TRAFFIC - LEGENDS & LIST OF DRAWINGS

STANDARD CONVENTIONS

HEDGE LINE	PICKET FENCE	EXISTING CULVERT
BIT. CONC. LIP CURBING	BOARD FENCE	PROPOSED CULVERT
CURB STATED WHETHER STONE or CONC.	WIRE FENCE	HOUSE / BARN
STONE WALL	GRAPE ARBOR	BUILDINGS
CONC. WALK	RETAINING WALL	
WALK - TAR, GRAVEL or EARTH	OPEN DITCH DRY	RIVERS, LAKES, FLOWING STREAMS, ETC.
NAME of CO.	TELEGRAPH, TELEPHONE or ELECTRIC LIGHT POLES	
EXISTING R.R. TRACKS		SWAMP
PROPOSED R.R. TRACKS	GUIDE RAIL (NOTE TYPE)	
TAKING LINE		C.B.
TAKING LINE NA or NA LINE	LEDGE or ROCK	RANDOM STONE
EASEMENT LINE	HYDRANT	HIGHWAY MON. C.H.D. MONUMENT
	TREE	
PROPERTY LINE	DECIDIOUS EVERGREEN	
TOWN LINE	NORTH ARROW (MAGNETIC)	EXISTING TRAVEL PATH

STANDARD TRAFFIC SIGNAL CONVENTIONS

○	PROPOSED WOOD SPAN POLE
●	EXISTING WOOD SPAN POLE
	PROPOSED STEEL SPAN POLE
	EXISTING STEEL SPAN POLE
	PROPOSED COMBINATION SPAN POLE
	EXISTING COMBINATION SPAN POLE
	PROPOSED UTILITY POLE
	EXISTING UTILITY POLE
	PEDESTAL MOUNTING
	PEDESTAL PUSH BUTTON
	TRAFFIC SIGNAL FACE
	PEDESTRIAN SIGNAL FACE
	CONTROLLER
	LOOP DETECTOR
	LOOP LEADS IN SAWCUT
	MAGNETIC DETECTOR
	HANDHOLE
	CONDUIT
	PORCELAIN STRAIN INSULATOR
	CABLE CLOSURE

STANDARD SIGNING CONVENTIONS

	OVERHEAD INSTALLATION	
	CANTILEVER INSTALLATION	
	SIDE MOUNTED INSTALLATION	
	SINGLE POST MOUNTING	REGULATORY, WARNING OR GUIDE SIGN INSTALLATION
	DOUBLE POST MOUNTING	
	AS NOTED - (16H,16E CONSTRUCTION INDENTIFICATION SIGNS)	
00 / 00-0	LOCATION NO. / SIGN NO.	

LIST OF DRAWINGS

DWG. NO.	SHEET NO.	TITLE
TR-01	03.01	SUBSET TITLE SHEET
TCS-1 -TCS-17	03.02-03.18	TRAFFIC CONTROL SIGNAL PLANS
GS-01 -GS-04	03.19-03.22	TRAFFIC GUIDE SHEETS
GS-05 -GS-08	03.23-03.26	HIGHWAY GUIDE SHEETS

THE DESIGN APPEARS TO CONFORM TO APPLICABLE CRITERIA. APPROVAL IS NOT TO BE CONSTRUED TO MEAN THAT ALL ASPECTS OF THE DESIGN HAVE BEEN PERSONALLY CHECKED BY THE UNDERSIGNED.

Sunny D. Ezete, P.E.
FOR TRACY L. FOGARTY
2017.07.18 14:17:54-04'00'

TRANSPORTATION PRINCIPAL ENGINEER

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-			

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 7/18/2017

DESIGNER/DRAFTER: **M.CLOUTIER**
CHECKED BY:
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\TR_MSH_CVR_172_435_436.dgn

SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY: DATE:

PROJECT TITLE:
INSTALLATION & REVISIONS OF TRAFFIC CONTROL SIGNALS IN DISTRICTS 1 & 2

TOWN: **VARIOUS**

DRAWING TITLE:
TRAFFIC - LEGENDS & LIST OF DRAWINGS

PROJECT NO. **0172-0435 0172-0436**
DRAWING NO. **TR-01**
SHEET NO. **03.01**

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2 PRE-EMPT 1	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
	1 2	1 2 3		5 4	6 7			

NTOR		FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
FACE #	1	Y	◄G	◄Y	G	G	Y	R	R	R	R	R	R	R	R	R	R												
	2	Y	G	G	G	G	Y	R	R	R	R	R	R	R	R	R	R												
	3	Y	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R												
	4	R	R	R	R	R	R	R	R	R	R	◄G	Y	R	R	R	R												
	5	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R												
	6	R	R	R	R	R	R	R	R	R	R	R	R	R	◄G	Y	R												
	7	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R												
	P	OFF	◄		DW			►	WØ	◄			DW				►												

INTERVALS	1																												
MIN GRN	5				15						5			5															
WALK									7 (2)	ACCESSIBLE PEDESTRIAN SIGNAL																			
PED CLR									11 (1)																				
VEH EXT					2.5						1.5			1.5															
MAX 1	5				45						20			15															
MAX 2	7				55						20			15															
YELLOW		3.0				3.5				4			3.9			3.0													
RED				1.0				2.6				0			1.3			1.0											
ADD INIT										COUNTDOWN PEDESTRIAN SIGNAL																			
MAX INIT																													
TBR																													
TTR																													
MIN GAP																													
MODE	MAX RECALL				MIN RECALL				NON-LOCK			NON-LOCK			NON-LOCK				OFF			OFF			OFF				
INIT START					THIS PHASE																								

DETECTORS

IDENT	SIZE (WXL)	TURNS	MODE
D2,D2A	6'X6'	4	PRESENCE
D2B	6'X6'	5	PRESENCE
D2C	6'X6'	4	PRESENCE
D4	12'X6'	3	PRESENCE
D4A	14'X6'	3	PRESENCE
D4B	15'X6'	3	PRESENCE
D5	8'X6'	3	PRESENCE
D5A	10'X6'	3	PRESENCE
D5B	12'X6'	3	PRESENCE

SYSTEM LOC MASTER

COORDINATION TYPE: NONE

PROGRAM FUNCTION	TIME	DAYS
FLASH	NONE	
MAX 1	ALL OTHER TIMES	
MAX 2	1500-1800	M-F

CYCLE	OFFSET SEC	OFFSET %

NOTES:
STATE TO MAINTAIN SIGNS AND PAVEMENT MARKINGS ON ROUTE 85 AND ALL STOP BARS.
TOWN TO MAINTAIN ALL OTHER PAVEMENT MARKINGS AND SIGNS ON HALLS HILL ROAD AND DOCTOR FOOTE ROAD.
PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE TOWN OF COLCHESTER

(S) BAR TYPE CROSSWALK STATE MAINTAINED

(T) BAR TYPE CROSSWALK TOWN MAINTAINED

(W) 30" X 30" CONCRETE HANDHOLE

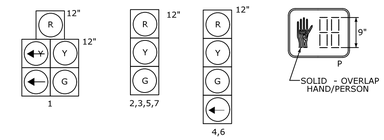
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PHASE 2 ON TO OMIT PHASE 1
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION
(1) COUNTDOWN ONLY DURING FLASHING PEDESTRIAN CHANGE INTERVAL.
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.
(2) PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.

OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:
REVISED TIMINGS AND REPLACED PEDESTRIAN SIGNAL WITH ACCESSIBLE AND COUNTDOWN UNDER PROJECT 0172-0435.

SIGNAL FACES



ALL INDICATIONS HAVE LED LAMPS

PRE-EMPTION SETTINGS

	PRE-EMPT 1
PRIORITY	NO
DET. LOCK	YES
DELAY	0
ALT. MIN. GRN	5
ALT. YELLOW	PARENT
ALT. RED	PARENT
ALT. PED. CLR.	11
HOLD GREEN	15
HOLD YELLOW	3.5
HOLD RED	2.6
HOLD PHASE	2
EXIT PHASE	4
EXIT CALL	NONE

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS EXISTING EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

MODIFY EXISTING CONTROLLER TO ACCOMMODATE CHANGES. SUPPLY 4 COPIES OF REVISED CABINET WIRING DIAGRAMS.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

(A) CONSTRUCT TYPE 3A MODIFIED SIDEWALK RAMP PER GUIDE SHEETS.

(C) CONSTRUCT SIDEWALK ADJACENT TO RAMPS AS SHOWN ON PLAN, REMOVE ALL EXCESS SIDEWALK OUTSIDE OF PROPOSED SIDEWALK LIMITS.

(D) CONSTRUCT TYPE 5A SIDEWALK RAMP PER GUIDE SHEETS.

(E) CONSTRUCT TYPE 3A SIDEWALK RAMP PER GUIDE SHEETS.

(G) INSTALL NEW CONDUIT AND EXTEND INTO EXISTING HANDHOLE.

(H) CONTRACTOR SHALL INSTALL A TOGGLE BOLT WITH A WASHER TO EFFECTIVELY SEAL THE HOLES LEFT IN THE SPAN POLE WHERE PEDESTRIAN PUSH BUTTON HOUSING AND PEDESTRIAN SIGNAL ARE REMOVED.

REMOVE EXISTING AUDIBLE BUZZER FROM THE EXISTING SPAN AND ASSOCIATED CONDUCTORS BACK TO THE SOURCE.

(W) EXISTING 30" X 30" CONCRETE HANDHOLE

(J) CLEAN EXISTING CONDUIT. TO BE PAID UNDER ITEM#1008908A - CLEAN EXISTING CONDUIT

(K) CLEAN EXISTING HANDHOLE. TO BE PAID UNDER ITEM#1010060A - CLEAN EXISTING CONCRETE HANDHOLE.

(L) INSTALL NEW PEDESTAL FOUNDATION, PEDESTAL AND COUNTDOWN PEDESTRIAN SIGNAL AT EXISTING PEDESTAL FOUNDATION LOCATION AND EXTEND THE EXISTING CONDUIT INTO NEW PEDESTAL FOUNDATION.

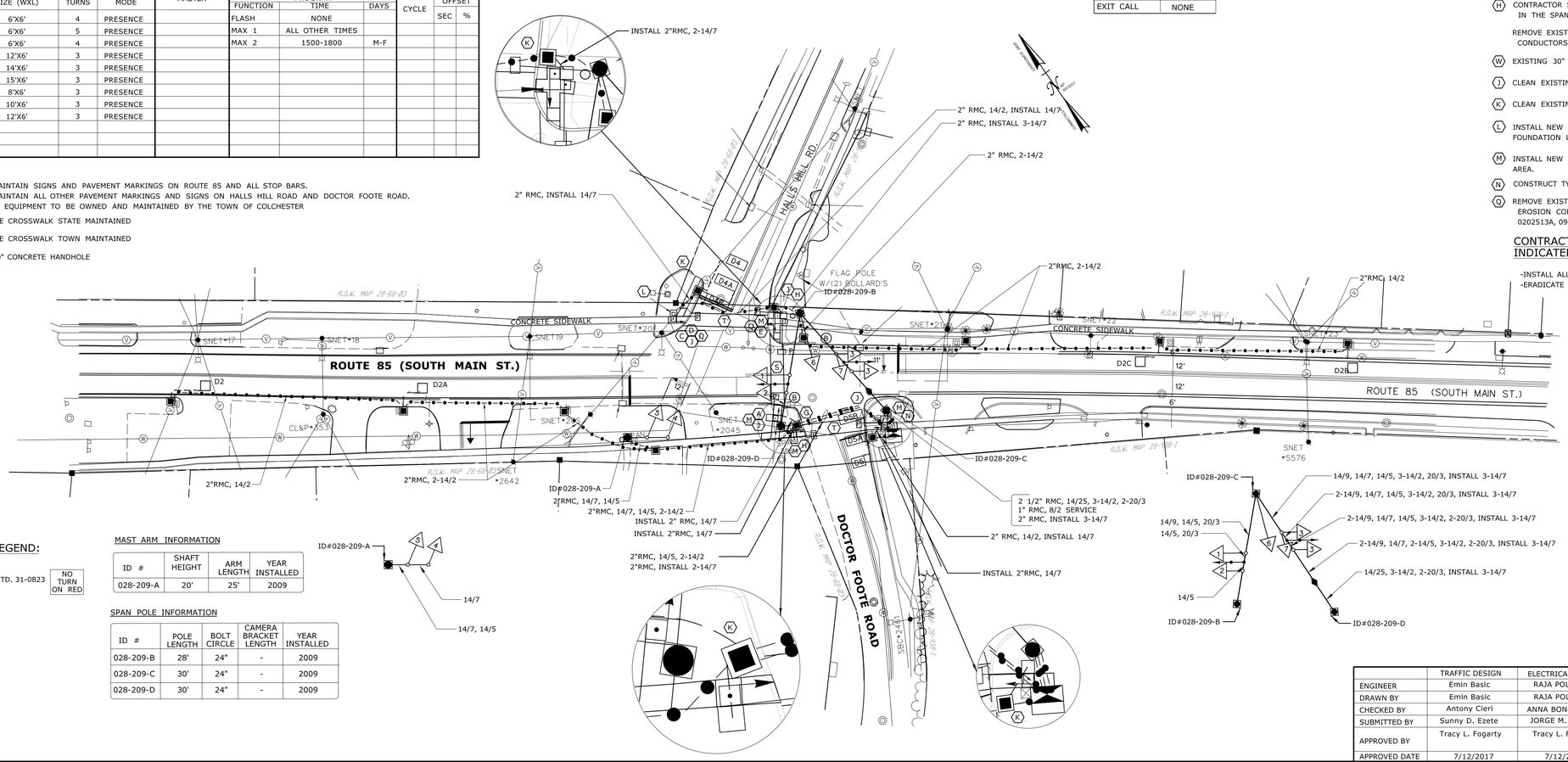
(M) INSTALL NEW PEDESTAL FOUNDATION, PEDESTAL AND COUNTDOWN PEDESTRIAN SIGNAL ADJACENT TO LANDING AREA.

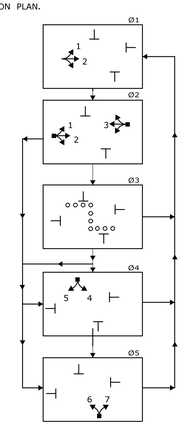
(N) CONSTRUCT TYPE 4E SIDEWALK RAMP PER GUIDE SHEETS.

(Q) REMOVE EXISTING CONRECETE SIDEWALK WITHIN LIMITS, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING AND APPROXIMATELY 3' OF BITUMINOUS CURB. WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, 0950013 AND 0815001 RESPECTIVELY.

CONTRACTOR TO INSTALL AND ERADICATE PAVEMENT MARKINGS AS INDICATED BELOW

-INSTALL ALL STOP BARS AS SHOWN.
-ERADICATE ALL CROSSWALKS AND INSTALL CROSSWALKS AS SHOWN ON PLAN.





SIGN LEGEND:

(B) SPAN MTD. 31-0823 — NO TURN ON RED

MAST ARM INFORMATION

ID #	SHAFT HEIGHT	ARM LENGTH	YEAR INSTALLED
028-209-A	20'	25'	2009

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
028-209-B	28'	24"	-	2009
028-209-C	30'	24"	-	2009
028-209-D	30'	24"	-	2009

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Emin Basic	RAJA POLINENI
DRAWN BY	Emin Basic	RAJA POLINENI
CHECKED BY	Antony Cieri	ANNA BONGIORNO
SUBMITTED BY	Sunny D. Ezete	JORGE M. KULJIS
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	7/12/2017	7/12/2017

REV # INTERSECTION #028-209

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE SNET 21
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
◄R RED ARROW
◄Y YELLOW ARROW
◄ GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 85 (SOUTH MAIN ST.)
AT HALLS HILL RD.
AND DOCTOR FOOTE RD.

TOWN: **COLCHESTER**

DRAWING TITLE: **TRAFFIC CONTROL SIGNAL PLAN**

PROJECT NO. 0172-0435
DRAWING NO. TCS-01
SHEET NO. 03.02

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_028_209_008pending.dgn

SCALE 1" = 40'

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	PHASE 9
NONE	1	2, 5	3	4, 7	5	1, 6	7	3, 8	O

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y	◄R	◄Y R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R
2	Y	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
3	R	R	R	R	R	R	R	◄R	◄Y R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R
4	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R
5	Y	R	R	R	G	Y	R	R	R	R	R	R	R	◄R	◄Y R	R	R	R	R	R	R	R	R	R	R
6	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R
7	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	◄R	◄Y R	R	R	R	R
8	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R
P	OFF	◄									◄	DW											◄	WØ	► ◄ DW ►
					◄ YIELD POINT												◄ YIELD POINT								

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	PHASE 9
MIN GRN	5	15	5	8	5	15	5	8	
WALK									7 (2)
PED CLR									19 (1)
VEH EXT	1.5	2.5	1.5	2.0	1.5	2.5	1.5	2.0	
MAX 1	11	35	11	18	11	35	11	18	
MAX 2	11	35	11	18	11	35	11	18	
YELLOW	3.0	5.2	3.0	3.4	3.0	5.2	3.0	3.4	4.0
RED	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE	NON-LOCK	MIN RECALL	NON-LOCK	NON-LOCK	NON-LOCK	MIN RECALL	NON-LOCK	NON-LOCK	NON-LOCK
INIT START		THIS PHASE				THIS PHASE			

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

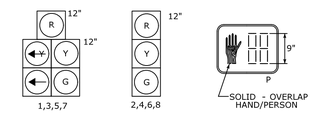
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PHASES 1&5 TO DRIVE FACES 1&5 ◄Y- AND ◄—ONLY.
PHASES 2&6 TO DRIVE FACES 1&5 R,Y, & G.
PHASES 3&7 TO DRIVE FACES 3&7 ◄Y- AND ◄—ONLY.
PHASES 4&8 TO DRIVE FACES 3&7 R,Y,G.
DETECTORS D2,D2A,D6 AND D6A TO BE NON-ACTUATING DURING COORDINATION.
DUAL ENTRY ON PHASES 4&8
(1) COUNTDOWN ONLY DURING FLASHING PEDESTRIAN CHANGE INTERVAL.
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.
(2) PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.
PEDESTRIAN PHASE ACTUATION MAY CAUSE SIGNAL TO DOUBLE CYCLE
PHASE 2 ON TO OMIT PHASE 1
PHASE 6 ON TO OMIT PHASE 5
D3 TO CALL AND EXTEND PHASE 3 AND EXTEND PHASE 8
D7 TO CALL AND EXTEND PHASE 7 AND EXTEND PHASE 4

OFFICE RECORD

REV #	TIR # N/A	SM # N/A	SIGNAL REVISED:
REPLACED PEDESTRIAN SIGNAL WITH ACCESSIBLE AND COUNTDOWN UNDER PROJECT 0172-0435.			

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS EXISTING EXCEPT AS NOTED.

(E) REPLACE EXISTING PEDESTRIAN SIGNAL FACES WITH COUNTDOWN SIGNAL HEADS ON EXISTING PEDESTAL.

(N) INSTALL PEDESTAL, PEDESTAL FOUNDATION, COUNTDOWN SIGNAL HEADS AND NEW APS PUSHBUTTONS.

(F) REMOVE EXISTING PUSH BUTTONS AND INSTALL NEW APS PUSHBUTTONS WITH 31-0845 AND APPROPRIATE ARROW ON EXISTING PEDESTAL AS SHOWN ON PLAN.

(G) REPLACE EXISTING PEDESTRIAN SIGNAL FACES WITH COUNTDOWN SIGNAL HEADS ON EXISTING SPAN POLE.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

(W) EXISTING 30" X 30" CONCRETE HANDHOLE

MODIFY EXISTING CONTROLLER TO ACCOMMODATE CHANGES. SUPPLY 4 COPIES OF REVISED CABINET WIRING DIAGRAMS.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

REMOVE EXISTING AUDIBLE BUZZER FROM EXISTING SPAN AND ASSOCIATED CONDUCTORS BACK TO SOURCE.

(H) CLEAN EXISTING CONDUIT. TO BE PAID UNDER ITEM#1008908A - CLEAN EXISTING CONDUIT

(I) CLEAN EXISTING HANDHOLE. TO BE PAID UNDER ITEM#1010060A - CLEAN EXISTING CONCRETE HANDHOLE

(J) REMOVE EXISTING CONCRETE SIDEWALK, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING AND APPROXIMATELY 8' OF BITUMINOUS CURB. WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, 0950013 AND 0815001 RESPECTIVELY.

(K) CONSTRUCT TYPE 4e SIDEWALK RAMP PER GUIDE SHEETS.

(L) CONSTRUCT TYPE 4f SIDEWALK RAMP PER GUIDE SHEETS.

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	6'X6'	3	PRESENCE
D2,D2A	6'X6'	5	PRESENCE
D3	6'X6'	3	PRESENCE
D4	6'X6'	3	PRESENCE
D4A	6'X8'	3	PRESENCE
D5	6'X6'	3	PRESENCE
D6,D6A	6'X6'	3	PRESENCE
D7	6'X6'	3	PRESENCE
D8	6'X6'	3	PRESENCE

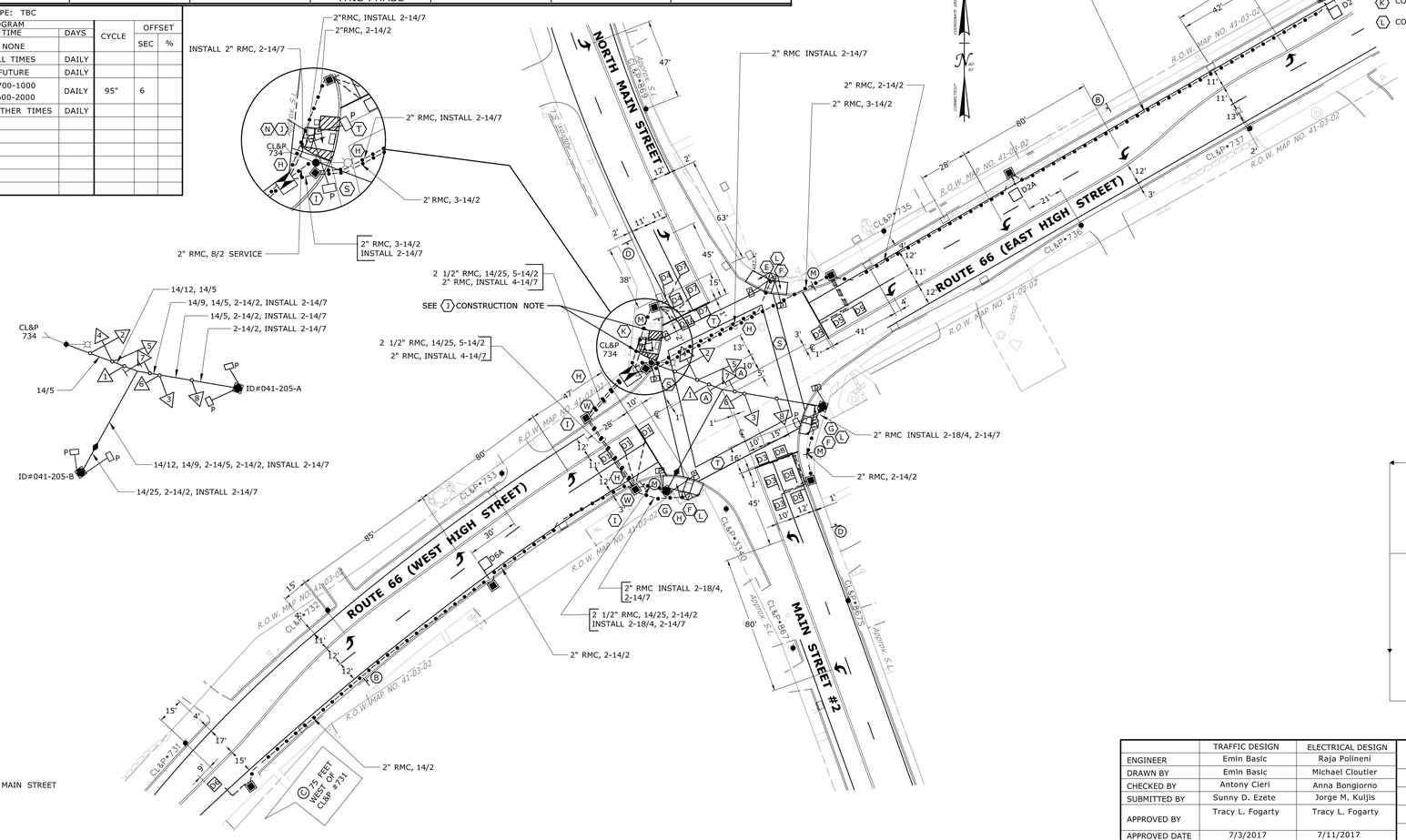
SYSTEM LOC
MASTER 041-217
041-205

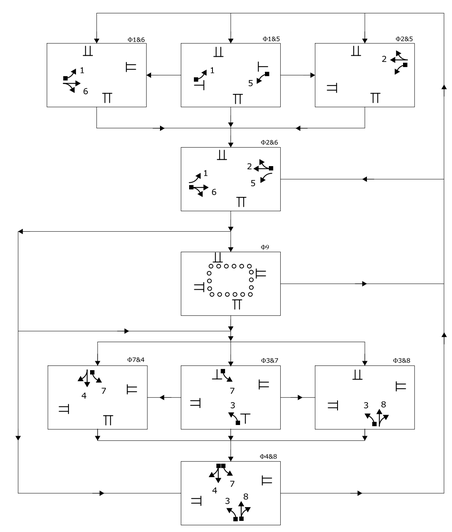
COORDINATION TYPE: TBC

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
MAX 1	ALL TIMES	DAILY			
MAX 2	FUTURE	DAILY			
PATTERN 1	0700-1000 1600-2000	DAILY	95"	6	
FREE	ALL OTHER TIMES	DAILY			

SIGN LEGEND

(A) EXIST. SPAN MOUNTED 31-0135 ONLY
(B) EXIST 31-0282 ONLY
(C) EXIST 41-0836
(D) EXIST 31-0282Z ONLY
(M) INSTALL 31-0282Z ONLY





SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
041-205-A	32'	24"	-	2010
041-205-B	30'	24"	-	2010

NOTES:
STATE TO MAINTAIN SIGNS AND PAVEMENT MARKINGS ON ROUTE 66 AND ALL STOP BARS.
TOWN TO MAINTAIN ALL OTHER PAVEMENT MARKINGS AND SIGNS ON N. MAIN STREET AND MAIN STREET

(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(T) BAR TYPE CROSSWALK - TOWN MAINTAINED
(W) EXISTING 30" X 30" CONCRETE HANDHOLE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
◄R- RED ARROW
◄Y- YELLOW ARROW
GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_041_205_XXXpendingEB.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 66 (WEST MAIN ST.) AT
N. MAIN ST. AND MAIN ST.

SCALE 1" = 40'

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Emin Basic	Raja Polineni
DRAWN BY	Emin Basic	Michael Cloutier
CHECKED BY	Antony Cieri	Anna Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	7/3/2017	7/11/2017

REV # INTERSECTION #041-205

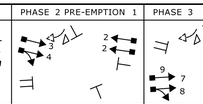
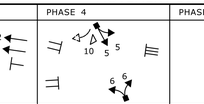
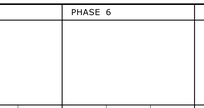
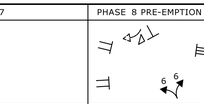
ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - CL&P 734
	UNMETERED SERVICE

TOWN: EAST HAMPTON

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0172-0435
DRAWING NO. TCS-02
SHEET NO. 03.03

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2 PRE-EMPTION 1	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8 PRE-EMPTION 2
								

		FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
FACE #	1	◄R	←	◄Y	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R									◄R	◄R	◄R			
	2	Y	G	G	G	G	G	G	G	Y	R	R	R	R									R	R	R			
	3	Y	R	R	R	G	Y	R	R	R	R	R	R	R									R	R	R			
	4	Y	R	R	R	G	Y	R	R	R	R	R	R	R									R	R	R			
	5	R	R	R	R	R	R	R	R	R	R	G	Y	R									R	R	R			
	6	R	R	R	R	R	R	R	R	R	R	G	Y	R									G	Y	R			
	7	R	R	R	R	R	R	R	G	Y	R	R	R	R									R	R	R			
	8	R	R	R	R	R	R	R	G	Y	R	R	R	R									R	R	R			
	9	R	R	R	R	R	R	R	G	Y	R	R	R	R									R	R	R			
	10	R	R	R	R	R	R	R	R	R	R	G	Y	R									R	R	R			
	11	R	R	R	R	R	R	R	R	R	R	G	Y	R									R	R	R			
INTERVALS	MIN GRN		5			15			9			5											15					
	WALK											25																
	PED CLR											1																
	VEH EXT		1.5			2.5			2.0			2.0																
	MAX 1		11			30			25			13																
	MAX 2		11			30			25			13																
	YELLOW			3.0			4.0			4.0			3.6											3.6				
	RED				1.0			2.0			2.0			1.5											1.5			
	ADD INIT																											
	MAX INIT																											
	TBR																											
	TTR																											
	MIN GAP																											
MODE			NON-LOCK			MIN RECALL			NON-LOCK			NON-LOCK			OFF			OFF			OFF			ON/OMIT				
INIT START						THIS PHASE																						

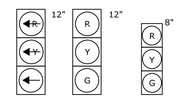
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PHASE 3 MUST FOLLOW PHASE 2.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
ARTERY DETECTORS TO BE NON-ACTUATING DURING COORDINATION.
TIMINGS SHOWN REFLECT FREE OPERATION.
ACTUAL COORDINATION INFORMATION TO BE DETERMINED BY CLOSED LOOP LOCAL COORDINATION UNIT.
SIGNAL MAY DOUBLE CYCLE WHEN PED PHASE IS CALLED.

OFFICE RECORD

REV # N/A SM # N/A SIGNAL REVISED:
REPLACED TRAFFIC SIGNAL EQUIPMENT AND REMOVED FLASHING "STOP AHEAD" SIGN ON ROUTE 1 EASTBOUND APPROACH UNDER PROJECT 0172-0435.

SIGNAL FACES



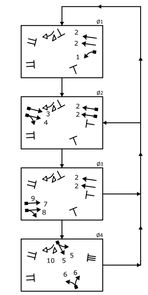
ALL SIGNAL INDICATIONS TO HAVE LED LAMPS.

SIGNAL FACES #3 AND #8 TO HAVE TUNNEL VISORS AND LOUVERS.

SIGNAL FACE #4 TO HAVE TUNNEL VISORS AND 5 VANE 7 DEGREE CUT OFF RIGHT LOUVERS.

SIGNAL FACE #7 TO HAVE TUNNEL VISORS AND 5 VANE 7 DEGREE CUT OFF LEFT LOUVERS.

ALL OVER HEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER.



CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

INSTALL STATE FURNISHED CONTROLLER.

(A) REMOVE INTERNALLY ILLUMINATED FLASHING "STOP AHEAD" SIGN PANEL AND STRUCTURE. DISCONNECT AND REMOVE ALL CONDUCTORS, ABANDON CONDIUT IN PLACE. TO BE PAID UNDER ITEM NO. 1208025A.

(X) CONSTRUCT MODIFIED TYPE 1A SIDEWALK RAMP PER GUIDE SHEETS.

(Y) CONSTRUCT MODIFIED TYPE 2A SIDEWALK RAMP PER GUIDE SHEETS.

(U) CONSTRUCT MODIFIED TYPE 4C SIDEWALK RAMP PER GUIDE SHEETS.

(V) CONSTRUCT TYPE 4e SIDEWALK RAMP PER GUIDE SHEETS.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

INSTALL ALL PEDESTAL FOUNDATIONS ADJACENT TO LANDING AREAS.

INSTALL CONTROLLER FOUNDATION ADJACENT TO WALK AT BACK EDGE.

INSTALL RISER ON SBC #43S UTILITY POLE.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

COORDINATE THIS REVISION WITH CONNECTICUT D.O.T. SIGNAL LAB CONTACT MR. DONALD ASSARD (860) 258-0346 OR MR. MARK ZAMPINI (860) 258-0349 AT LEAST 45 DAYS PRIOR TO REVISION.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. CAMERA CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH CAMERA AND THE CONTROLLER CABINET.

(J) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.

(K) INSTALL VIDEO-IP DETECTOR ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM. INSTALL LIGHT STANDARD FOUNDATION ADJACENT TO WALK AT BACK EDGE.

(L) INSTALL AUXILLIARY EQUIPMENT CABINET TO SPAN POLE 5-FEET ABOVE BASEPLATE. INSTALL CAT6 REPEATER IN CABINET AND COIL MINIMUM 10-FEET OF CAT6 CABLE IN CABINET.

SPAN POLES WITH 2 SPAN ATTACHMENTS TO HAVE 2 SPAN CLAMPS.

INSTALL SIGNS (B) AND (C) WITH SOLAR-POWERED FLASHERS AT THE LOCATIONS SHOWN (INT # 058-702). SEE SPECIAL PROVISION FOR ITEM # 1117101A - ALTERNATE FLASHING SIGNALS FOR WARNING SIGNS.

(Z) REMOVE EXISTING CONCRETE SIDEWALK RAMP, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING AND APPROX. 10' OF BITUMINOUS CURB. WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, 0950013 AND 0815001 RESPECTIVELY.

EMERGENCY PRE-EMPTION NOTES

RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW SPAN. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS

STATE FORCES TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	6' X 24'	VIDEO 360	PRESENCE
D2,D2A	6' X 6'	VIDEO-IP	PRESENCE
D2B,D2C	6' X 6'	VIDEO-IP	PRESENCE
D2D,D2E	6' X 6'	VIDEO-IP	PRESENCE
D2F,D2G	6' X 6'	VIDEO-IP	PRESENCE
D3,D3A	6' X 24'	VIDEO 360	PRESENCE
D4	6' X 24'	VIDEO 360	PRESENCE
D4A	6' X 24'	VIDEO 360	PRESENCE
D1R	6'X6'	VIDEO 360	PRESENCE
D3R,D3AR	6' X 6'	VIDEO 360	PRESENCE
D4R	6' X 6'	VIDEO 360	PRESENCE
D4AR	6' X 6'	VIDEO 360	PRESENCE

SYSTEM LOC

MASTER 058-239	
058-201	058-213
058-208	058-214
058-209	
058-272	
058-251	
058-235	
058-237	
058-236	
058-238	
058-210	
058-211	

COORDINATION TYPE: CLOSED LOOP

PROGRAM FUNCTION	PROGRAM TIME	PROGRAM DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
	SEE TECH NOTE				

PRE-EMPTION SETTINGS

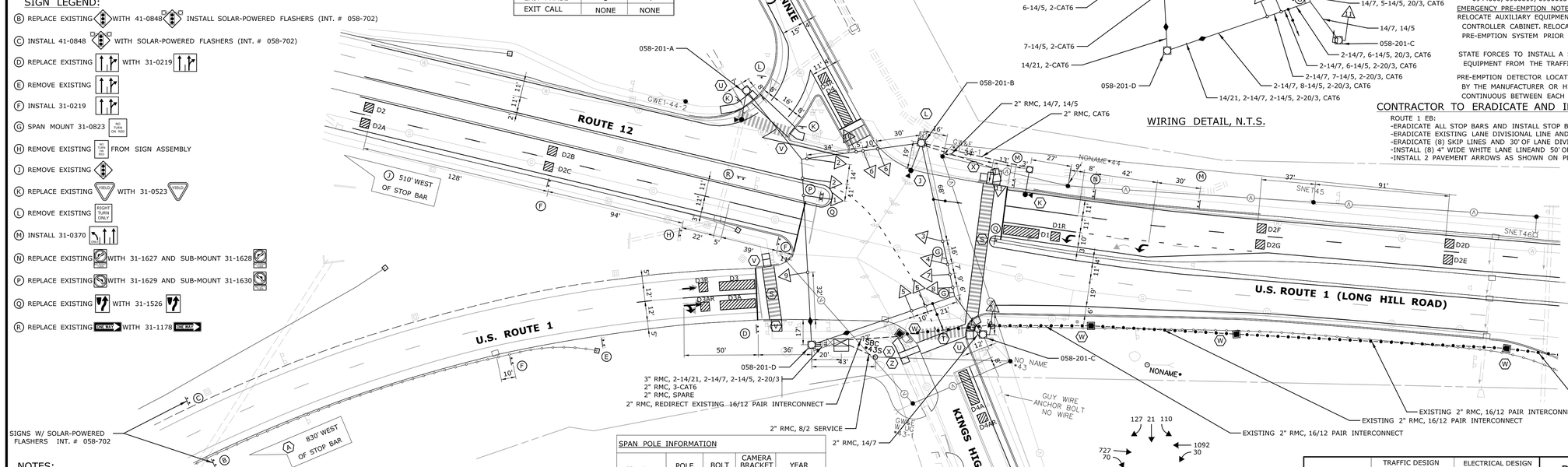
	PRE-EMPT 1	PRE-EMPT 2
PRIORITY	NO	NO
DET. LOCK	YES	YES
DELAY	0	0
ALT. MIN. GRN	5	5
ALT. YELLOW	PARENT	PARENT
ALT. RED	PARENT	PARENT
ALT. PED. CLR.	0	0
HOLD GREEN	15	15
HOLD YELLOW	4.0	3.6
HOLD RED	2.0	1.5
HOLD PHASE	2	8
EXIT PHASE	3	4
EXIT CALL	NONE	NONE

CLOSED LOOP DETECTOR CHART

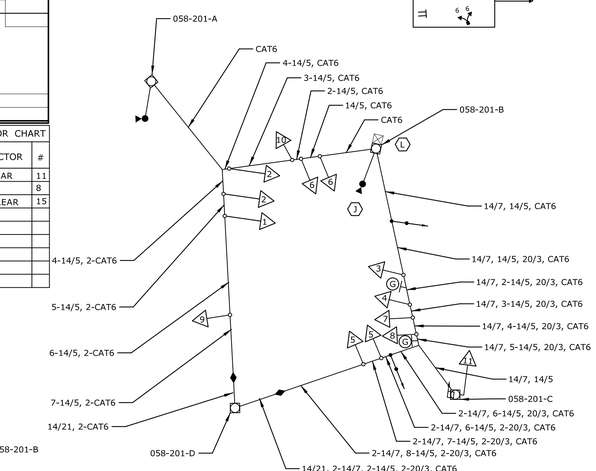
DETECTOR	#	DETECTOR	#
D1	1	D4 REAR	11
D1R	9	D4A	8
D2,D2B	2	D4A REAR	15
D2A,D2C	10		
D3	3		
D3 REAR	11		
D3A	12		
D3A REAR	13		
D4	4		

SIGN LEGEND:

(B) REPLACE EXISTING WITH 41-0848 INSTALL SOLAR-POWERED FLASHERS (INT. # 058-702)
(C) INSTALL 41-0848 WITH SOLAR-POWERED FLASHERS (INT. # 058-702)
(D) REPLACE EXISTING WITH 31-0219
(E) REMOVE EXISTING
(F) INSTALL 31-0219
(G) SPAN MOUNT 31-0823
(H) REMOVE EXISTING FROM SIGN ASSEMBLY
(J) REMOVE EXISTING
(K) REPLACE EXISTING WITH 31-0523
(L) REMOVE EXISTING
(M) INSTALL 31-0370
(N) REPLACE EXISTING WITH 31-1627 AND SUB-MOUNT 31-1628
(P) REPLACE EXISTING WITH 31-1629 AND SUB-MOUNT 31-1630
(Q) REPLACE EXISTING WITH 31-1526
(R) REPLACE EXISTING WITH 31-1178



WIRING DETAIL, N.T.S.



CONTRACTOR TO ERADICATE AND INSTALL ALL PAVEMENT MARKINGS AS INDICATED BELOW:

ROUTE 1 EB:
-ERADICATE ALL STOP BARS AND INSTALL STOP BARS AS SHOWN ON PLAN.
-ERADICATE EXISTING LANE DIVISIONAL LINE AND SHOULDER LINE BETWEEN THE EXISTING STOP BAR AND THE PROPOSED STOP BAR.
-ERADICATE (8) SKIP LINES AND 30' OF LANE DIVISION LINE.
-INSTALL (8) 4" WIDE WHITE LANE LINEAND 50' OF 4" WHITE DIVISIONAL LANE LINE AS SHOWN ON PLAN.
-INSTALL 2 PAVEMENT ARROWS AS SHOWN ON PLAN.

ROUTE 12 EB:
-ERADICATE EXISTING STOP BAR AND INSTALL STOP BAR AS SHOWN ON PLAN.
ERADICATE EXISTING LANE DIVISIONAL LINE AND SHOULDER LINE BETWEEN THE EXISTING STOP BAR AND THE PROPOSED STOP BAR.
-ERADICATE (6) SKIP LINES AND 20' OF LANE DIVISION LINE.
-INSTALL (7) 4" WIDE WHITE LANE LINE AND 50' OF 4" WHITE LANE LINE AS SHOWN.

ROUTE 1 WB:
-INSTALL STOP BAR AS SHOWN ON PLAN.
-ERADICATE (2) 10' SKIP LINES AT LEFT TURN LANE.
-INSTALL 4" WHITE DOTTED LINE AND 50' OF LANE LINE AS SHOWN ON PLAN.
-ERADICATE PAVEMENT ARROWS AND INSTALL PAVEMENT ARROWS AS SHOWN ON PLAN.
-ERADICATE (8) SKIP LINES AND 20' OF LANE DIVISION LINE.
-INSTALL (8) 4" WHITE LANE LINE AND 50' OF 4" WHITE LANE DIVISION LINE AS SHOWN ON PLAN.

KINGS HIGHWAY NB:
-INSTALL STOP BAR AS SHOWN ON PLAN.
-INSTALL 50' OF D.Y.C.L. AS SHOWN ON PLAN.
-INSTALL 4" WHITE DOTTED LINE (2' LINE, 4' SPACE) AS SHOWN ON PLAN.

S.R. 900 SB:
-INSTALL STOP BAR AS SHOWN.
-ERADICATE EXISTING CROSSWALK AND INSTALL NEW CROSSWALKS AS SHOWN ON

INSTALL SHOULDER LINES (YELLOW AND WHITE) WITHIN PROJECT LIMITS.
ERADICATE ALL PAVEMENT MARKINGS NOT CONSISTENT WITH THIS PLAN.

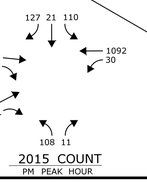
NOTES:

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON ROUTE 1, ROUTE 12, SR900 AND STOP BAR ON KINGS HIGHWAY.
TOWN OF GROTON TO MAINTAIN PAVEMENT MARKINGS ON KINGS HIGHWAY.
TOWN OF GROTON TO OWN AND MAINTAIN EMERGENCY PRE-EMPTION EQUIPMENT.
(S) BAR TYPE CROSSWALK - STATE MAINTAINED. (T) BAR TYPE CROSSWALK - TOWN MAINTAINED.
(W) 30"X30" CONCRETE HANDHOLE.
(J) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA. (K) VIDEO-IP DETECTOR MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
058-201-A	34'	24"	20'	
058-201-B	32'	24"	N/A	
058-201-C	32'	24"	N/A	
058-201-D	34'	24"	N/A	

(—O—) - LIGHT STANDARD



2015 COUNT
PM PEAK HOUR

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Jonathan J. Corilla	Michael A. Juliano
DRAWN BY	Jonathan J. Corilla	Michael A. Juliano
CHECKED BY	Yiu (Kevin) K. Ng	Anna B. Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	7/6/2017	6/22/2017

REV # INTERSECTION # 058-201
SIGNS W/ FLASHERS INTERSECTION # 058-702
ENERGY BY TOWN | ADDRESS #
MAINT LEVEL 1 | SERVICE POLE SBC #43S
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
◄R RED ARROW
◄Y YELLOW ARROW
◄ GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_058_201_xxxpending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 1 AT ROUTE 12,
SR 900 AND KINGS HIGHWAY #1

SCALE 1" = 40'

TOWN: GROTON
DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN
PROJECT NO. 0172-0435
DRAWING NO. TCS-03
SHEET NO. 03.04

MOVEMENT DIAGRAM

NTOR	PHASE 1 PRE-EMPT 1	PHASE 2 PRE-EMPT 2	PHASE 3	PHASE 4 PRE-EMPT 3	PHASE 5 PRE-EMPT 2	PHASE 6 PRE-EMPT 1	PHASE 7	PHASE 8
NONE	1	2, 5		3, 4	5	1, 6		

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y	◄R	◄Y R	R	R	R	R				R	R	R	R	R	R	G	Y	R									
2	Y	R	R	R	G	Y	R				R	R	R	R	R	R	R	R	R									
3	R	R	R	R	R	R	R				G	Y	R	R	R	R	R	R	R									
4	R	R	R	R	R	R	R				G	Y	R	R	R	R	R	R	R									
5	Y	R	R	R	G	Y	R				R	R	R	◄R	◄Y R	R	R	R	R									
6	Y	R	R	R	R	R	R				R	R	R	R	R	R	G	Y	R									
7	R	R	R	R	R	R	R				G	Y	R	R	R	R	R	R	R									
8	R	R	R	R	R	R	R				G	Y	R	R	R	R	R	R	R									

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	5	15		9	5	15		
WALK				14				
PED CLR				1				
VEH EXT	1.5	2.5		1.5	1.5	2.5		
MAX 1	11	30		21	11	30		
MAX 2	11	30		21	11	30		
YELLOW	3.0	4.7		3.2	3.0	4.7		
RED	1.0	1.0		1.0	1.0	1.0		
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	NON-LOCK	MIN RECALL	OFF	NON-LOCK	NON-LOCK	MIN RECALL	OFF	OFF
INIT START		THIS PHASE				THIS PHASE		

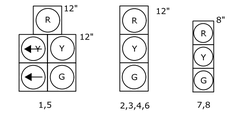
DETECTORS				SYSTEM LOC	COORDINATION TYPE: NONE				
IDENT	SIZE (WXL)	TYPE	MODE	MASTER	PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	%
D1	6'X24'	360 VIDEO	PRESENCE		FLASH	NONE				
D2, D2A	6'X6'	VIDEO-IP	PRESENCE		MAX 1	ALL TIMES	DAILY			
D4,D4A	SEE PLAN	360 VIDEO	PRESENCE		MAX 2	FUTURE				
D5	6'X24'	360 VIDEO	PRESENCE							
D6,D6A	6'X6'	VIDEO-IP	PRESENCE							

TECHNICAL NOTES
STANDARD OVERLAP SKIP FEATURES APPLY
PHASE 2 ON TO OMIT PHASE 1
PHASE 6 ON TO OMIT PHASE 5
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.

OFFICE RECORD

REV # TIR # 058-1605-01 SM # N/A SIGNAL REVISED:
REPLACED ALL TRAFFIC SIGNAL EQUIPMENT AND ADDED EMERGENCY PRE-EMPTION UNDER PROJECT 0172-0435.

SIGNAL FACES



ALL SIGNAL INDICATIONS TO HAVE LED LAMPS

ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER

SIGNAL FACES NO. 7 & 8 TO HAVE TUNNEL VISORS.

PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2	PRE-EMPT 3
PRIORITY	NO	NO	NO
DET. LOCK	YES	YES	YES
DELAY	0	0	0
ALT. MIN. GRN	5	5	5
ALT. YELLOW	PARENT	PARENT	PARENT
ALT. RED	PARENT	PARENT	PARENT
ALT. PED. CLR.	0	0	0
HOLD GREEN	15	15	15
HOLD YELLOW	3.0	3.0	3.2
HOLD RED	1.0	1.0	1.0
HOLD PHASE	1&6	2&5	4
EXIT PHASE	2&6	2&6	2&6
EXIT CALL	NONE	NONE	NONE

WIRING DETAIL, N.T.S.

CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

(C) CONSTRUCT TYPE 4C SIDEWALK RAMP PER GUIDE SHEETS.

(D) TRIM TREE BRANCHES TO ENSURE LINE OF SIGHT TO SIGNAL HEADS. THIS WORK TO BE PAID FOR UNDER ITEM #0952001 - SELECTIVE CLEARING AND THINNING.

(E) INSTALL PEDESTAL FOUNDATION, PEDESTRIAN PUSHBUTTON AND EXTENSION BRACKET. EDGE OF PUSH BUTTON SIGN NOT TO EXTEND BEYOND THE VERTICAL FACE OF GUIDERAIL.

(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

INSTALL RISER ON SNET #1864 UTILITY POLE.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. CAMERA CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH CAMERA AND THE CONTROLLER CABINET.

(J) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.

(K) INSTALL VIDEO-IP DETECTOR ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(L) REMOVE EXISTING BITUMINOUS CONCRETE SIDEWALK , FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING AND APPROXIMATELY 6' O' FRITUMINOUS CURB. WORK TO BE PAID UNDER ITEMS 0202530, 0944000, 0950019, 0950013 AND 0815001 RESPECTIVELY.

EMERGENCY PRE-EMPTION NOTES

INSTALL AUXILIARY EQUIPMENT CABINET ON LEFT SIDE OF CONTROLLER CABINET. INSTALL PRE-EMPTION EQUIPMENT IN AUXILIARY CABINET.

CONTRACTOR TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW

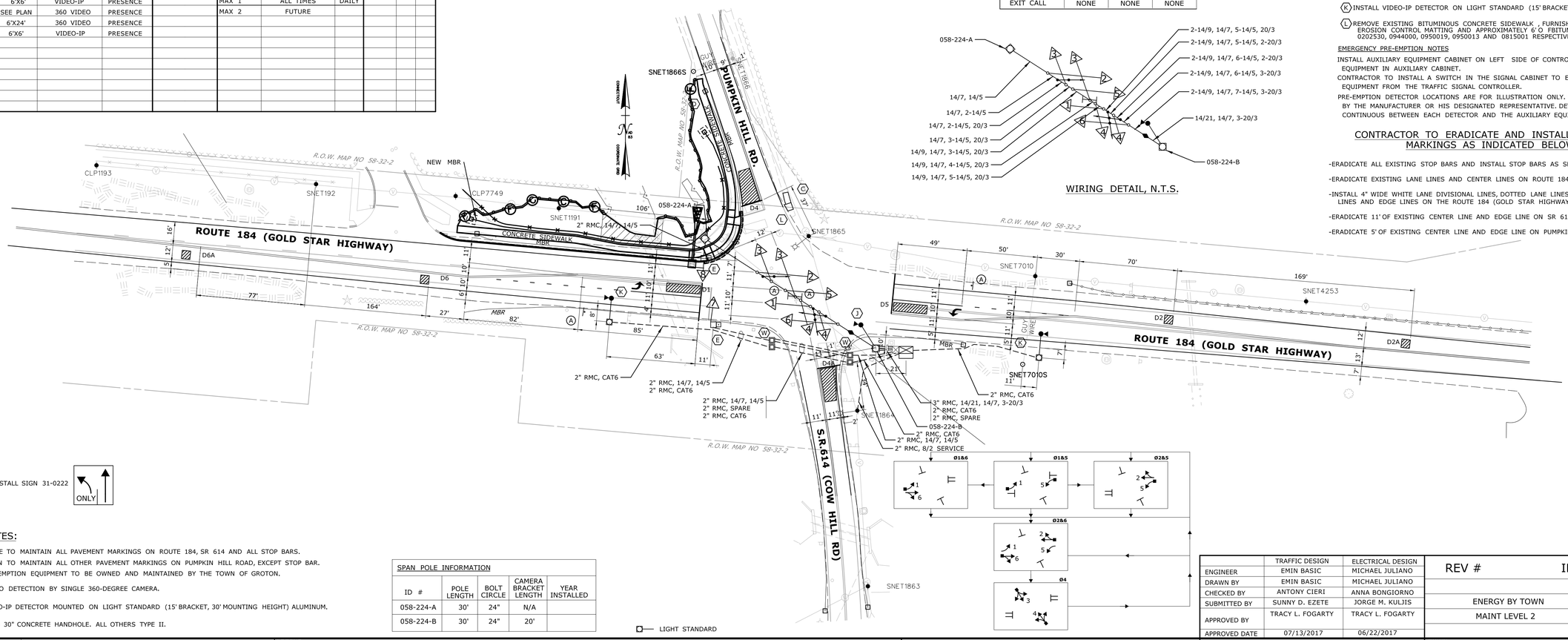
-ERADICATE ALL EXISTING STOP BARS AND INSTALL STOP BARS AS SHOWN ON PLAN.

-ERADICATE EXISTING LANE LINES AND CENTER LINES ON ROUTE 184 EAST AND WEST LEGS AS SHOWN ON THE PLAN.

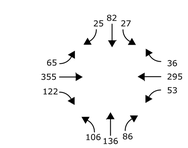
-INSTALL 4" WIDE WHITE LANE DIVISIONAL LINES, DOTTED LANE LINES (3' LINE, 9' SPACE), DOUBLE YELLOW CENTER LINES AND EDGE LINES ON THE ROUTE 184 (GOLD STAR HIGHWAY) EAST AND WEST LEGS AS SHOWN ON PLAN.

-ERADICATE 11' OF EXISTING CENTER LINE AND EDGE LINE ON SR 614 APPROACH AND INSTALL AS SHOWN ON PLAN.

-ERADICATE 5' OF EXISTING CENTER LINE AND EDGE LINE ON PUMPKIN HILL ROAD AND INSTALL AS SHOWN ON PLAN.



(A) INSTALL SIGN 31-0222



2015 COUNT YEAR VOLUMES

PM PEAK HOUR

NOTES:

STATE TO MAINTAIN ALL PAVEMENT MARKINGS ON ROUTE 184, SR 614 AND ALL STOP BARS.

TOWN TO MAINTAIN ALL OTHER PAVEMENT MARKINGS ON PUMPKIN HILL ROAD, EXCEPT STOP BAR.

PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE TOWN OF GROTON.

(J) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.

(K) VIDEO-IP DETECTOR MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(W) 30" x 30" CONCRETE HANDHOLE. ALL OTHERS TYPE II.

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
058-224-A	30'	24"	N/A	
058-224-B	30'	24"	20'	

LIGHT STANDARD

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	EMIN BASIC	MICHAEL JULIANO
DRAWN BY	EMIN BASIC	MICHAEL JULIANO
CHECKED BY	ANTONY CIERI	ANNA BONGIORNO
SUBMITTED BY	SUNNY D. EZETE	JORGE M. KULJIS
APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
APPROVED DATE	07/13/2017	06/22/2017

REV # INTERSECTION # 058-224

ENERGY BY TOWN

MAINT LEVEL 2 — SERVICE POLE SNET 1864

UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:

R RED
Y YELLOW
G GREEN
◄R RED ARROW
◄Y YELLOW ARROW
◄— GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_058_224_008pending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 184 (GOLD STAR HIGHWAY)
AT PUMPKIN HILL RD.
AND S.R.614 (COW HILL RD.)

SCALE 1" = 40'

TOWN: GROTON

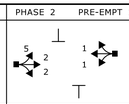
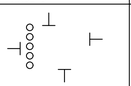
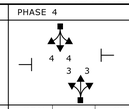
DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0172-0435

DRAWING NO. TCS-04

SHEET NO. 03.05

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2 PRE-EMPT 1	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
NONE								

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y				G	Y	R	R	R	R	R	R	R															
2	Y				G	Y	R	R	R	R	R	R	R															
3	R				R	R	R	R	R	R	G	Y	R															
4	R				R	R	R	R	R	R	G	Y	R															
5	Y				G	Y	R	R	R	R	R	R	R															
P	OFF				← DW →			← WØ →		← DW →																		
						← YIELD POINT																						

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN		15		5				
WALK			7 ② (ACCESSIBLE PEDESTRIAN SIGNAL)					
PED CLR			6 ① (ACCESSIBLE PEDESTRIAN SIGNAL)					
VEH EXT		3.0		1.5				
MAX 1		33		17				
MAX 2		33		17				
YELLOW		3.2	4	3.0				
RED		1.2	0	1.3				
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	OFF	MIN RECALL	NON-LOCK	NON-LOCK	OFF	OFF	OFF	OFF
INIT START		THIS PHASE						

COUNTDOWN PEDESTRIAN SIGNAL

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D2	6'X6'	VIDEO 360	PRESENCE
D2A	6'X6'	VIDEO 360	PRESENCE
D4	6'X24'	VIDEO 360	PRESENCE
D4A	6'X24'	VIDEO 360	PRESENCE

SYSTEM LOC

MASTER 082-249
082-248

COORDINATION TYPE: TIME CLOCK / T.B.C.

PROGRAM FUNCTION	PROGRAM TIME	PROGRAM DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
MAX 1	ALL TIMES				
MAX 2	FUTURE				
PATTERN 1	ALL TIMES	DAILY	60"	11	
FREE	2200-0500				

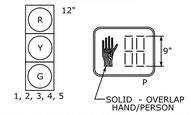
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
① COUNTDOWN ONLY DURING PEDESTRIAN CHANGE INTERVAL.
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.
② PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.

OFFICE RECORD

REV # TIR # 082-1610-01 SM # N/A SIGNAL REVISED:
REPLACED ALL TRAFFIC SIGNAL EQUIPMENT AND REVISED EMERGENCY PRE-EMPTION PHASING UNDER PROJECT 0172-0435.

SIGNAL FACES



ALL SIGNAL INDICATIONS TO HAVE LED LAMPS

ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER

PRE-EMPTION SETTINGS

	PRE-EMPT 1
PRIORITY	NO
DET. LOCK	YES
DELAY	0
ALT. MIN. GRN	5
ALT. YELLOW	PARENT
ALT. RED	PARENT
ALT. PED. CLR.	6
HOLD GREEN	15
HOLD YELLOW	3.2
HOLD RED	1.2
HOLD PHASE	2
EXIT PHASE	4
EXIT CALL	NONE

DEPARTMENT OF MENTAL HEALTH AND ADDICTION SERVICES TO BE RESPONSIBLE FOR MAJOR COMPONENT REPLACEMENT.

CONSTRUCTION NOTES:

ALL TRAFFIC EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS OR LANDING AREAS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM OF 4 FOOT FREE PATH IS UNAVAILABLE, NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

MAST ARMS AND PEDESTALS ADJACENT TO SIDEWALKS OR LANDING AREAS SHALL BE INSTALLED TO BE FLUSH WITH SIDEWALK OR LANDING AREA.

(B) REMOVE EXISTING AND RETURN TO C.V.H.

(C) CONSTRUCT TYPE 4e SIDEWALK RAMP PER GUIDE SHEETS.

(D) INSTALL MAST ARM FOUNDATION AT BACK EDGE OF SIDEWALK.

(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

INSTALL RISER ON SNET #3952 UTILITY POLE.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITES.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FRONTIER COMMUNICATIONS:
* INSTALL NEW 45' MID-SPAN POLE BETWEEN POLES #3951 AND #3952. ATTACH THE BOTTOM COMMUNICATION AT APPROXIMATE HEIGHT OF 20' 8" TO PROVIDE CLEARANCE FOR MAST ARM.

(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA MOUNTED ON 78" VERTICAL BRACKET.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. CAMERA CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH CAMERA AND THE CONTROLLER CABINET.

EMERGENCY PRE-EMPTION NOTES

RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW MAST ARMS. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS

CONTRACTOR TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

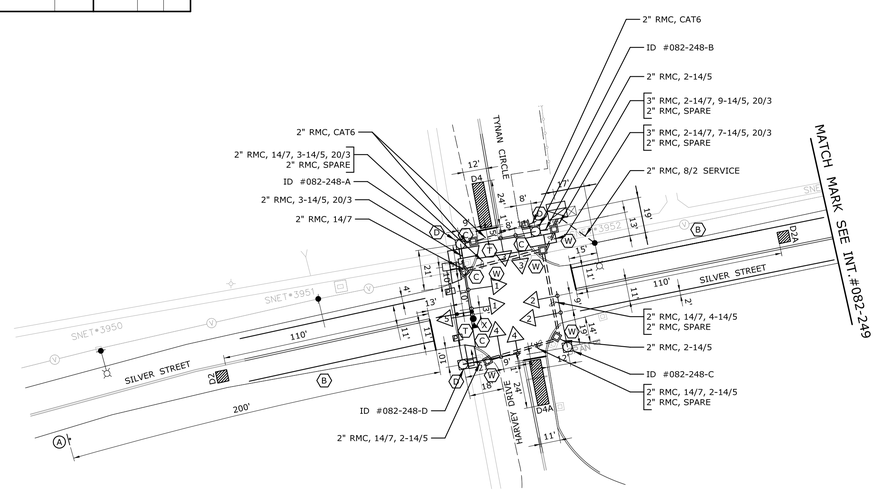
MAST ARM NOTES

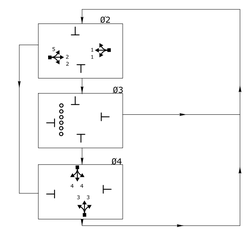
ALL MAST ARM MOUNTED TRAFFIC SIGNALS ARE FIX MOUNTED TO THE MAST ARM BY USE OF ADJUSTABLE BRACKETS.

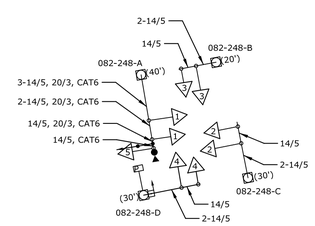
CONTRACTOR TO VERIFY ALL MAST ARM INFORMATION INCLUDING CROSS SECTIONS AND DIMENSIONS, BASED ON FIELD SURVEY, PRIOR TO SUBMISSION OF WORKING DRAWINGS.

SIGN LEGEND:

(A) REPLACE EXISTING ( ) WITH 41-0835 ( )







ELECTRICAL CALLOUTS FOR MAST ARMS, N.T.S.

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

-INSTALL ALL STOP BARS AS SHOWN.
-ERADICATE CROSSWALK ACROSS SILVER STREET AND INSTALL CROSSWALK AS SHOWN ON PLAN.
-INSTALL 100 FEET OF DOUBLE YELLOW CENTER LINE AND 4" WHITE SHOULDER LINES ON WEST LEG OF SILVER STREET AS SHOWN ON PLAN.
-INSTALL 135 FEET OF DOUBLE YELLOW CENTER LINE AND 4" WHITE SHOULDER LANE LINES ON EAST LEG OF SILVER STREET MATCHING INTO DOUBLE YELLOW CENTER LINE AND SHOULDER LINES CALLED OUT ON PLAN FOR INTERSECTION 082-249.
-ERADICATE STOP BAR AND DOUBLE YELLOW CENTER LINE ON HARVEY DRIVE.
-INSTALL 50 FEET OF DOUBLE YELLOW CENTER LINE ON TYNAN CIRCLE AND HARVEY DRIVE AS SHOWN ON PLAN.

NOTES:

STATE TO MAINTAIN ALL STOP BARS.

CITY OF MIDDLETOWN TO MAINTAIN ALL PAVEMENT MARKINGS AND SIGNING ON SILVER STREET.

DEPARTMENT OF MENTAL HEALTH AND ADDICTION SERVICES TO MAINTAIN DOUBLE YELLOW CENTER LINES ON HARVEY DRIVE AND TYNAN CIRCLE.

CITY OF MIDDLETOWN TO OWN AND MAINTAIN EMERGENCY PRE-EMPTION EQUIPMENT.

(T) BAR TYPE CROSSWALK - CITY MAINTAINED
(W) 30" X 30" CONCRETE HANDHOLE. ALL OTHERS TYPE II.
(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.

MAST ARM INFORMATION

ID #	APPROX. ARM ATTACHMENT HEIGHT	ARM LENGTH	VERTICAL BRACKET LENGTH	YEAR INSTALLED
082-248-A	17.4'	40'	78"	
082-248-B	18.5'	20'	N/A	
082-248-C	18'	30'	N/A	
082-248-D	18'	30'	N/A	

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Eamon P. Flannery	Vanessa J. Lannaman
DRAWN BY	Eamon P. Flannery	Vanessa J. Lannaman
CHECKED BY	Antony Cieri	Anna B. Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	07/06/2017	06/20/2017

REV # INTERSECTION #082-248

ENERGY BY DMHAS | ADDRESS #
MAINT LEVEL 5 | SERVICE POLE - SNET 3952
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
R RED ARROW
Y YELLOW ARROW
G GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

VC VIDEO CAMERA CABLE
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

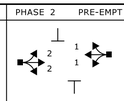
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Silver Street at Tynan Circle and Harvey Drive

TOWN: MIDDLETOWN
PROJECT NO. 0172-0435
DRAWING NO. TCS-05
DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN
SHEET NO. 03.06

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_tcs_082_248_xxxpendlng.dgn
SCALE 1" = 40'

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2 PRE-EMPT 1	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
NONE									

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y				G	Y	R	R	R	R	R	R	R															
2	Y				G	Y	R	R	R	R	R	R	R															
3	R				R	R	R	R	R	R	G	Y	R															
4	R				R	R	R	R	R	R	G	Y	R															
P	OFF				◄ DW		►	◄ WØ	►	◄	DW		►															
						◄ YIELD POINT																						

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN		15		5				
WALK			7 (2) ACCESSIBLE PEDESTRIAN SIGNAL					
PED CLR			9 (1)					
VEH EXT		3.0		2.0				
MAX 1		30		13				
MAX 2		30		13				
YELLOW		3.2	4.0	3.0				
RED		1.6	0	2.0				
ADD INIT								
MAX INIT			COUNTDOWN PEDESTRIAN SIGNAL					
TBR								
TTR								
MIN GAP								
MODE	OFF	MIN RECALL	NON-LOCK	NON-LOCK	OFF	OFF	OFF	OFF
INIT START		THIS PHASE						

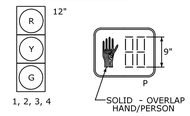
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
(1) COUNTDOWN ONLY DURING PEDESTRIAN CHANGE INTERVAL.
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.
(2) PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.

OFFICE RECORD

REV # TIR # 082-1610-02 SM # N/A SIGNAL REVISED:
REPLACED ALL TRAFFIC SIGNAL EQUIPMENT AND REVISED EMERGENCY PRE-EMPTION PHASING UNDER PROJECT 0172-0435.

SIGNAL FACES



ALL SIGNAL INDICATIONS TO HAVE L.E.D. LAMPS.

ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER.

PRE-EMPTION SETTINGS

	PRE-EMPT 1
PRIORITY	NO
DET. LOCK	YES
DELAY	0
ALT. MIN. GRN	5
ALT. YELLOW	PARENT
ALT. RED	PARENT
ALT. PED. CLR.	9
HOLD GREEN	15
HOLD YELLOW	3.2
HOLD RED	1.6
HOLD PHASE	2
EXIT PHASE	4
EXIT CALL	NONE

DEPARTMENT OF MENTAL HEALTH AND ADDICTION SERVICES TO BE RESPONSIBLE FOR MAJOR COMPONENT REPLACEMENT.

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

(A) REMOVE EXISTING AND RETURN TO C.V.H.

(B) CONSTRUCT TYPE 5a SIDEWALK RAMP PER GUIDE SHEETS.

(C) CONSTRUCT TYPE 4e SIDEWALK RAMP PER GUIDE SHEETS.

(D) CONSTRUCT TYPE 2a SIDEWALK RAMP PER GUIDE SHEETS.

(E) INSTALL NEW SIDEWALK AND CONSTRUCT TYPE 4a SIDEWALK RAMP PER GUIDE SHEETS AS SHOWN ON PLAN.

(F) INSTALL MAST ARM FOUNDATION AT BACK EDGE OF SIDEWALK.

(G) INSTALL PEDESTAL AT BACK EDGE OF LANDING AREA.

(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

INSTALL RISER ON SNET #3954 UTILITY POLE.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITES.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FRONTIER COMMUNICATIONS:
* SHIFT OVERHEAD CABLES ON POLE #3954 TO PROVIDE CLEARANCE FOR MAST ARM.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FIBERTECH:
* SHIFT OVERHEAD CABLES ON POLE #3954 TO PROVIDE CLEARANCE FOR MAST ARM.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY COMCAST:
* SHIFT OVERHEAD CABLES ON POLE #3954 TO PROVIDE CLEARANCE FOR MAST ARM.

(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA MOUNTED ON 78" VERTICAL BRACKET.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. CAMERA CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH CAMERA AND THE CONTROLLER CABINET.

EMERGENCY PRE-EMPTION NOTES

RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW MAST ARMS. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS

CONTRACTOR TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

MAST ARM NOTES

ALL MAST ARM MOUNTED TRAFFIC SIGNALS ARE FIX MOUNTED TO THE MAST ARM BY USE OF ADJUSTABLE BRACKETS.

CONTRACTOR TO VERIFY ALL MAST ARM INFORMATION INCLUDING CROSS SECTIONS AND DIMENSIONS, BASED ON FIELD SURVEY, PRIOR TO SUBMISSION OF WORKING DRAWINGS.

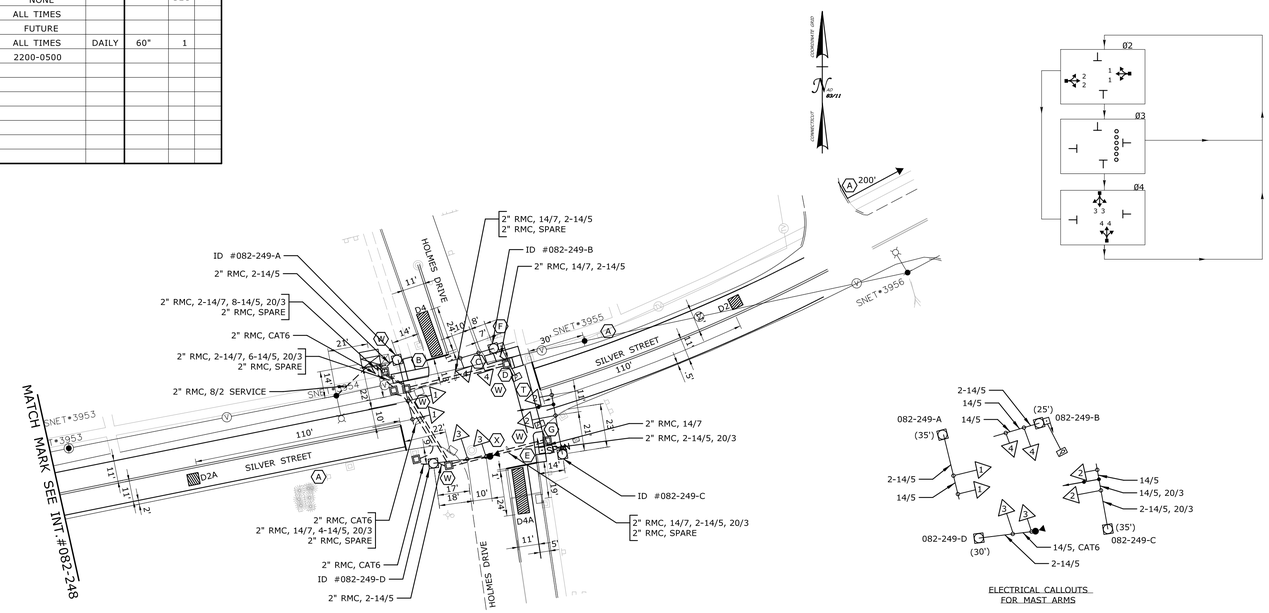
DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D2	6'X6'	VIDEO 360	PRESENCE
D2A	6'X6'	VIDEO 360	PRESENCE
D4	6'X24'	VIDEO 360	PRESENCE
D4A	6'X24'	VIDEO 360	PRESENCE

SYSTEM LOC: MASTER 082-249

COORDINATION TYPE: TIME CLOCK / T.B.C.

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
MAX 1	ALL TIMES				
MAX 2	FUTURE				
PATTERN 1	ALL TIMES	DAILY	60"	1	
FREE	2200-0500				



ELECTRICAL CALLOUTS FOR MAST ARMS

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

-INSTALL ALL STOP BARS AS SHOWN.
-ERADICATE CROSSWALK ACROSS SILVER STREET AND INSTALL CROSSWALK AS SHOWN ON PLAN.
-INSTALL 184 FEET OF DOUBLE YELLOW CENTER LINE AND 4" WHITE SHOULDER LANE LINES ON WEST LEG OF SILVER STREET MATCHING INTO DOUBLE YELLOW CENTER LINE AND SHOULDER LINES CALLED OUT ON PLAN FOR INTERSECTION 082-248.
-INSTALL 165 FEET OF DOUBLE YELLOW CENTER LINE AND 4" WHITE SHOULDER LANE LINES ON EAST LEG OF SILVER STREET AS SHOWN ON PLAN.
-ERADICATE STOP BAR AND DOUBLE YELLOW CENTERLINE ON N.B. APPROACH OF HOLMES DRIVE.
-INSTALL 50 FEET OF DOUBLE YELLOW CENTERLINE ON BOTH APPROACHES OF HOLMES DRIVE AS SHOWN ON PLAN.
-INSTALL 50 FEET OF 4" WHITE SHOULDER LINE OF N.B. APPROACH OF HOLMES DRIVE AS SHOWN ON PLAN.

NOTES:

STATE TO MAINTAIN ALL STOP BARS.

CITY OF MIDDLETOWN TO MAINTAIN ALL PAVEMENT MARKINGS AND SIGNING ON SILVER STREET.

DEPARTMENT OF MENTAL HEALTH AND ADDICTION SERVICES TO MAINTAIN DOUBLE YELLOW CENTER LINES ON HOLMES DRIVE.

CITY OF MIDDLETOWN TO OWN AND MAINTAIN EMERGENCY PRE-EMPTION EQUIPMENT.

(T) BAR TYPE CROSSWALK - CITY MAINTAINED
(W) 30" X 30" CONCRETE HANDHOLE. ALL OTHERS TYPE II.
(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.

MAST ARM INFORMATION

ID #	APPROX. ARM ATTACHMENT HEIGHT	ARM LENGTH	VERTICAL BRACKET LENGTH	YEAR INSTALLED
082-249-A	17.7'	35'	N/A	
082-249-B	18.2'	25'	N/A	
082-249-C	17.7'	35'	N/A	
082-249-D	18'	30'	78"	

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Eamon P. Flannery	Vanessa J. Lannaman
DRAWN BY	Eamon P. Flannery	Vanessa J. Lannaman
CHECKED BY	Antony Cieri	Anna B. Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	07/10/2017	06/20/2017

REV # INTERSECTION # 082-249

ENERGY BY DMHAS | ADDRESS #
MAINT LEVEL 5 | SERVICE POLE SNET #3954
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
RED ARROW
YELLOW ARROW
GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_tcs_082_249_xxxpendlng.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

SILVER STREET AT HOLMES DRIVE

SCALE 1" = 40'

TOWN: MIDDLETOWN

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0172-0435
DRAWING NO. TCS-06
SHEET NO. 03.07

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
		1 2 3 4 5		6 7	8 9 4 3			

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	R				G	Y	R	R	R	R	R	R	R	R	R	R												
2	R				G	Y	R	R	R	R	R	R	R	R	R	R												
3	R				G	Y	R	R	R	R	R	R	R	G	Y	R												
4	R				G	Y	R	R	R	R	R	R	R	G	Y	R												
5	R				G	Y	R	R	R	R	R	R	R	R	R	R												
6	R				R	R	R	R	R	R	G	Y	R	R	R	R												
7	R				R	R	R	R	R	R	G	Y	R	R	R	R												
8	R				R	R	R	R	R	R	R	R	R	G	Y	R												
9	R				R	R	R	R	R	R	R	R	R	G	Y	R												
P	OFF				◄	DW	►	WØ	◄			DW				►												

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN		15		5	5			
WALK			7 (1)					
PED CLR			11 (2)					
VEH EXT		2.5		2.0	2.0			
MAX 1		25		11	11			
MAX 2		25		11	11			
YELLOW		3.6	4.0	3.0	3.0			
RED		2.5	0	3.5	2.0			
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	OFF	MIN RECALL	NON-LOCK	NON-LOCK	NON-LOCK	OFF	OFF	OFF
INIT START		THIS PHASE						

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D2, D2A	6' X 6'	WIRELESS	PRESENCE
D2B,D2C	6' X 6'	WIRELESS	PRESENCE
D4	6' X 6'	WIRELESS	PRESENCE
D5	AS SHOWN	WIRELESS	PRESENCE

SYSTEM LOC MASTER

COORDINATION TYPE: NONE

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
MAX 1	ALL TIMES	DAILY			
MAX 2	FUTURE				

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

(1) PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.

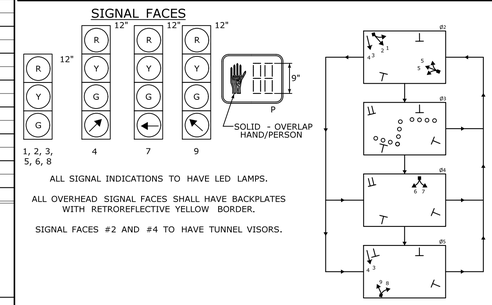
(2) COUNTDOWN ONLY DURING FLASHING PEDESTRIAN CHANGE INTERVAL. MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.

OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:

REPLACED TRAFFIC SIGNAL EQUIPMENT UNDER PROJECT 0172-0435.

SIGNAL FACES



ALL SIGNAL INDICATIONS TO HAVE LED LAMPS.

ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER.

SIGNAL FACES #2 AND #4 TO HAVE TUNNEL VISORS.

CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVALIBLE BETWEEN THE PROPOSED SPAN POLE AND THE 20 FT. PEDESTAL AS SHOWN, NOTIFY THE ENGINEER.

(F) CONSTRUCT MODIFIED TYPE 1 SIDEWALK RAMP PER GUIDE SHEETS.

(G) INSTALL DETECTABLE WARNING STRIP FOR THE CORSSING OF SOUTH MAIN STREET.

(H) INSTALL APPROX. 20 FEET OF CONCRETE SIDEWALK BETWEEN RAMPS AS SHOWN.

(J) INSTALL 5 FOOT WIDE CONCRETE SIDEWALK FROM RAMP F TO APPROX. AREA OF PEDESTAL L AS SHOWN.

(M) TRIM TREE BRANCHES TO ENSURE WIRELESS DETECTION COMMUNICATION WILL NOT BE DISRUPTED. TO BE PAID UNDER ITEM# 0952001A - SELECTIVE CLEARING AND THINNING.

(N) INSTALL 5'X5' CONCRETE PAD WITH DETECTABLE WARNING STRIP FLUSH WITH ROUTE 12 AS SHOWN.

SPAN POLES WITH 2 SPAN ATTACHMENTS TO HAVE 2 SPAN CLAMPS.

INSTALL ALL PEDESTAL FOUNDATIONS ADJACENT TO LANDING AREAS.

INSTALL CONTROLLER FOUNDATION ADJACENT TO WALK AT BACK EDGE.

(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

(X) INSTALL CAST IRON HANDHOLE COVER.

INSTALL RISER ON CL&P #2150 UTILITY POLE.

INSTALL RISER ON SNET #1816S UTILITY POLE.

ESTIMATED LOAD ON UTILITY POLES:
SNET #1816: 2211 lbs., SNET #1816S: 3325 lbs.

SPAN ATTACHMENT ON SNET#1816 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.

SPAN ATTACHMENT ON SNET#1816S TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

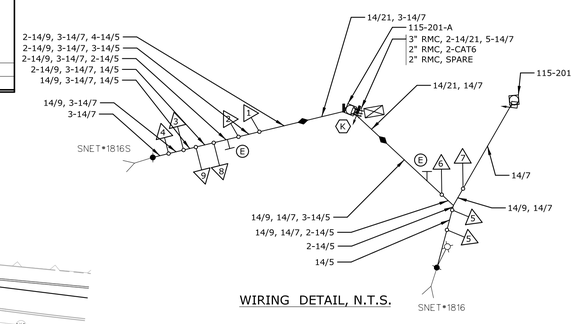
COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FRONTIER COMMUNICATIONS:
* REPLACE SNET#1816S WITH A 40-FT, CLASS 1 POLE, AND INSTALL AN ANCHOR AND GUY.
* LOWER GUY WIRE ON CL&P#916 BY 1-FOOT.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY ATLANTIC BROADBAND :
* LOWER COMMUNICATIONS CABLE ON CL&P#916 BY 1-FOOT.

(Z) CONTRACTOR TO TRIM AND CLEAR TREES AND BRUSH IN A 10-FOOT RADIUS OF SNET#1816S TO FACILITATE POLE REPLACEMENT. TO BE PAID UNDER ITEM# 0952001A - SELECTIVE CLEARING AND THINNING.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

SPAN POLES WITH 2 SPAN ATTACHMENTS TO HAVE 2 SPAN CLAMPS.



WIRING DETAIL, N.T.S.

WIRELESS DETECTION NOTES

INSTALL WIRELESS SENSORS CENTERED IN LANE AND 9' APART, CENTER TO CENTER.

(K) INSTALL 2 RECEIVER UNITS ON SPAN POLE 6" ABOVE THE TRAFFIC SIGNAL CABLE ENTRANCE FITTING. ENSURE THAT SENSORS AND TRANSCIEVERS ARE WITHIN THE 120° DETECTION CONE OF THE RECEIVER UNIT.

(L) INSTALL 20' PEDESTAL AT THE LOCATION SHOWN AND ATTACH FLEX-PANEL TRANSCEIVER UNIT 6" FROM THE TOP OF THE PEDESTAL. ENSURE THAT THE SENSORS ARE WITHIN THE 120° DETECTION CONE OF THE TRANSCEIVER UNIT.

RECEIVER AND TRANSCEIVER LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. CAT6 CABLE IS TO BE INSTALLED CONTINUOUS BETWEEN RECEIVER UNIT AND THE CONTROLLER CABINET.

SIGN LEGEND:

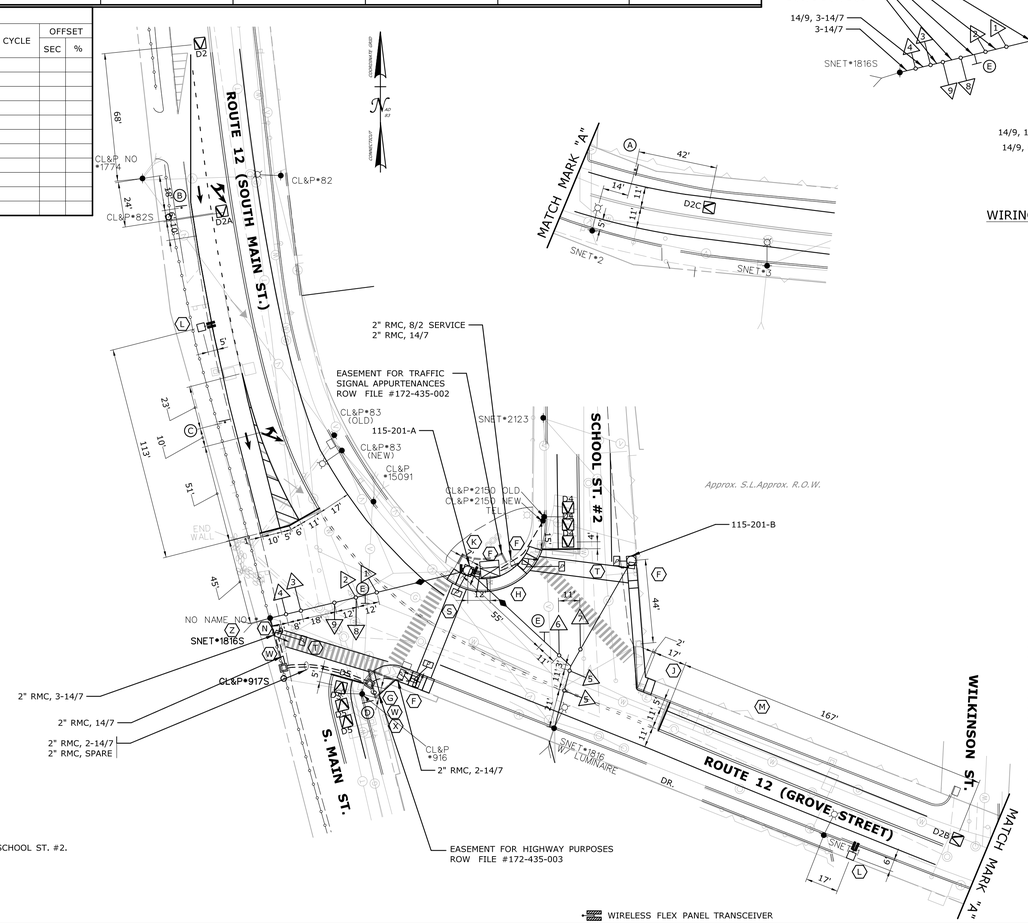
(A) REPLACE EXISTING WITH 41-0835

(B) INSTALL 31-0277

(C) REPLACE EXISTING WITH 31-0277

(D) REMOVE EXISTING NO TURN ON RED

(E) SPAN MOUNT 31-0823 NO TURN ON RED



SPAN POLE INFORMATION				
ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
115-201-A	30'	24"	N/A	
115-201-B	30'	24"	N/A	

CONTRACTOR TO ERADICATE AND INSTALL ALL PAVEMENT MARKINGS AS INDICATED BELOW:

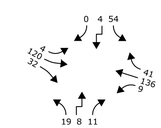
-INSTALL SHOULDER LINES WITH PROJECT LIMIT AS SHOWN.
-INSTALL D.Y.C.L. ON ROUTE 12 WITHIN PROJECT LIMITS AS SHOWN.

ROUTE 12 NB:
-INSTALL STOP BARS AS SHOWN.
-INSTALL SHOULDER LINE ON EAST SIDE OF ROUTE 12 SOUTH LEG AND EXTEND SOUTHERLY TO RING ST. (NORTH JCT)

ROUTE 12 SB:
-ERADICATE 2 PAVEMENT ARROWS AT THE LEFT LANE.
-INSTALL 4 PAVEMENT ARROWS AS SHOWN.
-ERADICATE 50' OF LANE DIVISION LANE LINE.
-INSTALL 4" DOUBLE YELLOW DOTTED CENTERLINE (2' LINE, 4' SPACE) AS SHOWN.
-ERADICATE EXISTING CROSSWALK.
-INSTALL CROSSWALK AS SHOWN.
-INSTALL 4" WHITE DOTTED LINE (3' LINE, 9' SPACE) AND THE CROSS HATCHED AREA AS SHOWN.
-INSTALL SHOULDER LINE ON WEST SIDE OF ROUTE 12 SOUTH LEG AND EXTEND SOUTHERLY TO RING ST. (NORTH JCT)

SCHOOL STREET #2 SB:
-INSTALL 50' OF D.Y.C.L.
-ERADICATE EXISTING STOP BAR AND D.Y.C.L. BETWEEN THE OLD AND NEW STOP BAR.
-INSTALL STOP BAR AS SHOWN.
-ERADICATE EXISTING CROSSWALK.
-INSTALL CROSSWALK AS SHOWN.

SOUTH MAIN SREET NB:
-ERADICATE EXISTING CROSSWALK.
-INSTALL CROSSWALK AS SHOWN.
-INSTALL 50' D.Y.C.L.



2015 COUNTS

PM PEAK HOUR

NOTES:

STATE TO MAINTAIN ALL SIGNS & PAVEMENT MARKINGS ON ROUTE 12 AND ALL STOP BARS.
TOWN TO MAINTAIN ALL SIGNS & PAVEMENT MARKINGS ON THE TOWN OWNED PORTION OF S. MAIN ST. AND SCHOOL ST. #2.

(S) BAR TYPE CROSSWALK STATE MAINTAINED

(T) BAR TYPE CROSSWALK TOWN MAINTAINED

(W) 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Jonathan J. Corilla	Michael A. Juliano
DRAWN BY	Jonathan J. Corilla	Michael A. Juliano
CHECKED BY	Yiu (Kevin) K. Ng	Anna B. Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	7/10/2017	6/23/2017

REV # INTERSECTION # 115-201

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE CL&P#2150
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
R RED ARROW
Y YELLOW ARROW
GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/18/2017 \\DOT-SDCENG07V\CTDOT_Projects$\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_115_201_XXXpendlng.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 12 (SOUTH MAIN ST.) AND ROUTE 12 (GROVE ST.) AT SOUTH MAIN STREET AND SCHOOL STREET #2

SCALE 1" = 40'

TOWN: **PUTNAM**

DRAWING TITLE: **TRAFFIC CONTROL SIGNAL PLAN**

PROJECT NO. 0172-0435

DRAWING NO. TCS-07

SHEET NO. **03.08**

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
NONE	1 6	1 6 2 5	3	4 7			7	3 8

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y	← G	←Y G	G	G	Y	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R			
2	Y	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R			
3	R	R	R	R	R	R	R	← R	←Y R	R	R	R	R	R	R	R				R	R	R	G	Y	R			
4	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R				R	R	R	R	R	R			
5	Y	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R			
6	Y	G	G	G	G	Y	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R			
7	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R				← R	←Y R	R	R	R	R			
8	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R				R	R	R	G	Y	R			
P	OFF	←							DW		→			WØ	← DW →					←		DW			→			

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	7	15	5	9			5	9
WALK					7 (2)			
PED CLR					15 (1)			
VEH EXT		3.0	1.5	2.0			1.5	2.0
MAX 1	7	24	8	25			8	25
MAX 2	7	36	11	35			11	35
YELLOW	3.0	4.5	3.0	3.7	4		3.0	3.7
RED	1.0	2.4	1.0	1.0	0		1.0	1.0
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	MAX RECALL	MIN RECALL	NON-LOCK	NON-LOCK	NON-LOCK	OFF	NON-LOCK	NON-LOCK
INIT START		THIS PHASE						

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D2	6'X6'	VIDEO	PRESENCE
D2A	6'X6'	VIDEO	PRESENCE
D3	6'X35'	VIDEO	2" DELAY
D4	6'X24'	VIDEO	PRESENCE
D7	6'X24'	VIDEO	2" DELAY
D8	6'X35'	VIDEO	PRESENCE

COORDINATION TYPE: NONE

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
MAX 1	ALL OTHER TIMES	M-F			
MAX 2	0700-0900				
	1500-1800				

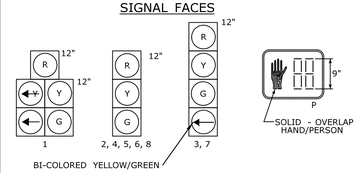
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PHASES 3 & 7 TO DRIVE FACES 3 & 7 ←Y AND ← ONLY.
PHASES 4 & 8 TO DRIVE FACES 3 & 7 R, Y, G.
PHASE 1 TO PRECEDE PHASE 2.
PHASE 2 ON TO OMIT PHASE 1.
D7 TO CALL AND EXTEND PHASE 7 AND EXTEND PHASE 4 ONLY.
D3 TO CALL AND EXTEND PHASE 3 AND EXTEND PHASE 8 ONLY.
(C) COUNTDOWN ONLY DURING PEDESTRIAN CHANGE INTERVAL.
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 5 PEDESTRIAN CHANGE INTERVAL.
(P) PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.
DUAL ENTRY PHASE 4 AND PHASE 8.

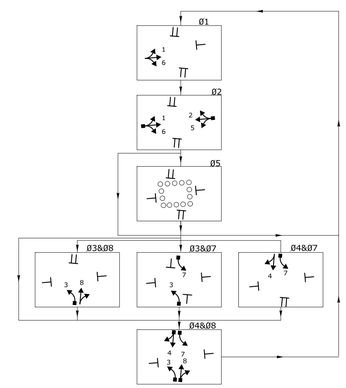
OFFICE RECORD

REV #	TIR # N/A	SM # N/A	SIGNAL REVISED:
	REPLACED PEDESTRIAN SIGNAL WITH ACCESSIBLE AND COUNTDOWN UNDER PROJECT 0172-0435.		

SIGNAL FACES



ALL INDICATIONS HAVE L.E.D. LAMPS



CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS EXISTING EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF THE TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF THE TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM OF 4 FOOT FREE PATH IS UNAVAILABLE, NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

CONTRACTOR TO REVISE DETECTION AREAS AS SHOWN ON PLAN.

(C) CONSTRUCT TYPE 4f SIDEWALK RAMP PER GUIDE SHEETS.

(D) CONSTRUCT TYPE 1 SIDEWALK RAMP PER GUIDE SHEETS.

(E) REPLACE EXISTING PEDESTRIAN SIGNAL FACES WITH COUNTDOWN PEDESTRIAN SIGNAL HEADS ON EXISTING PEDESTAL AS SHOWN ON PLAN. INSTALL NEW ACCESSIBLE PEDESTRIAN PUSH BUTTONS AND SIGNS #31-0845 WITH APPROPRIATE ARROW ON EXISTING PEDESTAL AS SHOWN ON PLAN.

(F) REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND INSTALL NEW ACCESSIBLE PEDESTRIAN PUSH BUTTONS AND SIGNS #31-0845 WITH APPROPRIATE ARROW ON EXISTING PEDESTAL AS SHOWN ON PLAN.

(G) INSTALL NEW PEDESTAL ON NEW FOUNDATION WITH COUNTDOWN SIGNAL HEADS AND APS PUSH BUTTONS WITH SIGNS #31-0845 AND APPROPRIATE ARROWS AS SHOWN ON PLAN.

INSTALL ALL NEW PEDESTAL FOUNDATIONS ADJACENT TO LANDING AREAS.

(H) REPLACE EXISTING PEDESTRIAN SIGNAL FACES WITH A COUNTDOWN PEDESTRIAN SIGNAL HEAD ON EXISTING PEDESTAL AS SHOWN ON PLAN.

(I) REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND INSTALL NEW ACCESSIBLE PEDESTRIAN PUSH BUTTON AND SIGN #31-0845 ON EXISTING PEDESTAL AS SHOWN ON PLAN.

(J) REPLACE EXISTING PEDESTRIAN SIGNAL FACES WITH A COUNTDOWN PEDESTRIAN SIGNAL HEAD ON EXISTING SPAN POLE AS SHOWN ON PLAN.

(K) REMOVE EXISTING PEDESTRIAN PUSH BUTTON AND INSTALL NEW ACCESSIBLE PEDESTRIAN PUSH BUTTON WITH SIGN #31-0845 AND APPROPRIATE ARROW ON EXISTING SPAN POLE AS SHOWN ON PLAN.

(L) REMOVE EXISTING PEDESTRIAN SIGNAL HEADS FROM EXISTING PEDESTAL.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

INSTALL A TOGGLE BOLT WITH A WASHER TO EFFECTIVELY SEAL EACH HOLE LEFT IN ALL LOCATIONS. WHERE THE PEDESTRIAN PUSH BUTTON HOUSINGS/PEDESTRIAN HEADS ARE REMOVED.

MODIFY EXISTING CONTROLLER TO ACCOMMODATE CHANGES. SUPPLY 4 COPIES OF REVISED CABINET WIRING DIAGRAMS.

(M) REMOVE EXISTING AUDIBLE BUZZER FROM EXISTING SPAN. REMOVE ASSOCIATED CONDUCTORS BACK TO SOURCE.

ALL EXISTING 14/7 CABLE IS TO BE REUSED. NEW CABLE TO BE INSTALLED AS NOTED.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

(N) REINSTALL EXISTING BITUMINOUS CONCRETE PATH TO UNIFORMILY SLOPE DOWN TO PROPOSED SIDEWALK LANDING.

(O) CONSTRUCT TYPE 4c SIDEWALK RAMP PER GUIDE SHEETS.

(P) REMOVE EXISTING CONCRETE SIDEWALK, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING AND APPROX. 22' OF GRANITE CURB. WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, 0950013 AND 0813001 RESPECTIVELY.

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

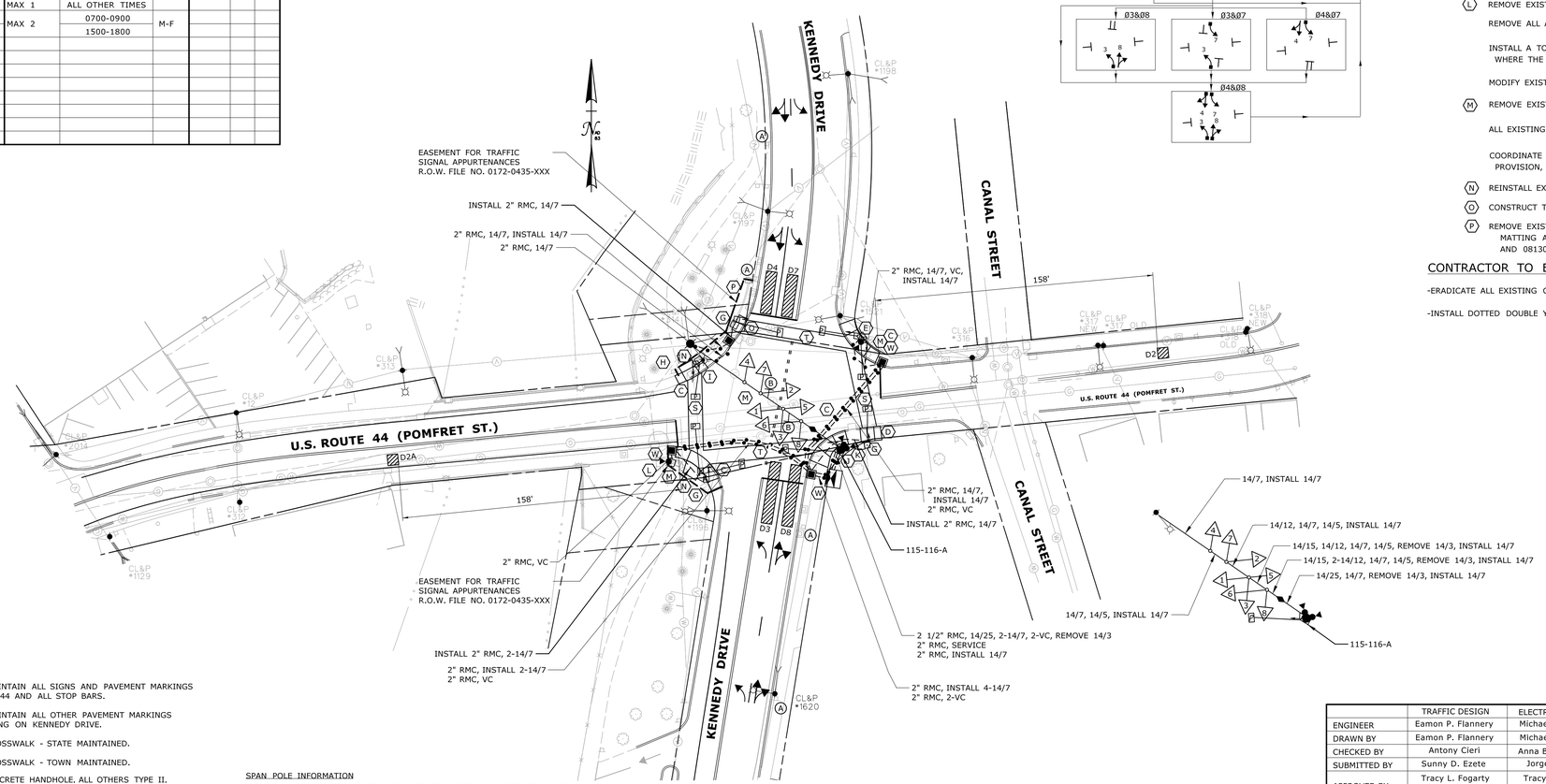
-ERADICATE ALL EXISTING CROSSWALKS AND INSTALL PROPOSED CROSSWALKS AS SHOWN ON PLAN.

-INSTALL DOTTED DOUBLE YELLOW CENTER LINE AS SHOWN ON PLAN.

SIGN LEGEND:

(A) 31-0282Z ( )

(B) SPAN MTD. 31-0135 ( )



NOTES:

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON ROUTE 44 AND ALL STOP BARS.

TOWN TO MAINTAIN ALL OTHER PAVEMENT MARKINGS AND SIGNING ON KENNEDY DRIVE.

(S) BAR TYPE CROSSWALK - STATE MAINTAINED.

(T) BAR TYPE CROSSWALK - TOWN MAINTAINED.

(W) 30" X 30" CONCRETE HANDHOLE. ALL OTHERS TYPE II.

(M) EXISTING VIDEO DETECTOR MOUNTED ON 20' ALUMINUM PEDESTAL

SPAN POLE INFORMATION
115-116-A: HEIGHT 30', B.C. 20", LOAD AT YIELD 7800 lbs. INSTALLED 2009

VC-VIDEO DETECTOR CABLE

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Eamon P. Flannery	Michael A. Juliano
DRAWN BY	Eamon P. Flannery	Michael A. Juliano
CHECKED BY	Antony Cieri	Anna B. Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	07/13/2017	06/23/2017

REV # INTERSECTION #115-216

ENERGY BY - TOWN | ADDRESS #
MAINT LEVEL 3 | SERVICE POLE - CL&P 1620
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
R RED ARROW
Y YELLOW ARROW
GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 \\DOT-SDCENG07V\CTDOT_Projects$\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_115_216_XXXpending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 44 (POMFRET STREET)
AT KENNEDY DRIVE

SCALE 1" = 40'

TOWN: **PUTNAM**

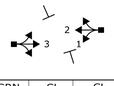
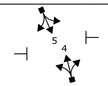
PROJECT NO. 0172-0435

DRAWING NO. TCS-08

DRAWING TITLE: **TRAFFIC CONTROL SIGNAL PLAN**

SHEET NO. **03.09**

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4 PRE-EMPT 1	PHASE 5	PHASE 6	PHASE 7	PHASE 8
NONE								

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y	◄— G	◄Y G	G	G	Y	R				R	R	R															
2	Y	G	G	G	G	Y	R				R	R	R															
3	Y	R	R	R	G	Y	R				R	R	R															
4	R	R	R	R	R	R	R				G	Y	R															
5	R	R	R	R	R	R	R				G	Y	R															
6	R	R	R	R	R	R	R				G	Y	R															
7	R	R	R	R	R	R	R				G	Y	R															

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	5	15		9				
WALK				11				
PED CLR				1				
VEH EXT	1.5	2.5		2				
MAX 1	11	30		20				
MAX 2	11	30		20				
YELLOW	3.0	5.0		4.6				
RED	1.0	2.1		1.9				
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	MIN RECALL	MIN RECALL	OFF	NON-LOCK	OFF	OFF	OFF	OFF
INIT START		THIS PHASE						

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	6'X25'	VIDEO 360	PRESENCE
D2	6'X6'	VIDEO IP	PRESENCE
D2A	6'X6'	VIDEO IP	PRESENCE
D2B	6'X6'	VIDEO IP	PRESENCE
D2C	6'X6'	VIDEO IP	PRESENCE
D4	8'X25'	VIDEO 360	PRESENCE
D4A	8'X25'	VIDEO 360	PRESENCE
D4B	SEE PLAN	VIDEO 360	6" DELAY

SYSTEM LOC MASTER

COORDINATION TYPE: NONE

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
MAX 1	ALL TIMES	DAILY			
MAX 2	FUTURE				

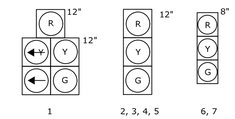
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PHASE 2 ON TO OMIT PHASE 1
D1 TO EXTEND PHASE 1 ONLY
EMERGENCY PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION

OFFICE RECORD

REV # TIR # 012-1605-01 SM # N/A SIGNAL REVISED:
REPLACE TRAFFIC SIGNAL EQUIPMENT, REMOVED OVERHEAD SIGN ON RT 6 / 44 WB APPROACH AND ADDED EMERGENCY PRE-EMPTION UNDER PROJECT NO 0172-0436

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS

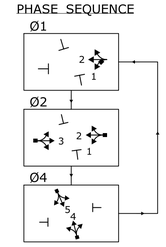
ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BOARDER

FACES 6 AND 7 TO HAVE TUNNEL VISORS

PRE-EMPTION SETTINGS

	PRE-EMPT 1
PRIORITY	NO
DET. LOCK	YES
DELAY	0
ALT. MIN. GRN	5
ALT. YELLOW	PARENT
ALT. RED	PARENT
ALT. PED. CLR.	0
HOLD GREEN	15
HOLD YELLOW	4.6
HOLD RED	1.9
HOLD PHASE	4
EXIT PHASE	1
EXIT CALL	NONE

PHASE SEQUENCE



CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.
STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

(J) REMOVE CANTILEVER SIGN STRUCTURE AND FOUNDATION TO BE PAID FOR UNDER ITEM NO. 1206025A REMOVAL AND RELOCATION OF EXISTING OVERHEAD SIGNS

(K) INSTALL 5'X5' CONCRETE PAD WITH DETECTABLE WARNING STRIP FLUSH WITH ROUTE 6/44 AND ADJACENT TO PEDESTAL FOUNDATION WITH FAR-SIDE CURB AS SHOWN.

(L) CONSTRUCT MODIFIED TYPE 2A SIDEWALK RAMP PER GUIDE SHEET.

INSTALL SERVICE RISERS ON UTILITY POLES SNET #80, SNET#89.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

COORDINATE AND SCHEDULE THE FOLLOWING WORK :
* EVERSOURCE:
RAISE SECONDARY LINE RUNNING BETWEEN SNET #80 & SNET #81 APPROXIMATELY 3' FROM ITS CURRRENT LOCATION.

* EVERSOURCE, FRONTIER, COMCAST:
RELOCATE SERVICE TO THE PRIVATE BUILDING IN THE NE CORNER OF THE INTERSECTION TO MID-SPAN BETWEEN SNET#81 & SNET#82.

SPAN POLES WITH 2 SPAN ATTACHMENTS TO HAVE 2 SPAN CLAMPS.

(M) PERFORM TEST PIT AT SPAN POLE ID# 012-201-D FOUNDATION LOCATION TO DETERMINE THE LOCATION OF UNDERGROUND UTILITIES.

(P) INSTALL VIDEO IP DETECTOR ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(Q) INSTALL AUXILLIARY EQUIPMENT CABINET ON SPAN POLE 5-FEET ABOVE BASEPLATE
INSTALL CAT6 REPEATER IN CABINET AND COIL MINIMUM 10-FEET OF CAT6 CABLE IN CABINET.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. CAMERA CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH CAMERA AND THE CONTROLLER CABINET.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

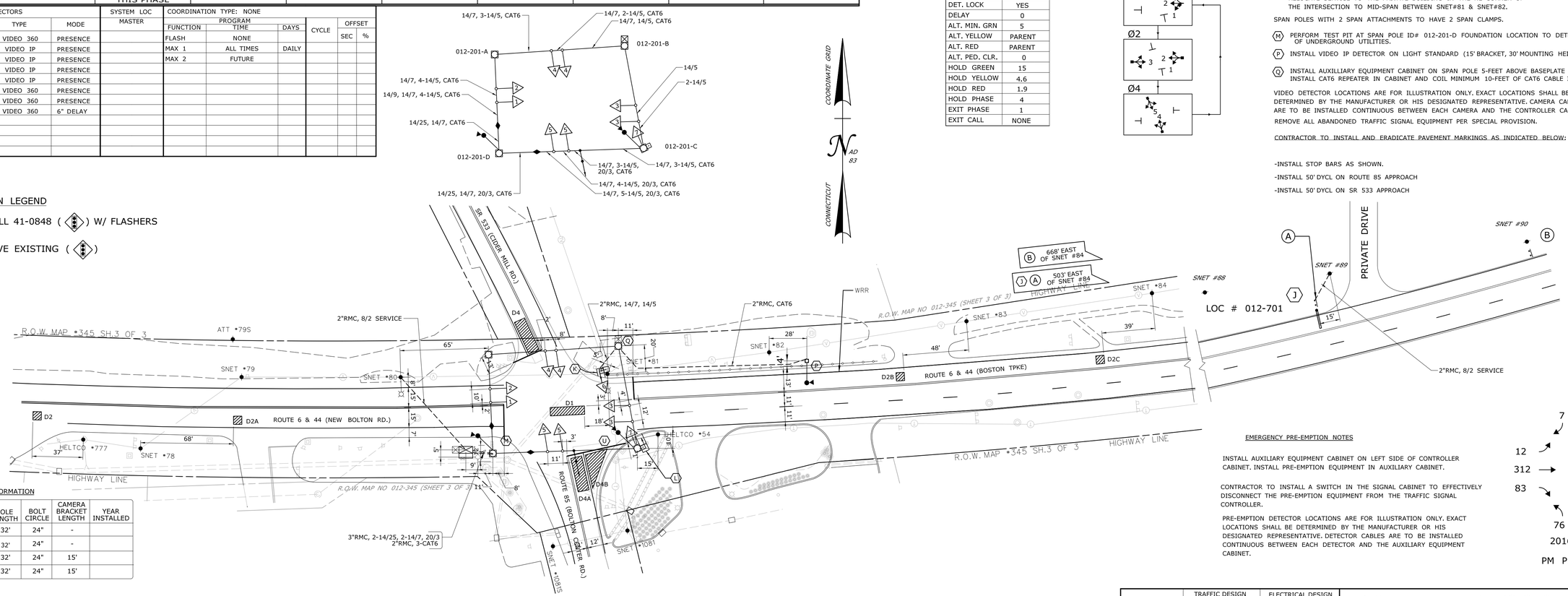
CONTRACTOR TO INSTALL AND ERADICATE PAVEMENT MARKINGS AS INDICATED BELOW:

-INSTALL STOP BARS AS SHOWN.
-INSTALL 50' DYCL ON ROUTE 85 APPROACH
-INSTALL 50' DYCL ON SR 533 APPROACH

SIGN LEGEND

(A) INSTALL 41-0848 ( ) W/ FLASHERS

(B) REMOVE EXISTING ( )



SPAN POLE INFORMATION

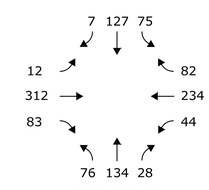
ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
012-201-A	32'	24"	-	
012-201-B	32'	24"	-	
012-201-C	32'	24"	15'	
012-201-D	32'	24"	15'	

EMERGENCY PRE-EMPTION NOTES

INSTALL AUXILIARY EQUIPMENT CABINET ON LEFT SIDE OF CONTROLLER CABINET. INSTALL PRE-EMPTION EQUIPMENT IN AUXILIARY CABINET.

CONTRACTOR TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.



2016 COUNT

PM PEAK HOUR

NOTES:

STATE TO MAINTAIN ALL SIGNS & PAVEMENT MARKINGS
TOWN OF BOLTON TO OWN AND MAINTAIN EMERGENCY PRE-EMPTION EQUIPMENT

(U) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA.

(P) VIDEO IP DETECTOR MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

OVERHEAD SIGN POST | LIGHT STANDARD

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Ryan T. O'Hara	R. POLINENI
DRAWN BY	Ryan T. O'Hara	R. POLINENI
CHECKED BY	Yiu (Kevin) K. Ng	A. BONGIORNO
SUBMITTED BY	Sunny D. Ezete	J. KULJIS
APPROVED BY	Tracy L. Fogarty	TRACY L. FOGARTY
APPROVED DATE	6/23/17	6/7/17

REV # INTERSECTION # 012-201

SIGN WITH FLASHERS LOCATION # 012-701, SERVICE POLE: SNET#89

ENERGY BY STATE | ADDRESS #

MAINT LEVEL 2 | SERVICE POLE: SNET #80

UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
◄R RED ARROW
◄Y YELLOW ARROW
◄— GREEN ARROW
W,Ø WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 6/44 (NEW BOLTON RD. / BOSTON TURNPIKE)
AT SR 533 (CIDER MILL RD.) &
ROUTE 85 (BOLTON CENTER RD.)

TOWN: **BOLTON**

DRAWING TITLE: **TRAFFIC CONTROL SIGNAL PLAN**

PROJECT NO. 0172-0436
DRAWING NO. TCS-09
SHEET NO. **03.10**

DATE PLOTTED : 7/17/2017 \\DOT-SDCENG07V\CTDOT_Projects$\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_012_201_xxxpending.dgn

SCALE 1" = 40'

MOVEMENT DIAGRAM

NTOR		PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			PHASE 7			PHASE 8					
		FL. R 2; FL. Y 1; FL. Y 1; 2 FL. R																										
	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
FACE # 1	Y																											
FACE # 2	R																											
INTERVALS: MIN GRN																												
WALK																												
PED CLR																												
VEH EXT																												
MAX 1																												
MAX 2																												
YELLOW																												
RED																												
ADD INIT																												
MAX INIT																												
TBR																												
TTR																												
MIN GAP																												
MODE																												
INIT START																												

TECHNICAL NOTES

OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:

REPLACED ALL FLASHING BEACON EQUIPMENT UNDER PROEJCT 0172-0436.

SIGNAL FACES

ALL SIGNAL INDICATIONS TO HAVE LED LAMPS

ALL SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER

CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

INSTALL SERVICE RISER ON CL&P #3538 UTILITY POLE.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY :

* FRONTIER & COMCAST:
  LOWER COMMUNICATION CABLES APPROXIMATELY 1' FROM THEIR CURRENT LOCATION ON UTILITY POLES CL&P#3538, CL&P#4556 & CL&P#3539

(P) INSTALL FLASHER CABINET ON TOP OF 4'-4" PEDESTAL AS SHOWN ON THE STANDARD SHEET.

INSTALL PEDESTAL AND SPAN POLES ADJACENT TO AND WITHIN R.O.W..

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

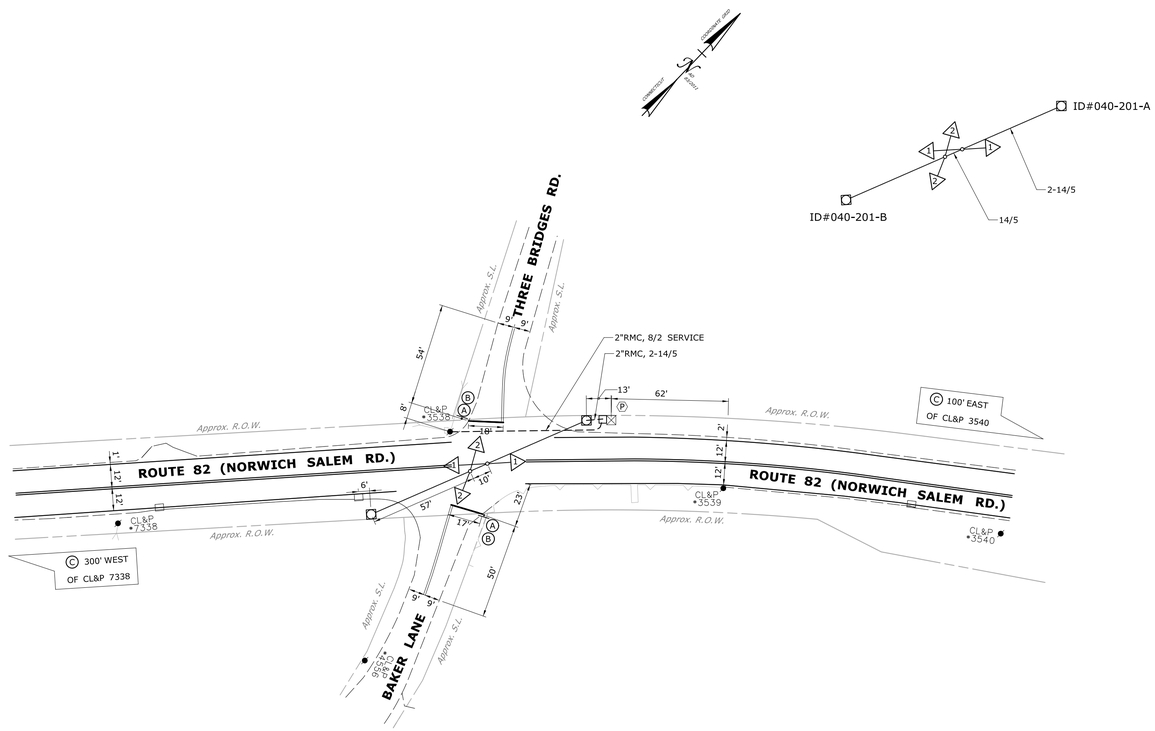
CONTRATOR TO INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:
-INSTALL ALL STOP BARS AS SHOWN.
-INSTALL 50' DYCL ON THREE BRIDGES ROAD.
-INSTALL 50' DYCL ON BAKER LANE.

SIGN LEGEND:

(A) REPLACE EXISTING 31-0552 AND INSTALL 31-5003 (VERTICAL RETROREFLECTIVE STRIP)

(B) SUBMOUNT 41-0564 CROSSING TRAFFIC DOES NOT STOP

(C) REPLACE EXISTING WITH 41-4226



SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
040-201-A	32'	24"	N/A	
040-201-B	26'	24"	N/A	

NOTES:

STATE TO MAINTAIN STOP BARS AND STOP SIGNS ON BAKER LANE AND THREE BRIDGES ROAD.
STATE TO MAINTAIN ALL PAVEMENT MARKINGS ON ROUTE 82.
TOWN OF EAST HADDAM TO MAINTAIN DOUBLE YELLOW CENTER LINE ON BAKER LANE AND THREE BRIDGES ROAD.

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Jonathan J. Corilla	Raja Polineni
DRAWN BY	Jonathan J. Corilla	Raja Polineni
CHECKED BY	Yiu (Kevin) K. Ng	Anna B. Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	7/6/2017	6/7/2017

REV # INTERSECTION #040-201

ENERGY BY STATE | ADDRESS # N/A

MAINT LEVEL 5 | SERVICE POLE: CL&P #3538

UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:

- R RED
- Y YELLOW
- G GREEN
- R RED ARROW
- Y YELLOW ARROW
- GREEN ARROW
- WØ WALK/ PED. CLR
- D.W. DON'T WALK
- FL. FLASHING
- PROPOSED WOOD SPAN POLE
- EXISTING WOOD SPAN POLE
- PROPOSED STEEL SPAN POLE
- EXISTING STEEL SPAN POLE
- PROPOSED UTILITY POLE
- EXISTING UTILITY POLE
- PEDESTAL MOUNTING
- PEDESTRIAN PUSH BUTTON & SIGN
- DIRECTIONAL ARW. FOR PUSH BUTTON
- TRAFFIC SIGNAL FACE
- PEDESTRIAN SIGNAL FACE
- DET. LEADS IN SAW CUT
- PROPOSED RMC (RIGID METAL CONDUIT)
- EXISTING RMC (RIGID METAL CONDUIT)
- AUXILIARY TERMINATION CABINET
- AUXILIARY EQUIPMENT CABINET
- VIDEO DETECTION ZONE
- PROPOSED CONTROLLER
- EXISTING CONTROLLER
- LOOP DETECTOR
- SD SYSTEM DETECTOR
- MAGNETIC DETECTOR
- OPTICAL DETECTOR
- VIDEO DETECTOR
- AUDIO DETECTOR
- SIDEWALK RAMP
- CABLE CLOSURE
- WIRELESS SENSOR
- WIRELESS RECEIVER
- WIRELESS TRANSMITTER
- GUY WIRE
- PROPOSED HANDHOLE
- EXISTING HANDHOLE

DATE PLOTTED : 7/18/2017 \\DOT-SDCENG07V\CTDOT_Projects$\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_040_201_002pending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 82 (NORWICH SALEM RD.)
AT BAKER LANE
AND THREE BRIDGES RD.

SCALE 1" = 40'

TOWN: **EAST HADDAM**

DRAWING TITLE: **TRAFFIC CONTROL SIGNAL PLAN**

PROJECT NO. 0172-0436

DRAWING NO. TCS-10

SHEET NO. **03.11**

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
	FL. R 2; 1 FL. Y; FL. Y 1							

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y																											
2	R																											

INTERVALS																												
MIN GRN																												
WALK																												
PED CLR																												
VEH EXT																												
MAX 1																												
MAX 2																												
YELLOW																												
RED																												
ADD INIT																												
MAX INIT																												
TBR																												
TTR																												
MIN GAP																												
MODE																												
INIT START																												

TECHNICAL NOTES

FACE 1 TO FLASH ALTERNATELY
FACE 2 TO FLASH SIMULTANEOUSLY

OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:
REPLACED ALL FLASHING BEACON EQUIPMENT UNDER PROJECT 0172-0436

SIGNAL FACES

ALL SIGNAL INDICATIONS TO HAVE LED LAMPS

ALL SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER

CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

(C) RETROFIT DETECTABLE WARNING STRIP.

INSTALL RISERS ON JCELP #14 UTILITY POLE.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

COORDINATE AND SCHEDULE THE FOLLOWING WORK :
* JEWETT CITY DEPARTMENT OF PUBLIC WORKS:
- REPLACE JCELP#13 WITH 35' LONG POLE AND INSTALL ANCHOR.
- REPLACE JCELP#14 WITH 35' LONG POLE AND INSTALL SIDEWALK ANCHOR
- INSTALL POLE TO POLE GUY BETWEEN JCELP#14 & JCELP#15.

(P) INSTALL FLASHER CABINET ON TOP OF 4'-4" PEDESTAL AS SHOWN ON THE STANDARD SHEET.

INSTALL PEDESTAL ADJACENT TO AND BEHIND THE EXISTING GUIDE RAIL.

ESTIMATED LOAD ON UTILITY POLES:
JCELP #13: 500 lbs.,
JCELP #14: 500 lbs.

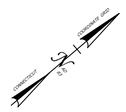
SPAN ATTACHMENT ON UTILITY POLES JCELP#13, JCELP#14 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.

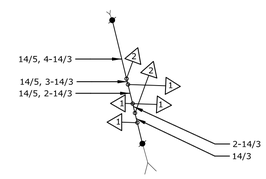
REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

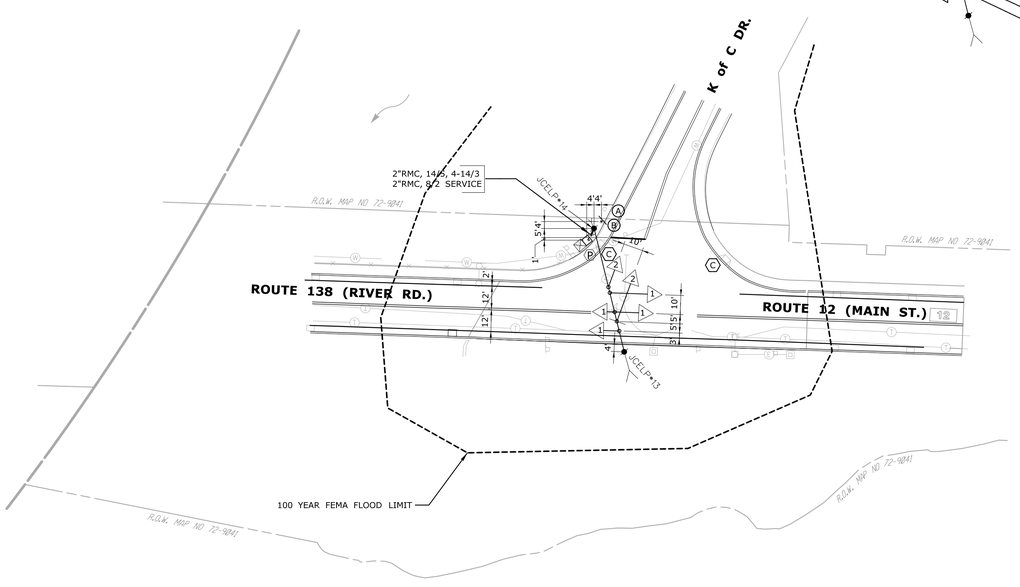
SIGN LEGEND:

(A) REPLACE EXISTING 31-0552 STOP AND INSTALL 31-5003 (VERTICAL RETROREFLECTIVE STRIP)

(B) SUBMOUNT 41-0564 CROSSING TRAFFIC DOES NOT STOP







CONTRACTOR TO INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

-INSTALL ALL STOP BARS AS SHOWN.
-INSTALL DYCL ON K OF C DRIVE AS SHOWN.
-INSTALL DYL ON BOTH ROUTE 12 APPROACHES AS SHOWN.
-INSTALL 4" WIDE WHITE EDGE LINES ON BOTH ROUTE 12 APPROACHES AS SHOWN.

NOTES:

STATE TO MAINTAIN ALL PAVEMENT MARKINGS ON ROUTE 12 AND ROUTE 138 AND STOP BAR AND STOP SIGN ON K OF C DRIVE
TOWN TO MAINTAIN DOUBLE YELLOW CENTERLINE ON K OF C DRIVE

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Emin Basic	Raja Polineni
DRAWN BY	Emin Basic	Raja Polineni
CHECKED BY	Antony Cieri	Anna Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	07/13/2017	6/21/2017

REV # INTERSECTION #057-201

ENERGY BY STATE | ADDRESS #
MAINT LEVEL 5 | SERVICE POLE: JCELP#14
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
R RED ARROW
Y YELLOW ARROW
GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 \\DOT-SDCENG07V\CTDOT_Projects$\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_057_201_004pending.dgn

SCALE 1" = 40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 138 (RIVER RD.)
& ROUTE 12 (MAIN ST.)
AT K of C DR.

TOWN: GRISWOLD

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0172-0436
DRAWING NO. TCS-11
SHEET NO. 03.12

MOVEMENT DIAGRAM

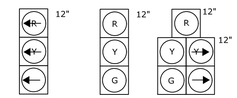
	NTOR	PHASE 1 PRE-EMPT 1	PHASE 2 PRE-EMPT 2	PHASE 3	PHASE 4	PHASE 5 PRE-EMPT 2	PHASE 6 PRE-EMPT 1	PHASE 7	PHASE 8	
		3, 1	2, 2		3, 4, 7	5	6, 6			
	FLASH	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL
FACE # 1	◀R	←Y ◀R	◀R ◀R ◀R		◀R ◀R ◀R	◀R ◀R ◀R	◀R ◀R ◀R			
2	Y	R R R	G Y R		R R R	R R R	R R R			
3	R	R→ R Y▶ R	R R R		G Y (1) R (2)	R R R	R R R			
4	R	R R R	R R R		G Y R	R R R	R R R			
5	◀R	◀R ◀R ◀R	◀R ◀R ◀R		◀R ◀R ◀R	←Y ◀R	◀R ◀R ◀R			
6	Y	R R R	R R R		R R R	R R R	G Y R			
7	R	R R R	R R R		G Y R	R R R	R R R			
			← YIELD PT.				← YIELD PT.			
INTERVALS MIN GRN		5	15		7	5	15			
WALK					20					
PED CLR					1					
VEH EXT		1.5	2.5		1.5	1.5	2.5			
MAX 1		11	40		19	11	40			
MAX 2		11	40		19	11	40			
YELLOW		3.0	4.5		3.2	3.0	4.5			
RED		1.3	1.0		1.5	1.3	1.0			
ADD INIT										
MAX INIT										
TBR										
TTR										
MIN GAP										
MODE		NON-LOCK	MIN RECALL	OFF	NON-LOCK	NON-LOCK	MIN RECALL	OFF	OFF	
INIT START			THIS PHASE				THIS PHASE			

TECHNICAL NOTES

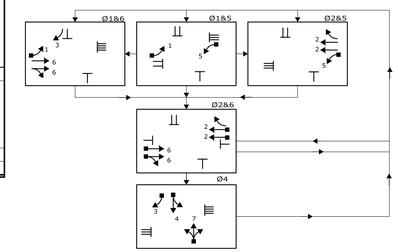
STANDARD OVERLAP SKIP FEATURES APPLY
ARTERY PHASE DETECTORS TO BE NON-ACTUATING DURING COORDINATION.
(1) TO BE Y→ IF Ø1 NEXT.
(2) TO BE R→ IF Ø1 NEXT.
TIMINGS SHOWN REFLECT FREE OPERATION. ACTUAL COORDINATION INFORMATION TO BE DETERMINED BY THE CLOSED LOOP LOCAL COORDINATION UNIT.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.

OFFICE RECORD
REV # TIR # N/A SM # N/A SIGNAL REVISED:
REPLACED ALL TRAFFIC SIGNAL EQUIPMENT UNDER PROJECT 0172-0436

SIGNAL FACES



ALL SIGNAL INDICATIONS TO HAVE LED LAMPS
ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER



CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.
STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.
ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.
THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.
INSTALL STATE FURNISHED CONTROLLER.
CABINET DOOR TO OPEN STREET SIDE.
COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.
COORDINATE AND SCHEDULE THE FOLLOWING WORK :
GROTON UTILITIES:
REPLACE EXISTING UTILITY POLES GW&E#X45 & GW&E#46 WITH TALLER 55'POLES, REPLACE THE EXISTING SECONDARY WIRES WITH TRIPLEX AND RELOCATE THEIR FACILITIES TO PROPOSED NEW POLES.
FRONTIER & COMCAST:
RELOCATE THEIR EXISTING FACILITIES TO PROPOSED NEW UTILITY POLES GW&E#X45 & GW&E#46.
ESTIMATED LOAD ON UTILITY POLE GW&E #X45: 1333lbs.
SPAN ATTACHMENT ON GW&E#X45 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.
SPAN POLES WITH 2 SPAN ATTACHMENTS TO HAVE 2 SPAN CLAMPS.
COORDINATE THIS REVISION WITH CONNECTICUT D.O.T. SIGNAL LAB CONTACT MR. DONALD ASSARD (860) 258-0346 OR MR. MARK ZAMPINI (860) 258-0349 AT LEAST 45 DAYS PRIOR TO REVISION.
RECEIVER AND TRANSCEIVER LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. CAT6 CABLE IS TO BE INSTALLED CONTINUOUS BETWEEN RECEIVER UNIT AND THE CONTROLLER CABINET.
(L) USE CAUTION WHEN TRENCHING TO AVOID UNDERGROUND GAS LINE IN THE VACINITY.
(M) PULL EXISTING INTERCONNECT CABLE BACK TO THE HANDHOLE AND RE-ROUTE INTERCONNECT CABLE TO PROPOSED CONTROLLER.
(N) INSTALL CONTROLLER CABINET AT EXISTING CONTROLLER CABINET LOCATION. TEMPORARILY RELOCATE EXISTING CABINET ONTO THE EXISITNG SPAN POLE TO FACILITATE INSTALLATION OF PROPOSED CONTROLLER CABINET.
(P) INSTALL RECEIVER UNIT ON SPAN POLE 6" ABOVE THE TRAFFIC SIGNAL CABLE ENTRANCE FITTING. ENSURE THAT SENSORS ARE WITHIN THE 120° DETECTION CONE OF THE RECEIVER UNIT.
(X) INSTALL 20' PEDESTAL AT THE LOCATION SHOWN AND ATTACH FLEX PANEL TRANSCEIVER UNIT WITH ANTENNA 6" FROM THE TOP OF THE PEDESTAL. ENSURE THAT SENSORS ARE WITHIN THE 120° DETECTION ZONES OF THE TRANSCEIVER UNIT AND ANTENNA.
REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

EMERGENCY PRE-EMPTION NOTES

RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW SPAN. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS
CONTRACTOR TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.
PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.
(A) INSTALL SPAN POLE FOUNDATION ADJACENT TO AND WITHIN R.O.W.
(B) INSTALL PEDESTAL FOUNDATION ADJACENT TO AND WITHIN R.O.W.
(C) CONSTRUCT TYPE 4e SIDEWALK RAMP PER SPECIAL PROVISIONS AND GUIDE SHEETS.
(D) CONSTRUCT TYPE 4b MODIFIED SIDEWALK RAMP PER SPECIAL PROVISIONS AND GUIDE SHEETS.

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW

-ERADICATE ALL EXISTING STOP BARS AND LANE USE ARROWS AND INSTALL STOP BARS AND LANE USE ARROWS AS SHOWN ON PLAN.
-ERADICATE EXISTING LANE LINES AND INSTALL 50' OF 4" WIDE WHITE LANE DIVISIONAL LINES AND DOTTED LANE LINE (3' LINE, 9' SPACE) ON THE ROUTE 12 (LONG HILL ROAD) NORTH APPROACH AS SHOWN.
-ERADICATE EXISTING EDGE LINE AND INSTALL 4" WIDE EDGE LINE ON THE ROUTE 12 (LONG HILL ROAD) NORTH APPROACH AS SHOWN.
-ERADICATE EXISTING LANE LINES AND INSTALL 50' OF 4" WIDE WHITE LANE DIVISIONAL LINES AND DOTTED LANE LINE (3' LINE, 9' SPACE) ON THE ROUTE 12 (LONG HILL ROAD) SOUTH APPROACH AS SHOWN.
-ERADICATE EXISTING EDGE LINE AND INSTALL 4" WIDE EDGE LINE ON THE ROUTE 12 (LONG HILL ROAD)SOUTH APPROACH AS SHOWN.
-ERADICATE EXISTING LANE AND DOTTED LANE LINES AND INSTALL 50' OF 4" WIDE WHITE LANE DIVISIONAL LINE AND EDGE LINE ON GROTON SQUARE DRIVE APPROACH AS SHOWN.
-INSTALL 55' OF D.Y.C.L. ON PLEASANT VALLEY ROAD SOUTH APPROACH AS SHOWN.

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	6' X 24'	WIRELESS	PRESENCE
D2,D2A	6' X 6'	WIRELESS	PRESENCE
D2B,D2C	6' X 6'	WIRELESS	PRESENCE
D4,D4A	SEE PLAN	WIRELESS	PRESENCE
D4B	SEE PLAN	WIRELESS	PRESENCE
D5	6' X 24'	WIRELESS	PRESENCE
D6,D6A	6' X 6'	WIRELESS	PRESENCE
D6B,D6C	6' X 6'	WIRELESS	PRESENCE

SYSTEM LOC: MASTER 58-240

COORDINATION TYPE: CLOSED LOOP

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
	SEE TECH NOTES				

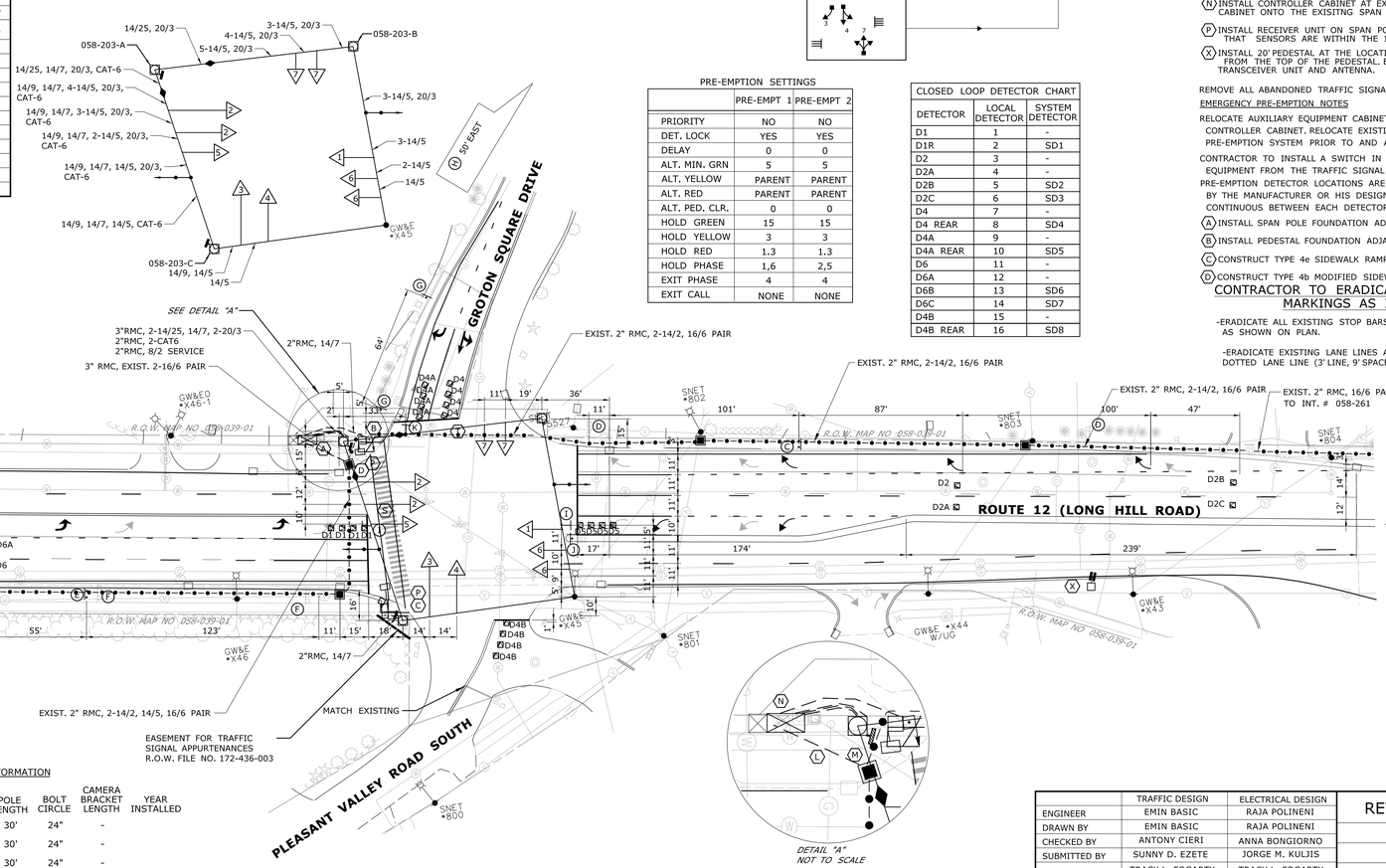
58-206
58-203
58-205
58-207
58-256
58-261
58-217
58-271
058-202

PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2
PRIORITY	NO	NO
DET. LOCK	YES	YES
DELAY	0	0
ALT. MIN. GRN	5	5
ALT. YELLOW	PARENT	PARENT
ALT. RED	PARENT	PARENT
ALT. PED. CLR.	0	0
HOLD GREEN	15	15
HOLD YELLOW	3	3
HOLD RED	1.3	1.3
HOLD PHASE	1,6	2,5
EXIT PHASE	4	4
EXIT CALL	NONE	NONE

CLOSED LOOP DETECTOR CHART

DETECTOR	LOCAL DETECTOR	SYSTEM DETECTOR
D1	1	-
D1R	2	SD1
D2	3	-
D2A	4	-
D2B	5	SD2
D2C	6	SD3
D4	7	-
D4 REAR	8	SD4
D4A	9	-
D4A REAR	10	SD5
D6	11	-
D6A	12	-
D6B	13	SD6
D6C	14	SD7
D4B	15	-
D4B REAR	16	SD8



SIGN LEGEND

(C) INSTALL 31-0445
(D) REMOVE EXISTING
(E) INSTALL 31-0307
(F) REMOVE EXISTING
(G) INSTALL 31-0283
(H) REMOVE EXISTING
(I) SPAN MOUNT 31-0135
(J) REPLACE EXISTING 31-1536 WITH
(K) SPAN MOUNT 31-0823

NOTES:

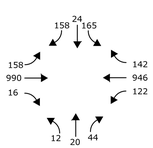
(S) STATE MAINTAINED CROSSWALK

STATE TO MAINTAIN ALL PAVEMENT MARKINGS ON ROUTE 12 AND ALL STOP BARS
TOWN TO MAINTAIN ALL OTHER PAVEMENT MARKINGS ON PLEASANT VALLEY ROAD SOUTH, EXCEPT STOP BARS.
OTHERS TO MAINTAIN ALL OTHER PAVEMENT MARKINGS ON GROTON SQUARE DRIVE, EXCEPT STOP BARS.
PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE TOWN OF GROTON.

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
058-203-A	30'	24"	-	
058-203-B	30'	24"	-	
058-203-C	30'	24"	-	

FLEX PANEL TRANSCEIVER



2015 COUNT YEAR VOLUMES
PM PEAK HOUR

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	EMIN BASIC	RAJA POLINENI
DRAWN BY	EMIN BASIC	RAJA POLINENI
CHECKED BY	ANTONY CIERI	ANNA BONGIORNO
SUBMITTED BY	SUNNY D. EZETE	JORGE M. KULJIS
APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
APPROVED DATE	7/10/2017	7/7/2017

REV # INTERSECTION # 058-203

ENERGY BY TOWN | ADDRESS #
MAINT LEVEL 5 | SERVICE POLE: GW&EO #X46-1
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
◀R RED ARROW
◀Y YELLOW ARROW
← GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 \\DOT-SDCENG07V\CTDOT_Projects$\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_058_203_xxxpendlng.dgn

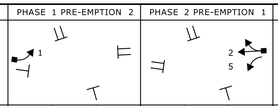
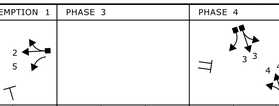
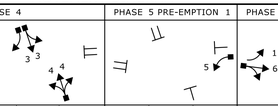
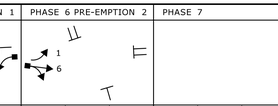
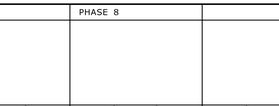
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 12 (LONG HILL RD.) AT PLEASANT VALLEY RD. SOUTH AND GROTON SQUARE DR.

SCALE 1" = 40'

TOWN: GROTON
PROJECT NO. 0172-0436
DRAWING NO. TCS-12
DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN
SHEET NO. 03.13

MOVEMENT DIAGRAM

NTOR	PHASE 1 PRE-EMPTION 2	PHASE 2 PRE-EMPTION 1	PHASE 3	PHASE 4	PHASE 5 PRE-EMPTION 1	PHASE 6 PRE-EMPTION 2	PHASE 7	PHASE 8
NONE								

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y	◄R	◄Y R	R	R	R	R				R	R	R	R	R	R	G	Y	R									
2	Y	R	R	R	G	Y	R				R	R	R	R	R	R	R	R	R									
3	R	R	R	R	R	R	R				G	Y	R	R	R	R	R	R	R									
4	R	R	R	R	R	R	R				G	Y	R	R	R	R	R	R	R									
5	Y	R	R	R	G	Y	R				R	R	R	◄R	◄Y R	R	R	R	R									
6	Y	R	R	R	R	R	R				R	R	R	R	R	R	G	Y	R									
7	R	R	R	R	R	R	R				G	Y	R	R	R	R	R	R	R									
					◄YIELD POINT												◄YIELD POINT											

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	5	15		9	5	15		
WALK				11				
PED CLR				1				
VEH EXT	1.5	2.5		1.5	1.5	2.5		
MAX 1	11	45		18	11	45		
MAX 2	11	45		18	11	45		
YELLOW	3.0	4.0		3.0	3.0	4.0		
RED	1.0	1.5		2.0	1.0	1.5		
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	NON-LOCK	MIN RECALL	OFF	NON-LOCK	NON-LOCK	MIN RECALL	OFF	OFF
INIT START		THIS PHASE				THIS PHASE		

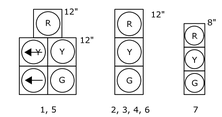
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
ARTERY PHASE DETECTORS TO BE NON-ACTUATING DURING COORDINATION.
TIMINGS SHOWN REFLECT FREE OPERATION. ACTUAL COORDINATION INFORMATION TO BE DETERMINED BY CLOSED LOOP LOCAL COORDINATION UNIT.
PHASE 2 ON TO OMIT PHASE 1.
PHASE 6 ON TO OMIT PHASE 5.

OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:
REPLACED ALL SIGNAL EQUIPMENT UNDER PROJECT NO. 0172-0436.

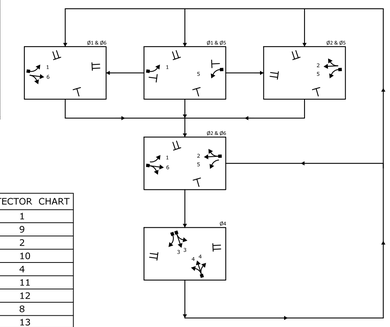
SIGNAL FACES



ALL SIGNAL INDICATIONS TO HAVE LED LAMPS

ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER

FACE #7 TO HAVE TUNNEL VISORS



CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.
STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.
ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.
THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.
INSTALL STATE FURNISHED CONTROLLER.
(G) CONTRUCT TYPE 4E SIDEWALK RAMP PER GUIDE SHEETS.
(H) CONTRUCT MODIFIED TYPE 1A SIDEWALK RAMP PER GUIDE SHEETS.
(J) CONTRUCT 6' X 6' LANDING AS SHOWN AND PER GUIDE SHEETS.
(K) CONSTRUCT TYPE 4F SIDEWALK RAMP PER GUIDE SHEETS.
(L) REMOVE EXISTING BITUMINOUS SIDEWALK RAMP AND APPROX. 10' OF BITUMIOUS SIDEWALK CONNECTING ROAD TO EXISTING SIDEWALK, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING AND APPROX. 10' OF BITUMINOUS CURB. WORK TO BE PAID UNDER ITEMS 0202530, 0944000, 0950019, 0950013 AND 0815001 RESPECTIVELY.
(M) INSTALL CONTROLLER FOUNDATION AND SPAN POLE FOUNDATION ADJACENT TO WALK AT FRONT EDGE.
(N) REPLACE EXISTING HANDHOLE WITH 30" X 30" CONCRETE HANDHOLE. EXTEND EXISTING CONDUITS INTO NEW HANDHOLE.
(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.
COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.
REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.
COORDINATE THIS REVISION WITH CONNECTICUT D.O.T. SIGNAL LAB CONTACT MR. DONALD ASSARD (860) 258-0346 OR MR. MARK ZAMPINI (860) 258-0349 AT LEAST 45 DAYS PRIOR TO REVISION.
INSTALL RISER ON SNET #128 UTILITY POLE.
ESTIMATED LOAD ON UTILITY POLES: SNET #127: 3,835 lbs.
SPAN ATTACHMENT ON SNET #127 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.
(O) INSTALL VIDEO IP DETECTOR ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.
(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.
VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE CONTROLLER CABINET.
(Y) TRIM TREE BRANCHES TO ENSURE LINE OF SIGHT FOR VIDEO DETECTOR. TO BE PAID FOR UNDER ITEM #0952001 - SELECTIVE CLEARING AND THINNING.
CLEAN EXISTING CONDUIT. TO BE PAID FOR UNDER ITEM #1008908A - CLEAN EXISTING CONDUIT.
COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FRONTIER COMMUNICATIONS:
* REPLACE POLE #127 WITH A 50' POLE.
* REPLACE POLE #126 WITH A 45' POLE.
COORDINATE AND SCHEDULE THE FOLLOWING WORK BY GROTON UTILITIES:
* SHIFT OVERHEAD SECONDARY CABLE ON POLE #127 TO PROVIDE CLEARANCE FOR SPAN ATTACHMENT.

EMERGENCY PRE-EMPTION NOTES

RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW SPAN. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS
STATE FORCES TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.
PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

CONTRACTOR TO INSTALL AND ERADICATE PAVEMENT MARKINGS AS INDICATED BELOW:
-ERADICATE BOTH EXISTING STOP BARS ON ROUTE 1.
-INSTALL ALL STOP BARS AS SHOWN.
-INSTALL 100' DYCL AND 50' OF 4" WIDE WHITE LANE LINE ON BUDDINGTON ROAD.
-INSTALL 25' DYCL ON GROTON REGENCY DRIVEWAY.
-ERADICATE CROSSWALK ACROSS ROUTE 1 AND INSTALL CROSSWALK AS SHOWN ON PLAN.
-ERADICATE ALL EXISTING PAVEMENT MARKING ARROWS AND INSTALL NEW PAVEMENT MARKING ARROWS AS SHOWN ON PLAN.
-ERADICATE DOUBLE YELLOW CENTER LINE BEGINNING 10 FEET WEST OF SNET #125 AND EXTENDING TO 28 FEET WEST OF SNET #127.
-INSTALL DOUBLE YELLOW CENTER LINE BEGINNING 10 FEET WEST OF SNET #125 AND EXTENDING TO 28 FEET WEST OF SNET #127 AS SHOWN.
-ERADICATE EXISTING WHITE LANE LINE BEGINNING 36 FEET WEST OF SNET #127 AND EXTENDING TO 28 FEET WEST OF SNET #127.
-INSTALL 50 FOOT 4" WHITE LANE LINE ON E.B. APPROACH OF ROUTE 1 AS SHOWN.
-ERADICATE 2 BROKEN LANE LINES ON E.B. APPROACH OF ROUTE 1 AND INSTALL 4" WHITE DOTTED LANE LINE AS SHOWN (3' LINE, 9' SPACE).
-INSTALL 4" WHITE SHOULDER LINE ON THE NORTH SIDE OF ROUTE 1 BEGINNING 86 FEET WEST OF SNET #127 AND EXTEND WESTERLY WITHIN THE PROJECT LIMIT.
-INSTALL 4" WHITE SHOULDER LINE ON THE SOUTH SIDE OF ROUTE 1 BEGINNING 36 FEET WEST OF SNET #127 AND EXTEND WESTERLY WITHIN THE PROJECT LIMIT.
-ERADICATE 60 FOOT WHITE LANE LINE ON THE W.B. APPROACH OF ROUTE 1.
-INSTALL 50 FOOT 4" WHITE LANE LINE AND 4" WHITE DOTTED LINE ON W.B. APPROACH OF ROUTE 1 AS SHOWN.
-ERADICATE DOUBLE YELLOW CENTER LINE BEGINNING 93 FEET WEST OF SNET #128 AND EXTENDING TO 24 FEET EAST OF SNET #130.
-INSTALL DOUBLE YELLOW CENTERLINE BEGINNING 86 FEET WEST OF SNET #128 AND EXTENDING TO 24 FEET EAST OF SNET #130.
-INSTALL 4" WHITE SHOULDER LINE ON THE NORTH SIDE OF ROUTE 1 BEGINNING 86 FEET WEST OF SNET #128 AND EXTENDING TO 60 FEET EAST OF SNET #132 MATCHING INTO 4" WHITE SHOULDER LINE CALLED OUT ON PLAN FOR INTERSECTION #058-211.
-INSTALL 4" WHITE SHOULDER LINE ON THE SOUTH SIDE OF ROUTE 1 BEGINNING 86 FEET WEST OF SNET #128 AND EXTENDING TO 60 FEET EAST OF SNET #132 MATCHING INTO 4" WHITE SHOULDER LINE CALLED OUT ON PLAN FOR INTERSECTION #058-211.
-INSTALL 50 FOOT 4" WHITE LANE LINE AND 80 FEET OF DOTTED LANE LINE ON S.B. APPROACH OF BUDDINGTON AS SHOWN

DETECTORS				SYSTEM LOC	COORDINATION TYPE: CLOSED LOOP		
IDENT	SIZE (WXL)	TYPE	MODE	MASTER 058-239	PROGRAM FUNCTION	PROGRAM TIME	PROGRAM DAYS
D1	6' X 24'	VIDEO 360	PRESENCE	058-201 058-213	FLASH	NONE	
D2	6' X 6'	VIDEO IP	PRESENCE	058-208 058-214			
D2A	6' X 6'	VIDEO IP	PRESENCE	058-209		SEE TECH NOTES	
D4	6' X 24'	VIDEO 360	PRESENCE	058-272			
D4A	AS SHOWN	VIDEO 360	8" DELAY	058-251			
D4B	10' X 24'	VIDEO 360	8" DELAY	058-235			
D5	6' X 24'	VIDEO 360	PRESENCE	058-237			
D6	6' X 6'	VIDEO IP	PRESENCE	058-236			
D6A	9' X 6'	VIDEO IP	PRESENCE	058-238			
D1R,D5R	6'X6'	VIDEO 360	PRESENCE	058-210			
D4R,D4AR	6'X6'	VIDEO 360	PRESENCE	058-211			
D4BR	6'X6'	VIDEO 360	PRESENCE				

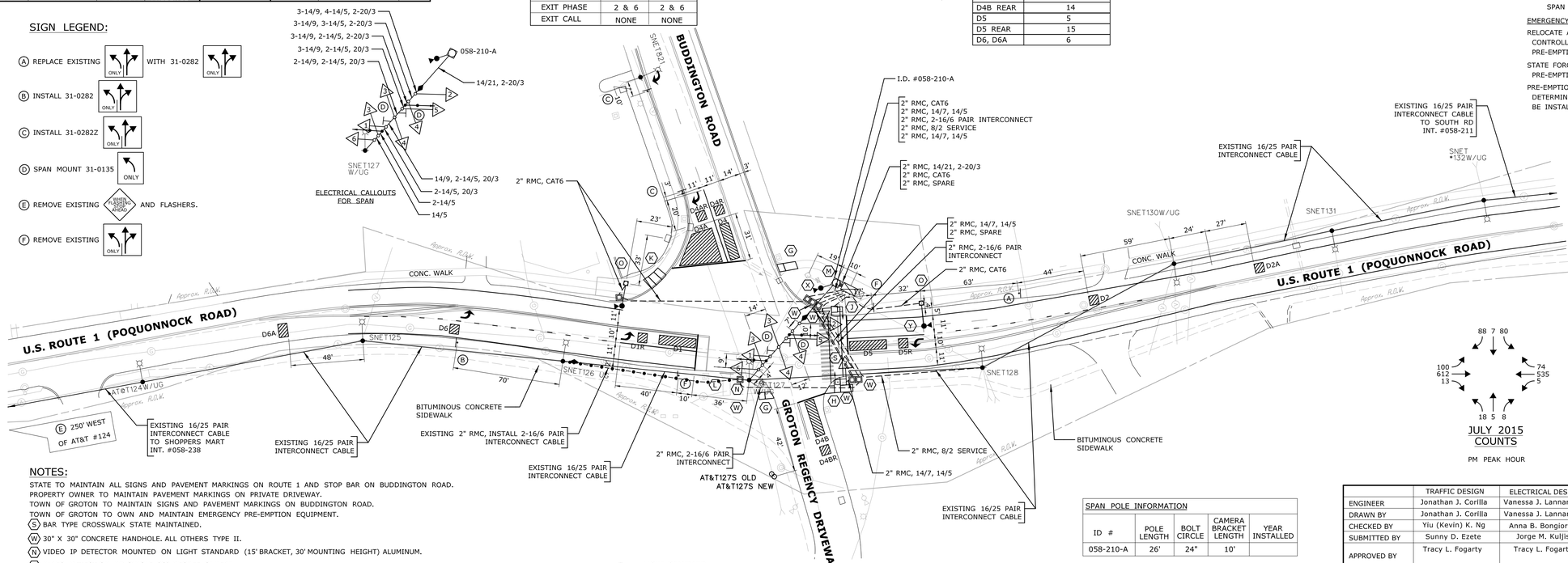
PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2
PRIORITY	NO	NO
DET. LOCK	YES	YES
DELAY	0	0
ALT. MIN. GRN	5	5
ALT. YELLOW	PARENT	PARENT
ALT. RED	PARENT	PARENT
ALT. PED. CLR.	0	0
HOLD GREEN	15	15
HOLD YELLOW	3.0	3.0
HOLD RED	1.0	1.0
HOLD PHASE	2 & 5	1 & 6
EXIT PHASE	2 & 6	2 & 6
EXIT CALL	NONE	NONE

CLOSED LOOP DETECTOR CHART	
D1	1
D1REAR	9
D2,D2A	2
D2B, D2C	10
D4	4
D4 REAR	11
D4A	12
D4 REAR	8
D4B	13
D4B REAR	14
D5	5
D5 REAR	15
D6, D6A	6

SIGN LEGEND:

(A) REPLACE EXISTING WITH 31-0282
(B) INSTALL 31-0282
(C) INSTALL 31-0282Z
(D) SPAN MOUNT 31-0135
(E) REMOVE EXISTING AND FLASHERS.
(F) REMOVE EXISTING



JULY 2015 COUNTS

PM PEAK HOUR

NOTES:

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON ROUTE 1 AND STOP BAR ON BUDDINGTON ROAD.
PROPERTY OWNER TO MAINTAIN PAVEMENT MARKINGS ON PRIVATE DRIVEWAY.
TOWN OF GROTON TO MAINTAIN SIGNS AND PAVEMENT MARKINGS ON BUDDINGTON ROAD.
TOWN OF GROTON TO OWN AND MAINTAIN EMERGENCY PRE-EMPTION EQUIPMENT.
(S) BAR TYPE CROSSWALK STATE MAINTAINED.
(W) 30" X 30" CONCRETE HANDHOLE. ALL OTHERS TYPE II.
(N) VIDEO IP DETECTOR MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.
(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
058-210-A	26'	24"	10'	

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Jonathan J. Corilla	Vanessa J. Lannaman
DRAWN BY	Jonathan J. Corilla	Vanessa J. Lannaman
CHECKED BY	Yiu (Kevin) K. Ng	Anna B. Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	06/28/2017	06/07/2017

REV # INTERSECTION #058-210

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - SNET 128
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
◄R RED ARROW
◄Y YELLOW ARROW
◄ GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_058_210_009pending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 1 (POQUONNOCK RD.) AT BUDDINGTON RD. AND GROTON REGENCY DRIVEWAY (PRIVATE)

SCALE 1" = 40'

TOWN: GROTON

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0172-0436
DRAWING NO. TCS-13
SHEET NO. 03.14

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2 PRE-EMPT 1	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
NONE									

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y	← G	← Y	G	G	Y	R				R	R	R															
2	Y	G	G	G	G	Y	R				R	R	R															
3	Y	R	R	R	G	Y	R				R	R	R															
4	R	R	R	R	R	R	R				G	Y	R															
5	R	R	R	R	R	R	R				G	Y	R															
6	R	R	R	R	R	R	R				G	Y	R															
					← YIELD POINT																							

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	5	15		9				
WALK				11				
PED CLR				1				
VEH EXT	1.5	3.0		1.5				
MAX 1	8	45		24				
MAX 2	8	45		24				
YELLOW	3.0	4.0		3.7				
RED	1.0	1.0		1.5				
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	NON-LOCK	MIN RECALL	OFF	NON-LOCK	OFF	OFF	OFF	OFF
INIT START		THIS PHASE						

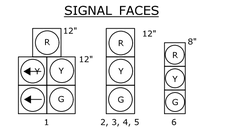
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
TIMINGS SHOWN REFLECT FREE OPERATION.
ACTUAL COORDINATION INFORMATION TO BE DETERMINED BY THE CLOSED LOOP LOCAL COORDINATION UNIT.
PHASE 2 ON TO OMIT PHASE 1.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.

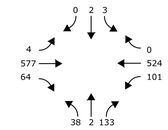
OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:
REPLACED ALL TRAFFIC SIGNAL EQUIPMENT UNDER PROJECT 0172-0436.

SIGNAL FACES



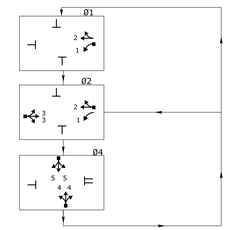
ALL OVERHEAD SIGNAL INDICATIONS TO HAVE LED LAMPS.
ALL SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER.
FACE #6 TO HAVE TUNNEL VISORS.



2015 COUNT
YEAR VOLUMES
PM PEAK HOUR

PRE-EMPTION SETTINGS

	PRE-EMPT 1
PRIORITY	NO
DET. LOCK	YES
DELAY	0
ALT. MIN. GRN	5
ALT. YELLOW	PARENT
ALT. RED	PARENT
ALT. PED. CLR.	0
HOLD GREEN	15
HOLD YELLOW	4.0
HOLD RED	1.0
HOLD PHASE	2
EXIT PHASE	4
EXIT CALL	NONE



CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

INSTALL PEDESTAL FOUNDATIONS ADJACENT TO LANDING AREAS.

(C) INSTALL 5'X5' CONCRETE PAD WITH DETECTABLE WARNING STRIP FLUSH TO ROUTE 1 AND ADJACENT TO PEDESTAL FOUNDATION AS SHOWN.

(D) CONSTRUCT TYPE 4f SIDEWALK RAMP PER GUIDE SHEETS.

(E) REMOVE EXISTING SIDEWALK AND INSTALL NEW SIDEWALK AS SHOWN ON PLAN. MAINTAIN 4' CLEAR PATH AND MATCH INTO EXISTING SIDEWALK.

CABINET DOOR TO OPEN STREET SIDE.

INSTALL CONTROLLER FOUNDATION ADJACENT TO WALK AT BACK EDGE.

INSTALL STATE FURNISHED CONTROLLER.

(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

COORDINATE THIS REVISION WITH CONNECTICUT D.O.T. SIGNAL LAB CONTACT MR. DONALD ASSARD (860) 258-0346 OR MR. MARK ZAMPINI (860) 258-0349 AT LEAST 45 DAYS PRIOR TO REVISION.

INSTALL RISER ON SNET #137, AT&T #138, & GW&E #0-138-1 UTILITY POLES.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FRONTIER COMMUNICATIONS:
* REPLACE POLE #139 WITH A 45' POLE.
* ANCHOR AND GUY POLES #138 AND #139.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY TOWN OF GROTON:
* SHIFT OVERHEAD MUNICIPAL CABLES ON POLES #138 AND #139 TO PROVIDE CLEARANCE FOR SPAN ATTACHMENT.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FIBERTECH:
* SHIFT OVERHEAD CABLES ON POLES #138 AND #139 TO PROVIDE CLEARANCE FOR SPAN ATTACHMENT.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY COMCAST:
* SHIFT OVERHEAD CABLES ON POLE #139 TO PROVIDE CLEARANCE FOR SPAN ATTACHMENT.

ESTIMATED LOAD ON UTILITY POLES: AT&T #138: 1,505 lbs., SNET #139: 5,020 lbs.

SPAN ATTACHMENTS ON AT&T #138 & SNET #139 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.

SPAN POLES WITH 2 SPAN ATTACHMENTS TO HAVE 2 SPAN CLAMPS.

(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE CONTROLLER CABINET.

EMERGENCY PRE-EMPTION NOTES

RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW SPAN. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS

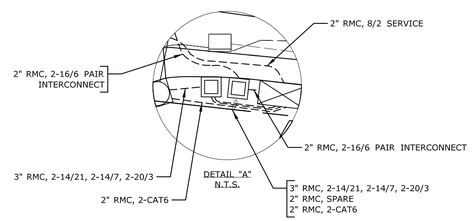
STATE FORCES TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

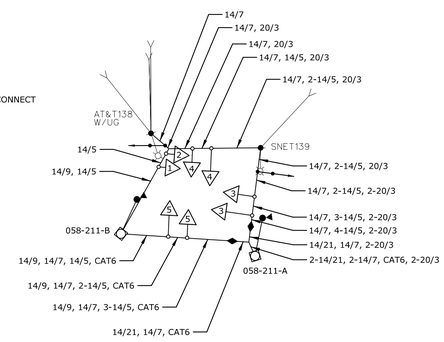
PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

DETECTORS

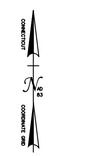
IDENT	SIZE (WXL)	TYPE	MODE
D1	6' X 24'	VIDEO 360	PRESENCE
D1 REAR	6' X 6'	VIDEO 360	PRESENCE
D2	6' X 6'	VIDEO 360	PRESENCE
D2A	6' X 6'	VIDEO IP	PRESENCE
D4	6' X 24'	VIDEO 360	PRESENCE
D4 REAR	6' X 6'	VIDEO 360	PRESENCE
D4A	6' X 24'	VIDEO 360	PRESENCE
D4A REAR	6' X 6'	VIDEO 360	PRESENCE

SYSTEM LOC MASTER 058-239	COORDINATION TYPE: CLOSED LOOP PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
058-201 058-272	FLASH	NONE				
058-208		SEE TECH NOTES				
058-209						
058-210						
058-211						
058-213						
058-214						
058-235						
058-236						
058-237						
058-238						
058-251						



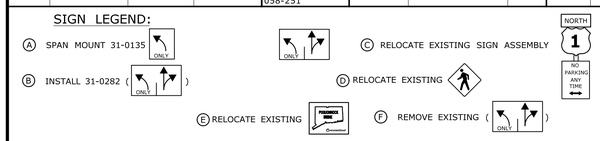


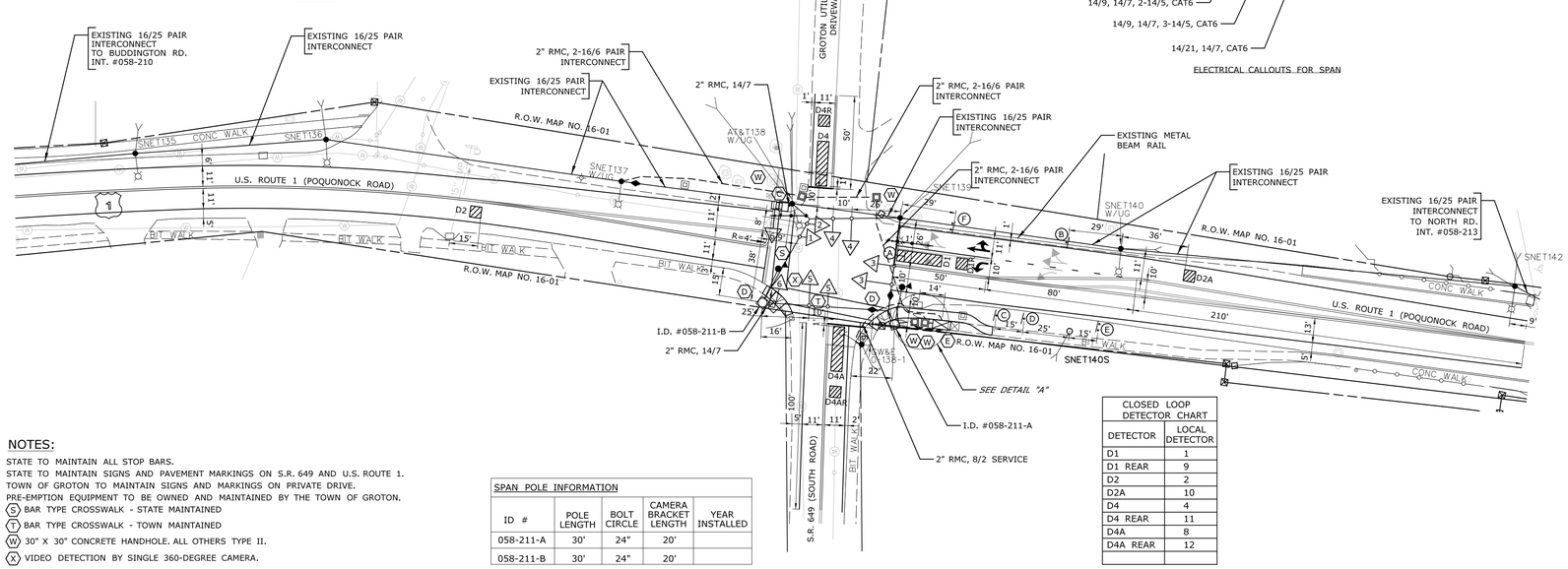
ELECTRICAL CALLOUTS FOR SPAN



SIGN LEGEND:

(A) SPAN MOUNT 31-0135
(B) INSTALL 31-0282 ( )
(C) RELOCATE EXISTING SIGN ASSEMBLY
(D) RELOCATE EXISTING
(E) RELOCATE EXISTING
(F) REMOVE EXISTING ( )





CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

-INSTALL ALL STOP BARS AS SHOWN.
-ERADICATE ALL EXISTING PAVEMENT MARKINGS ARROWS AND INSTALL NEW PAVEMENT MARKING ARROWS AS SHOWN ON PLAN.
-ERADICATE CROSSWALK ACROSS ROUTE 1 AND INSTALL CROSSWALK AS SHOWN ON PLAN.
-ERADICATE STOP BAR ON E.B. APPROACH OF ROUTE 1.
-INSTALL 4" WHITE SHOULDER LINES ON THE NORTH AND SOUTH SIDES OF ROUTE 1 WEST LEG BEGINNING 10 FEET WEST OF AT&T 138 AND EXTENDING TO 65 FEET WEST OF SNET 135 AS SHOWN ON PLAN MATCHING INTO 4" WHITE SHOULDER LINES CALLED OUT ON PLAN FOR INTERSECTION 058-210.
-INSTALL DOUBLE YELLOW CENTERLINE ON ROUTE 1 WEST LEG BEGINNING 10 FEET WEST OF AT&T 138 AND EXTENDING TO 65 FEET WEST OF SNET 135 AS SHOWN ON PLAN MATCHING INTO DOUBLE YELLOW CENTER LINE CALLED OUT ON PLAN FOR INTERSECTION 058-210.
-ERADICATE LANE LINE AND DOTTED LANE LINE ON W.B. APPROACH OF ROUTE 1.
-ERADICATE DOUBLE YELLOW CENTER LINE ON EAST LEG OF ROUTE 1 BEGINNING 50 FEET EAST OF SNET 139 AND EXTENDING TO 9 FEET EAST OF SNET 142.
-INSTALL 50 FEET OF 4" WHITE LANE LINE AND 80 FEET OF DOTTED LANE LINE ON E.B. APPROACH OF ROUTE 1.
-INSTALL 4" WHITE SHOULDER LINE ON ROUTE 1 W.B. BEGINNING AT SNET 139 AND EXTENDING TO 9 FEET EAST OF SNET 142 AS SHOWN ON PLAN.
-INSTALL 4" WHITE SHOULDER LINE ON ROUTE 1 E.B. BEGINNING 98 FEET WEST OF SNET 140S AND EXTENDING TO 9 FEET EAST OF SNET 142 AS SHOWN ON PLAN.
-INSTALL DOUBLE YELLOW CENTER LINE BEGINNING AT SNET 139 AND EXTENDING TO 9 FEET EAST OF SNET 142 AS SHOWN ON PLAN.
-ERADICATE STOP BAR ON S.R. 649 (SOUTH ROAD).
-INSTALL 100 FEET OF DOUBLE YELLOW CENTER LINE ON S.R. 649 (SOUTH ROAD) AS SHOWN ON PLAN.
-INSTALL 100 FEET OF 4" WHITE SHOULDER LINE ON THE EAST AND WEST SIDES OF S.R. 649 (SOUTH ROAD) AS SHOWN ON PLAN.
-ERADICATE STOP BAR ON PRIVATE DRIVE TO GROTON UTILITIES.
-INSTALL 50 FEET OF 4" WHITE SHOULDER LINE ON PRIVATE DRIVE TO GROTON UTILITIES AS SHOWN ON PLAN.
-INSTALL 50 FEET OF DOUBLE YELLOW CENTER LINE ON PRIVATE DRIVE TO GROTON UTILITIES AS SHOWN ON PLAN.

NOTES:

STATE TO MAINTAIN ALL STOP BARS.
STATE TO MAINTAIN SIGNS AND PAVEMENT MARKINGS ON S.R. 649 AND U.S. ROUTE 1.
TOWN OF GROTON TO MAINTAIN SIGNS AND MARKINGS ON PRIVATE DRIVE.
PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE TOWN OF GROTON.
(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(T) BAR TYPE CROSSWALK - TOWN MAINTAINED
(W) 30" X 30" CONCRETE HANDHOLE. ALL OTHERS TYPE II.
(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
058-211-A	30'	24"	20'	
058-211-B	30'	24"	20'	

CLOSED LOOP DETECTOR CHART

DETECTOR	LOCAL DETECTOR
D1	1
D1 REAR	9
D2	2
D2A	10
D4	4
D4 REAR	11
D4A	8
D4A REAR	12

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
R RED ARROW
Y YELLOW ARROW
GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_058_211_13pendlng.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 1 (POQUONOCK ROAD)
AT S.R. 649 (SOUTH RD.) AND
GROTON UTILITIES DRIVEWAY

SCALE 1" = 40'

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Eamon P. Flannery	Vanessa J. Lannaman
DRAWN BY	Eamon P. Flannery	Vanessa J. Lannaman
CHECKED BY	Antony Cieri	Anna B. Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	07/13/2017	06/07/2017

REV # INTERSECTION #058-211

ENERGY BY STATE	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - GW&E 0-138-1
	UNMETERED SERVICE

TOWN: **GROTON**

DRAWING TITLE: **TRAFFIC CONTROL SIGNAL PLAN**

PROJECT NO. 0172-0436
DRAWING NO. TCS-14
SHEET NO. 03.15

MOVEMENT DIAGRAM

NTOR	PHASE 1 PRE-EMPT 1	PHASE 2 PRE-EMPT 2	PHASE 3	PHASE 4	PHASE 5 PRE-EMPT 2	PHASE 6 PRE-EMPT 1	PHASE 7	PHASE 8	
NONE	7 1	2 2		7 3 4	5	6 6			

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	◄R	◄	◄Y	◄R	◄R	◄R	◄R	R	R	R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R									
2	Y	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R									
3	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R									
4	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R									
5	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄R	◄	◄Y	◄R	◄R	◄R	◄R									
6	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R									
7	R	R►	R ►Y►	R	R	R	R	R	R	R	G	Y (1)	R (2)	R	R	R	R	R	R									
P	◄			►DW◄				►WØ◄						◄	►DW◄				►									
					◄YIELD POINT												◄YIELD POINT											

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	5	15		9	5	15		
WALK			7 (4)					
PED CLR			16 (3)					
VEH EXT	1.5	2.5		1.5	1.5	2.5		
MAX 1	17	35		15	17	35		
MAX 2	17	35		15	17	35		
YELLOW	3.0	4.5	4.0	3.2	3.0	4.5		
RED	1.3	1.0	0.0	1.1	1.3	1.0		
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	NON-LOCK	MIN RECALL	NON-LOCK	NON-LOCK	NON-LOCK	MIN RECALL	OFF	OFF
INIT START		THIS PHASE				THIS PHASE		

ACCESIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

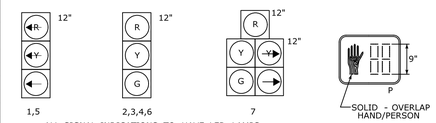
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
ARTERY PHASE DETECTORS TO BE NON-ACTUATING DURING COORDINATION.
TIMINGS SHOWN REFLECT FREE OPERATION.
ACTUAL COORDINATION INFORMATION TO BE DETERMINED BY THE CLOSED LOOP LOCAL COORDINATION UNIT.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
(1) TO BE Y—► IF PHASE 1 IS NEXT.
(2) TO BE R—► IF PHASE 1 IS NEXT.
(3) COUNTDOWN ONLY DURING FLASHING PEDESTRIAN CHANGE INTERVAL.
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL
(4) PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.

OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:
REPLACED ALL TRAFFIC SIGNAL EQUIPMENT UNDER PROJECT 0172-0436.

SIGNAL FACES



ALL SIGNAL INDICATIONS TO HAVE LED LAMPS
ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER

PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2
PRIORITY	NO	NO
DET. LOCK	YES	YES
DELAY	0	0
ALT. MIN. GRN	5	5
ALT. YELLOW	PARENT	PARENT
ALT. RED	PARENT	PARENT
ALT. PED. CLR.	16	16
HOLD GREEN	15	15
HOLD YELLOW	3	3
HOLD RED	1.3	1.3
HOLD PHASE	1&6	2&5
EXIT PHASE	2&6	2&6
EXIT CALL	NONE	NONE

CLOSED LOOP DETECTOR CHART

DETECTOR	LOCAL DETECTOR
D1	1
D1R	9
D2, D2B	2
D2A, D2C	10
D4, D4A	4
D4 REAR	11
D4A REAR	12
D4B, D4C	8
D4B REAR	13
D4C REAR	14
D5	5
D5 REAR	15
D6, D6B	6
D6A, D6C	16

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCERS TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

(D) CONSTRUCT TYPE 4e MODIFIED SIDEWALK RAMP PER GUIDE SHEETS.

(E) CONSTRUCT TYPE 2a SIDEWALK RAMP PER GUIDE SHEETS.

(F) CONSTRUCT TYPE 4d SIDEWALK RAMP PER GUIDE SHEETS.

INSTALL PEDESTAL FOUNDATIONS ADJACENT TO LANDING AREA.

INSTALL STATE FURNISHED CONTROLLER.

(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

(M) REPLACE EXISTING HANDHOLE WITH 30" X 30" CONCRETE HANDHOLE. EXTEND EXISTING CONDUITS INTO NEW HANDHOLE.

(N) REPLACE EXISTING HANDHOLE WITH TYPE II CONCRETE HANDHOLE.

(O) LOCATE EXISTING RIGID METAL CONDUIT. EXTEND INTO NEW CONTROLLER CABINET.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

COORDINATE THIS REVISION WITH CONNECTICUT D.O.T. SIGNAL LAB CONTACT MR. DONALD ASSARD (860) 258-0346 OR MR. MARK ZAMPINI (860) 258-0349 AT LEAST 45 DAYS PRIOR TO REVISION.

INSTALL RISER ON SNET #94 AND SNET #2458S UTILITY POLES.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

PERFORM A TEST PIT AT THE FOUNDATION OF MAST ARM I.D. #058-236-D TO DETERMINE THE LOCATION OF THE UNDERGROUND UTILITIES.

(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA MOUNTED ON 78" VERTICAL BRACKET.

(Y) VIDEO DETECTION BY USE OF IP CAMERA MOUNTED ON 96" VERTICAL BRACKET.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE CONTROLLER CABINET.

CLEAN EXISTING CONDUIT. TO BE PAID UNDER ITEM #1008908A - CLEAN EXISTING CONDUIT.

EMERGENCY PRE-EMPTION NOTES

RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW MAST ARMS. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS

STATE FORCES TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

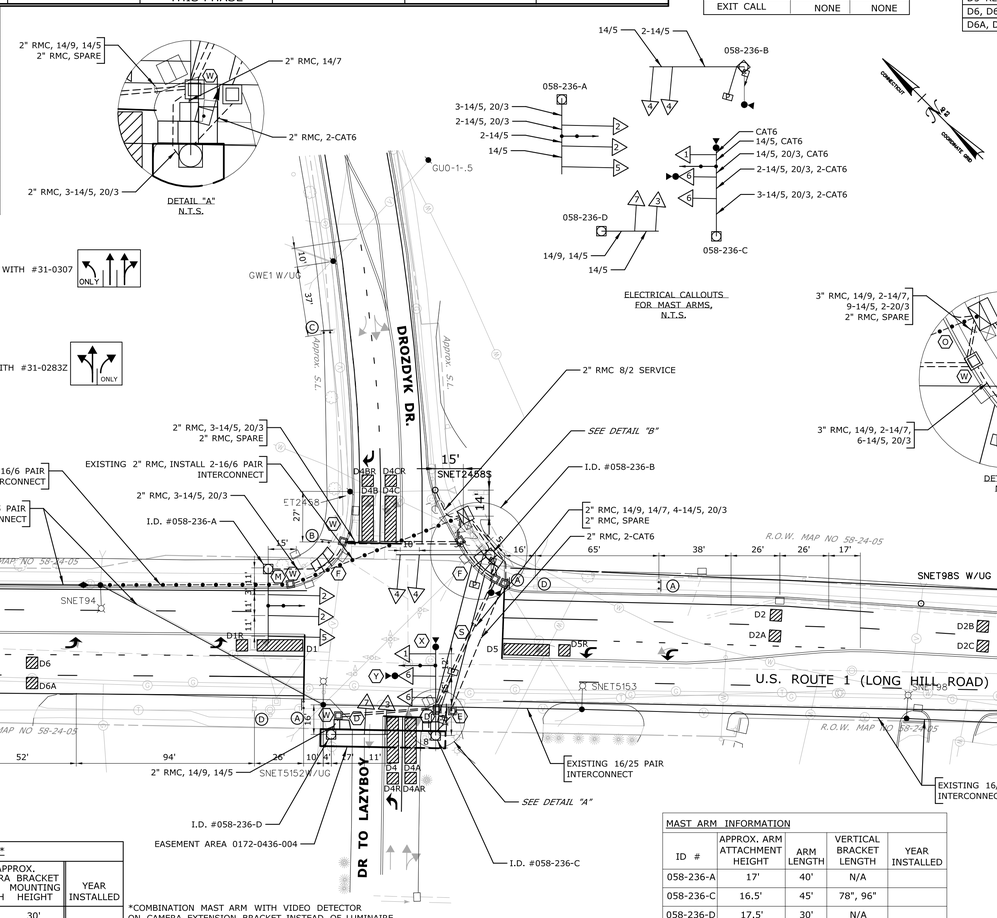
MAST ARM NOTES

ALL MAST ARM MOUNTED TRAFFIC SIGNALS ARE FIXED MOUNTED TO THE ARM BY USE OF ADJUSTABLE BRACKETS.

CONTRACTOR TO VERIFY ALL MAST ARM INFORMATION INCLUDING CROSS SECTIONS AND DIMENSIONS, BASED ON FIELD SURVEY, PRIOR TO SUBMISSION OF WORKING DRAWINGS.

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE	SYSTEM LOC MASTER 058-239	COORDINATION TYPE: CLOSED LOOP PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
D1	6'X24'	VIDEO 360	PRESENCE	058-208 058-214	FLASH	NONE				
D2,D2A	6'X6'	VIDEO 360	PRESENCE	058-209		SEE TECH NOTES				
D2B,D2C	6'X6'	VIDEO IP	PRESENCE	058-272						
D4,D4A	6'X24'	VIDEO 360	PRESENCE	058-251						
D4B,D4C	6'X24'	VIDEO 360	PRESENCE	058-235						
D5	6'X24'	VIDEO 360	PRESENCE	058-237						
D6,D6A	6'X6'	VIDEO IP	PRESENCE	058-236						
D6B,D6C	6'X6'	VIDEO IP	PRESENCE	058-201						
D1R,D5R	6'X6'	VIDEO 360	PRESENCE	058-238						
D4R,D4AR	6'X6'	VIDEO 360	PRESENCE	058-210						
D4BR,D4CR	6'X6'	VIDEO 360	PRESENCE	058-211						
				058-213						



SIGN LEGEND

(A) REPLACE EXISTING ONLY WITH #31-0307 ONLY

(B) INSTALL #31-0283 ONLY

(C) REPLACE EXISTING ONLY WITH #31-0283Z ONLY

(D) REMOVE EXISTING ONLY

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

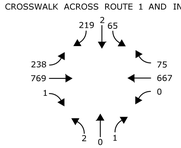
-ERADICATE EXISTING TURN ARROW PAVEMENT MARKINGS WITHIN THE LIMITS OF THE PLAN AND INSTALL NEW ARROWS AS SHOWN.

-INSTALL ALL STOP BARS AS SHOWN ON PLAN.

-ERADICATE EXISTING LANE USE MARKINGS AND INSTALL AS SHOWN ON EAST AND WEST ROUTE 1 APPROACHES.

-ERADICATE EXISTING LANE USE MARKINGS AND INSTALL AS SHOWN ON DROZDYK DRIVE.

-ERADICATE EXISTING CROSSWALK ACROSS ROUTE 1 AND INSTALL NEW CROSSWALK AS SHOWN ON PLAN.



2015 COUNT YEAR VOLUMES
PM PEAK HOUR

NOTES:

STATE TO MAINTAIN ALL PAVEMENT MARKINGS ON ROUTE 1 AND ALL STOP BARS EXCEPT MARKINGS ON PRIVATE DRIVEWAY.
TOWN TO MAINTAIN ALL OTHER PAVEMENT MARKINGS ON DROZDYK DRIVE.
OTHERS TO MAINTAIN ALL PAVEMENT MARKINGS ON PRIVATE DRIVEWAY.
PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE TOWN OF GROTON.

(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(W) 30" X 30" CONCRETE HANDHOLE. ALL OTHERS TYPE II.
(X) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA.

COMBINATION MAST ARM INFORMATION*

ID #	APPROX. ARM ATTACHMENT HEIGHT	ARM LENGTH	APPROX. CAMERA ARM LENGTH	APPROX. BRACKET MOUNTING HEIGHT	YEAR INSTALLED
058-236-B	16.5'	50'	20'	30'	

*COMBINATION MAST ARM WITH VIDEO DETECTOR ON CAMERA EXTENSION BRACKET INSTEAD OF LUMINAIRE

MAST ARM INFORMATION

ID #	APPROX. ARM ATTACHMENT HEIGHT	ARM LENGTH	VERTICAL BRACKET LENGTH	YEAR INSTALLED
058-236-A	17'	40'	N/A	
058-236-C	16.5'	45'	78", 96"	
058-236-D	17.5'	30'	N/A	

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Emin Basic	Vanessa Lannaman
DRAWN BY	Emin Basic	Vanessa Lannaman
CHECKED BY	Antony Cieri	Anna Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	7/6/17	06/20/2017

REV # INTERSECTION #058-236

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - SNET 2458S
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
◄R RED ARROW
◄Y YELLOW ARROW
◄ GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE
PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR
SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 \\DOT-SDCENG07V\CTDOT_Projects$\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_058_236_015pending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 1 (LONG HILL ROAD)
AT DROZDYK DRIVE
AN DRIVE TO LAZYBOY

SCALE 1" = 40'

TOWN: GROTON

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0172-0436
DRAWING NO. TCS-15
SHEET NO. 03.16

MOVEMENT DIAGRAM

NTOR	PHASE 1 PRE-EMPT 2	PHASE 2 PRE-EMPT 1	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
NONE	1, 2	1, 2, 3, 3		4, 4				

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y	← G	← Y	G	G	Y	R				R	R	R															
2	Y	G	G	G	G	Y	R				R	R	R															
3	R	R	R	R	G	Y	R				R	R	R															
4	Y	R	R	R	R	R	R				G	Y	R															
					← YIELD POINT																							

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	5	15		9				
WALK				16				
PED CLR				1				
VEH EXT	1.5	2.5		1.5				
MAX 1	8	50		21				
MAX 2	8	50		21				
YELLOW	3.0	4.0		3.0				
RED	1.0	2.0		1.0				
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	NON-LOCK	MIN RECALL	OFF	NON-LOCK	OFF	OFF	OFF	OFF
INIT START		THIS PHASE						

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	6'X24'	VIDEO 360	PRESENCE
D1R	6'X6'	VIDEO 360	PRESENCE
D2	6'X6'	VIDEO IP	PRESENCE
D2A	6'X6'	VIDEO IP	PRESENCE
D2B	6'X6'	VIDEO IP	PRESENCE
D2C	6'X6'	VIDEO IP	PRESENCE
D4	6'X24'	VIDEO 360	PRESENCE
D4R	6'X6'	VIDEO 360	PRESENCE
D4A	AS SHOWN	VIDEO 360	8" DELAY
D4AR	6'X6'	VIDEO 360	PRESENT

SYSTEM LOC

MASTER 058-240
058-203
058-205
058-206
058-207
058-217
058-256
058-261

COORDINATION TYPE: CLOSED LOOP

PROGRAM FUNCTION	PROGRAM TIME	PROGRAM DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
	SEE TECH NOTES				

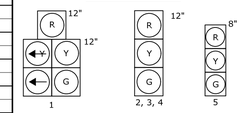
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
TIMINGS SHOWN REFLECT FREE OPERATION.
ACTUAL PHASE SPLITS TO BE DETERMINED BY THE CLOSED LOOP LOCAL COORDINATION UNIT.
PHASE 2 ON TO OMIT PHASE 1.
ARTERY PHASE DETECTORS TO BE NON-ACTUATING DURING COORDINATION.

OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:
REPLACED ALL TRAFFIC SIGNAL EQUIPMENT UNDER PROJECT 0172-0436.

SIGNAL FACES



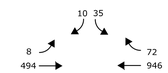
ALL SIGNAL INDICATIONS TO HAVE LED LAMPS.

ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER.

FACE 8 TO HAVE TUNNEL VISORS.

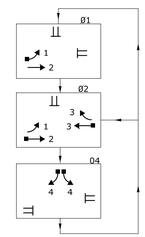
PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2
PRIORITY	NO	NO
DET. LOCK	YES	YES
DELAY	0	0
ALT. MIN. GRN	5	5
ALT. YELLOW	PARENT	PARENT
ALT. RED	PARENT	PARENT
ALT. PED. CLR.	0	0
HOLD GREEN	15	15
HOLD YELLOW	4.0	3.0
HOLD RED	2.0	1.0
HOLD PHASE	2	1
EXIT PHASE	4	2
EXIT CALL	NONE	NONE



2016 COUNT
YEAR VOLUMES

PM PEAK HOUR



CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

(H) CONSTRUCT TYPE 2a SIDEWALK RAMP PER GUIDE SHEETS.

(I) REMOVE EXISTING SIDEWALK RAMP AND SIDEWALK, AND INSTALL 5' X 5' CONCRETE PAD WITH DETECTABLE WARNING STRIP FLUSH TO ROUTE 12 AND ADJACENT TO PEDESTAL FOUNDATION AS SHOWN.

(K) REMOVE EXISTING CONCRETE SIDEWALK, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, AND INSTALL EROSION CONTROL MATTING. WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, AND 0950013 RESPECTIVELY.

(J) INSTALL SPAN POLE FOUNDATION ADJACENT TO AND WITHIN R.O.W.

INSTALL STATE FURNISHED CONTROLLER.

(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

TRIM TREE BRANCHES AS NEEDED ON ROUTE 12 NB TO PROVIDE CLEARANCE FOR SPAN POLE INSTALLATION. TO BE PAID UNDER ITEM #0952001A.

COORDINATE THIS REVISION WITH CONNECTICUT D.O.T. SIGNAL LAB CONTACT MR. DONALD ASSARD (860) 258-0346 OR MR. MARK ZAMPINI (860) 258-0349 AT LEAST 45 DAYS PRIOR TO REVISION.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FRONTIER COMMUNICATIONS:
* REPLACE POLE SNET #5840 WITH A 40' POLE. INSTALL ANCHOR AND GUY.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY GROTON UTILITIES:
* REPLACE POLE GW&E #195 WITH 55' POLE.
* INSTALL POLE TOP EXTENSION ON POLE GW&E #194.

INSTALL 2 RISERS ON GW&E #195 UTILITY POLE.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

ESTIMATED LOAD ON UTILITY POLES: SNET #5840 : 4,228 lbs.

SPAN ATTACHMENT ON SNET #5840 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.

(X) VIDEO DETECTION BY USE OF 360-DEGREE CAMERA CO-MOUNTED WITH IP VIDEO CAMERA ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM. INSTALL LIGHT STANDARD WITH EXTENSION BRACKET TURNED APPROX. 45 DEGREES NORTH AS SHOWN.

(Y) INSTALL VIDEO IP DETECTOR ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE CONTROLLER CABINET.

EMERGENCY PRE-EMPTION NOTES

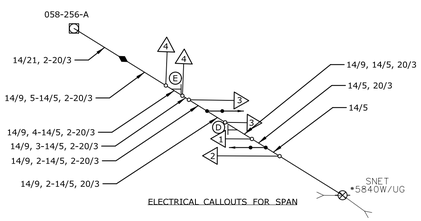
RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW SPAN. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS

STATE FORCES TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

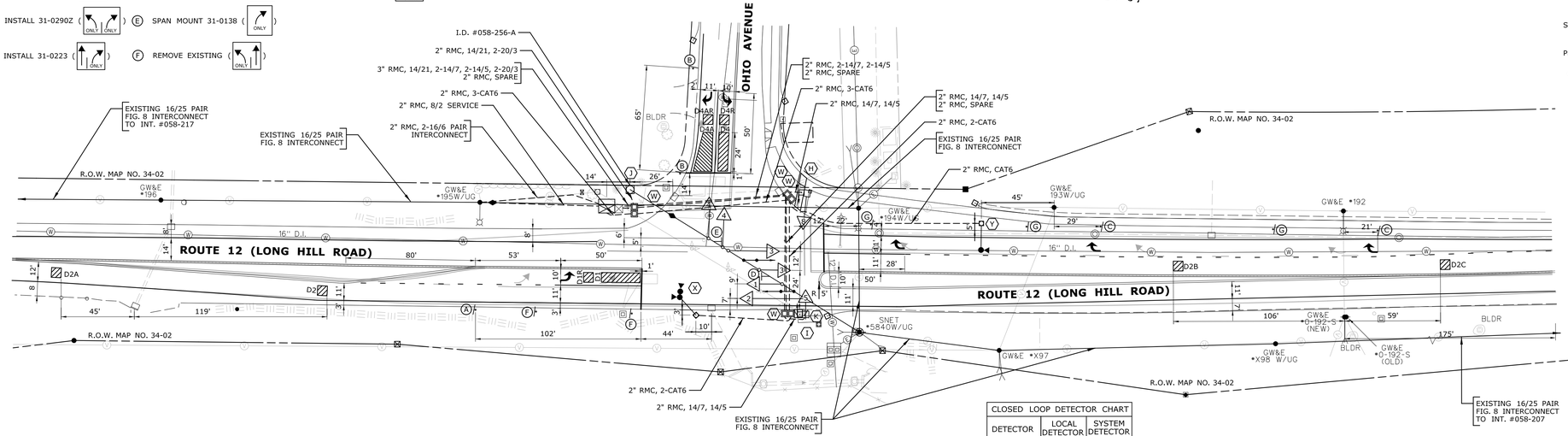
PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

SIGN LEGEND:

(A) INSTALL 31-0222 (ONLY)
(B) INSTALL 31-0290Z (ONLY ONLY)
(C) INSTALL 31-0223 (ONLY)
(D) SPAN MOUNT 31-0135 (ONLY)
(E) SPAN MOUNT 31-0138 (ONLY)
(F) REMOVE EXISTING (ONLY)
(G) REMOVE EXISTING (ONLY)



ELECTRICAL CALLOUTS FOR SPAN



CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

-INSTALL ALL STOP BARS AS SHOWN.
-ERADICATE ALL EXISTING PAVEMENT MARKING ARROWS AND INSTALL NEW PAVEMENT MARKING ARROWS AS SHOWN ON PLAN.
-ERADICATE CROSSWALK ACROSS ROUTE 12 AND INSTALL CROSSWALK AS SHOWN ON PLAN.
-ERADICATE EXISTING DOUBLE YELLOW CENTER LINE ON ROUTE 12 NORTH LEG BEGINNING 50 FEET NORTH OF GW&E 196 AND EXTENDING TO 5 FEET SOUTH OF GW&E 195.
-ERADICATE EXISTING ROUTE 12 N.B. LANE LINE BEGINNING 50 FEET NORTH OF GW&E 196 AND EXTENDING TO 35 FEET SOUTH OF GW&E 192.
-INSTALL 4" WHITE SHOULDER LINE ON ROUTE 12 N.B. BEGINNING 50 FEET NORTH OF GW&E AND EXTENDING TO 35 FEET SOUTH OF GW&E 192 AS SHOWN ON PLAN MATCHING INTO EXISTING 4" WHITE SHOULDER LINES AS SHOWN ON PLAN.
-INSTALL DOUBLE YELLOW CENTER LINE ON ROUTE 12 S.B. APPROACH BEGINNING 91 FEET NORTH OF GW&E 196 AND EXTENDING TO STOP BAR AS SHOWN ON PLAN.
-ERADICATE EXISTING ROUTE 12 S.B. LANE LINE BEGINNING 50 FEET NORTH OF GW&E 196 AND EXTENDING TO 140 FEET SOUTH OF GW&E 192.
-INSTALL 4" WHITE SHOULDER LINE ON ROUTE 12 S.B. BEGINNING 50 FEET NORTH OF GW&E 196 AND EXTENDING TO 175 FEET SOUTH OF GW&E 0-192-S AS SHOWN ON PLAN MATCHING INTO EXISTING WHITE SHOULDER LANE.
-ERADICATE LANE LINE AND DOTTED LANE LINE ON S.B. APPROACH OF ROUTE 12.
-INSTALL 50 FEET OF 4" WHITE LANE LINE AND 130 FEET OF DOTTED LANE LINE ON S.B. APPROACH OF ROUTE 12 AS SHOWN ON PLAN.
-ERADICATE STOP BAR, 8 FEET OF DOUBLE YELLOW CENTER LINE, LANE LINE AND DOTTED LANE LINE ON N.B. APPROACH OF ROUTE 12.
-INSTALL 50 FEET OF 4" WHITE LANE LINE AND 400 FEET OF DOTTED LANE LINE ON N.B. APPROACH OF ROUTE 12 MATCHING INTO EXISTING 4" WHITE SHOULDER LINE.
-INSTALL DOUBLE YELLOW CENTER LINE BEGINNING 22 FEET NORTH OF GW&E 194W AND EXTENDING TO 130 FEET SOUTH OF GW&E 0-192-S, MATCHING INTO EXISTING DOUBLE YELLOW CENTER LINE, AS SHOWN ON PLAN.
-ERADICATE STOP BAR ON OHIO AVENUE.
-ERADICATE 22 FEET OF DOUBLE YELLOW CENTERLINE AND 75 FEET OF WHITE LANE LINE ON OHIO AVENUE.
-INSTALL 100 FEET OF DOUBLE YELLOW CENTERLINE ON OHIO AVENUE AS SHOWN ON PLAN.
-INSTALL 100 FEET 4" WHITE SHOULDER LINE ON OHIO AVENUE AS SHOWN ON PLAN.
-INSTALL 50 FEET OF 4" WHITE LANE LINE ON OHIO AVENUE AS SHOWN ON PLAN.

NOTES:

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON ROUTE 12 AND ALL STOP BARS.
TOWN TO MAINTAIN ALL OTHER PAVEMENT MARKINGS AND SIGNS ON OHIO AVENUE.
PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE TOWN OF GROTON.
(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(W) 30" X 30" CONCRETE HANDHOLE. ALL OTHERS TYPE II.
(X) VIDEO DETECTION BY USE OF VIDEO-360 DEGREE CAMERA CO-MOUNTED WITH IP VIDEO CAMERA ON LIGHT STANDARD.
(Y) VIDEO IP DETECTOR MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
058-256-A	30'	24"	N/A	

= LIGHT STANDARD

CLOSED LOOP DETECTOR CHART

DETECTOR	LOCAL DETECTOR	SYSTEM DETECTOR
D1	1	-
D1R	2	SD1
D2	3	-
D2A	4	SD2
D2B	5	-
D2C	6	SD3
D4	7	-
D4 REAR	8	SD4
D4A	9	-
D4A REAR	10	SD5

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Eamon P. Flannery	Vanessa J. Lannaman
DRAWN BY	Eamon P. Flannery	Vanessa J. Lannaman
CHECKED BY	Antony Cieri	Anna B. Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge M. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	7/6/2017	06/20/2017

REV # INTERSECTION #058-256

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - GW&E 195
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
◄R RED ARROW
◄Y YELLOW ARROW
◄G GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_058_256_003pending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 12 (LONG HILL ROAD)
AT OHIO AVE

SCALE 1" = 40'

TOWN: GROTON

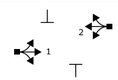
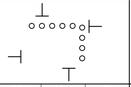
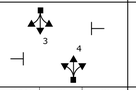
PROJECT NO. 0172-0436

DRAWING NO. TCS-16

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

SHEET NO. 03.17

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2 PRE-EMPT 1	PHASE 3	PHASE 4 PRE-EMPT 2	PHASE 5	PHASE 6	PHASE 7	PHASE 8
NONE								

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y				G	Y	R	R	R	R	R	R	R															
2	Y				G	Y	R	R	R	R	R	R	R															
3	R				R	R	R	R	R	R	G	Y	R															
4	R				R	R	R	R	R	R	G	Y	R															
P	OFF				◄	DW	►	◄ WØ	►		◄	DW	►															

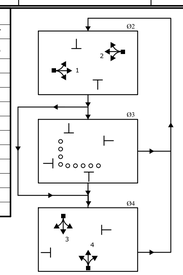
INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN		15		9				
WALK			7 (2)					
PED CLR			19 (1)					
VEH EXT		2.5		1.5				
MAX 1		30		21				
MAX 2		30		21				
YELLOW		4.0	4.0	4.0				
RED		1.0	0	1.0				
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	OFF	MIN RECALL	NON-LOCK	NON-LOCK	OFF	OFF	OFF	OFF
INIT START		THIS PHASE						

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

DETECTORS			
IDENT	SIZE (WXL)	TYPE	MODE
D2,D2A	6'X6'	VIDEO THERM	PRESENCE
D2B,D2C	6'X6'	VIDEO THERM	PRESENCE
D4,D4A	6'X24'	VIDEO THERM	PRESENCE

SYSTEM LOC	COORDINATION TYPE: NONE				
MASTER	PROGRAM			CYCLE	OFFSET
	FUNCTION	TIME	DAYS		SEC / %
	FLASH	NONE			
	MAX 1	ALL TIMES			



TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

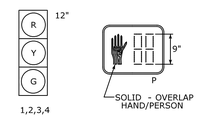
(1) COUNTDOWN ONLY DURING PEDESTRIAN CHANGE INTERVAL.
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.

(2) PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.

OFFICE RECORD

REV # TIR # 108-XXXX-XX SM # N/A SIGNAL REVISED:
REPLACED TRAFFIC SIGNAL EQUIPMENT AND ADDED EMERGENCY PRE-EMPTION EQUIPMENT UNDER PROJECT 0172-0436.

SIGNAL FACES



ALL SIGNAL INDICATIONS TO HAVE LED LAMPS

ALL OVERHEAD SIGNAL FACES SHALL HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER

PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2
PRIORITY	NO	NO
DET. LOCK	YES	YES
DELAY	0	0
ALT. MIN. GRN	5	5
ALT. YELLOW	PARENT	PARENT
ALT. RED	PARENT	PARENT
ALT. PED. CLR.	19	19
HOLD GREEN	15	15
HOLD YELLOW	4.0	4.0
HOLD RED	1.0	1.0
HOLD PHASE	2	4
EXIT PHASE	4	2
EXIT CALL	NONE	NONE

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION.

THE LOCATION OF TRAFFIC SIGNAL FOUNDATIONS WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE PATH OF NOT LESS THAN 4 FEET. IF A MINIMUM 4 FOOT FREE PATH IS UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC ENGINEERING.

(B) CONSTRUCT TYPE 4e SIDEWALK RAMP PER GUIDE SHEETS.

(C) CONSTRUCT TYPE 4c SIDEWALK RAMP PER GUIDE SHEETS.

(D) INSTALL BACK EDGE OF PEDESTAL FOUNDATION ADJACENT TO RIGHT OF WAY LINE.

(E) REMOVE EXISTING SIDEWALK, SIDEWALK RAMP AND DETECTABLE WARNING STRIP, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING AND APPROXIMATELY 8' OF BITUMINOUS CURB. WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, 0950013 AND 0815001 RESPECTIVELY.

(M) INSTALL CONTROLLER FOUNDATION ADJACENT TO AND WITHIN R.O.W.

ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE DIVISION OF TRAFFIC ENGINEERING PRIOR TO INSTALLATION.

CABINET DOOR TO OPEN STREET SIDE.

(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE CONTROLLER CABINET.

INSTALL RISER ON POLE #9165 UTILITY POLE.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY COMCAST:
* SHIFT OVERHEAD CABLES ON POLE #9165 TO PROVIDE CLEARANCE FOR SPAN.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FIBERTECH:
* SHIFT OVERHEAD CABLES ON POLE #9165 TO PROVIDE CLEARANCE FOR SPAN.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY EVERSOURCE:
* PROVIDE SECONDARY TO POLE # 9165 AND PROVIDE UNDERGROUND SERVICE FROM THIS POLE.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

ESTIMATED LOAD ON UTILITY POLES:
SNET # 301: 4800 lbs.

SPAN ATTACHMENT ON SNET # 301 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

SPAN POLES WITH 2 SPAN ATTACHMENTS TO HAVE 2 SPAN CLAMPS.

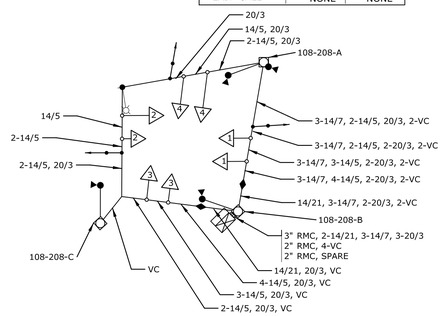
TRIM TREE BRANCHES AS NEEDED TO FACILITATE THE INSTALLATION OF SPAN POLE 108-208-C AND IN ORDER TO NOT BLOCK VIDEO DETECTION. TO BE PAID FOR UNDER ITEM #0952001-SELECTIVE CLEARING AND THINNING.

EMERGENCY PRE-EMPTION NOTES

INSTALL AUXILIARY EQUIPMENT CABINET ON LEFT SIDE OF CONTROLLER CABINET. INSTALL PRE-EMPTION EQUIPMENT IN AUXILIARY CABINET.

CONTRACTOR TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

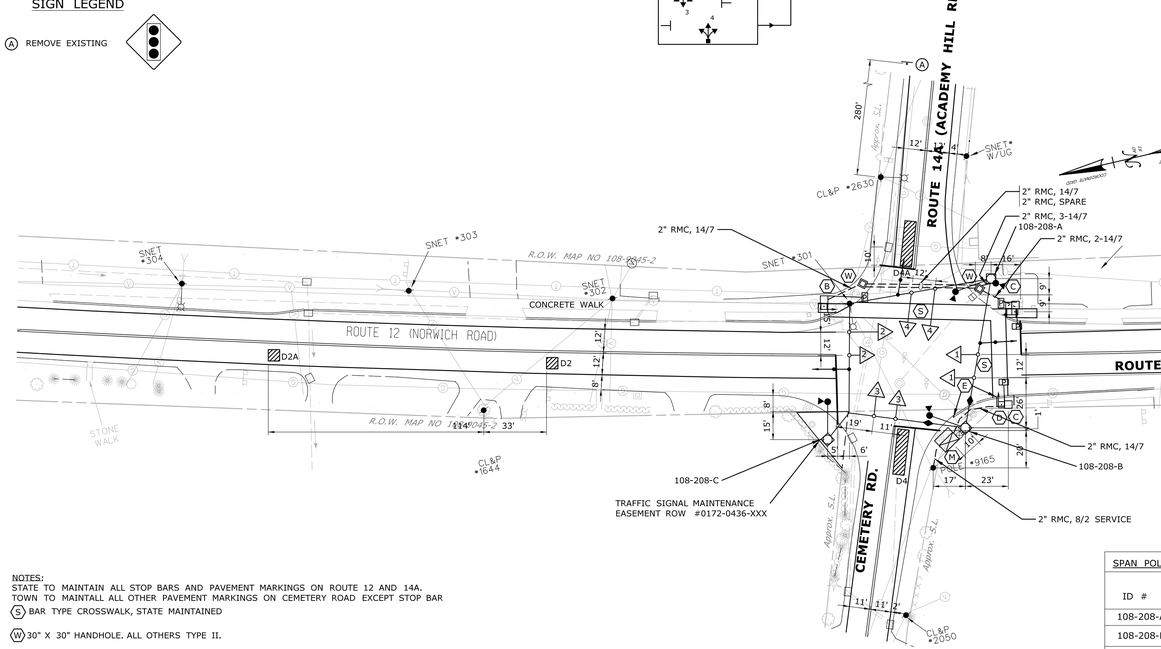
PRE-EMPTION DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.



WIRING DETAIL, N.T.S.

SIGN LEGEND

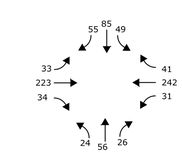
(A) REMOVE EXISTING



CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW

-ERADICATE EXISTING CROSSWALKS AND INSTALL CROSSWALKS AS SHOWN.

-ERADICATE EXISTING SHOULDER LINES AND INSTALL WHITE 4" WIDE EDGE LINES AS SHOWN.



2016 COUNT VOLUMES
PM PEAK HOUR

NOTES:
STATE TO MAINTAIN ALL STOP BARS AND PAVEMENT MARKINGS ON ROUTE 12 AND 14A.
TOWN TO MAINTALL ALL OTHER PAVEMENT MARKINGS ON CEMETERY ROAD EXCEPT STOP BAR
(S) BAR TYPE CROSSWALK, STATE MAINTAINED

(W) 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

EMERGENCY VEHICLE PRE-EMPTION EQUIPEMNT TO BE OWNED AND MAINTAINED BY THE TOWN OF PLAINFIELD .

VC - VIDEO CABLE

SPAN POLE INFORMATION				
ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
108-208-A	28'	24"	20'	
108-208-B	28'	24"	20'	
108-208-C	28'	24"	20'	

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	Emin Basic	Michael Juliano
DRAWN BY	Emin Basic	Michael Juliano
CHECKED BY	Antony Cieri	Anna Bongiorno
SUBMITTED BY	Sunny D. Ezete	Jorge Kuljis
APPROVED BY	Tracy Fogarty	Tracy Fogarty
APPROVED DATE	7/6/2017	6/23/2017

REV # INTERSECTION #108-208

ENERGY BY TOWN | ADDRESS #
MAINT LEVEL 5 | SERVICE POLE: POLE # 9165
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R RED
Y YELLOW
G GREEN
◄R RED ARROW
◄Y YELLOW ARROW
◄G GREEN ARROW
WØ WALK/ PED. CLR
D.W. DON'T WALK
FL. FLASHING

PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
DIRECTIONAL ARW. FOR PUSH BUTTON

TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
DET. LEADS IN SAW CUT
PROPOSED RMC (RIGID METAL CONDUIT)
EXISTING RMC (RIGID METAL CONDUIT)
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
VIDEO DETECTION ZONE

PROPOSED CONTROLLER
EXISTING CONTROLLER
LOOP DETECTOR
SD SYSTEM DETECTOR
MAGNETIC DETECTOR
OPTICAL DETECTOR
VIDEO DETECTOR
AUDIO DETECTOR

SIDEWALK RAMP
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSMITTER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 7/17/2017 X:\0172-0435-0436\Traffic\Signals\TR_MSH_TCS_108_208_007pending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

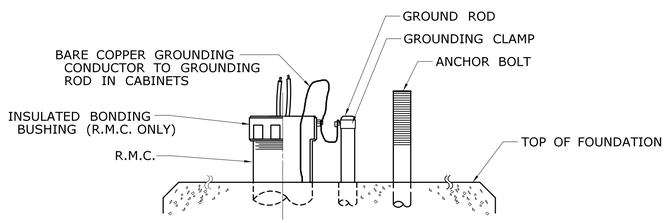
ROUTE 12 (NORWICH ROAD)
AT ROUTE 14A (ACADEMY HILL RD.)
AND CEMETERY RD.

SCALE 1" = 40'

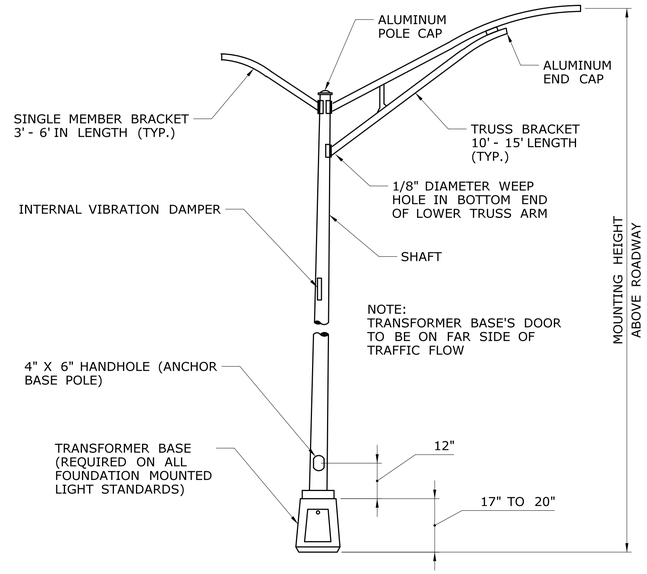
TOWN: PLAINFIELD

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0172-0436
DRAWING NO. TCS-17
SHEET NO. 03.18



CONDUIT TERMINATION AT VEHICLE DETECTOR LIGHT STANDARD BASE



ALUMINUM LIGHT STANDARD FOR VEHICLE DETECTOR

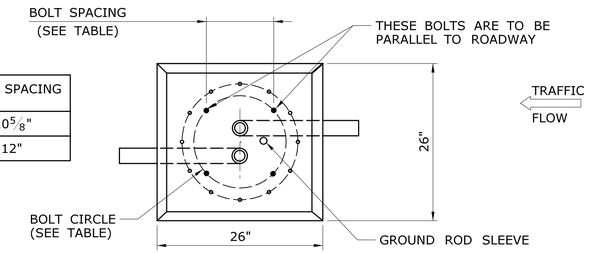
NOTE:

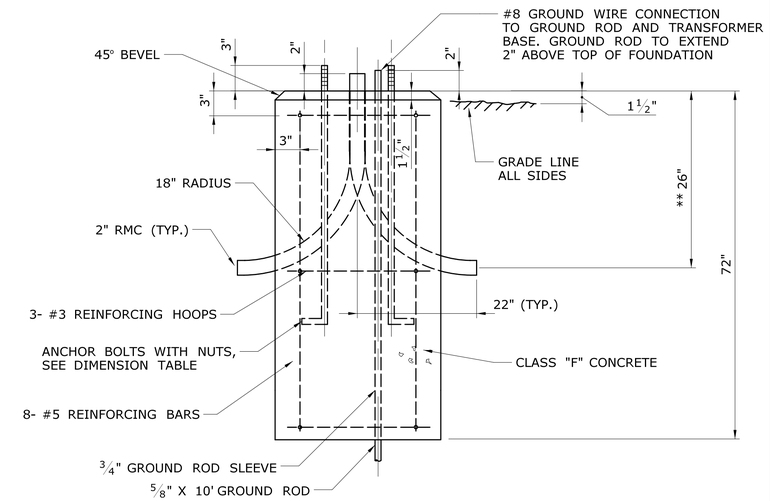
TRANSFORMER BASE DOOR TO BE ON FAR SIDE OF TRAFFIC FLOW.

TOP 2'-6" OF SHAFT IS NOT TAPERED.

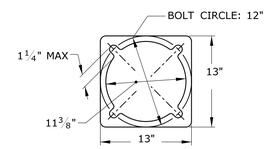
REFER TO SIGNAL PLANS FOR BRACKET LENGTHS.

BOLT CIRCLE DIAMETER	BOLT SPACING
15"	$10\frac{5}{8}$"
17"	12"

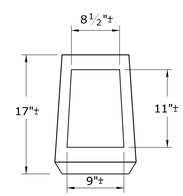




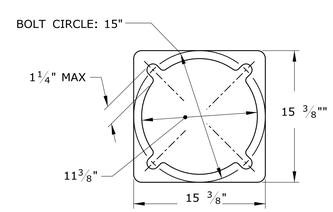
LIGHT STANDARD FOR VEHICLE DETECTOR FOUNDATION



TRANSFORMER BASE PLAN - TOP



TRANSFORMER BASE DOOR OPENING DETAIL



TRANSFORMER BASE PLAN - BOTTOM

ALUMINUM LIGHT STANDARD - DIMENSION TABLE							
MOUNTING HEIGHT	BRACKET LENGTH	SHAFT DIAMETER		SHAFT WALL THICKNESS	BASE TYPE	ANCHOR BOLT SIZE	BOLT CIRCLE DIAMETER
		BOTTOM	TOP				

LIGHT STANDARD NOTES:

1) ALUMINUM ALLOY SHALL BE 6063, T6 TEMPER.
2) BOLT CIRCLE SHOWN IS FOR ANCHOR BASE BOTTOM OR TRANSFORMER BASE BOTTOM (WHICHEVER IS APPLICABLE).
3) TO BE DESIGNED TO AASHTO "STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" FOR 90 M.P.H. WINDS.
4) WELDING DESIGN AND FABRICATION SHALL CONFORM TO THE LATEST EDITION OF THE ANSI/AWS D1.2, STRUCTURAL WELDING CODE - ALUMINUM.
5) FOR BASE CONNECTION WELDS, FABRICATION INSPECTION AND TESTING SHALL BE PERFORMED AS NECESSARY PRIOR TO ASSEMBLY, DURING ASSEMBLY, DURING WELDING, AND AFTER WELDING, TO ENSURE THAT MATERIALS AND WORKMANSHIP MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. FABRICATION INSPECTION AND TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR. VERIFICATION INSPECTION AND TESTING IS THE PREROGATIVE OF THE ENGINEER (CONNDOT).
6) NON-DESTRUCTIVE TESTING FOR ALUMINUM SHALL BE AS FOLLOWS: A RANDOM 25% OF ALL BASE CONNECTION WELDS SHALL BE INSPECTED IN ACCORDANCE WITH ASTM E-165 STANDARD PRACTICE FOR LIQUID PENETRANT INSPECTION METHOD.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 7/17/2017

DESIGNER/DRAFTER: DKS
CHECKED BY: JMK
NO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\CTDOT_TRAFFIC_GS-LS_AND_FOUND.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY: DATE:

PROJECT TITLE:
INSTALLATION AND REVISIONS OF TRAFFIC CONTROL SIGNALS IN DISTRICTS 1 & 2

TOWN: VARIOUS

DRAWING TITLE:
LIGHT STANDARD & FOUNDATION FOR VEHICLE DETECTION

PROJECT NO. 0172-0435 0172-0436
DRAWING NO. GS-01
SHEET NO. 03.19

R1 - SERIES

R1-1 *

STOP

LEGEND - WHITE
BACKGROUND - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.31	24	31-0536	1	.080
5.19	30	31-0552	1	.080
7.98	36	31-0553	1	.080
13.3	48	31-0557	2	.100

R1-2 *

YIELD

LEGEND - RED
BACKGROUND -WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.90	36	31-0523	1	.080
6.77	48	31-0522	2	.100
10.83	60	31-0528	2	.100

R1-3 *

ALL-WAY

LEGEND - WHITE
BACKGROUND - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
0.75	18X6	31-0508		.080

R2 - SERIES

R2-1

SPEED LIMIT 00

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-5505	1	.080
7.50	30X36	31-5504	1	.080
12.00	36X48	31-5506	2	.100
20.00	48X60	31-5507	2B	.100

R2-4a

SPEED LIMIT 00 MINIMUM 00

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
32	48X96	31-5510	2	.125

R3 - SERIES

R3-1

NO RIGHT TURN

31-1604 OVERHEAD MTD
LEGEND - BLACK
BACKGROUND - WHITE
CIRCLE & DIAGONAL - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-1604		.080
6.25	30X30	31-1617	1	.080
5.00	30X24	31-1618		.080
9.00	36X36	31-1627	2	.080
7.50	36X30	31-1628		.080

R3-2

NO LEFT TURN

31-1603 OVERHEAD MTD
LEGEND - BLACK
BACKGROUND - WHITE
CIRCLE & DIAGONAL - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-1603		.080
6.25	30X30	31-1619	1	.080
5.00	30X24	31-1620		.080
9.00	36X36	31-1629	2	.080
7.50	36X30	31-1630		.080

R3-3

NO TURNS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-1648	1	.080
9.00	36X36	31-1647	2	.080

R3-4

LEGEND - BLACK
BACKGROUND - WHITE
CIRCLE & DIAGONAL - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-1622	1	.080
9.00	36X36	31-1632	2	.080

R3-5

ONLY (L) ONLY (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-0135L	1	.080
4.00	24X24	31-0138R	1	.080
7.50	30X36	31-0183L	1	.080
7.50	30X36	31-0184R	1	.080

R3-6

(L) (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	30X36	31-0157L	1	.080
7.50	30X36	31-0158R	1	.080

R3-7L R3-7R

LEFT LANE MUST TURN LEFT

RIGHT LANE MUST TURN RIGHT

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30	31-0117L	1	.080
6.25	30X30	31-0118R	1	.080
9.00	36X36	31-0120L	2	.080
9.00	36X36	31-0123R	2	.080

R3-48

ONLY (L) ONLY (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30	31-0262L	1	.080
6.25	30X30	31-0261R	1	.080

ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	36X30		2	.080

ONLY ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-0125	1	.080
6.25	30X30	31-0165	1	.080
7.50	30X36	31-0175	1	.080

ONLY ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	30X24	31-0290	1	.080

ONLY ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.75	42X30	31-0279	2	.100

ONLY ONLY

31-0222 31-0223

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30		1	.080

ONLY ONLY

31-0282 31-0283

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	36X30		2	.080

ONLY ONLY

31-0295 31-0219

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	36X30		2	.080

ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	36X30	31-0277	2	.100

R3-8b

ONLY ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
10.00	48X30	31-0302	2	.100

ONLY ONLY

31-0307 31-0372

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
10.00	48X30		2	.100

ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.75	42X30	31-0334	2	.100

ONLY ONLY

31-0370 31-0371

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.75	42X30		2	.100

LEFT LANE MUST TURN LEFT

RIGHT LANE MUST TURN RIGHT

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
20.00	48X60	31-0121L	2	.100
20.00	48X60	31-0122R	2	.100

ONLY ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
12.50	60X30	31-0445	2	.100

R4 - SERIES

R4-1

DO NOT PASS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-1502	1	.080

KEEP RIGHT EXCEPT TO PASS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
20.00	48X60	31-1574	2	.100

SLOW VEHICLES KEEP RIGHT

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
20.00	48X60	31-1504	2	.100

R4-3

SLOWER TRAFFIC KEEP RIGHT

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-1562	1	.080
20.00	48X60	31-1564	2	.100

R4-7

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-1526	1	.080
12.00	36X48	31-1536	2	.100
20.00	48X60	31-1546	2	.100

R5 - SERIES

R5-1 *

DO NOT ENTER

LEGEND - WHITE
BACKGROUND - WHITE
CIRCLE - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30	31-1119	1	.080
9.00	36X36	31-1120	2	.080
16.00	48X48	31-1121	2	.100

NO PEDESTRIANS BICYCLES MOTOR BIKES MOTOR SCOOTERS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36X36	31-1775	2	.100

R5-1a *

WRONG WAY

LEGEND - WHITE
BACKGROUND - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.00	36X24	31-1122	2	.080
8.75	42X30	31-1123	2	.100

EMERGENCY AND AUTHORIZED VEHICLES ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-1790	1	.080
20.00	48X60	31-1792	2	.100

PROHIBITED
COMMERCIAL VEH
TRAILERS
COMBINATION VEH OVER 7500 LBS
VEH. OVER 8' HIGH
MOPEDS - BICYCLES PEDESTRIANS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
27.00	54X72	31-1719	2	.125

NO PEDESTRIAN CROSSING

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	30X24	31-1702	1	.080

R5-10c

NO PEDESTRIANS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	31-1774	1	.080

R6 - SERIES

R6-1

(L) ONE WAY
(R) ONE WAY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.00	36X12	31-1188L	1	.080
3.00	36X12	31-1177R	1	.080
6.75	54X18	31-1189L	2	.100
6.75	54X18	31-1178R	2	.100

R7 - SERIES

R7-1

NO PARKING ANY TIME

(R) ⟹ (L) ⟸
(D) ⟺
LEGEND - RED
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.50	12X18	31-0630	1	.080

R7-2a

NO PARKING 0:00 AM TO 0:00 PM

VARIABLE TIMES
(R) ⟹ (L) ⟸
(D) ⟺
LEGEND - RED
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.50	12X18	31-0603	1	.080

R8 - SERIES

R8-7

EMERGENCY STOPPING ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
12.00	48X36	31-0670	2	.100

R9 - SERIES

HITCHHIKING PROHIBITED
DO NOT STOP

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
27.50	66X60	31-1733	2	.125

R10 - SERIES

R10-6

STOP HERE ON RED 31-0801

STOP HERE ON RED 31-0802

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.00	24X36		1	.080

R10-11b

NO TURN ON RED

OVERHEAD MOUNTED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	31-0823		.080
9.00	36X36	31-0816	2	.080

RIGHT TURN ON RED FROM RIGHT LANE ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	30X36	31-0847	1	.080
20.00	48X60	31-0849	2	.100

DO NOT BLOCK DRIVEWAY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-0803	1	.080
12.00	36X48	31-0804	2	.100

R10-10L

LEFT TURN SIGNAL

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-0842		.080
7.50	30X36	31-0852	1	.080

R10-7

DO NOT BLOCK INTERSECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-0806	1	.080
12.00	36X48	31-0807	2	.100

R10-11a

NO TURN ON RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	30X36	31-0830	1	.080
12.00	36X48	31-0819	2	.100

R11 - SERIES

R11-1

KEEP OFF MEDIAN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	31-1915	1	.080
20.00	48X60	31-1918	2	.100

RETROREFLECTIVE STRIP

*

LEGEND - N/A
BACKGROUND - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.00	4X36	31-5003	1	.080
2.00	4X72	31-5004	1	.080
2.67	4X96	31-5005	1	.080

NOTES:

FOR METRIC SEE CONVERSION CHART.

1. THE LEGEND "O.S.T.A." SHALL APPEAR ON ALL R- SERIES SIGNS EXCEPT WHEN SUFFIXED WITH THE LETTER "Z".
2. FOR SPECIFIC SIGN DESIGN CONTACT CONN. D.O.T., DIVISION OF TRAFFIC ENGINEERING. FOR BOLT HOLE PATTERN REFER TO FHWA PUBLICATION "STANDARD HIGHWAY SIGNS". SIGNS OF DIFFERENT DIMENSIONS TO BE ERECTED ON THE SAME POSTS, OR SPAN/MAST ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERNS.
3. POSTS - SEE STANDARD SHEET TR-1208_02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."
4. POSTS SHALL BE 4 LBS./FT.
5. SIGNS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF SHEET ALUMINUM. SPLICING OF SHEET ALUMINUM WILL NOT BE ACCEPTED.
6. FOR OVERHEAD MOUNTED SIGNS, SEE STANDARD SHEET TR-1114_01 - "BONDING AND UTILITY POLE ATTACHMENT DETAILS, SIGN HANGER, "Y" CLAMP DETAIL."

COLORS:

BACKGROUND - WHITE (SILVER) - EXCEPT AS NOTED.
LEGEND - BLACK - EXCEPT AS NOTED.
ALL SIGNS TO USE TYPE IV RETROREFLECTIVE SHEETING EXCEPT AS NOTED BY *.
* SIGNS TO USE TYPE IX RETROREFLECTIVE SHEETING.

✸ THIS SIGN ADDED FOR THIS PROJECT ONLY.

REV.	DATE	REVISION DESCRIPTION
7	6-2017	REVISED POST REQUIREMENTS.
6	12-2016	REMOVED HANDICAPPED SIGN DETAIL.
5	6-2015	REVISED DRAWING NO.
4	5-2015	UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION.
3	6-2012	REVISED NOTE #1 TO REFERENCE "O.S.T.A."
2	6-2010	INCLUDED SIGNS TO MEET 2009 MUTCD REQUIREMENTS.
1	1-2010	REVISED SHEETING FROM TYPE I TO III.

METRIC CONVERSION CHART (1" = 25mm)

ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC
12"	300	42"	1050	72"	1800
18"	450	48"	1200	78"	1950
24"	600	54"	1350	84"	2100
30"	750	60"	1500	90"	2250
36"	900	66"	1650	96"	2400

DESIGNER/DRAFTER: A. S. MERMELSTEIN
CHECKED BY: B. A. SCHILLING
Plotted: 7/14/2017

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: TR_MSH_DET_172_435_436_1.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY: DATE:

PROJECT TITLE:
INSTALLATION AND REVISIONS OF TRAFFIC CONTROL SIGNALS IN DISTRICTS 1 & 2

TOWN: VARIOUS

PROJECT NO. 0172-0435 0172-0436

DRAWING TITLE: SIGN FACE SHEET ALUMINUM R-SERIES SIGNS TYPICAL DETAILS

DRAWING NO. GS_02

SHEET NO. 03.20

S - SERIES

S1-1
*

LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.75	36	41-2112	1	.080
12.00	48	41-2113	2	.100

W1 - SERIES

W1-1L

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4006	1	.080
9.00	36	41-4031	1	.080
16.00	48	41-4056	2	.100

W1-1R

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4005	1	.080
9.00	36	41-4160	1	.080
16.00	48	41-4055	2	.100

(L) (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4141L	1	.080
9.00	36	41-4140R	1	.080
16.00	48	41-4062L	2	.100
16.00	48	41-4061R	2	.100

W1-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4028	1	.080
9.00	36	41-4084	1	.080
16.00	48	41-4068	2	.100

W1-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4027	1	.080
9.00	36	41-4083	1	.080
16.00	48	41-4067	2	.100

(L) (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.0	36	41-4139L	1	.080
9.0	36	41-4140R	1	.080
16.00	48	41-4088L	2	.100
16.00	48	41-4087R	2	.100

W1-6

(LEFT OR RIGHT)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.00	48X24	41-4222	2	.100
12.50	60X30	41-4224	2	.100

W1-7

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
8.00	48X24	41-4207	2	.100
12.50	60X30	41-4208	2	.100

(L) (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4128L	1	.080
9.00	36	41-4127R	1	.080
16.00	48	41-4058L	2	.100
16.00	48	41-4057R	2	.100

W1-8

(LEFT OR RIGHT)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.00	18X24	41-4250	1	.080
5.00	24X30	41-4203	1	.080
7.50	30X36	41-4204	1	.080
12.00	36X48	41-4251	2	.080

W1-8
*

LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW
(LEFT OR RIGHT)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	41-4210	1	.080
7.50	30X36	41-4211	1	.080

W1-10

(L) (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4085L	1	.080
9.00	36	41-4043R	1	.080
16.00	48	41-4090L	2	.100
16.00	48	41-4089R	2	.100

W2 - SERIES

W2-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4226	1	.080
9.00	36	41-4236	1	.080
16.00	48	41-4246	2	.100

W2-2

(LEFT OR RIGHT)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4225	1	.080
9.00	36	41-4235	1	.080
16.00	48	41-4245	2	.100

W2-3

(L) (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4220L	1	.080
6.25	30	41-4219R	1	.080
9.00	36	41-4253L	1	.080
9.00	36	41-4252R	1	.080
16.00	48	41-4244L	2	.100
16.00	48	41-4243R	2	.100

W2-4

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4217	1	.080
9.00	36	41-4255	1	.080
16.00	48	41-4247	2	.100

W3 - SERIES

W3-1

OCTAGON - RED

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-0501	1	.080
9.00	36	41-0502	1	.080
16.00	48	41-0503	2	.100

W3-2

TRIANGLE - RED & WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-0504	1	.080
9.00	36	41-0505	2	.100
16.00	48	41-0506	2	.100

W3-3

SYMBOL & LEGEND - BLACK
BACKGROUND - YELLOW
TOP CIRCLE - RED
BOTTOM CIRCLE - GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-0835	1	.080
9.00	36	41-0836	1	.080
16.00	48	41-0848	2	.100
25.00	60	41-0860	2	.125

WHEN FLASHING STOP AHEAD

W/ FLASHERS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
25.00	60	41-0534	2	.125

W4 - SERIES

W4-1

(L) (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4448L	1	.080
9.00	36	41-4449R	1	.080
16.00	48	41-4452L	2	.100
16.00	48	41-4459R	2	.100

W4-2

(L) (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4442L	1	.080
9.00	36	41-4441R	1	.080
16.00	48	41-4446L	2	.100
16.00	48	41-4447R	2	.100

W4-3

(L) (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4468L	1	.080
9.00	36	41-4470R	1	.080
16.00	48	41-4435L	2	.100
16.00	48	41-4434R	2	.100

W5 - SERIES

W5-1

ROAD NARROWS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4402	1	.080
16.00	48	41-4404	2	.100

CROSSING TRAFFIC DOES NOT STOP

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.75	30X18	41-0564	1	.080

W6 - SERIES

W6-1 W6-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4335	1	.080
16.00	48	41-4330	2	.100

W6-3

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4329	1	.080
16.00	48	41-4331	2	.100

W7 - SERIES

W7-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4506	1	.080
9.00	36	41-4530	1	.080
16.00	48	41-4508	2	.100

W8 - SERIES

W8-5

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4519	1	.080
9.00	36	41-4520	1	.080
16.00	48	41-4521	2	.100

W9 - SERIES

W9-1

LEFT LANE ENDS (L) RIGHT LANE ENDS (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4443L	1	.080
9.00	36	41-4440R	1	.080
16.00	48	41-4444L	2	.100
16.00	48	41-4445R	2	.100

W9-2

LANE ENDS MERGE LEFT (L) LANE ENDS MERGE RIGHT (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4454L	1	.080
9.00	36	41-4453R	1	.080
16.00	48	41-4456L	2	.100
16.00	48	41-4455R	2	.100

SLOW VEHICLE LANE ENDS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
22.00	66X48	41-1510	2	.125

W10 - SERIES

W10-1

R R

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.07	36	41-2201	1	.080

W11 - SERIES

W11-2

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4810	1	.080
9.00	36	41-4811	1	.080
16.00	48	41-4812	2	.100

W11-8

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4680	1	.080
9.00	36	41-4681	1	.080
16.00	48	41-4692	2	.100

W12 - SERIES

W12-1

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30	41-4213	1	.080
9.00	36	41-4215	1	.080
16.00	48	41-4214	2	.100

W12-2

00'-0"

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36	41-4706	1	.080
16.00	48	41-4708	2	.100

LEFT LANE (L) RIGHT LANE (R)

(SUBPLATE)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	36X30	41-4729L		.080
7.50	36X30	41-4728R		.080

W13 - SERIES

W13-1

00 M.P.H.

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.25	18X18	41-5568		.080
4.00	24X24	41-5569		.080
6.25	30X30	41-5573		.080
16.00	48X48	41-5572		.100

W13-2

EXIT 00 M.P.H.

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
20.00	48X60	41-5596	2	.100

W13-3

RAMP 00 M.P.H.

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
20.00	48X60	41-5598	2	.100

W16 - SERIES

W16-2aP

41-6130 000 FT
41-6136 000 FT
41-6134 0000 FT

(SUBPLATE)
USE AT ADVANCE SIGN LOCATION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-6130		.080
3.75	30X18	41-6136		.080
7.00	42X24	41-6134		.100

W16-2aP
*

41-6140 000 FT
41-6142 000 FT

(SUBPLATE)
USE AT ADVANCE SIGN LOCATION
LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-6140		.080
3.75	30X18	41-6142		.080

W16-7PL

(SUBPLATE)
USE WITH W11-2 AT CROSSWALK

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-2609		.080
3.75	30X18	41-2608		.080

W16-7PL
*

(SUBPLATE)
USE WITH S1-1 AT CROSSWALK
LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-2617		.080
3.75	30X18	41-2618		.080

W16-7PR

(SUBPLATE)
USE WITH W11-2 AT CROSSWALK

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-2619		.080
3.75	30X18	41-2620		.080

W16-7PR
*

(SUBPLATE)
USE WITH S1-1 AT CROSSWALK
LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-6126		.080
3.75	30X18	41-6137		.080
6.00	36X24	41-6138		.080
12.00	48X36	41-6139		.100

W16-9P

AHEAD

(SUBPLATE)
USE AT ADVANCE SIGN LOCATION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-6125		.080
3.75	30X18	41-6112		.080
6.00	36X24	41-6116		.080
12.00	48X36	41-6115		.100

W16-9P
*

AHEAD

(SUBPLATE)
USE AT ADVANCE SIGN LOCATION
LEGEND - BLACK
BACKGROUND - FLUORESCENT YELLOW GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	24X12	41-6126		.080
3.75	30X18	41-6137		.080
6.00	36X24	41-6138		.080
12.00	48X36	41-6139		.100

THIS SIGN ADDED FOR THIS PROJECT ONLY.

NOTES:

FOR METRIC SEE CONVERSION CHART.

1. FOR SPECIFIC SIGN DESIGN CONTACT CONN. D.O.T., DIVISION OF TRAFFIC ENGINEERING. FOR BOLT HOLE PATTERN REFER TO FHWA PUBLICATION "STANDARD HIGHWAY SIGNS". SIGNS OF DIFFERENT DIMENSIONS TO BE ERECTED ON THE SAME POSTS, OR SPAN/MAST ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERNS.
2. POSTS - SEE STANDARD SHEET TR-1208_02 "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."
3. POSTS SHALL BE 4 LBS./FT.
4. SIGNS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF SHEET ALUMINUM. SPLICING OF SHEET ALUMINUM WILL NOT BE ACCEPTED.

COLORS:

BACKGROUND - YELLOW - EXCEPT AS NOTED.
LEGEND - BLACK - EXCEPT AS NOTED.
ALL SIGNS TO USE TYPE IV RETROREFLECTIVE SHEETING EXCEPT AS NOTED BY *.
* SIGNS TO USE TYPE IX RETROREFLECTIVE SHEETING.

REV.	DATE	REVISION DESCRIPTION
5	6-2017	REVISED POST REQUIREMENTS.
4	6-2015	REVISED DRAWING NO.
3	5-2015	UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION.
2	11-2013	UPDATED PER MUTCD.
1	1-2010	REVISED SHEETING FROM TYPE I TO III.

METRIC CONVERSION CHART (1" = 25mm)

ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC
12"	300	42"	1050	72"	1800
18"	450	48"	1200	78"	1950
24"	600	54"	1350	84"	2100
30"	750	60"	1500	90"	2250
36"	900	66"	1650	96"	2400

DESIGNER/DRAFTER: A. S. MERMELSTEIN
CHECKED BY: B. A. SCHILLING
Plotted: 7/14/2017

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY: DATE:

Filename: TR_MSH_DET_172_435_436_1.dgn

PROJECT TITLE:
INSTALLATION AND REVISIONS OF TRAFFIC CONTROL SIGNALS IN DISTRICTS 1 & 2

TOWN: VARIOUS

DRAWING TITLE:
SIGN FACE SHEET ALUMINUM
S&W SERIES SIGNS TYPICAL DETAILS

PROJECT NO. 0172-0435 0172-0436
DRAWING NO. GS_03
SHEET NO. 03.21

D1 - SERIES

D1-1

51-5202 Variable →

D1-2

51-5203 Variable Variable →

VARIABLE LEGEND & ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.

D3 - SERIES

D3-1

Variable Road Name

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	48X12	51-2010	2	.100
5.00	60X12	51-2011	2	.100
6.00	72X12	51-2012	2	.125
7.00	84X12	51-2013	2	.125

D3-1

Variable Road Name

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.00	48X18	51-2004	2	.100
7.50	60X18	51-2001	2	.100
9.00	72X18	51-2002	2	.125
10.50	84X18	51-2003	2	.125

D4 - SERIES

D4-2

PARK - RIDE →

VARIABLE ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	51-6006	1	.080
7.50	30X36	51-6007	1	.080
12.00	36X48	51-6008	2	.100

D4-2

PARK - RIDE →

VARIABLE ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	51-6033	1	.080
7.50	30X36	51-6034	1	.080
12.00	36X48	51-6035	2	.100

D4-2

PARK - RIDE →

VARIABLE ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	51-6044	1	.080
7.50	30X36	51-6045	1	.080
12.00	36X48	51-6046	2	.100

NOTICE
THIS PARKING AREA PATROLLED

LEGEND - BLACK
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
15.00	60X36	51-5937	2	.100

PARK AT YOUR OWN RISK
REMOVE KEYS AND LOCK CAR
NOT RESPONSIBLE FOR
PROPERTY LOST OR STOLEN

LEGEND - BLACK
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.50	36X18	51-6037	1	.080

D5 - SERIES

D5-2b

REST AREA ↗

LEGEND - WHITE
BACKGROUND - BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
42.25	78X78	51-6901	2	.125

SERVICE PLAZA ↗

LEGEND - WHITE
BACKGROUND - BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
39.00	72X78	51-6158	2	.125

D7 - SERIES

D-7

51-6802 Variable →

51-6803 Variable Variable →

W or W/O ARROW
VARIABLE ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.17	60X10	51-6802	2	.100
8.33	60X20	51-6803	2	.100

D9 - SERIES

D9-2

H

** FOR ARROW SUBPLATES
USE M5 & M6 SERIES

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-6788	1	.080

D9-3a

** FOR ARROW SUBPLATES
USE M5 & M6 SERIES

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-6762	1	.080

51-6705 DIESEL →
51-6706 FOOD →
51-6707 PHONE →
51-6708 GAS →
51-6709 LODGING →

VARIABLE ARROW DIRECTION

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.25	36X9		2	.080

D10 - SERIES

D10-4

NORTH
ROUTE 95
MILE
000

CARDINAL DIRECTION,
SHIELD AND NUMERALS ARE VARIABLE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.75	18X54	51-5307	1	.080

RECREATIONAL RS- SERIES

RS-054

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-6873	1	.080

RS-117

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-7872	1	.080

51-2705 ↑

51-2706 L or R →

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.19	21X15	51-2705		.080
2.19	21X15	51-2706		.080

E5 - SERIES

E5-1a

EXIT ↖ (L) EXIT ↗ (R)

FOR USE AT "NO NUMBERED" EXITS

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. # (L or R)	POSTS	ALUM. THK.
30.00	72X60	51-6150	2	.125

E5-1a

EXIT ↖ 00 (L) EXIT 00 ↗ (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. # (L or R)	POSTS	ALUM. THK.
32.50	78X60	51-6124R	2	.125
32.50	78X60	51-6125L	2	.125

E5-1a

EXIT ↖ 00 B (L) EXIT 00 B ↗ (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. # (L or R)	POSTS	ALUM. THK.
45.00	108X60	51-6126R	2	.125
45.00	108X60	51-6127L	2	.125

E5-1a

EXIT ↖ 00 A-B (L) EXIT 00 A-B ↗ (R)

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. # (L or R)	POSTS	ALUM. THK.
57.50	138X60	51-6128R	2	.125
57.50	138X60	51-6129L	2	.125

I - SERIES

I-3

(Variable) River

VARIABLE: RIVER, BROOK, CREEK

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
1.50	18X12	51-2009	1	.080
4.50	36X18	51-2007	2	.080
12.00	48X36	51-2051	2	.100

(Town Name)
(INCORPORATED OR SETTLED) (DATE)
TOWN LINE

VARIABLE: TOWN / CITY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
7.50	40X27	51-2020	2	.080

(Name)
Connecticut

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
10.00	48X30	51-2040	2	.100

I-7

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-1448	1	.080
6.25	30X30	51-1445	1	.080

INCIDENT MANAGEMENT

N 0 .0 N 0 0 .0 N 0 0 0 .0

CARDINAL DIRECTION VARIABLE - N, S, E, W

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.00	12X36	51-5103	1	.080
4.00	12X48	51-5104	1	.080
5.00	12X60	51-5105	1	.080

SYMBOL - WHITE
BACKGROUND - BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.00	18X24	51-5943	1	.080

51-6504 Variable

51-6505 Variable Variable

TO BE SUBMOUNTED W/ 51-5943
LEGEND - WHITE
BACKGROUND - BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
0.75	18X6	51-6504		.080
1.50	18X12	51-6505		.080

M1 - SERIES

M1-1

INTERSTATE CONNECTICUT 00 INTERSTATE CONNECTICUT 000

51-6662 51-6666 VARIABLE: 1 or 2 DIGITS 51-6663 51-6667 VARIABLE: 3 DIGITS

LEGEND - WHITE
BACKGROUND - RED & BLUE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
3.20	24X24	51-6662	1	.080
3.99	30X24	51-6663	1	.080
7.20	36X36	51-6666	2	.080
8.99	45X36	51-6667	2	.100

M1-4

00 000

51-6615 51-6635 VARIABLE: 1 or 2 DIGITS 51-6644 51-6645 VARIABLE: 3 DIGITS

LEGEND - BLACK
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-6615	1	.080
5.00	30X24	51-6644	1	.080
9.00	36X36	51-6635	2	.080
11.25	45X36	51-6645	2	.100

M1-5

00 000

51-6616 51-6636 VARIABLE: 1 or 2 DIGITS 51-6647 51-6646 VARIABLE: 3 DIGITS

LEGEND - BLACK
BACKGROUND - WHITE

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
4.00	24X24	51-6616	1	.080
5.00	30X24	51-6647	1	.080
9.00	36X36	51-6636	2	.080
11.25	45X36	51-6646	2	.100

M2 - SERIES

M2-1

JCT

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-6640	(1)	.080
2.19	21X15	51-6610	(2)	.080

M3 - SERIES

M3-1

NORTH

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6651	(1)	.080
2.00	24X12	51-6611	(2)	.080
4.50	36X18	51-6655	(1)	.080
4.50	36X18	51-6625	(2)	.080

M3-4

WEST

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6654	(1)	.080
2.00	24X12	51-6614	(2)	.080
4.50	36X18	51-6658	(1)	.080
4.50	36X18	51-6628	(2)	.080

M3-2

EAST

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6652	(1)	.080
2.00	24X12	51-6612	(2)	.080
4.50	36X18	51-6656	(1)	.080
4.50	36X18	51-6626	(2)	.080

M3-3

SOUTH

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6653	(1)	.080
2.00	24X12	51-6613	(2)	.080
4.50	36X18	51-6657	(1)	.080
4.50	36X18	51-6627	(2)	.080

M4 - SERIES

M4-5

TO

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.00	24X12	51-6650	(1)	.080
2.00	24X12	51-6620	(2)	.080

M5 - SERIES

M5-1

L or R

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2690L	(1)	.080
2.19	21X15	51-2691R	(1)	.080
2.19	21X15	51-2630L	(2)	.080
2.19	21X15	51-2631R	(2)	.080

M5-2

L or R

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2692L	(1)	.080
2.19	21X15	51-2693R	(1)	.080
2.19	21X15	51-2632L	(2)	.080
2.19	21X15	51-2633R	(2)	.080

M6 - SERIES

M6-1

L or R

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2686	(1)	.080
2.19	21X15	51-2626	(2)	.080

M6-4

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2697	(1)	.080
2.19	21X15	51-2627	(2)	.080

M6-2

L or R

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2688L	(1)	.080
2.19	21X15	51-2689R	(1)	.080
2.19	21X15	51-2628L	(2)	.080
2.19	21X15	51-2629R	(2)	.080
4.89	32X22	51-2609R	(2)	.080

M6-3

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	COLOR	ALUM. THK.
2.19	21X15	51-2685	(1)	.080
2.19	21X15	51-2625	(2)	.080

NOTES:

FOR METRIC SEE CONVERSION CHART.

1. FOR SPECIFIC SIGN DESIGN CONTACT CONN. D.O.T., DIVISION OF TRAFFIC ENGINEERING. FOR BOLT HOLE PATTERN REFER TO FHWA PUBLICATION "STANDARD HIGHWAY SIGNS". SIGNS OF DIFFERENT DIMENSIONS TO BE ERECTED ON THE SAME POSTS, OR SPAN/MAST ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERNS.
2. POSTS - SEE STANDARD SHEET TR-1208_02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."
3. POSTS SHALL BE 4 LBS./FT.
4. SIGNS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF SHEET ALUMINUM. SPLICING OF SHEET ALUMINUM WILL NOT BE ACCEPTED.

COLORS:

D - SERIES
D1, 2, 3, 4, 10 BACKGROUND-GREEN, LEGEND-WHITE
D7, RS BACKGROUND-BROWN, LEGEND-WHITE
D9 BACKGROUND-BLUE, LEGEND-WHITE
ALL OTHER D-SERIES AS NOTED

E - SERIES
BACKGROUND-GREEN, LEGEND-WHITE

I - SERIES
BACKGROUND-GREEN, LEGEND-WHITE
(EXCEPT AS NOTED)

M2 - M6 SERIES
(1) BACKGROUND-BLUE, LEGEND-WHITE
(2) BACKGROUND-WHITE, LEGEND-BLACK

ALL COLORS SHALL BE TYPE IV RETROREFLECTIVE WITH THE EXCEPTION OF BLACK WHICH SHALL BE OPAQUE.

REV.	DATE	REVISION DESCRIPTION
5	6-2017	REVISED POST REQUIREMENTS.
4	10-2016	ADDED SIGN TO I-3 SERIES.
3	6-2015	REVISED DRAWING TITLE AND NO.
2	5-2015	UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION.
1	1-2010	REVISED SHEETING FROM TYPE I TO III.

METRIC CONVERSION CHART (1" = 25mm)

ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC
12"	300	42"	1050	72"	1800
18"	450	48"	1200	78"	1950
24"	600	54"	1350	84"	2100
30"	750	60"	1500	90"	2250
36"	900	66"	1650	96"	2400

DESIGNER/DRAFTER: A. S. MERMELSTEIN
CHECKED BY: B. A. SCHILLING
Plotted: 7/14/2017

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: TR_MSH_DET_172_435_436_1.dgn

SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY: DATE:

PROJECT TITLE:
INSTALLATION AND REVISIONS OF TRAFFIC CONTROL SIGNALS IN DISTRICTS 1 & 2

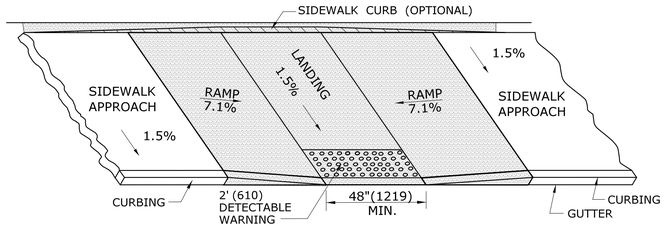
TOWN: VARIOUS

PROJECT NO. 0172-0435 0172-0436

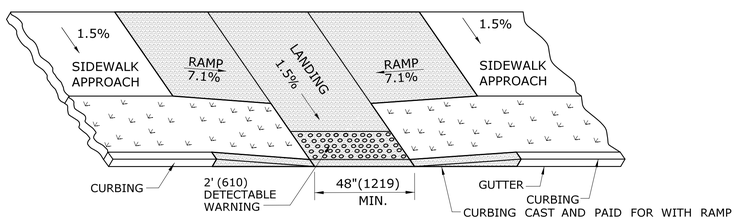
DRAWING TITLE: SIGN FACE SHEET ALUMINUM D,RS,E,I,&M SERIES SIGNS TYPICAL DETAILS

DRAWING NO. GS_04

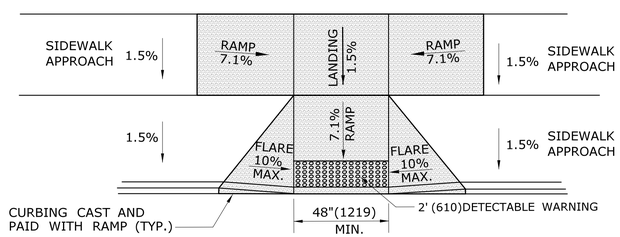
SHEET NO. 03.22



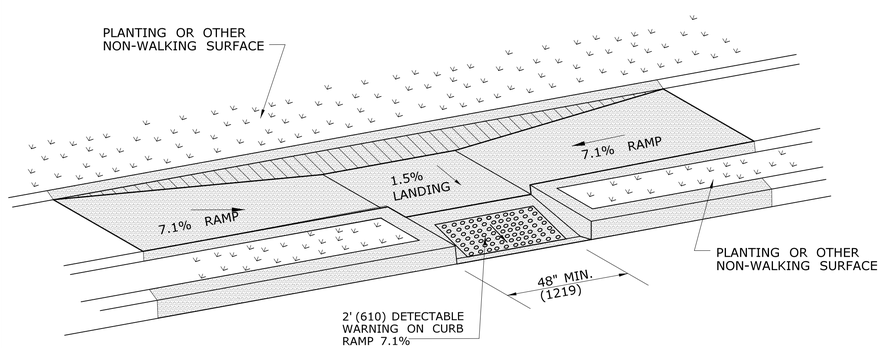
PARALLEL SIDEWALK RAMP (TYPE 1) NO UTILITY STRIP



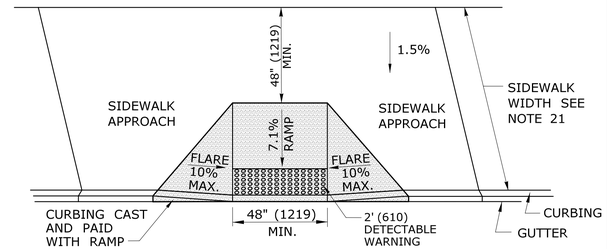
PARALLEL SIDEWALK RAMP (TYPE 1a)
WITH UTILITY / GRASS STRIP



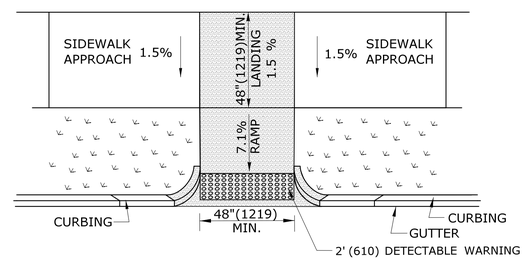
PARALLEL/PERPENDICULAR SIDEWALK RAMP
NO UTILITY/GRASS STRIP (TYPE 1b)



PARALLEL SIDEWALK RAMP (TYPE 1c)
WITH UTILITY / GRASS STRIP

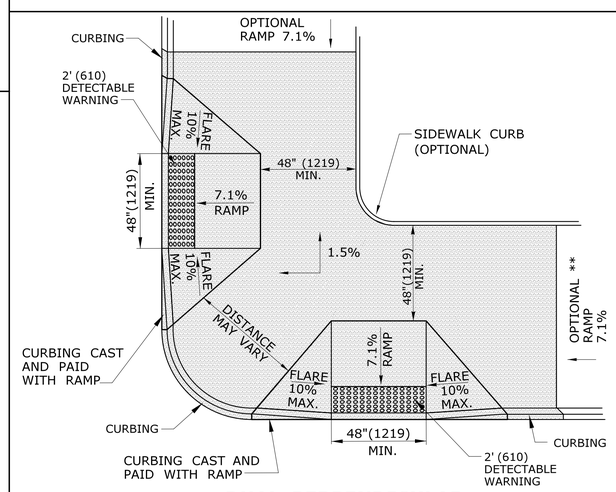


PERPENDICULAR SIDEWALK RAMP
W/ 48" (1219) MIN. BY PASS LANDING (TYPE 2)



PERPENDICULAR SIDEWALK RAMP
W/CURB RETURNS / UTILITY GRASS STRIP (TYPE 2a)

* OPTIONAL FLARE ONE SIDE OF RAMP

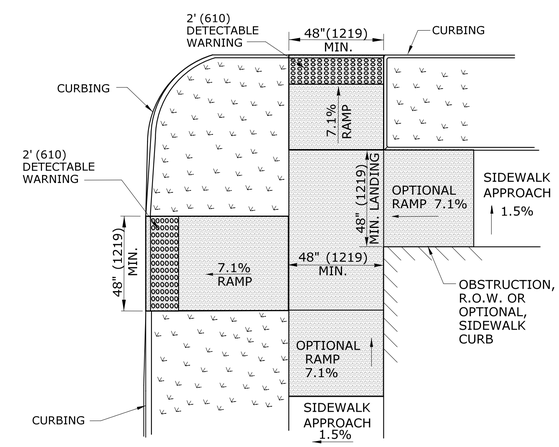


DUAL PERPENDICULAR
SIDEWALK RAMPS (TYPE 3)

SEE NOTES 19
* OPTIONAL CURB RETURN ON ONE SIDE OF RAMP
** SEE NOTE 23

GENERAL NOTES:

1. MAXIMUM SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE SIDEWALK RAMP SHOULD NOT EXCEED 5%. THE MAXIMUM GRADE DIFFERENCE BETWEEN THE GUTTER AND CURB RAMP SHALL NOT EXCEED 13%. SEE DETAIL 1 ON SHEET 4.
2. RAMP GRADE SHALL BE UNIFORM, FREE OF SAGS AND ABRUPT GRADE CHANGES. RUNNING SLOPES OF RAMPS SHALL NOT EXCEED 8.33% AND SHALL NOT EXCEED 15' (4.5m) WITHOUT PROVIDING A LANDING.
3. ALL RAMPS SHALL BE CONSTRUCTED OF CLASS "F" CONCRETE IN ACCORDANCE WITH CONNECTICUT STANDARD SPECIFICATIONS.
4. SIDEWALK RAMPS SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP. THE SURFACE OF ALL SIDEWALK RAMPS SHALL BE STABLE, FIRM AND SLIP RESISTANT. SURFACE DISCONTINUITIES SHALL NOT EXCEED ½" (13) MAX. VERTICAL DISCONTINUITIES BETWEEN ¼" (6.4) AND ½" (13) MAX. SHALL BE BEVELED 1:2 MINIMUM APPLIED ACROSS THE ENTIRE LEVEL CHANGE.
5. DIAGONAL SIDEWALK RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES. DIAGONAL AND PERPENDICULAR RAMPS SHALL HAVE THE RAMP CUT PERPENDICULAR TO THE TANGENT OF THE CURB RADIUS FOR THE DESIGNATED ACCESSIBLE ROUTE. BOTH LONGITUDINAL SIDES OF THE RAMP SHOULD BE THE SAME LENGTH. SKEWED RAMPS SHOULD BE AVOIDED. FLARES ARE NOT CONSIDERED PART OF PEDESTRIAN ACCESS ROUTE. DIAGONAL RAMPS SHOULD NOT BE INSTALLED WHERE CURB RADII IS LESS THAN 20'(6096).
6. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION OR CONTRACTION JOINT. 8.3% MAXIMUM SLOPE MAY NOT BE ACHIEVABLE DUE TO EXISTING SIDEWALK GRADE. IN RECOGNITION OF THIS, A LIMIT OF 15' (4572) FOR REMOVAL SHALL BE USED UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER. SAW CUT REQUIRED FOR DUMMY JOINTS SHALL BE INCLUDED IN THE COST OF "CONCRETE SIDEWALK RAMP" OR "CONCRETE SIDEWALK".
7. EXPANSION JOINTS IN CONCRETE SHALL MATCH THOSE IN ADJACENT SIDEWALKS BUT IN NO CASE SHALL THE SPACING BETWEEN EXPANSION JOINTS EXCEED 12' (3658) UNLESS OTHERWISE NOTED.
8. CONCRETE SIDEWALK RAMPS, SHALL BE PAID FOR UNDER THE ITEM "CONCRETE SIDEWALK RAMP", AS DEFINED BY THE CONSTRUCTION LIMITS ON THE PLANS AND SHALL BE FIELD VERIFIED.
9. SIDEWALK RAMPS SHALL BE CONSTRUCTED WITH THE TOE AT THE GUTTER CAST INTEGRALLY WITH RAMP UNLESS DIRECTED OTHERWISE BY THE ENGINEER (SEE TYPICAL SECTION ON SHEET 3). CURB REMOVAL AND CAST IN PLACE CURBING REQUIRED FOR THE RAMP, SHALL BE INCLUDED WITH PAY ITEM "CONCRETE SIDEWALK RAMP". CURBING OUTSIDE LIMITS OF RAMP OR LANDING SHOWN ON SHEET 3 SHALL BE CONSTRUCTED AND PAID FOR IN ACCORDANCE WITH CONNECTICUT STANDARD SPECIFICATIONS.
10. PREFERRED LOCATION TO INSTALL DETECTABLE WARNING STRIP SHALL BE 6" (152) FROM THE EDGE OF ROAD ALONG THE FULL WIDTH OF THE RAMP. FOR ALTERNATE LOCATIONS, REFER TO DETECTABLE WARNING PLACEMENT DETAILS ON SHEET 4.
11. TO PERMIT WHEELCHAIR WHEELS TO ROLL BETWEEN DOMES, ALIGN DOMES ON A SQUARE GRID IN THE DIRECTION OF RUNNING SLOPE (PERPENDICULAR TO CURB OR SLOPE BREAK). THE TRANSITION FROM RAMP TO GUTTER SHALL BE FLUSH WITHOUT A LIP.
12. WHERE COMMERCIAL DRIVEWAYS ARE PROVIDED WITH TRAFFIC SIGNALS AND THE SIDEWALK IS CONTINUOUS THROUGH DRIVEWAY, DETECTABLE WARNINGS ARE REQUIRED AT THE JUNCTION BETWEEN THE PEDESTRIAN ROUTE AND DRIVEWAY.
13. CONSTRUCT A SIDEWALK CURB WHEN THERE IS INSUFFICIENT BUFFER AVAILABLE TO GRADE OR WHEN CALLED FOR IN PLANS. PAID FOR WITH SIDEWALK RAMP WHEN REQUIRED FOR RAMP.
14. THE TOP AND BOTTOM OF RAMPS SHOULD BE PROVIDED WITH A 4' x 4' (1219 x 1219) MINIMUM LEVEL LANDING AREA WITH A CROSS SLOPE LESS THAN OR EQUAL TO 2% IN ANY DIRECTION.
15. UTILITY POLES, LUMINAIRE, PEDESTRIAN OR SIGNAL POLES, GRATES, ACCESS COVERS, AND OTHER APPURTENANCES SHALL NOT BE LOCATED ON RAMPS, LANDINGS, BLENDED TRANSITIONS, AND @ GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.
16. APPROACH SIDEWALK WIDTHS, GRASS STRIP OR UTILITY STRIP WIDTHS MAY VARY.
17. APPROACH SIDEWALK AND LANDING CROSS SLOPE SHALL NOT EXCEED 2%.
18. THE RUNNING OR CROSS SLOPES ON LANDINGS AT MID BLOCK CROSSING MAY BE WARPED TO MEET STREET OR HIGHWAY GRADE.
19. FOR PERPENDICULAR CURB RAMPS A MIN. 4'(1.2m) x 4'(1.2m) LEVEL LANDING SHALL BE PROVIDED AT THE TOP OF CURB RAMP. WHERE THE LEVEL LANDING IS RESTRICTED AT THE BACK OF SIDEWALK THE LEVEL LANDING SHALL BE 4'(1.2m) x 5'(1.5m) WITH THE 5'(1.5m) DIMENSION PROVIDED IN THE DIRECTION OF THE RAMP RUN.
20. FOR PARALLEL CURB RAMPS, A MIN. 4'(1.2m) x 4'(1.2m) LEVEL LANDING SHALL BE PROVIDED AT THE BOTTOM OF CURB RAMP. IF THE LEVEL LANDING IS RESTRICTED ON 2 OR MORE SIDES, THE LEVEL LANDING SHALL BE 4'(1.2m)x 5'(1.5m) WITH THE 5' (1.5m) DIMENSION PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.
21. WHEN WIDTH OF SIDEWALK IS ≥48" AND A PERPENDICULAR SIDEWALK RAMP IS INSTALLED, THE FLARED SIDES SHALL BE 10% MAX. IF WIDTH OF SIDEWALK IS <48" THE FLARED SIDES MUST NOT EXCEED 8.33% (12:1).
22. SHADED AREAS ARE TYPICAL PAY LIMITS FOR CONCRETE SIDEWALK RAMP BUT, MAY VARY AS DIRECTED BY THE ENGINEER.
23. OPTIONAL RAMP, WHEN REQUIRED, SHALL BE PAID FOR AS PART OF CONCRETE SIDEWALK RAMP.



DUAL PERPENDICULAR SIDEWALK RAMPS (TYPE 3a)
WITH UTILITY / GRASS STRIP

SEE NOTE 20

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
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-	-	-	-
1	7/13	Created new sheets (4 total).	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/17/2014

DESIGNER/DRAFTER: **MGB/EMK**
CHECKED BY: **LLF**

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\SIDEWALK RAMP 1_GD.dgn

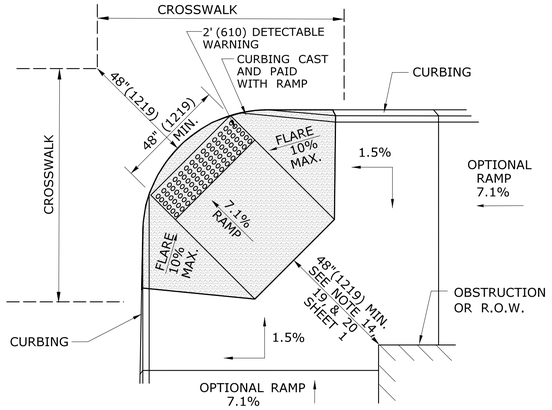
SIGNATURE/ BLOCK: **OFFICE OF ENGINEERING**
APPROVED BY:

PROJECT TITLE: **INSTALLATION & REVISIONS OF TRAFFIC CONTROL SIGNALS IN DISTRICTS 1 & 2**

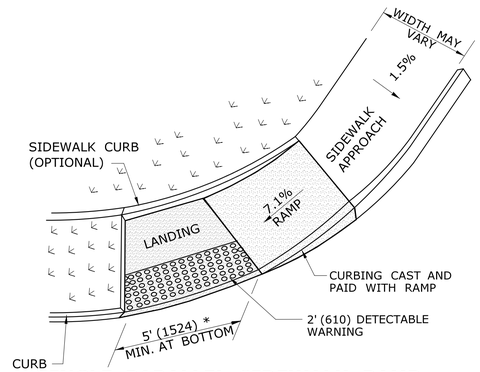
TOWN: **VARIOUS**

DRAWING TITLE: **SIDEWALK RAMPS SHEET 1**

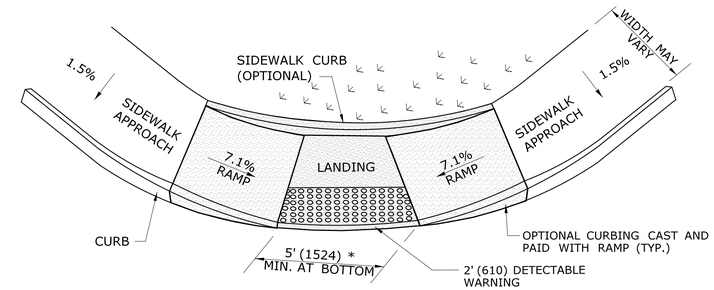
PROJECT NO. **0172-0435 0172-0436**
DRAWING NO. **GS-05**
SHEET NO. **03.23**



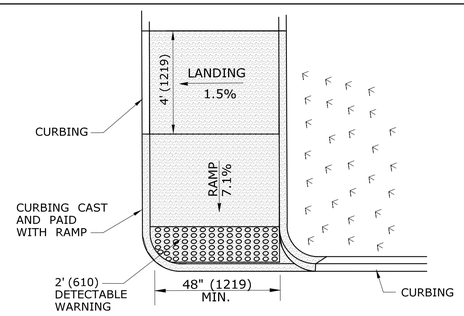
DIAGONAL SIDEWALK RAMP (TYPE 4)
W/LANDING AT TOP



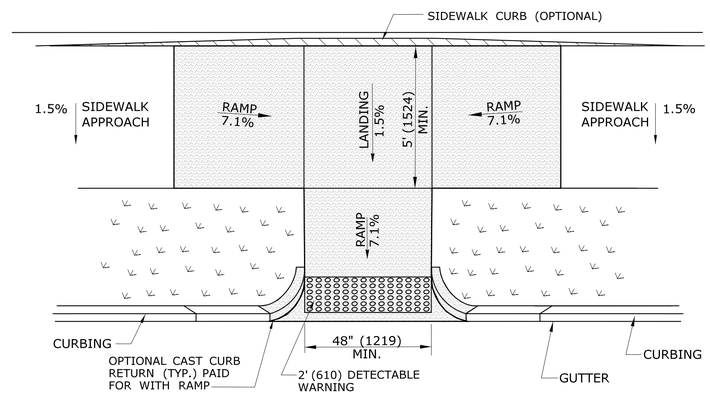
SINGLE PARALLEL SIDEWALK RAMP
W/LANDING AT BOTTOM ON
CORNER (TYPE 4c)
* SEE NOTE 20 SHEET 1



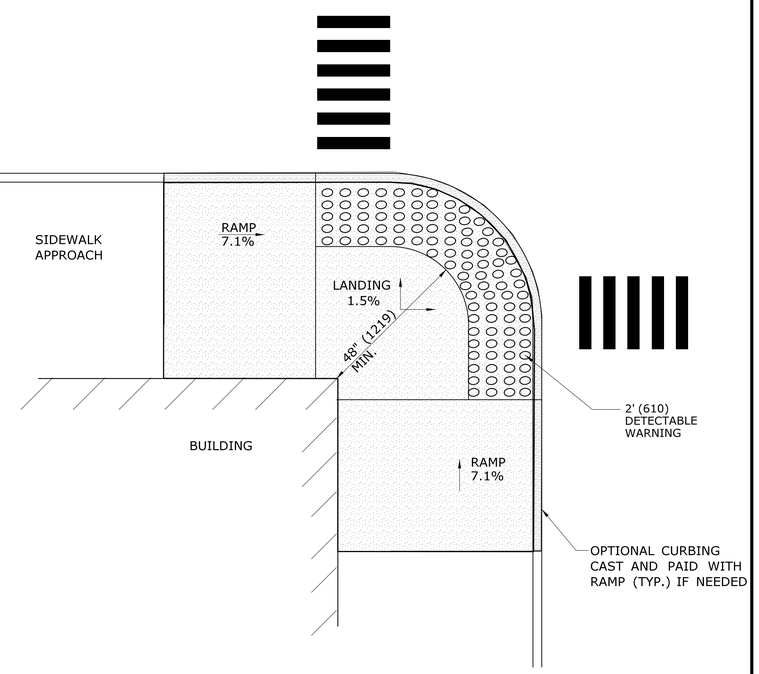
DOUBLE PARALLEL SIDEWALK RAMP
W/LANDING AT BOTTOM ON CORNER (TYPE 4f)
* SEE NOTE 20 SHEET 1



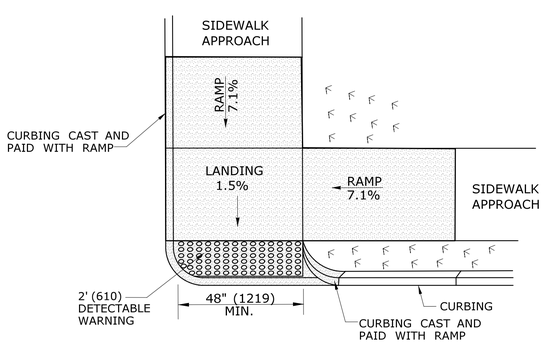
SINGLE DIRECTION
PERPENDICULAR SIDEWALK RAMP
NO / UTILITY GRASS STRIP
(TYPE 4a)



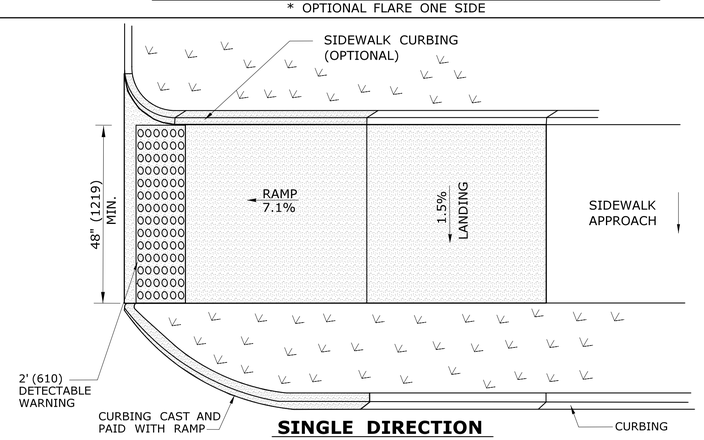
PARALLEL/PERPENDICULAR SIDEWALK RAMP
COMBINATION W/ CURB RETURNS (TYPE 4d)
* OPTIONAL FLARE ONE SIDE



RESTRICTED CONDITION
DIAGONAL SIDEWALK RAMP
(TYPE 4g)



DOUBLE DIRECTION
PARALLEL SIDEWALK RAMP
NO / UTILITY GRASS STRIP
(TYPE 4b)
SEE NOTE 20 SHEET 1



SINGLE DIRECTION
PERPENDICULAR SIDEWALK RAMP
W/ UTILITY GRASS STRIP (TYPE 4e)
REFER TO DETECTABLE WARNING PLACEMENT ON SHEET 4

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 5/27/2014

DESIGNER/DRAFTER: MGB/EMK
CHECKED BY: LLF

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\SIDEWALK RAMP 2_GD.dgn

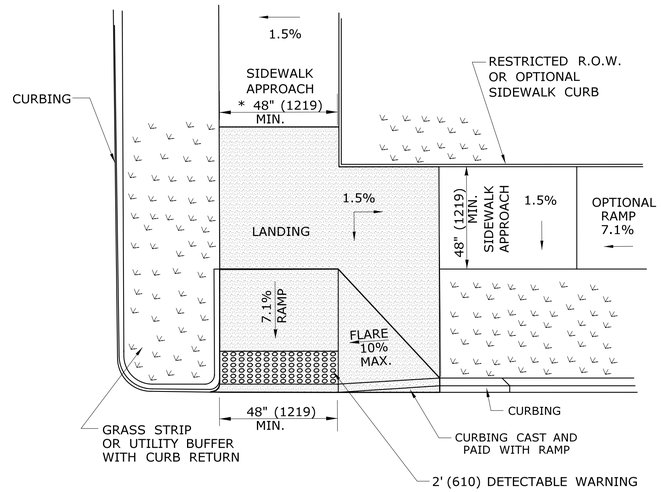
SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE: INSTALLATION & REVISIONS OF TRAFFIC CONTROL SIGNALS IN DISTRICTS 1 & 2

TOWN: VARIOUS

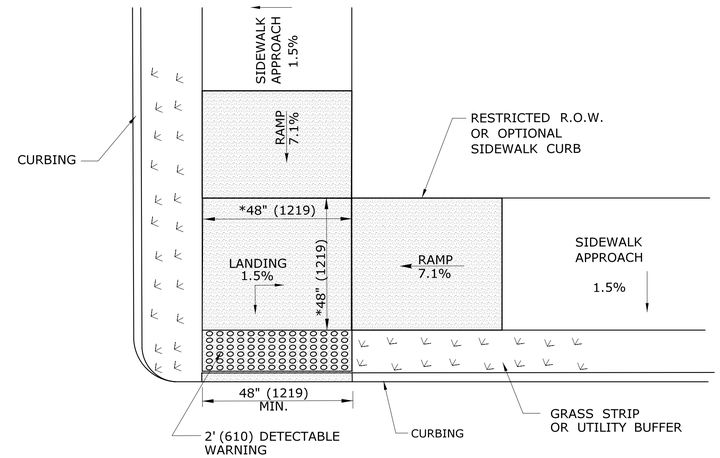
DRAWING TITLE: SIDEWALK RAMP SHEET 2

PROJECT NO. 0172-0435 0172-0436
DRAWING NO. GS-06
SHEET NO. 03.24



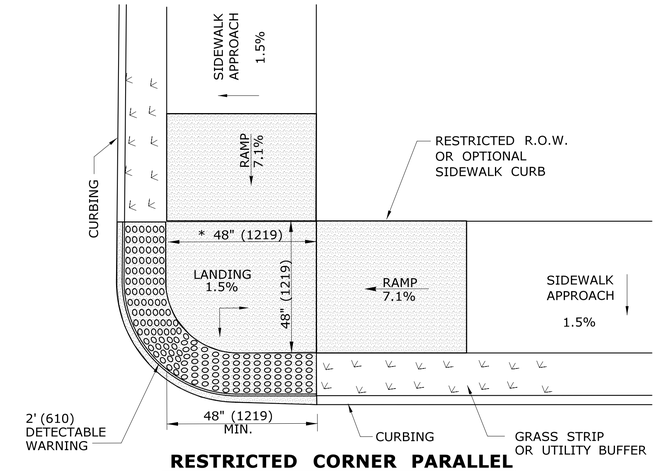
RESTRICTED CORNER PERPENDICULAR SIDEWALK RAMP (TYPE 5)

* SEE NOTE 19 SHEET 1



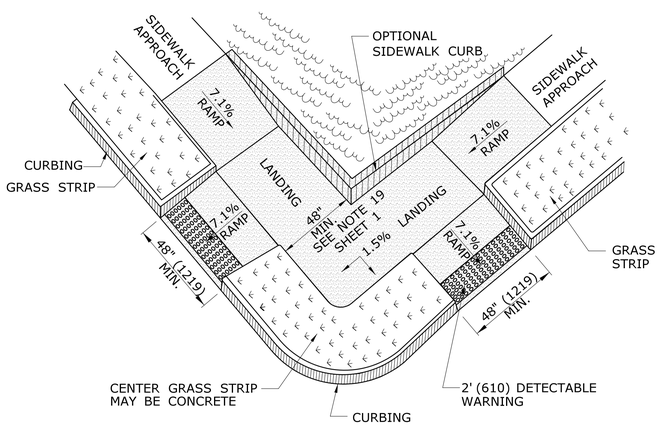
RESTRICTED CORNER PARALLEL DOUBLE SIDEWALK RAMPS W/CENTER LANDING AND UTILITY GRASS STRIP (TYPE 5a)

* SEE NOTE 20 SHEET 1



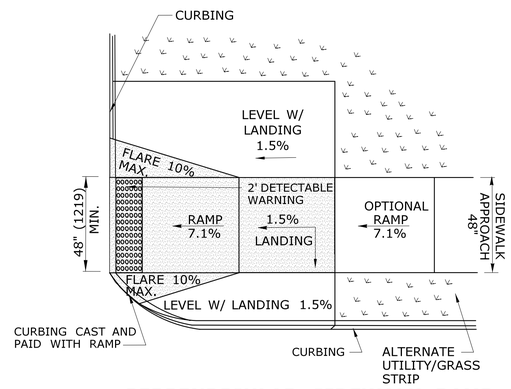
RESTRICTED CORNER PARALLEL SIDEWALK RAMPS W/ CENTER LANDING TWO DIRECTION AND UTILITY GRASS STRIP (TYPE 5b)

* SEE NOTE 20 SHEET 1

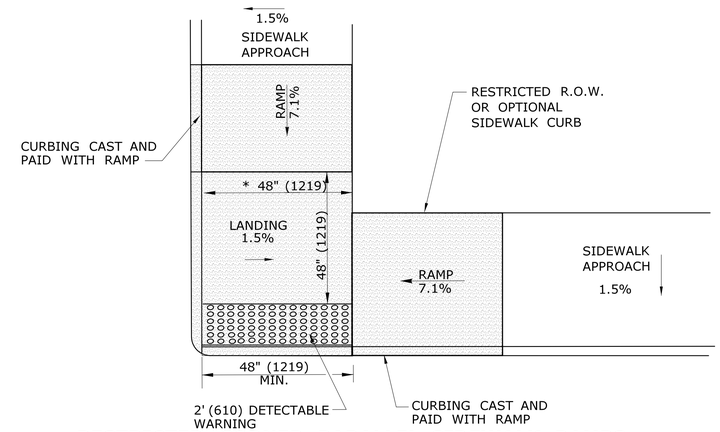


COMBINATION SIDEWALK RAMP (TYPE 6)

* SEE NOTE 19 SHEET 1

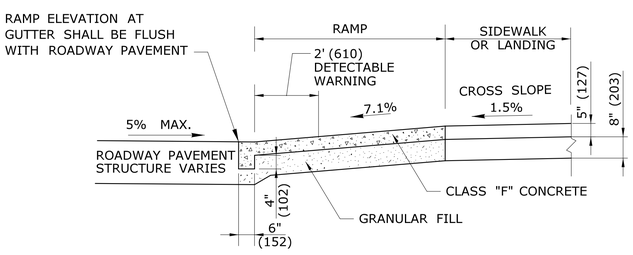


PERPENDICULAR SIDEWALK RAMP ONE DIRECTION ON CORNER (TYPE 6a)



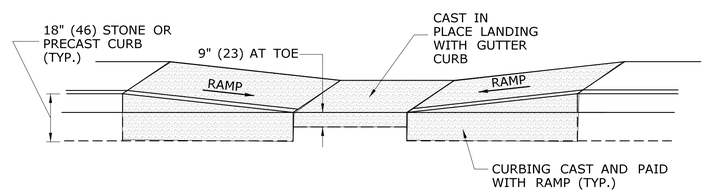
RESTRICTED CORNER PARALLEL SIDEWALK RAMPS W/CENTER LANDING NO GRASS STRIP (TYPE 5c)

* SEE NOTE 20 SHEET 1

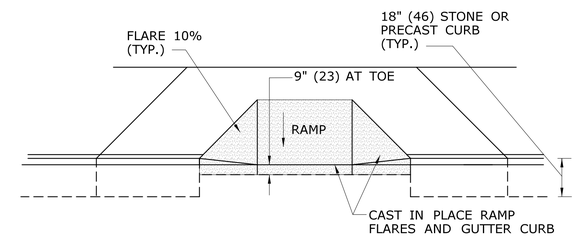


TYPICAL SECTION THRU SIDEWALK RAMP

SEE NOTE 2 AND 17 SHEET 1



TYPICAL ELEVATION PARALLEL SIDEWALK RAMP WITH CAST IN PLACE GUTTER



TYPICAL ELEVATION PERPENDICULAR SIDEWALK RAMP WITH CAST IN PLACE GUTTER

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 5/27/2014

DESIGNER/DRAFTER: MGB/EMK
CHECKED BY: LLF

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ..\SIDEWALK RAMP 3_GD.dgn

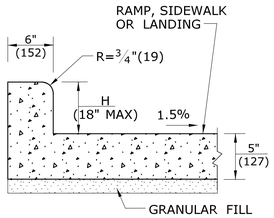
SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE: INSTALLATION & REVISIONS OF TRAFFIC CONTROL SIGNALS IN DISTRICTS 1 & 2

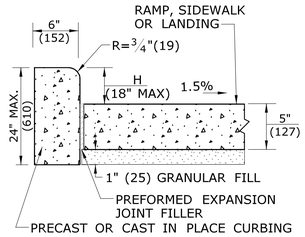
TOWN: VARIOUS

DRAWING TITLE: SIDEWALK RAMP SHEET 3

PROJECT NO. 0172-0435 0172-0436
DRAWING NO. GS-07
SHEET NO. 03.25

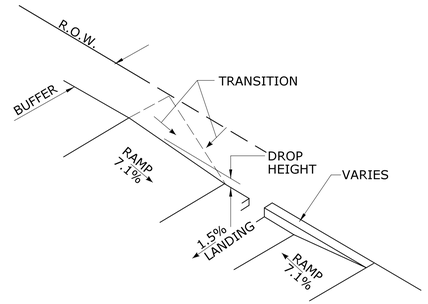


MONOLITHIC CAST CURB

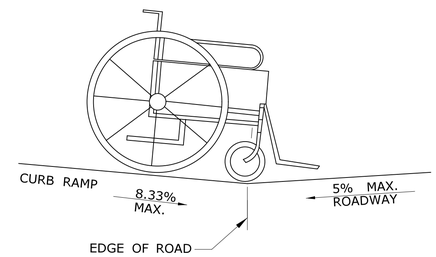


SEPARATELY CAST CURB

SIDEWALK CURB OPTIONS AT BACK OF SIDEWALK



BACK OF SIDEWALK CURB OR BUFFER TRANSITION



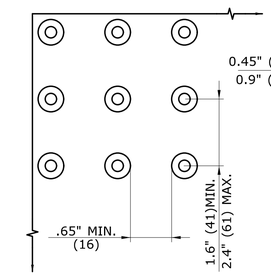
DETAIL 1

SEE GRADE CHANGE AT ROADWAY INTERFACE

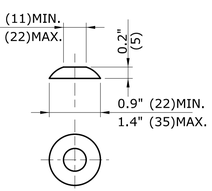
SEE NOTE 1 SHEET HW-921 02a

GENERAL NOTES:

1. RAMPED MEDIANS SHALL HAVE A CURB RAMP AT EITHER END AND LEVEL LANDING A MINIMUM OF 5' x 5' (1.5m x 1.5m) IN BETWEEN. CUT-THROUGH MEDIANS SHALL BE A MINIMUM OF 6' (1.8m) LONG AND 5' (1.5m) WIDE. FOR ALL MEDIANS, CUT-THROUGH OR RAMPED, A 2' (610) STRIP OF DETECTABLE WARNINGS SHALL BE INSTALLED AT THE ENTRANCE AND EXIT.
2. SEE GENERAL NOTES ON SHEET 1.

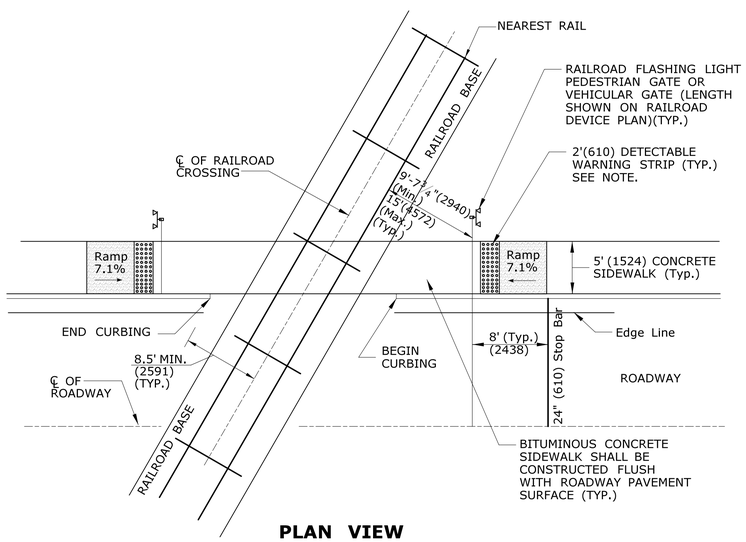


DOME SPACING

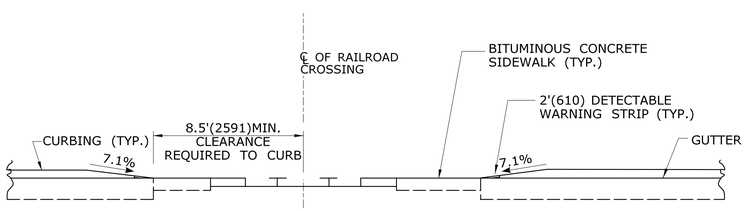


DOME SECTION

STANDARD DOME ON DETECTABLE WARNING TILES



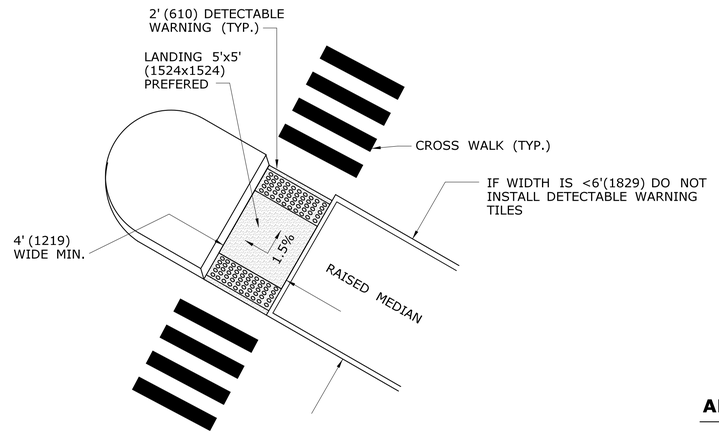
PLAN VIEW



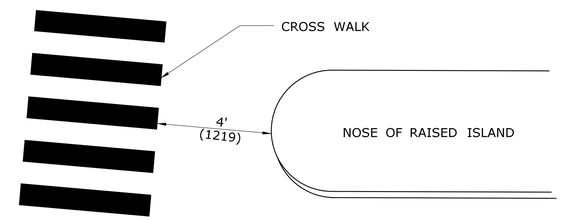
ELEVATION VIEW

DETECTABLE WARNINGS AT RAILROAD CROSSING

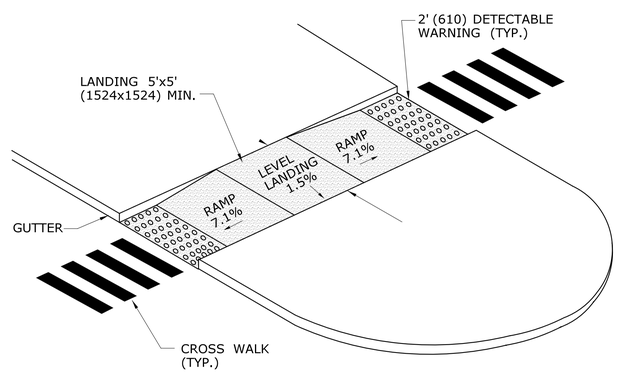
NOTE: WHEN NO GATE IS PRESENT, INSTALL DETECTABLE WARNING SURFACE 12' (3.6m) FROM THE NEAREST RAIL. IF GATE IS PRESENT, INSTALL DETECTABLE WARNING 2' (610) PRIOR TO GATE. THE ROWS OF TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL BE INSTALLED PARALLEL WITH THE DIRECTION OF PEDESTRIAN TRAVEL.



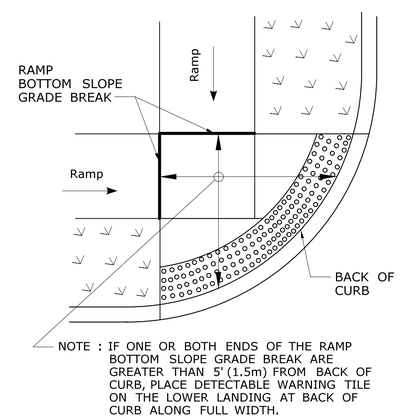
CUT-THROUGH MEDIAN ISLAND



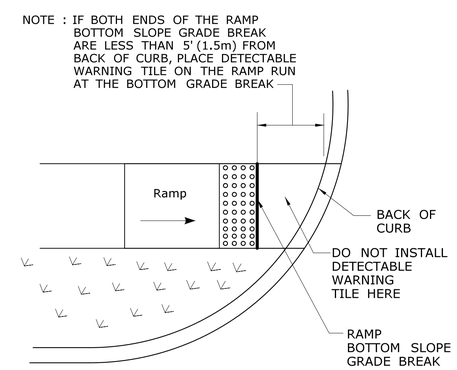
ALTERNATE CROSSWALK WITH MEDIAN ISLAND PULLED BACK



RAISED MEDIAN ISLAND WITH LANDING AND RAMPS



DETECTABLE WARNING PLACEMENT DETAIL 1



DETECTABLE WARNING PLACEMENT DETAIL 2

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 5/27/2014

DESIGNER/DRAFTER: **MGB/EMK**
CHECKED BY: **LLF**

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\SIDEWALK RAMP 4_GD.dgn

SIGNATURE/BLOCK: **OFFICE OF ENGINEERING**
APPROVED BY:

PROJECT TITLE: **INSTALLATION & REVISIONS OF TRAFFIC CONTROL SIGNALS IN DISTRICTS 1 & 2**

TOWN: **VARIOUS**

DRAWING TITLE: **SIDEWALK RAMP SHEET 4**

PROJECT NO. 0172-0435 0172-0436
DRAWING NO. GS-08
SHEET NO. 03.26