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 1-800-227-2600
   STREETLIGHTS (NEVA EVANS) 1-702-229-6331
   F.A.S.T. (JESUSE MARMOLEJO) 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.

4. SERVICE SHALL HAVE ONE 60 AMP SINGLE POLE BREAKER FOR SIGNAL, AND ONE 40 AMP SINGLE POLE BREAKERS FOR STREET LIGHTS. SERVICE SHALL BE 200 AMP PADMOUNT.

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 400 WATT HIGH PRESSURE SODIUM CUTOFF (G.E. M400A) WITH MC-111 DISTRIBUTION. EACH LUMINAIRE SHALL HAVE AN INDIVIDUAL 1000 WATT P.E. CONTROL. FOR LUMINAIRES THERE SHALL BE TWO (2)-#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. CONTRACTOR SHALL PROVIDE AND INSTALL THREE (3) 8-FOOT INTERNALLY ILLUMINATED STREET NAME SIGNS PER STD. DWG. NO. 404.416 AND 404.417 CLV MODIFIED ON POLES "A" AND "C", AND PER STD. DWG. NO. 404.415 ON POLE "F". 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. 6

8. CHECK CONDUIT AND CABLE SCHEDULE FOR CONDUIT, CABLE, AND WIRE SIZE. VERIFY ALL EXISTING CONDUIT RUNS.

9. ALL PULLBOXES SHALL BE IN ACCORDANCE WITH UNIFORM STANDARD DRAWINGS NO. 404.110, NO. 404.120, AND NO. 404.130. ALL PULLBOXES SHALL BE NUMBER 5 UNLESS OTHERWISE NOTED. PULLBOXES SHALL NOT BE INSTALLED IN SIDEWALK RAMPS.

10. TRAFFIC SIGNAL CABLE SHALL BE 15 OR 25 CONDUCTOR #14 AWG SOLID (TYPICAL) CABLE AND SHALL CONFORM TO IMSA SPEC. NO. 20-1 AS SPECIFIED ON THE DRAWINGS.

11. PEDESTRIAN PUSH BUTTONS SHALL BE AUDIBLE TACTILE "POLARA NAVIGATOR" TYPE (2 WIRE SYSTEM) 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, 2003 EDITION WITH FULL MOUNTING BRACKETS. ALL PUSH BUTTONS TO BE MOUNTED 42" ABOVE SIDEWALK. THE MAXIMUM HORIZONTAL REACH DISTANCE IS TO BE 24". SIDEWALK RAMPS WILL BE ACCORDING TO U.S.D. No. 235 (1-4) LATEST EDITION.

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. MAST ARM SIGNS SHALL BE ADJACENT (NO GAP) TO THE LEFT-MOST SIGNAL HEAD OR AS DIRECTED BY ENGINEER.

14. INSTALL TYPE VIII CABINET. THIS IS COMMONLY REFERRED TO AS AN "R" CABINET. THE CABINET SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS SPECIFICATIONS AND SPECIAL PROVISIONS, CLARK COUNTY AREA, NEVADA. INSTALL CABINET NEAR THE RIGHT-OF-WAY LINE OR AS DIRECTED BY THE ENGINEER.

15. THE CONTRACTOR SHALL SUPPLY A 2070N OR M53 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 PICK UP. 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" (SIEMENS) AND THE ICONS (SIEMENS) GENERAL SOFTWARE. LOOPS SHALL BE INSTALLED IN AC PAVEMENT PER USDCCA STD. DWG. NO 404.810 AND 404.811 AND DETAIL ON THIS SHEET.

16. CONTRACTOR SHALL POTHOLE SIGNAL POLE LOCATIONS PRIOR TO ORDERING OF POLES.

17. 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. 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 623 T.02.09 OF THE SPECIFICATIONS. ALL EXPOSED WELDS, SHALL BE PAINTED AS PROVIDED FOR REPAIRING DAMAGED GALVANIZED SURFACES.

18. ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL HAVE LIGHT EMITTING DIODE (LED) TYPE INDICATIONS, IN CONFORMANCE TO CITY OF LAS VEGAS SPECIAL PROVISIONS TO SECTION 623 OF THE CCA USS. PEDESTRIAN SIGNALS SHALL BE COUNTDOWN TYPE PER SPECIAL PROVISIONS.

19. PREFORMED LOOPS SHALL BE USED AS MANUFACTURED BY RENO A & E OR NEVER-FAIL LOOP SYSTEMS. TWO (2) CHANNEL RACK-MOUNTED DETECTOR AMPLIFIERS SHALL BE INSTALLED IN THE CONTROLLER CABINET WHICH ACCOMMODATE 24 SEPARATE CHANNELS. 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. ALL LOOPS SHALL BE INSTALLED IN THE ROADWAY PRIOR TO PLACEMENT OF THE FINAL PAVEMENT LIFT. 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. LOOPS SHALL BE INSTALLED IN AC PAVEMENT PER USDCCA STD. DWG. NO. 404.810 AND 404.811 AND DETAILS ON SHEET T4. ALL LOOPS SHALL BE INSTALLED IN THE ROADWAY PRIOR TO PLANCEMENT OF PCC PAVEMENT, SEE DETALS ON SHEET T4. LOOPS INSTALLED IN SURFACES OTHER THAN AC PAVEMENT SHALL BE PER MANUFACTURERS RECOMMENDATIONS. LOOPS INSTALLATION IN SURFACES OTHER THAN AC PAVEMENT SHALL BE APPROVED BY CLV TRAFFIC ENGINEER.

20. OPTICAL PREEMPTION UNITS WILL BE 3M (ENCODING CAPABLE), MODEL 754 PHASE SELECTOR INSTALLED IN A MODEL 760 CARD RACK; OPTICAL SENSORS WILL BE MODEL 722 AND WILL BE INTERFACED TO THE TRAFFIC SIGNAL CONTROLLER CABINET WITH M-138 CABLE.

21. 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.

22. INTERCONNECT CABLE SHALL BE AS SHOWN IN THE WIRE SCHEDULE.

23. THE CONTRACTOR SHALL INSTALL CROSSWALKS, STOP BARS, STRIPING AND SIGNS AS IDENTIFIED ON THE PLANS.

24. CONTRACTOR SHALL INSURE THAT THE TRAFFIC SIGNAL POLES ARE PLUMED AFTER THE INSTALLATION OF MAST ARMS AND TRAFFIC SIGNAL HEADS.

25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND AND AERIAL UTILITIES.

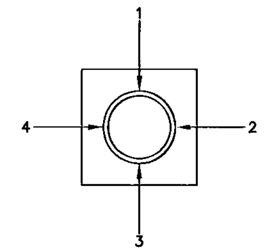
26. FOURTEEN (14) WORKING DAYS PRIOR TO TURN-ON TO A TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CITY OF LAS VEGAS TRAFFIC ENGINEER STATING THAT WORK IS BEING COMPLETED AND THE PROPOSED DATE OF COMPLETION.

27. CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION/REPLACEMENT OF THE EXISTING LANDSCAPING AND IRRIGATION SYSTEMS TO PRECONSTRUCTION CONDITIONS OR BETTER.

28. CONTRACTOR SHALL GROUND ALL PULL BOXES PER USDCCA STD. DWG. NO. 404.140.

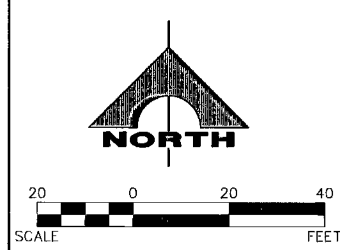
29. SEE LOOP DETECTOR SPECIFICATIONS AND DETAILS FOR DETECTOR LOOP AND INSTALLATION REQUIREMENTS ON SHEET T4.

30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDING THE CORRECT BLOCK NUMBER TO THE STREET NAME SIGNS. CONTRACTOR SHALL OBTAIN CORRECT BLOCK NUMBERS PRIOR TO ORDERING AND INSTALLING SIGNS.



QUADRANT LOCATOR

ARM OR SIGNAL LOCATION (TOP VIEW)



CONDUIT AND WIRE SCHEDULE

WIRE & CABLE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12
3-#4/0	NPC TRANS.	SERVICE PED.	X											
2-#2, (1-BLACK, 1 WHITE) FOR CONTROLLER 2-#4, (1-BLACK 1 WHITE) FOR LUMINAIRES 1-#4 AWG/THW GND	SERVICE PED.	CONTROLLER		X										
25 C. #14 SIG CABLE, 2-#10 AWG THW, 1-#8 AWG THW GND.	CONTROLLER	POLE A			X	X								
25 C. #14 SIG CABLE, 2-#10 AWG THW, 1-#8 AWG THW GND.	CONTROLLER	POLE B			X		X	X						
25 C. #14 SIG CABLE, 2-#10 AWG THW, 1-#8 AWG THW GND.	CONTROLLER	POLE C			X		X				NOT USED	NOT USED	X	
25 C. #14 SIG CABLE, 1-#8 AWG THW GND.	CONTROLLER	POLE D			X				X					
25 C. #14 SIG CABLE, 1-#8 AWG THW GND.	CONTROLLER	POLE E			X				X	X				
25 C. #14 SIG CABLE, 2-#10 AWG THW, 1-#8 AWG THW GND.	CONTROLLER	POLE F			X				X					
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	CONTROLLER	DET ø2B			X									X
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	CONTROLLER	DET ø2C, ø2E			X									X
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	CONTROLLER	DET ø4A			X				X					
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	CONTROLLER	DET ø4C, ø4D			X				X					
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	CONTROLLER	DET ø5A, ø5B, ø5C			X									X
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	CONTROLLER	DET ø7A, ø7C			X				X					
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	CONTROLLER	DET ø8A			X		X							
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	CONTROLLER	DET ø8B, ø8C, ø8D			X		X							
OPTICAL DETECTOR M-138	CONTROLLER	POLE A			X	X								
OPTICAL DETECTOR M-138	CONTROLLER	POLE D			X				X					
CONDUIT SIZE			1-3"	1-3"	6-3"	1-3"	2-3"	1-3"	3-3"	1-2"	–	2-3"	1-3"	1-2"

WIRE & CABLE	TO	13	14	15	16	17	18	19	20	21	22	23	24	25
3-#4/0	SERVICE PED.													
2-#2 … 1-#4 AWG/THW GND	CONTROLLER													
25 C. #14 SIG CABLE, 2-#10 AWG THW, 1-#8 AWG THW GND.	POLE A													
25 C. #14 SIG CABLE, 2-#10 AWG THW, 1-#8 AWG THW GND.	POLE B													
25 C. #14 SIG CABLE, 2-#10 AWG THW, 1-#8 AWG THW GND.	POLE C			NOT USED					NOT USED	NOT USED	NOT USED		X	
25 C. #14 SIG CABLE, 1-#8 AWG THW GND.	POLE D											X		
25 C. #14 SIG CABLE, 1-#8 AWG THW GND.	POLE E													
25 C. #14 SIG CABLE, 2-#10 AWG THW, 1-#8 AWG THW GND.	POLE F													X
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	DET ø2B													
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	DET ø2C, ø2E													
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	DET ø4A					X	X	X						
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	DET ø4C, ø4D					X								
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	DET ø5A, ø5B, ø5C	X												
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	DET ø7A, ø7C					X	X							
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	DET ø8A		X		X									
6 PAIR #18 AWG MULTI-CONDUCTORS LOOP LEAD-IN CABLES	DET ø8B, ø8C, ø8D		X											
OPTICAL DETECTOR M-138	POLE A													
OPTICAL DETECTOR M-138	POLE D											X		
CONDUIT SIZE		1-2"	1-2"	1-2"	1-2"	1-2"	1-2"	1-2"	1-3"	1-3"	1-3"	1-2"	1-3"	1-2"

A NO. 8 GREEN GROUNDING WIRE SHALL BE RUN FROM THE CONTROLLER CABINET TO EACH SIGNAL POLE BASE. 6

POLE SCHEDULE

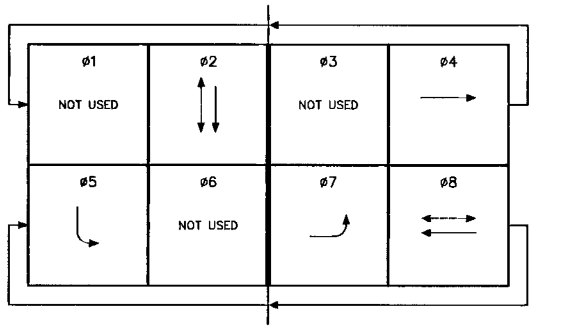
POLE	LOCATION STATION (OFFSET)	POLE TYPE	SIGNAL ARM QUAD.	SIGNAL ARM LENGTH	LUMINAIRE ARM QUAD.	LUMINAIRE ARM LENGTH	VEHICULAR SIGNALS TYPE	VEHICULAR SIGNALS QUAD.	PEDESTRIAN SIGNALS TYPE	PEDESTRIAN SIGNALS QUAD.	PEDESTRIAN PUSH BUTTON QUAD. (PHASE)	PEDESTRIAN PUSH BUTTON SIGN	REMARKS
A	ALTA DRIVE 16+91 47.0' LT	XX-A	3	45'	3	15'	M-2(2) B-1T	M.A. 1	W-3T	1	2(ø2) 3(ø8)	LT RT	INSTALL NEW TYPE XX-A POLE PER STD. DWG. NO. 404.406. MOUNT OPTICOM DETECTOR AND R3-4 ON MAST ARM.
B	ALTA DRIVE 17+87 58.5' LT	XX-A	–	–	4	15'	B-11T	2	W-0T	2	3(ø8)	LT	INSTALL NEW TYPE XX-A POLE PER STD. DWG. NO. 404.406.
C	ALTA DRIVE 18+04 1.0' LT	XX	3	35'	3	15'	M-2(2) B-14T	M.A. 1	–	–	–	–	INSTALL NEW TYPE XX POLE PER STD. DWG. NO. 404.406. INSTALL TYPE H FOUNDATION PER STD. DWG. NO. 404.208 WITH CAP FLUSH WITH SIDEWALK. MOUNT R3-4 AND R10-12 ON MAST ARM. PHASE 5 SHALL HAVE ALL ARROW INDICATIONS.
D	ALTA DRIVE 17+35 39.00' RT	1-A	–	–	–	–	A-2T	POST TOP	–	–	–	–	INSTALL NEW TYPE 1-A POLE PER STD. DWG. NO. 404.402. INSTALL TYPE C FOUNDATION PER STD. DWG. NO. 404.203.. PHASE 5 SHALL HAVE ALL ARROW INDICATIONS. ASSEMBLY A-2T SHALL BE MODIFIED AS DIRECTED BY CLV TRAFFIC TO ACCOMMODATE OPTICAL PREEMPTION UNIT.
E	ALTA DRIVE 16+99.5 39.00' RT	1-A	–	–	–	–	A-2T	POST TOP	W-0T	4	4(ø2)	LT	INSTALL NEW TYPE 1-A POLE PER STD. DWG. NO. 404.402. INSTALL TYPE C FOUNDATION PER STD. DWG. NO. 404.203 WITH CAP FLUSH WITH SIDEWALK.
F	ALTA DRIVE 16+81 39.00' RT	STREET LIGHT	–	–	1	8'	B-1T	4	–	–	–	–	INSTALL NEW 400W-120V STREET LIGHT, SEE NOTE 6 AND SHEET ST2. INSTALL ILLUMINATED STREET NAME SIGN PER STD. DWG. NO. 404.415, SEE NOTE 7.

M.A. = MAST ARM 6

STREET NAME SIGNS

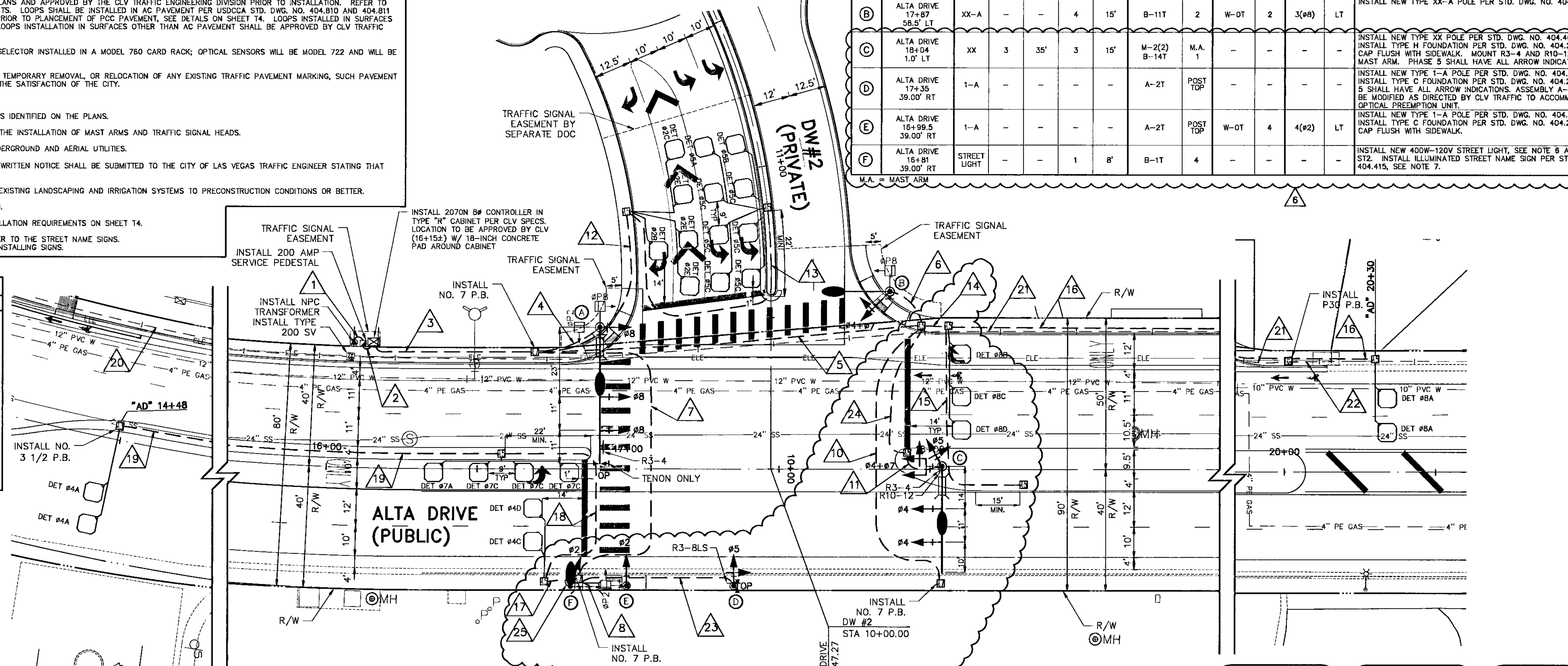
POLE	TYPE	SIGN LEGEND
A	DOUBLE FACE	S XXXX XX XXXX
C	DOUBLE FACE	S XXXX XX XXXX
F	DOUBLE FACE 8D 5C	W ALTA DR XXXX 5C 5C

8' 6



NEMA PHASE DIAGRAM

CONFLICT FLASH SHALL BE ALL RED
OPTICOM PRE-EMPTION FOR PHASE 2 (CHANNEL 1)
OPTICOM PRE-EMPTION FOR PHASE 4 & 8 (CHANNEL 2)



MATTHEW D. MEYER Exp. 12/31/2011 CIVIL No. 15790 STATE OF NEVADA PROFESSIONAL ENGINEER

DATE: 1/8/10

REV	DATE	DESCRIPTION	DATE	AGCY. APP.	DATE	GCW. APP.
6	12/15/09	REVISE TRAFFIC SIGNAL CONFIGURATION	1/10/12	MD		

DESIGN: MDM
DRAWN: DAM
CHECK: MDM
ISSUE DATE:
ISSUE EDITOR:
PLOT DATE: 01-08-10
PLOT TIME: 15:53:45

G. C. WALLACE COMPANIES
ENGINEERS | PLANNERS | SURVEYORS
1555 S. RAINBOW BOULEVARD · LAS VEGAS, NV 89146
T: 702.804.2000 · F: 702.804.2299 · GCWALLACE.COM

THE VILLAGE AT QUEENSBRIDGE
DQI OF NEVADA, LTD.
ALTA DRIVE/PROJECT DW #2
TRAFFIC SIGNAL PLAN

H22319

DRAWING
T2
26 OF 36 SHTS

107Y4889