

# TRAFFIC SIGNAL DESIGN NOTES

\* PLACE NOTES IN SAME ORDER ON SIGNAL PLANS

- A1. SEMI-ACTUATED OPERATION (WITH ATSAC CAMERA), (WITH EMERGENCY VEHICLE PREEMPTION) (WITH BATTERY BACKUP SYSTEM), AND/OR (WITH TRANSIT PRIORITY) (ATSAC 2070 CONTROLLER IN 35\_/332 CABINET)

ø2-  
ø4-  
ø6-  
ø8-

XXXXXXX ATSAC SYSTEM  
ATSAC CABLE INTERCONNECT

## REMOVAL OF EQUIPMENT

- B1. REMOVE TRAFFIC SIGNAL EQUIPMENT FOUNDATION AND PULL BOX. ABANDON CONDUIT(S).  
B2. REMOVE TRAFFIC SIGNAL EQUIPMENT: RETAIN FOUNDATION.  
B3. REMOVE MAST ARM VEHICLE HEAD AND MAST ARM.  
B4. REMOVE PULL BOX.  
B5. REMOVE VEHICLE/PEDESTRIAN HEAD.

## CONDUIT / PULL BOX WORK

- C1. INTERCEPT EXISTING CONDUIT. JOIN AND EXTEND INTO PULL BOX.  
C2. INSTALL NO. 6 (T) TRAFFIC PULL BOX WITH STEEL COVER, PER LADOT STD. DWG. NO. S-78.5.2.  
C3. INSTALL PULL BOX WITH SPECIAL COVER PER LADOT STD. DWG. NO. S-78.8 TO MATCH SURROUNDING TERRAZO SIDEWALK.  
C4. INSTALL NON-METALLIC CONDUIT EXPANSION FITTING PER CALTRANS STD. PLAN NO. ES-9B.  
C5. INSTALL CONDUIT IN BRIDGE SIDEWALK/BARRIER. SEE STRUCTURAL BRIDGE PLANS FOR DETAILS.

## LOOP WORK

- D1. PROTECT EXISTING LOOP(S)  
D2. INSTALL DETECTOR LOOP(S) PER LADOT STD. DWG. NO. S-70.1.A & S-70.1.D (CASE II).  
D3. INSTALL VEHICLE DETECTOR LOOP(S) PER LADOT STD. DWG. NO. S-70.1.A.  
D4. INSTALL BICYCLE DETECTOR LOOP(S) PER LADOT STD. DWG. NOS. S-75.0 AND S-70.1D (CASE I)  
D5. INSTALL SEPARATE DLC PAIR FOR ---LANE LOOP(S).  
D6. INSTALL TRANSIT PRIORITY LOOP(S) PER LADOT STD. DWG. NO. S-70.1F.  
D7. RENUMBER SYSTEM LOOPS AS SHOWN.  
D8. CONTRACTOR MAY RE-USE THE EXISTING DLC IN THE PULLBOX AS DETERMINED BY THE TRAFFIC SIGNAL INSPECTOR. IF DLC CABLE IS DAMAGED, NEW DLC CABLE SHALL BE INSTALLED FROM THE PULL BOX TO THE CONTROLLER.  
D9. CONTRACTOR MAY RE-USE EXISTING STUB-OUT AS DETERMINED BY THE TRAFFIC SIGNAL INSPECTOR. IF STUB-OUT IS NOT IN PLACE OR DAMAGED, CONTRACTOR SHALL INSTALL NEW STUB-OUT PER LADOT STD. DWG. S-70.1A.  
D10. INSTALL PREFORMED VEHICLE DETECTOR LOOP(S) PER LADOT STD. DWG. NO. S-70.1E.

## SERVICE WORK

### NEW SERVICE FROM UNDERGROUND VAULT

- E1. INSTALL 2" CONDUIT FROM SERVICE POINT, TO PULL BOX. INSTALL 3-#6 SERVICE WIRES FROM PULL BOX TO CONTROLLER AND A 60-AMP FUSE IN AN IN-LINE WATERPROFF FUSE HOLDER IN SERVICE PULL BOX. INSTALLATION SHALL BE PER LADOT STD. DWG. NO. S-79.9. WORK ON ANY ELECTRICAL SERVICE EQUIPMENT TO BE DONE IN CONJUNCTION WITH DEPARTMENT OF WATER AND POWER (DWP) PERSONNEL. CONTACT DWP AT (213) 367-9966 SEVEN(7) WORKING DAYS PRIOR TO BEGINNING WORK ON THE SERVICE LINE.

### NEW SERVICE FROM POWER POLE

- E2. INSTALL TWO-INCH (2") RISER AT THE -----O'CLOCK POSITION OF SERVICE POLE NO.-----M. INSTALL 3-#6 SERVICE WIRES FROM PULL BOX TO CONTROLLER AND A 60-AMP FUSE IN AN IN-LINE WATERPROFF FUSE HOLDER IN THE SERVICE PULL BOX PER LADOT STD. DWG. NO. S-79.8. WORK ON ANY ELECTRICAL SERVICE EQUIPMENT TO BE DONE IN CONJUNCTION WITH DEPARTMENT OF WATER AND POWER (DWP) PERSONNEL. CONTACT DWP AT (213) 367-9966, SEVEN (7) WORKING DAYS PRIOR TO BEGINNING WORK ON THE SERVICE LINE.

### REPLACE WIRES AND FUSE ONLY

- E3. INSTALL 3-#6 SERVICE WIRES FROM PULL BOX TO CONTROLLER AND A 60-AMP FUSE IN AN IN-LINE WATERPROFF FUSE HOLDER IN THE SERVICE PULL BOX PER LADOT STD. DWG. NO. S-79.8. WORK ON ANY ELECTRICAL SERVICE EQUIPMENT TO BE DONE IN CONJUNCTION WITH DEPARTMENT OF WATER AND POWER (DWP) PERSONNEL. CONTACT DWP AT (213) 367-9966 SEVEN (7) WORKING DAYS PRIOR TO BEGINNING WORK ON THE SERVICE LINE.

### CONVERT TO COMBINATION SERVICE

- E4. USE EXISTING STREET LIGHTING SERVICE ON POLE NO. -----, CONVERT STREET LIGHTING SEVICE TO A COMBINATION "STREET LIGHT/TRAFFIC SIGNAL" SERVICE PER LADOT STANDARD DWG. S-79.8 & S-79.9. REPLACE THE EXISTING STREET LIGHTING SERVICE PULLBOX WITH A TYPE PB-3 PULLBOX, WITH "ST. LTG./TRF. SIG." LID. INSTALL A 60-AMP FUSE IN AN IN-LINE WATERPROFF FUSE HOLDER IN THE SERVICE PULLBOX AND RUN THREE (3) #6 SERVICE WIRES FROM THE SERVICE PULL BOX TO CONTROLLER. WORK ON ANY ELECTRICAL SERVICE EQUIPMENT TO BE DONE ONLY IN CONJUNCTION WITH DEPARTMENT OF WATER AND POWER DWP AT (213) 367-9966 SEVEN (7) WORKING DAYS PRIOR TO INSTALLATION OF SERVICE LINE.

## CONTROLLER WORK

### NEW CONTROLLER NOTE

- F1. INSTALL ATSAC 2070 CONTROLLER IN 35\_ CABINET. THE CONTRACTOR SHALL PROVIDE A COMPLETE FUNCTIONING CONTROLLER ASSEMBLY AND CABINET CONFORMING TO THE LATEST LADOT SPECIFICATION FOR 2070 CONTROLLER AND 35\_ CABINET, AND SHALL INCLUDE ALL NECESSARY AUXILIARY EQUIPMENT TO PROVIDE A COMPLETE AND FUNCTIONING CONTROLLER. CONTRACTOR TO DELIVER COMPLETELY ASSEMBLED CONTROLLER FOR TESTING TO THE DEPARTMENT OF TRANSPORTATION GENERAL SHOP PIPER TECHNICAL CENTER, 555 RAMIREZ STREET THIRTY (30) WORKING DAYS PRIOR TO INSTALLATION. CONTRACTOR TO PICK UP AND INSTALL CONTROLLER ASSEMBLY ON F-332 FOUNDATION.

### RELOCATED CONTROLLER NOTE

- F2. RELOCATE 2070 CONTROLLER AND 332 CABINET AS SHOWN. RELOCATED 332 CABINET, CONTROLLER, AND AUXILIARY EQUIPMENT SHALL BE UNDAMAGED AT THE CONCLUSION OF THE RELOCATION AS DETERMINED BY THE TRAFFIC SIGNAL INSPECTOR. DAMAGED EQUIPMENT SHALL BE REPLACED WITH NEW EQUIPMENT AT THE CONTRACTOR'S EXPENSE. ASSEMBLY ON F-332 FOUNDATION.

### LADOT SUPPLIED CONTROLLER NOTE

- F3. INSTALL LADOT SUPPLIED 2070 CONTROLLER AND CABINET. CONTRACTOR TO COORDINATE WITH LADOT SIGNAL SHOP AT (213) 473-8468 FOR PICKUP OF SIGNAL CONTROLLER AND CABINET. CONTRACTOR TO INSTALL CONTROLLER ASSEMBLY ON F-332 FOUNDATION.

### TRANSIT PRIORITY SENSOR NOTE

- F4. CONTRACTOR SHALL FURNISH AND INSTALL TRANSIT PRIORITY SENSOR UNIT AND COMMUNICATION CHANNEL CARD IN 332-CABINET

### BACKUP BATTERY NOTE (USED FOR CALTRANS SHARED LOCATIONS AND RR SIGNALS)

- F5. FURNISH AND INSTALL BATTERY BACKUP SYSTEM (BBS) IN 332 CABINET PER LADOT SPECIFICATION 92-066-03 (LATEST EDITION)

## MODIFICATION OF CONTROLLER

- G1. FIELD MODIFICATION NOTE (ADDING A NEW PHASE: ON 2070 CONTROLLER ONLY)  
FIELD MODIFICATION OF CONTROLLER REQUIRED. NOTIFY THE LADOT SIGNAL SHOP AT (213) 473-8468 FIFTEEN (15) WORKING DAYS PRIOR TO START OF CONSTRUCTION TO OBTAIN NEW CONFLICT MONITOR AND CONTROLLER TIMING PACKAGE. LADOT WILL MAKE ALL CONTROLLER MODIFICATIONS AND INSTALL THE NEW CONFLICT MONITOR IN THE EXISTING CONTROLLER CABINET.  
G2. FIELD MODIFICATION NOTE (EXTENDING TIME DUE TO RE-ALIGNMENT, ETC.)  
THE CONTRACTOR SHALL CONTACT THE LADOT ----- YARD TRAFFIC SIGNAL INSPECTOR AT----- FIFTEEN (15) WORKING DAYS PRIOR TO START OF CONSTRUCTION FOR FIELD MODIFICATION OF CONTROLLER. TIMING CHANGES SHALL BE IMPLEMENTED PRIOR TO START OF CONSTRUCTION.

## TEMPORARY CONSTRUCTION WORK

- H1. THE CONTRACTOR SHALL ENSURE THAT ALL TRAFFIC CONTROL EQUIPMENT IS VISIBLE. PROVIDE ACCESS TO LADOT MAINTENANCE AT ALL TIMES.  
H2. ATTACH TYPE 7 POST TO CONCRETE BLOCK FOR PEDESTRIAN PUSH BUTTON INSTALLATION.  
H3. TEMPORARY SIGNAL (CLEARANCE IN FEET)  
TEMPORARY SIGNAL PLATFORM SHALL BE PLACED AS SHOWN WITH A MINIMUM 2' CLEARANCE FROM THE FACE OF THE PLATFORM TO THE EDGE OF THE TRAVELED ROADWAY (15' CLEARANCE IF NOT PROTECTED BY CRASH CUSHION OR BEHIND K-RAIL OR CURB). OVERHEAD CABLES SHALL MAINTAIN A 20' VERTICAL CLEARANCE ABOVE THE TRAVELED ROADWAY AND 12' CLEARANCE OVER THE SIDEWALK. COIL AN ADDITIONAL 25' LENGTH OF OVERHEAD CABLE AT THE TEMPORARY PLATFORM SIGNAL TO FACILITATE CHANGE IN POSITION. ALTERNATE LOCATIONS OF THE TEMPORARY SIGNAL EQUIPMENT, BASED ON CONSTRUCTION CONDITION, REQUIRES APPROVAL OF THE LADOT TRAFFIC SIGNAL INSPECTOR.  
H4. TEMPORARY SIGNAL (RESTORATION ON SIGNAL)  
AT THE CONCLUSION OF CONSTRUCTION, THE CONTRACTOR SHALL RESTORE TRAFFIC SIGNAL AND STRIPING TO THE ORIGINAL CONDITIONS THAT WERE EXISTING PRIOR TO THE START OF CONSTRUCTION.  
H5. COVER PEDESTRIAN PUSH BUTTON AND DISCONNECT AS DIRECTED BY TRAFFIC SIGNAL INSPECTOR.  
H6. UNCOVER PEDESTRIAN PUSH BUTTON AND RECONNECT AS DIRECTED BY TRAFFIC SIGNAL INSPECTOR.  
H7. COVER PEDESTRIAN HEAD/VEHICLE HEAD/GREEN & YELLOW UP ARROW WITH DETACHABLE HEAD COVER (PER LADOT SPEC.NO. 92-086-03) AND DE-ENERGIZE AS DIRECTED BY TRAFFIC SIGNAL INSPECTOR.  
H8. UNCOVER PEDESTRIAN HEAD/VEHICLE HEAD/GREEN & YELLOW UP ARROW AND ENERGIZE AS DIRECTED BY TRAFFIC SIGNAL INSPECTOR.  
H9. DISCONNECT DETECTOR WIRE(S) IN PULL BOX/CONTROLLER.  
H10. STRAP 2" CONDUIT TO EXISTING POLE FOR ROUTING OF TEMPORARY CABLES/WIRES.  
H11. CONTRACTOR TO INSTALL 8'-WIDE TEMPORARY A.C. RAMP WITH 3" PVC DRAIN PIPE TO CONFORM TO ADA REQUIREMENTS.  
H12. CONTRACTOR TO MAINTAIN TRAFFIC SIGNAL EQUIPMENT AND LADOT TO OPERATE AND TIME INTERSECTION. FOR TRAFFIC SIGNAL EMERGENCY, CALL LADOT EMERGENCY RADIO ROOM AT (818) 752-5112.

### THIS WORKSITE TRAFFIC CONTROL PLAN IS NOT A PERMIT

- H13. DEPARTMENT OF TRANSPORTATION ACCEPTANCE OF THIS PLAN DOES NOT CONSTITUTE CITY APPROVAL OF THE STREET, LANE AND/OR SIDEWALK CLOSURE(S) DEPICTED ON THIS PLAN. THE CONTRACTOR SHALL OBTAIN THE APPROPRIATE PERMIT FROM EITHER THE BUREAU OF STREET SERVICES OR BUREAU OF ENGINEERING PRIOR TO THE IMPLEMENTATION OF THIS PLAN.

## STRIPING-SIGNING/PARKING METERS WORK

- I1. REMOVE, MARKOUT AND INSTALL ALL SIGNS, STRIPING AND PAVEMENT MARKINGS PER LADOT GEOMETRIC PLAN NO. A-XXXX AND THIS SIGNAL PLAN.  
I2. REMOVE, MARKOUT AND INSTALL ALL SIGNS, STRIPING AND PAVEMENT MARKINGS AS SHOWN HEREON. CONTRACTOR SHALL NOTIFY LADOT CITY-WIDE INVESTIGATION OFFICE AT (213) 928-9625 TEN (10) WORKING DAYS PRIOR TO START OF CONSTRUCTION. UPON COMPLETION OF FINAL MARKOUT, CONTRACTOR SHALL NOTIFY CITY-WIDE INVESTIGATION FOR FINAL APPROVAL. STRIPING AND PAVEMENT MARKING SHALL BE IN HOT APPLIED ALKYD THERMOPLASTIC IN ACCORDANCE WITH LADOT SPECIFICATION NOS. 51-005-10 AND 76-012-15. THE FIELD CONDITIONS SHOWN AS EXISTING CONDITION ON THE PLAN MAY BE CHANGED BETWEEN THE PLAN APPROVAL DATE AND IMPLEMENTATION DATE. INSTALLATION OR REMOVAL OF STRIPING, PAVEMENT MARKINGS, SIGNS OR OTHER TRAFFIC CONTROL DEVICES BEYOND THAT INDICATED ON THIS PLAN MAY BE REQUIRED IN ORDER TO FACILITATE CHANGES IN FIELD CONDITIONS AND/OR TO BE IN COMPLIANCE WITH LADOT STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL INSTALL SIGN AS DIRECTED BY CITY-WIDE INVESTIGATIONS REPRESENTATIVE.  
I3. CHANGES TO THE EXISTING PARKING METER ZONE TO BE REQUESTED FOR APPROVAL FROM RAY LAU OF LADOT PARKING METER DIVISION AT (213) 473-8270 AFTER THE CIVIL IMPROVEMENT HAVE BEEN CONSTRUCTED.  
I4. INSTALL CONTINENTAL CROSSWALK(S) PER LADOT STD. DWG. NO. S-481.1. REMOVE CONFLICTING STRIPING.  
I5. STRIPING, RED CURB, AND SIGNS ON PRIVATE RIGHT OF WAY IS THE RESPONSIBILITY OF THE PRIVATE OWNER.

NO.	REVISION	DESCRIPTION	DW./DIST.	ENGR.	DATE	DATE	BY	DATE	TIMING	DISTRICT	GEOMETRIC	ATSAC	METRO RAIL
									SUPERVISOR	DESIGNER	SR. DRAFTING	DRAFTING	FIELD

SHEET 1 OF 2  
REV. 2  
MAY - '19

(LADOT Revised May/19)

