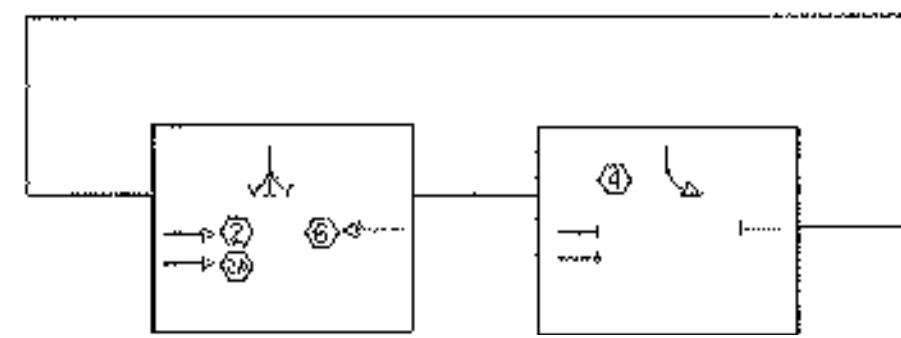


CONTROLLER TIMING CHART							
VT 100 & I-89 SOUTH RAMP							
PHASE	1	2	3	4	5	6	7
TRAFFIC MOVEMENT	↑	←	←	←	←	↓	↓
MINIMUM GREEN	5	5	5	5	5	5	5
MAXIMUM 1 GREEN	27	25	27	27	27	27	27
MAXIMUM 2 GREEN	29	29	29	29	29	29	29
MAXIMUM 3 GREEN	29	25	29	29	29	29	29
YELLOW CLEARANCE	4	4	4	4	4	4	4
ALL RED CLEARANCE	2	2	2	2	2	2	2
VEH. EXTENSION	2	2	2	2	2	2	2

CONTROLLER TO OPERATE MAXIMUM 2 GREEN TIMINGS FROM 6:00AM-10:00AM
 CONTROLLER TO OPERATE MAXIMUM 1 GREEN TIMINGS FROM 10:00AM-2:30PM
 & 6:00PM-6:00AM
 CONTROLLER TO OPERATE MAXIMUM 3 GREEN TIMINGS FROM 2:30PM-6:00PM

PHASING DIAGRAM



VEHICLE LOOP DETECTORS										
LOOP NO.	LANE	CALL Ø	SIZE	TYPE & NO. TURNS	DELAY OR PRESENCE	INDUCTANCE CALC. ACT.	RESISTANCE CALC. ACT.	LEAKAGE TO GROUND	LOCKING MEMORY	
2	EB	2	6x40	QUAD-2	PRESENCE	381	1.11			
2A	EB	2	6x40	QUAD-2	PRESENCE	377	1.07			
4	SB	4	6x40	QUAD-2	PRESENCE	351	0.72			
6	WB	6	6x40	QUAD-2	PRESENCE	353	0.75			

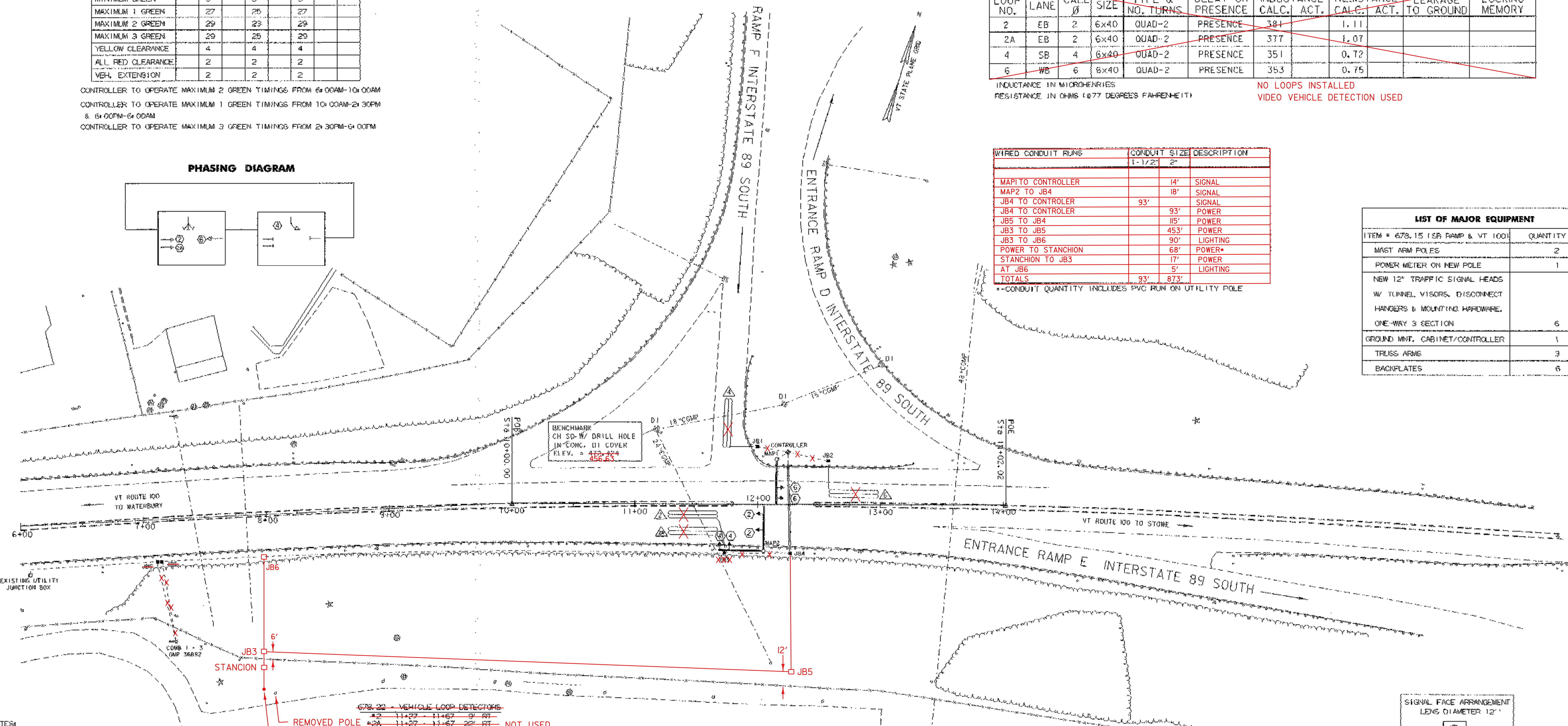
INDUCTANCE IN MICROHENRIES
 RESISTANCE IN OHMS (@77 DEGREES FAHRENHEIT)

NO LOOPS INSTALLED
 VIDEO VEHICLE DETECTION USED

WIRED CONDUIT RUNS	CONDUIT SIZE	DESCRIPTION
MAP1 TO CONTROLLER	14'	SIGNAL
MAP2 TO JB4	18'	SIGNAL
JB4 TO CONTROLLER	93'	SIGNAL
JB4 TO CONTROLLER	93'	POWER
JB5 TO JB4	115'	POWER
JB3 TO JB5	453'	POWER
JB3 TO JB6	90'	LIGHTING
POWER TO STANCHION	68'	POWER*
STANCHION TO JB3	17'	POWER
AT JB6	5'	LIGHTING
TOTALS	93'	873'

*CONDUIT QUANTITY INCLUDES PVC RUN ON UTILITY POLE

LIST OF MAJOR EQUIPMENT	
ITEM #	QUANTITY
678.15 (SB RAMP & VT 100)	
MAST ARM POLES	2
POWER METER ON NEW POLE	1
NEW 12" TRAFFIC SIGNAL HEADS W/ TUNNEL VISORS, DISCONNECT HANGERS & MOUNTING HARDWARE, ONE-WAY 3 SECTION	6
GROUND MNT. CABINET/CONTROLLER	1
TRUSS ARMS	3
BACKPLATES	6



NOTES:

- CALL DIG SAFE PRIOR TO PERFORMING ANY EXCAVATION WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM THE ACTUAL LOCATION OF THE EXISTING UNDERGROUND FACILITIES PRIOR TO EXCAVATING. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- A NEW UTILITY POLE WILL BE INSTALLED BY GREEN MOUNTAIN POWER AT APPROX. VT 100 STA. 7+22.100' RT TO REPLACE EXIST. POLE #1 GMP 36852. A NEW STANCHION WITH METERS AND DISCONNECTS FOR THE SIGNAL AND LIGHTING WILL BE NEXT TO THIS NEW POLE. THE LIGHTING WILL BE CONNECTED AT THE EXISTING UTILITY BOX THEN TIED INTO EXISTING CONDUIT. SEPARATE CONDUIT WILL BE RUN FOR THE TRAFFIC SIGNAL POWER BACK TO THE CONTROLLER WHERE ANOTHER DISCONNECT WILL BE INSTALLED.
- TRAFFIC ITEMS LISTED ARE APPROXIMATE LOCATIONS AND MAY BE CHANGED BY THE RESIDENT ENGINEER IN THE FIELD.
- ELECTRICAL CONDUIT SLEEVE TO BE INSTALLED BY DIRECTIONAL BORING.

678.22 - VEHICLE LOOP DETECTORS			
42	11+27	11+67	9' RT
2A	11+27	11+67	22' RT
4	11+75	146'	06' LT
6	12+58	12+98	9' LT

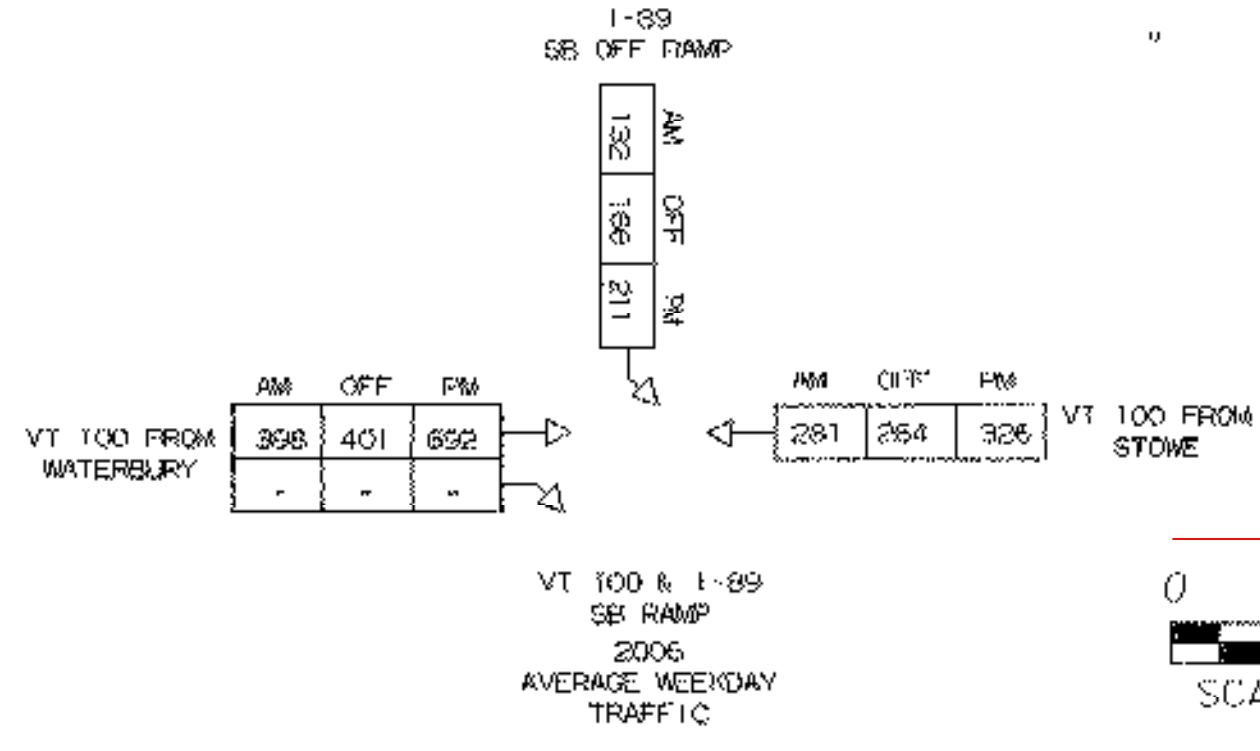
REMOVED POLE #122354
 NEW POLE #122354

678.25 - JUNCTION BOX			
JB1	12+00	47.3'	LT (SIGNAL)
JB2	12+67	25.6'	LT (SIGNAL)
JB3	11+75	29.8'	RT (SIGNAL) 109'
JB4	12+26	40.2'	RT (SIGNAL)
JB5	7+13	34.4'	RT (SIGNAL) 134'
JB6	7+10	34.4'	RT (LIGHTING) 32'

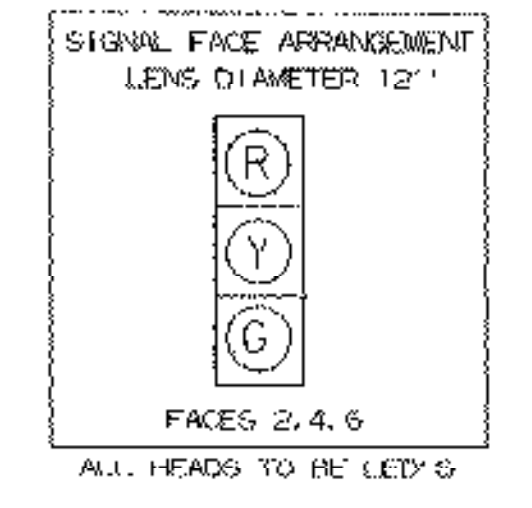
UNDER CONTRACT ITEM 678.15 MAST ARM POLES			
MAP1	12+16	36.9'	LT
MAP2	12+05	37.9'	RT

UNDER CONTRACT ITEM 678.15 CABINET / CONTROLLER			
12+25	42.6'	LT	

678.30 - ELECTRICAL CONDUIT SLEEVE (6") (PVC)
 12+26 (70 LF)



EXISTING	NEW	LEGEND
⊕	⊕	UTILITY POLE
⊙	⊙	LUMINAIRE
○	○	LIGHT OR WOOD POLE
⊗	⊗	MAST ARM POLE
⊠	⊠	CONTROLLER CABINET
⊡	⊡	JUNCTION BOX
⊞	⊞	SIGNAL HEAD
—	—	CONDUIT
⊞	⊞	VEHICLE LOOPS
⊞	⊞	STANCHION
—	—	SWEEP



TRAFFIC SIGNAL LAYOUT SHEET

PROJECT NAME: WATERBURY
 PROJECT NUMBER: NHG SGNL (27)
 FILE NAME: /traf/05b140/tb140n1.dgn
 PROJECT LEADER: B. NYQUIST
 DESIGNED BY: B. MCAVOY
 PLOT DATE: 13-NOV-2007
 DRAWN BY: B. MCAVOY
 CHECKED BY: J. SCHULTZ
 SHEET 5 OF 13