CONDUIT AND WIRE SCHEDULE

WIRE & CABLE	FROM	TO	VIA CONDUIT 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
EXISTING	SERVICE PEDESTAL (8571)	CONTROLLER	X																					
25 C. #14 & 8281 COAX VID 3–#16 C. PVC JACKETED	CONTROLLER	POLE A		X	X							USED			USED					USED				
25 C. #14 & 8281 COAX VID 3–#16 C. PVC JACKETED	CONTROLLER	POLE B		X		X	X																	
25 C. #14 & 8281 COAX VID 3–#16 C. PVC JACKETED	CONTROLLER	POLE C		X				X	X															
25 C. #14 & 8281 COAX VID 3–#16 C. PVC JACKETED	CONTROLLER	POLE D		X						X	X													
3 LOOP LEAD-IN CABLES	CONTROLLER	DET. 5A, 5B, & 5C*		X						X		NOT	X		NOT	NOT	NOT			NOT				
OPTICAL DETECTOR	CONTROLLER	POLE A		X	X																			
OPTICAL DETECTOR	CONTROLLER	POLE D		X		X	X					Z			Z	Z	Z	Z		Z				
INTERCONNECT CABLE (BY OTHERS) (SEE NOTE 24)	TYPE 200 S.V.	TYPE 200 S.V. GRAND MONTECITO/PRIVATE																			X	X		
INTERCONNECT CABLE (BY OTHERS) (SEE NOTE 24)	CONTROLLER	CONTROLLER AT DURANGO/ELKHORN												X					X					X
CONDUIT SIZE (E) INDICATES EXISTING CONDUIT				3" (E)	5–3" (E)	3" (E)	3–3" (E)	3" (E)	2–3" (E)	3" (E)	2–3" (E)	3" (E)	3"	2–3" (E)	3" (E)	4" (E)	4" (E)	4" (E)	3" (E)	4" (E)	4" (E)	4" (E)	4"	2–3" (E)

* DETECTORS 5A AND 5C DETECTORS IN THE OUTER LEFT–TURN LANE (FUTURE) SHALL NOT BE CONNECTED FOR INTERIM DESIGN AS SHOWN ON PLANS

CLV TRAFFIC SIGNAL NOTES

1. EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED AND NOT RELOCATED SHALL BE SALVAGED BY THE CONTRACTOR AND DELIVERED TO CITY OF LAS VEGAS SALVAGE YARD, 3104 E. BONANZA ROAD, LAS VEGAS, NEVADA, 89101.
2. ALL WORK PERFORMED ON ANY TRAFFIC SIGNAL COMPONENT MUST BE UNDER THE DIRECT ON–SITE SUPERVISION OF AN IMSA CERTIFIED TECHNICIAN LEVEL II.
3. 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
4. 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.
5. CONTRACTOR SHALL VERIFY 1–60 AMP SINGLE POLE BREAKER FOR SIGNAL AND 1–40 AMP SINGLE POLE BREAKER FOR INTERSECTION LIGHTS IN EXISTING 200 AMP PADMOUNT SERVICE PEDESTAL. IF NOT EXISTING, CONTRACTOR SHALL INSTALL.
6. CONTRACTOR SHALL VERIFY THAT EXISTING LUMINAIRES ON SIGNAL POLES ARE 400 WATT HIGH PRESSURE SODIUM, 120 VOLTS. 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. EXISTING CONDUCTORS FOR LUMINAIRES SHALL BE REUSED IF FOUND TO HAVE ADEQUATE LENGTH AND APPROVED BY THE ENGINEER. ALL CONDUCTORS NOT USED FOR SIGNAL OR STREET LIGHTING OPERATION SHALL BE REMOVED FROM CONDUITS, AS DIRECTED BY ENGINEER.
7. CONTRACTOR SHALL PROVIDE AND INSTALL FOUR (4) 8–FOOT INTERNALLY ILLUMINATED STREET NAME SIGNS PER STD. DWG. NO. 404.415 AND 404.417 CLV MODIFIED ON POLES "A", "B" "C" AND "D". THE INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE WIRED TO THE LUMINAIRES PHOTO CELL FOR CONTROL WITH #10 AWG THW COPPER STRANDED WIRE (TYPICAL). 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.
8. CHECK CONDUIT AND CABLE SCHEDULE FOR CONDUIT, CABLE AND WIRE SIZE. VERIFY ALL EXISTING CONDUIT RUNS.
9. ALL PULLBOXES ARE NO. 5 UNLESS OTHERWISE NOTED. ALL PULLBOXES SHALL BE IN ACCORDANCE WITH UNIFORM STANDARD DRAWINGS NOS. 404.110, 404.120, AND 404.130. PULLBOXES SHALL NOT BE INSTALLED IN SIDEWALK RAMPS.
10. TRAFFIC SIGNAL CABLE SHALL BE 25 CONDUCTOR #14 AWG SOLID (TYPICAL) CABLE AND SHALL CONFORM TO IMSA SPEC. NO. 20–1.
11. PEDESTRIAN PUSH BUTTONS SHALL BE AUDIBLE TACTILE TYPE IN ACCORDANCE WITH CITY OF LAS VEGAS SPECIAL PROVISIONS TO SECTION 623 OF THE CCA USS. PUSH BUTTON SIGNS SHALL BE 9" X 12" WITH FULL MOUNTING BRACKETS. ALL PUSH BUTTONS TO BE MOUNTED 42 INCHES ABOVE SIDEWALK. THE MAXIMUM HORIZONTAL REACH DISTANCE IS TO BE 24".
12. 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.
13. THE CONTRACTOR SHALL SUPPLY A 2070N CONTROLLER TO THE CITY OF LAS VEGAS TRAFFIC SIGNAL REPAIR SHOP, FOURTEEN DAYS PRIOR TO SIGNAL TURN–ON, FOR TESTING PURPOSES. THE CONTRACTOR SHALL DELIVER THE CONTROLLER TO, AND PICKUP THE CONTROLLER AT, 2801 E. CHARLESTON BOULEVARD. CONTRACTOR SHALL NOTIFY THE TRAFFIC SIGNAL REPAIR SHOP (229–6075) SEVEN DAYS PRIOR TO PICKUP. ALL 2070N CONTROLLERS MUST BE COMPATIBLE WITH AND FUNCTION PROPERLY WITH OS9 1996 OPERATION SYSTEM; THE LATEST REVISION OF THE "NEXT PHASE INTERSECTION MANAGEMENT SOFTWARE" (GARDNER TRANSPORTATION SYSTEM) AND THE ICONS (GARDNER TRANSPORTATION SYSTEM) GENERAL SOFTWARE.
14. 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. 404.406 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 623T.02.09 OF THE SPECIFICATIONS. ALL EXPOSED WELDS SHALL BE PAINTED TO PAINT POLE COLOR AND FINISH.
15. ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LIGHT EMITTING DIODE (LED) TYPE INDICATIONS, IN CONFORMANCE TO CITY OF LAS VEGAS SPECIAL PROVISIONS TO SECTION 623 OF THE CCA USS.
16. VEHICLE DETECTION WILL BE BY VIDEO IMAGE DETECTION (EXCEPT FOR PHASE 6 SEE NOTE 17) USING EITHER ITERIS EDGE 2, AUTOSCOPE 2020, OR AUTOSCOPE 2020–V8 VIDEO DETECTION SYSTEMS OR CITY OF LAS VEGAS EQUIVALANT WITH ALL NECESSARY AUXILARY EQUIPMENT SHALL BE INSTALLED IN EXISTING CONTROLLER CABINET. MOUNT FOUR (4) VIDEO CAMERAS AS SHOWN IN POLE SCHEDULE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. 8281 COAXIAL CABLE AND 3–#16 CONDUCTORS SHALL BE RUN FROM THE CONTROLLER TO EACH CAMERA WITH "BNC" CONNECTORS. THE VIDEO DETECTION SHALL HAVE THE CAPABILTY OF SENSING A VEHICLE ANYWHERE WITHIN THE "MINIMUM LIMITS OF DETECTION ZONE" SHOWN. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A MANUFACTURER'S REPRESENTATIVE FOR TURN ON.
17. VEHICLE DETECTION WILL BE BY LOOP DETECTORS AND ADVANCED DETECTOR LOOPS (6'X6' WITH 4 TURNS OF WIRE, CENTERED IN TRAVEL LANE) FOR PHASE #5. LOOP LEAD IN CABLE SHALL BE 6–PAIR 18AWG MULTI–CONDUCTOR. LOOPS 5A, & 5B SHALL BE PRECENSE/COUNT LOOPS. LOOPS 5C SHALL BE PRESENCE LOOPS. ALL NEW INDUCTION LOOPS SHALL BE INSTALLED USING CABLE–IN–DUCT WIRING OR PRE–FORMED LOOPS (AS SHOWN AND REQUIRED ON THE PLANS). SHALL HAVE INDEPENDENT LEAD–IN WIRES FOR EACH LOOP FROM THE CONTROLLER TO THE PULL BOX AND EACH LEAD–IN SHALL BE INDIVIDUALLY TAGGED. LOOPS 5A AND 5C IN THE OUTER LEFT–TURN LANE (FUTURE) SHALL NOT BE CONNECTED FOR THIS INTERIM DESIGN AS INDICATED ON PLANS.
18. 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.
19. MODEL 722 (TWO–WAY) OPTICOM DETECTORS SHALL BE MOUNTED ON TOP OF LEFT–MOST SIGNAL HEAD ON THE MAST ARMS OF POLES "A" AND "D". THE CONTROLLER SHALL BE EQUIPPED FOR OPTICOM PRE–EMPTION USING A MODEL 754 PHASE SELECTOR. MODEL 139 OPTICOM DETECTOR CABLE SHALL BE RUN FROM THE CONTROLLER TO THE OPTICOM DETECTOR AS SHOWN IN THE CONDUIT AND WIRE SCHEDULE.
20. CONTRACTOR SHALL SEPARATE VIDEO LINES WHEN EXTRA CONDUIT IS AVAILABLE. CONTRACTOR SHALL INSTALL 1–#8 THW TRACER WIRE IN EACH EMPTY CONDUIT.
21. CONTRACTOR SHALL INSURE THAT THE TRAFFIC SIGNAL POLES ARE PLUMBED AFTER THE INSTALLATION OF MAST ARMS AND TRAFFIC SIGNAL HEADS.
22. ALL PEDESTRIAN SIGNAL ASSEMBLIES SHALL BE PER SPECIAL PROVISIONS.
23. ALL STOP SIGNS AT INTERSECTION SHALL BE REMOVED AT TIME OF TRAFFIC SIGNAL ACTIVATION AND RETURNED TO THE CITY OF LAS VEGAS SALVAGE YARD 3104 E. BONANZA ROAD, LAS VEGAS, NEVADA, 89101.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND AND AERIAL UTILITIES.
25. FOURTEEN (14) WORKING DAYS PRIOR TO TURN–ON TO A TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CITY OF LAS VEGAS TRAFFIC ENGINEER STATING THAT WORK IS BEING COMPLETED AND THE PROPOSED DATE OF COMPLETION.
26. 1–#8 GRROUNDING WIRE FROM THE EXISTING TYPE 200 S.V. AT THE NORTHEAST CORNER OF ELKHORN/GRAND MONTECITO TO THE PROPOSED TYPE 200 S.V. AT GRAND MONTECITO/ACE IS PROVIDED IN THE CONDUIT SCHEDULE OF SHEET T–6. INTERCONNECT CABLE FOR CONNECTION TO THE CONTROLLER AT ELKHORN/DURANGO WILL BE PROVIDED AS PART OF THE 2009 DURANGO DRIVE ITS INFRASTRUCTURE IMPROVEMENTS FROM HUB #9 TI NWV PARK AND RIDE. EXISTING CONDUIT ROUTING SHOWN IN CONDUIT AND WIRE SCHEDULE. NO SPLICES BETWEEN THE SPLICE VAULTS.

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CIVIL
No. 15781

DATE 6/22/09

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CENTENNIAL HILLS TRANSIT CENTER AND PARK+RIDE
CITY OF LAS VEGAS
ELKHORN ROAD/GRAND MONTECITO PARKWAY
TRAFFIC SIGNAL NOTES AND SCHEDULES

DRAWING
T-9
38 OF 59 SHTS