

LED RETROFIT-SYSTEM "AAA" NOTES:

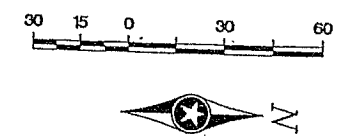
- ALL ITEMS OF SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, UNLESS OTHERWISE NOTED ON PLANS.
- CONTRACTOR SHALL REMOVE THE INPLACE "HAND/WALKING PERSON" LENS FROM EACH INPLACE ONE SECTION PED SIGNAL INDICATION, AND SHALL FURNISH & INSTALL A NEW COUNTDOWN TIMER LED "HAND/WALKING PERSON" LENS IN ITS PLACE.
- CONTRACTOR SHALL PROTECT AND MAINTAIN EACH INPLACE ONE SECTION PEDESTRIAN SIGNAL HOUSING & VISOR WHEN REMOVING AND REPLACING EACH LENS, AND SHALL REPLACE THE COMPLETE PEDESTRIAN SIGNAL INDICATION UNIT (HOUSING, VISOR, AND LENS) SHOULD ANY DAMAGE BE DONE TO THE UNIT BY CONTRACTOR DURING WORK ON THIS PROJECT (INCIDENTAL).
- IN LIEU OF THE LENS REPLACEMENT WORK DESCRIBED ABOVE, THE CONTRACTOR ALSO HAS THE OPTION OF REMOVING EACH INPLACE ONE SECTION PEDESTRIAN SIGNAL INDICATION (HOUSING, VISOR AND LENS) AND REPLACING THEM WITH NEW ONE SECTION PEDESTRIAN SIGNAL INDICATIONS (HOUSING, VISOR, AND LED LENSES), AT NO ADDITIONAL COST TO THE PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MODIFICATIONS TO INPLACE POLE MOUNTED BRACKETING ON EACH TRAFFIC SIGNAL POLE TO ACCOMMODATE INSTALLATION OF NEW ONE SECTION PEDESTRIAN SIGNAL INDICATIONS (INCLUDING THE REPLACEMENT OF THE POLE MOUNTED BRACKETING IF NEEDED TO ACCOMMODATE EACH PEDESTRIAN SIGNAL INDICATION INSTALLATION) (INCIDENTAL).
- ANY DAMAGE TO INPLACE TRAFFIC SIGNAL POLES OR VEHICLE SIGNAL HEADS & BRACKETING DUE TO WORK ON THIS PROJECT SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE ENGINEER, AT NO EXPENSE TO THE CITY.
- IF NEW PEDESTRIAN HOUSINGS AND VISORS ARE USED, THEY SHALL BE FABRICATED USING NEW POLYCARBONATE MATERIALS.
- ALL VEHICULAR SIGNAL INDICATIONS ARE LED AND ARE INPLACE (MAINTAIN AND REUSE INPLACE AS SHOWN).
- CONTRACTOR SHALL REMOVE ALL INPLACE PEDESTRIAN PUSH BUTTONS (8 TOTAL), R10-4b STICKER SIGNS, AND "MEANING OF WALK" STICKER SIGNS, & SHALL FURNISH & INSTALL NEW SOLID STATE PED PUSH BUTTONS AND R10-3e SIGNS IN THEIR PLACE.
- CONTRACTOR SHALL MAINTAIN OPERATION OF THE SIGNAL SYSTEM AT ALL TIMES, EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.
- SEE STATEMENT OF ESTIMATED QUANTITIES FOR BID ITEMS FOR WORK AT THIS SIGNAL SYSTEM.

NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D2-1	6x12	230'	1
D4-1	6x6	120'	3,8
D4-2	2-6x6	0'	1
D4-3	2-6x6	0'	7
D6-1	6x12	250'	1
D8-1	6x6	120'	3,8
D8-2	2-6x6	0'	1
D8-3	2-6x6	0'	7

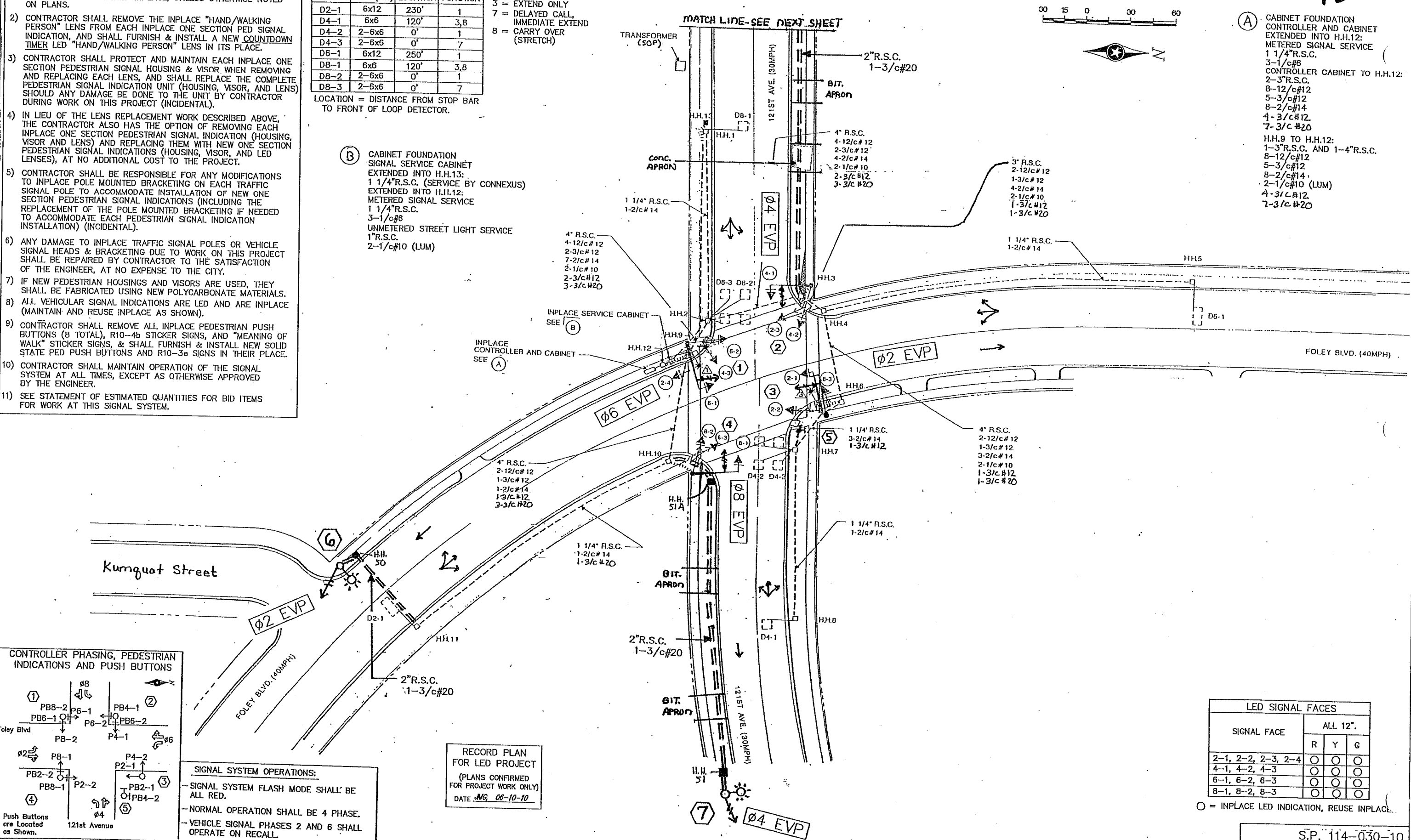
LOCATION = DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

- FUNCTIONS:
- 1 = CALL AND EXTEND
 - 3 = EXTEND ONLY
 - 7 = DELAYED CALL, IMMEDIATE EXTEND
 - 8 = CARRY OVER (STRETCH)

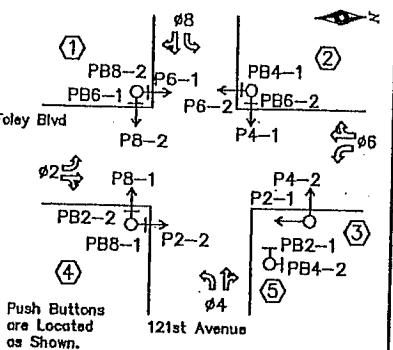
(B) CABINET FOUNDATION SIGNAL SERVICE CABINET EXTENDED INTO H.H.13: 1 1/4" R.S.C. (SERVICE BY CONNEXUS) EXTENDED INTO H.H.12: METERED SIGNAL SERVICE 1 1/4" R.S.C. 3-1/c#6 UNMETERED STREET LIGHT SERVICE 1" R.S.C. 2-1/c#10 (LUM)



(A) CABINET FOUNDATION CONTROLLER AND CABINET EXTENDED INTO H.H.12: METERED SIGNAL SERVICE 1 1/4" R.S.C. 3-1/c#6 CONTROLLER CABINET TO H.H.12: 2-3" R.S.C. 8-12/c#12 5-3/c#12 8-2/c#14 4-3/c#12 7-3/c#20 H.H.9 TO H.H.12: 1-3" R.S.C. AND 1-4" R.S.C. 8-12/c#12 5-3/c#12 8-2/c#14 2-1/c#10 (LUM) 4-3/c#12 7-3/c#20



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



SIGNAL SYSTEM OPERATIONS:
 - SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
 - NORMAL OPERATION SHALL BE 4 PHASE.
 - VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

RECORD PLAN FOR LED PROJECT
 (PLANS CONFIRMED FOR PROJECT WORK ONLY)
 DATE JMG 06-10-10

LED SIGNAL FACES			
SIGNAL FACE	ALL 12"		
	R	Y	G
2-1, 2-2, 2-3, 2-4	○	○	○
4-1, 4-2, 4-3	○	○	○
6-1, 6-2, 6-3	○	○	○
8-1, 8-2, 8-3	○	○	○

○ = INPLACE LED INDICATION, REUSE INPLACE

DRAWN BY: JMG
 DESIGNER: JMG
 CHECKED BY: JMG

NO.	BY	DATE	REVISIONS
1	Jmb	6/10	RECORD DRAWING FOR PROJECT

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
 Name: John M. Gray, PE
 L.C. No. 22457
 Date: May 18, 2009

SEH
 PHONE: (651) 490-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

COON RAPIDS, MINNESOTA

LED RETROFIT-SYSTEM "AAA"
 INTERSECTION LAYOUT
 FOLEY BOULEVARD AT 121ST AVENUE

FILE NO. 107418
 DATE 05/18/2009
 122
 131

S.P. 114-030-10
 CITY PROJECT NO. 09-18

43

① P90 POLE FOUNDATION
 TYPE P90-A-30-D40-9 (DAVIT AT 355")
 LUMINAIRE-250 W HPS WITH PEC AND CH.SW.
 ONE WAY SIGNAL-OVERHEAD
 TYPE 10A-POLE MOUNTED 90"
 TYPE 20C-POLE MOUNTED 270"
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 TYPE D SIGN PANEL-OVERHEAD
 ONE WAY EVP DETECTOR AND LIGHT (Ø6)
 EXTENDED INTO H.H.9:
 3"R.S.C.
 2-12/c#12
 3-3/c#12
 1-3/c#20
 4-1/c#10 (LUM)

④ P90 POLE FOUNDATION
 TYPE P90-A-30
 ONE WAY SIGNAL-OVERHEAD
 TYPE 20C-POLE MOUNTED 270"
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 TYPE D SIGN PANEL-OVERHEAD
 ONE WAY EVP DETECTOR AND LIGHT (Ø8)
 EXTENDED INTO H.H.10:
 3"R.S.C.
 2-12/c#12
 2-3/c#12
 1-3/c#20

② P90 POLE FOUNDATION
 TYPE P90-A-25
 ONE WAY SIGNAL-OVERHEAD
 TYPE 20C-POLE MOUNTED 270"
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 TYPE D SIGN PANEL-OVERHEAD
 ONE WAY EVP DETECTOR AND LIGHT (Ø4)
 EXTENDED INTO H.H.3:
 3"R.S.C.
 2-12/c#12
 2-3/c#12
 1-3/c#20

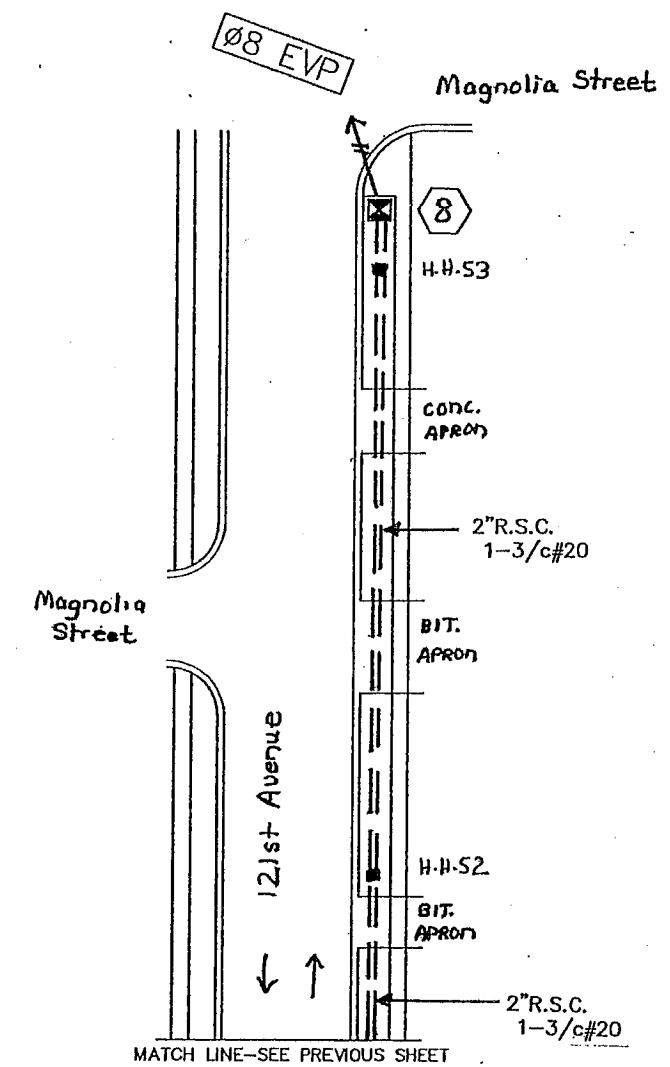
⑤ PEDESTRIAN PUSH BUTTON STATION (4"R.S.C.)
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 EXTENDED INTO H.H.7:
 1 1/4"R.S.C.
 1-3/c#12

⑥ ONE WAY EVP DETECTOR (Ø2)-
 MOUNT ON INPLACE WOOD STREET
 LIGHT POLE (20' ABOVE GROUNDLINE),
 FACING NORTHBOUND TRAFFIC.
 EXTEND INTO H.H.50:
 1"R.S.C.-ATTACH TO WOOD POLE
 1-3/c#20

③ P90 POLE FOUNDATION
 TYPE P90-A-25-D40-9 (DAVIT AT 355")
 LUMINAIRE-250 W HPS WITH PEC AND CH.SW.
 ONE WAY SIGNAL-OVERHEAD
 2-TYPE 10B-POLE MOUNTED 90' & 270"
 TYPE D SIGN PANEL-OVERHEAD
 ONE WAY EVP DETECTOR AND LIGHT (Ø2)
 EXTENDED INTO H.H.6:
 3"R.S.C.
 2-12/c#12
 3-3/c#12
 1-3/c#20
 2-1/c#10 (LUM)

⑦ ONE WAY EVP DETECTOR (Ø4)-
 MOUNT ON INPLACE WOOD STREET
 LIGHT POLE (20' ABOVE GROUNDLINE),
 FACING WESTBOUND TRAFFIC
 EXTEND INTO H.H.51:
 1"R.S.C.-ATTACH TO WOOD POLE
 1-3/c#20

⑧ PEDESTAL FOUNDATION
 10' PEDESTAL POLE (INCLUDES BASE)
 ONE WAY EVP DETECTOR (Ø8)-MOUNT ON
 TOP OF POLE, FACING EASTBOUND TRAFFIC
 EXTEND INTO H.H.53:
 2"R.S.C.
 1-3/c#20



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 FOR LED PROJECT
 (PLANS CONFIRMED
 FOR PROJECT WORK ONLY)
 DATE JMG 06-10-10

S.P. 114-030-10
 CITY PROJECT NO. 09-18

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DRAWN BY: JMG	1	Jmb	6/10	RECORD DRAWING FOR PROJECT
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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J.M.G.
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