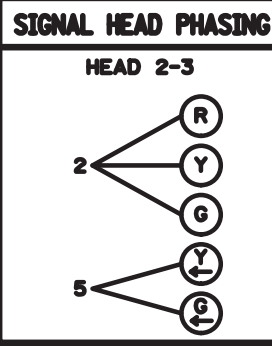


PLOTTED/REVISED: 10/31/2014



**SIGNAL HEAD CHART**

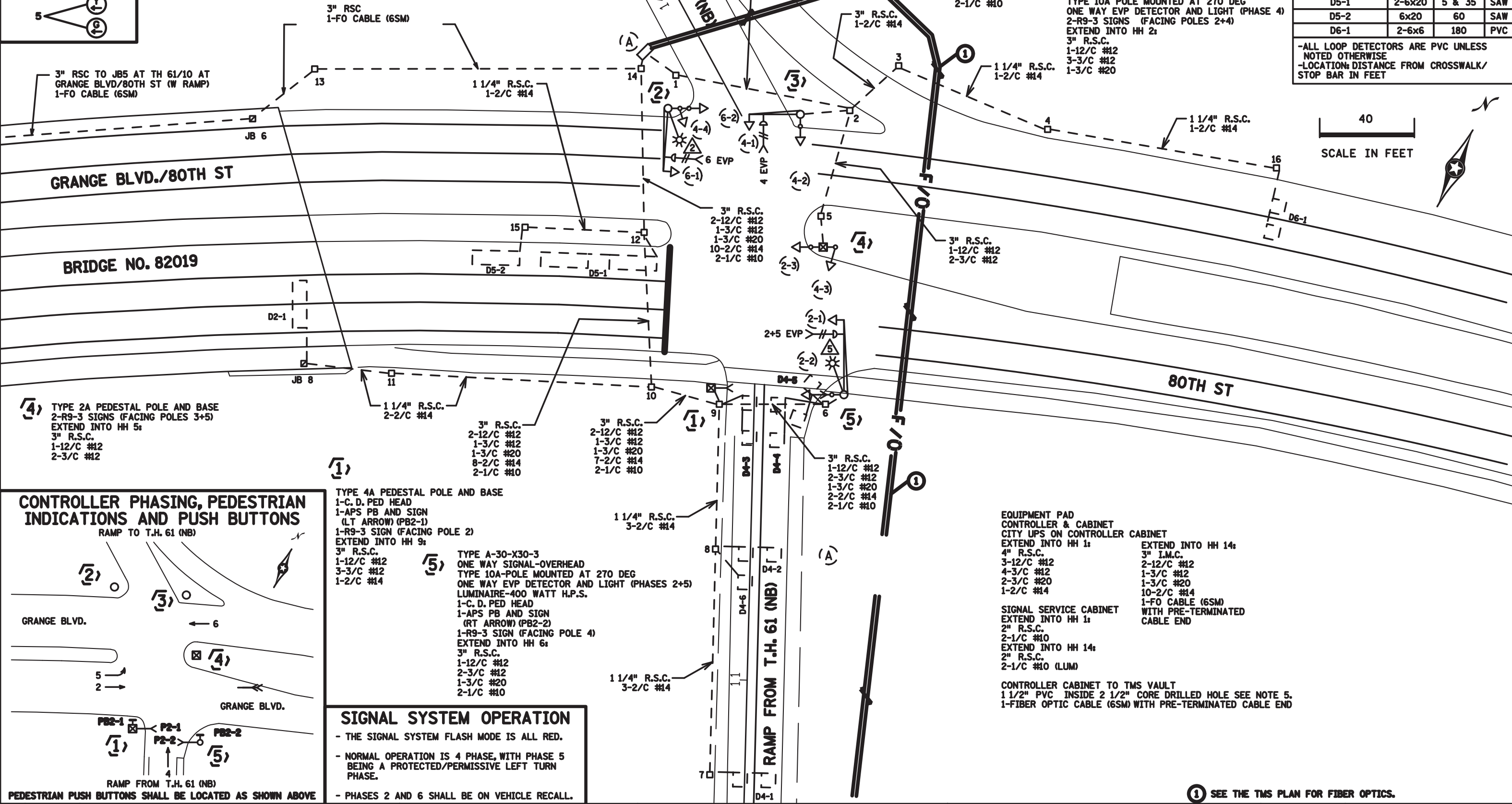
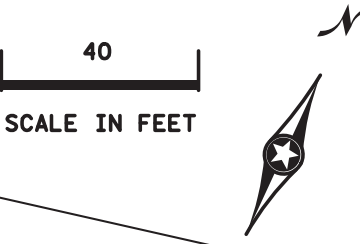
| FACE               | R | Y | G | Y | G |
|--------------------|---|---|---|---|---|
| 2-1, 2-2           | ○ | ○ | ○ |   |   |
| 2-3                | ○ | ○ | ○ | ◀ | ◀ |
| 4-1, 4-2, 4-3, 4-4 | ○ | ○ | ○ | ○ | ○ |
| 6-1, 6-2           | ○ | ○ | ○ |   |   |

-ALL SIGNAL INDICATIONS ARE 12" LED  
-ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS

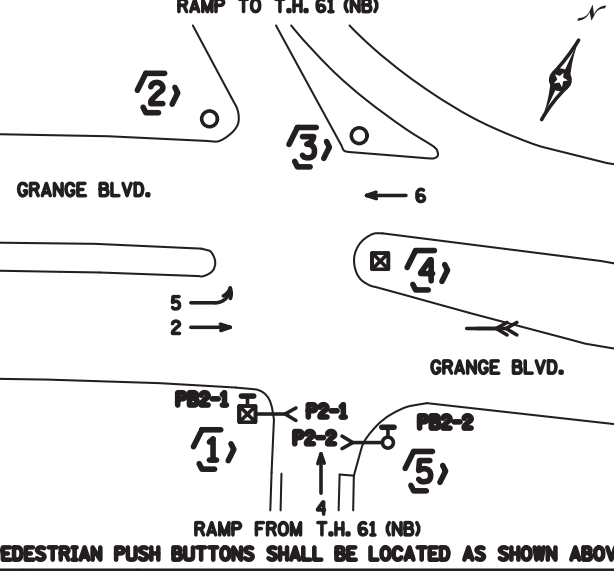
**LOOP DETECTOR CHART**

| NUMBER     | SIZE (FT) | LOCATION | TYPE |
|------------|-----------|----------|------|
| D2-1       | 6x20      | 150      | SAW  |
| D4-1       | 2-6x6     | 165      | PVC  |
| D4-2       | 2-6x6     | 70       | PVC  |
| D4-3, D4-4 | 2-6x6     | 5 & 20   | PVC  |
| D4-5       | 2-6x6     | -4 & 11  | PVC  |
| D5-1       | 2-6x20    | 5 & 35   | SAW  |
| D5-2       | 6x20      | 60       | SAW  |
| D6-1       | 2-6x6     | 180      | PVC  |

-ALL LOOP DETECTORS ARE PVC UNLESS NOTED OTHERWISE  
-LOCATION: DISTANCE FROM CROSSWALK/ STOP BAR IN FEET



**CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS**



- TYPE 4A PEDESTAL POLE AND BASE**  
1-C. D. PED HEAD  
1-APS PB AND SIGN (LT ARROW) (PB2-1)  
1-R9-3 SIGN (FACING POLE 2)  
EXTEND INTO HH 9:  
3" R.S.C. 1-12/C #12 3-3/C #12 1-2/C #14
- TYPE A-30-X30-3**  
ONE WAY SIGNAL-OVERHEAD TYPE 10A-POLE MOUNTED AT 270 DEG  
ONE WAY EVP DETECTOR AND LIGHT (PHASES 2+5)  
LUMINAIRE-400 WATT H.P.S.  
1-C. D. PED HEAD  
1-APS PB AND SIGN (RT ARROW) (PB2-2)  
1-R9-3 SIGN (FACING POLE 4)  
EXTEND INTO HH 6:  
3" R.S.C. 1-12/C #12 2-3/C #12 1-3/C #20 2-1/C #10

**SIGNAL SYSTEM OPERATION**

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE, WITH PHASE 5 BEING A PROTECTED/PERMISSIVE LEFT TURN PHASE.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

① SEE THE TMS PLAN FOR FIBER OPTICS.

DISTRICT #: METRO  
PLOT NAME: layout  
PATH & FILENAME: IP\_PWP-d0799INT21006\_sgl.dgn

| BY  | DATE     | REVISIONS                          |
|-----|----------|------------------------------------|
| EJA | 10-31-14 | AS-BUILT OF SP 1913-75 FIBER ADDED |

|                                  |           |
|----------------------------------|-----------|
| SYSTEM ID: 21006                 | T.E. 5868 |
| METER ADDRESS: 7900 GRANGE BLVD. |           |
| MASTER ID: 21008                 | T.E.      |

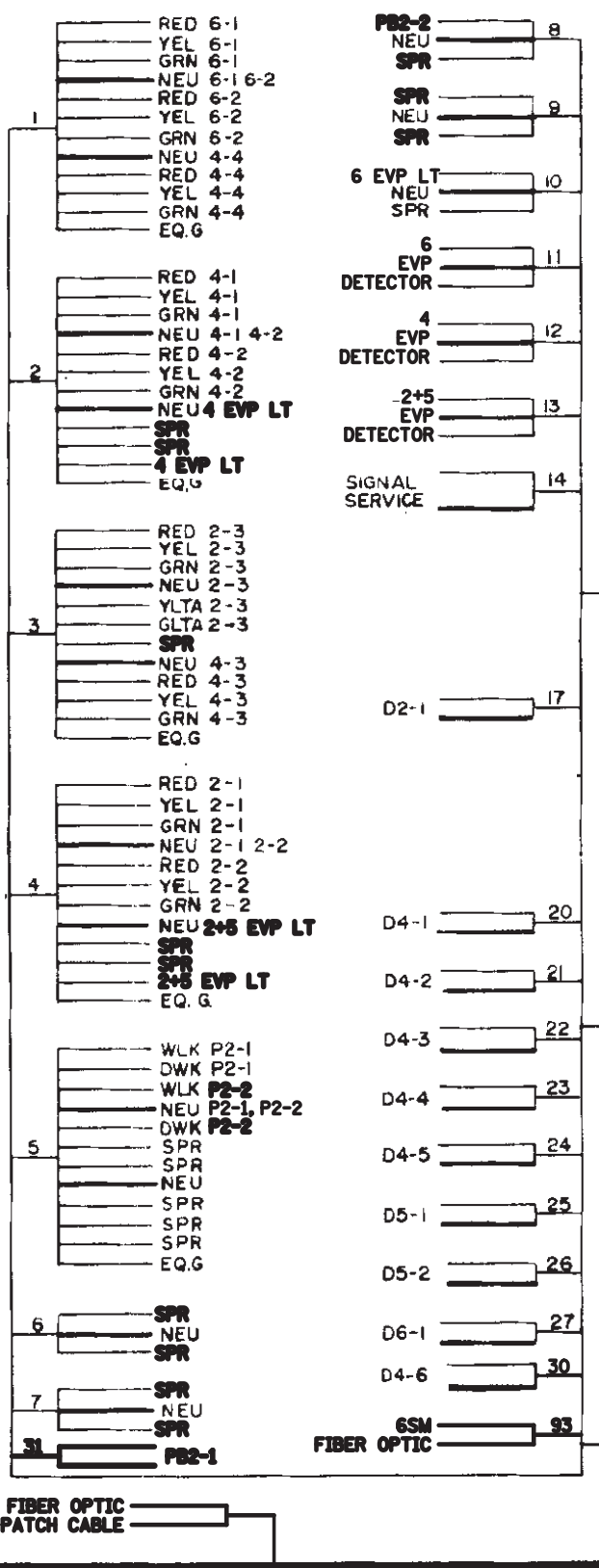
**INTERSECTION LAYOUT**  
**T.H. 61/10 AT GRANGE BLVD./80TH ST. (E. RAMP)**  
**IN COTTAGE GROVE, WASHINGTON CO.**

|  |                |                         |                |
|--|----------------|-------------------------|----------------|
| S.A.P. NO.                               | DRAWN BY: SJK  | CKD BY: EJA             | DATE: 09-10-13 |
| CERTIFIED BY: <i>Michael P. Gelinsky</i> | LIC. NO. 19863 | DATE: 09-10-13          |                |
| STATE PROJ. NO.                          | (T.H.61)       | SHEET NO. 1 OF 2 SHEETS |                |

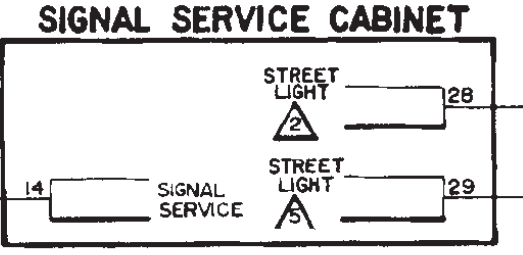
PLOTTED/REVISED: 10/31/2014

DISTRICT \*: METRO  
PLOT NAME: wiring diagram  
PATH & FILENAME: IP\_PWP-d07799INT21006WR\_sgl.dgn

# CONTROLLER CABINET



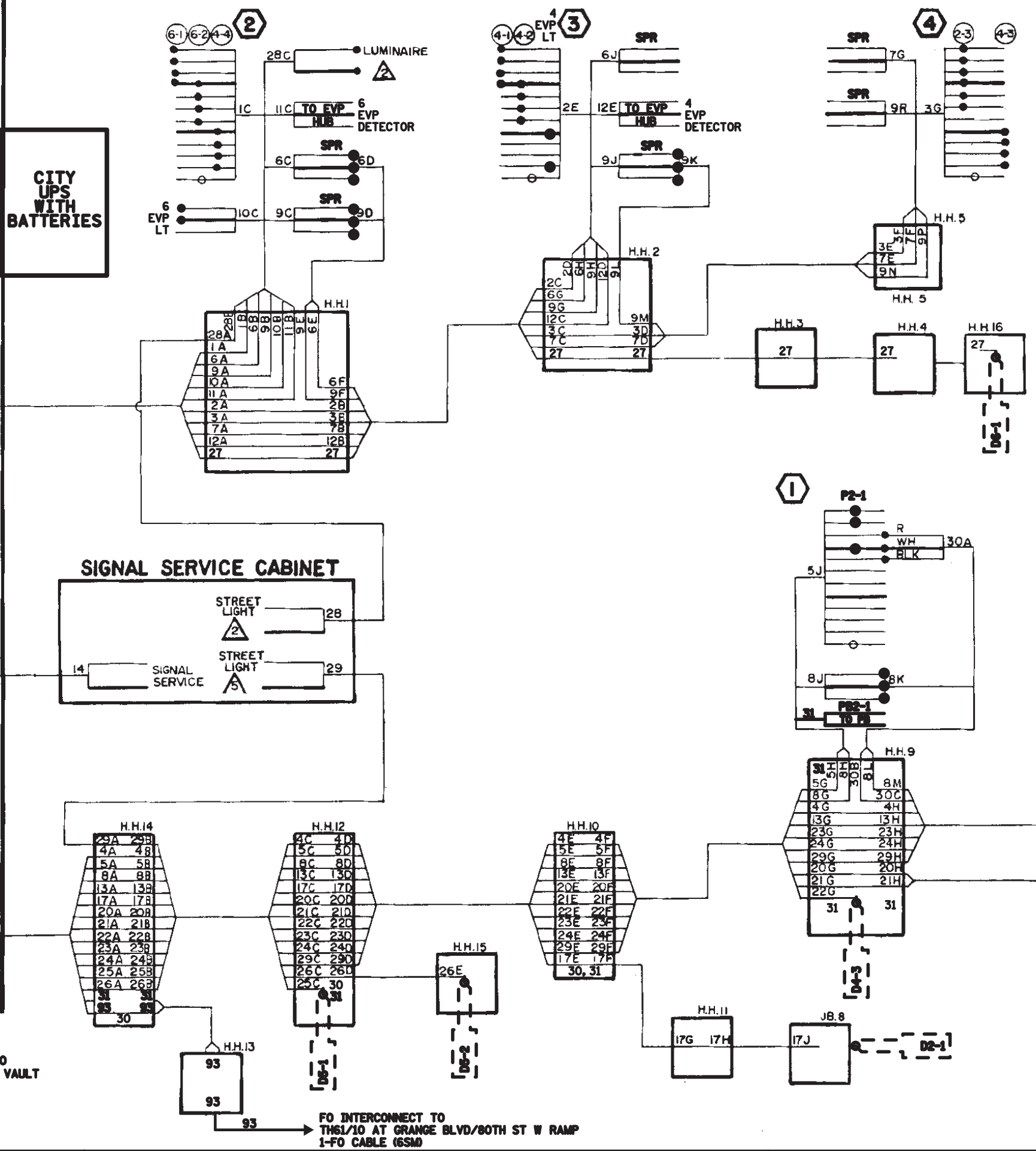
**CITY UPS WITH BATTERIES**



# CONDUCTOR COLOR CODING

|           |           |
|-----------|-----------|
| R         | BLK       |
| 0         | WH        |
| BL        | 2-1/C#6   |
| WH        | 2-1/C#10  |
| R/BLK     | R         |
| O/BLK     | WH        |
| BL/BLK    | 3-1/C#12  |
| WH/BLK    | BLK       |
| BLK       | BLK       |
| BLK/WH    | BLK       |
| G/BLK     | BLK       |
| G         | CLEAR     |
| R OR O    | 2-1/C#14  |
| WH OR YEL | 3-1/C#20  |
| BLK OR BL | BLK OR BL |

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



FO TO TMS VAULT

FO INTERCONNECT TO THS1/10 AT GRANGE BLVD/80TH ST W RAMP  
1-FO CABLE (6SM)

| BY  | DATE     | REVISIONS                          |
|-----|----------|------------------------------------|
| EJA | 10-31-14 | AS-BUILT OF SP 1-13-75 FIBER ADDED |

|                                  |           |
|----------------------------------|-----------|
| SYSTEM ID: 21006                 | T.E. 5868 |
| METER ADDRESS: 7900 GRANGE BLVD. |           |
| MASTER ID: 21008                 | T.E.      |

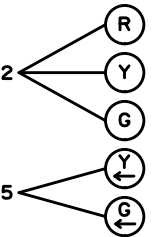
**FIELD WIRING DIAGRAM**  
**T.H. 61/10 AT GRANGE BLVD./80TH ST. (E. RAMP)**  
**IN COTTAGE GROVE, WASHINGTON CO.**

S.A.P. NO.  
 CERTIFIED BY: *Michael P. Liburdy*  
 STATE PROJ. NO. (T.H.61)

DRAWN BY: SJK CKD BY: EJA DATE: 09-10-13  
 LIC. NO. 19863 DATE: 09-10-13  
 SHEET NO. 2 OF 2 SHEETS

**SIGNAL HEAD PHASING**

HEAD 2-3



**SIGNAL FACE CHART**

| FACE               | R | Y | G | Y | G |
|--------------------|---|---|---|---|---|
| 2-1, 2-2           | ○ | ○ | ○ |   |   |
| 2-3                | ○ | ○ | ○ | ◀ | ◀ |
| 4-1, 4-2, 4-3, 4-4 | ○ | ○ | ○ |   |   |
| 6-1, 6-2           | ○ | ○ | ○ |   |   |

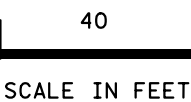
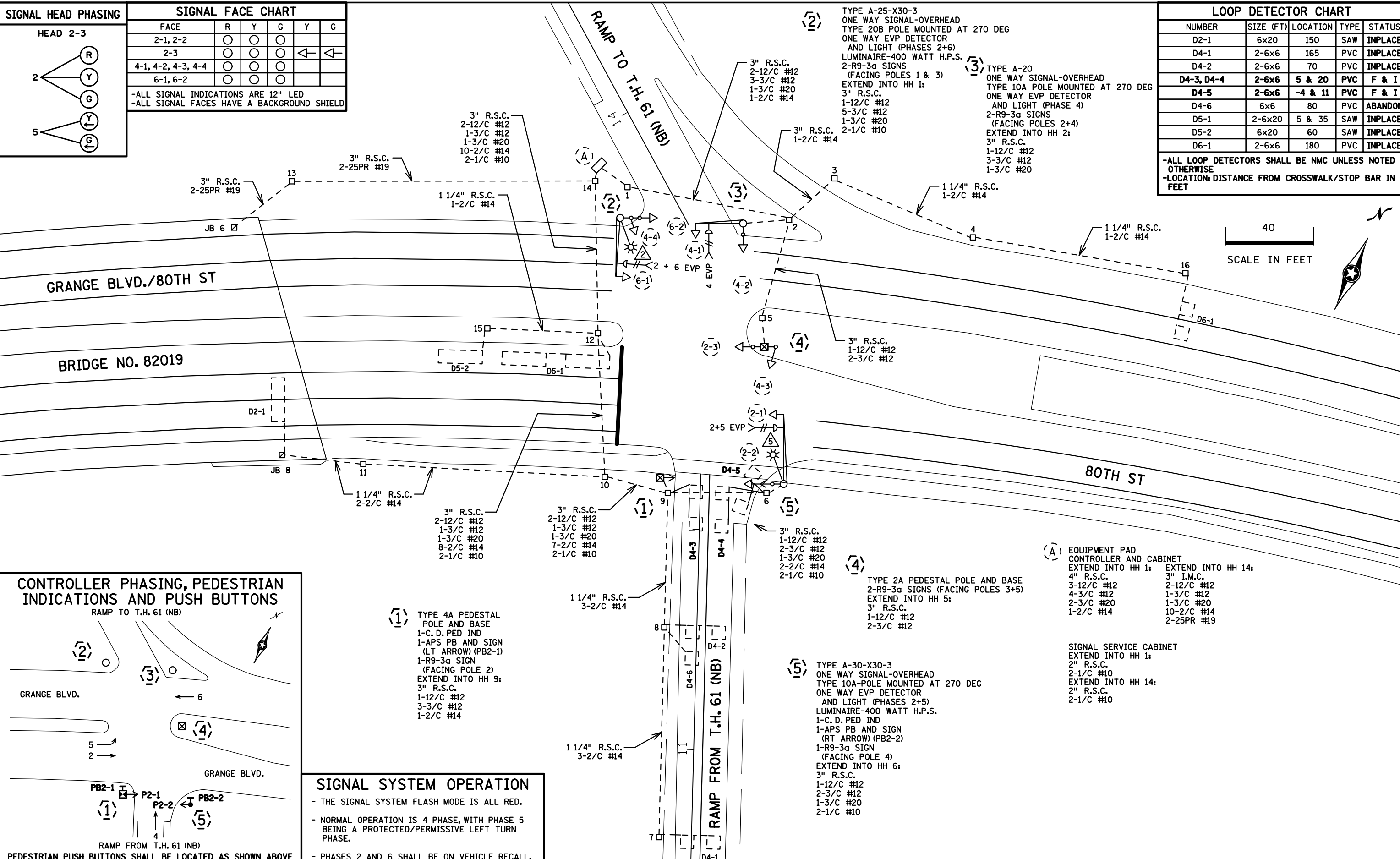
-ALL SIGNAL INDICATIONS ARE 12" LED  
-ALL SIGNAL FACES HAVE A BACKGROUND SHIELD

**LOOP DETECTOR CHART**

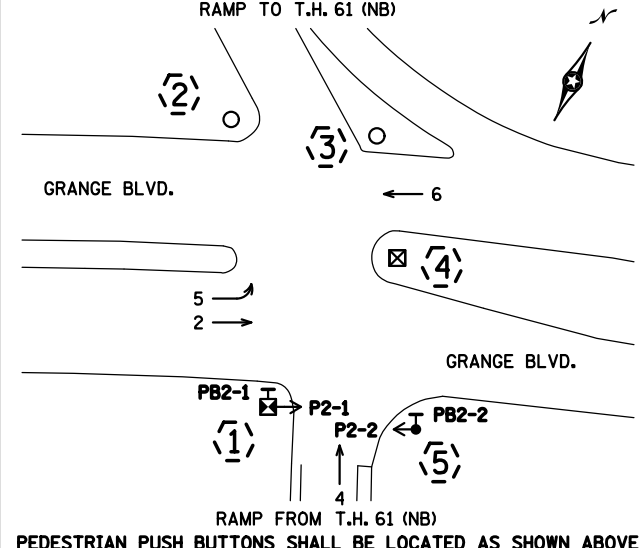
| NUMBER            | SIZE (FT)    | LOCATION           | TYPE       | STATUS           |
|-------------------|--------------|--------------------|------------|------------------|
| D2-1              | 6x20         | 150                | SAW        | INPLACE          |
| D4-1              | 2-6x6        | 165                | PVC        | INPLACE          |
| D4-2              | 2-6x6        | 70                 | PVC        | INPLACE          |
| <b>D4-3, D4-4</b> | <b>2-6x6</b> | <b>5 &amp; 20</b>  | <b>PVC</b> | <b>F &amp; I</b> |
| <b>D4-5</b>       | <b>2-6x6</b> | <b>-4 &amp; 11</b> | <b>PVC</b> | <b>F &amp; I</b> |
| D4-6              | 6x6          | 80                 | PVC        | ABANDON          |
| D5-1              | 2-6x20       | 5 & 35             | SAW        | INPLACE          |
| D5-2              | 6x20         | 60                 | SAW        | INPLACE          |
| D6-1              | 2-6x6        | 180                | PVC        | INPLACE          |

-ALL LOOP DETECTORS SHALL BE NMC UNLESS NOTED OTHERWISE  
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

PLOTTED/REVISED: 3/28/2013



**CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS**



**SIGNAL SYSTEM OPERATION**

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 4 PHASE, WITH PHASE 5 BEING A PROTECTED/PERMISSIVE LEFT TURN PHASE.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

| BY  | DATE     | REVISIONS                     |
|-----|----------|-------------------------------|
| EJA | 03-28-13 | AS-BUILT OF SP 8205-111 (APS) |

|                                  |      |
|----------------------------------|------|
| SYSTEM ID: 21006                 | T.E. |
| METER ADDRESS: 7900 GRANGE BLVD. |      |
| MASTER ID: 21008                 | T.E. |

**INTERSECTION LAYOUT**  
**T.H. 61 AT GRANGE BLVD./80TH ST. (E. RAMPS)**  
**IN COTTAGE GROVE, WASHINGTON CO.**

|  |                |                |                |
|--|----------------|----------------|----------------|
| S.A.P. NO.                               | DRAWN BY: GDS  | CKD BY: EJA    | DATE: 11-30-09 |
| CERTIFIED BY: <i>Michael P. Gelbrach</i> | LIC. NO. 19863 | DATE: 12-01-09 |                |
| STATE PROJ. NO.                          | (T.H. 61)      | SHEET NO. 1    | OF 2 SHEETS    |

DISTRICT #: METRO  
IPLOT NAME: layout (b)  
PATH & FILENAME: IP\_PWP-d07799\INT 21006LWR\_sgl.dgn

