

CITY OF LAS VEGAS TRAFFIC NOTES (CIP)

- 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.
- 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 1-800-227-2600
STREETLIGHTS 1-702-229-6331
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- 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 MECHANICAL SUPPORT AS SHOWN IN UNIFORM STANDARD DRAWING NUMBER 863 IF ONE OF THE SIGNAL HEADS CONTAINS 4 OR MORE SIGNAL MODULES.
- SERVICE SHALL HAVE 1-60 AMP SINGLE POLE BREAKER FOR SIGNAL, AND ONE 40 AMP SINGLE POLE BREAKER FOR STREET LIGHTS. SERVICE SHALL BE 200 AMP PADMOUNT.
- LINE SIDE OF METER TO BE WIRED WITH THREE #8 AWG THW LOAD SIDE SHALL BE WIRED WITH FOUR #4 AWG THW (2 BLACK, 2 WHITE) AND ONE #8 AWG THW (GREEN).
- LUMINAIRES ON ALL SIGNAL POLES SHALL BE AN APPROVED LED EQUAL TO A 400 WATT HIGH PRESSURE SODIUM CUTOFF (G.E. M400A) WITH MC-111 DISTRIBUTION PER SECTION 623 T.02.19 OF THE SPECIAL PROVISIONS. 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 TWO #10 AWG THW CONDUCTORS INDIVIDUALLY FUSED WITH 10 AMP FUSES. THERE SHALL BE NO SPLICES BETWEEN THE CABINET AND LUMINAIRE FIXTURES.
- 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.
- CHECK CONDUIT AND CABLE SCHEDULE FOR CONDUIT, CABLE, AND WIRE SIZE. VERIFY ALL EXISTING CONDUIT RUNS.
- ALL PULLBOXES SHALL BE IN ACCORDANCE WITH UNIFORM STANDARD DRAWINGS NO. 705, NO. 706, AND NO. 707.
- TRAFFIC SIGNAL CABLE SHALL BE 15 OR 25 CONDUCTOR #14 AWG SOLID (TYPICAL) CABLE AND SHALL CONFORM TO IMSA SPEC. NO. 20-1.
- PEDESTRIAN PUSH BUTTONS SHALL BE AUDIBLE TACTILE "POLARA NAVIGATOR" TYPE (2 WIRE SYSTEM) OR CAMPBELL COMPANY ADVANCED ACCESSIBLE PEDESTRIAN SYSTEM BUTTONS WITH AAPS APC (CONTROLLER) IN ACCORDANCE WITH CITY OF LAS VEGAS SPECIAL PROVISIONS AND SECTION 623 OF THE CCA USS. PUSH BUTTON SIGNS SHALL BE R10-36 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-TACTILE 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 HARNESSSES, TO PROVIDE A FULLY FUNCTIONING SYSTEM.
- 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.
- MAST ARM R10-12 SIGNS TO BE ADJACENT (NO GAP) TO THE M-5 SIGNAL HEAD, WHERE FLASHING YELLOW ARROW LEFT TURN SIGNAL ARE USED, A MAST ARM R10-12" LEFT TURN YIELD ON FLASHING YELLOW ARROW" SIGN SHALL BE MOUNTED ADJACENT TO THE M-4 SIGNAL HEAD.
- TRAFFIC SIGNAL CABINET SHALL BE A TYPE VII 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. INSTALL CABINET NEAR THE R.O.W. LINE AS SHOWN ON THE DRAWINGS. THE TRAFFIC SIGNAL CONTROLLER CABINET, SHALL BE EQUIPPED WITH 16 LOAD BAY POSITIONS, SHALL BE A 48 DETECTOR CHANNEL R CABINET AND SHALL INCLUDE TWO (2) RACK-MOUNTED, 12 SLOT, LOOP DETECTION RACKS, WITH 2 DETECTOR LOOP CHANNELS PER SLOT FULLY WIRED SO THAT ALL CHANNELS ARE USABLE AND 4 CHANNEL SLOTS THAT CAN ACCOMMODATE VIDEO DETECTION CARDS. THE CABINET SHALL CONTAIN A 764 OPTICOM PHASE SELECTOR IN A 760 RACK, WITH A 768 AUXILIARY INTERFACE PANEL MOUNTED IN THE CABINET AND FULLY WIRED FOR GREEN SENSE CAPABILITIES.
- THE CONTRACTOR SHALL SUPPLY A MALFUNCTION MANAGEMENT UNIT (MMU) AND TRAFFIC SIGNAL CONTROLLER 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 CONTROLLER SHALL BE A NAZTEC 980 ACT TS2 TYPE 2 NTPOT COMPLIANT SIGNAL CONTROLLER WITH INSTALLED AND LICENSED APOGEE CONTROLLER SOFTWARE, LATEST VERSION, AND THE MMU SHALL BE A MODEL MMU-1600GE AS MANUFACTURED BY RENO A&E, OR APPROVED EQUAL. THE CONTRACTOR SHALL DELIVER THE CONTROLLER AND MMU TO, AND PICKUP THE CONTROLLER AT 2824 E. CHARLESTON BOULEVARD, CONTRYTOR. THE CONTRACTOR SHALL NOTIFY THE TRAFFIC SIGNAL REPAIR SHOP (229-6076) SEVEN DAYS PRIOR TO PICK UP. THE CITY, AT ITS DISCRETION, MAY PROVIDE A DIFFERENT MODEL OF MMU OR CONTROLLER FOR INITIAL TURN-ON, IN WHICH CASE CITY PERSONNEL WILL SWAP THE CONTROLLER OR MMU AFTER THE PROJECT IS ACCEPTED.
- CONTRACTOR SHALL POTHOLE SIGNAL POLE LOCATIONS PRIOR TO ORDERING OF POLES.
- 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 D2.0. "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.
- 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 80M-400V-LED, OR DIALIGHT MODEL #430-6479-001C, OR APPROVED EQUAL. THE "COUNTDOWN" MESSAGE SHALL NOT FLASH. WHERE EXISTING SIGNAL 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.
- VIDEO DETECTION SYSTEMS WILL BE EITHER ITERIS EDGE 2 WITH EDGECONNECT PAK, (IP ADDRESSABLE); PEEK VIDEOTRAK IQ (WITH ETHERNET PORT); OR TRAFICON VPI WITH VIEWCOM (IP ADDRESSABLE). WHEN VIDEO DETECTION IS SPECIFIED ON THE TRAFFIC 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 CORE CONDUCTOR). CAMERAS THAT USE A PREFABRICATED CABLE INTEGRATING POWER AND COAXIAL CABLE INTO A SINGLE WEATHERPROOF CONNECTOR ARE ACCEPTABLE. "BNC" ARE THE ONLY ACCEPTABLE TERMINATION OF COAXIAL CABLES. CAMERAS WILL BE MOUNTED PER MANUFACTURE'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 AB-0166-5-62 OR EQUIVALENT). THE LOCATION OF THE CAMERA ON THE MAST ARM SHALL BE APPROVE BY THE TRAFFIC SIGNAL SUPERVISOR. A VIDEO FILTER (CX06-BNVC OR EQUIVALENT) WILL BE INSTALLED IN THE SIGNAL CABINET FOR EACH CAMERA VIDEO INPUT. VIDEO DETECTION PROCESSORS AND COMMUNICATIONS CARDS SHALL BE PROVIDED WITH THE LATEST VERSIONS OF THE MANUFACTURE'S SOFTWARE. THE CONTRACTOR SHALL AIM CAMERAS AND PROGRAM AND CONFIGURE THE VIDEO DETECTION PROCESSORS TO PROVIDE A FULLY FUNCTIONING SYSTEM.

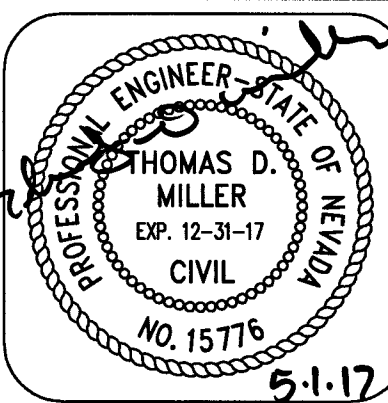
CITY OF LAS VEGAS TRAFFIC NOTES (CONTINUATION)

- WHERE NEW LOOPS WILL BE OVERLAD WITH NEW PAVEMENT, LOOP DETECTORS SHALL BE PREFORMED LOOPS AS MANUFACTURED BY RENO A & E 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 OVERLAD WITH NEW PAVEMENT, LOOPS SHALL BE CALBE-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 HARNESSSES, 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.
- 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.
- 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.
- INTERCONNECT CABLE SHALL BE AS SHOWN IN THE WIRE SCHEDULE.
- THE CONTRACTOR SHALL INSTALL CROSSWALKS, STOP BARS, STRIPING AND SIGNS AS IDENTIFIED ON THE PLANS.
- WHERE THE PLANS CALL FOR REMOVAL AND SALVAGE OF EXISTING TRAFFIC SIGNAL EQUIPMENT, THE CONTRACTOR SHALL CONTACT KARL KELLEY, THE TRAFFIC SIGNAL SUPERVISOR, AT 702-229-4086 TO ARRANGE FOR DELIVERY TIMES AND LOCATIONS.
- THE CONTRACTOR SHALL MAINTAIN EXISTING SIGNALS THROUGH THE LIFE OF THE PROJECT PER SECTION 623 G.03.01N OF THE CLV SPECIAL PROVISIONS.

ADDITIONAL TRAFFIC SIGNAL NOTES

- NEW CONDUITS SHALL BE INSTALLED IN THE TRENCH SUCH THAT TOP OF CONDUIT SHALL HAVE A MINIMUM COVER OF 30" (36" WITHIN NDOT R/W) BELOW ADJACENT EDGE OF PAVEMENT OR ORIGINAL GROUND, WHICHEVER IS LOWER. RADIUS BENDS AND INSTALLATION PER CCA USS 623.
- ALL WORK WITHIN NDOT R/W MUST CONFORM TO CONDITIONS OF NDOT ENCROACHMENT PERMIT.
- ALL STATIONING AND OFFSETS OF TRAFFIC SIGNAL EQUIPMENT ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATIONS WITH CLV INSPECTOR PRIOR TO PLACEMENT.
- A #8 GREEN GROUND WIRE SHALL BE RUN FROM GROUND LUG OF EACH SIGNAL POLE TO THE CONTROLLER CABINET AND FROM CONTROLLER CABINET TO THE SERVICE PEDESTAL.
- EXISTING LOOP DETECTOR CABLE (NOT CURRENTLY USED) SHALL BE ABANDONED IN PLACE.
- SEE SIGNING AND STRIPPING SHEETS FOR FIBER PULLBOXES AND CONDUIT RUNS ALONG PROJECT FRONTAGE.
- MANUAL TRAFFIC CONTROL TO BE PROVIDED DURING PERIODS OF SIGNAL SHUTDOWN USING UNIFORMED TRAFFIC CONTROL OFFICERS.
- CONDUIT LOCATIONS AS SHOWN ON THE DRAWINGS ARE FOR CLARITY OF RUNS ONLY.

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IMPROVEMENT PLANS FOR DC PLAZA

APN:125-17-613-001

TRAFFIC SIGNAL NOTES

8451 FARM ROAD
LAS VEGAS, NEVADA

DESCRIPTION

UPDATED MOST CURRENT TRAFFIC NOTES
APPROD: JDM 5/15/17

DESIGN BY

CS

3/13/17

DATE

NO.

A

CEI PROJECT: 4136

DESIGN BY: JDM SR

DRAWN BY: JDM SR

CHECKED BY: TOM P.E.

DATE:

03/13/17

SCALE:

SHEET NUMBER

C7.00

SHEET 29 OF 45

H # 64486