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	
STONE WALL	GRAPE ARBOR	HOUSE / BARN
CONC. WALK	RETAINING WALL	BUILDINGS
WALK - TAR, GRAVEL or EARTH	OPEN DITCH DRY	RIVERS, LAKES,FLOWING STREAMS, ETC.
NAME of CO.		
EXISTING R.R. TRACKS	TELEGRAPH, TELEPHONE or ELECTRIC LIGHT POLES	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-01 -TCS-13	03.02-03.14	TRAFFIC CONTROL SIGNAL PLANS
GS-01 -GS-06	03.15-03.20	TRAFFIC GUIDE SHEETS
GS-07 -GS-10	03.21-03.24	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.

Tracy L. Fogarty
Tracy L. Fogarty, P.E.
2018.06.19 15:58:09-04'00'

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: 6/19/2018

DESIGNER/DRAFTER: C. SYLVESTRE
CHECKED BY: Y. SAYKIN
SCALE NONE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\TR_MSH_SUBSET_CVR_0171_0401_0402.dgn

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

PROJECT TITLE:
INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1

TOWN: VARIOUS

DRAWING TITLE:
TRAFFIC - LEGENDS & LIST OF DRAWINGS

PROJECT NO. 0171-0401 0171-0402
DRAWING NO. TR-01
SHEET NO. 03.01

MOVEMENT DIAGRAM

	NTOR	PHASE 1 PRE-EMPT 1	PHASE 2	PHASE 3	PHASE 4 PRE-EMPT 2	PHASE 5	PHASE 6 PRE-EMPT 1	PHASE 7	PHASE 8	
	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	←R ↖Y R	R 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	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	Y	R R R	G Y 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			
P	OFF	←DW→	DW	WØ ←DW→	DW		←DW→			
			←YIELD PT.				←YIELD PT.			

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
MIN GRN	5	15	7 Ⓘ	9	5	15			
WALK			14 Ⓘ ACCESSIBLE PEDESTRIAN SIGNAL						
PED CLR									
VEH EXT	1.5	2.5		1.5	1.5	2.5			
MAX 1	6	22		18	6	22			
MAX 2	6	22		18	6	22			
YELLOW	3.0	4.0	4.0	3.0	3.0	4.0			
RED	1.0	1.0	0	2.0	1.0	1.0			
ADD INIT									
MAX INIT			COUNTDOWN PEDESTRIAN SIGNAL						
TBR									
TTR									
MIN GAP									
MODE	NON-LOCK	MIN-RECALL	NON-LOCK	NON-LOCK	NON-LOCK	MIN-RECALL	OFF	OFF	OFF
INIT START		THIS PHASE				THIS PHASE			

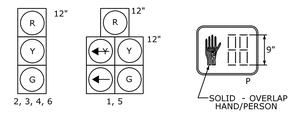
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
Ⓘ PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.
Ⓘ COUNTDOWN ONLY DURING FLASHING PEDESTRIAN CHANGE INTERNAL
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.
ARTERY PHASE LOOPS TO BE NON-ACTUATING DURING COORDINATION.
SIGNAL MAY DOUBLE CYCLE WHEN PHASE 3 IS CALLED DURING PATTERN 1
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.

OFFICE RECORD

REV #	TIR #	SM #	SIGNAL REVISED:
REPLACED SIGNAL EQUIPMENT AND REVISED PHASING AND TIMING UNDER PROJECT 0171-0401			

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS

ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH RETRO- REFLECTIVE YELLOW BORDER

CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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 ALL PEDESTAL FOUNDATIONS ADJACENT TO LANDING AREA.

(E) CONSTRUCT MODIFIED TYPE 4F SIDEWALK RAMP PER GUIDE SHEET.

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

(G) CONSTRUCT MODIFIED TYPE 4D SIDEWALK RAMP PER GUIDE SHEET.

(H) CONSTRUCT TYPE 4C SIDEWALK RAMP PER GUIDE SHEET.

(I) REMOVE EXISTING CONCRETE SIDEWALK RAMP, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING, AND APPROXIMATELY 31 FEET BITUMINOUS CURB. WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, 0950013, AND 0815001 RESPSECTIVELY.

(J) DIG TEST PIT IN THIS VICINITY TO CONFIRM LOCATION OF UNDERGROUND UTILITIES.

(K) TRIM TREE BRANCHES TO INSTALL MAST ARM. WORK TO BE PAID UNDER ITEM NO. 0952001A

(L) CONSTRUCT LANDING AREA WITH CURBING PER GUIDE SHEET.

(M) INSTALL MAST ARM FOUNDATIONS ADJACENT TO LANDING AREA.

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

(X) INSTALL CAST IRON HANDHOLE COVERS.
REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SEPECIAL PROVISION.
COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.

(Q) IP VIDEO DETECTOR MOUNTED ON MAST ARM ID# 079-210-C.

(Y) IP VIDEO DETECTOR MOUNTED ON MAST ARM ID# 079-210-A.

(Z) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA MOUNTED ON MAST ARM ID# 079-210-A.
VIDEO DETECTION CAMERAS AND DETECTOR ZONE LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR THEIR DESIGNATED REPRESENTATIVE. ALL CAMERA CABLES TO RUN CONTINUOUS BETWEEN EACH CAMERA ASSEMBLY AND THE VIDEO DETECTION PROCESSOR IN THE CONTROLLER CABINET.

ALL MAST ARM MOUNTED SIGNS ARE FIXED MOUNTED

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.

EMERGENCY PRE-EMPTION NOTES

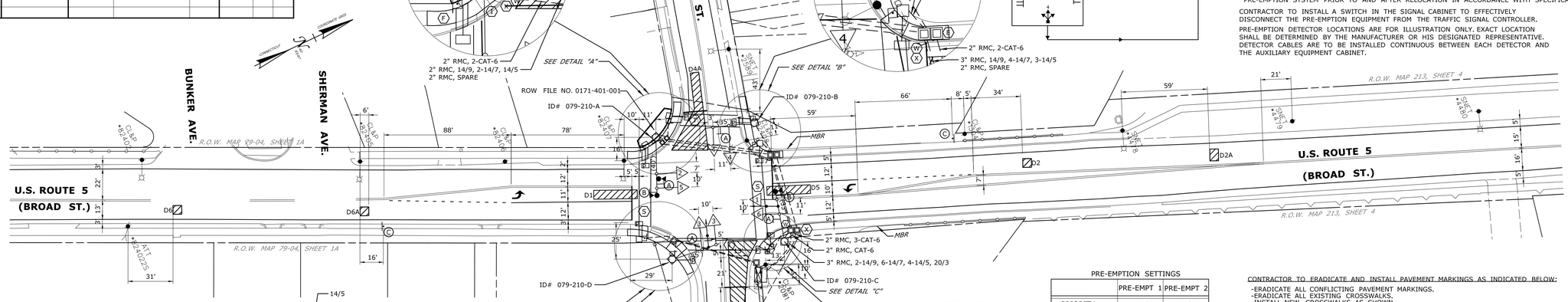
RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW SPAN. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS

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 LOCATION 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	SYSTEM LOC MASTER 079-207	COORDINATION TYPE: TC/TBC PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
D1	6'X25'	VIDEO 360	PRESENCE	079-209	FLASH	NONE				
D2	6'X6'	VIDEO IP	PRESENCE	079-231	MAX 1	ALL OTHER TIMES				
D2A	8'X6'	VIDEO IP	PRESENCE	079-210	MAX 2	FUTURE				
D4	SEE PLAN	VIDEO 360	PRESENCE	079-245	PATTERN 1	ALL OTHER TIMES		70"	34	49
D4A	6'X25'	VIDEO 360	PRESENCE		PATTERN 2	0700-0815	M-F	90"	39	43
D5	6'X25'	VIDEO 360	PRESENCE		PATTERN 3	FUTURE				
D6	6'X6'	VIDEO IP	PRESENCE		FREE	2300-0600	M-F			
D6A	6'X6'	VIDEO IP	PRESENCE			1400-1500				



SIGN LEGEND:

(A) SPAN MOUNT 31-0816

(B) SPAN MOUNT 31-0183

(C) INSTALL 31-0282

MAST ARM INFORMATION

ID #	APPROX. ARM ATTACHMENT HEIGHT	ARM LENGTH	CAMERA BRACKET LENGTH	YEAR INSTALLED
079-210-A	18'-10"	40'	10'-0" VER 6'-6" VER	
079-210-B	17'-1"	35'		
079-210-C	16'-3"	35'	10' VER	
079-210-D	17'-11"	35'		

NOTES:

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON U.S. ROUTE 5 (BROAD ST.) AND ALL STOP BARS.

CITY TO MAINTAIN SIGNS AND ALL OTHER PAVEMENT MARKINGS ON BRITANNIA STREET AND WESTFIELD ROAD.

PREEMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE CITY OF MERIDEN.

(S) BAR TYPE CROSSWALK - STATE MAINTAINED.

(T) BAR TYPE CROSSWALK - CITY MAINTAINED.

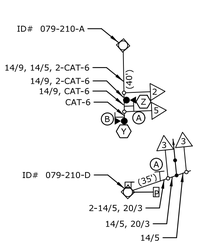
(W) 30" X 30" HANDHOLE.

(Q) IP VIDEO DETECTOR MOUNTED MOUNTED ON MAST ARM ID# 079-210-C.

(Y) IP VIDEO DETECTOR MOUNTED MOUNTED ON MAST ARM ID# 079-210-A.

(Z) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA MOUNTED ON MAST ARM ID# 079-210-A.

(X) INSTALL CAST IRON HANDHOLE COVERS.



ELECTRICAL CALLOUTS FOR MAST ARMS

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.	14	14
HOLD GREEN	15	15
HOLD YELLOW	3	3
HOLD RED	1	2
HOLD PHASE	1 & 6	4
EXIT PHASE	2 & 6	1 & 5
EXIT CALL	NONE	NONE

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:
-ERADICATE ALL CONFLICTING PAVEMENT MARKINGS.
-ERADICATE ALL EXISTING CROSSWALKS.
-INSTALL NEW CROSSWALKS AS SHOWN.

ROUTE 5 NORTH LEG:
-ERADICATE 340 FEET OF EXISTING DOUBLE YELLOW CENTERLINE MEASURED FROM THE STOP BAR AND EXTENDING NORTH.
-ERADICATE STOP BAR, LANE LINES & LANE USE ARROWS.
-INSTALL YELLOW CENTERLINE, STOP BAR, EDGE LINES, LANE LINES & LANE USE ARROWS AS SHOWN.

ROUTE 5 SOUTH LEG:
-ERADICATE 170 FEET OF EXISTING DOUBLE YELLOW CENTERLINE MEASURED FROM THE STOP BAR AND EXTENDING SOUTH.
-ERADICATE STOP BAR, LANE LINES & LANE USE ARROWS.
-INSTALL YELLOW CENTERLINE, STOP BAR, EDGE LINES, LANE LINES & LANE USE ARROWS AS SHOWN.

BRITANNIA STREET:
-RE-INSTALL EXISTING STOP BAR.
-INSTALL EDGE LINES FOR BOTH DIRECTIONS AS SHOWN.

WESTFIELD ROAD:
-RE-INSTALL EXISTING STOP BAR.

2016 TRAFFIC COUNTS
AM (PM) PEAK HOUR

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	A. MERMELSTEIN	M. SIMON
DRAWN BY	A. MERMELSTEIN	M. SIMON
CHECKED BY	P. ONWUAZOR	R. POLINENI
SUBMITTED BY	G. PALMER	J. KULJIS
APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
APPROVED DATE	06/08/18	06/12/18

REV # INTERSECTION # 079-210

ENERGY BY CITY | ADDRESS #
MAINT LEVEL 1 | SERVICE POLE CL&P 2091
UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
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

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 5 (BROAD ST.) AT WESTFIELD RD. & BRITANNIA ST.

TOWN: MERIDEN
PROJECT NO. 0171-0401
DRAWING NO. TCS-01
DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN
SHEET NO. 03.02

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects\0171-0401-0402\Traffic\Slgnals\TR_MSH_079_210_011.dgn
SCALE 1" = 40'

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
NONE	2 1 4	3 2 1		5 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	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	Y	G	Y	G	G	Y	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					
WALK									
PED CLR									
VEH EXT	1.5	2.5		1.5					
MAX 1	28	29		19					
MAX 2	17	41		18					
YELLOW	3.0	4.0		3.0					
RED	1.0	2.0		1.0					
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE	MIN RECALL	MIN RECALL	OFF	NON-LOCK	OFF	OFF	OFF	OFF	OFF
INIT START		THIS PHASE							

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	6'X34'	VIDEO 360	PRESENCE
D2, D2A	6'X6'	VIDEO IP	PRESENCE
D2B, D2C	6'X6'	VIDEO IP	PRESENCE
D4	37'X6'	VIDEO 360	PRESENCE
D4A	SEE PLAN	VIDEO 360	PRESENCE

SYSTEM LOC
MASTER

COORDINATION TYPE: NONE

PROGRAM FUNCTION	TIME	DAYS
FLASH	NONE	
MAX 1	0600-1000	M-F
MAX 2	ALL OTHER TIME	DAILY

CYCLE	OFFSET SEC	OFFSET %

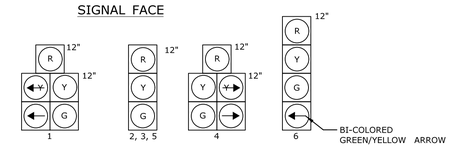
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
DETECTOR D1 TO ONLY EXTEND PHASE 1
PHASE 2 ON TO OMIT PHASE 1

OFFICE RECORD

REV # TIR # SM # N/A SIGNAL REVISED:
REPLACED ALL TRAFFIC SIGNAL EQUIPMENT UNDER PROJECT 0171-0402

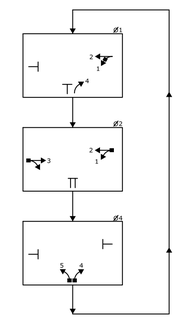
SIGNAL FACE

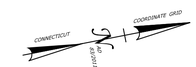


ALL INDICATIONS TO HAVE LED LAMPS

ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH RETRO-REFLECTIVE YELLOW BORDER

SIGNAL FACE 6 TO HAVE TUNNEL VISORS.





CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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.
REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

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

ESTIMATED LOAD ON UTILITY POLES: PROPOSED FRONTIER UTILITY POLE: 3663 lbs.

SPAN ATTACHMENT ON PROPOSED FRONTIER UTILITY POLE TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY EVERSOURCE AND FRONTIER:
* FRONTIER TO REPLACE SNET #813 WITH A 40' POLE.
* FRONTIER TO REPLACE SNET #812 WITH A 45' POLE.
* FRONTIER TO REPLACE SNET #811 WITH A 40' POLE.
* FRONTIER TO INSTALL PROPOSED 45' UTILITY POLE.
* EVERSOURCE TO RELOCATE THEIR FACILITIES TO NEW UTILITY POLES.

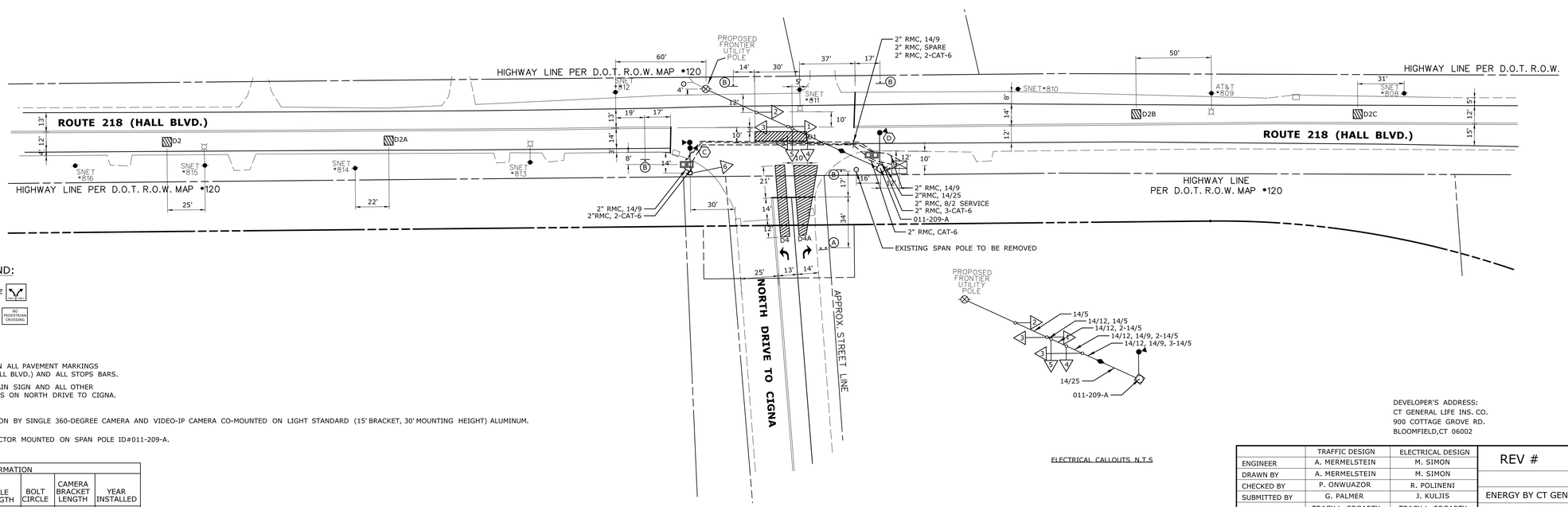
(C) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA AND VIDEO-IP CAMERA CO-MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(D) IP VIDEO DETECTOR MOUNTED ON SPAN POLE ID#011-209-A.

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.

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

-ERADICATE EXISTING STOP BARS ON ALL APPROACHES & INSTALL NEW 12" STOP BARS AS SHOWN.
-ERADICATE ALL CONFLICTING PAVEMENT MARKINGS THAT EXTEND BEYOND NEW STOP BARS.
-ERADICATE SECTION OF WESTERN EDGE LINE STARTING FROM SNET#12 AND EXTENDING NORTHERLY TO APPROXIMATELY 30 FEET NORTH OF AT&T #809.
-INSTALL SECTION OF WESTERN EDGE LINE STARTING FROM SNET#12 AND EXTENDING NORTHERLY AS SHOWN.
-ERADICATE EXISTING PAVEMENT ARROWS ON NORTH DRIVE TO CIGNA AND INSTALL NEW PAVEMENT ARROWS AS SHOWN.



SIGN LEGEND:

(A) INSTALL 31-0290Z

(B) INSTALL 31-1702 NO PEDESTRIAN CROSSING

NOTES:

STATE TO MAINTAIN ALL PAVEMENT MARKINGS ON ROUTE 218 (HALL BLVD.) AND ALL STOPS BARS.

OTHERS TO MAINTAIN SIGN AND ALL OTHER PAVEMENT MARKINGS ON NORTH DRIVE TO CIGNA.

(C) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA AND VIDEO-IP CAMERA CO-MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(D) IP VIDEO DETECTOR MOUNTED ON SPAN POLE ID#011-209-A.

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
011-209-A	32'	24"	20' HOR	

ELECTRICAL CALLOUTS N.T.S

DEVELOPER'S ADDRESS:
CT GENERAL LIFE INS. CO.
900 COTTAGE GROVE RD.
BLOOMFIELD,CT 06002

2016 TRAFFIC COUNTS

AM (PM) PEAK HOUR

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	A. MERMELSTEIN	M. SIMON
DRAWN BY	A. MERMELSTEIN	M. SIMON
CHECKED BY	P. ONWUAZOR	R. POLINENI
SUBMITTED BY	G. PALMER	J. KULJIS
APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
APPROVED DATE	06/08/18	06/12/18

REV # INTERSECTION # 011-209

ENERGY BY CT GENERAL LIFE INS. CO. | ADDRESS #
MAINT LEVEL 5 | SERVICE POLE - SNET #11
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 TRANSCEIVER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 218 (HALL BLVD.) AT
NORTH DRIVE TO CIGNA

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects$\0171-0401-0402\Traffic\Signals\TR_MSH_011_209_000.dgn

SCALE 1" = 40'

TOWN: BLOOMFIELD

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0171-0402
DRAWING NO. TCS-02
SHEET NO. 03.03

MOVEMENT DIAGRAM — RAILROAD PRE-EMPTION

NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7 TRACK CLEAR	PHASE 8 TRACK HOLD	
NONE									

FACE #	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	RAILROAD PRE-EMPTION FROM FAIL SAFE AND EMERG. FLASH
1	Y	← G	↓ G	G	G	Y	R	R	R	R	R	R	R							← G	↓ Y	R	R	R	R
2	Y	G	G	G	G	Y	R	R	R	R	R	R	R							G	Y	R	R	R	R
3	Y	R	R	R	G	Y	R	R	R	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	G	Y	R
5	R	R	R	R	R	R	R	R	R	R	G	Y	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	5	15	7 ①	9			33	15	
WALK			6 ②						
PED CLR									
VEH EXT	1.5	2.5		1.5					
MAX 1	15	23		10			33	*	
MAX 2	15	23		10			33	*	
YELLOW	3.5	3.5	4.0	3.0			4	3	
RED	1.0	1.8	0	1.6			2	2	
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE	MIN RECALL	MIN RECALL	NON-LOCK	NON-LOCK	OFF	OFF	ON/OMIT	ON/OMIT	
INIT START		THIS PHASE							

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	6'X23'	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	SEE PLAN	VIDEO 360	PRESENCE
D4A	6'X30'	VIDEO 360	PRESENCE

SYSTEM LOC MASTER

COORDINATION TYPE: NONE

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

PRE-EMPTION SETTINGS

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

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

PHASE 2 ON TO OMIT PHASE 1.

DETECTOR D1 TO ONLY EXTEND PHASE 1.

TECHNICAL NOTES CON'T.

* INTERVAL TO BE DETERMINED BY PRESENCE OF TRAIN.

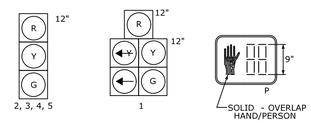
OFFICE RECORD

REV # TIR # 011-1806-01 SM # SIGNAL REVISED:

SIGNAL IN OPERATION

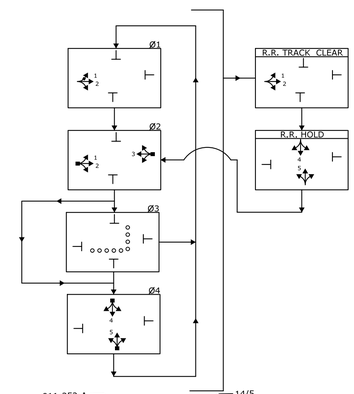
SIGNAL INSTALELD UNDER PROJECT NO. 0171-0402

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS

ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH RETRO-REFLECTIVE YELLOW BORDER



CONTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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.

EXCEPT FOR TEST PURPOSES, KEEP SIGNALS BAGGED PRIOR TO THE FUNCTIONAL INSPECTION (CURRENT EDITION OF THE STANDARD SPECIFICATIONS, SECT. 10.00.10). SIGNAL MAY BE PLACED IN FLASHING OPERATION NO MORE THAN 7 DAYS PRIOR TO PLACING IN NORMAL OPERATION.

INSTALL SIGN 41-0815 "NEW" AND 41-0836 (SIGNAL AHEAD SYMBOL) ON ALL APPROACHES APPROXIMATELY 400 FEET IN ADVANCE OF THE INTERSECTION. REMOVE SIGN ASSEMBLY AFTER 14 CALENDAR DAYS FROM THE DATE THE SIGNAL IS PLACED IN OPERATION.

INSTALL ALL PEDESTAL FOUNDATIONS ADJACENT TO THE LANDING AREA.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

INSTALL (2) RISERS ON CL&P #3263 UTILITY POLE.

INSTALL RISER ON CL&P #825 UTILITY POLE.

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

MESSENGER ATTACHMENT ON CL&P #3263, CL&P 3402 & CL&P 825 TO HAVE A MINIMUM CLEARANCE OF 40" BELOW SECONDARY & 12" ABOVE HIGHEST COMMUNICATIONS.

(P) COIL 15 FEET OF 14/5 CABLE IN THE HANDHOLE. CAP CONDUIT AND TAPE THE ENDS OF CABLE.

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

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

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

(H) CONSTRUCT 25 FEET OF BITUMINOUS CONCRETE LIP CURBING (ITEM# 0815001) AS SHOWN.

(I) INSTALL MAST ARM 011-252-C DIRECTLY BEHIND SIDEWALK AS SHOWN.

(J) EXTEND LANDING AREA TO THE MAST ARM FOUNDATION.

(K) IP VIDEO DETECTOR MOUNTED ON MAST ARM ID# 011-252-A.

(L) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA ON MAST ARM ID# 011-252-C.

(M) IP VIDEO DETECTOR MOUNTED ON MAST ARM ID# 011-252-C.

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.

MAST ARM NOTES

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

ALL MAST ARM MOUNTED SIGNS ARE FIXED MOUNTED

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

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

- INSTALL NEW 12" STOP BARS ON ALL APROACHES AS SHOWN, ERADICATE ALL CONFLICTING PAVEMENT MARKINGS THAT EXTEND BEYOND NEW STOP BARS.
- INSTALL 50 FEET OF DOUBLE YELLOW CENTERLINE (DYCL) ON SOUTH LEG OF CRESTVIEW DR. EXT.
- ERADICATE EXISTING CROSSWALK ON THE WEST LEG OF ROUTE 178.
- INSTALL CROSSWALK ON THE EAST LEG OF ROUTE 178 AS SHOWN.
- ERADICATE WHITE EDGE LINE ON THE NORTH SIDE OF ROUTE 178 AND INSTALL NEW AS SHOWN.

TECHNICAL NOTES

1. CONTROLLER SHALL IMMEDIATELY ADVANCE OUT OF ANY GREEN, INCLUDING MIN GREEN, INTO CLEARANCE INTERVALS GOING TO PRE-EMPTION, AND THEN GO DIRECTLY TO TRACK CLEAR PHASE 7 DURING RAILROAD PRE-EMPTION.
2. WHEN RAILROAD PRE-EMPTION OCCURS DURING THE CLEARANCE INTERVAL OF ANY PHASE, THE CONTROLLER TO DROP NEXT PHASE CALL, FINISH TIMING THE CLEARANCE INTERVALS GOING TO PRE-EMPTION, AND THEN GO TO TRACK CLEAR PHASE 7.
3. PEDESTRIAN TIMING TO IMMEDIATELY ADVANCE OUT OF THE WALK, THEN GO TO PED CLEARANCE INTERVAL THEN INTO CLEARANCE INTERVAL TIMINGS GOING TO PRE-EMPTION, THEN GO IMMEDIATELY TO TRACK CLEAR PHASE 7.
4. POLICE BOX MANUAL SHALL BE ABLE TO BE PRE-EMPTED BY RAILROAD CIRCUIT. THE POLICE BOX MANUAL CONTROL SHALL REMAIN INOPERATIVE FROM THE TIME A PRE-EMPTION CALL IS RECEIVED UNTIL THE CONTROLLER LEAVES THE TRACK HOLD PHASE (PHASE 8) AND RETURNS TO PHASE 2 GREEN.
5. ANY CHANGE IN THE CLEARANCE INTERVALS DENOTED ON THIS PLAN MAY REQUIRE A MODIFICATION OF THE RAILROAD TRACK CIRCUIT.
6. CONTROLLER TO REMAIN IN FLASHING OPERATION UPON RECEIPT OF A PRE-EMPTION CALL. RAILROAD DEVICES TO ACTUATE 26 SECONDS AFTER PRE-EMPTION CALL IS RECEIVED.
7. THE CONTROLLER SHALL BE A "MENU DRIVEN" TYPE WITH INTERNAL RAILROAD PRE-EMPTION.
8. CONTROLLER TO RETURN TO PHASE 2 AFTER RAILROAD PRE-EMPTION.

RAILROAD OPERATIONAL NOTES

RAILROAD PRE-EMPTION (NORMAL OPERATION)

1. TRAIN ENTERS TRACK CIRCUIT, RAILROAD PROVIDES IMMEDIATE PRE-EMPTION CIRCUIT TO THE TRAFFIC SIGNAL CONTROLLER CABINET.
2. THE TRAFFIC SIGNAL CONTROLLER IMMEDIATELY ADVANCES THE SEQUENCE TO THE TRACK CLEARANCE PHASE, (PHASE 7) VIA THE PROPER YELLOW AND RED CLEARANCE INTERVALS.
3. THE TRACK CLEARANCE PHASE (PHASE 7) WILL TERMINATE AND THE TRAFFIC SIGNAL CONTROLLER WILL HOLD IN THE PRE-EMPTION HOLD PHASE (PHASE 8).
4. THE RAILROAD FLASHING LIGHTS, AND BELLS WILL COMMENCE OPERATION 16 TO 24 SECONDS INTO PHASE 7, DEPENDING UPON WHAT INTERVAL THE TRAFFIC SIGNAL CONTROLLER IS IN WHEN THE PRE-EMPTION CALL IS RECEIVED. STANDARD RAILROAD TIMING FOR LIGHTS, BELLS, AND GATES WILL COMMENCE OPERATION A MINIMUM OF 29 SECONDS PRIOR TO THE TRAIN ENTERING THE CROSSING.
5. WHEN THE TRAIN HAS LEFT THE CROSSING AND THE TRACK CIRCUIT, THE RAILROAD DEVICES WILL DEACTIVATE AND THE TRAFFIC CONTROL SIGNAL SHALL RETURN TO NORMAL OPERATION, PHASE 2.

RAILROAD PRE-EMPTION (FAIL/SAFE FLASHING OPERATION)

1. TRAIN ENTERS TRACK CIRCUIT, RAILROAD PROVIDES IMMEDIATE PRE-EMPTION CIRCUIT TO THE TRAFFIC SIGNAL CONTROLLER CABINET.
2. THE TRAFFIC SIGNAL REMAINS IN NORMAL FLASHING OPERATION.
3. THE RAILROAD FLASHING LIGHTS WILL COMMENCE OPERATION 26 SECONDS AFTER THE PRE-EMPTION CALL IS RECEIVED. STANDARD RAILROAD TIMING FOR LIGHTS, BELLS, AND GATES WILL COMMENCE A MINIMUM OF 29 SECONDS PRIOR TO THE TRAIN ENTERING THE CROSSING.
4. WHEN THE TRAIN HAS LEFT THE CROSSING AND THE TRACK CIRCUIT, THE TRAFFIC CONTROL SIGNAL SHALL REMAIN IN FLASHING OPERATION.

NOTES:

STATE TO MAINTAIN PAVEMENT MARKINGS ON ROUTE 178 AND ALL STOP BARS.
TOWN TO MAINTAIN ALL OTHER PAVEMENT MARKINGS ON CRESTVIEW DRIVE.

(S) BAR TYPE CROSSWALK - STATE MAINTAINED

(T) BAR TYPE CROSSWALK - TOWN MAINTAINED

(K) IP VIDEO DETECTOR MOUNTED ON MAST ARM ID# 011-252-A.

(L) VIDEO DETECTION BY SINGLE 360-DEGREE CAMERA ON MAST ARM ID# 011-252-C.

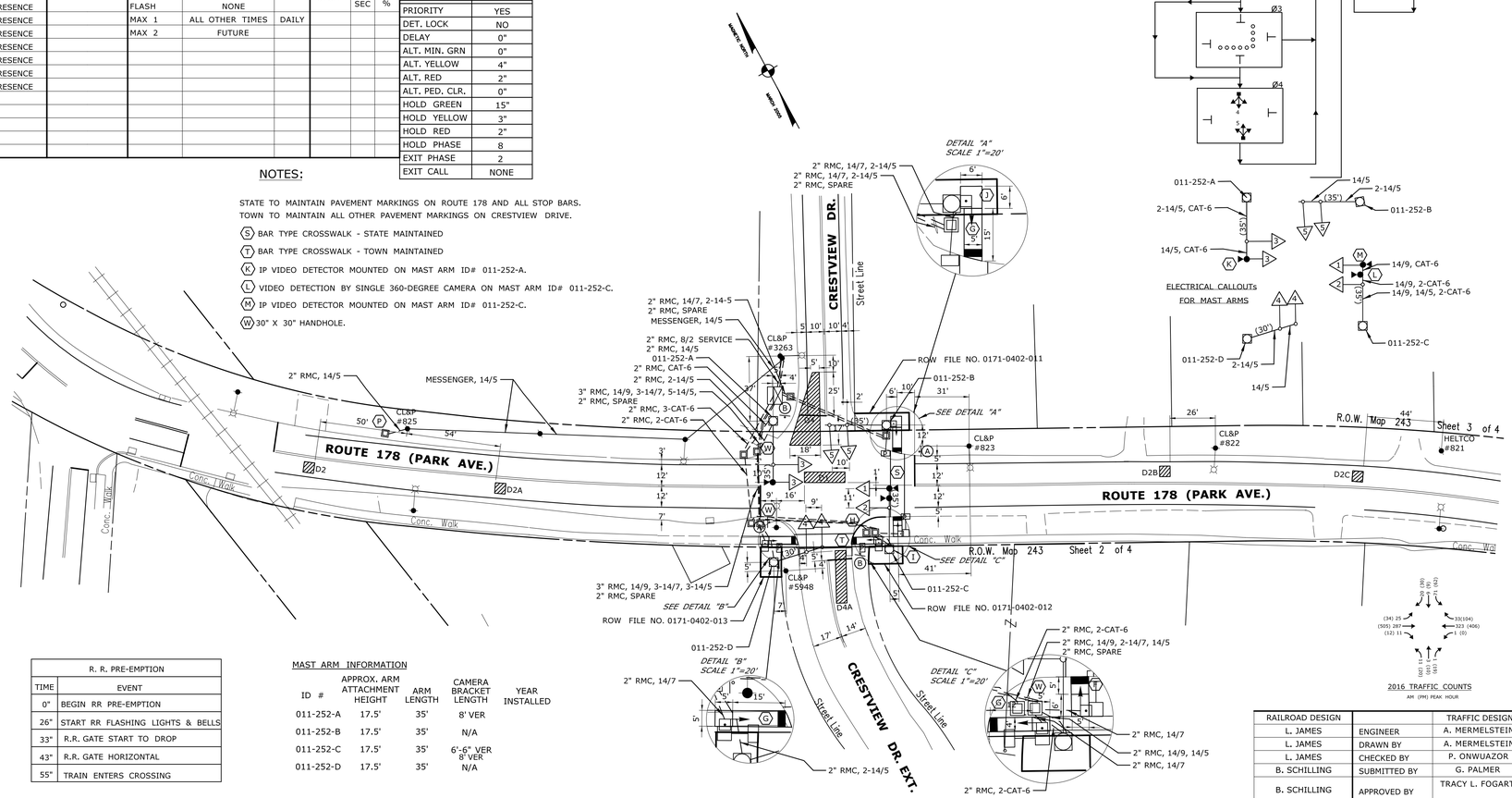
(M) IP VIDEO DETECTOR MOUNTED ON MAST ARM ID# 011-252-C.

(W) 30" X 30" HANDHOLE.

SIGN LEGEND:

(A) REMOVE

(B) REMOVE STOP



R. R. PRE-EMPTION	
TIME	EVENT
0"	BEGIN RR PRE-EMPTION
26"	START RR FLASHING LIGHTS & BELLS
33"	R.R. GATE START TO DROP
43"	R.R. GATE HORIZONTAL
55"	TRAIN ENTERS CROSSING

MAST ARM INFORMATION

ID #	APPROX. ARM ATTACHMENT HEIGHT	ARM LENGTH	CAMERA BRACKET LENGTH	YEAR INSTALLED
011-252-A	17.5'	35'	8' VER	
011-252-B	17.5'	35'	N/A	
011-252-C	17.5'	35'	6'-6" VER 8' VER	
011-252-D	17.5'	35'	N/A	

RAILROAD DESIGN		TRAFFIC DESIGN	ELECTRICAL DESIGN
L. JAMES	ENGINEER	A. MERMELSTEIN	M.SIMON
L. JAMES	DRAWN BY	A. MERMELSTEIN	M.CLOUTIER
L. JAMES	CHECKED BY	P. ONWUAZOR	R.POLINENI
B. SCHILLING	SUBMITTED BY	G. PALMER	J.KULJIS
B. SCHILLING	APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
06/12/18	APPROVED DATE	06/08/18	06/12/18

REV # INTERSECTION # 011-252

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 1	SERVICE POLE - CL&P #3263
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
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

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

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects\0171-0401-0402\Traffic\Signals\TR_MSH_011_252_000.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 178 (PARK AVE.) AT CRESTVIEW DR. & CRESTVIEW DR. EXT

SCALE 1" = 40'

TOWN: **BLOOMFIELD**

PROJECT NO. 0171-0402

DRAWING NO. TCS-03

DRAWING TITLE: **TRAFFIC CONTROL SIGNAL PLAN**

SHEET NO. **03.04**

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	
	1	2, 5		4, 4, 3		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
1	Y	◄R	◄Y R	R	R	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	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	Y	R	R	R	G	Y	R	R	R	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	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	5	15		7	5	15			
WALK			7 (1)						
PED CLR			22 (2)						
VEH EXT	1.5	2.5		1.5	1.5	2.5			
MAX 1	7	40		20	7	40			
MAX 2	7	40		20	7	40			
YELLOW	3	3.9	4.0	3	3	3.9			
RED	1.0	2.1	0	1.9	1.0	2.1			
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE	NON-LOCK	MIN RECALL	NON-LOCK	NON-LOCK	NON-LOCK	MIN RECALL	OFF	OFF	OFF
INIT START		THIS PHASE							

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

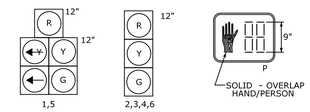
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
TIMINGS SHOWN REFLECT FREE OPERATION.
ACTUAL COORDINATION INFORMATION TO BE DETERMINED BY THE CLOSED LOOP LOCAL COORDINATION UNIT.
(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.
PHASE 3 TO CALL PHASE 3 AT LOC. #025-238.
PHASE 4 CHECK TO CALL PHASE 4 AT LOC. #025-238.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
ARTERY PHASE DETECTORS TO BE NON-ACTUATING DURING COORDINATION.

OFFICE RECORD

REV # TIR # SM # N/A SIGNAL REVISED:
REPLACED SIGNAL EQUIPMENT UNDER PROJECT NO. 0171-0402.

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS

ALL SIGNAL FACES TO HAVE BACKPLATES WITH RETRO-REFLECTIVE YELLOW BORDER

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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.

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

ESTIMATED LOAD ON UTILITY POLE: CL&P #4813: 5605 lbs.

INSTALL 3 STAND-OFF RISERS ON CL&P #4813 UTILITY POLE.

INSTALL STATE FURNISHED CONTROLLER.

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.

SPAN ATTACHMENT ON CL&P #4813 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 AND SCHEDULE THE FOLLOWING WORK BY EVERSOURCE:
* RAISE THE SECONDARY AND TRANSFORMERS ON POLES CL&P #4813 AND CL&P #4814 BY 2 FEET.

(I) CONSTRUCT TYPE 3A SIDEWALK RAMP PER DETAIL SHEETS AND EXTEND CONCRETE SIDEWALK TO MATCH TO EXISTING SIDEWALK FOR STRAIGHT PATH.

(J) CONSTRUCT TYPE 4A SIDEWALK RAMP PER DETAIL SHEETS.

(K) CONSTRUCT TYPE 5B SIDEWALK RAMP PER DETAIL SHEETS.

(L) CONSTRUCT TYPE 4E SIDEWALK RAMP PER DETAIL SHEETS.

INSTALL PEDESTAL FOUNDATIONS ADJACENT TO LANDING AREAS.

(M) INSTALL SPAN POLE FOUNDATION ADJACENT TO WALK AT NORTH EDGE AND WITHIN ROW.

(N) INSTALL SPAN POLE FOUNDATION ADJACENT TO WALK AT EAST EDGE AND WITHIN ROW.

(P) REMOVE EXISTING CONCRETE CURBING WHICH EXTENDS INTO CROSSWALK. REFER TO TYPICAL SECTION. WORK TO BE PAID UNDER 0202000, 0202509, 0202529, 0209001, 0212000, 0406171, 0406172, 0406236, 0406999, 0811001, AND 0945301.

(Q) REPLACE EXISTING CURBING WITH 12 FEET OF CONCRET CURBING. WORK TO BE PAID UNDER 0202533 AND 0811001 RESPECTIVELY.

(R) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA CO-MOUNTED WITH THERMAL VIDEO CAMERA ON SPAN POLE ID# 025-225-C.

(Y) VIDEO DETECTION BY USE OF THERMAL VIDEO CAMERA MOUNTED ON SPAN POLE ID# 025-225-A.

(Z) INSTALL AUXILIARY EQUIPMENT CABINET ON SPAN POLE ID# 025-225-A. INSTALL CAT6 REPEATER IN CABINET AND COIL MINIMUM 10' OF CAT6 CABLE IN CABINET.

(AA) EXTEND EXISTING CONDUIT AND 14/7 CABLE INTO NEW CABINET AND WIRE ACCORDINGLY. SEE TECH NOTES.

(AB) PULL EXISTING INTERCONNECT CABLE BACK TO UTILITY POLE CL&P 4813 AND RERUN THE CABLE TO NEW CONTROLLER CABINET VIA NEW CONDUIT.

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

EMERGENCY PRE-EMPTION NOTES:

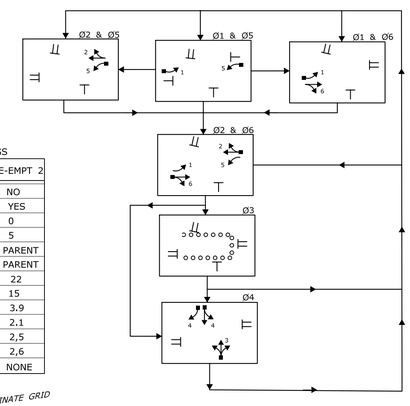
RELOCATE AUXILIARY EQUIPMENT CABINET FROM EXISTING CONTROLLER CABINET TO LEFT SIDE OF NEW CONTROLLER CABINET. RELOCATE EXISTING EMERGENCY PRE-EMPTION DETECTORS TO NEW SPAN. TEST PRE-EMPTION SYSTEM PRIOR TO AND AFTER RELOCATION IN ACCORDANCE WITH SPECIFICATIONS

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 ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

- ERADICATE EXISTING CROSSWALK AND INSTALL NEW CROSSWALKS AS SHOWN.
- ERADICATE EXISTING YELLOW CENTERLINE AND WHITE BROKEN LANE LINES ON THE ROUTE 10 NORTH LEG; INSTALL NEW 4" YELLOW CENTERLINE MARKINGS, 4" WHITE LANE LINES, AND 4" DOTTED WHITE EXTENSION LINE (2' LINE, 4' SPACING) AS SHOWN.
- ERADICATE EXISTING YELLOW CENTERLINE MARKINGS ON THE SOUTHBOUND SIDE OF THE ROUTE 10 SOUTH LEG.
- INSTALL 4" YELLOW CENTERLINE TO FILL BREAK ON THE NORTHBOUND SIDE OF THE ROUTE 10 SOUTH LEG.
- ERADICATE EXISTING 4" WHITE LANE LINE MARKINGS FOR THE LEFT-TURN LANE ON THE ROUTE 10 SOUTH LEG AND INSTALL NEW 4" WHITE LANE LINE AND 4" WHITE DOTTED EXTENSION LINE (2' LINE, 4' SPACING) AS SHOWN.
- ERADICATE ALL CONFLICTING MARKINGS.



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.	22	22
HOLD GREEN	15	15
HOLD YELLOW	3.9	3.9
HOLD RED	2.1	2.1
HOLD PHASE	1,6	2,5
EXIT PHASE	2,6	2,6
EXIT CALL	NONE	NONE

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	6'X30'	VIDEO 360	PRESENCE
D2	8'X6'	VIDEO THERM	PRESENCE
D4	6'X36'	VIDEO 360	PRESENCE
D4A	6'X27'	VIDEO 360	PRESENCE
D4B	6'X27'	VIDEO 360	PRESENCE
D5	6'X30'	VIDEO 360	PRESENCE
D6	13'X6'	VIDEO THERM	PRESENCE
D6A	8'X6'	VIDEO THERM	PRESENCE

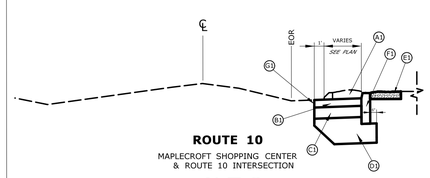
SYSTEM LOC

MASTER 025-219	
025-217	025-211
025-212	025-225
025-203	025-204
025-226	025-220
025-238	025-224
025-202	025-231
025-222	025-201
025-235	025-233
025-218	025-236

COORDINATION TYPE: CLOSED LOOP

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

TYPICAL SECTION



N.T.S

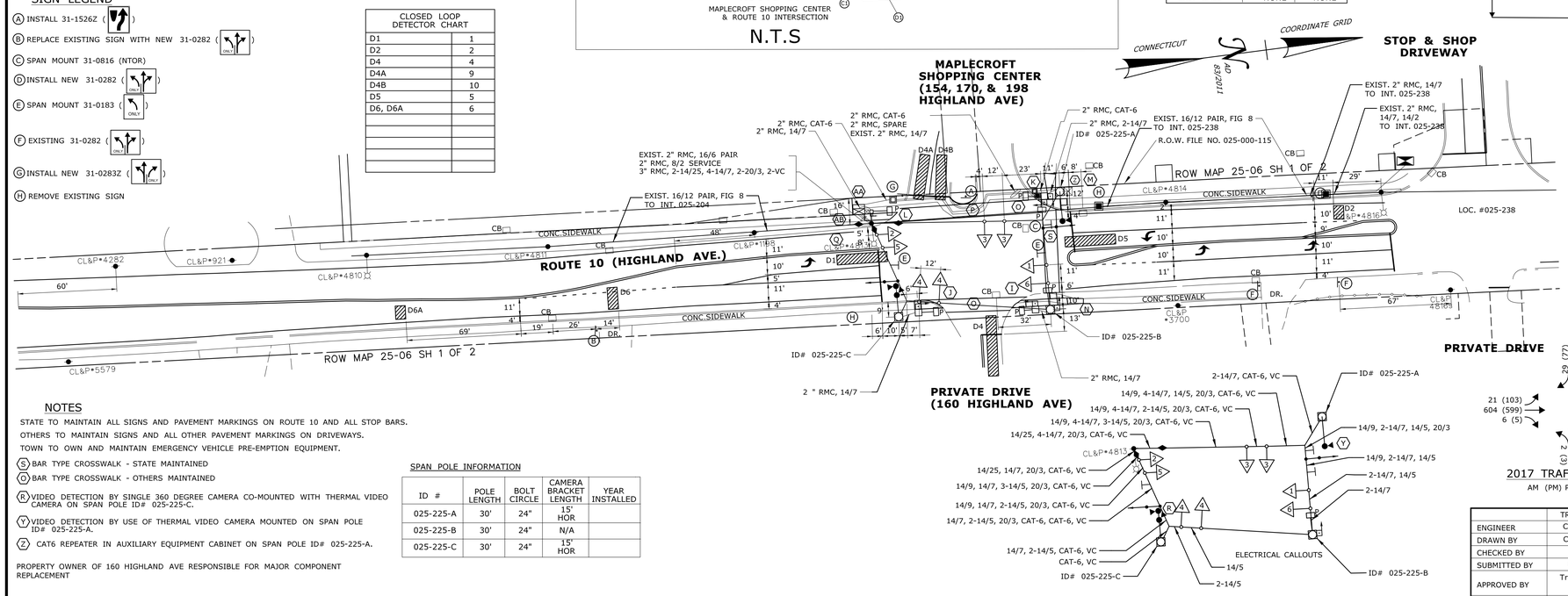
LEGEND:

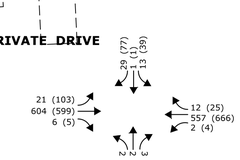
(A1) EARTH EXCAVATION
(B1) 3" HMA S0.375 (TRAFFIC LEVEL 3) (PLACED IN 2 EQUAL LIFTS)
(C1) 6" HMA 0.5 (TRAFFIC LEVEL 3) (PLACED IN 1 LIFT)
(D1) 12" SUBBASE
(E1) MULCHING
(F1) CONCRETE CURBING
(G1) CUT BITUMINOUS PAVEMENT

SIGN LEGEND

(A) INSTALL 31-1526Z
(B) REPLACE EXISTING SIGN WITH NEW 31-0282
(C) SPAN MOUNT 31-0816 (NTOR)
(D) INSTALL NEW 31-0282
(E) SPAN MOUNT 31-0183
(F) EXISTING 31-0282
(G) INSTALL NEW 31-0283Z
(H) REMOVE EXISTING SIGN

CLOSED LOOP DETECTOR CHART	
D1	1
D2	2
D4	4
D4A	9
D4B	10
D5	5
D6, D6A	6





2017 TRAFFIC COUNTS
AM (PM) PEAK HOUR

NOTES

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON ROUTE 10 AND ALL STOP BARS.
OTHERS TO MAINTAIN SIGNS AND ALL OTHER PAVEMENT MARKINGS ON DRIVEWAYS.
TOWN TO OWN AND MAINTAIN EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT.

(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(O) BAR TYPE CROSSWALK - OTHERS MAINTAINED
(R) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA CO-MOUNTED WITH THERMAL VIDEO CAMERA ON SPAN POLE ID# 025-225-C.
(Y) VIDEO DETECTION BY USE OF THERMAL VIDEO CAMERA MOUNTED ON SPAN POLE ID# 025-225-A.
(Z) CAT6 REPEATER IN AUXILIARY EQUIPMENT CABINET ON SPAN POLE ID# 025-225-A.

PROPERTY OWNER OF 160 HIGHLAND AVE RESPONSIBLE FOR MAJOR COMPONENT REPLACEMENT

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
025-225-A	30'	24"	15' HOR	
025-225-B	30'	24"	N/A	
025-225-C	30'	24"	15' HOR	

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	C. SYLVESTRE	M.Simon
DRAWN BY	C. SYLVESTRE	M. Cloutier
CHECKED BY	Y. SAYKIN	R. Polineni
SUBMITTED BY	G. PALMER	J. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	06/15/18	06/13/18

REV # INTERSECTION #025-225

ENERGY BY OWNER OF 160 HIGHLAND	ADDRESS#
MAINT LEVEL 3	SERVICE POLE - CL&P #4813
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
◄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

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 10 (HIGHLAND AVE.) AT MAPLECROFT SHOPPING CENETR AND PRIVATE DRIVE

SCALE 1" = 40'

TOWN: CHESHIRE

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0171-0402
DRAWING NO. TCS-04
SHEET NO. 03.05

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects$\0171-0401-0402\Traffic\Signals\TR_MSH_025_225_xxxpendlng.dgn

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2 PRE-EMPT 1	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
NONE	2, 1	2, 1, 3		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	G	Y	R	R	R	R	R	R	R															
2	Y	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															
4	R	R	R	R	R	R	R	R	R	R	G	Y	R															
P	OFF	← DW →						WØ	← DW →																			
					← YIELD																							

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
MIN GRN	5	15		7					
WALK			7 ①						
PED CLR			9 ②						
VEH EXT	1.5	2.5		2					
MAX 1	5	45		20					
MAX 2	8	45		30					
YELLOW	3.0	4.2	4	3.0					
RED	1.0	3.2	0	1.1					
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE	NON-LOCK	MIN RECALL	NON-LOCK	NON-LOCK	OFF	OFF	OFF	OFF	OFF
INIT START		THIS PHASE							

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

① PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.
② COUNTDOWN ONLY DURING FLASHING PEDESTRIAN CHANGE INTERVAL.

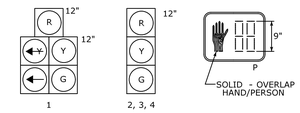
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.

PHASE 2 ON TO OMIT PHASE 1.

OFFICE RECORD

REV # TIR # 042-1806-01 SM # N/A SIGNAL REVISED:
REPLACED SIGNAL EQUIPMENT, INSTALLED EVPS, AND ADDED EXCLUSIVE PEDESTRIAN PHASE UNDER PROJECT No. 0171-0402.

SIGNAL FACES

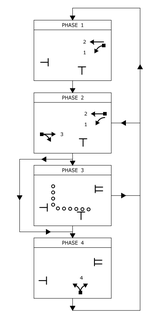


ALL INDICATIONS TO HAVE LED LAMPS.

ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH RETRO-REFLECTIVE 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	4.2
HOLD RED	3.2
HOLD PHASE	2
EXIT PHASE	4
EXIT CALL	NONE



CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.
STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.
REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISIONS.
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.

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

(H) USE CAUTION WHEN AUGERING FOR THE SPAN POLE FOUNDATION TO AVOID NEARBY UNDERGROUND GAS LINE. INSTALL SPAN FOUNDATION ADJACENT TO LANDING AREA.

(I) REMOVE CONCRETE SIDEWALK, FURNISH AND PLACE TOPSOIL, INSTALL EROSION CONTROL MATTING, ESTABLISH TURF AND APPROX. 11 L.F. OF BITUMINOUS CONCRETE CURBING (TOTAL FOR ALL CORNERS). WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950013, 0950019 AND 0815001, RESPECTIVELY.

(K) PERFORM TEST PIT AT SPAN POLE FOUNDATION LOCATION TO DETERMINE THE LOCATION OF UNDERGROUND UTILITIES.
INSTALL CONTROLLER CABINET FOUNDATION ADJACENT TO WALK AT FRONT EDGE.

(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.
INSTALL RISERS ON SNET #989 AND AT&T #31553 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:
* INSTALL A SIDEWALK ANCHOR ON AT&T #31553 WITHIN R.O.W.

ESTIMATED LOAD ON UTILITY POLE: AT&T #31553: 3,708 lbs.

SPAN ATTACHMENT ON AT&T #31553 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.

(L) INSTALL LIGHT STANDARD FOUNDATION ADJACENT TO AND WITHIN R.O.W.

(M) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA ON SPAN POLE I.D. 042-251-A.

(N) 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.

(O) INSTALL AUXILIARY EQUIPMENT CABINET ON SPAN POLE. INSTALL CAT6 REPEATER IN CABINET AND COIL MINIMUM 10' OF CAT6 CABLE IN CABINET.

(P) TRIM TREE BRANCHES TO INSTALL SPAN POLE. WORK TO BE PAID UNDER ITEM NO. 0952001A - SELECTIVE CLEARING AND THINNING.

(Q) USE CAUTION WHEN TRENCHING TO AVOID UNDERGROUND GAS LINE.

(R) REPLACE SIDEWALK BETWEEN RAMPS AS NECESSARY.

EMERGENCY PRE-EMPTION NOTES

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

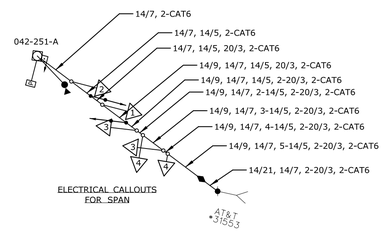
CONTRACTOR TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

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.

DETECTORS				SYSTEM LOC
IDENT	SIZE (WXL)	TYPE	MODE	MASTER 042-234
D1	6 x 30	VIDEO 360	PRESENCE	042-251
D2	6 x 6	VIDEO IP	PRESENCE	
D2A	6 x 6	VIDEO IP	PRESENCE	
D2B,D2C	6 x 6	VIDEO IP	PRESENCE	
D4	SEE PLAN	VIDEO 360	PRESENCE	

COORDINATION TYPE: TC/TBC

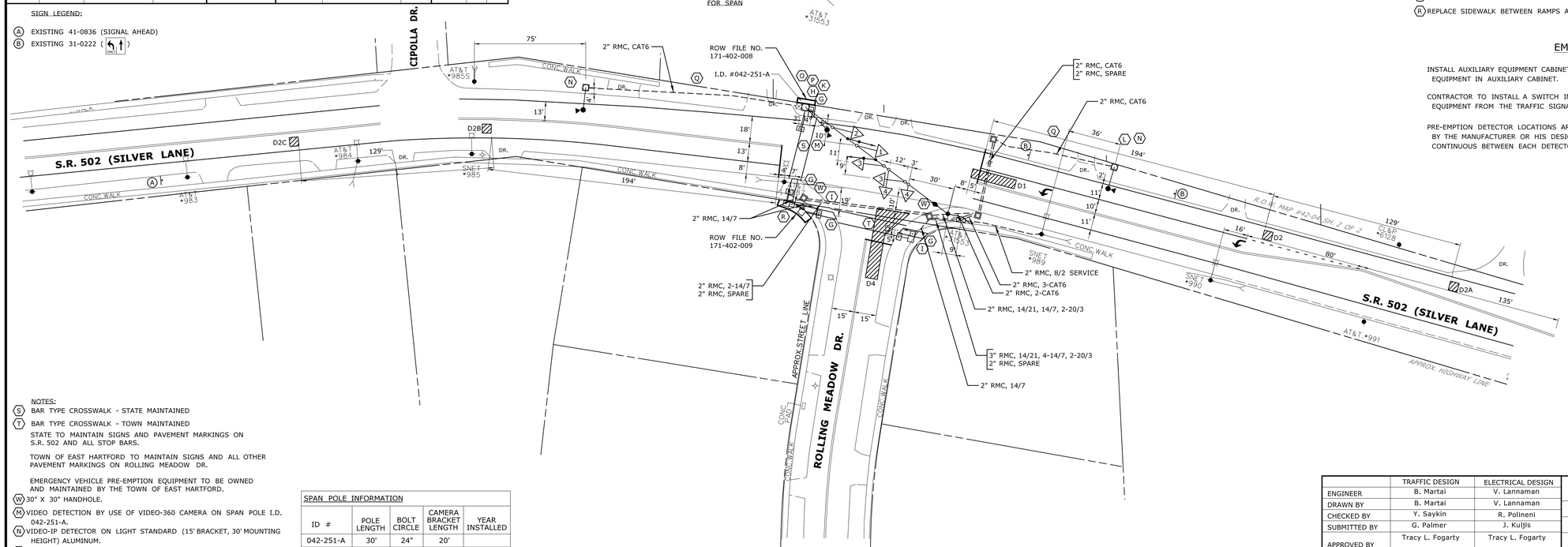
PROGRAM			CYCLE	OFFSET	
FUNCTION	TIME	DAYS		SEC	%
FLASH	NONE	DAILY			
MAX 1	ALL OTHER TIMES				
MAX 2	0700-0900	M-SAT			
CYCLE 1	ALL OTHER TIMES		80"		
CYCLE 2	1000-1430	SPECIAL	120"		
CYCLE 3	1430-1900	EVENTS	120"		



ELECTRICAL CALLOUTS FOR SPAN

SIGN LEGEND:

(A) EXISTING 41-0836 (SIGNAL AHEAD)
(B) EXISTING 31-0222 (ONLY)



551 (267)
11 (8)
431 (508)
49 (23)
41 (42)
5 (27)

2017 TRAFFIC COUNTS
AM (PM) PEAK HOUR

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

- REVISE ALL PAVEMENT MARKINGS ASSOCIATED WITH CROSSWALK REVISIONS.
- INSTALL NEW CROSSWALKS ON THE WEST AND SOUTH LEGS OF THE INTERSECTION.
- INSTALL NEW STOP BARS ON S.R. 502.
- ERADICATE ALL PAVEMENT MARKINGS WITHIN 4 FEET OF CROSSWALKS.
- ERADICATE ALL CONFLICTING PAVEMENT MARKINGS.
- ERADICATE EXISTING PAVEMENT ARROW MARKINGS
- INSTALL NEW PAVEMENT ARROW MARKINGS.
- INSTALL EDGE LINES AS SHOWN.

NOTES:
(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(T) BAR TYPE CROSSWALK - TOWN MAINTAINED
STATE TO MAINTAIN SIGNS AND PAVEMENT MARKINGS ON S.R. 502 AND ALL STOP BARS.
TOWN OF EAST HARTFORD TO MAINTAIN SIGNS AND ALL OTHER PAVEMENT MARKINGS ON ROLLING MEADOW DR.
EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE TOWN OF EAST HARTFORD.
(W) 30" X 30" HANDHOLE.
(M) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA ON SPAN POLE I.D. 042-251-A.
(N) VIDEO-IP DETECTOR ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.
(O) CAT6 REPEATER IN AUXILIARY EQUIPMENT CABINET ON SPAN POLE.

SPAN POLE INFORMATION				
ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
042-251-A	30'	24"	20'	

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	B. Martai	V. Lannaman
DRAWN BY	B. Martai	V. Lannaman
CHECKED BY	Y. Saykin	R. Polineni
SUBMITTED BY	G. Palmer	J. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	06/08/18	06/13/18

REV # INTERSECTION # 042-251

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - SNET #989
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
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

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

S.R. 502 (SILVER LANE) AT ROLLING MEADOW DR.

TOWN: EAST HARTFORD

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0171-0402
DRAWING NO. TCS-05
SHEET NO. 03.06

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_ProJects$\0171-0401-0402\Traffic\Signals\TR_MSH_042_251_XXXpendlng.dgn

SCALE 1" = 40'

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2 PRE-EMPT. 2	PHASE 3	PHASE 4 PRE-EMPT. 1	PHASE 5	PHASE 6 PRE-EMPT. 2	PHASE 7	PHASE 8	
NONE	1	2, 5		4, 3	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	R	R	R	G	Y	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	Y	R	R	R	G	Y	R	R	R	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	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	5	15		7	5	15			
WALK			7 (1)						
PED CLR			9 (2)						
VEH EXT	2	2.5		2	2	2.5			
MAX 1	5	40		25	5	40			
MAX 2	15	45		25	15	45			
YELLOW	3	4.2	4	3	3	4.2			
RED	1	1.5	0	1.5	1	1.5			
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE	NON-LOCK	MIN. RECALL	NON-LOCK	NON-LOCK	NON-LOCK	MIN. RECALL	OFF	OFF	OFF
INIT START		THIS PHASE				THIS PHASE			

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

DETECTORS

IDENT	SIZE (WXL)	TYPE/TURNS	MODE
D1	6' x 30'	VIDEO 360	PRESENCE
D2	6' x 6'	4	PRESENCE
D2A	6' x 6'	5	PRESENCE
D2B	6' x 6'	5	PRESENCE
D2C	6' x 6'	4	PRESENCE
D4	10' x 36'	VIDEO 360	PRESENCE
D4A	10' x 36'	VIDEO 360	PRESENCE
D4B	10' x 6'	4	4" DELAY
D5	6' x 30'	VIDEO 360	PRESENCE

SYSTEM LOC MASTER

COORDINATION TYPE: NONE

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
MAX 1	ALL OTHER TIMES				
MAX 2	0600 - 0900 1500 - 1800	M-F			

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.
PRE-EMPT. 1 AND 2 TO BE INOPERATIVE DURING FLASHING OPERATION.
DETECTOR D4B TO CALL PRE-EMPT. 1 WHEN OCCUPIED FOR 4 SECONDS.

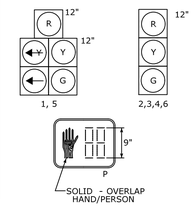
OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:
REVISED DETECTION, ADDED FORCE-OFF DETECTION ON WOOSTER STREET APPROACH,
INSTALLED APS EQUIPMENT, AND REVISED TIMINGS UNDER PROJECT NO. 0171-0402.

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.	9	9
HOLD GREEN	20	15
HOLD YELLOW	3.0	4.2
HOLD RED	1.5	1.5
HOLD PHASE	4	2,6
EXIT PHASE	2,6	4
EXIT CALL	NONE	NONE

SIGNAL FACES



ALL INDICATIONS HAVE LED LAMPS.

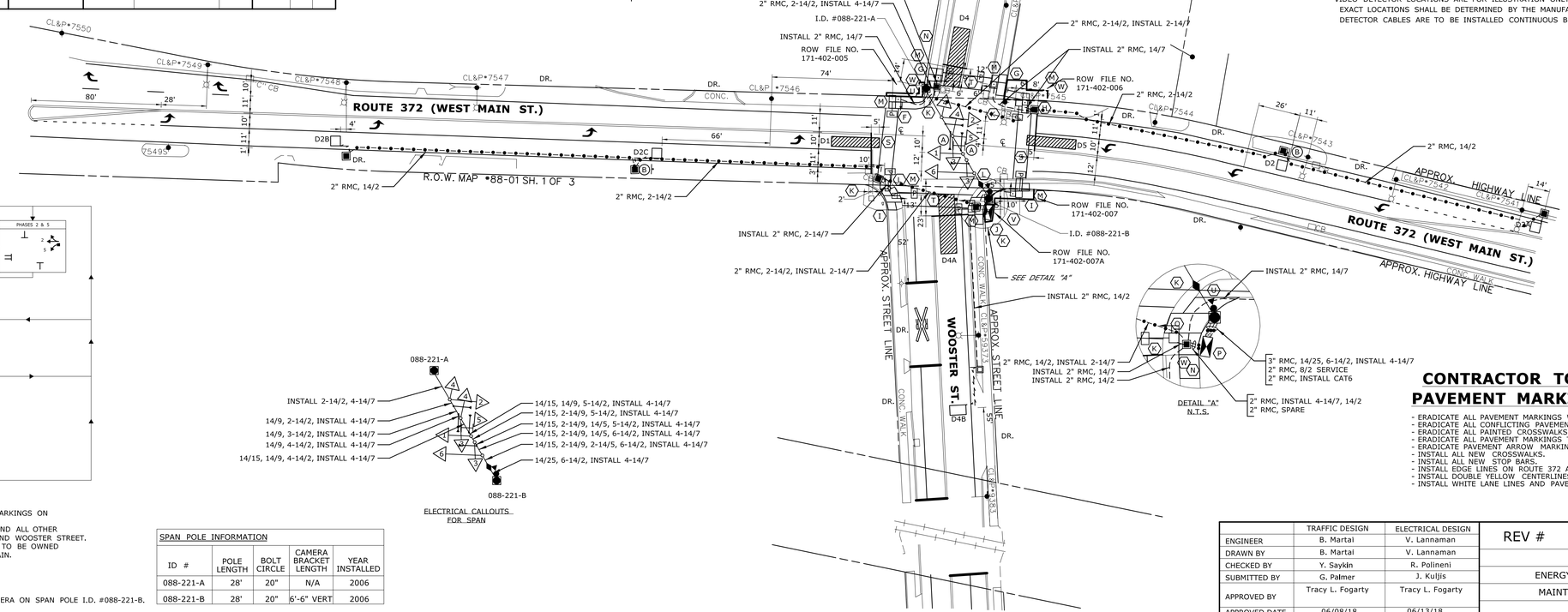
CONSTRUCTION NOTES:

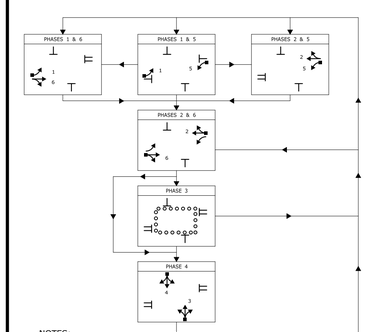
ALL TRAFFIC SIGNAL EQUIPMENT IS EXISTING EXCEPT AS NOTED.
STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.
REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISIONS.
ANY PROPOSED REVISIONS TO THE LOCATION OF THE APPURTENANCES SHOWN ON THE PLAN MUST BE SUBMITTED 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.
ALL PEDESTRIAN SIGNALS AND HARDWARE TO BE PAINTED BLACK FEDERAL STANDARD NO. 595.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL PROVISION, 1.07 - LEGAL RELATIONS AND RESPONSIBILITIES.
COORDINATE AND SCHEDULE THE FOLLOWING WORK BY EVERSOURCE:
* REPLACE EXISTING GUY WIRE ON CL&P 7545 WITH SIDEWALK GUY TO ALLOW PEDESTRIANS TO WALK UNDERNEATH.

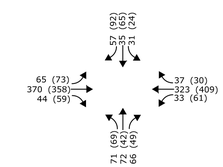
(F) CONSTRUCT HALF TYPE 1 SIDEWALK RAMP PER SPECIAL PROVISIONS AND GUIDE SHEETS.
(G) CONSTRUCT TYPE 4d SIDEWALK RAMP PER SPECIAL PROVISIONS AND GUIDE SHEETS.
(H) CONSTRUCT TYPE 2a SIDEWALK RAMP PER SPECIAL PROVISIONS AND GUIDE SHEETS.
(I) CONSTRUCT HALF TYPE 1a SIDEWALK RAMP PER SPECIAL PROVISIONS AND GUIDE SHEETS.
(J) CONSTRUCT TYPE 1a SIDEWALK RAMP PER SPECIAL PROVISIONS AND GUIDE SHEETS.
(K) REMOVE EXISTING CONCRETE SIDEWALK, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING, AND APPROXIMATELY 25 FEET OF BIT. CONC. CURBING (TOTAL FOR ALL CORNERS). WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, 0950013 AND 0815001, RESPECTIVELY.
(L) REMOVE EXISTING CONCRETE SIDEWALK RAMP, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, AND INSTALL EROSION CONTROL MATTING. WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, AND 0950013, RESPECTIVELY.
(V) RECONSTRUCT LEVEL SIDEWALK BETWEEN RAMPS AS NECESSARY.
(M) INSTALL NEW PEDESTAL FOUNDATION, PEDESTAL, COUNTDOWN SIGNAL HEADS, AND APS PUSH BUTTONS ADJACENT TO LANDING AREA.
INSTALL A TOGGLE BOLT WITH A WASHER TO EFFECTIVELY SEAL EACH HOLE LEFT IN THE SPAN POLES WHERE THE PEDESTRIAN PUSH BUTTON HOUSING IS REMOVED.
MODIFY EXISTING CONTROLLER TO ACCOMMODATE CHANGES. SUPPLY 5 COPIES OF REVISED CABINET WIRING DIAGRAMS.
(N) INSTALL CAST IRON HANDHOLE COVER.
CLEAN ALL EXISTING CONDUIT WHERE NEW CABLE IS BEING RUN. TO BE PAID UNDER ITEM #1008908A - CLEAN EXISTING CONDUIT.
CLEAN ALL EXISTING HANDHOLES. TO BE BE PAID UNDER ITEM #1010060A - CLEAN EXISTING CONCRETE HANDHOLE.
(P) MODIFY EXISTING HANDHOLE TO ACCOMMODATE NEW CONDUIT.
INSTALL NEW LOOP DETECTORS AND AMPLIFIERS FOR D2, D2A, D2B, D2C, D4B AS SHOWN PLAN.
CENTER LOOP DETECTORS IN LANE.
(U) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA ON SPAN POLE I.D. #088-221-B.
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.

SIGN LEGEND:
(A) SPAN MTD. 31-0135 ( )
(B) EXISTING 31-0282 ( )





ELECTRICAL CALLOUTS FOR SPAN



2016 TRAFFIC COUNTS
AM (PM) PEAK HOUR

NOTES:
(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(T) BAR TYPE CROSSWALK - TOWN MAINTAINED
STATE TO MAINTAIN SIGNS AND PAVEMENT MARKINGS ON ROUTE 372 AND ALL STOP BARS.
CITY OF NEW BRITAIN TO MAINTAIN SIGNS AND ALL OTHER PAVEMENT MARKINGS ON STANWOOD DRIVE AND WOOSTER STREET.
EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE CITY OF NEW BRITAIN.
(W) 30" X 30" HANDHOLE.
(N) CAST IRON HANDHOLE COVER.
(U) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA ON SPAN POLE I.D. #088-221-B.

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
088-221-A	28'	20"	N/A	2006
088-221-B	28'	20"	6'-6" VERT	2006

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

- ERADICATE ALL PAVEMENT MARKINGS WITHIN 4 FEET OF CROSSWALKS.
- ERADICATE ALL CONFLICTING PAVEMENT MARKINGS.
- ERADICATE ALL PAINTED CROSSWALKS.
- ERADICATE ALL PAVEMENT MARKINGS THAT EXTEND BEYOND THE NEW STOP BARS.
- ERADICATE PAVEMENT ARROW MARKINGS ON ROUTE 372.
- INSTALL ALL NEW CROSSWALKS.
- INSTALL ALL NEW STOP BARS.
- INSTALL EDGE LINES ON ROUTE 372 AS SHOWN.
- INSTALL DOUBLE YELLOW CENTERLINES AND TAPERS ON ROUTE 372 AS SHOWN.
- INSTALL WHITE LANE LINES AND PAVEMENT ARROW MARKINGS ON ROUTE 372 AS SHOWN.

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	B. Martai	V. Lannaman
DRAWN BY	B. Martai	V. Lannaman
CHECKED BY	Y. Saykin	R. Polineni
SUBMITTED BY	G. Palmer	J. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	06/08/18	06/13/18

REV # INTERSECTION #088-221

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE CL&P 7545
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
◄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

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

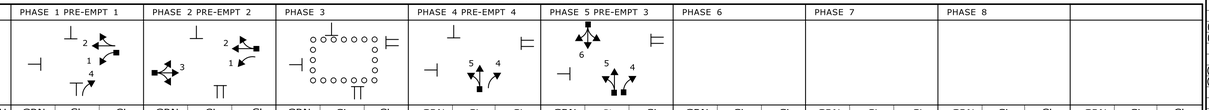
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 372 (WEST MAIN ST.) AT STANWOOD DR. & WOOSTER ST.

TOWN: NEW BRITAIN
DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN
PROJECT NO. 0171-0402
DRAWING NO. TCS-06
SHEET NO. 03.07

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects\0171-0401-0402\Traffic\Signals\TR_MSH_088_221_012pending.dgn
SCALE 1" = 40'

MOVEMENT DIAGRAM

NTOR	PHASE 1 PRE-EMPT 1	PHASE 2 PRE-EMPT 2	PHASE 3	PHASE 4 PRE-EMPT 4	PHASE 5 PRE-EMPT 3	PHASE 6	PHASE 7	PHASE 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	R	◄ G	◄Y G	G	G	Y	R	R	R	R	R	R	R	R	R	R												
	2	R	G	G	G	G	Y	R	R	R	R	R	R	R	R	R	R												
	3	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R												
	4	R	R →	R →Y►	R	R	R	R	R	R	R	G	G ③	G ④	G	Y	R												
	5	R	R	R	R	R	R	R	R	R	R	◄ G	◄Y G ③	G ④	G	Y	R												
	6	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R												
	P	OFF	◄		DW	►			WØ	◄		DW	►																

INTERVALS																													
	MIN GRN	5			20						5			8															
	WALK							7 ①	ACCESSIBLE PEDESTRIAN SIGNAL																				
	PED CLR							14 ②																					
	VEH EXT	2			2.5						2			2															
	MAX 1	10			35						8			10															
	MAX 2	12			45						13			12															
	YELLOW		3.0			3.6			4.0			3.2			3.2														
	RED			1.0			2.0			0			1.8			1.8													
	ADD INIT																												
	MAX INIT								COUNTDOWN PEDESTRIAN SIGNAL																				
	TBR																												
	TTR																												
	MIN GAP																												
MODE		NON-LOCK			MIN RECALL			NON-LOCK			NON-LOCK			NON-LOCK			OFF			OFF			OFF			OFF		
INIT START					THIS PHASE																								

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	7'X30'	VIDEO 360	PRESENCE
D2	10'X6'	VIDEO IP	PRESENCE
D2A	9'X6'	VIDEO IP	PRESENCE
D2B	9'X6'	VIDEO 360	PRESENCE
D2C	9'X6'	VIDEO IP	PRESENCE
D4	8'X35'	VIDEO 360	PRESENCE
D4A	8'X35'	VIDEO 360	PRESENCE
D5	9'X35'	VIDEO 360	PRESENCE

SYSTEM LOC MASTER

COORDINATION TYPE: NONE

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
MAX 1	ALL OTHER TIMES	M-F			
MAX 2	1500-1900	M-F			

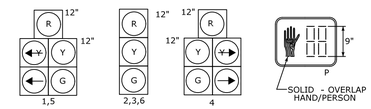
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
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.
PHASE 2 ON TO OMIT PHASE 1
③ TO BE Y IF PHASE 5 IS SKIPPED.
④ TO BE R IF PHASE 5 IS SKIPPED.

OFFICE RECORD

REV # TIR # 088-1708-01 SM # N/A SIGNAL REVISED:
REPLACED SIGNAL EQUIPMENT AND ADDED PRE-EMPTION UNDER PROJECT NO. 0171-0402.

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS

ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH RETRO-REFLECTIVE YELLOW BORDER

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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.

(G) CONSTRUCT TYPE 5B SIDEWALK RAMP PER GUIDE SHEETS. EXTEND SIDEWALK WIDTH TO CURB LINE ALONG ROUTE 71 TO ENSURE FREE PATH AROUND MAST ARM FOUNDATION AS SHOWN.
(H) CONSTRUCT TYPE 5A SIDEWALK RAMP PER GUIDE SHEETS. EXTEND LANDING AREA TO MAST ARM FOUNDATION.
(I) CONSTRUCT TYPE 1A SIDEWALK RAMP PER GUIDE SHEETS.
(J) CONSTRUCT TYPE 4F SIDEWALK RAMP PER GUIDE SHEETS.
(K) CONSTRUCT MODIFIED TYPE 4F SIDEWALK RAMP PER GUIDE SHEETS.

PEDESTAL FOUNDATIONS TO BE INSTALLED ADJACENT TO LANDING AREA.

(L) INSTALL MAST ARM FOUNDATION ADJACENT TO AND WITHIN EXISTING STAT R.O.W. (NOT WITHIN FILE NO. 171-402-002 EASEMENT AREA). IMPACT TO FENCING SHOULD BE AVOIDED. IF IMPACTED BY INSTALLATION, ENSURE IT IS RESTORED TO EXISTING CONDITIONS.
(M) INSTALL MAST ARM FOUNDATION ADJACENT TO WALK AT NORTH EDGE.
(N) PERFORM TEST PIT TO CONFIRM LOCATION OF UNDERGROUND TELEPHONE LINE.
(X) INSTALL CONTROLLER CABINET FOUNDATION ADJACENT TO AND WITHIN R.O.W.
(O) INSTALL PEDESTAL FOUNDATION ADJACENT TO WALK AT BACK EDGE WITHIN EASEMENT AREA.
(W) INSTALL 30" X 30" HANDHOLE. ALL OTHERS TYPE II.

INSTALL SERVICE RISER ON UTILITY POLE CL&P #70.

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

(P) INSTALL CAST IRON HANDHOLE COVER.
(Q) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA MOUNTED ON 6'-6" VERTICAL BRACKET ON SPAN POLE I.D. #088-247-A.
(R) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON 8' VERTICAL BRACKET ON SPAN POLE I.D. #088-247-C.
(U) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON 20' PEDESTAL.

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.

(V) DUE TO THE PROXIMITY OF THE RETAINING WALL REFER TO THE SPECIAL PROVISIONS AND NTC FOR CONSTRUCTION OF THE MAST ARM FOUNDATION.

MAST ARMS, PEDESTALS, SIGNAL HEADS, PEDESTRIAN HEADS, PEDESTRIAN PUSHBUTTONS TO BE PAINTED BLACK FEDERAL NO. 37038. REFER TO SPECIAL PROVISIONS.

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.

MAST ARM NOTES

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

ALL MAST ARM MOUNTED SIGNS ARE FIXED MOUNTED

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

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

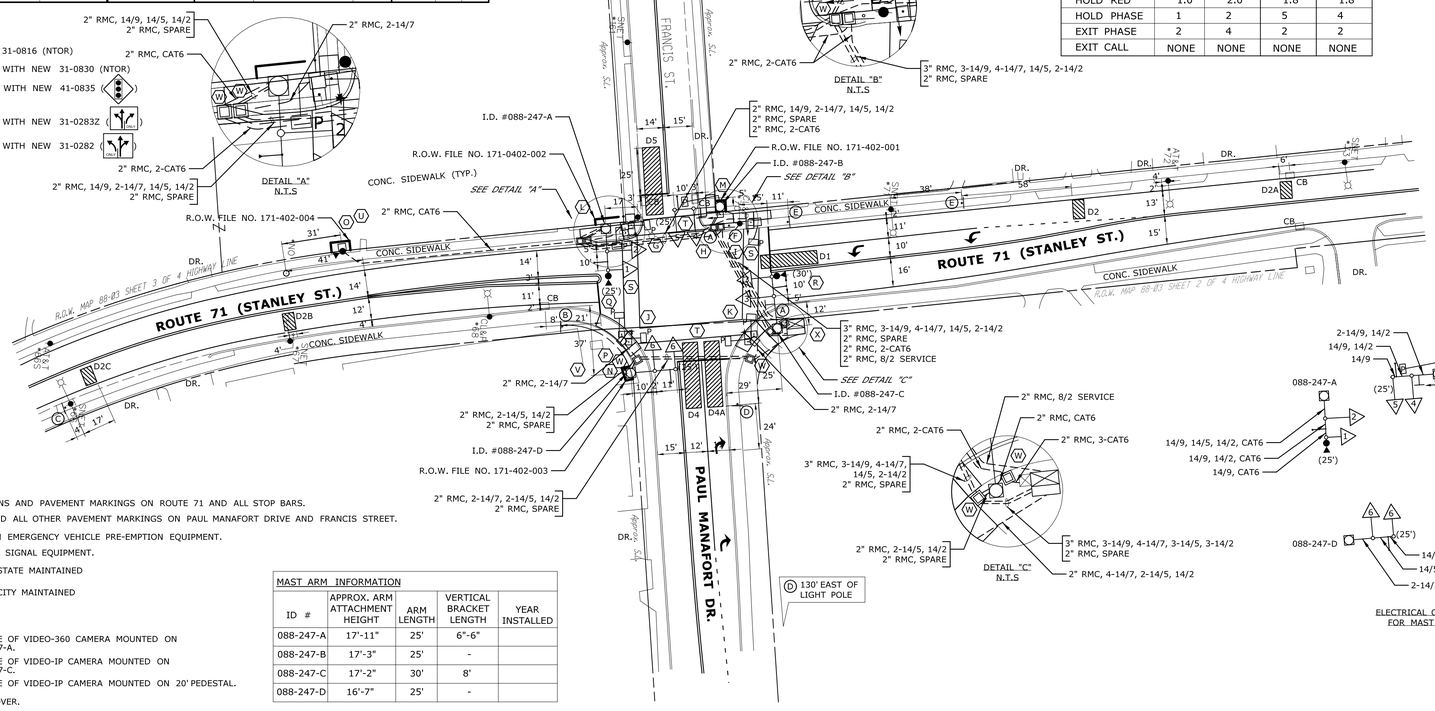
- ERADICATE EXISTING CROSSWALKS AND INSTALL NEW CROSSWALKS AS SHOWN.
- ERADICATE EXISTING STOP BAR ON ROUTE 71 SOUTHBOUND APPROACH AND INSTALL NEW STOP BAR AS SHOWN.
- ERADICATE EXISTING BROKEN LANE LINES ON ROUTE 71 SOUTHBOUND APPROACH OF THE NORTH LEG AND ON PAUL MANAFORT DR WESTBOUND APPROACH OF THE EAST LEG.
- INSTALL 4" WHITE LANE LINE AND 4" DOTTED WHITE LINE (2' LINE, 4' SPACING) ON ROUTE 71 SOUTHBOUND APPROACH OF THE NORTH LEG AS SHOWN.
- INSTALL 4" WHITE LANE LINE AND 4" DOTTED WHITE LINE (2' LINE, 4' SPACING) TO MEET EXISTING EDGE LINE ON PAUL MANAFORT DR WESTBOUND APPROACH OF THE EAST LEG.
- ERADICATE ALL CONFLICTING MARKINGS.
- ERADICATE ALL CONFLICTING PAVEMENT MARKINGS THAT EXTEND BEYOND THE NEW STOP BAR.
- INSTALL ALL NEW STOP BARS.

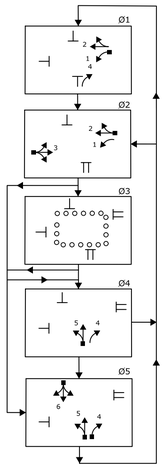
PRE-EMPTION SETTINGS

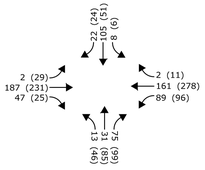
	PRE-EMPT 1	PRE-EMPT 2	PRE-EMPT 3	PRE-EMPT 4
PRIORITY	NO	NO	NO	NO
DET. LOCK	YES	YES	YES	YES
DELAY	0	0	0	0
ALT. MIN. GRN	5	5	5	5
ALT. YELLOW	PARENT	PARENT	PARENT	PARENT
ALT. RED	PARENT	PARENT	PARENT	PARENT
ALT. PED. CLR.	14	14	14	14
HOLD GREEN	15	15	15	15
HOLD YELLOW	3.0	3.6	3.2	3.2
HOLD RED	1.0	2.0	1.8	1.8
HOLD PHASE	1	2	5	4
EXIT PHASE	2	4	2	2
EXIT CALL	NONE	NONE	NONE	NONE

SIGN LEGEND

(A) MAST ARM MOUNT NEW 31-0816 (NTOR)
(B) REPLACE EXISTING SIGN WITH NEW 31-0830 (NTOR)
(C) REPLACE EXISTING SIGN WITH NEW 41-0835 ( )
(D) REPLACE EXISTING SIGN WITH NEW 31-0283Z ( )
(E) REPLACE EXISTING SIGN WITH NEW 31-0282 ( )
(F) REMOVE EXISTING SIGN.







2017 TRAFFIC COUNTS

AM (PM) PEAK HOUR

ELECTRICAL CALLOUTS FOR MAST ARMS

NOTES:

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON ROUTE 71 AND ALL STOP BARS.
CITY TO MAINTAIN SIGNS AND ALL OTHER PAVEMENT MARKINGS ON PAUL MANAFORT DRIVE AND FRANCIS STREET.
CITY TO OWN AND MAINTAIN EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT.
CITY TO MAINTAIN PAINT ON SIGNAL EQUIPMENT.
(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(T) BAR TYPE CROSSWALK - CITY MAINTAINED
(W) 30" X 30" HANDHOLE.
(Q) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA MOUNTED ON SPAN POLE I.D. #088-247-A.
(R) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON SPAN POLE I.D. #088-247-C.
(U) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON 20' PEDESTAL.
(P) CAST IRON HANDHOLE COVER.

MAST ARM INFORMATION

ID #	APPROX. ARM ATTACHMENT HEIGHT	ARM LENGTH	VERTICAL BRACKET LENGTH	YEAR INSTALLED
088-247-A	17'-11"	25'	6"-6"	
088-247-B	17'-3"	25'	-	
088-247-C	17'-2"	30'	8'	
088-247-D	16'-7"	25'	-	

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
◄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
VC VIDEO CAMERA CABLE
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSCEIVER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects$\0171-0401-0402\Traffic\Signals\TR_MSH_088_247_XXXpending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

CITY OF NEW BRITAIN
ROUTE 71 (STANLEY STREET)
AT PAUL MANAFORT DRIVE
AND FRANCIS STREET

SCALE 1" = 40'

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	C. SYLVESTRE	V. LANNAMAN
DRAWN BY	C. SYLVESTRE	V. LANNAMAN
CHECKED BY	Y. SAYKIN	R. POLINENI
SUBMITTED BY	G. PALMER	J. KULJIS
APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
APPROVED DATE	06/13/18	06/13/18

REV # INTERSECTION # 088-247

ENERGY BY CITY	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - CL&P #70
	UNMETERED SERVICE

TOWN: **NEW BRITAIN**

DRAWING TITLE: **TRAFFIC CONTROL SIGNAL PLAN**

PROJECT NO. 0171-0402
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 PRE-EMPT 1
		2, 1		4, 3				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
1	Y				↑	Y	R	R	R	R	R	R	R										↑	↑	↑
2	Y				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
4	R				R	R	R	R	R	R	G	Y	R										R	R	R
P	OFF				← DW →			WØ	← DW →														← DW →		

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8 PRE-EMPT 1
MIN GRN		15		7				35
WALK			7 (1)					
PED CLR			7 (2)					
VEH EXT				1.5				
MAX 1		35		22				35
MAX 2		35		22				35
YELLOW		4.3	4	3.5				3.0
RED		1.0	0	1.0				1.0
ADD INIT								
MAX INIT								
TBR								
TTR								
MIN GAP								
MODE	OFF	MAX RECALL	NON-LOCK	NON-LOCK	OFF	OFF	OFF	ON/OMIT
INIT START		THIS PHASE						

(1) ACCESSIBLE PEDESTRIAN SIGNAL
(2) COUNTDOWN PEDESTRIAN SIGNAL

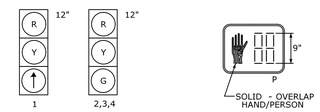
TECHNICAL NOTES

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.
PRE-EMPTION ACTIVATED BY BUTTON IN FIRE HOUSE.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.

OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:
REPLACED TRAFFIC SIGNAL EQUIPMENT EXCEPT PEDESTRIAN AMENITIES UNDER PROJECT NO. 0171-0402.

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS.
ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH YELLOW RETRO-REFLECTIVE BORDER.

CONSTRUCTION NOTES:

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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.

(J) EXISTING PEDESTAL TO REMAIN.

(K) EXISTING SIDEWALK RAMP TO REMAIN.

(L) SPAN POLE FOUNDATION IS TO BE INSTALLED 4 FEET BEHIND THE BACK FACE OF GUIDE RAIL POSTS.

(M) LOCATE EXISTING RIGID METAL CONDUIT. EXTEND INTO NEW SPAN POLE FOUNDATION.

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

(N) LOCATE EXISTING RIGID METAL CONDUIT. EXTEND INTO NEW HANDHOLE.

(O) INSTALL 14' ALUMINUM PEDESTAL.

(P) REMOVE VEGETATION TO ALLOW VISIBILITY OF SIGN. WORK TO BE PAID UNDER ITEM NO. 0952001A - SELECTIVE CLEARING AND THINNING.

INSTALL 2 RISERS ON SNET #3718 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:
* REPLACE SNET #3718 WITH A 45' POLE. REUSE EXISTING ANCHOR AND GUY WIRE.

PULL EXISTING INTERCONNECT CABLE BACK TO UTILITY POLE SNET #3718. INSTALL NEW CONDUIT AND RE-ROUTE EXISTING INTERCONNECT CABLE FROM UTILITY POLE TO PROPOSED CABINET.

ESTIMATED LOAD ON UTILITY POLE: SNET #3718: 3,543 lbs.

SPAN ATTACHMENT ON SNET #3718 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.

(Q) VIDEO DETECTION BY USE OF VIDEO-STD CAMERA ON SPAN POLE I.D. #088-279-A.

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.

TRIM TREE BRANCHES AS NEEDED TO FACILITATE THE INSTALLATION OF SPAN POLE 088-279-A AND INSTALLATION OF THE VIDEO DETECTOR AND EXTENSION BRACKET. TO BE PAID FOR UNDER ITEM #0952001A - SELECTIVE CLEARING AND THINNING.

SPAN POLE, PEDESTALS, SIGNAL HEADS, PEDESTRIAN HEADS, PEDESTRIAN PUSHBUTTONS TO BE PAINTED BLACK FEDERAL NO. 37038. REFER TO SPECIAL PROVISIONS.

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

- ERADICATE ALL STOP BARS AND CROSSWALKS.
- INSTALL ALL NEW STOP BARS AND CROSSWALK.
- ERADICATE ALL PAVEMENT MARKINGS THAT EXTEND BEYOND THE NEW STOP BARS.
- ERADICATE ALL PAVEMENT MARKINGS WITHIN 4 FEET OF CROSSWALK.
- ERADICATE ALL CONFLICTING PAVEMENT MARKINGS.

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D4	SEE PLAN	VIDEO STD	PRESENCE

SYSTEM LOC: MASTER 088-211
088-279

COORDINATION TYPE: MASTER/SLAVE

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
			SAFETY CRT		
MAX 1	ALL TIMES		70"		
MAX 2	FUTURE	DAILY			
FREE	2400-0500	DAILY			

PRE-EMPTION SETTINGS

	PRE-EMPT 1
PRIORITY	NO
DET. LOCK	YES
DELAY	20
ALT. MIN. GRN	5
ALT. YELLOW	PARENT
ALT. RED	PARENT
ALT. PED. CLR.	7
HOLD GREEN	35
HOLD YELLOW	3.0
HOLD RED	1.0
HOLD PHASE	8
EXIT PHASE	2
EXIT CALL	NONE

SIGN LEGEND:

(A) SPAN MOUNT 31-0816 "NO TURN ON RED"

(B) SPAN MOUNT 31-1603

(C) EXISTING 31-1526Z

(D) REPLACE EXISTING 41-0836

NOTES:

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS ON ROUTE 71 AND ALL STOP BARS.

CITY TO MAINTAIN ALL SIGNS AND OTHER PAVEMENT MARKINGS ON FIREHOUSE LANE.

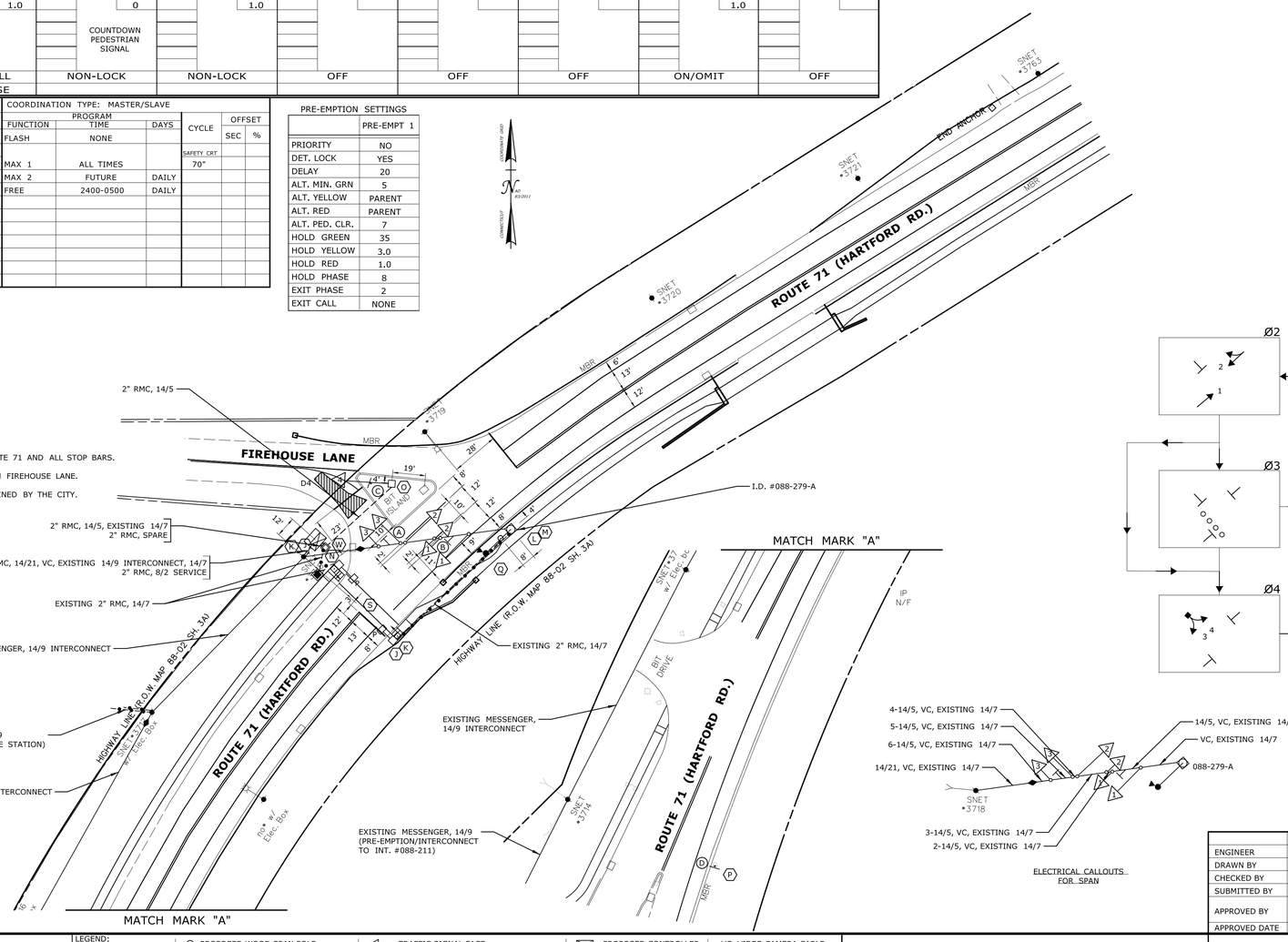
EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT OWNED AND MAINTAINED BY THE CITY.

CITY TO MAINTAIN PAINT ON SIGNAL EQUIPMENT.

(S) BAR TYPE CROSSWALK - STATE MAINTAINED

(W) 30" X 30" CONCRETE HANDHOLE.

(Q) VIDEO DETECTION BY USE OF VIDEO-STD CAMERA ON SPAN POLE I.D. #088-279-A.



2016 TRAFFIC COUNTS
AM (PM) PEAK HOUR

SPAN POLE INFORMATION				
ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
088-279-A	30'	24"	20'	

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	M. DISLA-SUAREZ	V. Lannaman
DRAWN BY	M. DISLA-SUAREZ	V. Lannaman
CHECKED BY	P. Onwuazor	R. Polineni
SUBMITTED BY	G. Palmer	J. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	06/08/18	06/13/18

REV # INTERSECTION # 088-279

ENERGY BY CITY	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - SNET #3718
	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

ROUTE 71 (HARTFORD RD.) AT FIREHOUSE LANE

TOWN: NEW BRITAIN

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0171-0402
DRAWING NO. TCS-08
SHEET NO. 03.09

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects\0171-0401-0402\Traffic\Signals\TR_MSH_088_279_007pendlng.dgn

SCALE 1" = 40'

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
NONE	2 3 4 5 9	2 6 1 5		10 8 9 4 5	2 3 7 4 5 9				

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	R	R	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	G	G	G												
3	~~R~~	←	~~Y~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	←	~~Y~~	~~R~~												
4	~~R~~	←	~~Y~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	←	←	←	←	~~Y~~	~~R~~												
5	Y	G	G	G	G	Y	R	R	R	R	G	G	G	G	G	G												
6	Y	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R												
7	R	R	R	R	R	R	R	R	R	R	R	R	R	→	~~Y~~	R												
8	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R												
9	R	R→	R ~~Y~~	R	R	R	R	R	R	R	G	Y	R	R→	③ R→	④ R→												
10	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	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	5	18		7	7				
WALK			7 ①						
PED CLR			9 ②						
VEH EXT	1.5	2.5		1.5	1.5				
MAX 1	8	27		8	10				
MAX 2	8	27		8	10				
YELLOW	3	4.0	4	3	3				
RED	2.8	1.5	0	1	2.8				
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE	NON-LOCK	MIN RECALL	NON-LOCK	NON-LOCK	NON-LOCK	OFF	OFF	OFF	OFF
INIT START		THIS PHASE							

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

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.
③ TO BE R→Y IF PHASE 2 IS NEXT.
④ TO BE R IF PHASE 2 IS NEXT.

OFFICE RECORD

REV # TIR # 109-1706-01 SM # N/A SIGNAL REVISED:
REPLACED TRAFFIC SIGNAL AND ADDED PEDESTRIAN PHASE UNDER PROJECT 0171-0402.

DETECTORS

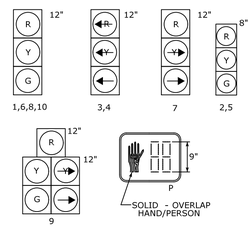
IDENT	SIZE (WXL)	TYPE	MODE
D1,D1A	6' x 30'	VIDEO 360	PRESENCE
D2,D2B	6' x 6'	VIDEO IP	PRESENCE
D2A	6' x 6'	VIDEO IP	PRESENCE
D2C	6' x 16'	VIDEO IP	PRESENCE
D4	6' x 45'	VIDEO 360	DELAY 8'
D4A	6' x 45'	VIDEO 360	PRESENCE
D4B	6' x 40'	VIDEO 360	PRESENCE
D5	8' x 65'	VIDEO IP	DELAY 8"

SYSTEM LOC MASTER

COORDINATION TYPE: NONE

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

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS

ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH RETRO-REFLECTIVE YELLOW BORDER.
SIGNAL FACES 6, 8 AND 9 TO HAVE TUNNEL VISORS

PAVEMENT MARKING NOTES

- ERADICATE EXISTING BROKEN LANE LINES ON ROUTE 10 (EAST STREET) AND EXTEND LANE LINE AND INSTALL 2' DOTTED EXTENSION LANE LINE WITH 4' SPACING AS SHOWN ON PLAN.
- ERADICATE EXISTING BROKEN LANE LINES ON ROUTE 10 (EAST STREET) BETWEEN SHUTTLE MEADOW ROAD AND WHITING STREET, AND INSTALL 8" WIDE DOTTED LANE LINES (3' LINE/9' SPACE) AS INDICATED.
- INSTALL NEW STOP BAR ON THE ROUTE 10 (EAST STREET) NORTHBOUND APPROACH AS INDICATED. ERADICATE EXISTING STOP BAR AND CENTERLINE BEYOND NEW STOP BAR LOCATION.
- INSTALL EDGE LINES ALONG ROUTE 10 (EAST STREET) AS INDICATED.
- ERADICATE PAVEMENT ARROWS ALONG ROUTE 10 (EAST STREET) NOT CONSISTENT WITH THIS PLAN AND INSTALL NEW PAVEMENT ARROWS AS INDICATED.
- INSTALL NEW STOP BAR ON THE ROUTE 10 (EAST STREET) SOUTHBOUND APPROACH BETWEEN SHUTTLE MEADOW ROAD AND WHITING STREET. ERADICATE EXISTING STOP BAR AND CENTERLINE BEYOND NEW STOP BAR LOCATION.

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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 APPURTENANCES (MAST ARMS, PEDESTALS, AND HAND HOLES) 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 SEPECIAL PROVISION.

(I) INSTALL TYPE 3a SIDEWALK RAMP PER GUIDE SHEETS. MATCH TO EXISTING BITUMINOUS SIDEWALK. EXTEND LANDING AREA TO PROVIDE A 4'x 4' AREA ADJACENT TO PEDESTAL FOUNDATION FOR CROSSING ROUTE 10

(J) INSTALL TYPE 2A SIDEWALK RAMP PER GUIDE SHEETS. EXISTING LANDING AREA TO REMAIN.

(K) INSTALL TYPE 2A SIDEWALK RAMP PER GUIDE SHEETS.

(L) INSTALL TYPE 4D SIDEWALK RAMP PER GUIDE SHEETS.

(P) REMOVE EXISTING CONCRETE SIDEWALK, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING AND APPROXIMATELY 9 FEET OF BITUMINOUS CONCRETE. WORK TO BE PAID UNDER ITEM 0202513A, 0921001 AND 0814002 RESPECTIVELY.

(M) INSTALL MAST ARM FOUNDATION ADJACENT TO FRONT EDGE OF SIDEWALK

(N) INSTALL MAST ARM FOUNDATION ADJACENT TO AND WITHIN R.O.W.

(O) REMOVE EXISTING CONCRETE SIDEWALK, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING AND APPROXIMATELY 30 FEET OF CONCRETE CURBING. WORK TO BE PAID UNDER ITEM 0202513A, 0921001 AND 0814002 RESPECTIVELY.

INSTALL PEDESTAL FOUNDATIONS ADJACENT TO LANDING AREA.

(Q) DIG TEST PIT TO CONFIRM LOCATION OF UNDERGROUND WATER LINE AND RCP

(U) DIG TEST PIT TO CONFIRM LOCATION OF UNDERGROUND GAS MAIN AND TELEPHONE LINE.

(R) RETROFIT DETECTABLE WARNING STRIP PER GUIDE SHEETS.

(AB) INSTALL NEW 4' WIDE CONCRETE SIDEWALK FROM EXISTING SIDEWALK TO EXISTING BITUMINOUS PATH.

(V) INSTALL CONTROLLER FOUNDATION AND CONCRETE PAD ADJACENT TO AND WITHIN R.O.W.

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

(X) INSTALL CAST IRON HANDHOLE COVER.

(Y) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA CO-MOUNTED WITH VIDEO-IP CAMERA ON 78" VERTICAL BRACKET ON MAST ARM ASSEMBLY I.D. #109-201-B.

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

(AA) INSTALL AUXILIARY EQUIPMENT CABINET ON 4'-4" PEDESTAL. INSTALL CAT6 REPEATER IN CABINET AND COIL MINIMUM 10' OF CAT6 CABLE IN CABINET.

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 SNET #147S 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 THE TOWN OF PLAINVILLE:
* RAISE TOWN-OWNED LUMINAIRE ON CL&P #1387 3-FEET.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY COMCAST:
* RAISE COMMUNICATION CABLE ON CL&P #1387 3-FEET.

COORDINATE AND SCHEDULE THE FOLLOWING WORK BY FRONTIER:
* RAISE COMMUNICATION CABLE ON CL&P #1387 3-FEET.

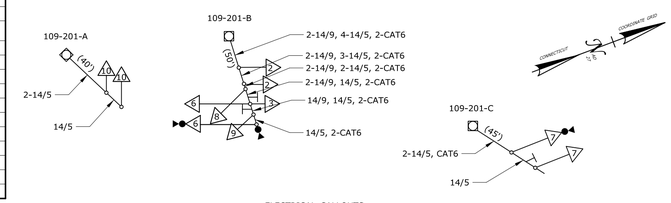
(AC) UTILIZE TEMPORARY SIGNALIZATION TO FACILITATE FRONTIER RELOCATION OF COMMUNICATION CABLES UNDER EXISTING MAST ARMS.

MAST ARM NOTES

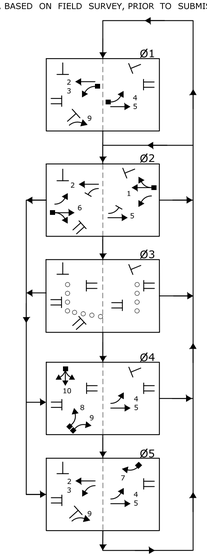
ALL MAST ARM MOUNTED TRAFFIC SIGNALS ARE FIXED MOUNTED TO THE ARM BY USE OF ADJUSTABLE BRACKETS.

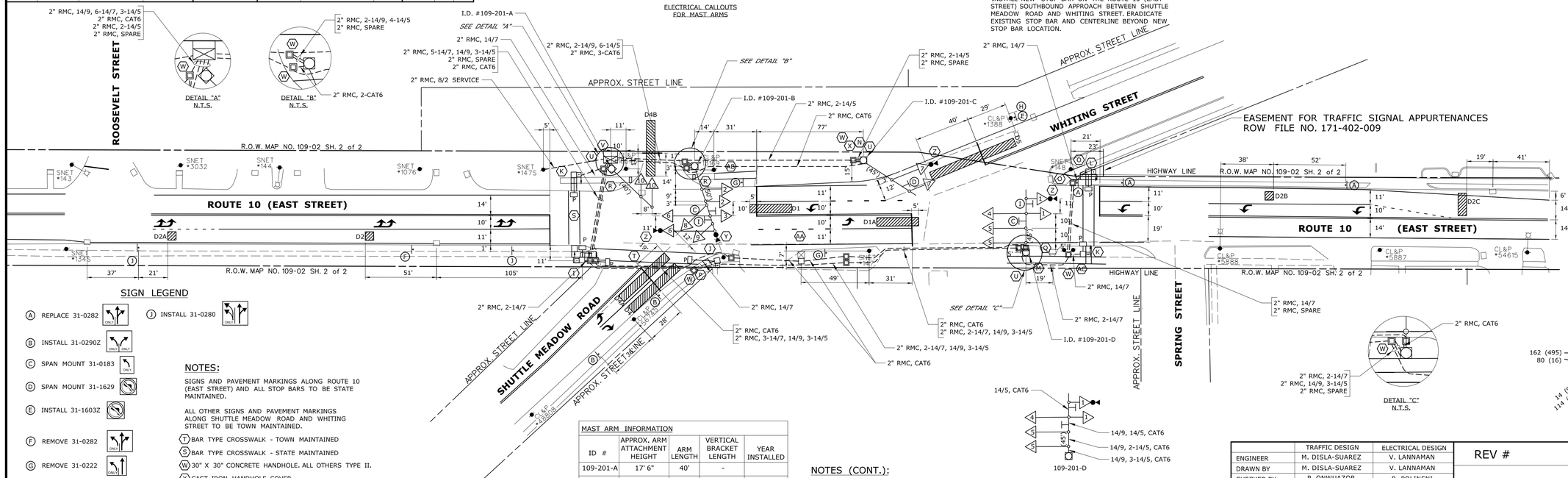
ALL MAST ARM MOUNTED SIGNS ARE FIXED MOUNTED

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

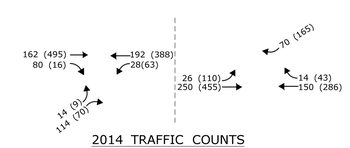


ELECTRICAL CALLOUTS FOR MAST ARMS





ELECTRICAL CALLOUTS FOR MAST ARM



2014 TRAFFIC COUNTS
AM (PM) PEAK HOUR

SIGN LEGEND

(A) REPLACE 31-0282
(B) INSTALL 31-0290Z
(C) SPAN MOUNT 31-0183
(D) SPAN MOUNT 31-1629
(E) INSTALL 31-1603Z
(F) REMOVE 31-0282
(G) REMOVE 31-0222
(H) REMOVE "NO LEFT TURN" SIGN
(I) SPAN MOUNT 41-0807
(J) INSTALL 31-0280

NOTES:

SIGNS AND PAVEMENT MARKINGS ALONG ROUTE 10 (EAST STREET) AND ALL STOP BARS TO BE STATE MAINTAINED.

ALL OTHER SIGNS AND PAVEMENT MARKINGS ALONG SHUTTLE MEADOW ROAD AND WHITING STREET TO BE TOWN MAINTAINED.

(T) BAR TYPE CROSSWALK - TOWN MAINTAINED
(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(W) 30" X 30" CONCRETE HANDHOLE. ALL OTHERS TYPE II.
(X) CAST IRON HANDHOLE COVER.
(Y) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA CO-MOUNTED WITH VIDEO-IP CAMERA ON 78" VERTICAL BRACKET ON MAST ARM ASSEMBLY I.D. #109-201-B.
(Z) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON 96" VERTICAL BRACKET.

MAST ARM INFORMATION

ID #	APPROX. ARM ATTACHMENT HEIGHT	ARM LENGTH	VERTICAL BRACKET LENGTH	YEAR INSTALLED
109-201-A	17' 6"	40'	-	
109-201-B	17'	50'	78"	
109-201-C	17' 4"	45'	96"	
109-201-D	17' 6"	45'	96"	

NOTES (CONT.):

(AA) CAT6 REPEATER IN AUXILIARY EQUIPMENT CABINET ON 4'-4" PEDESTAL.

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	M. DISLA-SUAREZ	V. LANNAMAN
DRAWN BY	M. DISLA-SUAREZ	V. LANNAMAN
CHECKED BY	P. ONWUAZOR	R. POLINENI
SUBMITTED BY	G. PALMER	J. KULJIS
APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
APPROVED DATE	06/08/18	06/13/18

REV # INTERSECTION # 109-201

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - SNET #147S
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
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
VC VIDEO CAMERA CABLE
CABLE CLOSURE
WIRELESS SENSOR
WIRELESS RECEIVER
WIRELESS TRANSCEIVER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects$\0171-0401-0402\Traffic\Signals\TR_MSH_TCS_109_201_000PENDING.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 10 (EAST STREET) AT SHUTTLE MEADOW ROAD AND WHITING STREET

SCALE 1" = 40'

TOWN: PLAINVILLE

PROJECT NO. 0171-0402

DRAWING NO. TCS-09

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

SHEET NO. 03.10

MOVEMENT DIAGRAM

NTOR	PHASE 1 PRE-EMPT 2	PHASE 2 PRE-EMPT 1	PHASE 3	PHASE 4 PRE-EMPT 3	PHASE 5 PRE-EMPT 1	PHASE 6 PRE-EMPT 2	PHASE 7	PHASE 8	PHASE 9
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	R	R	G	Y	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	Y	R	R	R	G	Y	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	G	Y	R	R	R	R	R	R	R									
P	OFF	←					DW→	WØ	←			DW	→															
					←YIELD PT.												←YIELD PT.											

INTERVALS																												
MIN GRN	5				15						7			5			15											
WALK								7 (1)	ACCESSIBLE PEDESTRIAN SIGNAL																			
PED CLR								22 (2)																				
VEH EXT	1.5				2.5						1.5			1.5			2.5											
MAX 1	20				34						25			6			34											
MAX 2	20				34						25			6			34											
YELLOW		3.0				4.0			4.0			3.0			3.0			4.0										
RED				1.5			2.0			0			3.0			1.5			2.0									
ADD INIT																												
MAX INIT																												
TBR									COUNTDOWN PEDESTRIAN SIGNAL																			
TTR																												
MIN GAP																												
MODE	NON-LOCK				MIN RECALL			NON-LOCK			NON-LOCK			NON-LOCK			MIN RECALL			OFF			OFF			OFF		
INIT START					THIS PHASE												THIS PHASE											

DETECTORS				SYSTEM LOC	COORDINATION TYPE: CLOSED LOOP					
IDENT	SIZE (WXL)	TYPE	MODE	MASTER 159-237	PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET SEC	OFFSET %
D1	6' x 28'	VIDEO 360	PRESENCE	118-209	FLASH	NONE				
D2,D2A	6' x 6'	VIDEO IP	PRESENCE	118-233						
D2B,D2C	6' x 6'	VIDEO IP	PRESENCE	159-235		SEE TECH NOTES				
D5	6' x 28'	VIDEO 360	PRESENCE	159-206						
D6,D6A	6' x 6'	VIDEO IP	PRESENCE	159-246						
D6B,D6C	6' x 6'	VIDEO IP	PRESENCE							
D4,D4B	SEE PLAN	VIDEO 360	PRESENCE							
D4A	6' x 62'	VIDEO 360	PRESENCE							

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.	22	22	22
HOLD GREEN	15	15	15
HOLD YELLOW	3.0	3.0	3.0
HOLD RED	1.5	1.5	3.0
HOLD PHASE	2,5	1,6	4
EXIT PHASE	2,6	2,6	2,6
EXIT CALL	NONE	NONE	NONE

CLOSED LOOP DETECTOR CHART	
D1	1
D2, D2B	2
D2A, D2C	9
D5	5
D6, D6B	6
D6A, D6C	10
D7	7
D8	8
D8A	11

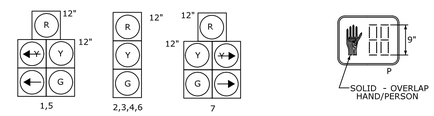
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
(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.
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.

OFFICE RECORD

REV # TIR # N/A SM # N/A SIGNAL REVISED:
REPLACED TRAFFIC SIGNAL EQUIPMENT UNDER PROJECT 0171-0402.

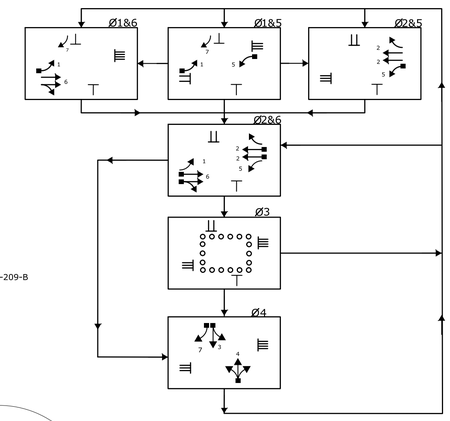
SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS.

ALL FACES TO HAVE TUNNEL VISORS.

ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH RETRO-REFLECTIVE YELLOW BORDER.



CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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

THE LOCATION OF TRAFFIC SIGNAL FOUNDATION 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 AREA.

TEMPORARILY RELOCATE EXISTING CONTROLLER TO FACILITATE FOUNDATION MODIFICATION AND UNTIL NEW CONTROLLER IS IN OPERATION.

INSTALL STATE FURNISHED CONTROLLER.

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

ALL MAST ARM MOUNTED SIGNS ARE FIXED MOUNTED.

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

INSTALL RISERS ON CL&P #1308 UTILITY POLE.

INTERCONNECT ATTACHMENT ON CL&P #1308 TO HAVE A MINIMUM CLEARANCE OF 40" BELOW SECONDARY & 12" ABOVE HIGHEST COMMUNICATIONS.

INTERCONNECT CABLE SHALL BE PULLED BACK TO UTILITY POLE CL&P 1308 AND REINSTALLED IN NEW CONDUIT TO NEW CABINET LOCATION.

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

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

(J) INSTALL TYPE 3a SIDEWALK RAMP PER GUIDE SHEET AND CONSTRUCT 4' WIDE CONC. WALK TO EXTEND TO EXISTING SIDEWALK.

(K) INSTALL TYPE 3a SIDEWALK RAMP PER GUIDE SHEET.

(L) REMOVE EXISTING CONCRETE SIDEWALK AND SIDEWALK RAMP, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING, AND APPROXIMATELY 38 FEET OF CONCRETE CURB. WORK TO BE PAID UNDER ITEMS 0202513A,0944000A,0950019A, 0950013, AND 0813001 RESPECTIVELY.

(M) REMOVE EXISTING CONCRETE SIDEWALK RAMP, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING, AND APPROXIMATELY 20 FEET OF CONCRETE CURB. WORK TO BE PAID UNDER ITEMS 0202513A,0944000A,0950019A, 0950013,AND 0813001 RESPECTIVELY.

(N) DIG TEST PIT TO CONFIRM LOCATION OF UNDERGROUND UTILITIES.

(P) INSTALL MAST ARM FOUNDATION ADJACENT TO SIDEWALK AT FRONT EDGE AND LANDING AREA.

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

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SEPECIAL PROVISION.

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

(AA) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA MOUNTED ON MAST ARM ID# 118-209-C.

(BB) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(CC) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON MAST ARM ID# 118-209-A.

VIDEO DETECTION CAMERAS AND DETECTOR ZONE LOCATIONS ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR THEIR DESIGNATED REPRESENTATIVE. ALL CAMERA CABLES TO RUN CONTINUOUS BETWEEN EACH CAMERA ASSEMBLY AND THE VIDEO DETECTION PROCESSOR IN THE CONTROLLER CABINET.

MAST ARMS, PEDESTALS, SIGNAL HEADS, PEDESTRIAN HEADS, PEDESTRIAN PUSHBUTTONS TO BE PAINTED BLACK FEDERAL NO. 17038. REFER TO SPECIAL PROVISIONS.

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 LOCATION 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 CROSSWALKS AND INSTALL NEW CROSSWALKS AS SHOWN.

ERADICATE EXISTING PAVEMENT ARROWS AND LANE LINES ON TOWN LINE ROAD AND INSTALL NEW PAVEMENT ARROWS AND LANE LINES AS SHOWN.

INSTALL NEW STOP BARS AS SHOWN.

ERADICATE EXISTING LANE LINES ON ROUTE 99 (SILAS DEANE HIGHWAY) AND INSTALL PAVEMENT MARKINGS AS SHOWN.

ERADICATE EXISTING PAVEMENT ARROWS ALONG ROUTE 99 (SILAS DEANE HIGHWAY) AND INSTALL NEW PAVEMENT ARROWS AS SHOWN.

SIGN LEGEND

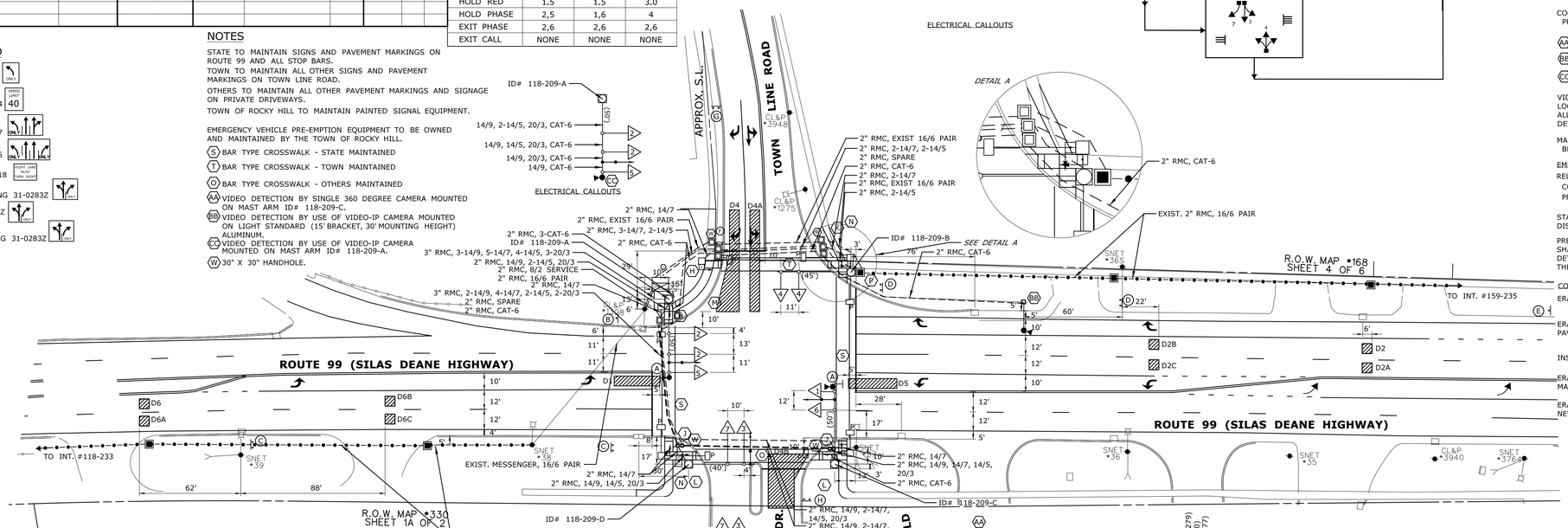
(A) INSTALL 31-0183
(B) REPLACE 31-5504
(C) REPLACE 31-0307
(D) REPLACE 31-0445
(E) EXISTING 31-0118
(F) REPLACE EXISTING 31-0283Z
(G) INSTALL 31-0283Z
(H) REMOVE EXISTING 31-0283Z

NOTES

STATE TO MAINTAIN SIGNS AND PAVEMENT MARKINGS ON ROUTE 99 AND ALL STOP BARS.
TOWN TO MAINTAIN ALL OTHER SIGNS AND PAVEMENT MARKINGS ON TOWN LINE ROAD.
OTHERS TO MAINTAIN ALL OTHER PAVEMENT MARKINGS AND SIGNAGE ON PRIVATE DRIVEWAYS.
TOWN OF ROCKY HILL TO MAINTAIN PAINTED SIGNAL EQUIPMENT.

EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE TOWN OF ROCKY HILL.

(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(T) BAR TYPE CROSSWALK - TOWN MAINTAINED
(O) BAR TYPE CROSSWALK - OTHERS MAINTAINED
(AA) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA MOUNTED ON MAST ARM ID# 118-209-C.
(BB) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.
(CC) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON MAST ARM ID# 118-209-A.
(W) 30" X 30" HANDHOLE.



MAST ARM INFORMATION

ID #	APPROX ARM ATTACHMENT HEIGHT	ARM LENGTH	CAMERA ARM LENGTH	BRACKET NO. OF CAMERAS	YEAR INSTALLED
118-209-A	16'-6"	50'	10'-0" VER	1	
118-209-B	16'-6"	45'	6'-6" VER	1	
118-209-C	16'-6"	50'			
118-209-D	16'-6"	40'			

MAST ARM NOTES

CONTRACTOR TO VERIFY MAST ARM INFORMATION INCLUDING CROSS SECTIONS AND DIMENSIONS PRIOR TO SUBMISSION OF WORKING DRAWINGS.

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

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	M. DISLA-SUAREZ	M. SIMON
DRAWN BY	M. DISLA-SUAREZ	M. SIMON
CHECKED BY	P. ONWUAZOR	R. POLINENI
SUBMITTED BY	G. PALMER	J. KULJIS
APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
APPROVED DATE	06/08/18	06/14/18

REV # INTERSECTION #118-209

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 2	SERVICE POLE CL&P #1308
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
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

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

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects\0171-0401-0402\Traffic\Signals\TR_MSH_118_209_xxxpendlng_PERMISSIVE.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 99 (SILAS DEANE HIGHWAY)
AT TOWN LINE ROAD AND
PRIVATE DRIVEWAY

SCALE 1" = 40'

TOWN: ROCKY HILL

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0171-0402
DRAWING NO. TCS-10
SHEET NO. 03.11

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2 PRE-EMPTION 1	PHASE 3	PHASE 4 PRE-EMPTION 2	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
NONE	1 2	1 2, 3		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	Y	R	R	R	G	Y	R				R	R	R															
4	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									
PED CLR									
VEH EXT	1.5	2.5		1.5					
MAX 1	14	22		22					
MAX 2	15	30		30					
YELLOW	3.0	4.6		3.0					
RED	1.0	1.0		1.0					
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE	NON-LOCK	MIN RECALL	OFF	NON-LOCK	OFF	OFF	OFF	OFF	OFF
INIT START		THIS PHASE							

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D1	6' x 57'	VIDEO 360	PRESENCE
D2, D2A	6' x 6'	VIDEO IP	PRESENCE
D2B,D2C	6' x 6'	VIDEO IP	PRESENCE
D2D	6' x 13'	VIDEO IP	PRESENCE
D4,D4A	SEE PLAN	VIDEO 360	PRESENCE
DWW	39' x 17'	VIDEO 360	PRESENCE

SYSTEM LOC MASTER

COORDINATION TYPE: NONE

PROGRAM FUNCTION	PROGRAM TIME	PROGRAM DAYS	CYCLE	OFFSET SEC	OFFSET %
FLASH	NONE				
MAX 1	ALL OTHER TIMES	DAILY			
MAX 2	0600-1000,1500-1800	M-F			

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.	NO	NO
HOLD GREEN	15	15
HOLD YELLOW	4.6	3.0
HOLD RED	1.0	1.0
HOLD PHASE	2	4
EXIT PHASE	4	2
EXIT CALL	NONE	NONE

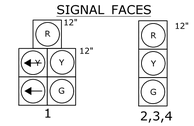
TECHNICAL NOTES

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

OFFICE RECORD

REV # TIR # 131-1706-01 SM # N/A SIGNAL REVISED:
REPLACED SIGNAL EQUIPMENT AND ADDED EMERGENCY PRE-EMPTION UNDER PROJECT 0171-0402.

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS.

SIGNAL FACES 1 AND 2 TO HAVE TUNNEL VISORS AND CUT-OFF RIGHT LOUVERS.

SIGNAL FACES 4 TO HAVE TUNNEL VISORS AND CUT-OFF LEFT LOUVERS.

ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH RETROREFLECTIVE YELLOW BORDER.

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

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.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISION.

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

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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

(M) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA MOUNTED ON SPAN POLE ID# 131-233-B.

(N) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(P) INSTALL AUXILLIARY EQUIPMENT CABINET ON 4'-4" PEDESTAL. INSTALL CAT6 REPEATER IN CABINET AND COIL MINIMUM 10' OF CAT6 CABLE IN CABINET.

MAINTAIN 12" BETWEEN OVERHEAD SERVICE WIRE AND SIGNAL SPAN WIRE RUNNING BETWEEN SPAN POLES 131-233-A AND 131-233-B.

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

INSTALL LUMINAIRE ON SPAN POLE 131-233-A, 131-233-B AND PROVIDE SERVICE FROM THE CONTROLLER CABINET.

INSTALL CIRCUIT BREAKER FOR LUMINAIRE SERVICE IN THE CABINET AS SPECIFIED IN THE SPECIAL PROVISIONS.

SELECTIVE CLEARING AND THINNING REQUIRED FOR LUMINAIRE BRACKET AND INSTALLATION OF SPAN POLE 131-233-A TO BE PAID UNDER ITEM 0952001A.

ADD DETECTION ZONE FOR WRONG WAY ENTRY ON THE OFF-RAMP. SET DIRECTIONAL FLOW OF DETECTION ZONE AGAINST THE NORMAL FLOW OF VEHICULAR TRAFFIC IN THE 360 DEGREE VIDEO DETECTION PROCESSOR.

ENABLE WRONG WAY ENTRY VEHICLE DETECTION COUNTS IN THE 360 DEGREE VIDEO DETECTION PROCESSOR.

FIELD ADJUST DETECTION ZONE AS NEEDED.

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 CONTINOUS BETWEEN EACH DETECTOR AND THE AUXILIARY EQUIPMENT CABINET.

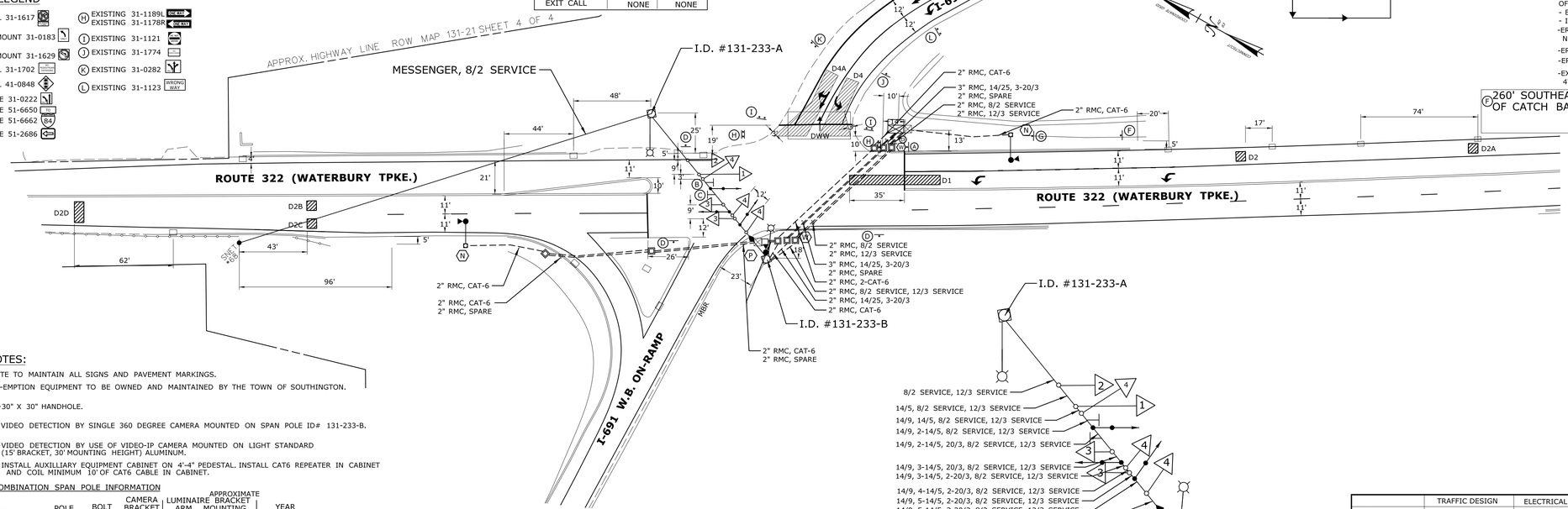
CONTRACTOR TO ERRADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

OFF RAMP PAVEMENT MARKINGS:
- EXTEND LANE LINE FOR 375' FROM STOP BAR (FULL WIDTH OF TWO LANES).
- INSTALL 2' DOTTED EXTENSION LANE LINE WITH 4' SPACING FOR 150' TAPER AREA.
- ERADICATE PAVEMENT ARROW CLOSEST TO STOP BAR ON ROUTE 322 EAST LEG; INSTALL NEW PAVEMENT ARROW AS SHOWN.
- ERADICATE ALL PAVEMENT MARKINGS THAT EXTEND BEYOND THE STOP BARS.
- ERADICATE ALL CONFLICTING MARKINGS.
- EXTEND LANE LINE FOR 575' FROM STOP BAR AND INSTALL 2' DOTTED EXTENSION LANE LINE WITH 4' SPACING FOR 50' TAPER AREA ON ROUTE 322 EAST LEG FOR THE LEFT TURN LANE AS INDICATED.

(F) 260' SOUTHEAST OF CATCH BASIN
- INSTALL ISLAND ON ROUTE 322 WEST LEG AS INDICATED.
- ERADICATE ALL STOP BARS; INSTALL ALL NEW STOP BARS.

SIGN LEGEND

- (A) INSTALL 31-1617
- (B) SPAN MOUNT 31-0183
- (C) SPAN MOUNT 31-1629
- (D) INSTALL 31-1702
- (E) INSTALL 41-0848
- (F) REPLACE 31-0222
- (G) REPLACE 51-6650 / REPLACE 51-6662 / REPLACE 51-2686
- (H) EXISTING 31-1189L / EXISTING 31-1178R
- (I) EXISTING 31-1121
- (J) EXISTING 31-1774
- (K) EXISTING 31-0282
- (L) EXISTING 31-1123



NOTES:

STATE TO MAINTAIN ALL SIGNS AND PAVEMENT MARKINGS.

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

(W) 30" X 30" HANDHOLE.

(M) VIDEO DETECTION BY SINGLE 360 DEGREE CAMERA MOUNTED ON SPAN POLE ID# 131-233-B.

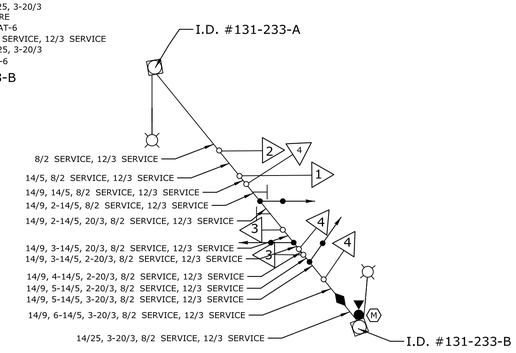
(N) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON LIGHT STANDARD (15' BRACKET, 30' MOUNTING HEIGHT) ALUMINUM.

(P) INSTALL AUXILLIARY EQUIPMENT CABINET ON 4'-4" PEDESTAL. INSTALL CAT6 REPEATER IN CABINET AND COIL MINIMUM 10' OF CAT6 CABLE IN CABINET.

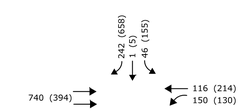
COMBINATION SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	LUMINAIRE ARM LENGTH	APPROXIMATE BRACKET MOUNTING HEIGHT	YEAR INSTALLED
131-233-A	32'	24"	20' HOR	20'	31'	
131-233-B	32'	24"	15' HOR 6'-6" VER	20'	31'	

LIGHT STANDARD



ELECTRICAL CALLOUTS N.T.S:



2016 TRAFFIC COUNTS

AM (PM) PEAK HOUR

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	M. DISLA-SUAREZ	M. SIMON
DRAWN BY	M. DISLA-SUAREZ	M. SIMON
CHECKED BY	P. ONWUAZOR	R. POLINENI
SUBMITTED BY	G. PALMER	J. KULJIS
APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
APPROVED DATE	06/08/18	06/14/18

REV # INTERSECTION # 131-233

ENERGY BY STATE	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - SNET #68
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:
R, Y, G RED, YEL, GRN
R RED ARROW
Y YELLOW ARROW
G GREEN ARROW
W 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 TRANSCEIVER
GUY WIRE
PROPOSED HANDHOLE
EXISTING HANDHOLE

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects\0171-0401-0402\Traffic\Signals\TR_MSH_131_233_008pending.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 322 (Waterbury Turnpike) AT ROUTE I-691 WESTBOUND OFF-RAMP AND I-691 W.B. ON-RAMP

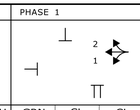
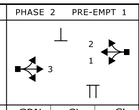
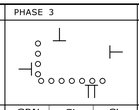
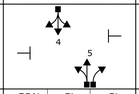
SCALE 1" = 40'

TOWN: SOUTHINGTON

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0171-0402
DRAWING NO. TCS-11
SHEET NO. 03.12

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 G	G	G	Y	R	R	R	R	R	R	R															
2	Y	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															
4	R	R	R	R	R	R	R	R	R	R	G	Y	R															
5	R	R	R	R	R	R	R	R	R	R	G	Y	R															
P	OFF	← DW →						WØ	← DW →																			

INTERVALS	PHASE 1	PHASE 2	PRE-EMPT 1	PHASE 3	PHASE 4	PRE-EMPT 2	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
MIN GRN	5	15		7 ① 11 ② (ACCESSIBLE PEDESTRIAN SIGNAL)	7						
WALK											
PED CLR											
VEH EXT		2.5			1.5						
MAX 1	5	35			20						
MAX 2	5	50			25						
YELLOW	3		4.3	4		3.3					
RED	1		2.9	0	1						
ADD INIT				(COUNTDOWN PEDESTRIAN SIGNAL)							
MAX INIT											
TBR											
TTR											
MIN GAP											
MODE	MAX RECALL	MIN RECALL		NON-LOCK	NON-LOCK		OFF	OFF	OFF	OFF	OFF
INIT START		THIS PHASE									

DETECTORS

IDENT	SIZE (WXL)	TYPE	MODE
D2, D2A	6'x6'	VIDEO IP	PRESENCE
D2B,D2C	6'x6'	VIDEO IP	PRESENCE
D4	6'x37'	VIDEO 360	PRESENCE
D4A	SEE PLAN	VIDEO 360	8" DELAY
D4B	SEE PLAN	VIDEO 360	PRESENCE

SYSTEM LOC MASTER

COORDINATION TYPE: NONE

PROGRAM FUNCTION	TIME	DAYS
FLASH	NONE	
MAX 1	ALL OTHER TIME	M-F
MAX 2	0700-0900	M-F
	1530-1800	M-F

CYCLE	OFFSET SEC	OFFSET %

SIGN LEGEND:

Ⓐ EXISTING 31-0283Z ( )

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

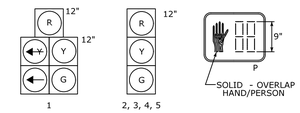
① PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.
② COUNTDOWN ONLY DURING FLASHING PEDESTRIAN CHANGE INTERVAL.

PHASE 2 ON TO OMIT PHASE 1.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.

OFFICE RECORD

REV # TIR # 159-1702-01 SM # N/A SIGNAL REVISED:
REPLACED SIGNAL EQUIPMENT; ADDED PRE-EMPTION AND PEDESTRIAN PHASE
UNDER PROJECT NO. 0171-0402.

SIGNAL FACES

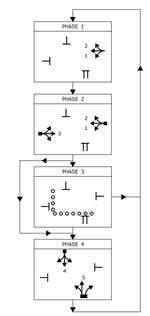


ALL INDICATIONS TO HAVE LED LAMPS.

ALL SIGNAL FACES TO HAVE BACKPLATES WITH RETRO-REFLECTIVE 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.	11	11
HOLD GREEN	15	15
HOLD YELLOW	4.3	3.3
HOLD RED	2.9	1
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 AS REQUESTED PER THE ENGINEER.
REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL PROVISIONS.
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.

(G) CONSTRUCT COMBINATION TYPE 4d SIDEWALK RAMP PER GUIDE SHEETS.
(H) CONSTRUCT TYPE 4e SIDEWALK RAMP PER GUIDE SHEETS.
(I) CONSTRUCT TYPE 5a SIDEWALK RAMP PER GUIDE SHEETS.
(J) USE CAUTION WHEN AUGERING FOR THE SPAN POLE FOUNDATION TO AVOID NEARBY UNDERGROUND GAS LINE.
(K) REMOVE EXISTING CONCRETE SIDEWALK, FURNISH AND PLACE TOPSOIL, ESTABLISH TURF, INSTALL EROSION CONTROL MATTING, AND APPROXIMATELY 6 FEET OF BIT. CONC. CURBING. WORK TO BE PAID UNDER ITEMS 0202513A, 0944000, 0950019, 0950013 AND 0815001, RESPECTIVELY.
(L) INSTALL SPAN POLE FOUNDATION ADJACENT TO WALK AT FRONT EDGE. TRIM TREE BRANCHES TO INSTALL SPAN POLE AND CAMERA EXTENSION BRACKET. WORK TO BE PAID UNDER ITEM NO. 0952001A - "SELECTIVE CLEARING AND THINNING".
INSTALL CONTROLLER CABINET FOUNDATION ADJACENT TO WALK AT FRONT EDGE.
(M) INSTALL SPAN POLE FOUNDATION ADJACENT TO LANDING AREA AT BACK EDGE.
(W) INSTALL 30" X 30" HANDHOLE.

INSTALL RISER ON CL&P #1777 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 EVERSOURCE:
* REPLACE CL&P #1777 WITH A 50-FT, CLASS 2 POLE.
ESTIMATED LOAD ON UTILITY POLE: CL&P #1777: 1,458 lbs.
SPAN ATTACHMENT ON CL&P #1777 TO HAVE A MINIMUM CLEARANCE OF 12" BELOW SECONDARY & 40" ABOVE HIGHEST COMMUNICATIONS.
SPAN POLES WITH 2 SPAN ATTACHMENTS TO HAVE 2 SPAN CLAMPS.

(O) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA CO-MOUNTED WITH VIDEO-IP CAMERA ON SPAN POLE I.D. #159-230-C.
(P) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON 20' PEDESTAL.
(Q) INSTALL AUXILIARY EQUIPMENT CABINET ON 4'4" PEDESTAL. INSTALL CAT6 REPEATER IN CABINET AND COIL MINIMUM 10 FEET OF CAT-6 CABLE IN CABINET.

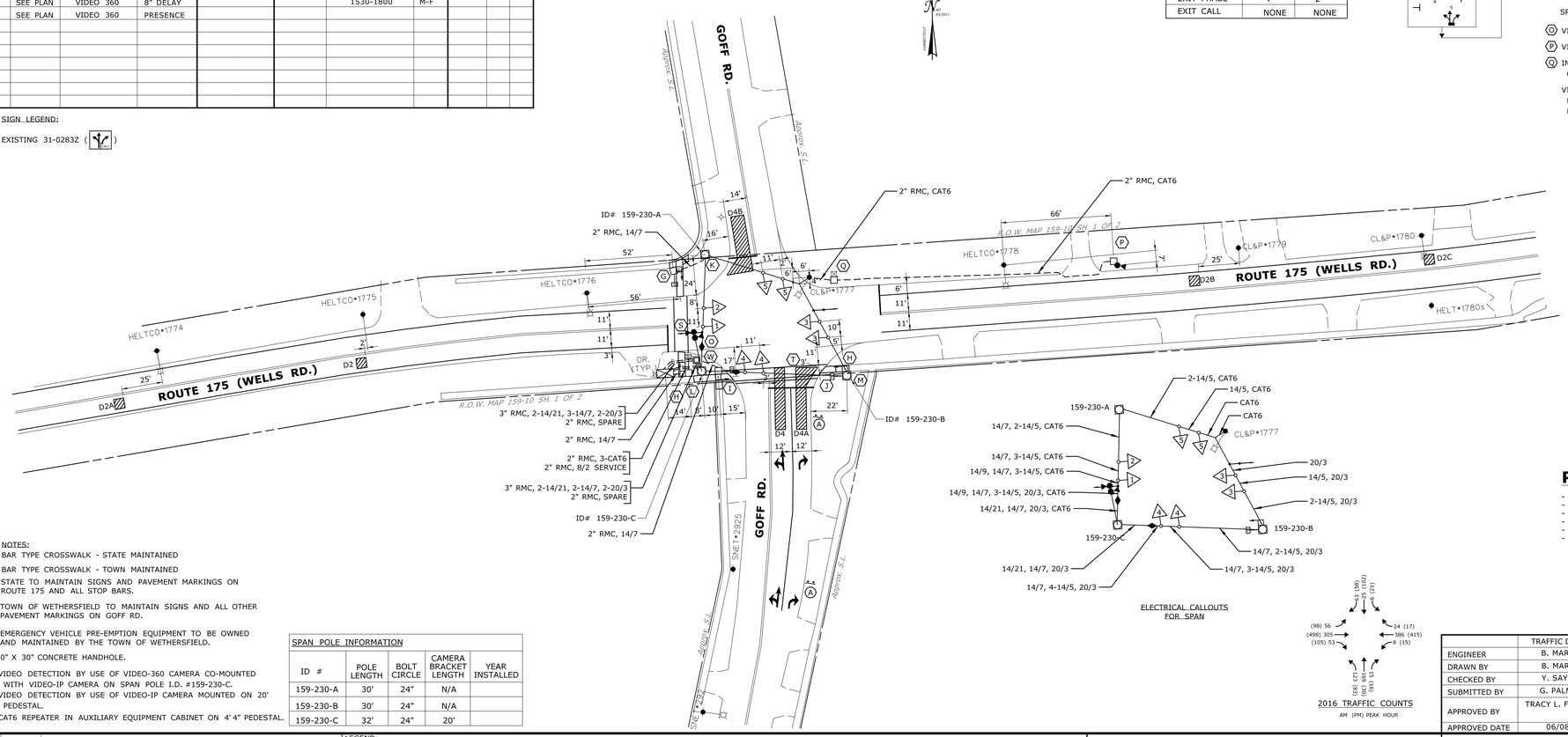
VIDEO DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY.
EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE.
DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH DETECTOR AND THE CONTROLLER CABINET.

EMERGENCY PRE-EMPTION NOTES

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 PAVEMENT MARKINGS WITHIN 4 FEET OF CROSSWALKS.
- ERADICATE ALL CONFLICTING PAVEMENT MARKINGS.
- ERADICATE PAVEMENT ARROWS CLOSEST TO STOP BAR ON THE GOFF ROAD SOUTH LEG.
- INSTALL ALL NEW CROSSWALKS.
- INSTALL NEW PAVEMENT ARROWS CLOSEST TO STOP BAR ON THE GOFF ROAD SOUTH LEG.
- INSTALL ALL NEW STOP BARS.

NOTES:

(S) BAR TYPE CROSSWALK - STATE MAINTAINED
(T) BAR TYPE CROSSWALK - TOWN MAINTAINED

STATE TO MAINTAIN SIGNS AND PAVEMENT MARKINGS ON ROUTE 175 AND ALL STOP BARS.

TOWN OF WETHERSFIELD TO MAINTAIN SIGNS AND ALL OTHER PAVEMENT MARKINGS ON GOFF RD.

EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT TO BE OWNED AND MAINTAINED BY THE TOWN OF WETHERSFIELD.

(W) 30" X 30" CONCRETE HANDHOLE.
(O) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA CO-MOUNTED WITH VIDEO-IP CAMERA ON SPAN POLE I.D. #159-230-C.
(P) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON 20' PEDESTAL.
(Q) CAT6 REPEATER IN AUXILIARY EQUIPMENT CABINET ON 4'4" PEDESTAL.

SPAN POLE INFORMATION

ID #	POLE LENGTH	BOLT CIRCLE	CAMERA BRACKET LENGTH	YEAR INSTALLED
159-230-A	30'	24"	N/A	
159-230-B	30'	24"	N/A	
159-230-C	32'	24"	20'	

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

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects$\0171-0401-0402\Traffic\Signals\TR_MSH_159_230_XXXpendlng.dgn

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 175 (WELLS RD.) AT GOFF ROAD

SCALE 1" = 40'

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	B. MARTAI	V.LANNAMAN
DRAWN BY	B. MARTAI	V. LANNAMAN
CHECKED BY	Y. SAYKIN	R. POLINENI
SUBMITTED BY	G. PALMER	J. KULJIS
APPROVED BY	TRACY L. FOGARTY	TRACY L. FOGARTY
APPROVED DATE	06/08/18	06/14/18

REV # INTERSECTION # 159-230

ENERGY BY TOWN	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - HELTCO #1776
	UNMETERED SERVICE

TOWN: WETHERSFIELD

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0171-0402
DRAWING NO. TCS-12
SHEET NO. 03.13

MOVEMENT DIAGRAM

NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8	
	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	G	Y	R	R	R	R	R	R	R															
2	Y	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															
4	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	5	15		7					
WALK			7 (1)						
PED CLR			19 (2)						
VEH EXT	1.5	2.5		1.5					
MAX 1	6	29		26					
MAX 2	6	29		26					
YELLOW	3.0	4.4	4.0	3.6					
RED	1.0	2.5	0	1.0					
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE	NON-LOCK	MIN RECALL	NON-LOCK	NON-LOCK	OFF	OFF	OFF	OFF	OFF
INIT START		THIS PHASE							

ACCESSIBLE PEDESTRIAN SIGNAL

COUNTDOWN PEDESTRIAN SIGNAL

DETECTORS				SYSTEM LOC	COORDINATION TYPE: NONE					
					PROGRAM				OFFSET	
IDENT	SIZE (WXL)	TYPE	MODE	MASTER	FUNCTION	TIME	DAYS	CYCLE	SEC	%
D1	6'X30'	VIDEO 360	PRESENCE		FLASH	NONE				
D2	8'X6'	VIDEO IP	PRESENCE							
D2A	8'X6'	VIDEO IP	PRESENCE		MAX 1	ALL TIMES				
D2B	8'X6'	VIDEO IP	PRESENCE		MAX 2	FUTURE				
D2C	8'X6'	VIDEO IP	PRESENCE							
D4	6'X35'	VIDEO 360	PRESENCE							
D4A	6'X30'	VIDEO 360	PRESENCE							

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

(1) PERCUSSIVE TONE ONLY DURING PEDESTRIAN WALK INTERVAL.

(2) COUNTDOWN ONLY DURING FLASHING PEDESTRIAN CHANGE INTERVAL.

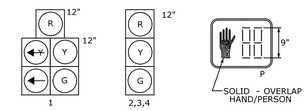
MANUAL AND INTERVAL ADVANCE TO BE DISCONNECTED DURING PHASE 3 PEDESTRIAN CHANGE INTERVAL.

OFFICE RECORD

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

REPLACED SIGNAL EQUIPMENT UNDER PROJECT NUMBER 0171-0402.

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS.

ALL VEHICULAR SIGNAL FACES TO HAVE BACKPLATES WITH RETRO-REFLECTIVE YELLOW BORDER.

SIGNAL FACES 1 AND 2 TO HAVE TUNNEL VISORS.

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

STATE FORCES TO STAKE ALL R.O.W. PRIOR TO EXCAVATION AS REQUESTED PER THE ENGINEER.

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.

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

(P) CONSTRUCT MODIFIED TYPE 1 AND 1A SIDEWALK RAMPS WITH COMBINED LANDING AREA PER GUIDE SHEETS. RESET EXISTING BRICK PAVERS DISTURBED DURING CONSTRUCTION TO BE PAID UNDER ITEM 0925101A.

(Q) CONSTRUCT TYPE 4F SIDEWALK RAMP PER GUIDE SHEETS AND WITHIN THE ROW.

(R) PEDESTAL FOUNDATION TO BE INSTALLED AS CLOSE AS POSSIBLE TO GUIDERAIL.

(V) INSTALL PUSHBUTTON EXTENSION BRACKET TO ENSURE PUSHBUTTON IS WITHIN 10" OF LANDING AREA.

PEDESTAL FOUNDATIONS TO BE INSTALLED ADJACENT TO LANDING AREA.

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

(J) INSTALL CAST IRON HANDHOLE COVER.

(K) INSTALL HANDHOLE BETWEEN CONCRETE WALK AND CURBING.

INSTALL RISER ON SNET #662 UTILITY POLE.

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

(L) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA CO-MOUNTED WITH VIDEO-IP CAMERA ON 6'-6" VERTICAL BRACKET ON SPAN POLE I.D #165-213-A.

(M) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA MOUNTED ON 10' VERTICAL BRACKET ON SPAN POLE I.D #165-213-B.

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.

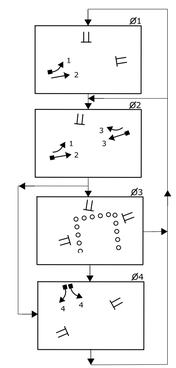
(N) USE CAUTION WHEN TRENCHING TO AVOID UNDERGROUND GAS LINE.

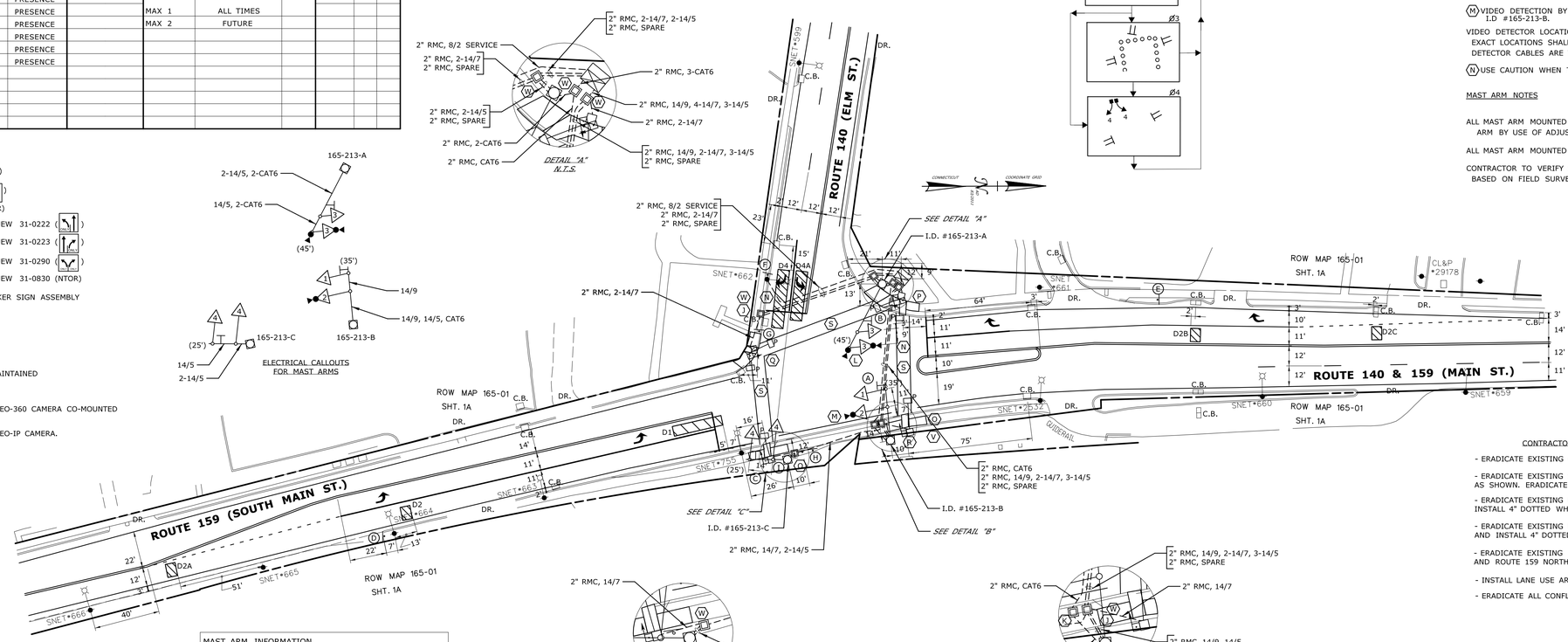
MAST ARM NOTES

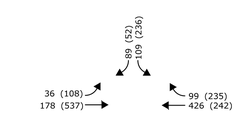
ALL MAST ARM MOUNTED TRAFFIC SIGNALS ARE FIXED MOUNTED TO THE ARM BY USE OF ADJUSTABLE BRACKETS.

ALL MAST ARM MOUNTED SIGNS ARE FIXED MOUNTED

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







2017 TRAFFIC COUNTS

AM (PM) PEAK HOUR

CONTRACTOR TO ERADICATE AND INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

- ERADICATE EXISTING CROSSWALKS AND INSTALL NEW CROSSWALKS AS SHOWN.
- ERADICATE EXISTING STOP BAR ON ROUTE 140 & 159 SOUTHBOUND APPROACH AND INSTALL NEW STOP BAR AS SHOWN. ERADICATE ALL CONFLICTING PAVEMENT MARKINGS THAT EXTEND BEYOND THE NEW STOP BAR.
- ERADICATE EXISTING BROKEN LANE LINES ON ROUTE 159 NORTHBOUND APPROACH OF THE SOUTH LEG AND INSTALL 4" DOTTED WHITE LINE (2' LINE, 4' SPACING) AS SHOWN.
- ERADICATE EXISTING BROKEN LANE LINES ON ROUTE 140 & 159 SOUTHBOUND APPROACH OF THE NORTH LEG AND INSTALL 4" DOTTED WHITE LINE (2' LINE, 4' SPACING) AS SHOWN.
- ERADICATE EXISTING LANE USE ARROWS ON ROUTE 140 & 159 SOUTHBOUND APPROACH OF THE NORTH LEG AND ROUTE 159 NORTHBOUND APPROACH OF THE SOUTH LEG.
- INSTALL LANE USE ARROWS AS SHOWN.
- ERADICATE ALL CONFLICTING MARKINGS.

SIGN LEGEND

(A) MAST ARM MOUNT 31-0183 (D4A)

(B) MAST ARM MOUNT 31-0184 (D4)

(C) MAST ARM MOUNT 31-0823 (NTOR)

(D) REPLACE EXISTING SIGN WITH NEW 31-0222

(E) REPLACE EXISTING SIGN WITH NEW 31-0223

(F) REPLACE EXISTING SIGN WITH NEW 31-0290

(G) REPLACE EXISTING SIGN WITH NEW 31-0830 (NTOR)

(H) RELOCATE EXISTING ROUTE MARKER SIGN ASSEMBLY

(I) REMOVE EXISTING SIGN

NOTES

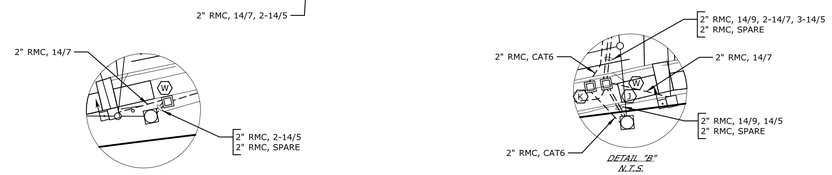
(S) BAR TYPE CROSSWALK - STATE MAINTAINED

(W) 30" X 30" HANDHOLE.

(L) VIDEO DETECTION BY USE OF VIDEO-360 CAMERA CO-MOUNTED WITH VIDEO-IP CAMERA.

(M) VIDEO DETECTION BY USE OF VIDEO-IP CAMERA.

(J) CAST IRON HANDHOLE COVER



MAST ARM INFORMATION				
ID #	APPROX. ARM ATTACHMENT HEIGHT	ARM LENGTH	VERTICAL BRACKET LENGTH	YEAR INSTALLED
165-213-A	17' 4"	45'	6'-6"	
165-213-B	17' 10"	35'	10'	
165-213-C	18' 4"	25'	-	

	TRAFFIC DESIGN	ELECTRICAL DESIGN
ENGINEER	C. Sylvestre	V. Lannaman
DRAWN BY	C. Sylvestre	V. Lannaman
CHECKED BY	Y. Saykin	R. Polineni
SUBMITTED BY	G. Palmer	J. Kuljis
APPROVED BY	Tracy L. Fogarty	Tracy L. Fogarty
APPROVED DATE	6/13/2018	06/14/18

REV # INTERSECTION # 165-213

ENERGY BY STATE	ADDRESS #
MAINT LEVEL 5	SERVICE POLE - SNET #662
	UNMETERED SERVICE

NO.	DATE	REVISION DESCRIPTION

LEGEND:

R, Y, G RED, YEL, GRN
R RED ARROW
Y YELLOW ARROW
G 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

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

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ROUTE 140 (ELM ST.) AT
ROUTE 159 (MAIN ST. AND S. MAIN ST.)
SOUTH JUNCTION

TOWN: WINDSOR LOCKS

DRAWING TITLE: TRAFFIC CONTROL SIGNAL PLAN

PROJECT NO. 0171-0402

DRAWING NO. TCS-13

SHEET NO. 03.14

DATE PLOTTED : 6/19/2018 \\DOT-SDCENG07V\CTDOT_Projects\0171-0401-0402\Traffic\Signals\TR_MSH_165_213_XXXpendlng.dgn

SCALE 1" = 40'

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

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

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.
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.
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

31-0222 31-0223

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
6.25	30X30		1	.080
8.75	42X30	31-0279	2	.100

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

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

31-0445

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

ONLY

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
9.00	36X42	31-0334	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 STOP HERE ON RED

31-0801 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		.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 SIGNS 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: 6/19/2018

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: CTDOT_TRAFFIC_GS.dgn

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

PROJECT TITLE:
INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1

TOWN: VARIOUS

PROJECT NO. 0171-0401 0171-0402

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

DRAWING NO. GS-01

SHEET NO. 03.15

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	41-4040R	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

ONCOMING TRAFFIC MAY HAVE EXTENDED GREEN

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
5.00	24X30	41-0807	1	.080

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

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

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	41-2607		.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	41-2609		.080
3.75	30X18	41-2610		.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	41-2619		.080
3.75	30X18	41-2620		.080

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

NEW

AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.
2.00	12X24	41-0815	1	.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:

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.

THIS SIGNS ADDED FOR THIS PROJECT ONLY.

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: 6/19/2018

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: CTDOT_TRAFFIC_GS.dgn

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

PROJECT TITLE:
INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1

TOWN: VARIOUS

PROJECT NO. 0171-0401 0171-0402

DRAWING NO. GS-02

DRAWING TITLE: SIGN FACE SHEET ALUMINUM S&W SERIES SIGNS TYPICAL DETAILS

SHEET NO. 03.16

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

M3-2

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

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

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: 6/18/2018

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: CTDOT_TRAFFIC_GS.dgn

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

PROJECT TITLE:
INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1

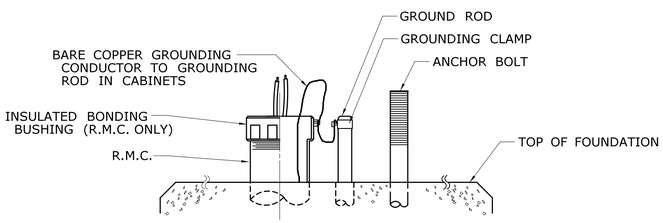
TOWN: VARIOUS

DRAWING TITLE: SIGN FACE SHEET ALUMINUM D,RS,E,I,&M SERIES SIGNS TYPICAL DETAILS

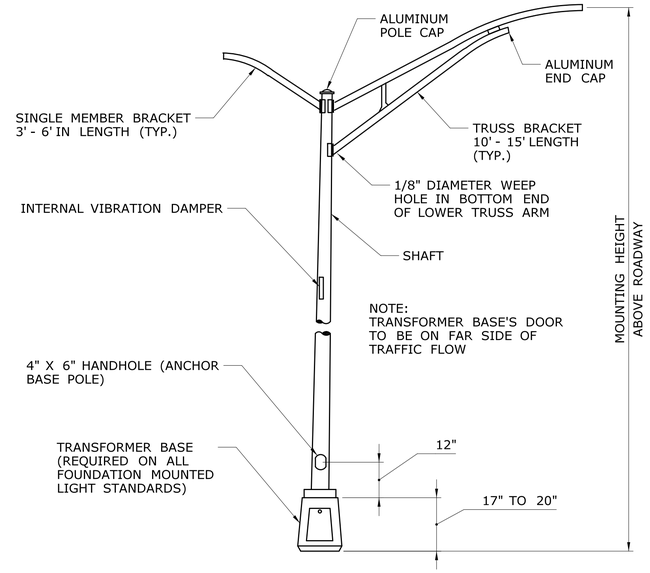
PROJECT NO. 0171-0401 0171-0402

DRAWING NO. GS-03

SHEET NO. 03.17



CONDUIT TERMINATION AT VEHICLE DETECTOR LIGHT STANDARD BASE



ALUMINUM LIGHT STANDARD FOR VEHICLE DETECTOR

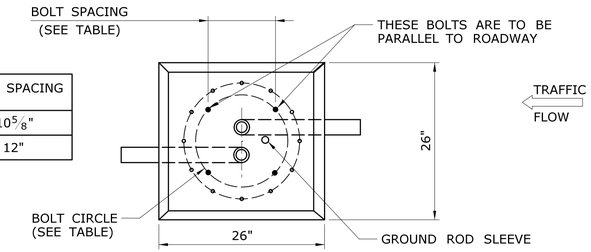
NOTE:

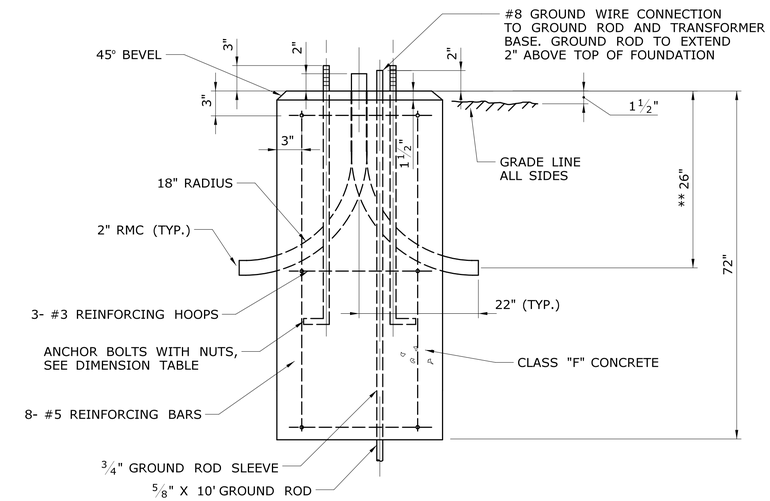
TRANSFORMER BASE DOOR TO BE ON FAR SIDE OF TRAFFIC FLOW.

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

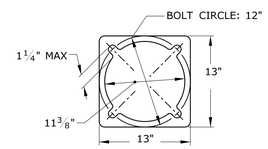
REFER TO SIGNAL PLANS FOR BRACKET LENGTHS.

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

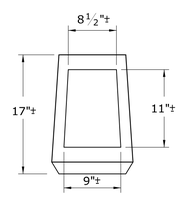




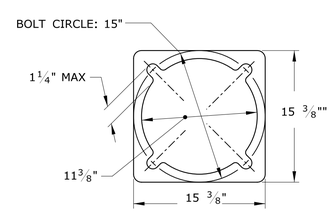
LIGHT STANDARD FOR VEHICLE DETECTOR FOUNDATION



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: 6/18/2018

DESIGNER/DRAFTER: **MMS**

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 & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1

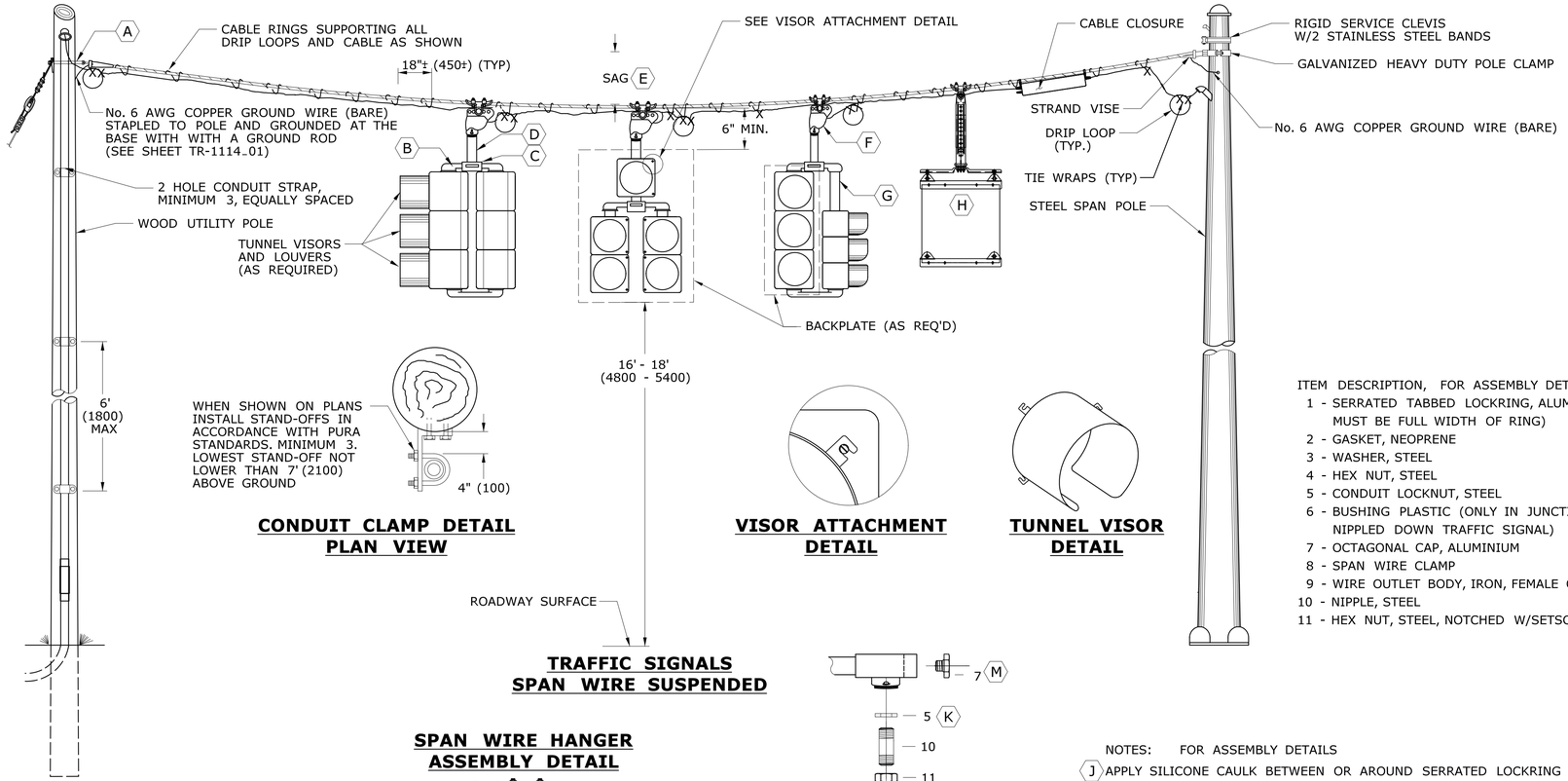
TOWN: **VARIOUS**

DRAWING TITLE: **LIGHT STANDARD & FOUNDATION FOR VEHICLE DETECTION**

PROJECT NO. **0171-0401 0171-0402**

DRAWING NO. **GS-04**

SHEET NO. **03.18**



TRAFFIC SIGNALS SPAN WIRE SUSPENDED

CONDUIT CLAMP DETAIL PLAN VIEW

VISOR ATTACHMENT DETAIL

TUNNEL VISOR DETAIL

ITEM DESCRIPTION, FOR ASSEMBLY DETAILS
1 - SERRATED TABBED LOCKRING, ALUMINUM (TAB MUST BE FULL WIDTH OF RING)
2 - GASKET, NEOPRENE
3 - WASHER, STEEL
4 - HEX NUT, STEEL
5 - CONDUIT LOCKNUT, STEEL
6 - BUSHING PLASTIC (ONLY IN JUNCTION BOX OR NIPPLED DOWN TRAFFIC SIGNAL)
7 - OCTAGONAL CAP, ALUMINIUM
8 - SPAN WIRE CLAMP
9 - WIRE OUTLET BODY, IRON, FEMALE ONLY
10 - NIPPLE, STEEL
11 - HEX NUT, STEEL, NOTCHED W/SETSCREWS

TRAFFIC SIGNAL CABLE COLOR ASSIGNMENTS

SIGNAL ASSEMBLY & CABLE USED	SIGNAL FUNCTION	ARTERY 1	ARTERY 2	SIDE STREET 1	SIDE STREET 2
2 - WAY 9 CONDUCTOR	RED	RED		BLACK	
	YELLOW	ORANGE		WHITE \ BLACK	
	GREEN	GREEN		BLUE	
	SPARE	GREEN\BLACK		RED \ BLACK	
	NEUTRAL	WHITE			
3 - WAY 12 CONDUCTOR	RED	RED	RED \ BLACK	BLACK	
	YELLOW	ORANGE	ORANGE \ BLACK	WHITE \ BLACK	
	GREEN	GREEN	GREEN \ BLACK	BLUE	
	SPARE	BLUE\BLACK	BLACK \ WHITE		
	NEUTRAL	WHITE			
4 - WAY 15 CONDUCTOR	RED	RED	RED \ BLACK	BLACK	RED \ WHITE
	YELLOW	ORANGE	ORANGE \ BLACK	WHITE \ BLACK	BLACK \ WHITE
	GREEN	GREEN	GREEN \ BLACK	BLUE	GREEN \ WHITE
	SPARE	BLUE\BLACK		BLUE \ WHITE	
	NEUTRAL	WHITE			

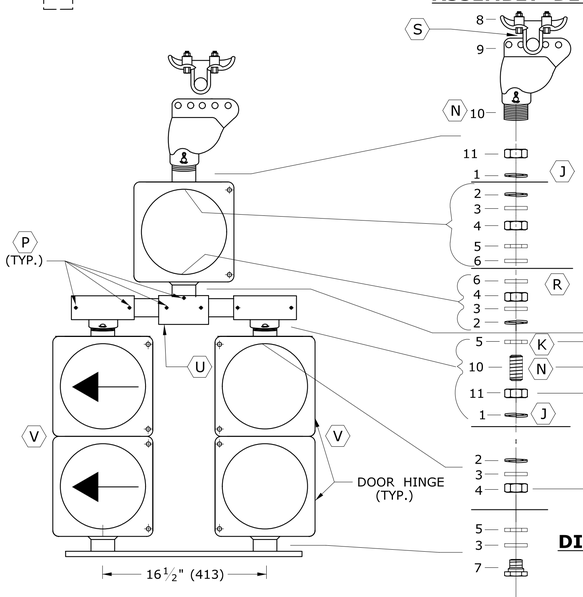
PEDESTRIAN SIGNAL CABLE COLOR ASSIGNMENTS

SIGNAL ASSEMBLY & CABLE USED	SIGNAL FUNCTION	WIRE COLOR
WALK SIGNAL W/ PUSHBUTTON 7 CONDUCTOR	DON'T WALK	RED
	WALK	GREEN
	NEUTRAL FOR WALK SIGNAL	WHITE
	PEDESTRIAN PUSHBUTTON	BLACK
	NEUTRAL FOR PUSHBUTTON	ORANGE
	SPARE CONDUCTOR	WHITE \ BLACK
	SPARE CONDUCTOR *	BLUE \ BLACK
WALK SIGNAL W/ PUSHBUTTON 7 CONDUCTOR	RED	RED
	YELLOW	ORANGE
	GREEN	GREEN
	NEUTRAL FOR TRAFFIC SIGNAL	WHITE
	PEDESTRIAN PUSHBUTTON	BLACK
	NEUTRAL FOR PUSHBUTTON	WHITE \ BLACK
	SPARE CONDUCTOR *	BLUE \ BLACK

* IF 14/7 FEEDS MORE THAN ONE BUTTON, SPLIT THE BUTTONS AND USE BLUE WITH BLACK TRACER FOR THE ADDITIONAL BUTTON.

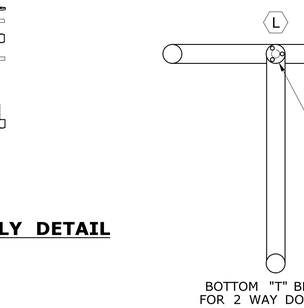
TABLE NOTES:
1. INSTALL SEPARATE CABLE BETWEEN CLOSURE AND EACH TRAFFIC SIGNAL ASSEMBLY. WIRE EACH TRAFFIC SIGNAL SECTION SEPARATELY BACK TO CABLE CLOSURE. JUMPERS BETWEEN TERMINALS ARE NOT ALLOWED EXCEPT ON NEUTRAL CONDUCTORS.
2. WIRE ALL SIGNALS, SAME DIRECTION FROM CONTROLLER, SEPARATELY WITH CONDUCTORS IN 21 CONDUCTOR CABLE, EVEN IF INDICATIONS ARE IDENTICAL.
3. CABLES THAT FEED PEDESTRIAN INDICATIONS, PUSH BUTTONS, AND DETECTORS BYPASS CABLE CLOSURE.
4. REFER TO STANDARD SHEET TR-1113_01 FOR CABLE CLOSURE - TYPE A.

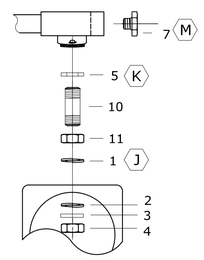
SPAN WIRE HANGER ASSEMBLY DETAIL



UPPER CENTER SUPPORT DETAIL

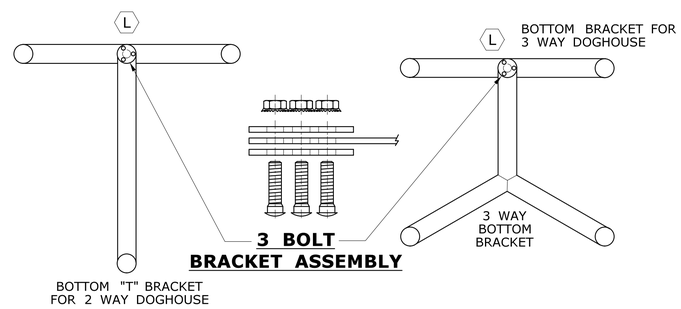
DIRECT ASSEMBLY DETAIL





TWO WAY, THREE WAY & FOUR WAY NIPPLE DOWN ASSEMBLY DETAIL

NOTES: FOR ASSEMBLY DETAILS
J APPLY SILICONE CAULK BETWEEN OR AROUND SERRATED LOCKRING AND HOUSING.
K OPTIONAL USE IF NIPPLE THREADS TOO FAR INTO ELBOW.
L DRILL HOLE IN CENTER OF 2 WAY BOTTOM BRACKET - INSTALL 3 BOLT BRACKET (SEE DETAIL).
M DO NOT INSERT ORNAMENTAL CAP PAST DOTTED LINE.
N ALL THREAD.
P SETSCREW (SQUARE OR ALLEN) ON ALL FITTINGS.
R CHASE NIPPLE CAN BE SUBSTITUTED FOR THE COMBINATION OF ITEMS 6, 5 AND 10.
S INSTALL STAINLESS STEEL WASHER ON INSIDE OF COTTER PIN. COTTER PIN AND WASHER SHALL BE ON SIDE OF HANGER AWAY FROM SIGNAL CABLES.
T CHASE NIPPLE CAN BE SUBSTITUTED FOR COMBINATION 4, 5, 10 AND 11.
U CENTER HUB SAME AS C EXCEPT TOP OPENING MAY BE THREADED.
V DOOR HINGE ON OUTSIDE OF SIDE BY SIDE ASSEMBLY.



3 BOLT BRACKET ASSEMBLY

NOTES:
SERVICE CONDUCTORS: THW, THWN OR XHHW. INDIVIDUAL WIRES MAY BE USED IN LIEU OF MULTI-CONDUCTOR CABLE.
ALL WORK ON UTILITY POLES MUST COMPLY WITH CURRENT PURA REGULATIONS AND NESC RULES.
A ATTACH SPAN AT LEAST 12" (300) BELOW LOWEST POWER COMPANY ATTACHMENT, AND AT LEAST 40" (1000) ABOVE HIGHEST COMMUNICATIONS ATTACHMENT, UNLESS OTHERWISE DIRECTED ON PLANS.
B ELBOW OR "T" FITTING MUST HAVE NOTCH FOR SERRATED TABBED LOCKRING.
C TOP BRACKET CENTER HUB SHALL BE MIN 4" (100) ROUND AND 3" (75) DEEP OR EQUAL VOLUME. SERRATION CAST IN HUB OR TABBED OR SERRATED LOCKRING, TOP OPENING NOT THREADED.
D NIPPLE LENGTH DEPENDS ON SPAN HEIGHT.
E SAG OF SPAN TO BE 5%± LENGTH, UNLESS OTHERWISE ALLOWED BY ENGINEER.
F FACE ALL ENTRANCE FITTINGS TOWARD CABLE CLOSURE.
G INSTALL EXTENSION NIPPLE ON TOP OF SIGNAL HOUSING SO BOTTOM OF ALL SIGNALS ARE EVEN.
H REFER TO TR-GS_01 "SIGN FACE SHEET ALUMINUM, R-SERIES SIGNS TYPICAL DETAILS", AND TO TR-1114_01 FOR SIGN HANGER ASSEMBLY. MAXIMUM SIGN SIZE 36" X 36" (900 X 900). ALL STAINLESS STEEL HARDWARE.
SECURE LOUVERS TO TUNNEL VISORS WITH 3 STAINLESS STEEL SCREWS.

LEGEND AS SHOWN ON TRAFFIC CONTROL SIGNAL PLAN:
PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
POLE ANCHOR & GUY
CABLE CLOSURE
SPAN MOUNTED SIGN
SPAN MOUNTED TRAFFIC SIGNAL

REV.	DATE	REVISION DESCRIPTION
4	1-2018	REVISED GROUNDING NOTE FOR SPAN AND OTHER MINOR REVISIONS.
3	3-2015	REMOVED STRAIN INSULATOR.
2	5-2013	MINOR REVISIONS.
1	4-2012	MINOR REVISIONS.

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: 5/24/2018

DIMENSIONS ARE IN ENGLISH (.") & METRIC UNITS (mm). METRIC DIMENSIONS ARE ROUNDED:
- OVER 1" TO NEAREST 5 mm
- UNDER 1" TO NEAREST 1 mm.

NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: CTDOT_TRAFFIC_STD_TR-1105_01.dgn Model: TR-1105_01

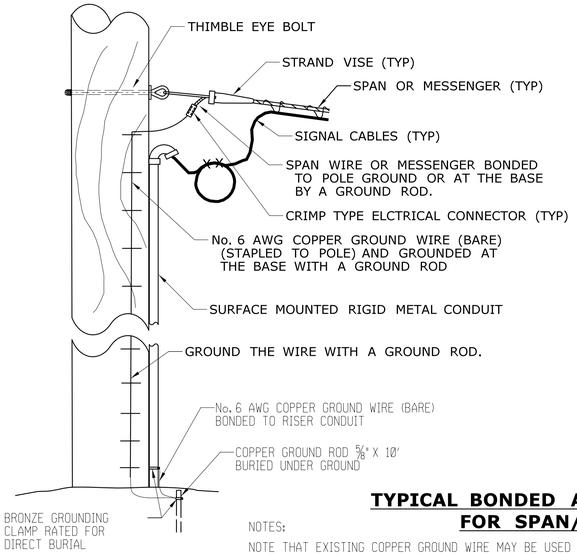
SIGNATURE/ BLOCK:
OFFICE OF ENGINEERING
APPROVED BY: DATE:

PROJECT TITLE:
INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1

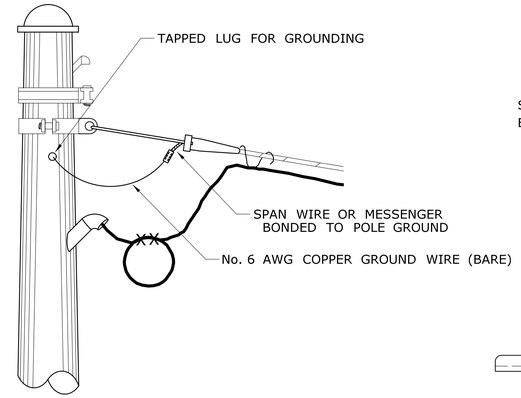
TOWN: VARIOUS

DRAWING TITLE: TRAFFIC SIGNALS & CABLE ASSIGNMENTS

PROJECT NO. 0171-0401 0171-0402
DRAWING NO. GS-05
SHEET NO. 03.19



WOOD UTILITY POLE



STEEL POLE

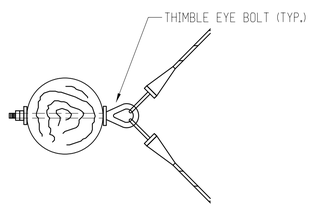
TYPICAL BONDED ATTACHMENT DETAIL FOR SPAN/MESSENGER

NOTES:

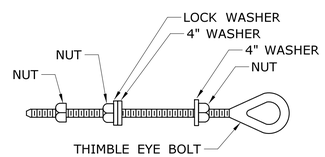
NOTE THAT EXISTING COPPER GROUND WIRE MAY BE USED IF AVAILABLE.

ALL ATTACHMENTS REQUIRE BONDING.

THE WOOD UTILITY POLE DETAIL APPLIES TO INSTALLATIONS OF GROUND RODS IN SOIL, SIDEWALK, PAVEMENT. THE TOP SURFACE SHALL BE REPLACED IN KIND AFTER THE GROUND ROD INSTALLATION. WEHN ROCK BOTTOM IS ENCOUNTERED, REFER TO NEC 250.53G FOR INSTALLATION REQUIREMENTS.

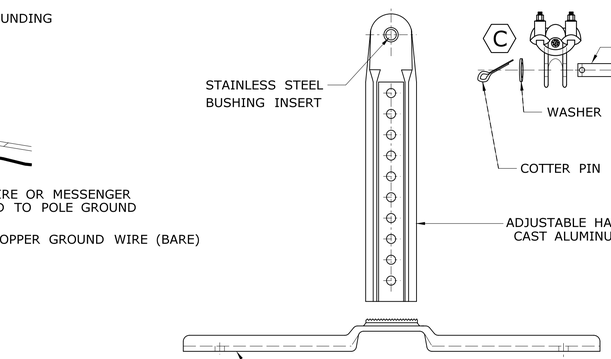


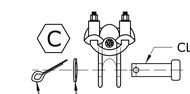
TYPICAL SINGLE ATTACHMENT WITH DOUBLE PULL-OFF

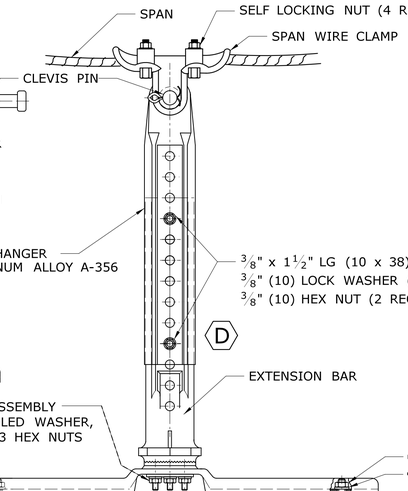


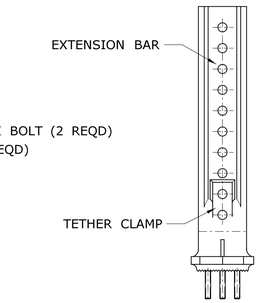
THIMBLE EYE BOLT

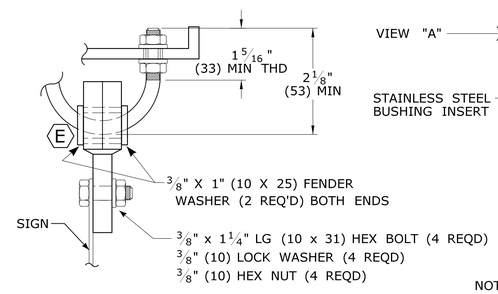
SUPPLIED BY THE CONTRACTOR.











VIEW "A"

END VIEW

FREE SWINGING SPAN MOUNTED SIGN HANGER ASSEMBLY

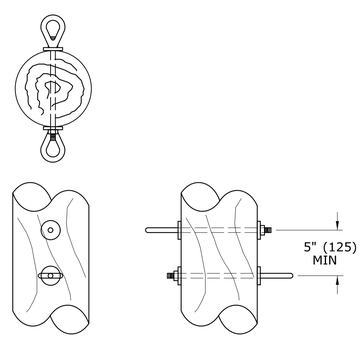
NOTES:

ALL STAINLESS STEEL HARDWARE: BOLTS, NUTS, WASHERS, CLEVIS PIN, COTTER PIN, ETC.

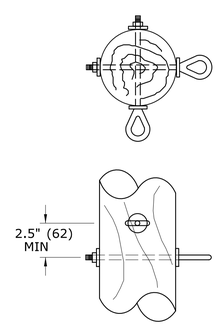
(C) INSTALL CLEVIS PIN SO THAT THE WASHER AND COTTER PIN ARE ON SIDE OF HANGER AWAY FROM SIGNAL CABLES.

(D) OVERLAP MAXIMUM NUMBER OF HOLES SEAT SNUGGLY ON EXTENSION BAR. LEAVE BOTTOM HOLE OPEN FOR TETHER CLAMP.

(E) INSTALL FENDER WASHER ON U-BOLT, ON BOTH ENDS, ON BOTH SIDES OF SIGN BRACKET.



SAME PLANE



PERPENDICULAR

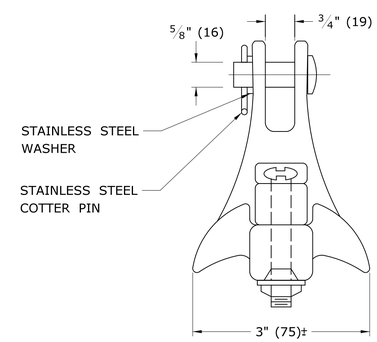
TYPICAL DOUBLE ATTACHMENT DETAIL ON WOOD POLE

NOTE:

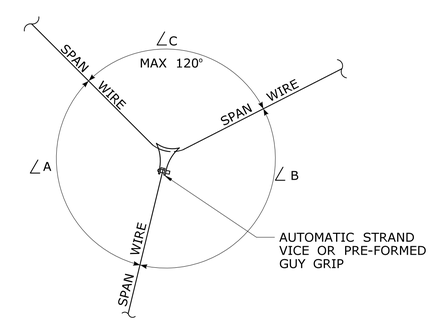
METHOD OF ATTACHMENT TO BE DETERMINED BY POLE CUSTODIAN.

LEGEND AS SHOWN ON TRAFFIC CONTROL SIGNAL PLAN:

SPAN MOUNTED SIGN



TANGENT "Y" SPAN CLAMP DETAIL



CLAMP ORIENTATION DETAIL

NOTES:

MINIMUM 11,000 LBS. (10.7 kN) BREAKING STRENGTH.

CLAMP SMALLEST ANGLE OF Y CONNECTION.

∠A ≈ ∠B SO PULL-OFF BISECTS ∠C.

REV.	DATE	REVISION DESCRIPTION
4	1-2018	REVISED WOOD POLE GROUNDING DETAILS, ADDED GROUND ROD
3	3-2015	REVISED SPAN WIRE TO WOOD POLE DETAILS, ADDED BONDING ATTACHMENT DETAILS, REMOVED ANCHOR & SIGN HANGER DETAILS.
2	4-2014	ADDED SIGNAL "Y" SPAN ATTACHMENT DETAIL.
1	4-2012	INCLUDED SIGN HANGER BOLTS, REMOVED AUDIBLE PED. SIGNAL & RENUMBERED STANDARD SHEET (FROM TR-1107_02).

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Plotted Date: 5/24/2018

DIMENSIONS ARE IN ENGLISH (.") & METRIC UNITS (mm). METRIC DIMENSIONS ARE ROUNDED: - OVER 1" TO NEAREST 5 mm - UNDER 1" TO NEAREST 1 mm.

NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: CTDOT_TRAFFIC_STD_TR-1114_01.dgn Model: TR-1114_01

SIGNATURE/ BLOCK:

OFFICE OF ENGINEERING

APPROVED BY: DATE:

PROJECT TITLE:

INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1

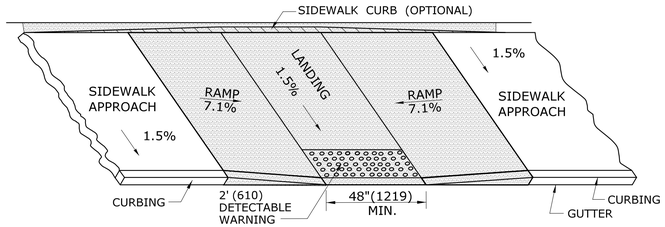
TOWN: VARIOUS

DRAWING TITLE: BONDING AND UTILITY POLE ATTACHMENT DETAILS, SIGN HANGER, "Y" CLAMP DETAIL

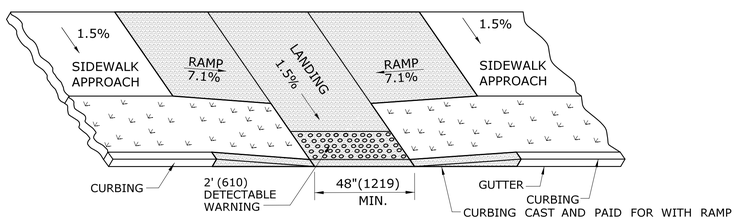
PROJECT NO. 0171-0401 0171-0402

DRAWING NO. GS-06

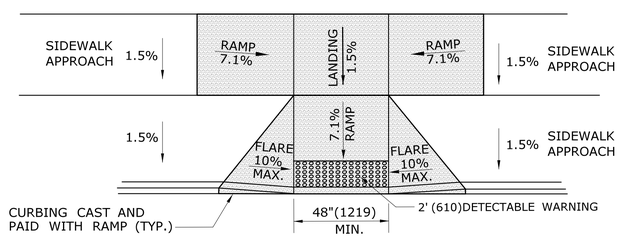
SHEET NO. 03.20



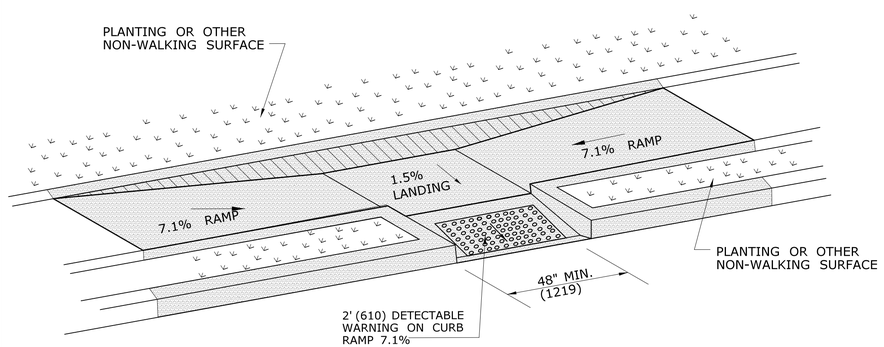
PARALLEL SIDEWALK RAMP (TYPE 1) NO UTILITY STRIP



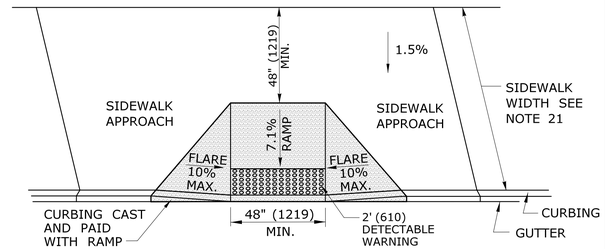
PARALLEL SIDEWALK RAMP (TYPE 1a)
WITH UTILITY / GRASS STRIP



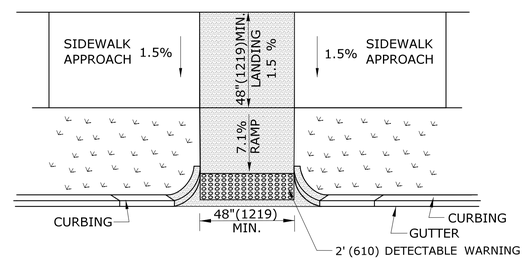
PARALLEL/PERPENDICULAR SIDEWALK RAMP
NO UTILITY/GRASS STRIP (TYPE 1b)



PARALLEL SIDEWALK RAMP (TYPE 1c)
WITH UTILITY / GRASS STRIP

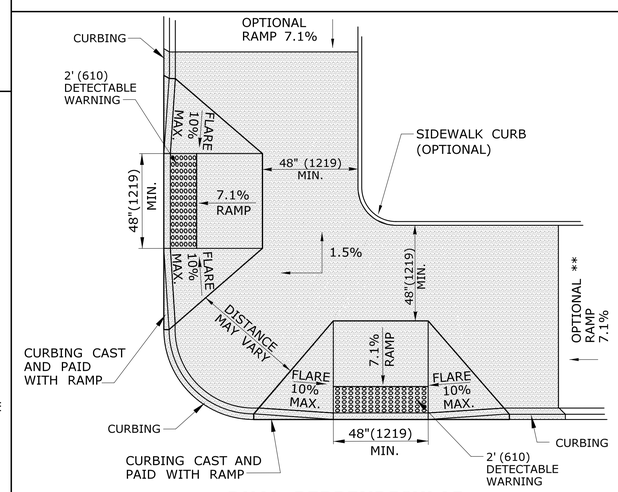


PERPENDICULAR SIDEWALK RAMP
W/ 48" (1219) MIN. BY PASS LANDING (TYPE 2)



PERPENDICULAR SIDEWALK RAMP
W/CURB RETURNS / UTILITY GRASS STRIP (TYPE 2a)

* OPTIONAL FLARE ONE SIDE OF RAMP

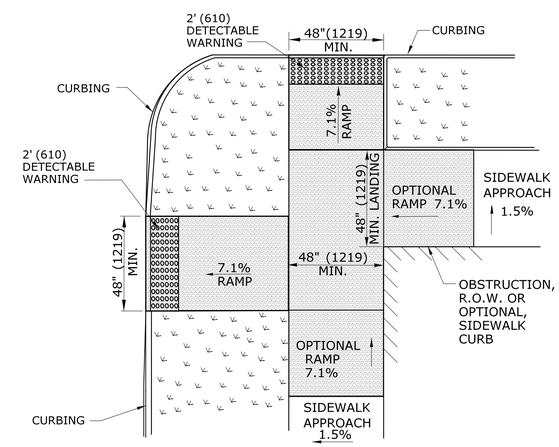


DUAL PERPENDICULAR
SIDEWALK RAMPS (TYPE 3)

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.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
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: 6/18/2018

DESIGNER/DRAFTER: **MGB/EMK**
CHECKED BY: **LLF**

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ..\CTDOT_Highway_GD1.dgn

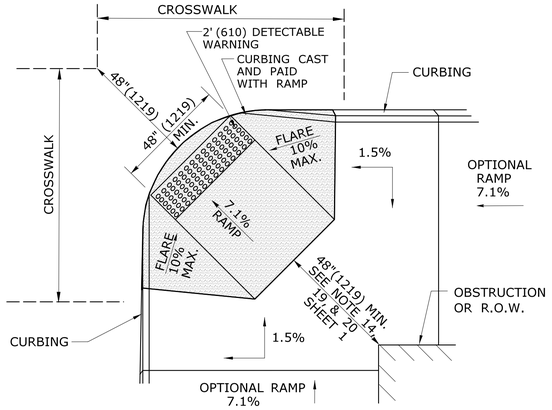
SIGNATURE/ BLOCK: **OFFICE OF ENGINEERING**
APPROVED BY:

PROJECT TITLE: **INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1**

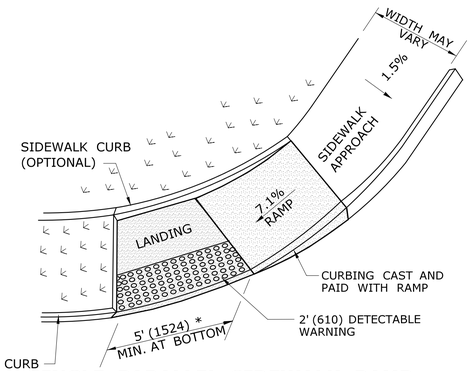
TOWN: **VARIOUS**

DRAWING TITLE: **SIDEWALK RAMPS SHEET 1**

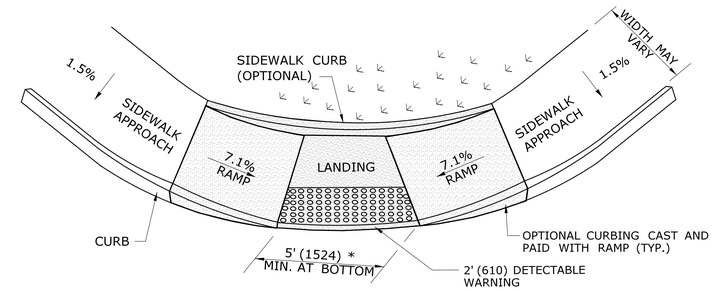
PROJECT NO. **0171-0401 0171-0402**
DRAWING NO. **GS-07**
SHEET NO. **03.21**



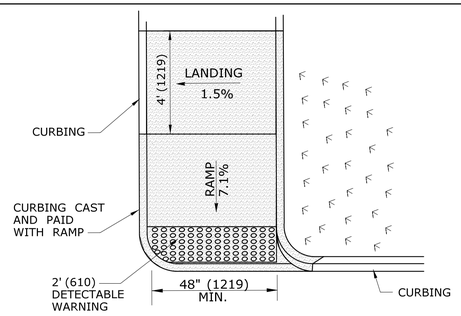
DIAGONAL SIDEWALK RAMP (TYPE 4)
W/LANDING AT TOP



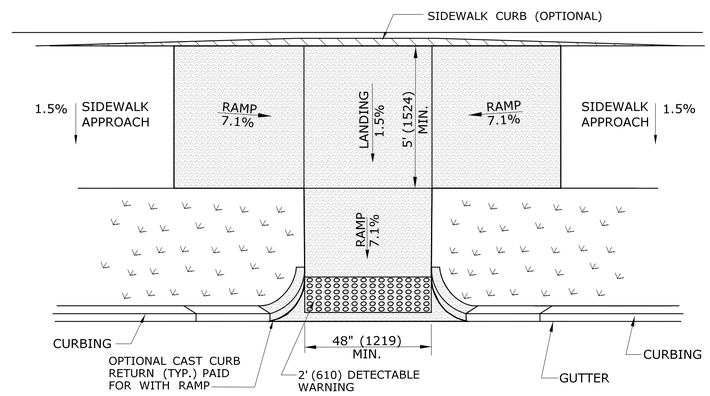
SINGLE PARALLEL SIDEWALK RAMP
W/LANDING AT BOTTOM ON
CORNER (TYPE 4c)
* SEE NOTE 20 SHEET 1



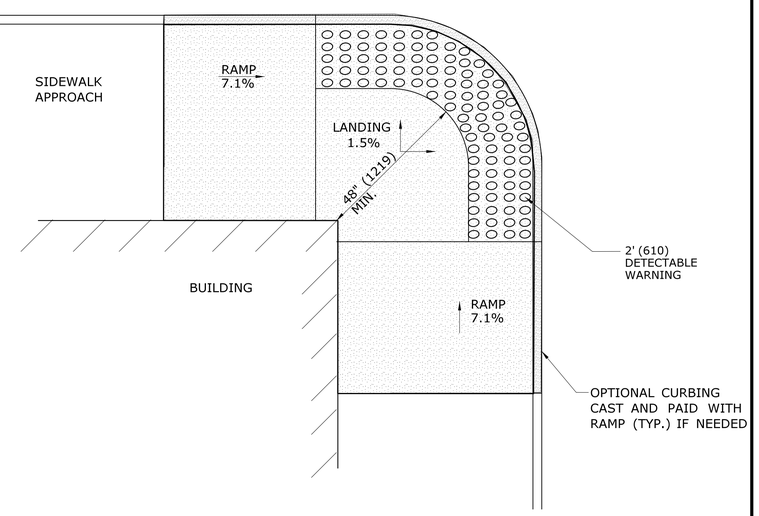
DOUBLE PARALLEL SIDEWALK RAMP
W/LANDING AT BOTTOM ON CORNER (TYPE 4f)
* SEE NOTE 20 SHEET 1



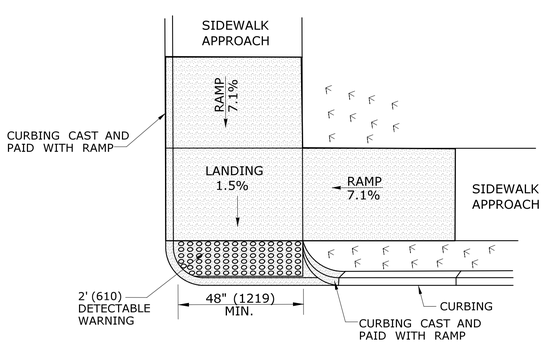
SINGLE DIRECTION
PERPENDICULAR SIDEWALK RAMP
NO / UTILITY GRASS STRIP
(TYPE 4a)



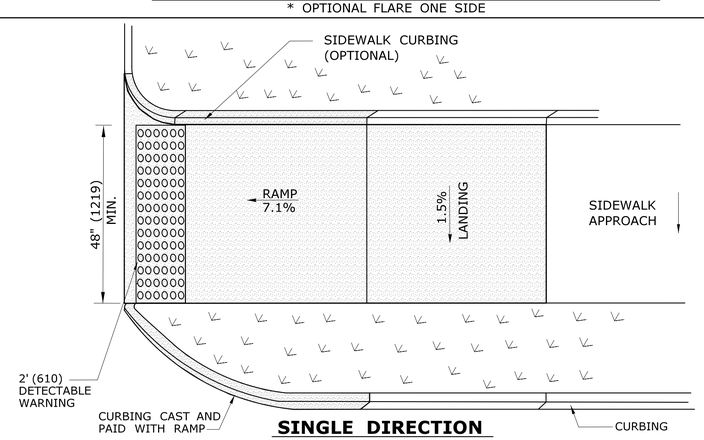
PARALLEL/PERPENDICULAR SIDEWALK RAMP
COMBINATION W/ CURB RETURNS (TYPE 4d)
* OPTIONAL FLARE ONE SIDE



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: 6/18/2018

DESIGNER/DRAFTER: MGB/EMK
CHECKED BY: LLF

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\CTDOT_Highway_GD1.dgn

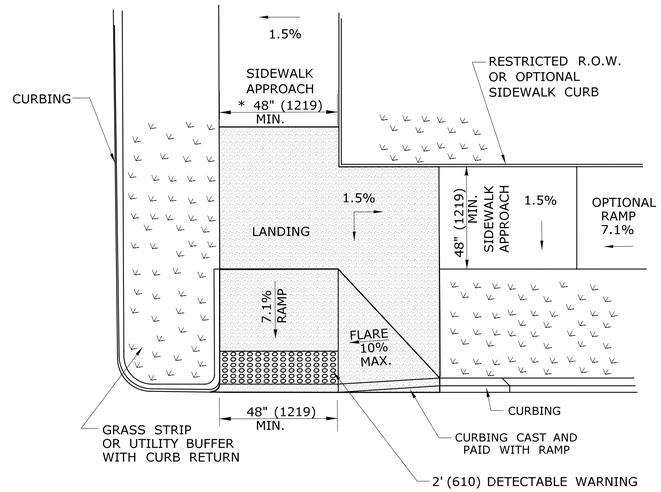
SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE: INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1

TOWN: VARIOUS

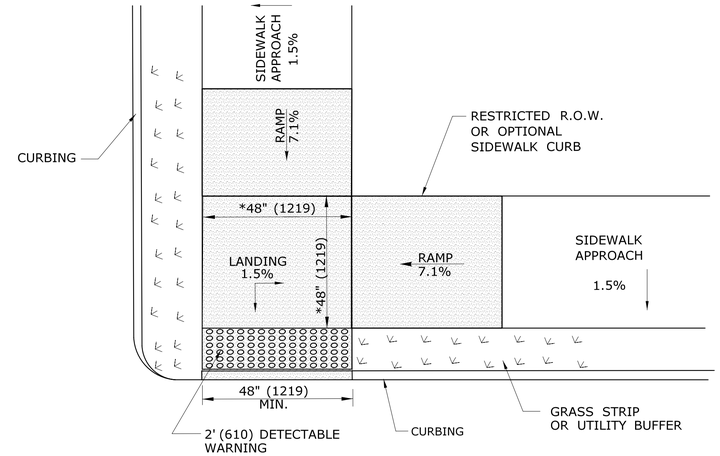
DRAWING TITLE: SIDEWALK RAMP SHEET 2

PROJECT NO. 0171-0401 0171-0402
DRAWING NO. GS-08
SHEET NO. 03.22



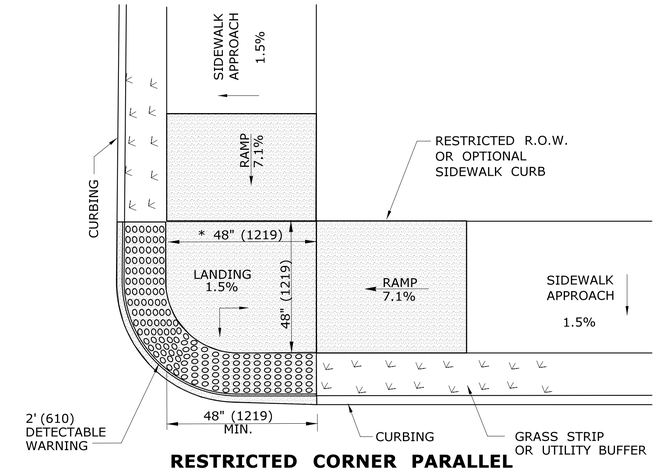
RESTRICTED CORNER PERPENDICULAR SIDEWALK RAMP (TYPE 5)

* SEE NOTE 19 SHEET 1



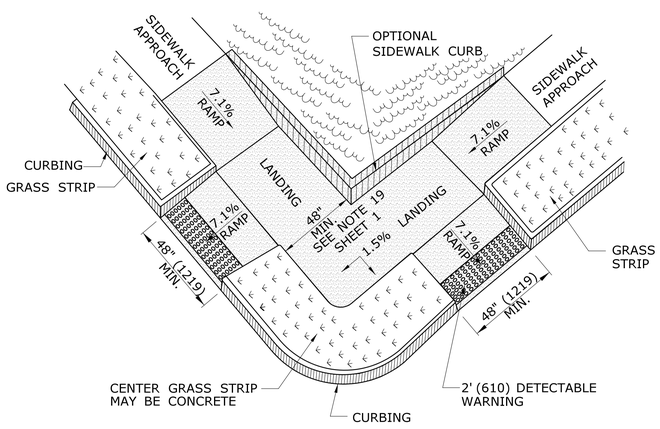
RESTRICTED CORNER PARALLEL DOUBLE SIDEWALK RAMPS W/CENTER LANDING AND UTILITY GRASS STRIP (TYPE 5a)

* SEE NOTE 20 SHEET 1



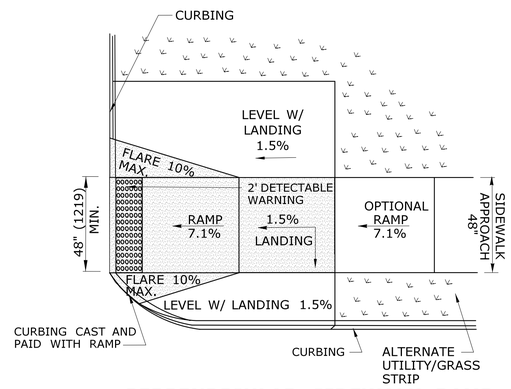
RESTRICTED CORNER PARALLEL SIDEWALK RAMPS W/ CENTER LANDING TWO DIRECTION AND UTILITY GRASS STRIP (TYPE 5b)

* SEE NOTE 20 SHEET 1

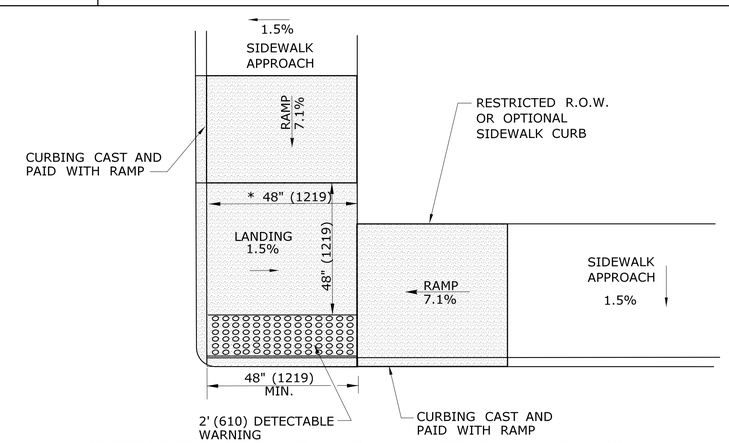


COMBINATION SIDEWALK RAMP (TYPE 6)

* SEE NOTE 19 SHEET 1

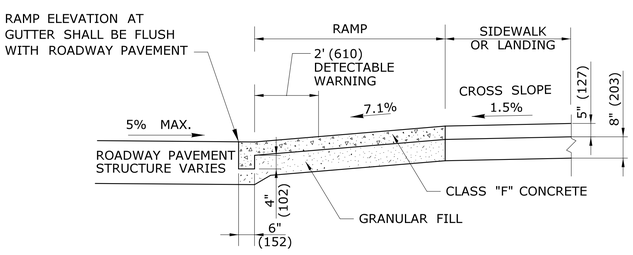


PERPENDICULAR SIDEWALK RAMP ONE DIRECTION ON CORNER (TYPE 6a)



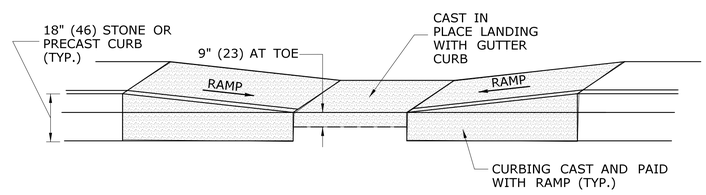
RESTRICTED CORNER PARALLEL SIDEWALK RAMPS W/CENTER LANDING NO GRASS STRIP (TYPE 5c)

* SEE NOTE 20 SHEET 1

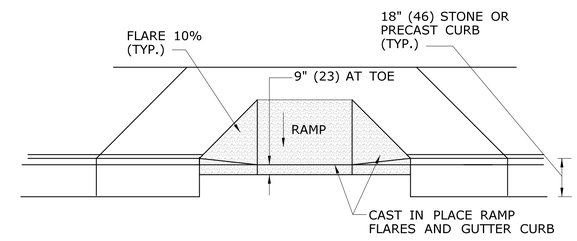


TYPICAL SECTION THRU SIDEWALK RAMP

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

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Plotted Date: 6/18/2018

DESIGNER/DRAFTER: **MGB/EMK**
CHECKED BY: **LLF**

STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION

Filename: ...\CTDOT_Highway_GD1.dgn

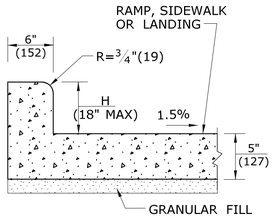
SIGNATURE/BLOCK: **OFFICE OF ENGINEERING**
APPROVED BY:

PROJECT TITLE: **INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1**

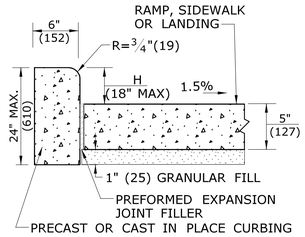
TOWN: **VARIOUS**

DRAWING TITLE: **SIDEWALK RAMP SHEET 3**

PROJECT NO. **0171-0401 0171-0402**
DRAWING NO. **GS-09**
SHEET NO. **03.23**

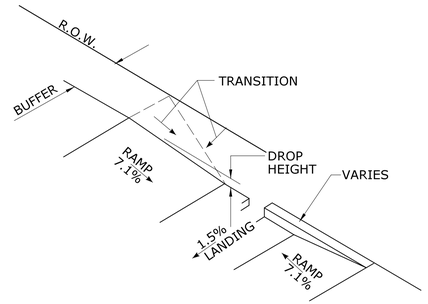


MONOLITHIC CAST CURB

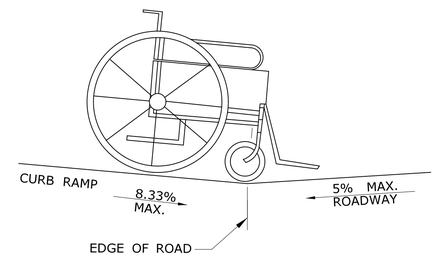


SEPARATELY CAST CURB

SIDEWALK CURB OPTIONS AT BACK OF SIDEWALK



BACK OF SIDEWALK CURB OR BUFFER TRANSITION



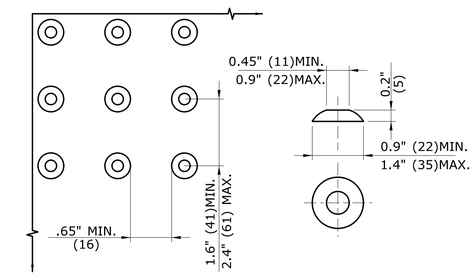
DETAIL 1

SEE GRADE CHANGE AT ROADWAY INTERFACE

SEE NOTE 1 SHEET HW-921 02a

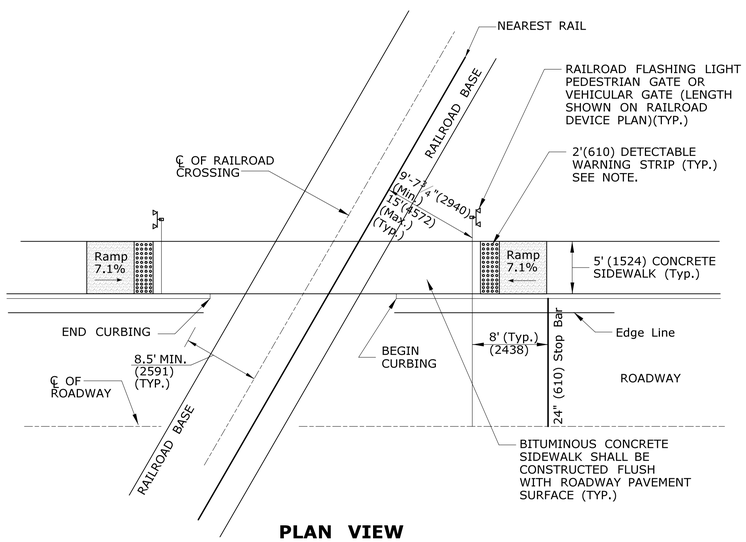
GENERAL NOTES:

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.

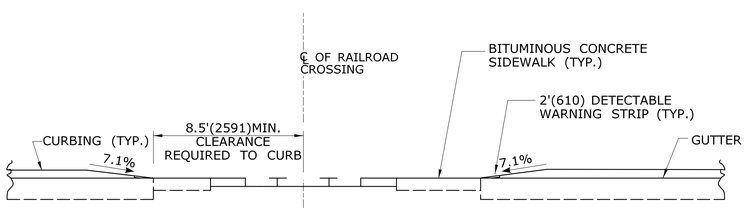


DOME SPACING **DOME SECTION**

STANDARD DOME ON DETECTABLE WARNING TILES



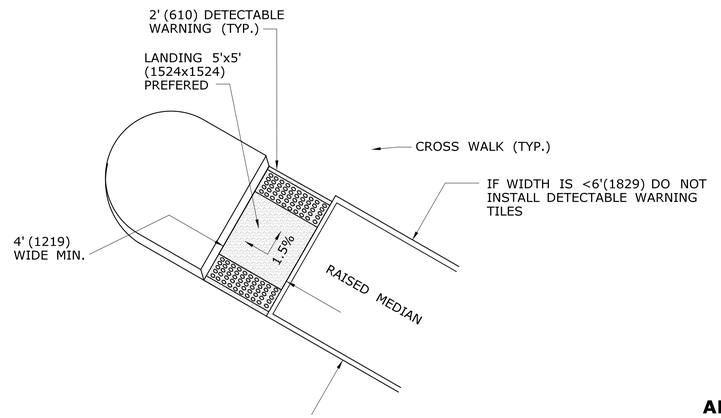
PLAN VIEW



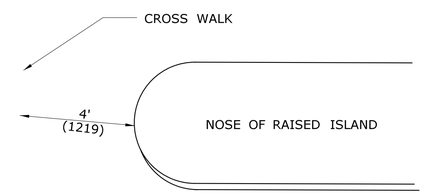
ELEVATION VIEW

DETECTABLE WARNINGS AT RAILROAD CROSSING

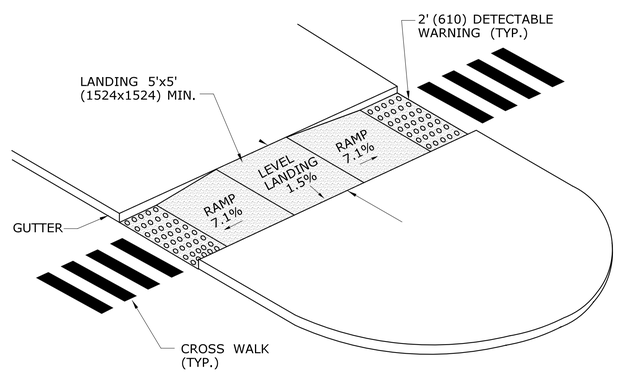
NOTE: WHEN NO GATE IS PRESENT, INSTALL DETECTABLE WARNING SURFACE 12' (3.6m) FROM THE NEAREST RAIL. IF GATE IS PRESENT, INSTALL DETECTABLE WARNING 2' (610) PRIOR TO GATE. THE ROWS OF TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL BE INSTALLED PARALLEL WITH THE DIRECTION OF PEDESTRIAN TRAVEL.



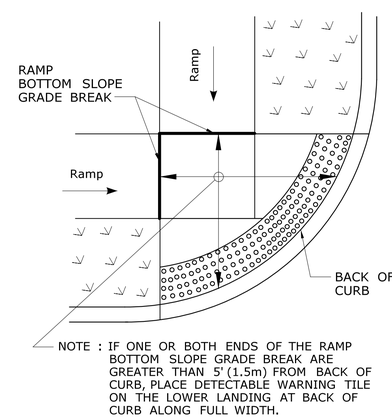
CUT-THROUGH MEDIAN ISLAND



ALTERNATE CROSSWALK WITH MEDIAN ISLAND PULLED BACK



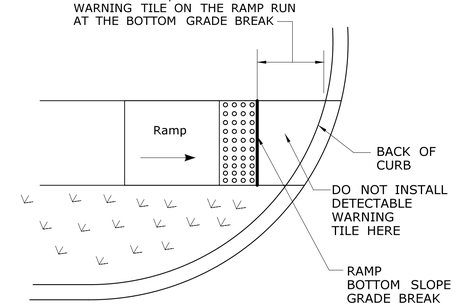
RAISED MEDIAN ISLAND WITH LANDING AND RAMPS



NOTE : IF ONE OR BOTH ENDS OF THE RAMP BOTTOM SLOPE GRADE BREAK ARE GREATER THAN 5' (1.5m) FROM BACK OF CURB, PLACE DETECTABLE WARNING TILE ON THE LOWER LANDING AT BACK OF CURB ALONG FULL WIDTH.

DETECTABLE WARNING PLACEMENT DETAIL 1

NOTE : IF BOTH ENDS OF THE RAMP BOTTOM SLOPE GRADE BREAK ARE LESS THAN 5' (1.5m) FROM BACK OF CURB, PLACE DETECTABLE WARNING TILE ON THE RAMP RUN AT THE BOTTOM GRADE BREAK



DETECTABLE WARNING PLACEMENT DETAIL 2

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REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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PROJECT TITLE: **INSTALLATION & REVISION OF TRAFFIC CONTROL SIGNALS IN DISTRICT 1**

TOWN: **VARIOUS**

DRAWING TITLE: **SIDEWALK RAMP SHEET 4**

PROJECT NO. **0171-0401 0171-0402**
DRAWING NO. **GS-10**
SHEET NO. **03.24**