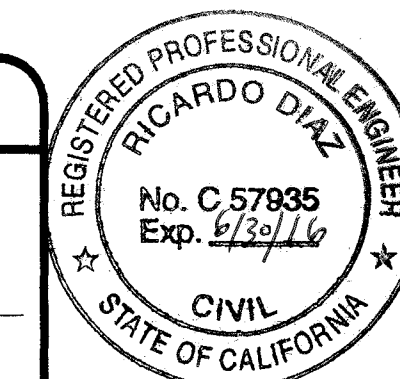


# FOOTHILL BOULEVARD

**JUNE 2016**

COUNTY OF ORANGE



| UTILITY OWNER            | CONTACT         | PHONE NO.                        |
|--------------------------|-----------------|----------------------------------|
| PACIFIC BELL             | DAVID GOLDSTEIN | (714) 666-5696                   |
| O.C. SANITARY DISTRICT   | QUYNH NGUYEN    | (714) 593-7326                   |
| AT&T                     | MATHEW KANG     | (818) 898-2352                   |
| EAST O.C. WATER DISTRICT | JERRY MENDZER   | (714) 501-5596                   |
| TIME WARNER CABLE        | DAVE DOLNEY     | (714) 903-8446                   |
| CITY OF TUSTIN WATER     | ERIC JOHNSON    | (714) 573-3320<br>(714) 734-8991 |
| SCE                      | JAMES ROWE      | (714) 573-3320<br>(714) 734-8991 |
| USA DIG ALERT            |                 | 800 - 227 - 2600                 |

SHEET 1 OF 4

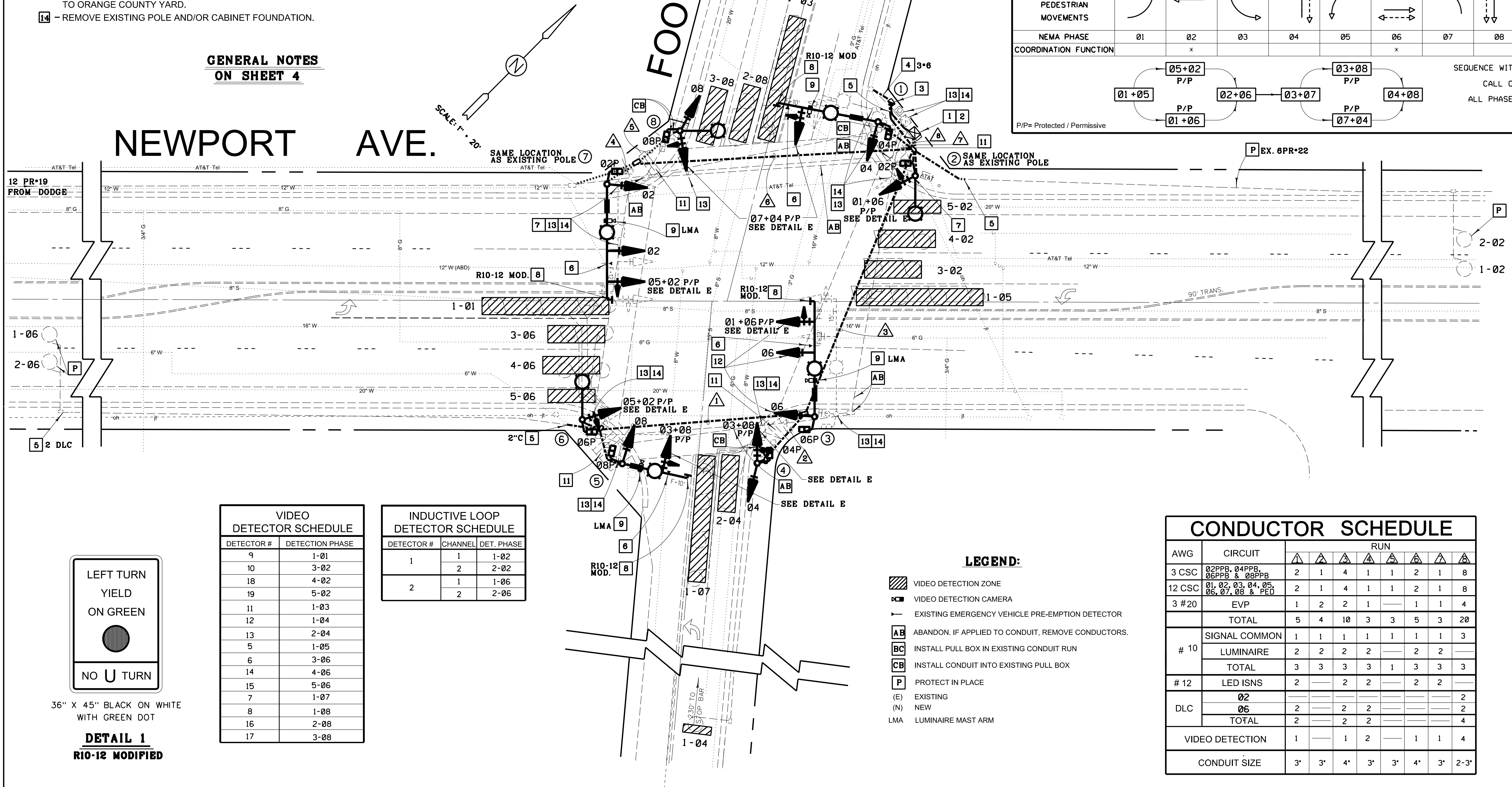






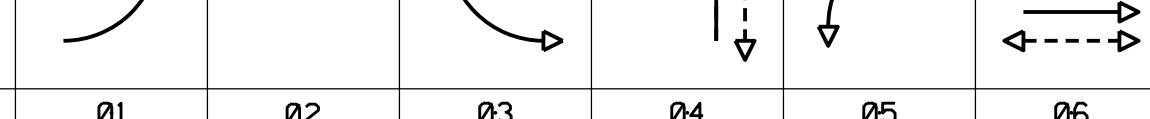
- 1] — CONSTRUCT P.C. CONCRETE TYPE "P" CONTROLLER CABINET FOUNDATION AND EXTEND FOUNDATION TO ACCOMMODATE MOUNTING BATTERY CABINET.
- 2] — FURNISH TRAFFIC CONTROLLER IN A FULLY WIRED TYPE "P" ALUMINUM CABINET PER SPECIAL PROVISIONS. FURNISH AND INSTALL DIMENSION 24M11-WBE BATTERY BACKUP SYSTEM PER SPECIAL PROVISIONS. FACE CONTROLLER CABINET DOOR TOWARDS FOOTHILL BLVD.
- 3] — FURNISH & INSTALL TYPE III-B ELECTRICAL SERVICE CABINET WITH A 100A MAIN, 50A SIGNAL, 30A (UNMETERED) STREET LIGHTING WITH TYPE V PHOTOCCELL IN THE BREAKER AREA OF THE CABINET AND FOUNDATION PER SPECIAL PROVISIONS. INSTALL COVER FOR PHOTOCCELL WINDOW.
- 4] — FURNISH & INSTALL 2" CONDUIT, #3/6 CONDUCTORS AND PULL ROPE TO ELECTRICAL SERVICE CONNECTION AS DIRECTED BY UTILITY COMPANY.
- 5] — FURNISH & INSTALL CONDUIT AND/OR CONDUCTOR AS INDICATED.
- 6] — SALVAGE AND REUSE EXISTING EVP DETECTOR AND CARDS. FURNISH & INSTALL CABLE AND TO CONTROLLER CABINET AND COIL 10' OF CABLE INSIDE CONTROLLER CABINET.
- 7] — CONTRACTOR SHALL PROVIDE TEMPORARY POLE INCLUDING TEMPORARY WIRING WITH CONCRETE BLOCKS DURING CONSTRUCTION OF NEW POLE FOUNDATION.
- 8] — FURNISH & INSTALL SIGN AS INDICATED.
- 9] — FURNISH AND INSTALL VIDEO DETECTION CAMERA PER SPECIAL PROVISIONS. CAMERA LOCATIONS PER DIRECTION O.C. TRAFFIC SIGNAL OPERATIONS PERSONNEL.
- 10] — FURNISH AND INSTALL DETECTOR LOOPS AS SHOWN AND PER GENERAL NOTES SHEET 3.
- 11] — CONSTRUCT WHEELCHAIR ACCESS RAMP PER CALTRANS STANDARD PLAN A88A.
- 12] — FURNISH & INSTALL PELCO GEOMETRICAL PROGRAMABLE LOUVER ON GREEN BALL AS DIRECTED PER OC TRAFFIC SIGNAL OPERATIONS PERSONNEL.
- 13] — REMOVE & SALVAGE EXISTING EQUIPMENT SUCH AS CABINETS, POLES & MASTARMS, SIGNAL HEADS, PED HEADS ETC. AND DELIVER TO ORANGE COUNTY YARD.
- 14] — REMOVE EXISTING POLE AND/OR CABINET FOUNDATION.

NEWPORT AVE.



| POLE DATA |           |        | SIGNAL | LED LUMINAIRE |      | SIGNAL MOUNTING |        |      | PED PUSH BUTTON |       | FOUNDATION |      | LED STREET NAME SIGN<br>(DOUBLE FACE) |            |
|-----------|-----------|--------|--------|---------------|------|-----------------|--------|------|-----------------|-------|------------|------|---------------------------------------|------------|
| NO.       | TYPE      | HEIGHT |        | M.A.          | M.A. | WATTS           | VEH.   | M.A. | PED.            | PHASE | POLE QUAD  | TYPE |                                       | SIZE       |
| ①         | 26'-4-100 | 30'    | 40'    | ●             | 15'  | 154             | SV-1-T | 1MAS | SP-1-T          | 2     | SE         | C    | 3.5' x 12'                            | * Newport  |
| ②         | 15TS      | 30'    | —      | ●             | 15'  | 154             | SV-1-T | —    | SP-1-T          | 4     | SW         | C    | 2.5' x 7.5'                           | —          |
| ③         | 26'-4-100 | 30'    | 45'    | ●             | 15'  | 154             | SV-1-T | 2MAS | SP-1-T          | 4     | SW         | C    | 3.5' x 12'                            | * Foothill |
| ④         | 1-A       | 10'    | —      | —             | —    | —               | TV-2-T | —    | SP-1-T          | 6     | NW         | C    | 2' x 3.5'                             | —          |
| ⑤         | 19'-4-100 | 30'    | 25'    | ●             | 15'  | 154             | SV-1-T | 2MAS | SP-1-T          | 6     | NW         | C    | 3' x 11'                              | * Newport  |
| ⑥         | 15TS      | 30'    | —      | ●             | 15'  | 154             | SV-1-T | —    | SP-1-T          | 8     | NE         | C    | 2.5' x 7.5'                           | —          |
| ⑦         | 26'-4-100 | 30'    | 45'    | ●             | 15'  | 154             | SV-1-T | 2MAS | SP-1-T          | 8     | NE         | C    | 3.5' x 12'                            | * Foothill |
| ⑧         | 15TS      | 30'    | —      | ●             | 15'  | 154             | SV-2-T | —    | SP-1-T          | 2     | SE         | C    | 2.5' x 7.5'                           | —          |

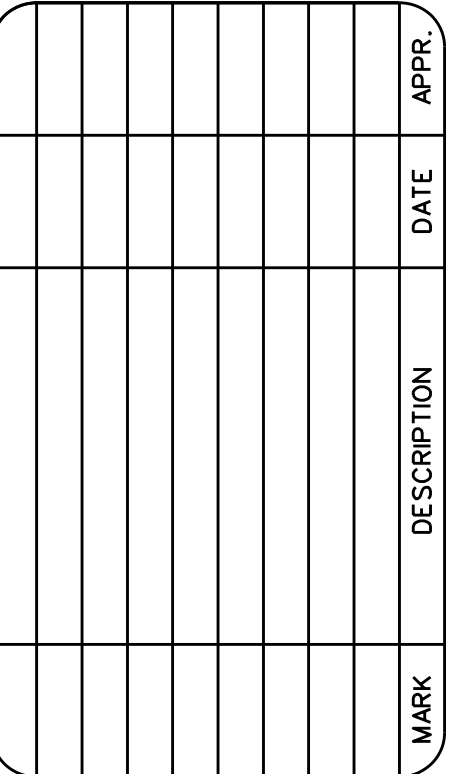
| PHASE DIAGRAM                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|----------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| VEHICULAR & PEDESTRIAN MOVEMENTS |  |  |  |  |  |  |  |  |
| NEMA PHASE                       | 01                                                                                  | 02                                                                                  | 03                                                                                  | 04                                                                                  | 05                                                                                  | 06                                                                                  | 07                                                                                  | 08                                                                                  |
| COORDINATION FUNCTION            |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |



SEQUENCE WITH CALL ON ALL PHASES

P/P= Protected / Permissive

| AWG             | CIRCUIT                                 | RUN |    |    |    |    |    |    |      |
|-----------------|-----------------------------------------|-----|----|----|----|----|----|----|------|
|                 |                                         | 1   | 2  | 3  | 4  | 5  | 6  | 7  | 8    |
| 3 CSC           | 02PPB, 04PPB,<br>06PPB & 08PPB          | 2   | 1  | 4  | 1  | 2  | 1  | 8  |      |
| 12 CSC          | 01, 02, 03, 04, 05,<br>06, 07, 08 & FED | 2   | 1  | 4  | 1  | 1  | 2  | 1  | 8    |
| 3 #20           | EVF                                     | 1   | 2  | 2  | 1  | —  | 1  | 1  | 4    |
|                 | TOTAL                                   | 5   | 4  | 10 | 3  | 3  | 5  | 3  | 20   |
| # 10            | SIGNAL COMMON                           | 1   | 1  | 1  | 1  | 1  | 1  | 1  | 3    |
|                 | LUMINAIRE                               | 2   | 2  | 2  | 2  | —  | 2  | 2  | —    |
|                 | TOTAL                                   | 3   | 3  | 3  | 3  | 1  | 3  | 3  | 3    |
| # 12            | LED ISNS                                | 2   | —  | 2  | 2  | —  | 2  | 2  | —    |
| DLC             | 02                                      | —   | —  | —  | —  | —  | —  | —  | 2    |
|                 | 06                                      | 2   | —  | 2  | 2  | —  | —  | —  | 2    |
|                 | TOTAL                                   | 2   | —  | 2  | 2  | —  | —  | —  | 4    |
| VIDEO DETECTION |                                         | 1   | —  | 1  | 2  | —  | 1  | 1  | 4    |
| CONDUIT SIZE    |                                         | 3"  | 3" | 4" | 3" | 3" | 4" | 3" | 2-3" |



PREPARED UNDER THE RESPONSIBLE CHARGE OF:

DATE

RICARDO DIAZ

DESIGNED BY: T. PHAM

|                      |                        |
|----------------------|------------------------|
| DRAWN<br>BY: T. PHAM | CHECKED<br>BY: B. DIAZ |
|----------------------|------------------------|

DRAWING CODE:

NEWPORT2.DGN

|            |        |
|------------|--------|
| PLOT DATE: | SCALE: |
|------------|--------|

COUNTY OF ORANGE  
OC PUBLIC WORKS

PREPARED BY:  
TRAFFIC ENGINEERING S

NEWPORT AVENUE  
AT  
FOOTHILL BOULEVARD  
TRAFFIC SIGNAL  
PLAN

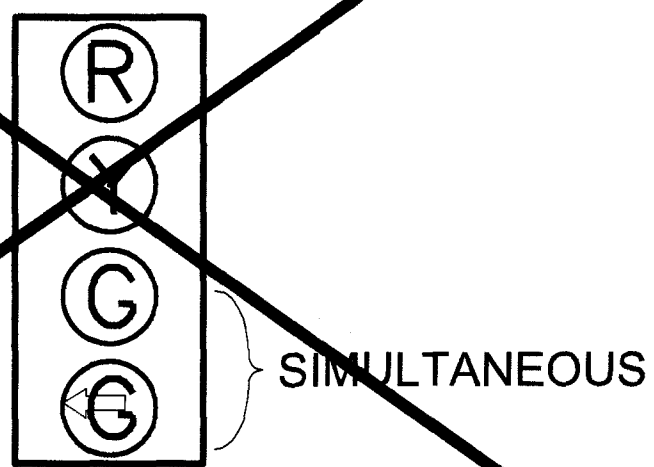
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Reference  
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Sheet 3 of 4



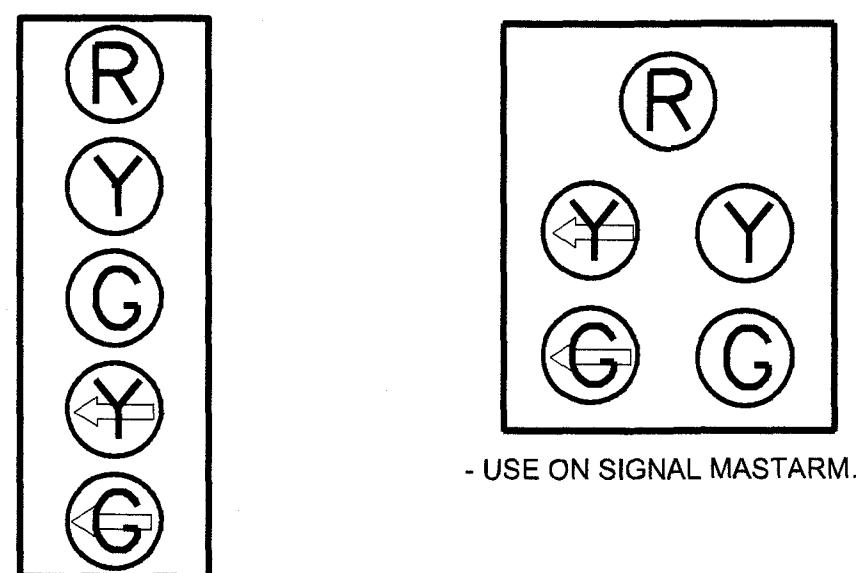
### DETAIL A

4-SECTION SIGNAL HEAD  
12" LENSES



### DETAIL E

5-SECTION SIGNAL HEAD  
12" LENSES

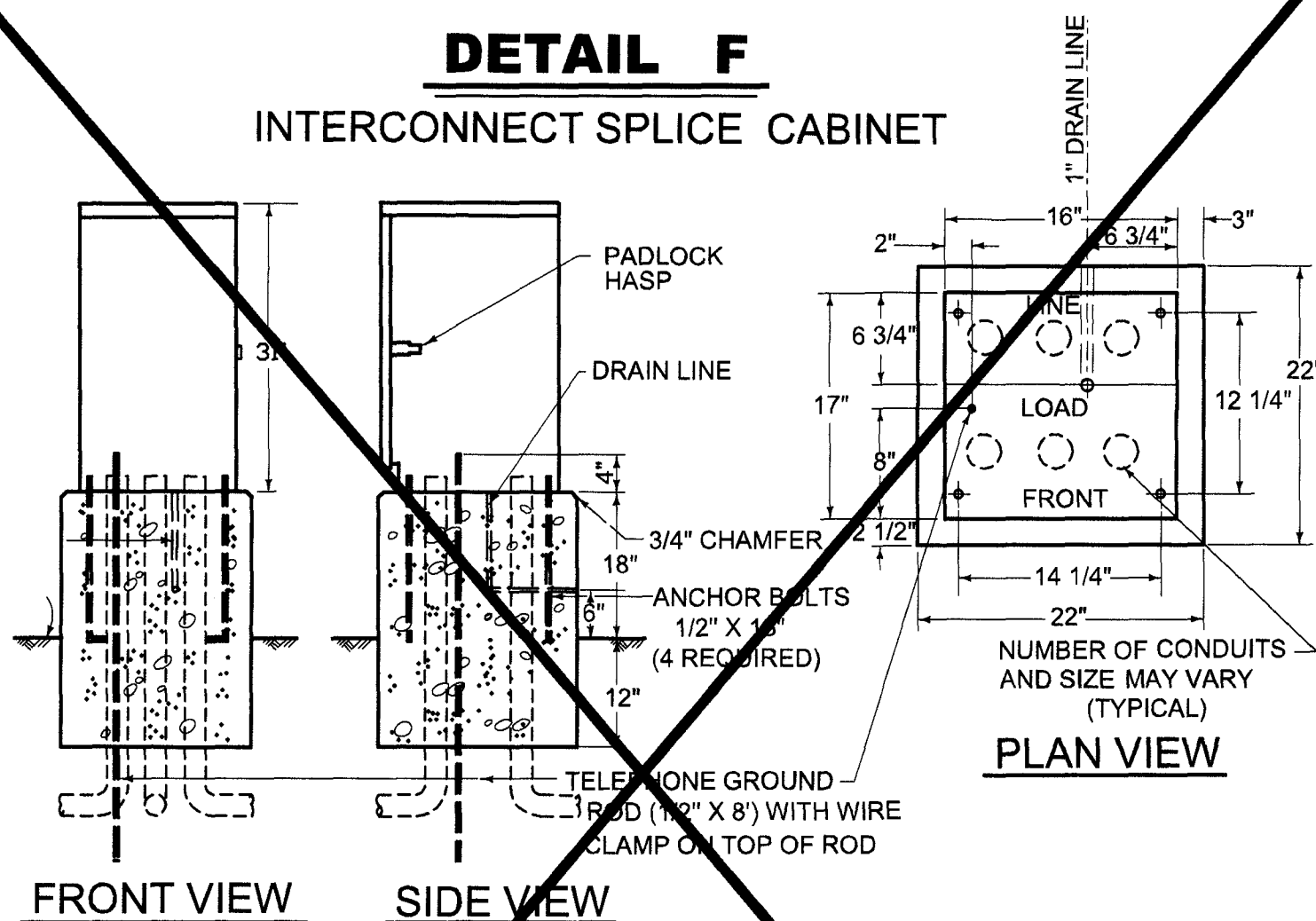


- USE ON SIGNAL MASTARM.

- BAND STRAP OR BOLT FRAME WORK AT TOP, TO SIGNAL POLE, AS DIRECTED BY ENGINEER.  
- NO CAST ALUMINUM TERMINAL BLOCKS ALLOWED.

### DETAIL F

INTERCONNECT SPLICE CABINET

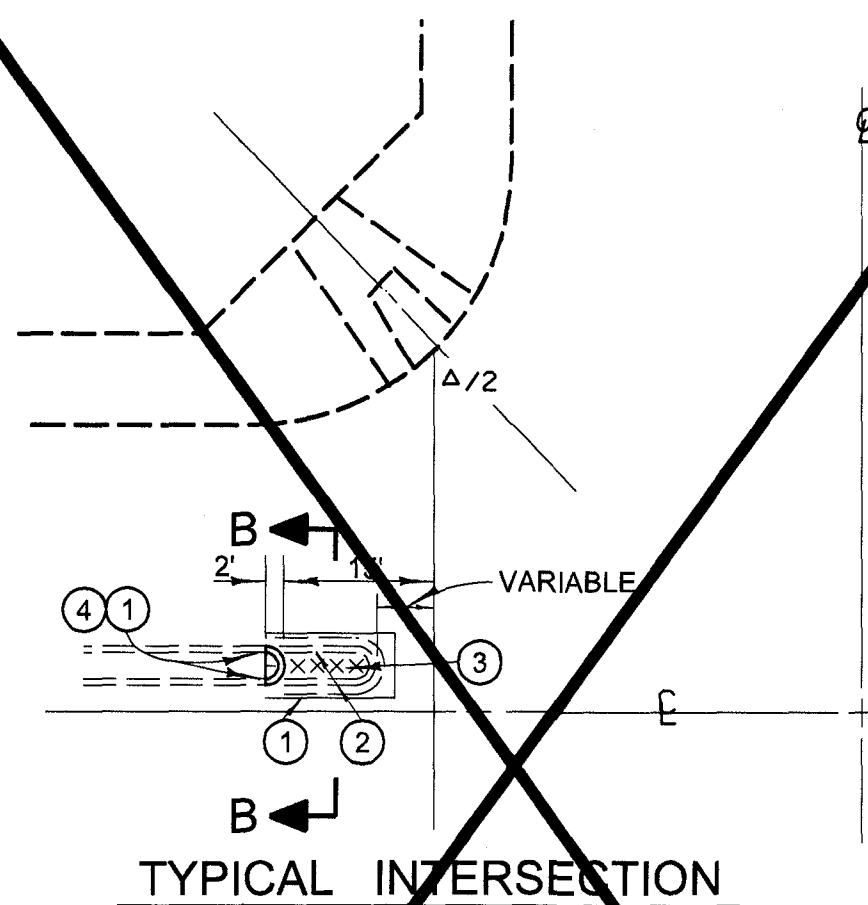


#### NOTES - DETAIL F

1. FOUNDATION TO BE 22" X 22" ANCHOR BOLT PLACEMENT PER CABINET MFG. TEMPLATE.
2. ENCLOSURE SHALL BE ALUMINUM AND FURNISHED WITH A DETACHABLE MOUNTING BASE.
3. ALL FACTORY INSTALLED COMPONENTS SHALL BE U.L. LISTED OR PER PUBLISHED N.E.C. STANDARDS.
4. A 3/4" CONSTRUCTION GRADE PLYWOOD PANEL SHALL BE FASTENED TO THE REAR WALL. PANEL SHALL BE 12" X 24" AND SHALL HAVE A No. MI-25 AND R-841 STANDOFF FASTENED IN THE CENTER OF THE PANEL.
5. ENCLOSURE FINISH SHALL CONFORM TO A.S.T.M. B-117. PAINT TO BE APPLIED TO EXTERNAL AND INTERNAL CABINET SURFACE SHALL BE WHITE ANTI-GRAFFITI CARDINAL'S 6409 SERIES OR APPROVED EQUAL. ANTI-GRAFFITI PAINT SHALL BE APPLIED TO CABINET AT THE TIME OF MANUFACTURE.
6. PROVIDE 1 1/2" CONDUIT FOR FUTURE 115 VAC SERVICE.
7. PROVIDE GROUND BUS INSIDE SPLICE CABINET.

### DETAIL B

INTERSECTIONS RAISED MEDIAN



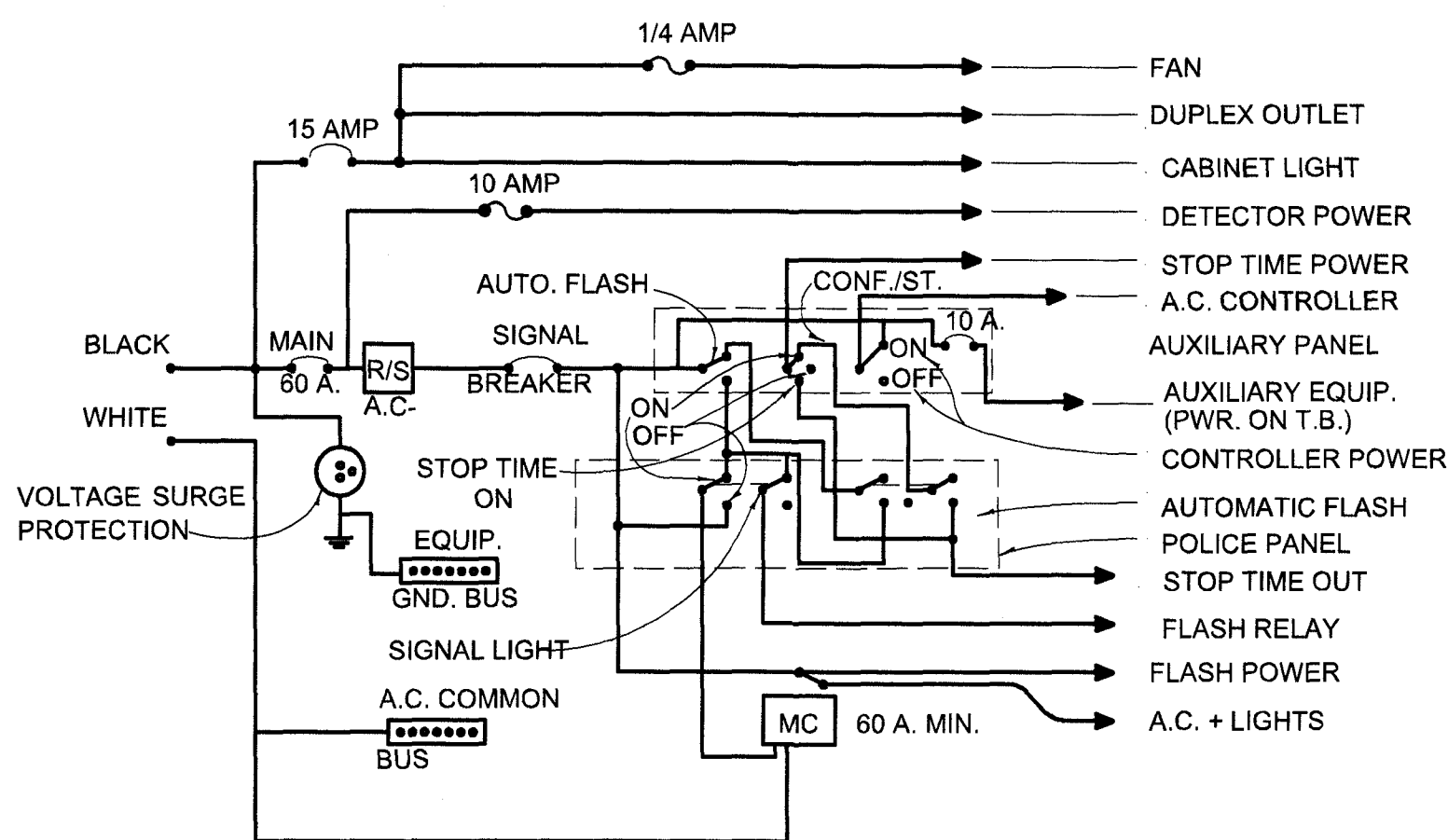
#### SECTION B - B

#### NOTES - DETAILS B

1. SAWCUT AND JOIN EXISTING
2. REMOVE CONCRETE
3. CONSTRUCT 0.85' AC OVER NATIVE SOIL
4. CONSTRUCT TYPE A1-8 CONCRETE CURB PER APWA STD. PLAN 120-0.

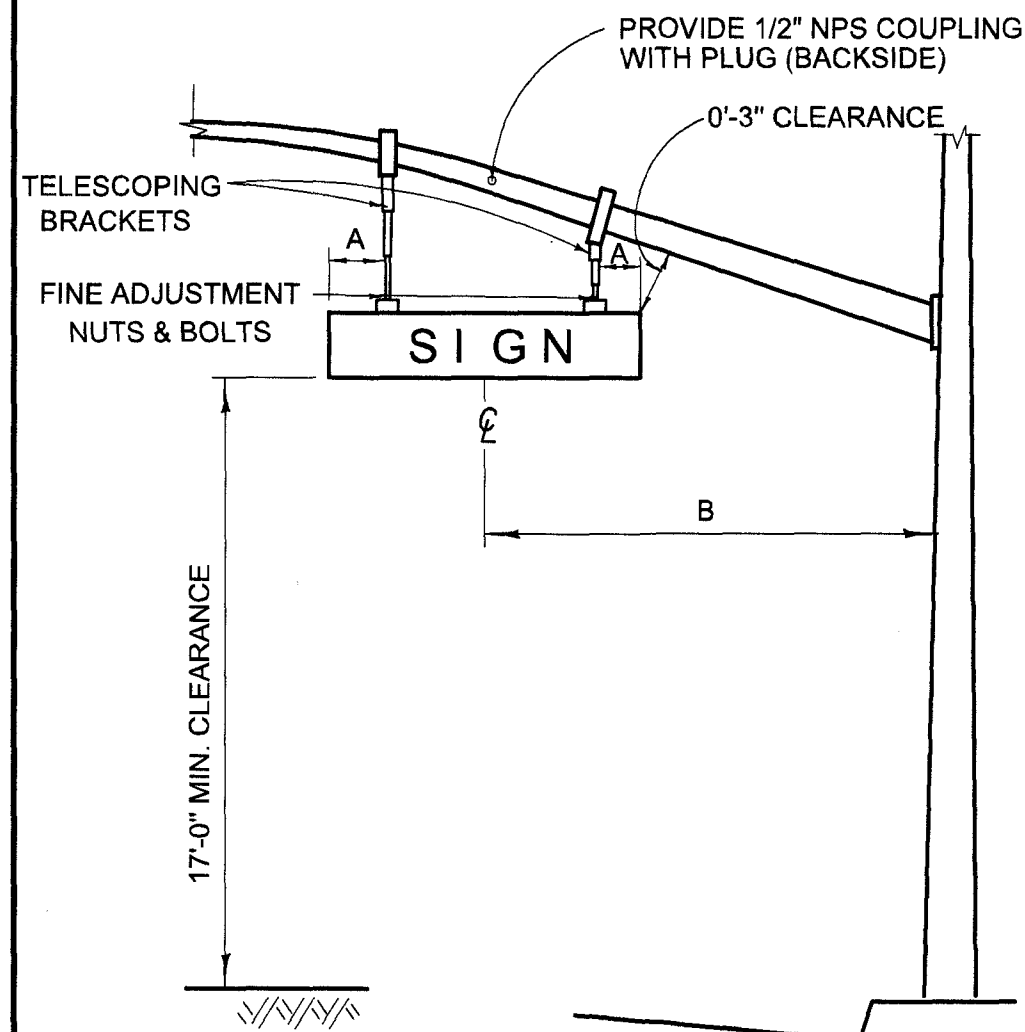
### DETAIL G

CONTROLLER CABINET WIRING



### DETAIL C

INTERNALLY ILLUMINATED LED STREET  
NAME SIGN COMPONENTS

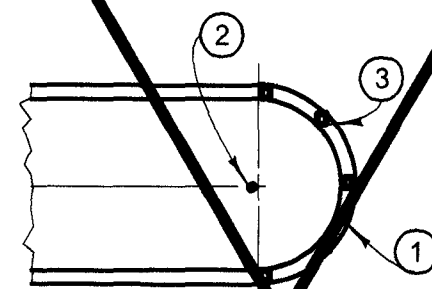


#### NOTES - DETAIL C

- A 1'-6" (18"x72" SIGN), 2'-0" (18"x96" SIGN)
- B 10'-6" CENTERLINE OF SIGN TO FACE OF POLE

### DETAIL H

RAISED MEDIAN MARKING

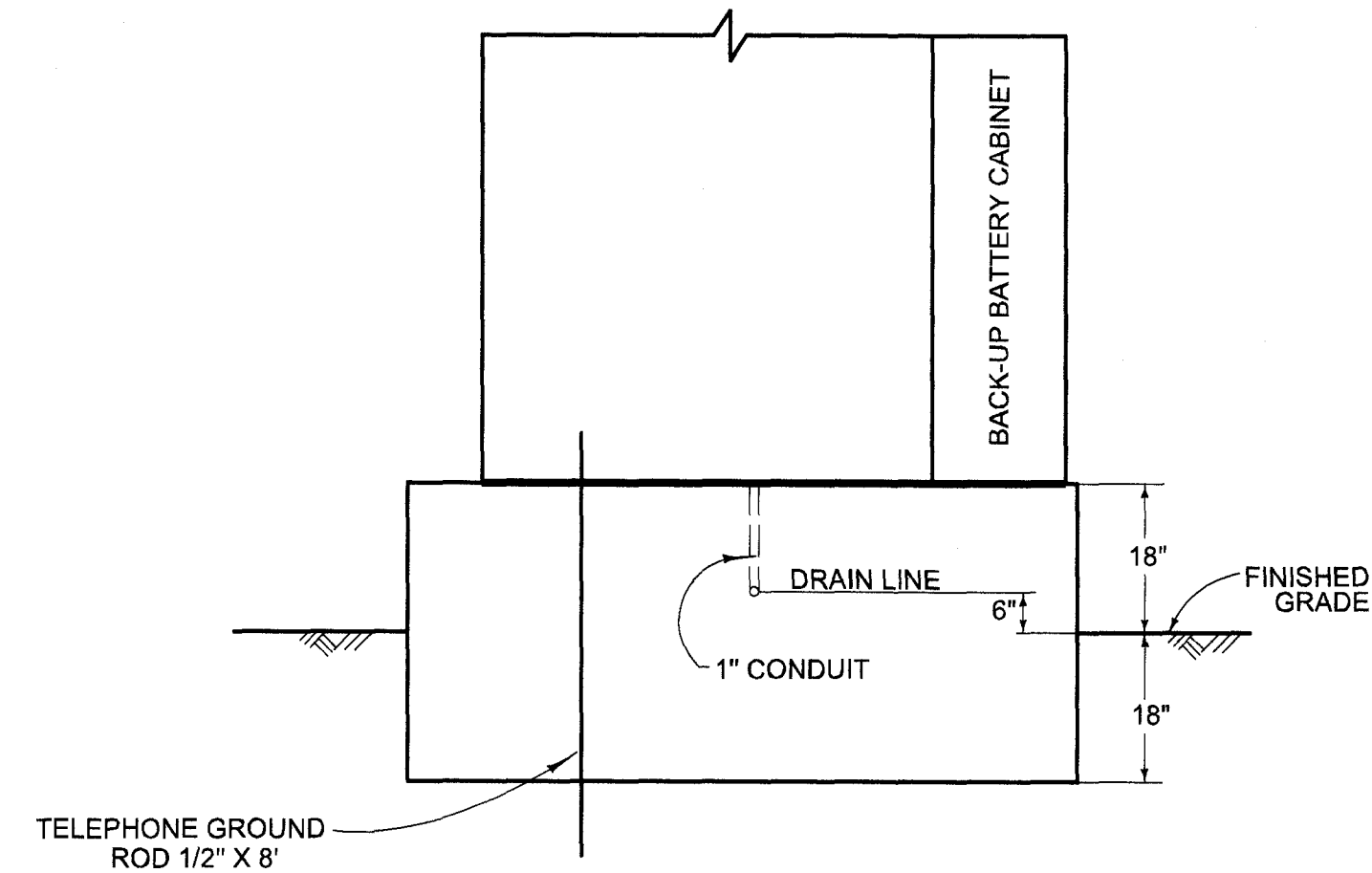


#### NOTES - DETAIL H

1. PAINT MEDIAN NOSE WITH HIGHLY REFLECTIVE PREMIXED YELLOW TRAFFIC PAINT WITH GLASS BEADS.
2. INSTALL FLEXIBLE VERTICAL TYPE K MARKER, R7, R10 OR TYPE N-1 ON TELESAR POST AS INDICATED ON PLAN.
3. INSTALL YELLOW REFLECTIVE PAVEMENT MARKERS ON TOP SURFACE OF MEDIAN CURB NOSE AT 2' O.C. SPACING (MINIMUM 2 MARKERS). PLACE REFLECTIVE SURFACE OF MARKERS PERPENDICULAR TO C OF ROADWAY.

### DETAIL D

CONTROLLER CABINET

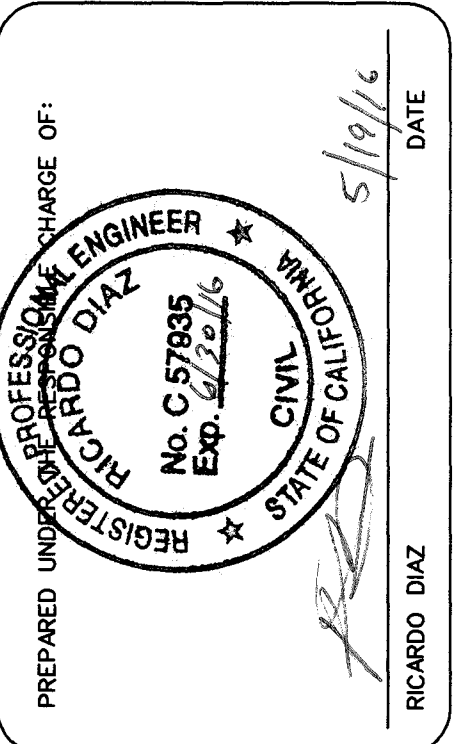


### GENERAL NOTES :

1. ALL WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST STATE OF THE CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD PLANS AND STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS FOR THIS PROJECT.
2. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER, IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY INTERFERE WITH SUCH FACILITIES. CONTACT USA DIG ALERT 1-800-227-2600 48 HOURS IN ADVANCE.
3. 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT OC PUBLIC WORK DEPARTMENT FOR INSPECTION AT 714-567-7800.
4. THE ENGINEER SHALL APPROVE POLE AND LOOP DETECTION PLACEMENT IN THE FIELD PRIOR TO INSTALLATION.
5. ALL CONDUITS SHALL BE 3" SCHEDULE 80 PVC. CONDUIT SHALL BE MINIMUM 30" OF DEPTH UNLESS OTHERWISE NOTED.
6. ALL PULL BOXES SHALL BE #6 UNLESS OTHERWISE NOTED AND 200' SPACING APART.
7. ALL SALVAGED EQUIPMENT SHALL BE DELIVERED UNDAMAGED, BY CONTRACTOR, TO THE ORANGE COUNTY YARD AT 1152 EAST FRUIT ST., SANTA ANA, CA. CONTRACTOR SHALL GIVE A 48-HOUR NOTICE TO THE COUNTY PRIOR TO THE DELIVERY DATE.
8. CONTRACTOR SHALL PROVIDE ALL NECESSARY TELEPHONE AND ELECTRICAL SERVICE LINES AND INTERCONNECT HOOK-UPS BETWEEN THE LOCAL CONTROLLER AND THE SYSTEM MASTER.
9. PEDESTRIAN INDICATIONS SHALL BE INTERNATIONAL SYMBOL AND COUNT DOWN.
10. PEDESTRIAN PUSH BUTTONS SHALL BE TYPE B WITH INTERNATIONAL SYMBOL PLATE.
11. ALL VEHICLE INDICATIONS SHALL BE 12" DIAMETER WITH BACKPLATES, UNLESS SHOWN OTHERWISE.
12. CONTRACTOR SHALL POTHOLE CONFLICTING UTILITIES AS DIRECTED BY ENGINEER.
13. CONTRACTOR SHALL AVOID DAMAGING EXISTING UTILITIES. (SEE SPECIAL PROVISIONS).
14. DETECTOR LOOPS SHALL BE CIRCULAR 6' DIAMETER. ALL DETECTOR LOOPS SHALL HAVE FOUR (4) TURNS.
15. ALL DETECTOR CABLE HOMERUNS SHALL BE IN THE CROSSWALK AREA.
16. TRAFFIC CONTROLLER CABINET FOUNDATION SHALL BE 18" ABOVE AND BELOW FINISHED GRADE (SEE DETAIL D).
17. INSTALL "CABINET DOOR OPEN" CIRCUIT IN CONTROLLER CABINET PER MANUFACTURE'S SPECIFICATIONS.
18. CONCRETE REPLACEMENT TO MATCH EXISTING.
19. CONTRACTOR SHALL MAINTAIN TRAFFIC SIGNAL FULL OPERATIONS DURING CONSTRUCTION.



| MARK | DESCRIPTION | DATE | APPR. |
|------|-------------|------|-------|
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|                      |                     |                    |                                          |                 |
|----------------------|---------------------|--------------------|------------------------------------------|-----------------|
| DESIGNED BY: T. PHAM | CHECKED BY: R. DIAZ | DRAWING CODE:      | FILE NAME: DETAIL D.DGN                  | SCALE: AS SHOWN |
| DRAWN BY: T. PHAM    | DATE: 5/19/16       | PLOT DATE: 5/19/16 | PREPARED BY: TRAFFIC ENGINEERING SECTION |                 |

COUNTY OF ORANGE  
OC PUBLIC WORKS

NEWPORT AVENUE AT  
DODGE AVENUE AND  
AT FOOTHILL BLVD

TRAFFIC SIGNAL  
DETAILS