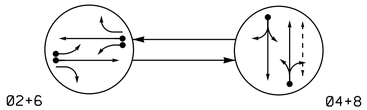
PROJECT REFERENCE NO.	SHEET NO.
EB-3314E	Sig. 1

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 02+6	PHASE 04+8	FLASH
21, 22	G	R	Y
41, 42	R	G	R
61, 62	G	R	Y
81, 82	R	G	R
P81, P82	DW	W	DRK

SIGNAL FACE I.D.

All Heads L.E.D.

21, 22
41, 42
61, 62
81, 82

P81, P82

2070L LOOP & DETECTOR INSTALLATION CHART

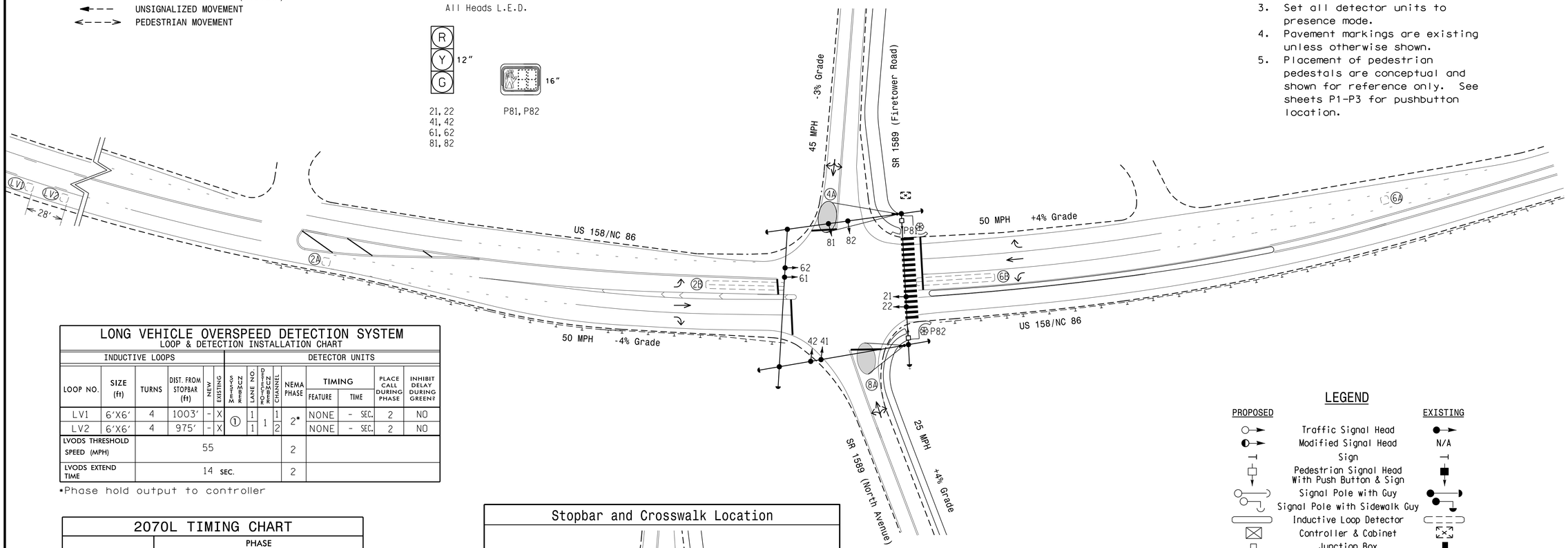
INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP/ ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	355	EXIST	-	2	Y	Y	-	-	-	-	-
2B	6X60	+5	2-4-2	-	2	Y	Y	Y	-	3	-	-
4A ✳	14X24	+2	✳	-	4	Y	Y	-	-	5	-	-
6A	6X6	355	EXIST	-	6	Y	Y	-	-	-	-	-
6B	6X60	+5	2-4-2	-	6	Y	Y	Y	-	3	-	-
8A ✳	14X24	+5	✳	-	8	Y	Y	-	-	5	-	-

✳ Microwave Detection Zone

2 Phase
Fully Actuated
(Isolated)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Pavement markings are existing unless otherwise shown.
5. Placement of pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location.



LONG VEHICLE OVERSPEED DETECTION SYSTEM
LOOP & DETECTION INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR UNITS							
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW EXISTING	MODEL NO.	LANE NO.	CARD NO.	CHANNEL NO.	NEMA PHASE	TIMING FEATURE	TIMING TIME	PLACE CALL DURING PHASE	INHIBIT DELAY DURING GREEN?
LV1	6'X6'	4	1003'	- X	①	1	1	1	2*	NONE	- SEC.	2	NO
LV2	6'X6'	4	975'	- X		1		2		NONE	- SEC.	2	NO
LVODS THRESHOLD SPEED (MPH)		55							2				
LVODS EXTEND TIME		14 SEC.							2				

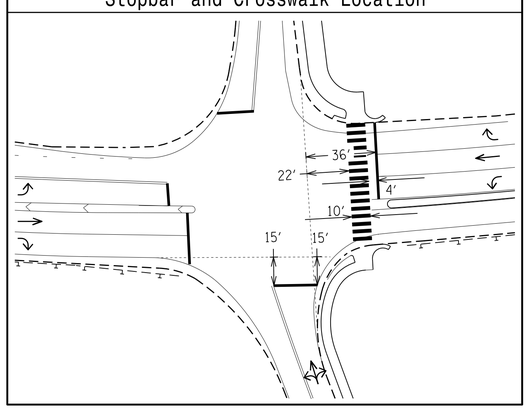
*Phase hold output to controller

2070L TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6	PHASE 8
Min Green 1 *	14	7	14	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	70	25	70	25
Yellow Clearance	5.2	4.8	4.5	4.0
Red Clearance	1.3	1.6	1.4	2.9
Walk 1 *	-	-	-	7
Don't Walk 1	-	-	-	17
Seconds Per Actuation *	2.5	-	2.5	-
Max Variable Initial *	40	-	40	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	40	-	40	-
Minimum Gap	3.3	-	3.3	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Stopbar and Crosswalk Location



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Microwave Presence Detection Zone	
	Out of Pavement Detector	
N/A	Guardrail	
	Type I Pushbutton Post	

Signal Upgrade

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

US 158/NC 86
at
SR 1589 (Firetower Rd/North Ave)

Division 7 Caswell County Yanceyville

PLAN DATE: April 2015	REVIEWED BY:
PREPARED BY: M.E. Giles	REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA

DocuSigned by: 5/26/2015
SIGNATURE DATE

SIG. INVENTORY NO. 07-2051

28-MAY-2015 11:58
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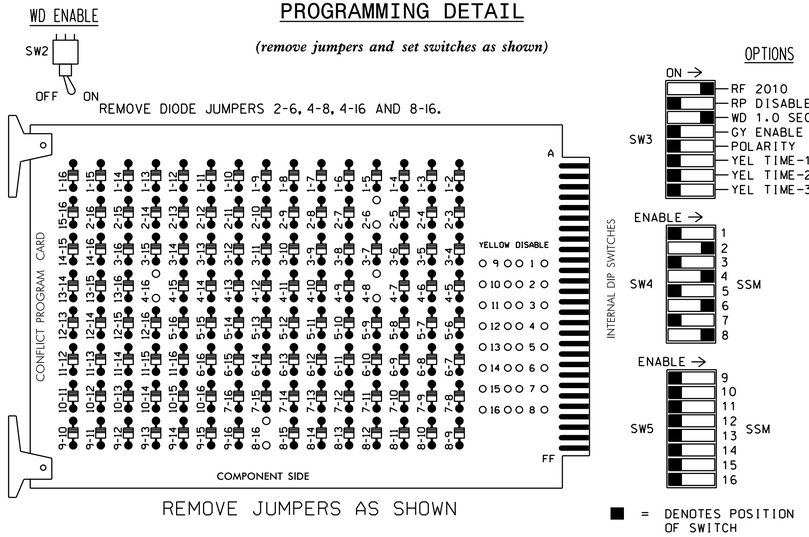
rziemba

PROJECT REFERENCE NO.	SHEET NO.
EB-3314E	Sig.2

EDI MODEL 2010ECL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE JUMPERS AS SHOWN

NOTES:

1. CARD IS PROVIDED WITH ALL DIODE JUMPERS IN PLACE. REMOVAL OF ANY JUMPER ALLOWS ITS CHANNELS TO RUN CONCURRENTLY.
2. MAKE SURE JUMPERS SEL1-SEL5 ARE PRESENT ON THE MONITOR BOARD.

NOTES

1. TO PREVENT "FLASH-CONFLICT" PROBLEMS, INSERT RED FLASH PROGRAM BLOCKS FOR ALL UNUSED VEHICLE LOAD SWITCHES IN THE OUTPUT FILE. THE INSTALLER SHALL VERIFY THAT SIGNAL HEADS FLASH IN ACCORDANCE WITH THE SIGNAL PLANS.
2. TO PREVENT RED FAILURES ON UNUSED MONITOR CHANNELS, SEE RED MONITOR BOARD PROGRAMMING DETAIL THIS SHEET.
3. PROGRAM CONTROLLER TO START UP IN PHASES 2 AND 6 GREEN.
4. ENABLE SIMULTANEOUS GAP-OUT FEATURE, ON CONTROLLER UNIT, FOR ALL PHASES.
5. PROGRAM PHASES 4 AND 8, ON CONTROLLER UNIT, FOR DUAL ENTRY.
6. PROGRAM PHASES 2 AND 6, ON CONTROLLER UNIT, FOR VARIABLE INITIAL AND GAP REDUCTION.
7. PROGRAM PHASE 8 FOR ' STARTUP PED CALL'.
8. PROGRAM PHASES 2 AND 6 FOR YELLOW FLASH.

EQUIPMENT INFORMATION

CONTROLLER.....EAGLE TYPE 2070L
CABINET .....McCAIN/CONTROL TECHNOLOGIES
(DWG.NO.9500-332-NCDOT)
SOFTWARE .....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...12
LOAD SWITCHES USED.....S2,S4,S6,S8,S8P
PHASES USED.....2,4,6,8 PED
OVERLAPS.....NONE

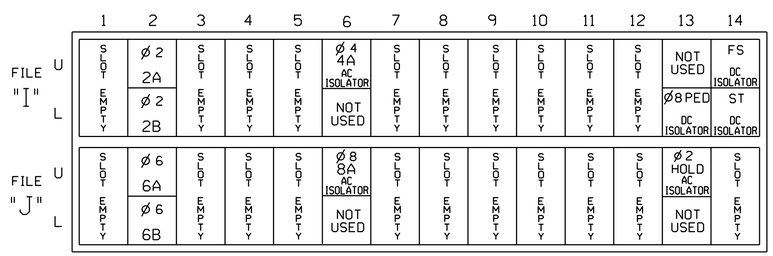
FIELD CONNECTION HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED
SIGNAL HEAD NO.	NU	21,22	NU	NU	41,42	NU	NU	61,62	NU	NU	81,82	P81, P82
GREEN		130			103			136			109	
YELLOW		129			102			135			108	
RED		128			101			134			107	
RED ARROW												
YELLOW ARROW												
GREEN ARROW												
🚶												110
✋												112

NU = NOT USED

INPUT FILE POSITION LAYOUT

(front view)



EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y	Y		3
✳ 4A	—	I6U	41	3	4	4	Y	Y			5
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y	Y		3
✳ 8A	—	J6U	42	4	8	8	Y	Y			5
PED PUSH BUTTONS											
P81,P82	TB8-8,9	I13L	70	32	PED 8	8 PED					

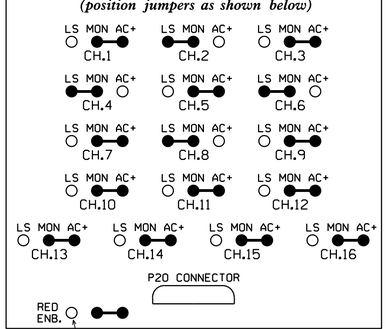
NOTE:
INSTALL DC ISOLATORS IN INPUT FILE SLOT I13.

✳ MICROWAVE DETECTORS. SEE WIRING DETAILS ON SHEET 2 OF THIS PLAN SET.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

RED MONITOR BOARD PROGRAMMING

(position jumpers as shown below)



THIS PIN CLIPPED AT THE FACTORY.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 07-2051
DESIGNED: April 2015
SEALED: 5-26-15
REVISED: N/A

ELECTRICAL DETAIL – SHEET 1 of 3

REVISION SEAL

NORTH CAROLINA PROFESSIONAL SEAL 008453 ENGINEER JOHN T. ROWE, JR.

DocuSigned by: John T. Rowe, Jr. 5/28/2015
641D60C145EE4F5... DATE

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signals Management Section
122 N. McDowell St., Raleigh, NC 27603

US 158/NC 86
AT
SR 1589 (FIRETOWER RD)/
(NORTH AVE)

DIVISION 7 CASWELL COUNTY YANCEYVILLE

PLAN DATE: 7-22-04	REVIEWED BY: D.T. JOYCE
PREPARED BY: D.H. SPAULDING	REVIEWED BY:

REVISIONS	INIT.	DATE
Added 8 PED. delay to loops 4A & 8A, note 8 and switched YEL TIME 1 & 2 off. (JPI)	JTR	5/28/2015

Not a certified document as to the Original Document but Only as to the Revisions - This document originally issued and sealed by Milton I. Dean Seal # 16286 on 7-31-03
This document is only certified as to the revisions.

SIG. INVENTORY NO. 07-2051

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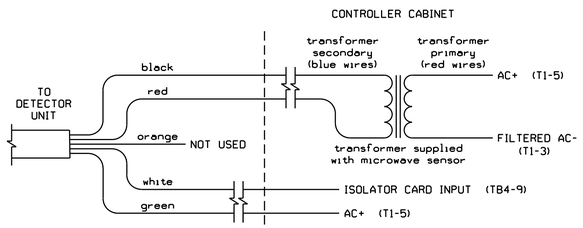
jtpeterson

PROJECT REFERENCE NO.	SHEET NO.
EB-3314E	Sig.3

MICROWAVE DETECTOR WIRING DETAIL 4A

(wire as shown)



TC26B WIRE LIST

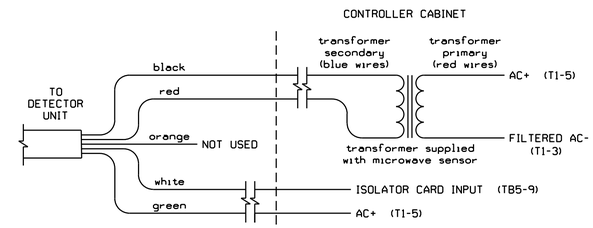
COLOR	FUNCTION
black	12V to 24V AC/DC (no polarity)
red	12V to 24V AC/DC (no polarity)
orange	Output Relay Normally Open
white	Output Relay Normally Closed
green	Output Relay Normally Common

NOTES:

1. SENSOR IS A MICROWAVE SENSORS, INC. MODEL TC-26B MICROWAVE MOTION DETECTOR MOUNTED ON POLES AS INDICATED ON SIGNAL DESIGN PLANS.
2. CONFIGURE AC ISOLATOR CARD TO PLACE CALL UPON REMOVAL OF AC+ FROM THE INPUT.
3. IMPORTANT: FOR PROPER OPERATION OF THE MICROWAVE DETECTOR, REMOVE SURGE PROTECTION FROM TB4-9 AND TB4-10. TIE TB4-10 TO AC NEUTRAL.

MICROWAVE DETECTOR WIRING DETAIL 8A

(wire as shown)



TC26B WIRE LIST

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green	Output Relay Normally Common

NOTES:

1. SENSOR IS A MICROWAVE SENSORS, INC. MODEL TC-26B MICROWAVE MOTION DETECTOR MOUNTED ON POLES AS INDICATED ON SIGNAL DESIGN PLANS.
2. CONFIGURE AC ISOLATOR CARD TO PLACE CALL UPON REMOVAL OF AC+ FROM THE INPUT.
3. IMPORTANT: FOR PROPER OPERATION OF THE MICROWAVE DETECTOR, REMOVE SURGE PROTECTION FROM TB5-9 AND TB5-10. TIE TB5-10 TO AC NEUTRAL.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 07-2051
DESIGNED: April 2015
SEALED: 5-26-15
REVISED: N/A

1

ELECTRICAL DETAIL – SHEET 2 of 3

REVISION 1 SEAL

NORTH CAROLINA PROFESSIONAL SEAL 008453 ENGINEER JOHN T. ROWE, JR.

DocuSigned by: John T. Rowe, Jr. 5/28/2015
641D60C145EE4F5... DATE

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Signals Management Section

122 N. McDowell St., Raleigh, NC 27603

US 158/NC 86
AT
SR 1589 (FIRETOWER RD)/
(NORTH AVE)

DIVISION 7 CASWELL COUNTY YANCEYVILLE

PLAN DATE:	7-22-04	REVIEWED BY:	D.T. JOYCE
PREPARED BY:	D.H. SPAULDING	REVIEWED BY:	

REVISIONS	INIT.	DATE
1 Added 8 PED., delay to loops 4A & 8A, note 8 and switched YEL TIME 1 & 2 off. (JP)	JTR	5/28/2015

SEAL

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This document is only certified as to the revisions.

SIGNATURE DATE

SIG. INVENTORY NO. 07-2051

27-MAY-2015 07:32
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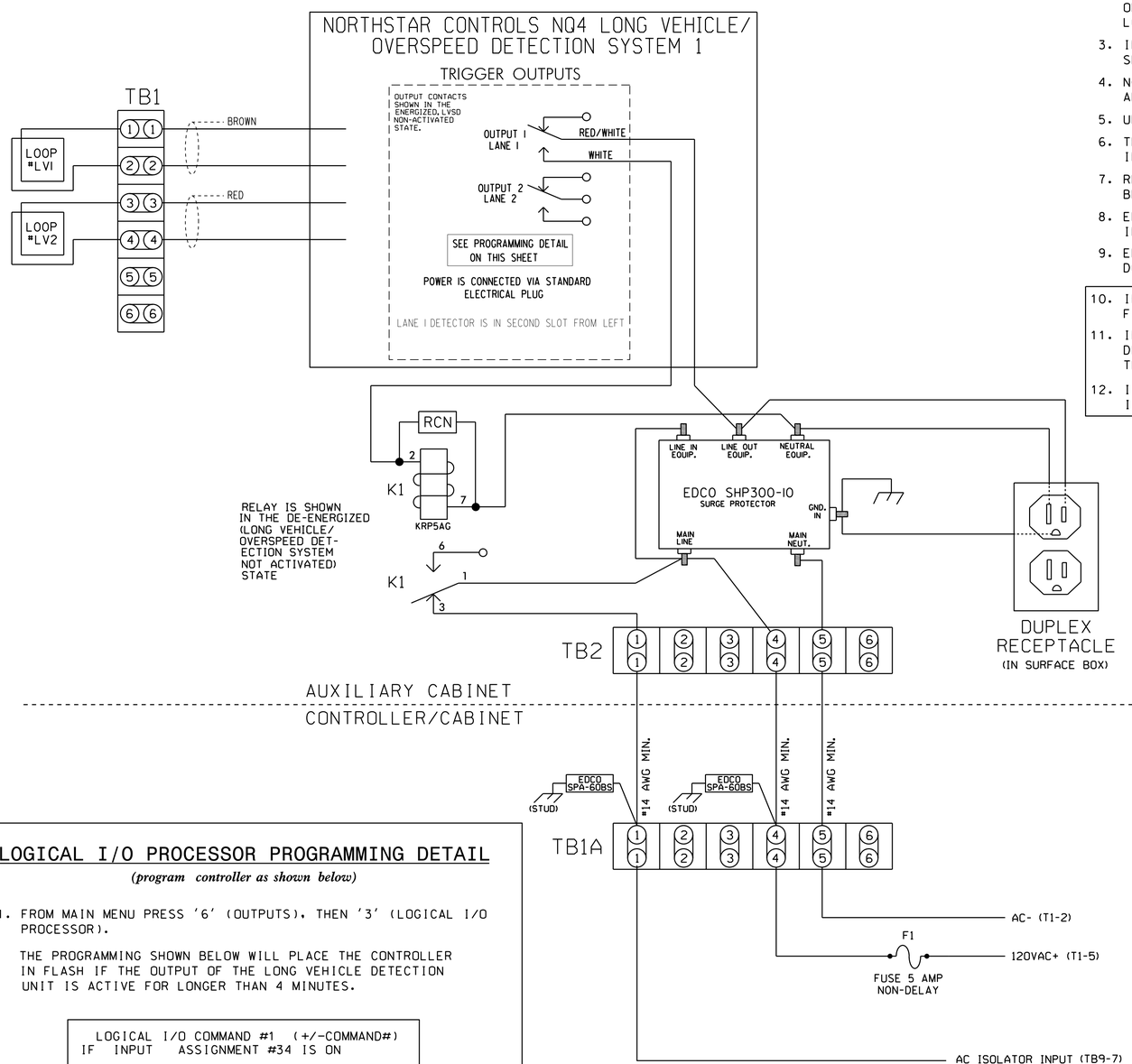
jtpeterson

PROJECT REFERENCE NO.	SHEET NO.
EB-3314E	Sig.3

WIRING DETAIL FOR NORTHSTAR CONTROLS NQ4 LONG VEHICLE / OVERSPEED DETECTION SYSTEM NO. 1

(wire unit as shown below)



NOTES

1. ALL LOOP LEAD-INS SHALL BE TWISTED.
2. LOOP SPACING IS CRITICAL TO THE PROPER OPERATION OF THIS OVERSPEED DETECTION SYSTEM. MAKE SURE LOOP SPACING IS CORRECTLY PROGRAMMED IN NQ4 UNIT.
3. INSURE THAT CONNECTORS ON REAR OF NQ4 ARE SEATED SECURELY.
4. NQ4 UNIT SHALL BE LOCATED IN AN AUXILIARY CABINET ADJACENT TO SPEED WARNING SYSTEM LOOPS.
5. UNIT POWER IS CONNECTED BY STANDARD ELECTRICAL PLUG.
6. TERMINAL STRIPS TB1, TB2, AND TB1A TO BE ADDED BY INSTALLER.
7. RELAY 'K1' IS A SPDT WITH AN 120VAC COIL. POTTER & BRUMFIELD NO. KRP5AG. DOT MATERIAL NO. 625028600.
8. EDCO SPA-60BS IS A SURGE PROTECTOR FOR 120VAC INTERCONNECT CIRCUITS. DOT MATERIAL NO. 625022076.
9. EDCO SHP300-10 IS AN AC SERVICE SURGE PROTECTOR. DOT MATERIAL NO. 625022075.
10. IMPORTANT! A JUMPER MUST BE INSTALLED BETWEEN INPUT FILE TERMINALS J13-E AND J13-K IF NOT ALREADY PRESENT.
11. IMPORTANT! FOR PROPER OPERATION OF THE LONG VEHICLE DETECTION UNIT, REMOVE SURGE PROTECTION FROM TERMINALS TB9-7, TB9-8 AND TB9-9. TIE TB9-9 TO AC NEUTRAL.
12. IMPORTANT! MAKE SURE AC ISOLATOR CARD INSERTED AT INPUT FILE POSITION J13U IS SET FOR INVERTED OPERATION.

NORTHSTAR CONTROLS MODEL NQ4 PROGRAMMING DETAIL

(program unit as shown)

NOTE: UNIT MUST BE PROGRAMMED USING PC AND HYPERTERMINAL PROGRAM. FOR CONNECTION TO HYPERTERMINAL REFER TO NQ4 OPERATION MANUAL.

PROGRAM NQ4 BY TYPING THE FOLLOWING COMMANDS

1. SET SPEED=55
2. SET LENGTH=22'
3. SET ALARMTIME=14
4. SET SEPARATION=28' (LEADING EDGE TO LEADING EDGE) (THIS VALUE MAY VARY. PROGRAM ACTUAL MEASURED SEPARATION)
5. SET LOOP LENGTH=6' (THIS VALUE MAY VARY. PROGRAM ACTUAL MEASURED LOOP LENGTH)
6. SAVE

INPUT ASSIGNMENT PROGRAMMING DETAIL

(program controller as shown below)

FROM MAIN MENU PRESS '5' (INPUTS), THEN '+' UNTIL PIN 72 (INPUT 34) IS REACHED.

```
PAGE: 1 C1 PIN:72  HOLD PHASES
INPUT ASSIGNMENT #.................34
DEBOUNCE TIME (0-25.5 SEC)..........0.5
DELAY TIME (0-25.5 SEC).............0.0
HOLD-OVER TIME (0-25.5 SEC).........0.0
ASSIGNMENT SELECTION:
NOT ENABLED (Y/N)...................._
VEHICLE DETECTOR (1-64)............._
PEDESTRIAN DETECTOR (1-16)..........._
ALTERNATE PED DETECTOR (1-16)......._
PREEMPT (1-10)......................._
INVERTED PREEMPT (1-10)............._
STOP TIME (Y/N)....................._
FLASH SENSE (Y/N)..................._
DOOR OPEN (Y/N)....................._
MANUAL CONTROL ENABLE (Y/N)........._
MANUAL CONTROL ADVANCE (Y/N)......._
SPECIAL FUNCTION ALARM (1-8)......._
TOD HOUR SYCHRONIZATION (0-23)....._
FORCE OFF RING (1-4)..............._
HOLD PHASES (1-16)................2
PLAN (65=FLSH,66=FREE)..._  OFFSET#.._
CHANGE PHASE SEQUENCE PAGE (1-12)..._
CHANGE PHASE TIMING PAGE (1-4)....._
CHANGE PHASE CONTROL PAGE (1-4)...._
CHANGE OVERLAP CONTROL PAGE (1-4)..._
CHANGE INPUT PAGE (1-4)............_
CHANGE OUTPUT PAGE (1-4)..........._
OVERRIDE PHASE CONTROL FUNCTION (Y)._
```

PRESS '+' THREE TIMES

```
PAGE: 1 C1 PIN:75  PLAN
INPUT ASSIGNMENT #.................37
DEBOUNCE TIME (0-25.5 SEC)..........0.5
DELAY TIME (0-25.5 SEC).............0.0
HOLD-OVER TIME (0-25.5 SEC).........0.0
ASSIGNMENT SELECTION:
NOT ENABLED (Y/N)...................._
VEHICLE DETECTOR (1-64)............._
PEDESTRIAN DETECTOR (1-16)..........._
ALTERNATE PED DETECTOR (1-16)......._
PREEMPT (1-10)......................._
INVERTED PREEMPT (1-10)............._
STOP TIME (Y/N)....................._
FLASH SENSE (Y/N)..................._
DOOR OPEN (Y/N)....................._
MANUAL CONTROL ENABLE (Y/N)........._
MANUAL CONTROL ADVANCE (Y/N)......._
SPECIAL FUNCTION ALARM (1-8)......._
TOD HOUR SYCHRONIZATION (0-23)....._
FORCE OFF RING (1-4)..............._
HOLD PHASES (1-16)................._
PLAN (65=FLSH,66=FREE)..65 OFFSET#..1
CHANGE PHASE SEQUENCE PAGE (1-12)..._
CHANGE PHASE TIMING PAGE (1-4)....._
CHANGE PHASE CONTROL PAGE (1-4)...._
CHANGE OVERLAP CONTROL PAGE (1-4)..._
CHANGE INPUT PAGE (1-4)............_
CHANGE OUTPUT PAGE (1-4)..........._
OVERRIDE PHASE CONTROL FUNCTION (Y)._
```

PROGRAMMING COMPLETE

LOGICAL I/O PROCESSOR PROGRAMMING DETAIL

(program controller as shown below)

1. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).

   THE PROGRAMMING SHOWN BELOW WILL PLACE THE CONTROLLER IN FLASH IF THE OUTPUT OF THE LONG VEHICLE DETECTION UNIT IS ACTIVE FOR LONGER THAN 4 MINUTES.

```
LOGICAL I/O COMMAND #1  (+/-COMMAND#)
IF  INPUT   ASSIGNMENT #34 IS ON

                 SCROLL DOWN
THEN:
    DELAY FOR  240.0 SECONDS
SET INPUT   ASSIGNMENT #37 ON
```

LOGIC I/O PROCESSOR PROGRAMMING COMPLETE

2. FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE LOGIC COMMAND 1.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 07-2051
DESIGNED: April 2015
SEALED: 5-26-15
REVISED: N/A

ELECTRICAL DETAIL – SHEET 3 of 3

REVISION SEAL

NORTH CAROLINA PROFESSIONAL SEAL 008453 ENGINEER JOHN T. ROWE, JR.

DocuSigned by: John T. Rowe, Jr. 5/28/2015
641D60C145EE4F5... DATE

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signals Management Section
122 N. McDowell St., Raleigh, NC 27603

US 158/NC 86
AT
SR 1589 (FIRETOWER RD)/
(NORTH AVE)

DIVISION 7	CASWELL COUNTY	YANCEYVILLE
PLAN DATE: 7-22-04	REVIEWED BY: D.T. JOYCE	
PREPARED BY: D.H. SPAULDING	REVIEWED BY:	

REVISIONS	INIT.	DATE
Added B.PED., delay, to loops 4A & 8A, note 8 and switched YEL TIME 1 & 2 off, 1JP1	JTR	5/28/2015

Not a certified document as to the Original Document but Only as to the Revisions - This document originally issued and sealed by Milton I. Dean Seal # 16286 on 7-31-03
This document is only certified as to the revisions.

SIG. INVENTORY NO. 07-2051

27-MAY-2015 07:34
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jmpeterson

PROJECT NO.	SHEET NO.
	Sig. P1

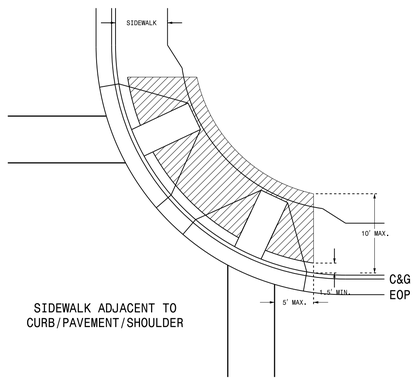
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

06-14

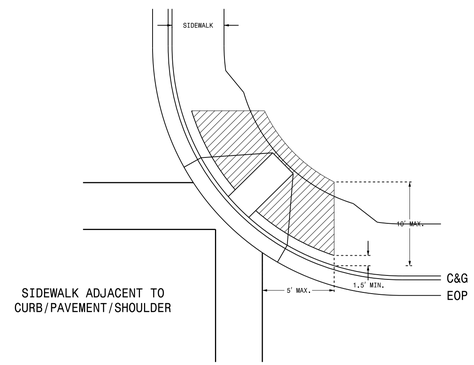
ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

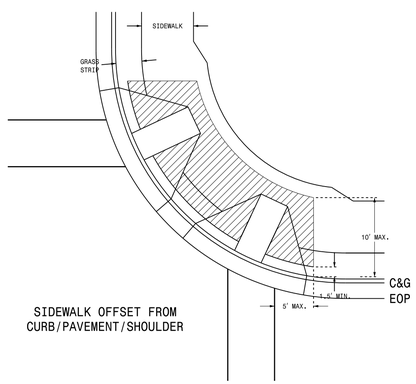
SHEET 1 OF 3
1705D01

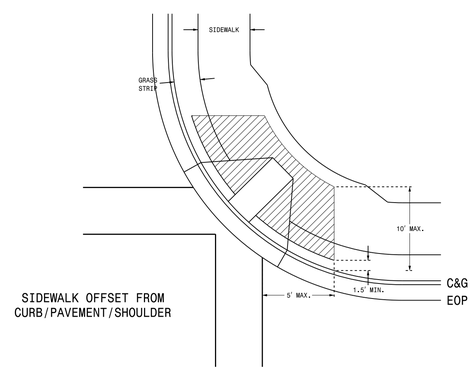
PUSHBUTTON PLACEMENT
SEPARATE CURB RAMPS



PUSHBUTTON PLACEMENT
SHARED CURB RAMP







NOTES

1. Pushbutton pedestals should not be located further than 10 feet from the edge of curb, shoulder, or pavement.
2. The face of the pushbutton should be parallel to the applicable crosswalk.
3. Separate pushbuttons used on the same corner should be separated by a distance of at least 10 feet.
4. Pushbuttons shall be installed adjacent to a level surface with a maximum reach distance of 10 inches.
5. Maintain 4 feet of clearance around pedestal if located in sidewalk.
6. Refer to section 1705 of the 2012 NCDOT Roadway Standard Drawings for Pushbutton Assembly details.
7. Refer to section 1743 of the 2012 NCDOT Roadway Standard Drawings for Pedestal details.
8. Contact Division Traffic Engineer for pushbutton location approval prior to installation.
9. Curb ramps are for symbolic use only and may not reflect actual design or field conditions.

LEGEND

PROPOSED

- Signal Pole
- Type I Pushbutton Post
- Type II Signal Pedestal
- Pushbutton & Sign
- Pedestrian Signal Head
- Curb Ramp
- Pushbutton Location Area

STATE OF
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RALEIGH, N.C.

06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 1 OF 3
1705D01

See Plate for Title

Prepared in the Offices of:

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Signal Design Section

750 N. Greenfield Parkway
Garner, NC 27529

SEAL

NORTH CAROLINA
PROFESSIONAL
SEAL
026486
ENGINEER
ROBERT J. ZIEMBA

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SIGNATURE

6/17/2014
DATE

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PROJECT NO.	SHEET NO.
	Sig. P2

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

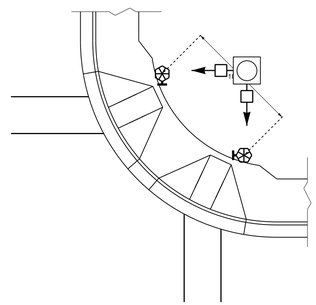
06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

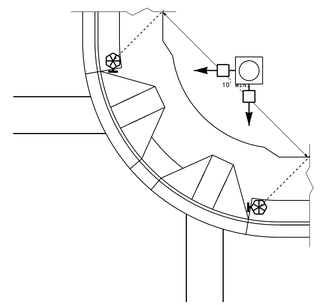
SHEET 2 OF 3
1705D01

TYPICAL PUSHBUTTON LOCATIONS (CASE I)

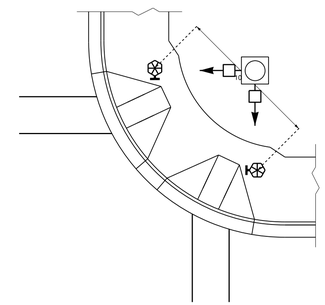
SEPARATE CURB RAMPS W/ TYPE I PEDESTALS



BACK OF SIDEWALK IS WITHIN 10'
OF CURB OR PAVEMENT/SHOULDER



GRASS STRIP PLACEMENT IF BACK
OF SIDEWALK EXCEEDS 10' FROM
CURB OR PAVEMENT/SHOUDLER



PUSHBUTTON PLACEMENT
IN WIDE SIDEWALK

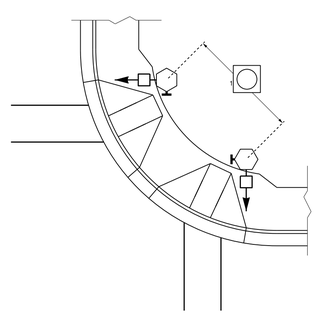
PROPOSED

LEGEND

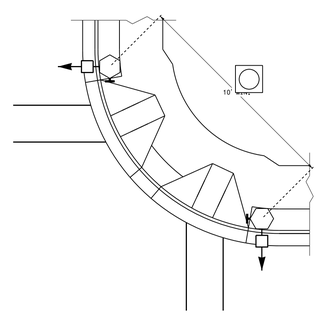
- Signal Pole
- Type I Pushbutton Post
- Type II Signal Pedestal
- Pushbutton & Sign
- Pedestrian Signal Head
- Curb Ramp
- Pushbutton Location Area

TYPICAL PUSHBUTTON LOCATIONS (CASE II)

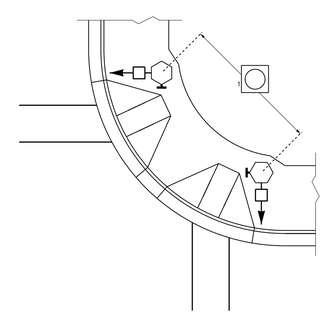
SEPARATE CURB RAMPS W/ TYPE II PEDESTALS



BACK OF SIDEWALK IS WITHIN 10'
OF CURB OR PAVEMENT/SHOULDER



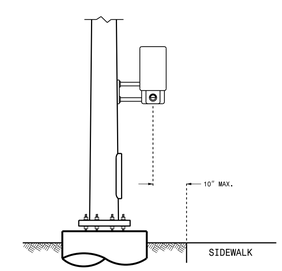
GRASS STRIP PLACEMENT IF BACK
OF SIDEWALK EXCEEDS 10' FROM
CURB OR PAVEMENT/SHOULDER



PUSHBUTTON PLACEMENT
IN WIDE SIDEWALK

OPTIONAL PUSHBUTTON EXTENSION

FACE OF PUSHBUTTON PARALLEL TO
APPLICABLE CROSSWALK



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RALEIGH, N.C.

06-14

ENGLISH DETAIL DRAWING FOR
PEDESTRIAN PUSHBUTTON LOCATIONS
PLACEMENT DETAIL

SHEET 2 OF 3
1705D01

See Plate for Title

Prepared in the Offices of:

Transportation Mobility and Safety Division
Signal Design Section

750 N. Greenfield Parkway
Garner, NC 27529

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA

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PROJECT NO.	SHEET NO.
	Sig. P3

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RALEIGH, N.C.

06-14

ENGLISH DETAIL DRAWING FOR

PEDESTRIAN PUSHBUTTON LOCATIONS

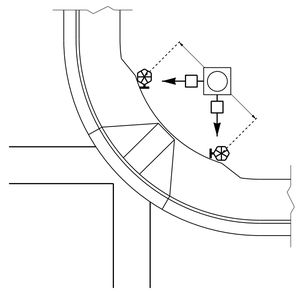
PLACEMENT DETAIL

SHEET 3 OF 3

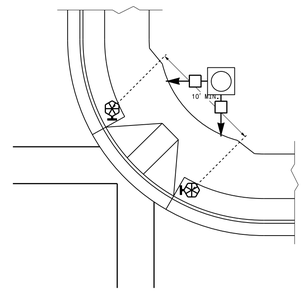
1705D01

TYPICAL PUSHBUTTON LOCATIONS (CASE III)

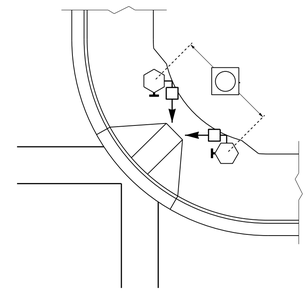
SHARED CURB RAMPS



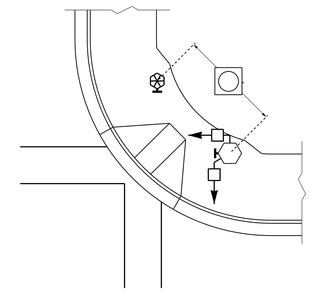
BACK OF SIDEWALK IS WITHIN 10′ OF CURB OR PAVEMENT/SHOULDER



GRASS STRIP PLACEMENT IF BACK OF SIDEWALK EXCEEDS 10′ FROM CURB OR PAVEMENT/SHOULDER

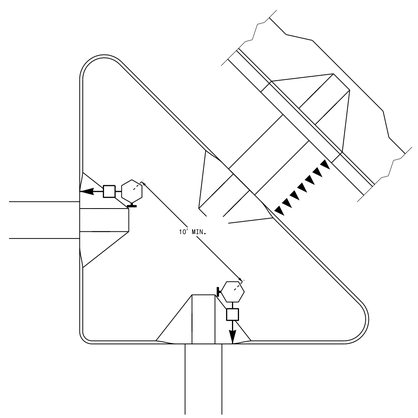


PUSHBUTTON PLACEMENT IN WIDE SIDEWALK (CORRESPONDING PUSHBUTTONS AND SIGNAL HEADS ON DIFFERENT PEDESTALS)

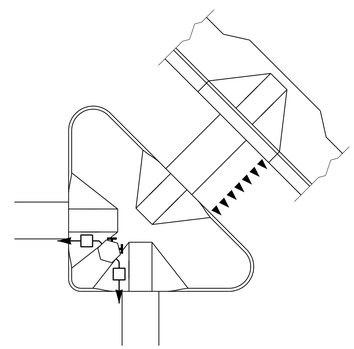


PUSHBUTTON PLACEMENT WITH SHARED TYPE II SIGNAL PEDESTAL AND TYPE I PUSHBUTTON POST

TRAFFIC ISLAND PUSHBUTTON LOCATIONS

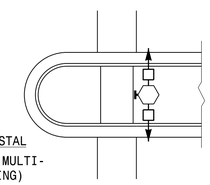


PUSHBUTTON PLACEMENT IN LARGE "PORK CHOP ISLAND" WITH SEPARATE PEDESTALS



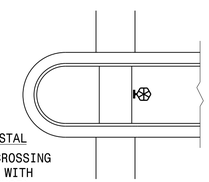
PUSHBUTTON PLACEMENT IN SMALL "PORK CHOP ISLAND" WITH SHARED PEDESTAL

PUSHBUTTON PLACEMENT IN MEDIAN



TYPE II PEDESTAL

(FOR STAGED OR MULTI-PHASE CROSSING)



TYPE I PEDESTAL

(FOR COMPLETE CROSSING CURB TO CURB WITH OPTIONAL REFUGE)

LEGEND

PROPOSED

- Signal Pole
- Type I Pushbutton Post
- Type II Signal Pedestal
- Pushbutton & Sign
- Pedestrian Signal Head
- Curb Ramp
- Pushbutton Location Area

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ENGLISH DETAIL DRAWING FOR

PEDESTRIAN PUSHBUTTON LOCATIONS

PLACEMENT DETAIL

SHEET 3 OF 3

1705D01

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6/17/2014 — DATE

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