION OF EXISTING WATER LINE INSTALLED BELOW GRADE - CARE SHALL BE TAKEN DURING TRENCHING AND SERVICE LATERAL INSTALLATION TO ENSURE IT REMAINS UNDAMAGED.
7. APPROXIMATE LOCATION OF EXISTING SEWER LINE INSTALLED BELOW GRADE - CARE SHALL BE TAKEN DURING TRENCHING AND SERVICE LATERAL INSTALLATION TO ENSURE IT REMAINS UNDAMAGED.
8. NEW SOFT-START MOTOR STARTER WITHIN NEMA 3R ENCLOSURE SHALL BE SECURELY MOUNTED TO UNISTRUT STRUCTURE ANCHORED TO HOUSEKEEPING PAD. REFER TO SINGLE-LINE DIAGRAM, SHEET 'E-03,' FOR ADDITIONAL INFORMATION AND REQUIREMENTS. (NOTE: EXISTING WIRELESS COMMUNICATIONS EQUIPMENT LOCATED WITHIN EXISTING PUMP HOUSE SHALL BE RELOCATED TO THIS ENCLOSURE, AND LINK WITH LEVEL SENSING EQUIPMENT AT TULE SPRINGS LAKE (NORTHWEST QUADRANT) RE-ESTABLISHED FOR RUN/STOP SIGNALING TO MOTOR STARTER. COORDINATE WITH CITY OF LAS VEGAS FACILITIES ENGINEER.)
9. REFER TO SINGLE-LINE DIAGRAM, SHEET 'E-03,' FOR FEEDER REQUIREMENTS.
10. NON-FUSED DISCONNECT SWITCH NEAR WELL HEAD - REFER TO SINGLE-LINE DIAGRAM, SHEET 'E-03,' FOR ADDITIONAL INFORMATION AND REQUIREMENTS. FABRICATE AND MOUNT TO UNISTRUT STRUCTURE ANCHORED TO HOUSEKEEPING PAD AT LEAST 4'-0" AWAY FROM WELL HEAD, ENSURING PLACEMENT WILL NOT INTERFERE WITH FUTURE WELL MAINTENANCE OPERATIONS - COORDINATE WITH CITY OF LAS VEGAS FACILITIES ENGINEERING PERSONNEL.
11. COORDINATE WITH WELL DRILLER THE REQUIRED CONNECTION TO THE SUBMERSIBLE PUMP MOTOR. FEEDER CONDUCTORS DROP VERTICALLY AT THIS POINT AS SUBMERSIBLE PUMP IS LOWERED INTO WELL CASING; ENSURE CONDUCTORS ARE SECURED AS REQUIRED TO PRECLUDE DAMAGE WHILE LOWERING.



B E-04 TYPICAL TRENCH DETAIL

NTS

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NO.	DATE	SHEET	REVISIONS

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PROFESSIONAL ENGINEER - STATE OF NEVADA
DAVID MERCH
EXP: 12/31/2023
ELECTRICAL
NO. 010317

03-02-2023

TITLE: FLOYD LAMB PARK REPLACEMENT WELL 174A

SHEET: SITE ELECTRICAL PLAN

PREPARED FOR: CITY OF LAS VEGAS

BID # 23.691111.09 | DATE: 03-02-2023 | DESIGNED BY: IMEG | DRAWN BY: IMEG | CHECKED BY: PE

PLANS LIB # 650.144 | SUBMITTAL STAGE: ISSUE FOR BIDS

SHEET E-04

15 OF 15

DRAWING NO.

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