South Central Regional Council of Governments

Traffic Signal Inventory Project

Town of Wallingford, CT

Prepared by:

BETA
ENGINEERING SUCCESS TOGETHER

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June 2012

TRAFFIC SIGNAL INVENTORY: WALLINGFORD, CT

PROJECT REPORT

FINAL REPORT

Prepared by: BETA Group, Inc.

Prepared for: South Central Regional Council of Governments

June 2012

EXECUTIVE SUMMARY

BETA Group, Inc. was retained by the South Central Regional Council of Governments (SCRCOG), on behalf of the Town of Wallingford, CT, to conduct an inventory of traffic signal equipment and intersection geometry at 31 town-owned locations. The purpose of this project was to gather data relating to the type and condition of the existing traffic signal equipment and geometry at the project locations. These data were then used by a team or senior traffic signal engineers to develop a qualitative assessment of existing operations, and potential improvement strategies which may require further study.

Qualitative Assessment

The following Qualitative Assessment categories were used to classify each project location:

1. **Compliant Intersections** are those that have no major violations of the requirements of the Manual on Uniform Traffic Control Devices (MUTCD). Equipment at these intersections is typically operating properly and providing good traffic operations.
2. **Maintenance Needed Intersections** are those intersections that require routine maintenance. Minor equipment issues and operational changes fall into this category.
3. **Capital Improvement Intersections** are those intersections which require replacement or upgrading of hardware that shows significant deterioration or operational issues. These intersections typically have deteriorated structural supports or vehicle damage.
4. **Replacement Intersections** are those intersections where the signal equipment is at the end of its useful life based on age or ability to be maintained. In most cases intersections which have not been upgraded in approximately 20 to 25 years will fall into this category. Intersections that have major compliance issues with the MUTCD requirements will also fall into this category.
5. **Red Flag Intersections** are those intersections that were found to have issues that present serious safety issues. In such cases, the situation would be immediately reported to the Town with recommendations for actions to provide interim solutions. It should be noted that none of the project intersections were assigned to this category.

The results of the Qualitative Assessment are summarized as follows:

Qualitative Assessment	Number of Intersections
1 - Compliant Intersections	2
2 - Maintenance Needed Intersections	8
3 - Capital Improvement Intersections	12
4 - Replacement Intersections	9
5 - Red Flag Intersections	0
TOTAL	31

Recommended Intersection Improvements

This report has identified improvements which can be realized in the traffic signals which are owned by the City of Wallingford. The recommended improvement program is divided into two major categories:

1. System Level Improvements – These are projects which apply to the overall performance of the system. These include actions to improve traffic signal operations as a whole. Projects which address multiple locations, operational plans and similar actions.
2. Intersection Level Improvements – These items are recommended to bring a specific location to its original design, repair malfunctioning equipment or upgrade an intersection to current standards.

The following table summarizes the estimated costs associated with the System Level Improvements:

Project	Estimated Cost
Vehicle Detector Repair	$30,000
System Coordination Repair	$35,000
System Timing Update	$50,000
TOTAL	$115,000

The following tables summarize the estimated costs associated with the Intersection Level Improvements:

Intersection Cost Estimate Summary

Qualitative Assessment		Total
2	Maintenance Needed Intersections	$402,000
3	Capital Improvement Intersections	$1,718,000
4	Replacement Intersections	$1,648,000
	TOTAL	$3,768,000

Intersection Cost Estimate Summary - Maintenance Needed Intersections

Intersection		Estimated Cost				Priority
		Equipment	Software	Geometric	Total	
59T	Quinnipiac Street at Washington Street	$47,000	$0	$30,000	$77,000	1
60T	Quinnipiac Street at North and South Cherry Street	$46,000	$0	$16,000	$69,000	2
4T	South Colony Road (US Route 5) at Walgreens Shopping Center Driveway	$32,000	$5,000	$0	$37,000	3
30T	Hall Avenue (Route 150) at Washington Street	$51,000	$0	$0	$51,000	4
54T	South Turnpike Road at Cook Hill Road	$27,000	$5,000	$1,000	$33,000	5
55T	South Turnpike Road at Cheshire Road	$30,000	$0	$0	$30,000	6
56T	South Turnpike Road/Quinnipiac Street at Masonic Avenue/Route 15 Southbound Ramps	$87,000	$0	$0	$87,000	7
69T	Research Parkway at Bristol-Myers Squibb Main Driveway	$13,000	$5,000	$0	$18,000	8
				TOTAL	$402,000	

Intersection Cost Estimate Summary - Capital Improvement Intersections

Intersection		Estimated Cost				Priority
		Equipment	Software	Geometric	Total	
28T	Center Street (Route 150) at North and South Orchard Streets	$151,000	$0	$0	$151,000	1
5T	South Colony Road (US Route 5) at Ward Street	$184,000	$5,000	$14,000	$203,000	2
6T	North and South Colony Road (US Route 5) at Hall Avenue, Center Street, Quinnipiac Street	$197,000	$0	$19,000	$216,000	3
29T	Hall Avenue (Route 150) at North Cherry Street	$163,000	$0	$0	$163,000	4
57T	Quinnipiac Street at River Road/Route 15 Northbound Off-Ramp	$142,000	$0	$0	$142,000	5
58T	Quinnipiac Street at Ward Street	$207,000	$0	$4,000	$211,000	6
65T	North Main Street Extension at Barnes Industrial Road/Wal-Mart Driveway	$176,000	$0	$0	$176,000	7
66T	North Main Street Extension at Ives Road	$148,000	$0	$0	$148,000	8
68T	Barnes Industrial Road North at Barnes Road	$103,000	$0	$0	$103,000	9
73T	John Street at South Cherry Street	$115,000	$0	$0	$115,000	10
74T	Hope Hill Road at Yalesville Fire Department	$77,000	$0	$0	$77,000	11
75T	North Colony Street (US Route 5) at Holy Trinity Church	$2,000	$0	$11,000	$13,000	12
				TOTAL	$1,718,000	

Intersection Cost Estimate Summary - Replacement Intersections

Intersection		Estimated Cost				Priority
		Equipment	Software	Geometric	Total	
27T	Center Street (Route 150) at North and South Main Streets	$192,000	$0	$46,000	$238,000	1
26T	Center Street (Route 150) at North and South Elm Streets	$161,000	$0	$43,000	$204,000	2
25T	Center Street (Route 150) at Silver Pond Apartments Driveway	$132,000	$0	$18,000	$150,000	3
67T	North Main Street Extension at Stop & Shop Shopping Center Driveway	$163,000	$0	$16,000	$179,000	4
61T	Ward Street at South Cherry Street	$166,000	$0	$38,000	$204,000	5
64T	North Main Street Extension at Beaumont Road	$163,000	$0	$13,000	$176,000	6
63T	North Plains Industrial Road at Pent Highway	$135,000	$0	$16,000	$151,000	7
62T	Ward Street at South Orchard Street	$166,000	$0	$16,000	$182,000	8
32T	Hall Avenue (Route 150) at Masonic Avenue/Fire Dept. Headquarters	$149,000	$0	$15,000	$164,000	9
				TOTAL	$1,648,000	

Prioritization of Improvements

This report also prioritized the system and intersection improvements recommended. The following list of priorities is based primarily on the condition of the existing equipment as determined by the field inventory and a review of traffic signal maintenance logs.

Priority Area 1: Repair vehicle detection, traffic signal coordination, and traffic signal timing system wide. Simple timing changes and coordination of operations at adjacent intersections could significantly improve traffic operations within the Town. Repair of broken vehicle detectors will also reduce the amount of unused time given to non-coordinated signal phases. These are relatively low cost improvements that could be implemented in a short period of time and could have a significant effect on traffic signal operations town wide.

Priority Area 2: Implement recommended improvements along Center Street which include the following intersections:

- 25T - Center Street (Route 150) at Silver Pond Apartments Driveway
- 26T - Center Street (Route 150) at North and South Elm Streets
- 27T - Center Street (Route 150) at North and South Main Streets
- 28T - Center Street (Route 150) at North and South Orchard Streets

These intersections are among the oldest in the Town system. Most of the equipment is outdated and reaching the end of its useful life. A review of maintenance records shows that these intersections require the most on-going maintenance.

Priority Area 3: Implement recommended improvements at project intersections along Hall Avenue, Quinnipiac Street, and South Colony Road which include the following intersections:

- 5T - South Colony Road (US Route 5) at Ward Street
- 6T - North and South Colony Road (US Route 5) at Hall Avenue, Center Street, Quinnipiac Street
- 29T - Hall Avenue (Route 150) at North Cherry Street
- 57T - Quinnipiac Street at River Road/Route 15 Northbound Off-Ramp
- 58T - Quinnipiac Street at Ward Street
- 59T - Quinnipiac Street at Washington Street
- 60T - Quinnipiac Street at North and South Cherry Street
- 61T - Ward Street at South Cherry Street

Priority Area 4: Implement recommended improvements at all intersections categorized as “Maintenance needed” which include the following intersections:

- 4T - South Colony Road (US Route 5) at Walgreens Shopping Center Driveway
- 30T - Hall Avenue (Route 150) at Washington Street
- 54T - South Turnpike Road at Cook Hill Road
- 55T - South Turnpike Road at Cheshire Road

- 56T - South Turnpike Road/Quinnipiac Street at Masonic Avenue/Route 15 Southbound Ramps
- 59T - Quinnipiac Street at Washington Street
- 60T - Quinnipiac Street at North and South Cherry Street
- 69T - Research Parkway at Bristol-Myers Squibb Main Driveway

Most intersections in this category require improvements that are in the low to middle price range. These intersections could most likely be repaired using existing town maintenance contracts in a short time frame. These improvements were given a lower priority because they are typically not critical to the safe operation of the traffic signal.

Priority Area 5: Implement recommended improvements along North Main Street Extension which includes the following intersections:

- 64T - North Main Street Extension at Beaumont Road
- 65T - North Main Street Extension at Barnes Industrial Road/Wal-Mart Driveway
- 66T - North Main Street Extension at Ives Road
- 67T - North Main Street Extension at Stop & Shop Shopping Center Driveway

These closely spaced intersections located in a heavy Industrial and commercial area could benefit from improved timing and traffic signal coordination. The traffic signal located at the driveway from the Stop & Shop Plaza appears to be the oldest in the Town system.

Priority Area 6: Implement recommended improvements at the remaining project intersections which include:

- 32T - Hall Avenue (Route 150) at Masonic Avenue/Fire Dept. Headquarters
- 62T - Ward Street at South Orchard Street
- 63T - North Plains Industrial Road at Pent Highway
- 68T - Barnes Industrial Road North at Barnes Road
- 73T - John Street at South Cherry Street
- 74T - Hope Hill Road at Yalesville Fire Department
- 75T - North Colony Street (US Route 5) at Holy Trinity Church

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

BETA Group, Inc. was retained by the South Central Regional Council of Governments (SCRCOG), on behalf of the Town of Wallingford, CT, to conduct an inventory of traffic signal equipment and intersection geometry at 31 town owned locations. This project was funded through the Federal Highway Administration (FHWA), the Connecticut Department of Transportation (CDOT) and SCRCOG per a SCRCOG-CDOT Fiscal Year 2012-2012 planning agreement as described in SCRCOG's *Fiscal Year 2012 Unified Planning Work Program* ("UPWP").

1.1 Project Purpose

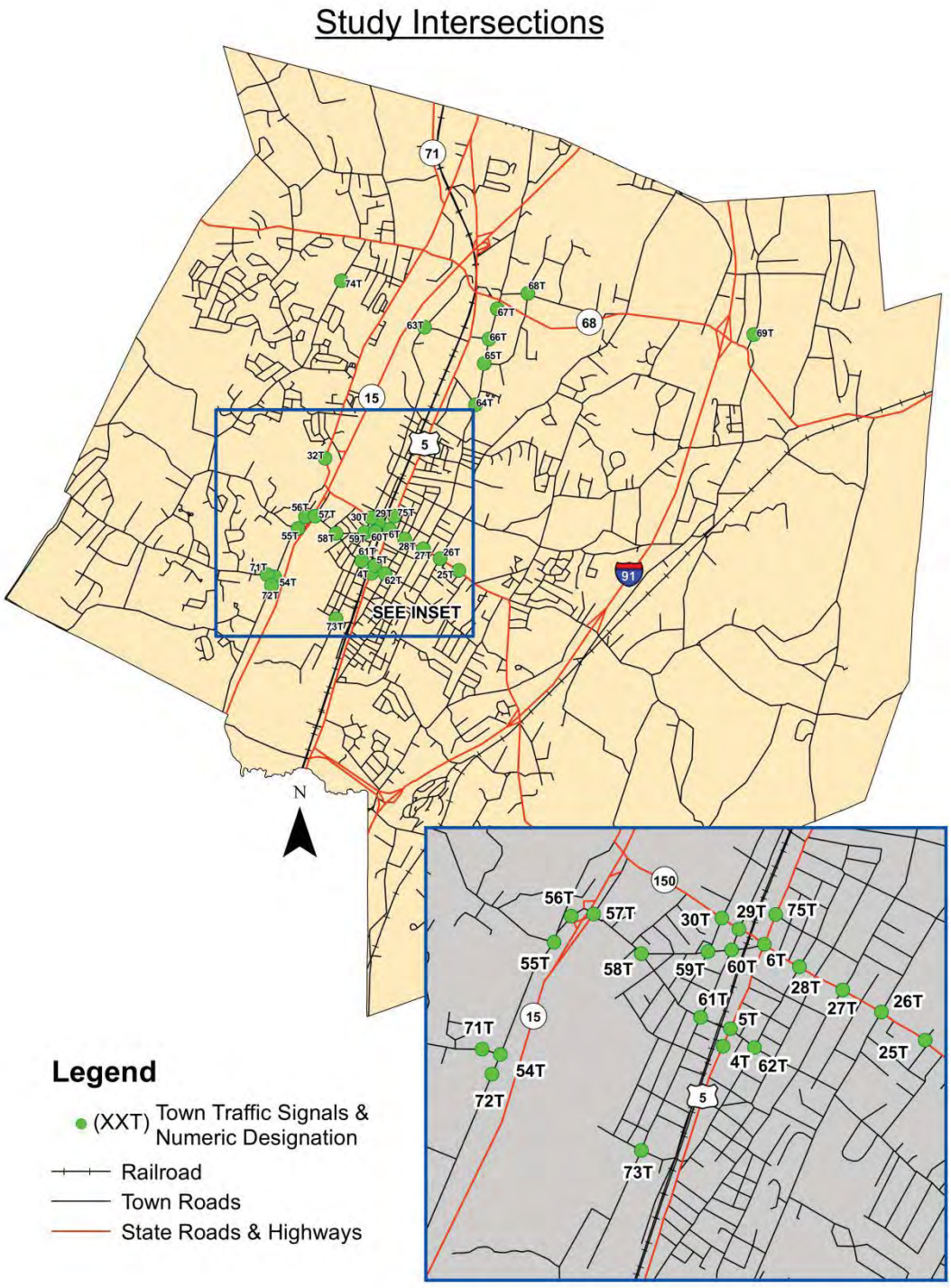
The purpose of this project was to gather data relating to the type and condition of the existing traffic signal equipment and geometry at the 31 project locations. These data were then used to develop a qualitative assessment of existing operations, and potential improvement strategies which may require further study. The study intersections are presented in Figure 1.

1.2 Study Methodology

This study was performed in three parts. Part one involved the collection of record signal plans and a field visit to each of the 31 project locations to perform an inventory of existing traffic signal equipment and intersection geometry. Upon completion of the field inventory, the project intersections were reviewed by senior traffic signal engineers to assess the needed modifications and improvements. In the last part, the qualitative assessments were drafted into improvement recommendations for each of the study intersection.

A Microsoft Access Database was created and populated with existing traffic signal data. This database will serves as the basis for the Town to monitor the condition of signal equipment as traffic patterns change due to: future development, background growth, and the influence of future transportation improvements.

Figure 1 - Study Intersections



2.0 TRAFFIC SIGNAL INVENTORY AND QUALITATIVE ASSESSMENT

The following section provides the results of the traffic signal and intersection geometry inventories. During the field visit the following items were inventoried:

- Traffic signal controller, cabinet, and ancillary equipment;
- Traffic signal phasing and timing settings;
- Size, type, location, and condition of vehicular and pedestrian signal heads;
- Location of pedestals, mast arms and span wires;
- Pedestrian push-buttons;
- Accessible Pedestrian Signals (APS);
- Regulatory signing;
- Vehicle detector type, location and function;
- Emergency vehicle pre-emption equipment;
- Traffic signal interconnection

The record plans were also reviewed during the field visit for changes which might have occurred since the plan was developed. A photo log of the intersection was also obtained.

Each of the 31 project intersections were evaluated by a team of senior traffic engineers following the field inventory. Each intersection was classified into one of the following categories during the qualitative assessment:

1. **Compliant Intersections** are those that have no major violations of the requirements of the Manual on Uniform Traffic Control Devices (MUTCD). Equipment at these intersections is typically operating properly and providing good traffic operations.
2. **Maintenance Needed Intersections** are those intersections that require routine maintenance. Minor equipment issues and operational changes fall into this category.
3. **Capital Improvement Intersections** are those intersections which require replacement or upgrading of hardware that shows significant deterioration or operational issues. These intersections typically have deteriorated structural supports or vehicle damage.
4. **Replacement Intersections** are those intersections where the signal equipment is at the end of its useful life based on age or ability to be maintained. In most cases intersections which have not been upgraded in approximately 20 to 25 years will fall into this category. Intersections that have major compliance issues with the MUTCD requirements will also fall into this category.
5. **Red Flag Intersections** are those intersections that were found to have issues that present serious safety issues. In such cases, the situation would be

immediately reported to the Town with recommendations for actions to provide interim solutions. It should be noted that none of the project intersections were assigned to this category.

2.1 Intersection Inventory, Deficiencies, and Qualitative Assessments

The following section presents the results of the field inventory, deficiencies identified, and the Qualitative Assessment Category assigned to each project intersection.

2.1.1 Intersection 4T - South Colony Road (US Route 5) at Walgreens Shopping Center Driveway

This three-legged, T-type intersection is controlled by a three phase, semi-actuated traffic signal. A leading, protected left-turn signal phase is provided on the South Colony Road southbound approach and left-turns are permitted during the following through phase. Pedestrians are permitted to cross South Colony Road concurrently with the Walgreens Driveway traffic. The driveway approaches the intersection from the east and the traffic signal phase is actuated by wire loop detectors. A pre-emption detector is provided and a pre-emption routine is programmed for the South Colony Road southbound approach. Vehicle signal heads are supported by a single span wire assembly. Wire loop detectors and shelf mounted amplifiers are used for vehicle detection.

The provided plan is marked as revision number 2 and is dated 2008. The South Colony Road southbound approach is a multi-lane approach. A concrete sidewalk and sidewalk ramps are provided on the east side of South Colony Rd. The following deficiencies were identified during the inventory:

Wire nuts are used for splices in one or more hand holes.	

The doghouse signal head is damaged.	

- Controller timing parameters do not match the values on the record plan. All values are within the Min/Max ranges shown on the plan.
- The southbound left-turn phase is programmed with Max recall.
- Traffic signal coordination and time-of-day settings have not been programmed. The signal operates in the Free Mode at all times.
- Eight-inch, three-section vehicular signal indications are currently used to indicate the concurrent pedestrian phase.
- Eight-inch signal indications are provided on the Walgreens Driveway approach. All other indications are 12-inch diameter.
- One of the two signal heads provided on the northbound and southbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Loop Detector D1 is not programmed in the traffic signal controller to extend Phase 1 as shown on the plan.
- The emergency vehicle pre-emption function does not appear to be functioning on the South Colony Road southbound approach.
- Emergency vehicle pre-emption is not provided on the South Colony Road northbound approach.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet light bulb is burned out.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. Updates were last performed at this intersection in 2008. The issues that are present are minor in nature and could be resolved by maintenance activities. The Qualitative Assessment category assigned to this intersection is:

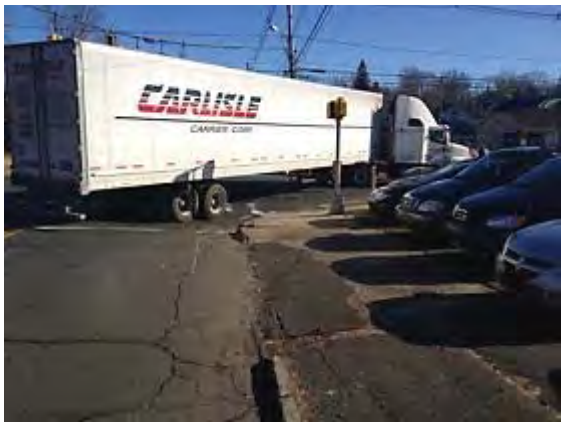
2 - Maintenance Needed

2.1.2 Intersection 5T - South Colony Road (US Route 5) at Ward Street

This four-legged intersection is controlled by a four-phase, semi-actuated traffic signal. Ward Street eastbound and westbound traffic are served by a single phase and eastbound traffic, which crosses the rail road tracks, is provided with a lagging clear-out phase. South Colony Street traffic is served by a single phase, and pedestrians cross during an exclusive pedestrian phase. Vehicle signal heads are supported by a single span wire assembly. Wire loop detectors and shelf mounted amplifiers are used for vehicle detection.

This intersection is located 130 feet east of the Amtrak regional railroad line. Traffic signal operations are pre-empted during train crossings. Internally illuminated "No Left Turn" and "No Right Turn" signs are provided on the South Colony Road northbound and southbound approaches, respectively. These signs are activated during train pre-emption and prohibit turns onto Ward Street westbound.

The provided plan is dated 1995. This intersection is located in a commercial zone. The South Colony Road northbound approach consists of an exclusive left-turn lane and a shared through/right-turn lane. All other approaches consist of a single travel lane. Concrete sidewalks and sidewalk ramps are provided on all four corners of the intersection. The following deficiencies were identified during the inventory:

Wire nuts are used for splice connections in one or more hand holes. Hand hole covers are not bonded.	
Pavement markings and some sidewalk ramps are in poor condition.	
Large vehicles have difficulty turning at one or more corners.	

Pedestrian push-buttons, signs and pedestrian signal heads are different types.	  

- The on-street master traffic signal controller is located at this intersection; however, it is disconnected from the communication system and is not powered.
- This intersection operates in the Free Mode at all times.
- No coordination settings are programmed.
- Train pre-emption is working properly, but it does not appear that emergency vehicle pre-emption is functioning.

- One of the two signal heads provided on the northbound, southbound and eastbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Most existing signal indications are eight-inch diameter indications.
- Existing pedestrian signal heads present word legends for Walk and Don't Walk.
- Pedestrian clearance interval timing should be verified for conformance with the latest revision of the MUTCD.
- An audible pedestrian tone is not provided during the exclusive pedestrian phase.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. This intersection was constructed in 1995 and the equipment is now 17 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.3 Intersection 6T - North and South Colony Road (US Route 5) at Hall Avenue, Center Street, Quinnipiac Street

This five-legged intersection is controlled by a six-phase, semi-actuated traffic signal. A leading protected left-turn signal phase is provided on the South Colony Road northbound approach and the Quinnipiac Street eastbound approach. A lagging protected left-turn signal phase is provided on the North Colony Road southbound approach. Left-turns are permitted from all roadways during the through traffic phases. Pedestrian are permitted to cross during an exclusive pedestrian phase. All traffic signal phases are actuated with wire loop detectors and rack mounted amplifiers. Vehicle signal heads are supported by two span wire assembly utilizing three span poles. An audible tone is provided during the exclusive

pedestrian phase.

This intersection is located 300 feet east of the Amtrak regional railroad line. Traffic signal operations are pre-empted during train crossings. A "No Left Turn" sign and a "No Right Turn" sign are provided on South Colony Road northbound and southbound approaches, respectively. These signs are illuminated during a train pre-emption to prohibit turns onto Quinnipiac Street and Hall Avenue. Three emergency vehicle pre-emption routines are programmed.

The provided plan is marked as revision number two and is dated July 1997. Decorative lighting, trash receptacles, landscaping, brick paver treatments and a bus stop are provided at this location. Concrete sidewalks and sidewalk ramps are present on each corner. An exclusive left-turn lane and a shared through/right-turn lane are provided on North and South Colony Road and on Quinnipiac Street. A shared through/left-turn lane and a shared through/right-turn lane are provided on the Center Street (Route 150) approach. Hall Avenue consists of two westbound departure lanes. The following deficiencies were identified during the inventory:

Railroad crossing pavement markings are in poor condition.	
A concrete hand hole is damaged at the intersection of Hall Avenue and Quinnipiac Street.	

Existing sidewalk ramps lack detectable warning strips and do not meet current ADA requirements. A section of brick pavers behind the sidewalk ramp has settled causing a hazard to pedestrians.	
Wire nuts are used for splice connections in several hand holes. Some hand hole covers are not grounded, lack duct seal and/or are not set flush to grade.	

- Grout at the base of the span pole located on the northeast Corner of Hall Avenue and North Colony Road is deteriorated.
- Traffic signal coordination settings are programed, but the controller is operating in Free Mode at all times. According to the controller's program change log, the signal is operating in the Free Mode at all times on a command from the master system controller.
- Emergency vehicle pre-emption for the Quinnipiac Street approach appears to be the only functioning pre-emption phase. The pre-emption phase selector rack card for the remaining two pre-emption routines is not connected to the card rack and is inactive.
- One of the two signal heads provided on the northbound approach is located too close to the stop line and does not conform to the requirements of the MUTCD.
- There is evidence in the controller cabinet of mice infestation. It appears that the debris is old and the mice have been removed from the cabinet, and all entrances were sealed.
- Backplates are not provided on span wire mounted signal heads.

- Dust and debris should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

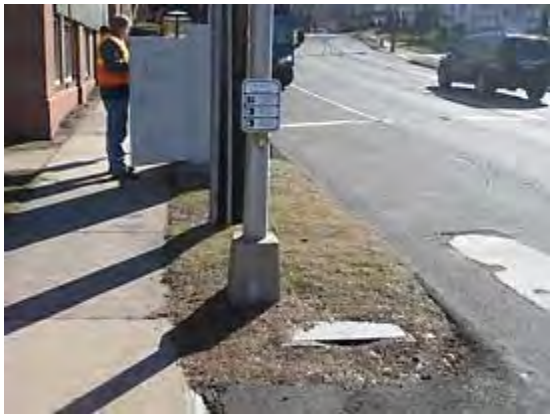
Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. This intersection was constructed in 1997 and the equipment is now 15 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.4 Intersection 25T - Center Street (Route 150) at Silver Pond Apartments Driveway

This three-legged, T-type intersection is controlled by a three-phase, semi-actuated traffic signal. Center Street northbound and southbound movements are served in phase one; an exclusive pedestrian phase is provided in phase two; and the driveway from the Silver Pond Apartments is served in phase three. Vehicle signal heads are supported by a Y-type span wire assembly, utilizing three span poles. An audible tone is provided during the exclusive pedestrian phase. Wire loop detectors and rack mounted amplifiers are used for vehicle detection.

The provided plan is dated April-1997. All approach roadways consist of single lanes. Concrete sidewalks are provided along each side of Center Street (Route 150). The following deficiencies were identified during the inventory:

A concrete hand hole is damaged on the north side of Center Street (Route 150).	
Pavement markings are in poor condition. Pedestrian ramps are not provided at crosswalks.	
Pavement on the Silver Pond Apartments Driveway is in poor condition. Vehicle detection loops are currently functioning properly, but the pavement condition makes these loops susceptible to failure.	

The color of the signal heads and visors is chipped and faded.	

- The design plans indicate that this intersection is intended to operate as part of the Downtown closed-loop traffic signal system, however, the controller operates in the Free Mode at all times.
- Communication with the closed-loop system should be tested.
- Programmed time settings do not match the record plans. Some of the programmed times do not fall within the Min/Max ranges presented on the record plans.
- One of the two signal heads provided on the westbound and southbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- The intersection does not include emergency pre-emption equipment.
- Tinting on the face of the pedestrian signal indications is peeling.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in poor condition. This intersection was constructed in 1997 and the equipment is now 15 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

4 - Replacement Intersection

2.1.5 Intersection 26T - Center Street (Route 150) at North and South Elm Streets

This four-legged intersection is controlled by a semi-actuated traffic signal. A leading left-turn phase is provided for Center Street southbound vehicles in Phase 1 and northbound and southbound vehicles are permitted during Phase 2. An exclusive pedestrian phase is provided in Phase 5. North and South Elm Street signal phases are arranged in the standard NEMA dual ring configuration and feature leading left turn phases (Phase 3 and 7) which are followed by through phases (Phase 4 and 8). Left turns are permitted during the through phases. The signal currently operates in the Free Mode at all times. Vehicle signal heads are supported by a Y-type span wire assembly. An audible pedestrian tone is provided during the exclusive pedestrian phase. Wire loop detectors and shelf mounted amplifiers are used for vehicle detection.

The plan provided is dated April 1990. Concrete sidewalks are provided along each side on all roadways and sidewalk ramps and crosswalks are provided on all four corners. The following deficiencies were identified during the inventory:

Conduits are not sealed in the controller cabinet.	

The pedestrian traffic signal push-buttons and signs are a mix of older and newer types.	 
The crosswalk pavement markings are in poor condition.	

A ground rod is exposed and a riser conduit is open on the utility pole located on the northwest corner.	
A drip loop has uncoiled and is hanging in front of a signal head.	

- The lock on this cabinet should be changed to match the key used at most other Town maintained intersections.
- Programmed time settings do not match record plan times; however, all values are within the Min/Max ranges presented on the record plan.
- The record plans indicate that this intersection is intended to operate as part of the Downtown closed-loop traffic signal system, however it operates in the Free Mode at all times. Communication with the closed-loop system should be tested.
- Most existing signal indications are eight-inch diameter indications.
- One of the two signal heads provided on the eastbound approach is located too close to the stop line and does not conform to the requirements of the MUTCD.
- The intersection does not include emergency pre-emption equipment.
- A flash transfer relay is wired on the shelf, instead of in the back panel.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet light bulb is burned out.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in poor condition. This intersection was constructed in 1990 and the equipment is now 22 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

4 - Replacement Intersection

2.1.6 Intersection 27T - Center Street (Route 150) at North and South Main Streets

This four-legged intersection is controlled by a seven-phase, semi-actuated traffic signal. The Center Street eastbound and westbound approaches are served by leading protected left-turn phases (Phases 1 and 5). Left-turns are also permitted to move with the adjacent through movements in the following phase (Phases 2 and 6). The North/South Main Street approaches are provided with a single protected left-turn phase and a single through phase during which left-turns are also permitted to move. Pedestrians cross during an exclusive pedestrian phase. Right turn on red is prohibited on all approaches. Vehicle signal heads are supported by a single span wire assembly. An audible pedestrian tone is provided during the exclusive pedestrian phase. Wire loop detectors and shelf mounted amplifiers are used for vehicle detection.

The on-street master traffic signal controller is located at this intersection. The master is currently operating, but most connected intersections do not seem to be receiving plan changes from the master and therefore operate in the Free Mode at all times.

The provided plan is dated May 29, 1991, and is labeled a revision number four. An exclusive left-turn lane and a shared through/right-turn lane are provided on all approaches. A one way entrance to a parking lot for businesses along Main Street is located in the northwest quadrant of the intersection. Concrete sidewalks, sidewalk ramps and crosswalks are provided on all corners (including the parking lot entrance). Brick pavers, ornamental lighting and other streetscape amenities are also provided. The following deficiencies were identified during the inventory:

Conduits are not sealed in the controller cabinet.	
The pedestrian push-buttons and signs are a mix of older and newer types.	 

Wire nuts are used for splice connections in one or more hand holes. Several hand holes could not be opened due to rusted bolts.	
Span poles and pedestrian poles have been painted, but the colors do not match and are faded. Some span poles are missing bolt covers.	 

- The lock on the cabinet door was difficult to turn and the door was difficult to open.
- Programmed time settings do not match record plan times; however, all values are within the Min/Max ranges presented on the record plan.
- Communications between the on-street master and the local controllers should be tested and repaired where necessary.

- The record plans indicate that this intersection is intended to operate as part of the Downtown closed-loop traffic signal system, however it operates in the Free Mode at all times.
- One of the two signal heads provided on the northbound and southbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Most existing signal indications are eight-inch diameter indications.
- The intersection does not include emergency pre-emption equipment.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet light bulb is burned out.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in poor condition. This intersection was constructed in 1991 and the equipment is now 21 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

4 - Replacement Intersection

2.1.7 Intersection 28T - Center Street (Route 150) at North and South Orchard Streets

This four-legged intersection is controlled by a four-phase, semi-actuated traffic signal. The North Orchard Street approach intersects Center Street approximately 30 feet to the east of the South Orchard Street intersection with Center Street. The Center Street eastbound and westbound approaches are served during the first signal phase. Center Street eastbound left-turns are permitted to move with the adjacent through movements. The North/South Orchard Street approaches are provided with split phases, where each street is given its own signal phase. Pedestrians cross during an exclusive pedestrian phase. Right turn on red is prohibited on all approaches. Vehicle signal heads are supported by a single span wire assembly. An audible pedestrian tone is provided during the exclusive pedestrian phase. Wire loop detectors and shelf mounted amplifiers are used for vehicle detection.

The provided plan is dated May-2004, and is marked as revision number five. Concrete sidewalks, sidewalk ramps and crosswalks are provided on all corners. Brick pavers, ornamental lighting and other streetscape amenities are also provided at this location. The following deficiencies were identified during the inventory:

Conduits are not sealed in the controller cabinet.	
The pedestrian push-buttons are a mix of older and newer types.	 

Wire nuts are used for splice connections in one or more hand holes. Some hand hole covers are not bonded. Conduits are not sealed.	
One or more span poles have been painted and do not match colors and are faded. One or more span poles are missing bolt covers and/or exhibit slight corrosion at the base.	 

- An older Peek 3000 controller is currently in operation. It appears that this controller is a replacement for the Transyt 1880EL controller which sits non-operational in the cabinet.
- Coordination parameters have not been programmed. The signal operates in the Free Mode at all times.
- Controller timings do not match the record plan, but all parameters are within the acceptable Min/Max ranges shown on the plan.
- All existing signal indications are eight-inch diameter indications.

- One of the two signal heads provided on the northbound, eastbound and westbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- The intersection does not include emergency pre-emption equipment.
- The cabinet light bulb is burned out.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. This intersection was last updated in 2004 but most equipment is much older. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.8 Intersection 29T - Hall Avenue (Route 150) at North Cherry Street

This four-legged intersection is controlled by a four-phase, fully-actuated traffic signal. Hall Avenue eastbound and westbound traffic are served by separate consecutive signal phases. North Cherry Street traffic is served by a single phase, and pedestrians are provided with an exclusive phase. Vehicle signal heads are supported by a single span wire assembly. An audible pedestrian tone is provided during the exclusive pedestrian phase. Wire loop detectors and rack mounted amplifiers are used for vehicle detection.

This traffic signal operates as part of the Downtown coordinated traffic signal system between 6:30 AM and 6:30 PM. The signal operates in the Free Mode during the overnight hours. Coordination and Time of Day functions are operating as programmed

This intersection is located 250 feet west of the Amtrak regional railroad line. Traffic signal operations are pre-empted during train crossings.

The provided plan is dated July-1997. This intersection is located within a mixed-use commercial/residential area. Concrete sidewalks are provided along all roadways and driveways are located in close proximity to the intersection. New ramps and sidewalks are present on the northwest and southwest corners. The following deficiencies were identified during the inventory:

A NO RIGHT TURN sign is leaning over the curb line.	
One or more hand hole covers are not grounded. Wire nuts are used for splice connections. Hand hole covers have rusted or missing bolts. Ducts are not sealed.	
Pavement markings are worn.	

A hand hole is partially buried.	

- The system detector located on the departure lane of North Cherry Street northbound (SD8) is malfunctioning.
- The emergency vehicle phase selector card is not connected to the card rack; therefore, none of the emergency vehicle pre-emption phases function.
- Programmed time settings do not match the record plans. Some of the programmed times do not fall within the Min/Max ranges presented on the record plans.
- One of the two signal heads provided on the eastbound and westbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet light bulb is burned out.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. This intersection was constructed in 1997 and the equipment is now 15 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.9 Intersection 30T - Hall Avenue (Route 150) at Washington Street

This four-legged intersection is controlled by a four-phase, fully-actuated traffic signal. A leading protected left-turn signal phase is provided on the Hall Avenue eastbound approach. Washington Street traffic is served by a single signal phase, and pedestrians are provided with an exclusive signal phase. Vehicle signal heads are supported by a single span wire assembly. An audible pedestrian tone is provided during the exclusive pedestrian phase. Wire loop detectors and rack mounted amplifiers are used for vehicle detection.

Design plans show that this traffic signal is intended to operate as part of the Downtown coordinated traffic signal system between 7:00 AM and 9:00 PM, but the signal operates in the Free Mode at all times.

The provided plan is dated July-1997. Single approach and departure lanes are provided on each roadway. New concrete sidewalks and sidewalk ramps are present at this location. Crosswalks are present on all roadways. The following deficiencies were identified during the inventory:

Several hand holes and the controller cabinet were found in locations other than those shown on the plan. Several hand holes had rusted or missing cover bolts.	 

The crosswalks and stop bars have not been painted on some approaches.	

- System Detectors SD7 and SD8 on the departure lanes of Washington Street are malfunctioning.
- The stop bar detector (D4B) on the Washington Street southbound approach is malfunctioning.
- One of the two signal heads provided on the eastbound approach is located too close to the stop line and does not conform to the requirements of the MUTCD.
- The record plans indicate that the signal is intended to operate with two emergency vehicle pre-emption routines on Hall Avenue, however, no pre-emption routines are programed in the traffic signal controller. A rack mounted pre-emption phase selector card is present and powered in the cabinet, and two detectors are mounted on the overhead span wire.
- Programmed time settings do not match the record plans. Some of the programmed times fall outside of the Min/Max ranges presented on the record plans.
- The record plans indicate that this intersection is intended to operate as a part of the Downtown closed-loop traffic signal system, but coordination settings are not programmed in the traffic signal controller, and the signal operates in the Free Mode at all times.
- The cable drip loop for the Hall Avenue eastbound pre-emption detector has fallen out and the cable hangs in front of one of the Washington Street northbound signal faces.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. Updates were last performed at this intersection in 2008. The issues that are present are minor in nature and could be resolved by maintenance activities. The Qualitative Assessment category assigned to this intersection is:

2 - Maintenance Needed

2.1.10 Intersection 32T - Hall Avenue (Route 150) at Masonic Avenue/Fire Department Headquarters

This location consists of two separate T-type intersections which operate on the same traffic signal controller. The northern intersection is the intersection of Masonic Avenue and the driveway for the Fire Department Headquarters building, and the southern intersection is the intersection of Masonic Avenue and Masonic Drive. Both Masonic Drive and the Fire Department driveway approach Masonic Avenue from the west.

The Masonic Drive intersection consists of two-phase, vehicle-actuated, signal operation. The fire department driveway intersection is under flashing operation except during an emergency vehicle pre-emption, when a signal phase is called that stops northbound and southbound traffic in front of the fire department and permits northbound traffic to proceed at the Masonic Drive intersection. Vehicle signal heads are supported by a two span wire assemblies, with one assembly located at each intersection. Wire loop detectors and shelf mounted amplifiers are used for vehicle detection.

The provided plan is dated February-1998. The plan provided did not provide a plan view layout of the intersection and related signal equipment. A single travel lane is provided on each approach. No sidewalks, sidewalk ramps or crosswalks are present at this location. The following deficiencies were identified during the inventory:

Signal head and visor color are faded and peeling.	
The stop bar pavement markings are worn on all approaches.	

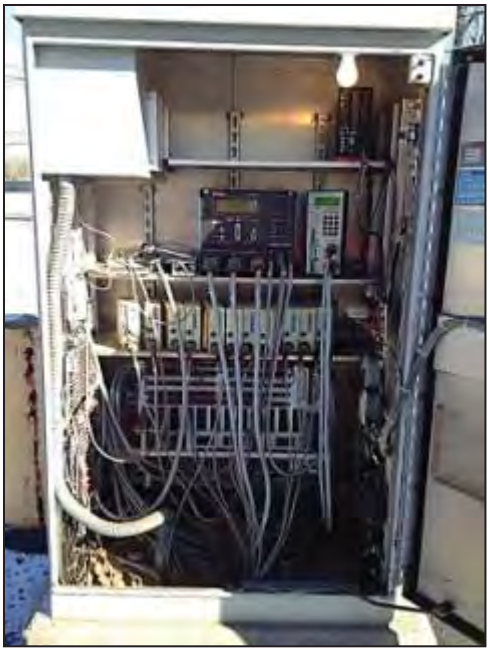
- Traffic signal controller is out-dated, but appears to be operating safely and reliably.
- Programmed time settings do not match the record plans. Some of the programmed times do not fall within the Min/Max ranges presented on the record plans.
- The signal heads provided on the eastbound approach may be located too close to the stop line and may not conform to the requirements of the MUTCD.
- Pedestrian signals are not provided at this intersection.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet does not have an internal light bulb to illuminate the cabinet when the cabinet door is opened.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in poor condition. This intersection was updated in 1998, but the equipment is much older than that. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

4 - Replacement Intersection

2.1.11 Intersection 54T - South Turnpike Road at Cook Hill Road



This three-legged, T-type intersection is controlled by a three-phase, fully-actuated traffic signal. The South Turnpike Road northbound approach is provided with a leading, actuated, left-turn phase and the South Turnpike Road northbound and southbound through movements follow in the next signal phase. Cook Hill Road is served in phase three. Vehicle signal heads are supported by a single span wire assembly. Pedestrians are permitted to cross concurrently with parallel vehicle traffic. Wire loop detectors and shelf mounted amplifiers are used to provide vehicle detection.

The provided plan is dated February-1996. No sidewalks, sidewalk ramps, or crosswalks are provided at this location. The following deficiencies were identified during the inventory:

One or more hand holes were not found. Hand hole covers are not bonded. Hand hole covers are missing bolts or could not be opened because of rust.	

Access to pedestrian bush buttons is not ADA compliant. The pedestal top is loose.	
A lane use sign is missing on the Cook Hill southbound approach. One sign is provided; two signs are indicated on the plan.	

- The pedestrian crosswalk is not striped and 8-inch vehicle indications are used to indicate the concurrent pedestrian phase across South Turnpike Road.
- Programmed time settings generally match the record plans, however, some of the programmed times fall outside of the Min/Max ranges presented on the plans.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. The issues that are present are minor in nature and could be resolved by maintenance activities. The Qualitative Assessment category assigned to this intersection is:

2 - Maintenance Needed

2.1.12 Intersection 55T - South Turnpike Road at Cheshire Road

This three-legged, T-type intersection is controlled by a four-phase, semi-actuated traffic signal. The South Turnpike Road northbound approach is provided with a leading, actuated, left-turn phase and the South Turnpike Road northbound and southbound through movements follow in the next two signal phases. The second through signal phase is used to activate an illuminate traffic sign in advance of the northbound stop line to warn drivers that the signal is red. Cheshire Road is served in phase three. Vehicle signal heads are supported by a single span wire assembly. Pedestrians are permitted to cross Cheshire Road concurrently with parallel vehicle traffic on South Turnpike Road. Wire loop detectors and shelf mounted amplifiers are used to provide vehicle detection.

The provided plan is dated May 29, 1996. The plan notes a revision in which traffic signal interconnection and emergency pre-emption were added and South Turnpike Road was widened to add a left-turn lane. A retaining wall is present along the east side of South Turnpike Road and two approach lanes are provided in each direction. The northbound approach on South Turnpike Road appears to have limited sight distance due to a crest vertical curve. A "When Flashing Stop Ahead" warning flasher is provided on this approach. No sidewalks, sidewalk ramps, or crosswalks are present at this location. The following deficiencies were identified during the inventory:

One or more hand holes were not found, were buried, or could not be opened.	

One or more hand holes were not found, were buried, or could not be opened.	

- Cheshire Road vehicle detection is malfunctioning. The signal phase operates on Max recall.
- One of the two signal heads provided on the eastbound approach is located too close to the stop line and does not conform to the requirements of the MUTCD.
- The existing signal indications on Cheshire Road are eight-inch diameter indications.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet light bulb is burned out.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. Routine maintenance appears to be performed at this location. The issues that are present are minor in nature and could be resolved by maintenance activities. The Qualitative Assessment category assigned to this intersection is:

2 - Maintenance Needed

2.1.13 Intersection 56T - South Turnpike Road/Quinnipiac Street at Masonic Avenue/Route 15 Southbound Ramps

This five-legged intersection is controlled by a four-phase, fully-actuated traffic signal. The signal phases for the South Turnpike Road northbound and southbound approaches are arranged in the standard NEMA dual ring configuration, which provides leading, protected left-turns and lagging through phases. The Route 15 off-ramp is served by signal phase three, and Masonic Avenue is served by signal phase seven. The right turn movement from the Route 15 off-ramp to Quinnipiac Street northbound operates under Yield control. Most vehicle signal heads are supported by a single span wire assembly. One signal head is mounted on a pedestal. Wire loop detectors and shelf mounted amplifiers are used to provide vehicle detection. The shelf mounted vehicle loop detector amplifiers are marked with tags that clearly describe the loop the amplifier is connected to.

The provided plan is dated May 30, 1996, and was revised on December 3, 1997 and June 29, 1998. No sidewalks, sidewalk ramps or crosswalks are provided at this location. The following deficiencies were identified during the inventory:

For one or more hand holes: • Covers are not grounded, • Standing water was observed in the bottom, • Cover bolts are rusted or missing Some hand holes could not be found.	

The color of the signal heads and visors is chipped and faded.	
A lane use sign has been damaged and is on the ground. Other signs at this intersection show damage.	
Two hand holes are within the vehicle tracking path and show damage.	

A pedestal mounted signal is out of plumb.	

- Programmed time settings do not match the record plans, however, all of the programmed times fall within the Min/Max ranges presented on the plans.
- One of the three signal heads provided on the northbound approach is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet light bulb is burned out.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. Routine maintenance appears to be performed at this location. The issues that are present are minor in nature and could be resolved by maintenance activities. The Qualitative Assessment category assigned to this intersection is:

2 - Maintenance Needed

2.1.14 Intersection 57T - Quinnipiac Street at River Road/Route 15 Northbound Off-Ramp

This four-legged intersection is controlled by a four-phase, fully-actuated traffic signal. The Quinnipiac Street eastbound approach is provided with a leading, vehicle-actuated, left-turn phase and the Quinnipiac Street eastbound and westbound through movements follow in the next signal phase. The Route 15 Off-Ramp approach and the River Road approach are served by individual signal phases with are run sequentially. Most vehicle signal heads are supported by a single span wire assembly. The signal heads for the Quinnipiac eastbound approach are mounted horizontally to improve visibility for traffic passing below the Route 15 bridges. Pedestrians are permitted to cross Quinnipiac Street concurrently with parallel vehicle traffic on the Route 15 Off-Ramp and River Street. Wire loop detectors and shelf mounted amplifiers are used to provide vehicle detection.

The provided plan is dated June 4, 1996. An advance warning sign is provided on Quinnipiac Street due to a horizontal curve sight line restriction. Sidewalks are provided along Quinnipiac Street under the Route 15 bridge and along the east side of River Road. The following deficiencies were identified during the inventory:

For one or more hand holes:

- The cover is not grounded,
- Cover bolts are rusted or missing.

Wire nuts are used for splice connections.

Many hand holes could not be found or may have been filled over with debris.

	
The paint on the signal heads and visors is chipped and faded.	
Sidewalk ramps are not ADA compliant.	

- A fault was present on detector D2B (Quinnipiac Street westbound through phase).
- The record plans indicate that this intersection is intended to operate as part of the South Turnpike Road Closed-Loop traffic signal system, however the signal operates in the Free Mode at all times.
- Programmed time settings do not match the record plans, but all of the programmed times fall within the Min/Max ranges presented on the plans.

- One of the two signal heads provided on the northbound and eastbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- Pavement markings are worn.

Qualitative Assessment

Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. This intersection was constructed in 1996 and the equipment is now 16 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.15 Intersection 58T - Quinnipiac Street at Ward Street/Lufbery Avenue/Bull Avenue

This signal controls multiple intersections in close proximity to each other in a commercial/residential zone. The signal operates with four actuated vehicle phases and an actuated pedestrian phase. Each roadway receives an individual signal phase. These phases are run in consecutive order. Phase one serves Quinnipiac Street eastbound and westbound traffic, phase two is the exclusive pedestrian phase, phase three serves Bull Avenue, phase four serves Lufbery Avenue and phase five serves Ward Street. Vehicle turning moves are prohibited between the section of Quinnipiac Street east of the intersection and Ward Street. Vehicle signal heads are supported by three span wire assemblies, with one assembly located at each intersection. Wire loop detectors and rack mounted amplifiers are used to provide vehicle detection.

The provided plan is dated July-1997. Sidewalks, sidewalk ramps and crosswalks are provided along all roadways at this location. Several business and/or residential driveways are located within the intersection. The following deficiencies were identified during the inventory:

One or more hand hole covers are not grounded, and have rusted or missing cover bolts. Wire nuts are used for splice connections in some hand holes. Some hand holes could not be found.	
The 8’ pedestal and foundation opposite Bull Avenue is damaged.	
A wire loop is loose on the span pole located on the south side of Ward Street.	

A pedestrian ramp located on the north side of Quinnipiac St is filled with sediment/debris.	
A signal face is obscured by curb line trees.	

- A fault was present on detector D6 (Ward Street westbound approach)
- Programmed time settings do not match the record plans, and some of the programmed times do not fall within the Min/Max ranges presented on the plans.
- An emergency pre-emption phase selector card and an optical detector are present, but it does not appear that the emergency pre-emption system is functioning.
- The cabinet door was difficult to open.
- One of the two signal heads provided on the eastbound approach of Quinnipiac Street to Bull Avenue and Lufbery Avenue, the Lufbery Avenue northbound approach, and the Quinnipiac Street westbound approach to Lufbery Avenue is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Both of the signal heads provided on the Bull Avenue southbound approach are located too close to the stop line and does not conform to the requirements of the MUTCD.
- Some of the existing signal indications are eight-inch diameter indications.

- Backplates are not provided on span wire mounted signal heads.
- An audible pedestrian tone is not provided during the exclusive pedestrian phase.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. This intersection was constructed in 1997 and the equipment is now 15 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.16 Intersection 59T - Quinnipiac Street at Washington Street

This four-legged intersection is controlled by a three-phase, fully-actuated traffic signal. The Quinnipiac Street eastbound and westbound approaches are served in phase one, an exclusive pedestrian phase is provided in phase two, and Washington Street northbound and southbound traffic is served in phase three. An audible pedestrian tone is provided during the exclusive pedestrian phase. Vehicle signal heads are supported by a single span wire assembly. Wire loop detectors and rack mounted amplifiers are used to provide vehicle detection.

The plan provided is dated July-1997. Concrete sidewalks and sidewalk ramps are present at each corner. The following deficiencies were identified during the inventory:

The “SLOW” pavement markings are faded.	
Wire nuts are used for splice connections in at least one location.	
Sidewalk ramps do not meet current ADA requirements lacking detectable warning strips and at least one location is in poor condition.	

Pavement/Loop Condition is poor in at least one location.	

- Faults are present on detectors D4 (Washington Street northbound) and D4C (Washington Street southbound).
- This signal is intended to operate as part of the Downtown closed-loop traffic signal system; however, it does not appear that the coordination plans are being used by the controller.
- An emergency pre-emption phase selector card is in the detector rack, but is not connected. Emergency vehicle pre-emption is not functioning.
- One of the two signal heads provided on the northbound and southbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- A second Peek 3000 traffic signal controller is located in this cabinet. It is unclear if this second controller is operational.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. The issues that are present are minor in nature and could be resolved by maintenance activities. The Qualitative Assessment category assigned to this intersection is:

2 - Maintenance Needed

2.1.17 Intersection 60T - Quinnipiac Street at North and South Cherry Street

This four-legged intersection is controlled by a four-phase, fully-actuated traffic signal. The Quinnipiac Street eastbound and westbound approaches are served in Phase 1, an exclusive pedestrian phase is provided in Phase 2, the North Cherry Street southbound approach is given a leading green phase in Phase 3 and North and South Cherry Streets are served in Phase 4. Vehicle signal heads are supported by a single span wire assembly. An audible pedestrian tone is provided during the exclusive pedestrian phase. Wire loop detectors and rack mounted amplifiers are used to provide vehicle detection.

The plan provided is dated July-1997. Concrete sidewalks and sidewalk ramps are present at each corner. The following deficiencies were identified during the inventory:

Pavement markings are in poor condition.	
Existing sidewalk ramps do not meet current ADA requirements. They lack detectable warning strips and in some cases exceed slope requirements.	

A wood utility pole on the southeast corner of the intersection appears to be moderately out of plumb.	
Pedestal mounted signals on Quinnipiac Street westbound appear to be obscured by a tree.	

- Programmed time settings do not match the record plans, however, all of the programmed times fall within the Min/Max ranges presented on the plans.
- This intersection is intended to operate as part of the Downtown Closed-Loop traffic signal system. This intersection operates in the Free Mode at all times and does not seem to be communicating with the master.
- An emergency pre-emption phase selector card is in the detector rack, but is not connected. Emergency vehicle pre-emption is not functioning.
- One of the two signal heads provided on the northbound approach is located too close to the stop line and does not conform to the requirements of the MUTCD.
- The Railroad Crossing graphic sign on Quinnipiac Street eastbound is missing.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. The issues that are present are minor in nature and could be resolved by maintenance activities. The Qualitative Assessment category assigned to this intersection is:

2 - Maintenance Needed

2.1.18 Intersection 61T - Ward Street at South Cherry Street

This four-legged intersection is controlled by an isolated, three-phase, semi-actuated traffic signal. The Ward Street eastbound and westbound approaches are served in Phase 1, an exclusive pedestrian phase is provided in Phase 2 and traffic on the South Cherry Street northbound and southbound approaches is served in Phase 3. Vehicle signal heads are supported by a single span wire assembly. Vehicle actuation is provided on the South Cherry Street Approach. The cycle length varies between 55 and 65 seconds. Wire loop detectors and shelf mounted amplifiers are used to provide vehicle detection.

The provided plan was dated 1973 with a notation that timings recorded in June-2002. Sidewalks, sidewalk ramps and crosswalks are provided on all four approaches. The pedestals and pedestrian signals appear to have been recently replaced or updated. Otherwise, the existing traffic signal hardware was generally found to be in fair to poor condition with the following deficiencies or exceptions:

The crosswalk markings are faded, do not align with the sidewalk ramps, and appear to be too narrow. The pedestrian signal faces are difficult to see as they do not face opposing ramps. One or more ramps appear to be too steep (non-ADA compliant).	

The signs for the pedestrian push-buttons are not consistent with pedestrian signal faces which are man/hand. Pedestrian push-buttons are not all 2” diameter.	
The vehicle detector loops are in poor condition.	
The conduits in the controller cabinet are not sealed.	

Signal heads appear to be old and have been repaired or are missing components.	
A manhole within the cross walk has been paved over and is creating a tripping hazard.	

- Programmed time settings do not match the record plans, however, all of the programmed times appear to fall within the Min/Max ranges presented on the plans.
- One of the two signal heads provided on the southbound, eastbound and westbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- The two signal heads provided on the northbound approach are located too close to the stop line and do not conform to the requirements of the MUTCD.
- All existing vehicle signal indications are eight-inch diameter.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet does not have an internal light bulb to illuminate the cabinet when the cabinet door is opened.
- An audible pedestrian tone is not provided during the exclusive pedestrian phase.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced,
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in poor condition. This intersection was constructed in 1973 but the equipment seems to be approximately 15 to 20 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

4 - Replacement Intersection

2.1.19 Intersection 62T - Ward Street at South Orchard Street

This four-legged intersection is controlled by an isolated, three-phase, semi-actuated traffic signal. The Ward Street eastbound and westbound approaches are served in Phase 1, an exclusive pedestrian phase is provided in Phase Two, and the South Orchard Street northbound and southbound approaches are served in Phase 3. Vehicle signal heads are supported by a single span-wire assembly. Vehicle actuation is provided on the South Cherry Street Approach. Microwave detection is provided on South Orchard Street and wire loop detectors are provided on Ward Street. Rack mounted amplifiers are used to provide vehicle detection.

The provided plan is dated April-1997. This intersection consists of single lane approaches in all directions. The location is primarily within a business/residential zone. A school is located in the vicinity of this intersection. Concrete sidewalks, sidewalk ramps and crosswalks are provided on all four corners. The following deficiencies were identified during the inventory:

Conduits are not sealed in the controller cabinet.	
Pedestrian push-button signs are a mix of older and newer types.	 

One or more sidewalk ramps appear to be non ADA compliant.	
A span pole is missing the hand hole cover, one or more bolt covers, and exhibits slight corrosion at the base.	
Double yellow centerlines are missing on South Orchard Street.	

- Programmed time settings do not match the record plans, however, all of the programmed times fall within the Min/Max ranges presented on the plans.
- One of the two signal heads provided on the northbound, eastbound and westbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Both of the signal heads provided on the southbound approach are located too close to the stop line and do not conform to the requirements of the MUTCD.

- The plans indicate that this intersection is intended to operate in coordination with intersection 5T (South Colony Road at Ward Street). Coordination settings are not programmed in the controller, and the intersection operates in the Free Mode at all times.
- The plans indicate that an emergency pre-emption phase is provided on South Orchard Street southbound. The intersection does not include emergency pre-emption equipment, and no pre-emption routines have been programmed.
- The audible pedestrian tone was not functioning at this intersection.
- Most existing vehicle signal indications are eight-inch diameter.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet light bulb is burned out.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in poor condition. This intersection was constructed in 1997 and the equipment is now 15 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

4 - Replacement Intersection

2.1.20 Intersection 63T - North Plains Industrial Road at Pent Highway

This intersection is a three-way, vehicle actuated, isolated, T-type intersection. An uncontrolled driveway approaches the intersection from the west. A leading southbound left-turn phase is provided on North Plains Industrial Road, and the Pent Highway westbound right-turn is allowed to move as an overlapping movement during this leading signal phase. Vehicle signal heads are supported by a single span wire assembly. Pedestrian push-buttons are provided, but a crosswalk is not marked. Pedestrians move concurrently with westbound Pent Highway traffic. Wire loop detectors and rack mounted amplifiers are used to provide vehicle detection.

The provided plan is dated March-2001. This location is primarily commercial with

business access in close proximity to the intersection. There are no sidewalks at this location. A pedestrian crossing exists on North Plains Ind. The following deficiencies were identified during the inventory:

One or more hand hole covers were not found and may be filled over. One or more hand holes had rusted or missing bolts in the cover.	
The detector loops and pavement are in poor condition at several locations.	
An additional signal face is mounted on the northeast span pole that is not noted on the signal plan.	

Signal Face #3 is mounted horizontally in the field but not identified on the signal plan as such (may be due to visibility/height reasons).	
A hand hole on the northeast corner of the intersection is being hit by turning vehicles.	

- The adjacent property owner's chain link fence has been damaged and is leaning toward the controller cabinet, making it impossible to fully open the controller cabinet door.
- Eight-inch diameter red, yellow, and green vehicle signal heads are provided as pedestrian indications. These indications are timed with the vehicle phase, and do not show pedestrian walk or clearance intervals.
- Programmed time settings do not match the record plans; however, all values fall with the Min/Max range presented on the plan.
- Loop detectors in the North Plains Industrial Road southbound left-turn lane and Pent Highway westbound right turn lane are malfunctioning.
- The system detector on the Pent Highway departure lane (SD3) is malfunctioning.
- Backplates are not provided on span wire mounted signal heads.
- The pavement markings are in poor condition.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in poor condition. This intersection was updated in 2001 but the equipment seems to be much older. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

4 - Replacement Intersection

2.1.21 Intersection 64T - North Main Street Extension at Beaumont Road

This four-legged intersection is controlled by a four-phase, vehicle-actuated, traffic signal which operates as part of the North Main Street Extension coordinated traffic signal system. North Main Street Extension northbound and southbound traffic moves together with permitted left-turns. Beaumont Road eastbound traffic and the Community Pool driveway traffic are each served by split signal phases. An exclusive pedestrian phase is also provided which includes an audible tone. Vehicle signal heads are supported by a single span wire assembly. Wire loop detectors and rack mounted amplifiers are used to provide vehicle detection.

The provided plan was dated December-1998. The entrance to the Town's community pool is located on the east leg of the intersection. Sidewalks are present along the east side of North Main Street Extension and also along the west side of North Main Street Extension to the north of Beaumont Road. Concrete sidewalk ramps and crosswalks are present on all four corners. The following deficiencies were identified during the inventory:

One or more hand hole covers are not grounded, and are rusted or missing cover bolts.	
The span pole located in the northwest corner has been hit by large vehicles turning onto Beaumont Road. The bolt covers are also damaged.	
Tree pruning is required at Utility pole #5497 to clear vegetation away from the signal power supply.	

A span wire mounted sign is out of plumb.	
One or more of the pedestrian signals are corroding and/or have been damaged.	

- The North Main Street Extension signal heads in the center of the intersection are held together using rope.
- The pre-emption detection card is not installed in the detector rack, but is stored in a cardboard box on the shelf.
- The pedestrian push-button on the southeast corner of the intersection appears to have been hit and the signal housing is broken. The push-button and signal head function properly.
- One of the two signal heads provided on the northbound and eastbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Both of the signal heads provided on the westbound approach are located too close to the stop line and do not conform to the requirements of the MUTCD.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet light bulb is missing.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in poor condition. This intersection was constructed in 1998 and the equipment is now 14 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

4 - Replacement Intersection

2.1.22 Intersection 65T - North Main Street Extension at Barnes Industrial Road/Wal-Mart Driveway

This four-legged intersection is controlled by a five-phase, vehicle-actuated, traffic signal which operates as part of the North Main Street Extension coordinated signal system. The master signal controller for this coordinated signal system is located in at this intersection. The signal phases for the North Main Street Extension northbound and southbound vehicle movements are arranged in a standard NEMA dual-ring configuration. Barnes Industrial Road and the Wal-Mart driveway are controlled by the same signal phase. Vehicle signal heads are supported by a single span wire assembly. Pedestrian push-buttons are provided, and pedestrians are permitted to cross North Main Street Extension concurrently with adjacent vehicle traffic, however, pedestrian indications and marked crosswalks are not provided. Wire loop detectors and shelf mounted amplifiers are used to provide vehicle detection.

Two emergency vehicle pre-emption routines are programmed in the controller, detector cards are installed and powered, and pre-emption detectors are present. The pre-emption routines were not tested to ensure proper function.

The provided plan is dated October 1995. This intersection is located within a commercial area, and concrete sidewalks are only provided along the west side of North Main Street Extension. Two concrete sidewalk ramps are present on the northwest and southwest corners. The following deficiencies were identified during the inventory:

Some hand hole covers are not grounded, and have rusted or missing bolts. Some hand holes could not be found and appear to have been filled over. Wire nuts are used for splice connections in one or more hand holes. Conduits are not sealed.	
Heavy vehicles are riding over the curb while making right turns on to Barnes Industrial Road.	
The length of the concrete ramp leading to the push-button on the northeast corner appears to exceed allowable ADA limits.	

- One of the two signal heads provided on the eastbound approach is located too close to the stop line and does not conform to the requirements of the MUTCD.
- The existing vehicle signal indications for the Wal-Mart Driveway and Barnes Industrial Road approaches are eight-inch diameter.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.

- The wire drip loop at the top of the northeast span pole is uncoiled.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. This intersection was constructed in 1995 and the equipment is now 17 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.23 Intersection 66T - North Main Street Extension at Ives Road

This four-legged intersection is controlled by a five-phase, vehicle-actuated, traffic signal which operates as part of the North Main Street Extension coordinated signal system. The signal phases for the North Main Street Extension northbound and southbound vehicle movements are arranged in a standard NEMA dual-ring configuration. Ives Road and the Westview Office Park driveway are controlled by the same signal phase. Vehicle signal heads are supported by a single span wire assembly. Pedestrian push-buttons are provided, and pedestrians are permitted to cross North Main Street Extension concurrently with adjacent vehicle traffic. Wire loop detectors and shelf mounted amplifiers are used to provide vehicle detection.

The provided plan is dated July-1997. A sidewalk and one sidewalk ramp is provided on the northwest corner of the intersection. There are no marked crosswalks at this location. The following deficiencies were identified during the inventory:

One or more hand hole covers are not grounded. Some covers have rusted or missing bolts. Wire nuts are used for splice connections. Some hand holes could not be found.	
A span mounted lane use sign (Left Turn Only) is out of plumb.	
Trimming of vegetation is required at one utility pole.	

Heavy vehicles are riding over the curb while making right turns onto Ives Road.	

- Programmed time settings match the record plans for all intervals except MAX 1 for phase 1 (North Main Street Extension northbound left turn phase). The programmed values fall within the Min/Max ranges presented on the plan.
- Pedestrian push-buttons are provided, but pedestrian indications and marked crosswalks are not provided.
- Both of the signal heads provided on the westbound approach are located too close to the stop line and do not conform to the requirements of the MUTCD.
- The existing vehicle signal indications for the Ives Road and Westview Office Park Driveway approaches are eight-inch diameter.
- The foundation for the traffic signal controller has settled approximately 18 inches. The bottom of the cabinet door is partially blocked by soil.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. This intersection was constructed in 1997 and the equipment is now 15 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.24 Intersection 67T - North Main Street Extension at Stop & Shop Shopping Center Driveway

This four-legged intersection is controlled by a three-phase, vehicle-actuated, traffic signal. The North Main Street Extension northbound left-turn is the leading signal phase, which is followed by the northbound/southbound through phase. The Stop & Shop Shopping Center driveway and a driveway leading to an office building are served by the third signal phase. Vehicle signal heads are supported by a single span wire assembly. Pedestrian push-buttons are provided, but pedestrian indications and marked crosswalks are not provided. Wire loop detectors and shelf mounted amplifiers are used to provide vehicle detection.

The provided plan is dated August-1988. Concrete sidewalks are only provided along the west side of North Main Street from the Stop and Shop Plaza driveway to the south. One concrete sidewalk ramp is present on the southwest corner. The following deficiencies were identified during the inventory:

Existing pavement marking s and lane use do not agree with the signal plan.	

One or more hand hole covers were not grounded. Some hand holes could not be found. Wire nuts are used for splice connections. Some covers have rusted or missing bolts. Conduits are not sealed.	
Pedestrian push-buttons are the older style and not easily accessible by pedestrians.	

- Programmed time settings do not match the record plans, however, all of the programmed times fall within the Min/Max ranges presented on the plan.
- The traffic signal is intended to operate as part of the North Main Street Extension coordinated signal system, however, the signal operates in the Free Mode at all times.
- Emergency vehicle pre-emption is not provided at this intersection.
- The pedestrian push-buttons are not ADA compliant because there are not handicapped accessible routes leading to the buttons.
- One of the two signal heads provided on the eastbound and westbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet light bulb is burned out.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced,
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in poor condition. This intersection was constructed in 1988 and the equipment is now **24 years old**. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

4 - Replacement Intersection

2.1.25 Intersection 68T - Barnes Industrial Road North at Barnes Road

This four-legged intersection is controlled by a two-phase, vehicle-actuated traffic signal. East-west traffic along Barnes Road is served by Phase 1 and north-south traffic along Barnes Industrial Road North is served by Phase 2. All vehicle signal heads are LED type, 12 inch diameter, and supported by a single span wire assembly. Pedestrian crosswalks, pedestrian signal heads, and emergency vehicle pre-emption are not provided at this intersection. All equipment in this cabinet is manufactured by Naztec. Wire loop detectors and shelf mounted amplifiers are used to provide vehicle detection.

The provided plan is dated August-1996. This intersection is located in an industrial area. No sidewalks, sidewalk ramps or crosswalks are provided. The following deficiencies were identified during the inventory:

One or more hand hole covers were not grounded. Some hand holes could not be found. Wire nuts are used for splice connections. Some covers have rusted or missing bolts. Conduits are not sealed.	

The pavement in the vicinity of the vehicle loop detectors is in poor condition.	
Vehicles are impacting the northwest and northeast curb lines.	

- A detector fault was present on loop D1 (Barnes Road westbound approach).
- Programmed time settings do not match the record plans, and, some of the programmed times do not fall within the Min/Max ranges presented on the plan.
- Emergency vehicle pre-emption is not provided at this intersection.
- One of the two signal heads provided on the northbound and southbound approaches is located too close to the stop line and does not conform to the requirements of the MUTCD.
- Visors are missing on the following two signal heads:
    - Barnes Road: eastbound green indication
    - Barnes Industrial Road North: southbound green indication
- The existing vehicle signal indications for the Barnes Industrial Road approaches are eight-inch diameter.
- The lock on this cabinet should be changed to use the same key as all other Town owned intersections.
- Vegetation around the cabinet should be trimmed.
- Backplates are not provided on span wire mounted signal heads.

- The cabinet light bulb is missing.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced,
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. This intersection was constructed in 1996 and the equipment is now 16 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.26 Intersection 69T - Research Parkway at Bristol-Myers Squibb Main Driveway

This three-legged, T-type intersection operates as an isolated, fully-actuated, three-phase traffic signal. The Research Parkway southbound left-turn is the leading signal phase, which is followed by the northbound/southbound through phase. The Bristol-Myers Squibb driveway is served by the third signal phase. Vehicle signal heads are supported by a single span wire assembly. Pedestrian push-buttons are provided, and pedestrians are permitted to cross Research Parkway concurrently with the driveway traffic, however, marked crosswalks are not provided. Wire loop detectors and rack mounted amplifiers are used to provide vehicle detection.

The provided plan is dated June-2001.No sidewalks, sidewalk ramps, or crosswalks are provided at this location. The following deficiencies were identified during the inventory:

One or more hand hole covers were not grounded. Some hand holes could not be found. Wire nuts are used for splice connections. Some covers have rusted or missing bolts.	
Sidewalk access is not provided to the Pedestrian push-buttons.	
Lane restriction signs are missing on the northbound approach.	

- Eight-inch diameter red, yellow, and green vehicle signal heads are provided as pedestrian indications. These indications are timed with the vehicle phase, and do not show pedestrian walk or clearance intervals.
- Programmed time settings do not match the record plans, however, all of the programmed times do fall within the Min/Max ranges presented on the plan.
- One of the two signal heads provided on the westbound approach is located too close to the stop line and does not conform to the requirements of the MUTCD.

- Emergency vehicle pre-emption is not provided at this location.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet does not have an internal light bulb to illuminate the cabinet when the cabinet door is opened.
- Dust and dirt should be vacuumed from the cabinet and the air filter should be replaced.
- The color of the signal heads and visors is chipped and faded.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. The issues that are present are minor in nature and could be resolved by maintenance activities. The Qualitative Assessment category assigned to this intersection is:

2 - Maintenance Needed

2.1.27 Intersection 71T - Cook Hill Road at Oakdale Theater North Driveway

This is a T-type intersection with a flashing beacon signal. Flashing yellow indications are provided for Cook Hill Road traffic and a flashing red indication is provided for Oakdale Theater north driveway traffic. These indications are supported by a single span wire assembly. Traffic on the Oakdale Theater north driveway is controlled by a STOP sign.

A cluster of four flood lights are mounted below the flashing indications to illuminate the roadway below. The flood lights are controlled by a toggle switch located in the pedestal mounted controller cabinet.

The following deficiencies were identified during the inventory:

- Dust and dirt should be vacuumed from the cabinet.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. No major issues were found. The Qualitative Assessment category assigned to this intersection is:

1 - Compliant Intersection

2.1.28 Intersection 72T - South Turnpike Road at Oakdale Theater East Driveway

This is a T-type intersection with a flashing beacon signal. A flashing yellow indication is displayed to traffic on South Turnpike Road and a flashing red indication is displayed to vehicles on the Oakdale Theater driveway. These indications are supported by a single span wire assembly. Traffic on the Oakdale Theater east driveway is controlled by a STOP sign.

A cluster of four flood lights are mounted below the flashing indications to illuminate the roadway below. The flood lights are controlled by a toggle switch located in the controller cabinet mounted on the southern span pole.

The following deficiencies were identified during the inventory:

- A bulb in one of the overhead flood lights is burned out and should be replaced.
- The light bulb provided in this cabinet is burned out.
- Pavement markings are faded.
- Dust and dirt should be vacuumed from the cabinet.

Qualitative Assessment

Overall, traffic signal equipment and intersection geometry are in good condition. No major issues were found. The Qualitative Assessment category assigned to this intersection is:

1 - Compliant Intersection

2.1.29 Intersection 73T - John Street at South Cherry Street

This four-legged intersection is controlled by a two-phase, fixed-time traffic signal. North-south traffic along South Cherry Street is served by phase one and east/west traffic along John Street is served by Phase 2. Vehicle signal heads are LED type, 12 inch diameter, and supported by a single span wire assembly. Pedestrian crosswalks, pedestrian signal heads, and emergency vehicle pre-emption are not provided at this intersection. Traffic signal equipment is contained in a small, pedestal mounted, traffic controller cabinet.

A plan of this intersection does not exist. The following deficiencies were identified during the inventory:

A wire drip loop is uncoiled. Pavement markings are faded.	
Heavy vehicles are riding over the curb line in the southeast corner of the intersection.	

- Traffic Signal warrants should be reviewed at this location to confirm that traffic signal operations are still warranted.
- Vehicle detection is not provided.
- The signal heads provided on the southbound approach are located too close to the stop line and do not conform to the requirements of the MUTCD.
- The existing signal timing does not match the timing specified in the STC permit.
- Backplates are not provided on span wire mounted signal heads.
- The cabinet does not have an internal light bulb to illuminate the cabinet when the cabinet door is opened.
- Dust and dirt should be vacuumed from the cabinet.
- The color of the signal heads and visors is faded.

Qualitative Assessment

Overall, intersection geometry is in fair condition, but the traffic signal equipment is in poor condition. This STC permit is dated 1958, but most of the equipment seems to be approximately 20 years old. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.30 Intersection 74T - Hope Hill Road at Yalesville Fire Department

This is a T-type intersection controlled by a flashing traffic signal. Flashing yellow indications are displayed to traffic on Hope Hill Road and flashing red indications are displayed to vehicles on the Yalesville Fire Department driveway. The traffic signal displays steady red indications on the Hope Hill Road approaches and steady green indications on the Fire Station driveway approach when fire trucks exit the fire station. A push-button is located in the fire station to actuate the signal phase for the Fire Station approach.

The following deficiencies were identified during the inventory:

The conduits in the controller cabinet are not sealed.	

Multiple risers and loose wiring are present around the weather-heads.	

- The cabinet lock and door assembly should be repaired. Entry into the cabinet was very difficult.
- Programmed time settings do not match the record plans, and some of the programmed times do not fall within the Min/Max ranges presented on the plan.
- Backplates are not provided on span wire mounted signal heads.
- Dust and dirt should be vacuumed from the cabinet.

Qualitative Assessment

Overall, intersection geometry is in good condition, but the traffic signal equipment is in poor condition. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

2.1.31 Intersection 75T - North Colony Street (US Route 5) at Holy Trinity Church

This location consists of an overhead spot light. The switch to activate the spot light is located approximately nine feet above the ground on a utility pole located in southeast corner of the intersection.

The following deficiencies were identified during the inventory:

3. A bulb in one of the overhead spot lights is burned out.

There are no pedestrian ramps for the marked crosswalks on North Colony Road.	 

Qualitative Assessment

Overall, the overhead spot lights are in good condition, but the lack of sidewalk ramps should be addressed. The issues that are present will require more than routine maintenance to resolve. The Qualitative Assessment category assigned to this intersection is:

3 - Capital Improvement Intersection

3.0 QUALITATIVE ASSESSMENT RESULTS

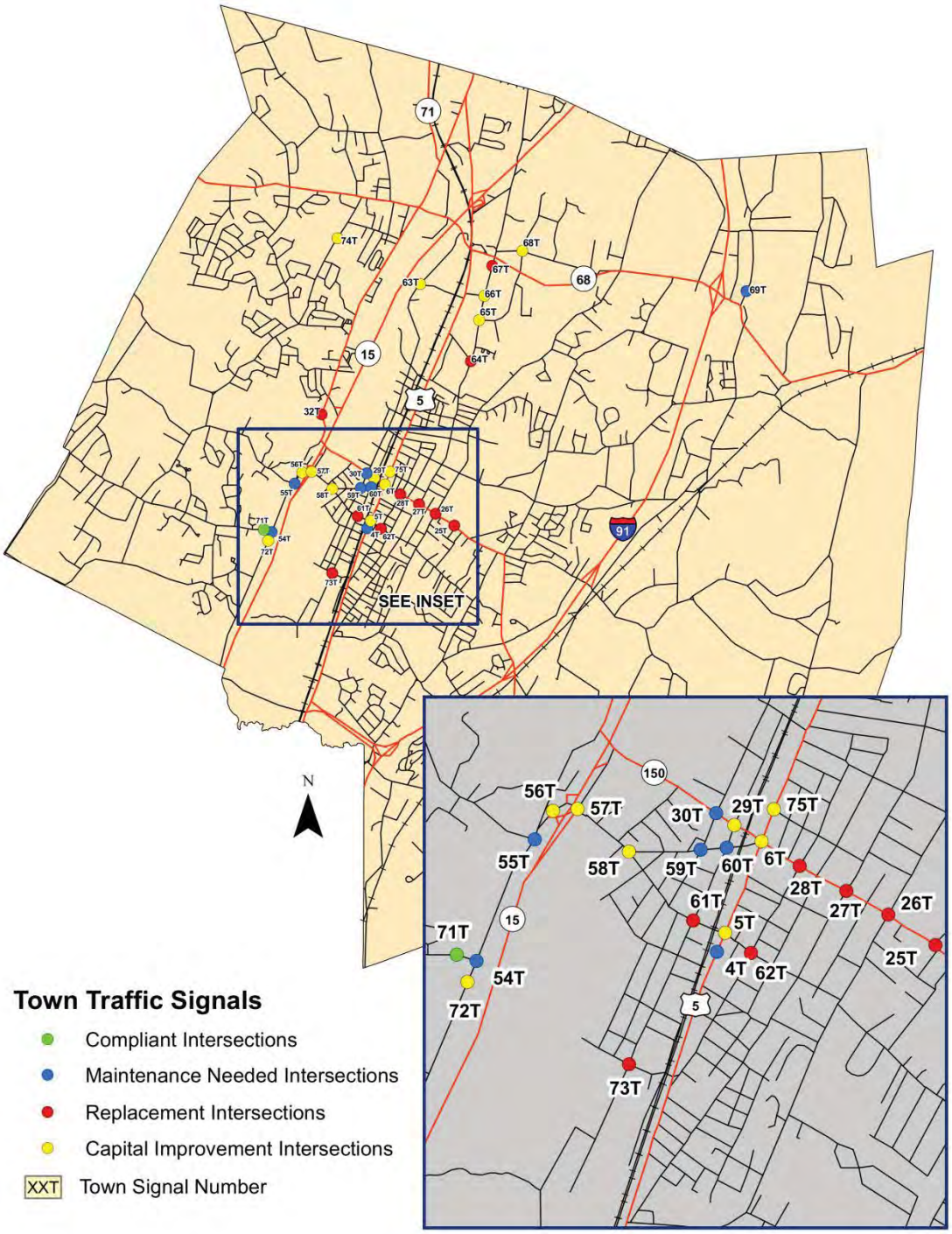
Based on the intersection inventory results, the Qualitative Assessments of the project intersections are summarized in Table 1 and in Figure 2.

Table 1 - Qualitative Assessment Summary by Intersection

Intersection		Qualitative Assessment
4T	South Colony Road (US Route 5) at Walgreens Shopping Center Driveway	2 - Maintenance Needed
5T	South Colony Road (US Route 5) at Ward Street	3 - Capital Improvement Intersection
6T	North and South Colony Road (US Route 5) at Hall Avenue, Center Street, Quinnipiac Street	3 - Capital Improvement Intersection
25T	Center Street (Route 150) at Silver Pond Apartments Driveway	4 - Replacement Intersection
26T	Center Street (Route 150) at North and South Elm Streets	4 - Replacement Intersection
27T	Center Street (Route 150) at North and South Main Streets	4 - Replacement Intersection
28T	Center Street (Route 150) at North and South Orchard Streets	3 - Capital Improvement Intersection
29T	Hall Avenue (Route 150) at North Cherry Street	3 - Capital Improvement Intersection
30T	Hall Avenue (Route 150) at Washington Street	2 - Maintenance Needed
32T	Hall Avenue (Route 150) at Masonic Avenue/Fire Dept. Headquarters	4 - Replacement Intersection
54T	South Turnpike Road at Cook Hill Road	2 - Maintenance Needed
55T	South Turnpike Road at Cheshire Road	2 - Maintenance Needed
56T	South Turnpike Road/Quinnipiac Street at Masonic Avenue/Route 15 Southbound Ramps	2 - Maintenance Needed
57T	Quinnipiac Street at River Road/Route 15 Northbound Off-Ramp	3 - Capital Improvement Intersection
58T	Quinnipiac Street at Ward Street	3 - Capital Improvement Intersection
59T	Quinnipiac Street at Washington Street	2 - Maintenance Needed
60T	Quinnipiac Street at North and South Cherry Street	2 - Maintenance Needed

Intersection		Qualitative Assessment
61T	Ward Street at South Cherry Street	4 - Replacement Intersection
62T	Ward Street at South Orchard Street	4 - Replacement Intersection
63T	North Plains Industrial Road at Pent Highway	4 - Replacement Intersection
64T	North Main Street Extension at Beaumont Road	4 - Replacement Intersection
65T	North Main Street Extension at Barnes Industrial Road/Wal-Mart Driveway	3 - Capital Improvement Intersection
66T	North Main Street Extension at Ives Road	3 - Capital Improvement Intersection
67T	North Main Street Extension at Stop & Shop Shopping Center Driveway	4 - Replacement Intersection
68T	Barnes Industrial Road North at Barnes Road	3 - Capital Improvement Intersection
69T	Research Parkway at Bristol-Myers Squibb Main Driveway	2 - Maintenance Needed
71T	Cook Hill Road at Oakdale Theater North Driveway	1 - Compliant Intersection
72T	South Turnpike Road at Oakdale Theater East Driveway	1 - Compliant Intersection
73T	John Street at South Cherry Street	3 - Capital Improvement Intersection
74T	Hope Hill Road at Yalesville Fire Department	3 - Capital Improvement Intersection
75T	North Colony Street (US Route 5) at Holy Trinity Church	3 - Capital Improvement Intersection

Figure 2 - Intersection Status



The Qualitative Assessment categories are summarized in Table 2.

Table 2 - Qualitative Assessment Summary by Category

Qualitative Assessment	Number of Intersections
1 - Compliant	2
2 - Maintenance Needed	8
3 - Capital Improvement	12
4 - Replacement	9
5 - Red Flag	0
TOTAL	31

4.0 RECOMMENDATIONS

This report has identified improvements which can be realized in the traffic signals which are owned by the City of Wallingford. The improvement program is divided into two major categories:

4. System Level Improvements – These are projects which apply to the overall performance of the system. These include actions to improve traffic signal operations as a whole. Projects which address multiple locations, operational plans and similar actions.
5. Intersection Level Improvements – These items are recommended to bring a specific location to its original design, repair malfunctioning equipment or upgrade an intersection to current standards.

The following sections will present the recommendations to improvement of the overall traffic signal system and to improve individual intersections.

4.1 System Level Improvements

Vehicle Detector Repair

A number of detectors were found to be malfunctioning. This is normally due to pavement deterioration and requires replacement of loop detectors. The number of these detectors is sufficient to justify the development of a system wide detector repair project. We recommend the City program this improvement as a separate effort from other intersection repairs. This project is recommended at a funding level of $30,000.

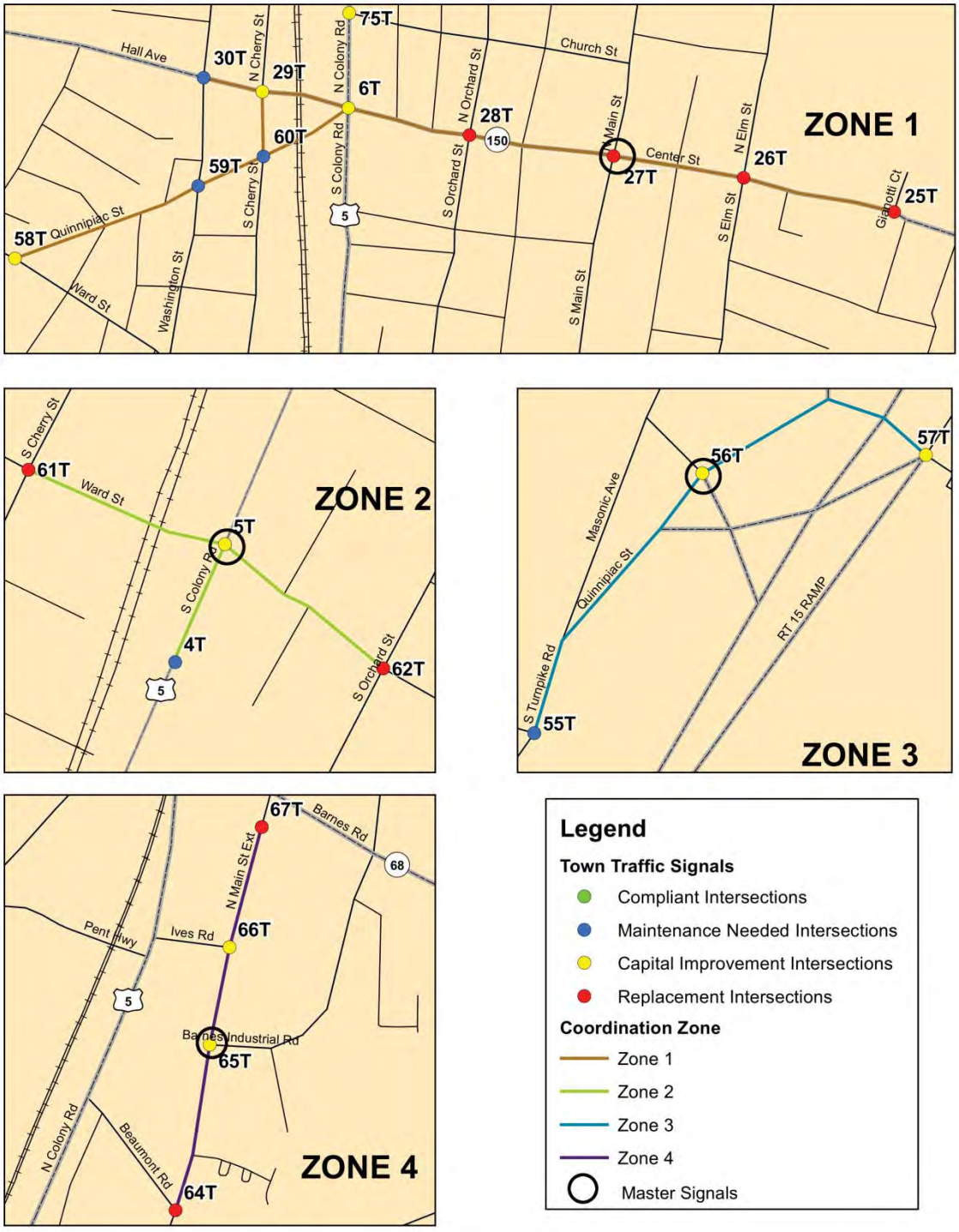
System Coordination Repair

Our inspection and inventory noted that many intersections were originally designed to function in a coordinated fashion. This is a very efficient means to reduce stops and vehicle delay between closely spaced intersections. In Wallingford, there are four such "Systems". These systems are presented in Figure X. None of the four systems are functioning. In two cases, the coordination units were missing or not connected. In the others, the coordination hardware did not appear to be communicating with its neighboring intersections.

Efficiency of the overall traffic signal system could be improved by restoring the existing traffic signal interconnect communication system, and implementing traffic signal coordination settings. Most project intersections are programmed with the coordination settings shown on the plans, but these settings not being implemented. A few project intersections do not have the coordination setting programmed. This traffic signal inventory found that 21 project intersections should be operating with coordination plans. The Inventory revealed that only six project intersections are actually implementing the intended coordination plans.

We recommend a System Coordination Project which will examine each "System" and determine the reasons for failure. This project would test coordination cable for deterioration, re-establish operation plans, and verify that local intersections are responding to system commands from the master location.

Figure 3 - Coordination Zones



A number of coordination technologies are now available for locations where the existing traffic signal hard-wire interconnect communication system is not functioning and the repair would be too costly to implement. Wireless communication technology has advanced to a point where it can be considered a reliable and cost effective solution. Time-based traffic signal coordination can also be implemented by using the highly accurate time data transmitted by Global Positioning System (GPS) satellites. These data are used to synchronize the internal clocks of the local traffic signal controllers. This project is recommended to be funded at $35,000.

System Retiming Update

Major improvement in traffic operations could be obtained by retiming Wallingford's traffic signals.

The coordination plans for most project intersections are over 15 years old. Traffic patterns may have changed during that period of time. A traffic study is recommended to assess the existing coordination plans and recommend new settings where needed.

This project would include collecting counts at each intersection supplemented by Automatic Traffic Data assembled from existing CDOT data and other information the Town has. This data would be used to reset the timing at each intersection and develop updated system timing plans. We note that for this effort to be fully effective it would have to be preceded by the local repair efforts. The project could be first performed for non-coordinated intersections and then the effort bundled with each system repair. System work should include modeling of system operations using a software package similar to Synchro. We recommend a budget of $50,000.00 for this effort.

4.2 System Level Improvements Cost Estimate Summary

The estimated system project costs are summarized in Table 3.

Table 3 - System Level Improvements Cost Estimate Summary

Project	Estimated Cost
Vehicle Detector Repair	$30,000
System Coordination Repair	$35,000
System Timing Update	$50,000
TOTAL	$115,000

4.3 Intersection Level Improvements

The following sections present the improvements recommended for each project intersection and the estimated cost associated with those improvements. Recommended improvements are based on the Qualitative Assessment category

assigned to each intersection. The recommended improvements where determined as follows:

1. **Compliant Intersection:** There are generally no recommended improvements for these intersections.
2. **Maintenance Needed:** Recommended improvements include items required to address identified deficiencies to bring the intersections in to a good state of repair. Reapplication of pavement markings is also included at all intersections in this category.
3. **Capital Improvement Intersection:** Recommended improvements generally consist of replacement of damaged/obsolete aboveground traffic signal equipment (e.g. controller, cabinet, span poles, pedestals, signal heads, emergency pre-emption equipment, loop detectors, wiring, regulatory signs and foundations). The hand hole and conduit system is assumed to be reused where possible as replacement of these elements could disturb existing roadways and sidewalks.
4. **Replacement Intersection:** Recommended improvements generally consist of replacement of all aboveground traffic signal equipment (e.g. controller, cabinet, span poles, pedestals, signal heads, emergency pre-emption equipment, loop detectors, wiring, regulatory signs and foundations). The hand hole and conduit system is assumed to be reused where possible. Damaged conduit and hand holes are assumed to be replaced. Replacement of these items may require areas of roadway and sidewalk construction. Reapplication of pavement markings is included where roadway work may be necessary.

4.3.1 Intersection 4T - South Colony Road (US Route 5) at Walgreens Shopping Center Driveway

This intersection is assessed as a "Maintenance needed" intersection. Recommended improvements include:

- Modify traffic signal controller settings to match record plans and implement traffic signal coordination.
- Repair/replace emergency vehicle pre-emption functions.
- Replace all existing traffic signal heads.
- Eliminate the use of wire nuts for cable splices in hand holes.
- Ensure vehicle loop detectors are functioning properly.

The estimated cost to implement these recommended improvements is $37,000.

4.3.2 Intersection 5T - South Colony Road (US Route 5) at Ward Street

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most of the existing traffic signal equipment, with reuse of the existing cabinet, and reuse of the existing hand hole and conduit system where possible. The existing traffic signals and mast arms controlling traffic at the railroad crossing would be retained.

The estimated cost to implement these recommended improvements is $203,000.

4.3.3 Intersection 6T - North and South Colony Road (US Route 5) at Hall Avenue, Center Street, Quinnipiac Street

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most existing traffic signal equipment, with reuse of the existing cabinet and reuse of the existing hand hole and conduit system where possible. The existing traffic signals and mast arms controlling traffic at the railroad crossing would be retained.

The estimated cost to implement these recommended improvements is $216,000.

4.3.4 Intersection 25T - Center Street (Route 150) at Silver Pond Apartments Driveway

This intersection is assessed as a "Replacement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment.
- Reconstruct sidewalk ramps.
- Mill and resurface sections of the approach roadways where needed for vehicle detector placement.

The estimated cost to implement these recommended improvements is $150,000.

4.3.5 Intersection 26T - Center Street (Route 150) at North and South Elm Streets

This intersection is assessed as a "Replacement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment.
- Reconstruct sidewalk ramps.
- Mill and resurface sections of the approach roadways where needed for vehicle detector placement.

The estimated cost to implement these recommended improvements is $204,000.

4.3.6 Intersection 27T - Center Street (Route 150) at North and South Main Streets

This intersection is assessed as a "Replacement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment. The existing traffic signal configuration consists of two span poles and a single span wire. The recommended configuration would include four span poles to support the span wire in in a box configuration. This configuration ensures that all signal heads can be located in conformance with the requirements of the MUTCD.
- Reconstruct sidewalk ramps.
- Mill and resurface sections of the approach roadways where needed for vehicle detector placement.

The estimated cost to implement these recommended improvements is $238,000.

4.3.7 Intersection 28T - Center Street (Route 150) at North and South Orchard Streets

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most existing traffic signal equipment, with reuse of the existing hand hole and conduit system where possible. The existing traffic signal configuration consists of two span poles and a single span wire. The recommended configuration would include four span poles to support the span wire in in a box configuration. This configuration ensures that all signal heads can be located in conformance with the requirements of the MUTCD.

The estimated cost to implement these recommended improvements is $151,000.

4.3.8 Intersection 29T - Hall Avenue (Route 150) at North Cherry Street

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most existing traffic signal equipment, with reuse of the existing hand hole and conduit system where possible. The existing traffic signal configuration consists of two span poles and a single span wire. The recommended configuration would include four span poles to support the span wire in in a box configuration. This configuration ensures that all signal heads can be located in conformance with the requirements of the MUTCD.

The estimated cost to implement these recommended improvements is $163,000.

4.3.9 Intersection 30T - Hall Avenue (Route 150) at Washington Street

This intersection is assessed as a "Maintenance needed" intersection. Recommended improvements include:

- Modify traffic signal controller settings to match record plans and implement traffic signal coordination.
- Repair/replace emergency vehicle pre-emption functions
- Eliminate the use of wire nuts for cable splices in hand holes.

The estimated cost to implement these recommended improvements is $51,000.

4.3.10 Intersection 32T - Hall Avenue (Route 150) at Masonic Avenue/Fire Department Headquarters

This intersection is assessed as a "Replacement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment.
- Mill and resurface the approach of Masonic Avenue within 100 feet of the intersection. Hall Avenue was recently resurfaced.

The estimated cost to implement these recommended improvements is $164,000.

4.3.11 Intersection 54T - South Turnpike Road at Cook Hill Road

This intersection is assessed as a "Maintenance needed" intersection. Recommended improvements include:

- Modify traffic signal controller settings to match record plans and implement traffic signal coordination.
- Repair/replace emergency vehicle pre-emption functions
- Install new pedestrian signals and crosswalk markings on South Turnpike Road.
- Eliminate the use of wire nuts for cable splices in hand holes.

The estimated cost to implement these recommended improvements is $33,000.

4.3.12 Intersection 55T - South Turnpike Road at Cheshire Road

This intersection is assessed as a "Maintenance needed" intersection. Recommended improvements include:

- Replace the existing traffic signal controller, program settings to match record plans and implement traffic signal coordination.
- Eliminate the use of wire nuts for cable splices in hand holes.

The estimated cost to implement these recommended improvements is $30,000.

4.3.13 Intersection 56T - South Turnpike Road/Quinnipiac Street at Masonic Avenue/Route 15 Southbound Ramps

This intersection is assessed as a "Maintenance needed" intersection. Recommended improvements include:

- Replace the existing traffic signal controller, program settings to match record plans and implement traffic signal coordination.
- Replace the on-street master traffic signal controller.
- Replace all traffic signal heads.
- Eliminate the use of wire nuts for cable splices in hand holes.

- Relocate the two hand holes located in the roadway.
- Repair/replace damaged regulatory signs.

The estimated cost to implement these recommended improvements is $87,000.

4.3.14 Intersection 57T - Quinnipiac Street at River Road/Route 15 Northbound Off-Ramp

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most existing traffic signal equipment, with reuse of the existing hand hole and conduit system where possible. The advance warning sign with flashing beacons located on Quinnipiac Street is included in the equipment replacement.

The estimated cost to implement these recommended improvements is $142,000.

4.3.15 Intersection 58T - Quinnipiac Street at Ward Street

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most existing traffic signal equipment, with reuse of the existing hand hole and conduit system where possible.

The estimated cost to implement these recommended improvements is $211,000.

4.3.16 Intersection 59T - Quinnipiac Street at Washington Street

This intersection is assessed as a "Maintenance needed" intersection. Recommended improvements include:

- Replace the existing traffic signal controller, program settings to match record plans and implement traffic signal coordination.
- Repair/replace emergency vehicle pre-emption functions.
- Eliminate the use of wire nuts for cable splices in hand holes.
- Mill and resurface sections of approach roadways where the existing roadway has deteriorated near existing vehicle loop detector locations.
- Replace vehicle loop detectors in areas of milling and resurfacing.
- Reconstruct sidewalk ramps.
- Replace all loop detector amplifier cards.
- Reapply pavement markings.

The estimated cost to implement these recommended improvements is $77,000.

4.3.17 Intersection 60T - Quinnipiac Street at North and South Cherry Street

This intersection is assessed as a "Maintenance needed" intersection. Recommended improvements include:

- Replace existing traffic signal controller with a new controller, program settings to match record plans and implement traffic signal coordination.
- Replace the existing bowed wooden span pole with a new steel span pole
- Eliminate the use of wire nuts for cable splices in hand holes.
- Reconstruct sidewalk ramps.
- Repair/replace damaged regulatory signs.

The estimated cost to implement these recommended improvements is $69,000.

4.3.18 Intersection 61T - Ward Street at South Cherry Street

This intersection is assessed as a "Replacement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment. The existing traffic signal configuration consists of two span poles and a single span wire. The recommended configuration would include four span poles to support the span wire in in a box configuration. This configuration ensures that all signal heads can be located in conformance with the requirements of the MUTCD.
- Reconstruct sidewalk ramps.
- Mill and resurface sections of the approach roadways where needed for vehicle detector placement.

The estimated cost to implement these recommended improvements is $204,000.

4.3.19 Intersection 62T - Ward Street at South Orchard Street

This intersection is assessed as a "Replacement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment. The existing traffic signal configuration consists of two span poles and a single span wire. The recommended configuration would include four span poles to support the span wire in in a box configuration. This configuration ensures that all signal heads can be located in conformance with the requirements of the MUTCD.
- Reconstruct sidewalk ramps.
- Mill and resurface sections of the approach roadways where needed for vehicle detector placement.

The estimated cost to implement these recommended improvements is $182,000.

4.3.20 Intersection 63T - North Plains Industrial Road at Pent Highway

This intersection is assessed as a "Replacement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment.
- Reconstruct sidewalk ramps.

- Mill and resurface sections of the approach roadways where needed for vehicle detector placement.

The estimated cost to implement these recommended improvements is $151,000.

4.3.21 Intersection 64T - North Main Street Extension at Beaumont Road

This intersection is assessed as a "Replacement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment. The existing traffic signal configuration consists of two span poles and a single span wire. The recommended configuration would include four span poles to support the span wire in in a box configuration. This configuration ensures that all signal heads can be located in conformance with the requirements of the MUTCD.
- Reconstruct sidewalk ramps.
- Mill and resurface sections of the approach roadways where needed for vehicle detector placement.

The estimated cost to implement these recommended improvements is $176,000.

4.3.22 Intersection 65T - North Main Street Extension at Barnes Industrial Road/Wal-Mart Driveway

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most existing traffic signal equipment, with reuse of the existing cabinet and reuse of the existing hand hole and conduit system where possible. The closed-loop mater controller is located at this intersection and is included in the equipment replacement.

The estimated cost to implement these recommended improvements is $176,000.

4.3.23 Intersection 66T - North Main Street Extension at Ives Road

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most existing traffic signal equipment, with reuse of the existing hand hole and conduit system where possible.

The estimated cost to implement these recommended improvements is $148,000.

4.3.24 Intersection 67T - North Main Street Extension at Stop & Shop Shopping Center Driveway

This intersection is assessed as a "Replacement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment.
- Reconstruct sidewalk ramps.
- Mill and resurface sections of the approach roadways where needed for vehicle detector placement.

The estimated cost to implement these recommended improvements is $179,000.

4.3.25 Intersection 68T - Barnes Industrial Road North at Barnes Road

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most existing traffic signal equipment, with reuse of the existing cabinet and reuse of the existing hand hole and conduit system where possible.

The estimated cost to implement these recommended improvements is $103,000.

4.3.26 Intersection 69T - Research Parkway at Bristol-Myers Squibb Main Driveway

This intersection is assessed as a "Maintenance needed" intersection. Recommended improvements include:

- Replace the 3-section signal head that is currently fastened together with rope.
- Eliminate the use of wire nuts for cable splices in hand holes.
- Repair/replace damaged regulatory signs.
- Reapply pavement markings.

The estimated cost to implement these recommended improvements is $18,000.

4.3.27 Intersection 71T - Cook Hill Road at Oakdale Theater North Driveway

This intersection is assessed as a "Compliant" intersection. No improvements are recommended for this intersection.

4.3.28 Intersection 72T - South Turnpike Road at Oakdale Theater East Driveway

This intersection is assessed as a "Compliant" intersection. No physical improvements are recommended for this intersection. An analysis of traffic signal warrants is recommended at this location to assess the need to upgrade the existing flashing beacon to for a fully functional traffic signal.

4.3.29 Intersection 73T - John Street at South Cherry Street

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace all existing traffic signal equipment, with reuse of the existing hand hole and conduit system where possible. An analysis of traffic signal warrants is recommended at this location to assess the need to retain this existing traffic signal.

The estimated cost to implement these recommended improvements is $115,000.

4.3.30 Intersection 74T - Hope Hill Road at Yalesville Fire Department

This intersection is assessed as a "Capital Improvement" intersection. Recommended Improvements include:

- Replace most existing traffic signal equipment, with reuse of the existing cabinet and reuse of the existing hand hole and conduit system where possible.

The estimated cost to implement these recommended improvements is $77,000.

4.3.31 Intersection 75T - North Colony Street (US Route 5) at Holy Trinity Church

This intersection is assessed as a "Capital Improvement" intersection. This location is currently unsignalized. An analysis of traffic signal warrants is recommended to assess the need for a pedestrian traffic signal or a flashing pedestrian hybrid signal.

Physical improvement recommendations include construction of sidewalk ramps and reconstruction of sidewalk areas as needed.

The estimated cost to implement these recommended improvements is $13,000.

4.4 Intersection Level Cost Estimate Summary

The estimated intersection costs are summarized in Table 4 through Table 7. Estimates are based on 2011 ConnDOT Weighted Unit Prices.

Table 4 - Intersection Cost Estimate Summary

Qualitative Assessment		Total
2	Maintenance Needed Intersections	$402,000
3	Capital Improvement Intersections	$1,718,000
4	Replacement Intersections	$1,648,000
	TOTAL	$3,768,000

Table 5 - Intersection Cost Estimate Summary - Maintenance Needed Intersections

Intersection		Estimated Cost				Priority
		Equipment	Software	Geometric	Total	
59T	Quinnipiac Street at Washington Street	$47,000	$0	$30,000	$77,000	1
60T	Quinnipiac Street at North and South Cherry Street	$46,000	$0	$16,000	$69,000	2
4T	South Colony Road (US Route 5) at Walgreens Shopping Center Driveway	$32,000	$5,000	$0	$37,000	3
30T	Hall Avenue (Route 150) at Washington Street	$51,000	$0	$0	$51,000	4
54T	South Turnpike Road at Cook Hill Road	$27,000	$5,000	$1,000	$33,000	5
55T	South Turnpike Road at Cheshire Road	$30,000	$0	$0	$30,000	6
56T	South Turnpike Road/Quinnipiac Street at Masonic Avenue/Route 15 Southbound Ramps	$87,000	$0	$0	$87,000	7
69T	Research Parkway at Bristol-Myers Squibb Main Driveway	$13,000	$5,000	$0	$18,000	8
				TOTAL	$402,000	

Table 6 - Intersection Cost Estimate Summary - Capital Improvement Intersections

Intersection		Estimated Cost				Priority
		Equipment	Software	Geometric	Total	
28T	Center Street (Route 150) at North and South Orchard Streets	$151,000	$0	$0	$151,000	1
5T	South Colony Road (US Route 5) at Ward Street	$184,000	$5,000	$14,000	$203,000	2
6T	North and South Colony Road (US Route 5) at Hall Avenue, Center Street, Quinnipiac Street	$197,000	$0	$19,000	$216,000	3
29T	Hall Avenue (Route 150) at North Cherry Street	$163,000	$0	$0	$163,000	4
57T	Quinnipiac Street at River Road/Route 15 Northbound Off-Ramp	$142,000	$0	$0	$142,000	5
58T	Quinnipiac Street at Ward Street	$207,000	$0	$4,000	$211,000	6
65T	North Main Street Extension at Barnes Industrial Road/Wal-Mart Driveway	$176,000	$0	$0	$176,000	7
66T	North Main Street Extension at Ives Road	$148,000	$0	$0	$148,000	8
68T	Barnes Industrial Road North at Barnes Road	$103,000	$0	$0	$103,000	9
73T	John Street at South Cherry Street	$115,000	$0	$0	$115,000	10
74T	Hope Hill Road at Yalesville Fire Department	$77,000	$0	$0	$77,000	11
75T	North Colony Street (US Route 5) at Holy Trinity Church	$2,000	$0	$11,000	$13,000	12
				TOTAL	$1,718,000	

Table 7 - Intersection Cost Estimate Summary - Replacement Intersections

Intersection		Estimated Cost				Priority
		Equipment	Software	Geometric	Total	
27T	Center Street (Route 150) at North and South Main Streets	$192,000	$0	$46,000	$238,000	1
26T	Center Street (Route 150) at North and South Elm Streets	$161,000	$0	$43,000	$204,000	2
25T	Center Street (Route 150) at Silver Pond Apartments Driveway	$132,000	$0	$18,000	$150,000	3
67T	North Main Street Extension at Stop & Shop Shopping Center Driveway	$163,000	$0	$16,000	$179,000	4
61T	Ward Street at South Cherry Street	$166,000	$0	$38,000	$204,000	5
64T	North Main Street Extension at Beaumont Road	$163,000	$0	$13,000	$176,000	6
63T	North Plains Industrial Road at Pent Highway	$135,000	$0	$16,000	$151,000	7
62T	Ward Street at South Orchard Street	$166,000	$0	$16,000	$182,000	8
32T	Hall Avenue (Route 150) at Masonic Avenue/Fire Dept. Headquarters	$149,000	$0	$15,000	$164,000	9
				TOTAL	$1,648,000	

4.5 Recommended Prioritization

The following list of priorities is based primarily on the condition of the existing equipment as determined by the field inventory and a review of traffic signal maintenance logs.

Priority Area 1: Repair vehicle detection, traffic signal coordination, and traffic signal timing system wide. Simple timing changes and coordination of operations at adjacent intersections could significantly improve traffic operations within the Town. Repair of broken vehicle detectors will also reduce the amount of unused time given to non-coordinated signal phases. These are relatively low cost improvements that could be implemented in a short period of time and could have a significant effect on traffic signal operations town wide.

Priority Area 2: Implement recommended improvements along Center Street which include the following intersections:

- 25T - Center Street (Route 150) at Silver Pond Apartments Driveway
- 26T - Center Street (Route 150) at North and South Elm Streets
- 27T - Center Street (Route 150) at North and South Main Streets
- 28T - Center Street (Route 150) at North and South Orchard Streets

These intersections are among the oldest in the Town system. Most of the equipment is outdated and reaching the end of its useful life. A review of maintenance records shows that these intersections require the most on-going maintenance.

Priority Area 3: Implement recommended improvements at project intersections along Hall Avenue, Quinnipiac Street, and South Colony Road which include the following intersections:

- 5T - South Colony Road (US Route 5) at Ward Street
- 6T - North and South Colony Road (US Route 5) at Hall Avenue, Center Street, Quinnipiac Street
- 29T - Hall Avenue (Route 150) at North Cherry Street
- 57T - Quinnipiac Street at River Road/Route 15 Northbound Off-Ramp
- 58T - Quinnipiac Street at Ward Street
- 59T - Quinnipiac Street at Washington Street
- 60T - Quinnipiac Street at North and South Cherry Street
- 61T - Ward Street at South Cherry Street

Priority Area 4: Implement recommended improvements at all intersections categorized as “Maintenance needed” which include the following intersections:

- 4T - South Colony Road (US Route 5) at Walgreens Shopping Center Driveway
- 30T - Hall Avenue (Route 150) at Washington Street
- 54T - South Turnpike Road at Cook Hill Road
- 55T - South Turnpike Road at Cheshire Road

- 56T - South Turnpike Road/Quinnipiac Street at Masonic Avenue/Route 15 Southbound Ramps
- 59T - Quinnipiac Street at Washington Street
- 60T - Quinnipiac Street at North and South Cherry Street
- 69T - Research Parkway at Bristol-Myers Squibb Main Driveway

Most intersections in this category require improvements that are in the low to middle price range. These intersections could most likely be repaired using existing town maintenance contracts in a short time frame. These improvements were given a lower priority because they are typically not critical to the safe operation of the traffic signal.

Priority Area 5: Implement recommended improvements along North Main Street Extension which includes the following intersections:

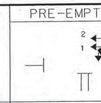
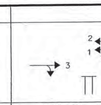
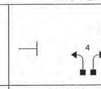
- 64T - North Main Street Extension at Beaumont Road
- 65T - North Main Street Extension at Barnes Industrial Road/Wal-Mart Driveway
- 66T - North Main Street Extension at Ives Road
- 67T - North Main Street Extension at Stop & Shop Shopping Center Driveway

These closely spaced intersections located in a heavy Industrial and commercial area could benefit from improved timing and traffic signal coordination. The traffic signal located at the driveway from the Stop & Shop Plaza appears to be the oldest in the Town system.

Priority Area 6: Implement recommended improvements at the remaining project intersections which include:

- 32T - Hall Avenue (Route 150) at Masonic Avenue/Fire Dept. Headquarters
- 62T - Ward Street at South Orchard Street
- 63T - North Plains Industrial Road at Pent Highway
- 68T - Barnes Industrial Road North at Barnes Road
- 73T - John Street at South Cherry Street
- 74T - Hope Hill Road at Yalesville Fire Department
- 75T - North Colony Street (US Route 5) at Holy Trinity Church

APPENDIX A - INTERSECTION PLANS

	PRE-EMPT 1	MOVEMENT DIAGRAM						
NONE								
NTOR	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
FACE # 1	← G ← G G	G Y R		R R R				
2	G G G	G Y R		R R R				
3	R R R	G Y R		R R R				
4	R R R	R R R		G Y R				
5	R R R	R R R		G Y R				
		←YIELD PT.						
MIN	3 3 0.1	15 3 1.0		5 3 0.5				
MAX	15 5 1.0	70 5 3.0		30 5 2.0				
INTERVALS MIN GRN	3	15		5				
WALK				12				
PED CLR				1				
VEH EXT	2.5			2				
MAX 1	9	32		14				
MAX 2	9	32		14				
YELLOW	3	4		3				
RED	0.1	2		1				
ADD INI								
MAX INT								
TBR								
TTR								
MIN GAP								
MODE	MIN-RECALL	MAX-RECALL	OFF	NON-LOCK	OFF	OFF	OFF	OFF
INI START		THIS PHASE						

FLASHING OPERATION: Y Y R R

MAINTLV 5

ENERGY BY- DEVELOPER
SERVICE POLE-SNET 2788
OFFICE RECORD
REVISION # 1
STC # 148-9505-05 SM # N/A
SIGNAL REVISED: 2/2/98
REPLACED ALL EQUIPMENT AND ADDED PRE-EMPTION UNDER PROJECT 148-158
INCLUDED IN TOWN'S CLOSED LOOP SYSTEM
AS BUILT PLAN DRAWN 4/98
REVISION # 2
STC # 148-0802-01 SM # N/A
SIGNAL REVISED:
TRAFFIC AND ELECTRICAL DESIGN: BL COMP.
MODIFIED WALGREENS SHOPPING CENTER
DRIVEWAY. REPLACED TRAFFIC EQUIPMENT
ON THE NORTHEAST CORNER. ADDED FACE #5
AND DETECTOR D1.

INTERSECTION #148-219

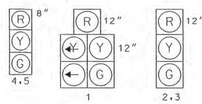
METERED SERVICE

METER NUMBER 54 417 811 - 38183

PRE-EMPTION SETTINGS

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

SIGNAL FACES



ALL INDICATIONS TO HAVE LED LAMPS.

TOWN SIGNAL

DETECTORS

IDENT	SIZE	TURNS	MODE
D1	6'X30'	3	PRESENCE
D4	9'X6'	3	8" DELAY
D4A	9'X6'	3	PRESENCE

PROGRAM

FUNCTION	TIME	DAYS
FLASH	NONE	
MAX. 1	ALL TIMES	DAILY
MAX. 2	FUTURE	
PATTERNS	TO BE DETERMINED BY TOWN	

COORDINATION TYPE- (TOWN CLOSED LOOP)

CYCLE	OFFSET SEC/%	YIELD PT %	PERMIS PERIOD	FORCE OFF Ø	Ø	Ø
60"		①				

SYSTEM LOC

MASTER
148-205
148-204
148-219

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
DETECTOR D1 TO EXTEND ONLY DURING PHASE 1.
① YIELD TO CORRESPOND WITH PHASE 4 END OF GREEN AT WARD STREET
PHASE 1 TO ALWAYS PRECEDE PHASE 2.
PHASE 2 ON TO OMIT PHASE 1.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.

LEGEND

R RED	CONTROLLER
Y YELLOW	EXISTING CONTROLLER
G GREEN	EXISTING HANDHOLE
← RED ARROW	HANDHOLE
← YELLOW ARROW	(R.M.C.) PROPOSED RIGID METAL CONDUIT
← GREEN ARROW	(R.M.C.) EXISTING RIGID METAL CONDUIT
WALK/ FL. D.W.	STRAIN INSULATOR
D.W. DON'T WALK	MAGNETOMETER PROBES
FL. FLASHING	CABLE CLOSURE
PROPOSED WOOD SPAN POLE	DET. LEADS IN SAW CUT
EXISTING WOOD SPAN POLE	AUX. TERMINATION CABINET
PROPOSED STEEL SPAN POLE	AUX. EQUIPMENT CABINET
EXISTING STEEL SPAN POLE	RADIO ANTENNA
PROPOSED UTILITY POLE	SYSTEM DETECTOR
EXISTING UTILITY POLE	AUDIBLE WALK SIGNAL
PEDESTAL MOUNTING	MICROWAVE DETECTOR
PEDESTRIAN PUSH BUTTON & SIGN	OPTICAL DETECTOR
TRAFFIC SIGNAL FACE	LUMINAIRE
PEDESTRIAN SIGNAL FACE	
LOOP DETECTOR	
MAGNETIC DETECTOR	
OVERHEAD SIGN	

VHB

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
US ROUTE 5 (SOUTH COLONY STREET) AT WALGREEN'S SHOPPING CENTER

REV. # 1	TRAFFIC		ELECTRICAL	
		DATE		DATE
FIELD SURVEY				
ENGINEER	VANASSE HANGEN BRUSTLIN, INC			
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE				

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD			2008	5	C1.4	

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS EXISTING, EXCEPT AS NOTED.
PLAN BASED ON AS BUILT FROM PROJECT # 148-158.

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

NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455 72 HOURS PRIOR TO ANY WORK.

CONTRACTOR TO PAINT PAVEMENT MARKINGS IN WALGREEN'S DRIVEWAY AT LOCATION SHOWN. ERADICATE CONFLICTING MARKINGS.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT AND RETURN TO TOWN.

(M) INSTALL PEDESTRIAN PUSH BUTTON, 8' ALUMINUM PEDESTAL, FOUNDATION AND FACE #5 AT CORNER OF SIDEWALK. PEDESTRIAN PUSH-BUTTON SHALL BE PIEZO TYPE.

(N) INSTALL NEW LOOP DETECTORS D1, D4, D4A, HANDHOLES AND CONDUIT AS SHOWN. DETECTORS TO BE INSTALL IN CENTER OF LANE AND 8' APART, UNLESS OTHERWISE NOTED. FURNISH AND INSTALL LOOP AMPLIFIER FOR D1. MODIFY CONTROLLER TO PROVIDE ACTUATION AND EXTENSION AS SHOWN ON THE PLAN.

(P) EXTEND EXISTING CONDUITS TO NEW HANDHOLE LOCATIONS. REMOVE OLD CABLES. REMOVE EXISTING HANDHOLES.

(Q) REROUTE EXISTING INTERCONNECT CABLE THROUGH NEW HANDHOLE. NO SPLICES WILL BE PERMITTED. IF CABLE SLACK IS INSUFFICIENT TO REROUTE WITHOUT SPLICING, REPLACE ENTIRE RUN BETWEEN THIS CONTROLLER AND WARD STREET.

(W) INSTALL 30"X30" HANDHOLE. ALL OTHERS TYPE II.

ADD PED. TIMING TO PHASE 4.

REV. # 2 | INTERSECTION #148-219

SIGN LEGEND

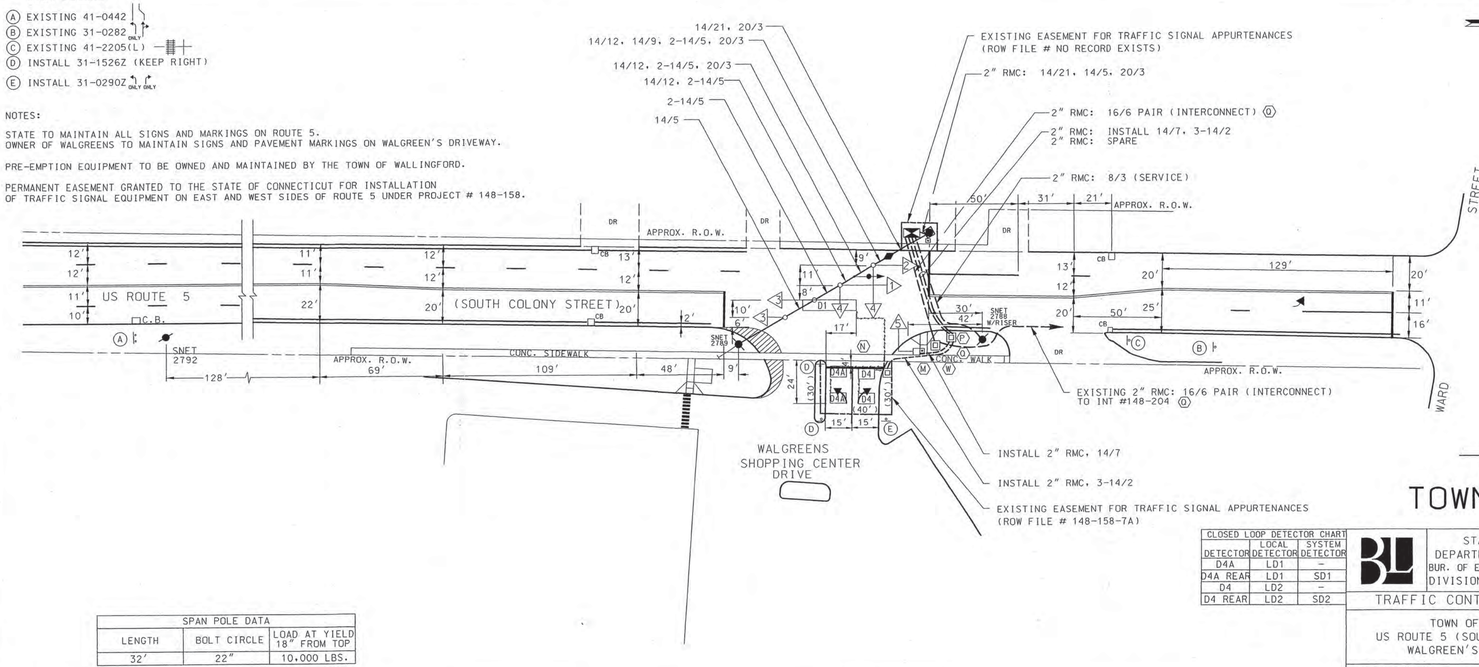
(A) EXISTING 41-0442
(B) EXISTING 31-0282 ONLY
(C) EXISTING 41-2205(L)
(D) INSTALL 31-1526Z (KEEP RIGHT)
(E) INSTALL 31-0290Z ONLY ONLY

NOTES:

STATE TO MAINTAIN ALL SIGNS AND MARKINGS ON ROUTE 5.
OWNER OF WALGREENS TO MAINTAIN SIGNS AND PAVEMENT MARKINGS ON WALGREEN'S DRIVEWAY.

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

PERMANENT EASEMENT GRANTED TO THE STATE OF CONNECTICUT FOR INSTALLATION OF TRAFFIC SIGNAL EQUIPMENT ON EAST AND WEST SIDES OF ROUTE 5 UNDER PROJECT # 148-158.



SPAN POLE DATA		
LENGTH	BOLT CIRCLE	LOAD AT YIELD 18" FROM TOP
32'	22"	10,000 LBS.

CLOSED LOOP DETECTOR CHART

DETECTOR	LOCAL DETECTOR	SYSTEM DETECTOR
D4A	LD1	-
D4A REAR	LD1	SD1
D4	LD2	-
D4 REAR	LD2	SD2

DEVELOPER
READCO, LLC
OLD LYME, CT

TOWN SIGNAL

BL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
US ROUTE 5 (SOUTH COLONY STREET) AT WALGREEN'S SHOPPING CENTER

SCALE 1"=40'

BL • 05C1367\ 148219-001.DGN
DATE 4/20/2009

REVISIONS

NO.	DATE	INIT.	DESCRIPTION

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

DRAWING NO. C1.4

REV. # 2 | INTERSECTION #148-219

TOWN SIGNAL

4T

NONE

NTOR

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
FACE # 1		G G G	← G Y ① R ①	R R R	R R R		← G Y R	R R R
2		G G G	G Y R	R R R	R R R		G Y R	R R R
3		G Y R	R R R	R R R	R R R		R R R	R R R
4		G Y R	R R R	R R R	R R R		R R R	R R R
5		R R R	R R R	G Y R	R R R		R R R	G Y R
6		R R R	R R R	G Y R	R R R		R R R	G Y R
P		← DW →	DW	← DW →	W⑥ ← DW →		DW	OFF
S-1		← OFF →	OFF	← OFF →	← ON →		ON	OFF
S-2		← OFF →	OFF	← OFF →	← ON →		ON	OFF
		←YIELD			W DW			
MIN		9 3 0.5	5 3 0.5	15 3 0.5	7.0 7.0		16 3 1	20 0.1 0.1
MAX		35 5 2.0	15 5 2.0	45 5 3	7.5 8.0		23 5 3	30 5 5

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN		9	5	15			22	20
WALK					7			
PED CLR					7			
VEH EXT		3	2	3				
MAX 1		24	9	34				
MAX 2		31	9	27				
YELLOW		4	4	4	0.1		4	3
RED		2	1	1	0		2	1.0
ADD INI								
MAX INT								
TBR								
TTR								
MIN GAP								
MODE	OFF	MIN RECALL	NON-LOCK	LOCK	NON-LOCK	OFF	ON/OMITTED	ON/OMITTED
INI START		THIS PHASE						

FLASHING OPERATION

MAIN

24hr ☒

Norm ☐

ENERGY BY— TOWN
SERVICE POLE— SNET 932

OFFICE RECORD
REVISION #
REVISION #

STC # 148-9506-01 SM # N/A
SIGNAL REVISED
REPLACED CONTROLLER AND INSTALLED
OPTICAL DETECTORS UNDER PROJECT 148-158.

INTERSECTION # 148-204

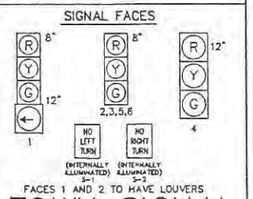
METERED SERVICE

METER NUMBER

PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2	PRE-EMPT 3
PRIORITY	YES	YES	YES
DET. LOCK	NO	NO	NO
DELAY	0	0	0
ALT. MIN. GRN	NO	5	NO
ALT. YELLOW	NO	NO	NO
ALT. RED	NO	NO	NO
ALT. PED. CLR.	0	0	0
TRACK CLEAR GREEN	22		
TRACK CLEAR YELLOW	4		
TRACK CLEAR RED	2		
HOLD GREEN	20	15	15
HOLD YELLOW	0.1	4	4
HOLD RED	0.1	2	2
HOLD PHASE	8	4	2
EXIT PHASE	2	2	3
EXIT CALL	NONE	NONE	NONE

SIGNAL FACES



FACES 1 AND 2 TO HAVE LOUVERS

TOWN SIGNAL

LEGEND

- R RED
- Y YELLOW
- G GREEN
- ◀P PED ARROW
- ◀Y YELLOW ARROW
- ◀G GREEN ARROW
- WK WALK/ FL. D.W.
- 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
- TRAFFIC SIGNAL FACE
- PEDESTRIAN SIGNAL FACE
- LOOP DETECTOR
- MAGNETIC DETECTOR
- OVERHEAD SIGN
- CONTROLLER
- EXISTING CONTROLLER
- EXISTING HANDHOLE
- HANDHOLE
- (R.M.C.) PROPOSED RIGID METAL CONDUIT
- (R.M.C.) EXISTING RIGID METAL CONDUIT
- STRAIN INSULATOR
- MAGNETOMETER PROBES
- CABLE CLOSURE
- DET. LEADS IN SAW CUT
- AUX. TERMINATION CABINET
- AUX. EQUIPMENT CABINET
- RADIO ANTENNA
- SD SYSTEM DETECTOR
- AUDIBLE WALK SIGNAL
- MICROWAVE DETECTOR
- OPTICAL DETECTOR
- LUMINAIRE

VHB

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
US ROUTE 5 (SOUTH COLONY STREET) AT WARD STREET

REV. #	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY				
ENGINEER	VANASSE HANGEN BRUSTLIN, INC			
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE				

DETECTORS

IDENT	SIZE	TURNS	MODE
D2E	7'x6'	3	8" DELAY
D2A	10'x6'	3	PRESENCE
D2F	10'x6'	3	PRESENCE
D2B	10'x6'	3	10" DELAY
D2D	6'x6'	3	8" DELAY
D2C	9'x6'	3	PRESENCE
D4A	14'x6'	3	PRESENCE
D4B D4C	6'x6'	4	PRESENCE

PROGRAM

FUNCTION	TIME	DAYS
FLASH	(12)	
MAX. 1	ALL OTHER TIMES	DAILY
MAX. 2	1130-1315 1515-1720	M-W, SAT
MAX. 2	1130-1315 1515-2000	THUR, FRI
PATTERNS	TO BE DETERMINED BY TOWN	
FREE	2300-0500	DAILY

COORDINATION TYPE- CLOSED LOOP (TOWN SYSTEM)

CYCLE	OFFSET SEC/%	YIELD PT %	PERMIS PERIOD	FORCE OFF Ø	FORCE OFF Ø

SYSTEM LOC MASTER

148-202
148-201
148-226
148-203
148-219
148-204
148-205
148-206

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

① TO REMAIN ← G IF RAILROAD PRE-EMPTION IS NEXT
2 D2B TO EXTEND PHASE 3 ONLY
3 D2A AND D2F TO OPERATE DURING PHASE 2.
4 SIGNAL SHALL IMMEDIATELY ADVANCE OUT OF ANY GREEN INCLUDING MIN. GREEN, INTO CLEARANCE INTERVALS GOING TO PRE-EMPTION & THEN GO DIRECTLY TO PHASE 7
DETECTORS D2A, D2C, D2D, AND D2E TO BE NONACTUATING DURING COORDINATED OPERATION.
PHASE 2 ON TO OMIT PHASE 4 AND 5.
PHASE 4 AND 5 CHECK TO CALL BUT NOT EXTEND PHASE 3.

SIGN LEGEND

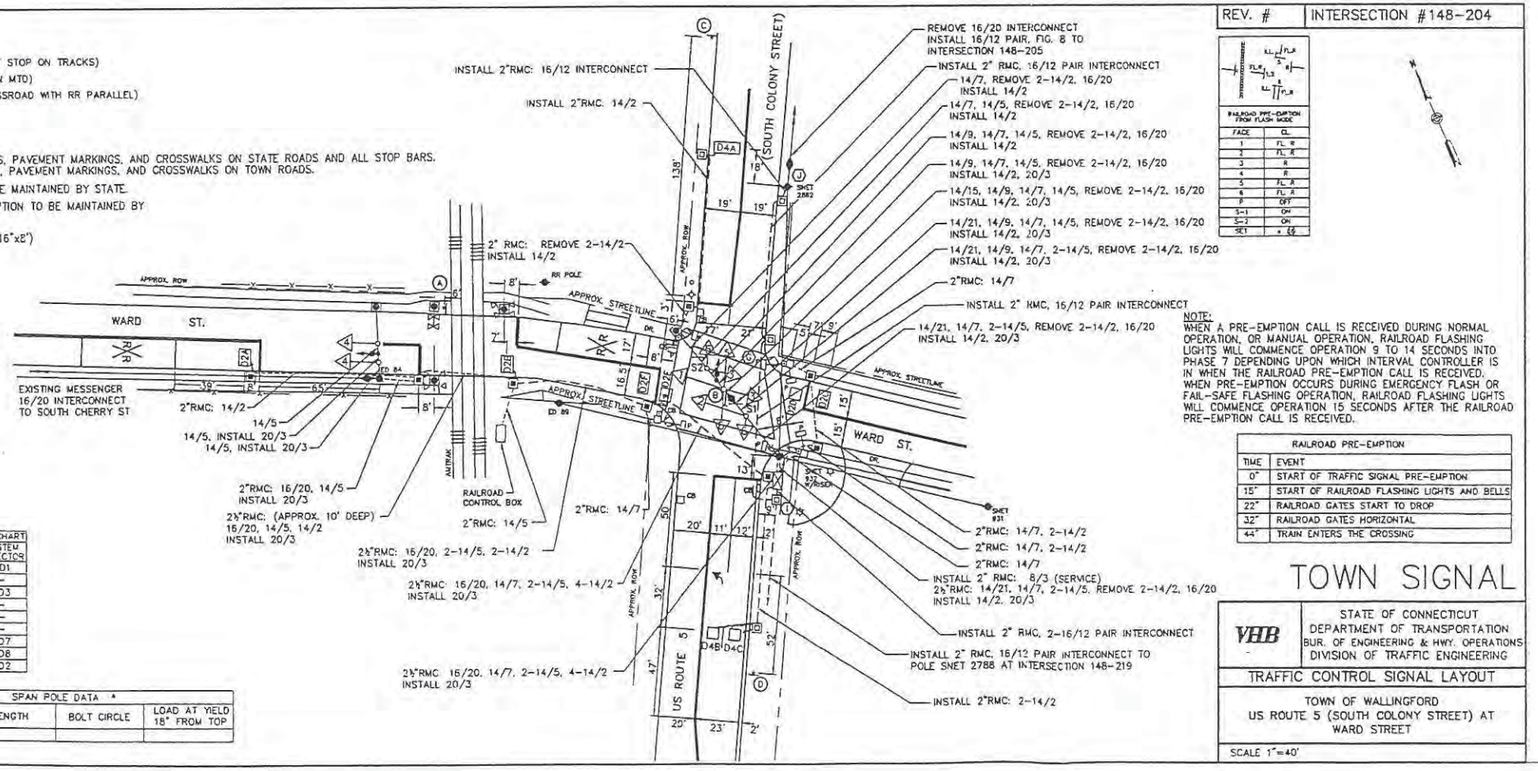
- (A) EXISTING 31-0410 (DO NOT STOP ON TRACKS)
- (B) INSTALL 31-0135 (SPAN MTD)
- (C) INSTALL 41-2205(R) (CROSSROAD WITH RR PARALLEL)
- (D) INSTALL 31-0349

NOTE:
STATE TO MAINTAIN ALL SIGNS, PAVEMENT MARKINGS, AND CROSSWALKS ON STATE ROADS AND ALL STOP BARS.
TOWN TO MAINTAIN ALL SIGNS, PAVEMENT MARKINGS, AND CROSSWALKS ON TOWN ROADS.

RAILROAD PRE-EMPTION TO BE MAINTAINED BY STATE.

EMERGENCY VEHICLE PRE-EMPTION TO BE MAINTAINED BY TOWN OF WALLINGFORD.

BAR TYPE CROSSWALKS (16"x16"x2")



NOTE:
WHEN A PRE-EMPTION CALL IS RECEIVED DURING NORMAL OPERATION OR MANUAL OPERATION, RAILROAD FLASHING LIGHTS WILL COMMENCE OPERATION 9 TO 14 SECONDS INTO PHASE 7 DEPENDING UPON WHICH INTERVAL CONTROLLER IS IN WHEN THE RAILROAD PRE-EMPTION CALL IS RECEIVED. WHEN PRE-EMPTION OCCURS DURING EMERGENCY FLASH OR FAIL-SAFE FLASHING OPERATION, RAILROAD FLASHING LIGHTS WILL COMMENCE OPERATION 15 SECONDS AFTER THE RAILROAD PRE-EMPTION CALL IS RECEIVED.

RAILROAD PRE-EMPTION	
TIME	EVENT
0"	START OF TRAFFIC SIGNAL PRE-EMPTION
15"	START OF RAILROAD FLASHING LIGHTS AND BELLS
22"	RAILROAD GATES START TO DROP
32"	RAILROAD GATES HORIZONTAL
44"	TRAIN ENTERS THE CROSSING

CLOSED LOOP DETECTOR CHART		
DETECTOR	LOCAL DETECTOR	SYSTEM DETECTOR
D2A	LD1	SD1
D2B	LD2	–
D2C	LD3	SD3
D2D	LD4	–
D2E	LD5	–
D2F	LD6	–
D4A	LD7	SD7
D4B	LD8	SD8
D4C	LD9	SD2

SPAN POLE DATA *			
POLE TYPE	LENGTH	BOLT CIRCLE	LOAD AT YIELD 18" FROM TOP

* UNKNOWN

REV. #	INTERSECTION #148-204

TOWN SIGNAL

VHB

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
US ROUTE 5 (SOUTH COLONY STREET) AT WARD STREET

SCALE 1"=40'

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD	CM-55 (133)	148-158	1995	5	12	24

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS EXISTING EXCEPT AS NOTED.
STAKE ALL R.O.W. PRIOR TO EXCAVATION.
INSTALL EIGHT PHASE FULLY ACTUATED CONTROLLER IN A TYPE "C" CABINET ON EXISTING FOUNDATION. MODIFY FOUNDATION TO INSTALL 3-2" RMC SWEEPS.
INSTALL LOOP DETECTORS D4A, D4B, D4C, HANDHOLE, 2"RMC AND 14/2 CABLING TO CONTROLLER.
INSTALL LOUVERS ON FACES 1 AND 2.
REPLACE SIGNAL HEADS 4 WITH 3-SECTION 12" HEADS.
INSTALL OPTICAL DETECTOR.

① INSTALL HANDHOLE AND 2" RMC BETWEEN HANDHOLE AND 2" RMC SWEEP INSTALLED IN FOUNDATION. INSTALL 2-16/12 INTERCONNECT IN 2" RMC.
INSTALL HANDHOLE AT BASE OF POLE SNET 2862 AND 2" RISER ON POLE. INSTALL 2" RMC BETWEEN RISER AND HANDHOLE AND INSTALL 16/12 INTERCONNECT.
INSTALL 2" RISER AND STANDOFF ON POLE SNET 932. REMOVE 1" RISER.

② INSTALL CABLE CLOSURE (TYPE A).

NEW LOOPS ARE TO BE INSTALLED IN CENTER OF LANE AND SHOULD BE FIELD LOCATED PRIOR TO CUTTING ROADWAY.
INSTALL HANDHOLES APPROXIMATELY 1' BEHIND CURB OR EDGE OF ROAD UNLESS OTHERWISE SPECIFIED.
REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT INCLUDING FOUNDATIONS, CONDUIT, RISERS AND CABLE, MESSENGER AND INTERCONNECT.
UNLESS OTHERWISE NOTED ALL EXISTING TRAFFIC SIGNAL EQUIPMENT BEING REMOVED IS TO BE RETURNED TO THE STATE OF CONNECTICUT, BROOK STREET, ROCKY HILL.
CABINET DOOR TO OPEN FIELD SIDE.
INSTALL SIDEWALK 3'X4' IN FRONT OF CONTROLLER FOUNDATION, DOOR SIDE.
THE CONTRACTOR SHALL TELEPHONE "CALL BEFORE YOU DIG" PRIOR TO ANY EXCAVATION.
CONTRACTOR TO INSTALL PAVEMENT MARKINGS AS SHOWN.
TWO WEEKS PRIOR TO INSTALLATION CONTACT WALLINGFORD ELECTRIC REPRESENTATIVE ARTHUR DUTRA AT (203) 265-1532 SNET REPRESENTATIVE ROBERT WENTWORTH AT (203) 725-4519, AND TCI CABLEVISION REPRESENTATIVE JAMES HUBBARD AT (203) 483-3622.
CONTRACTOR TO NOTIFY AMTRACK REPRESENTATIVE PETER FINCH AT (203) 773-6014 TWO WEEKS PRIOR TO DISCONNECTING THE RAILROAD PRE-EMPTION.
ALL SIGNS REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN-KIND UNLESS OTHERWISE NOTED.
INSTALL NEW EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT.
OPTICAL 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 OPTICAL DETECTOR AND THE AUXILARY EQUIPMENT CABINET.
CABINET TO BE EQUIPPED WITH AN OUTSIDE ELECTRIC METER CLOSURE TO BE MOUNTED ON THE SIDE OF THE CABINET AND APPROVED BY WALLINGFORD ELECTRIC (WE).

RAILROAD OPERATIONAL NOTES

RAILROAD PRE-EMPTION (NORMAL OPERATION)

TRAIN ENTERS TRACK CIRCUIT – R.R. PROVIDES IMMEDIATE PRE-EMPTION CIRCUIT TO THE TRAFFIC SIGNAL CONTROLLER CABINET.
THE TRAFFIC SIGNAL CONTROLLER IMMEDIATELY ADVANCES THE SEQUENCE TO THE TRACK CLEARANCE PHASE AND THEN HOLD PHASE (PHASES 7 AND 8), VIA THE PROPER YELLOW AND RED CLEARANCE INTERVALS.
THE TURN RESTRICTION SIGNS WILL BE ILLUMINATED WITH THE TRAFFIC SIGNAL PRE-EMPTION PHASE 7.
THE R.R. FLASHING LIGHTS WILL COMMENCE OPERATION 9 TO 14 SECONDS INTO THE TRAFFIC CONTROLLER TRACK CLEARANCE PHASE (PHASE 7) DEPENDING UPON WHAT INTERVAL THE TRAFFIC SIGNAL CONTROLLER IS IN WHEN THE PRE-EMPTION CALL IS RECEIVED. STANDARD R.R. TIMING FOR LIGHTS, GATES, AND BELLS WILL COMMENCE A MINIMUM OF 29 SECONDS PRIOR TO THE TRAIN ENTERING THE CROSSING.
THE TRACK CLEARANCE INTERVAL WILL TERMINATE AND THE TRAFFIC CONTROLLER WILL HOLD IN THE PRE-EMPTION PHASE (PHASE 8).
WHEN THE TRAIN HAS LEFT THE CROSSING AND THE TRACK CIRCUIT, THE RAILROAD DEVICES AND ILLUMINATED SIGNS WILL DEACTIVATE, AND THE TRAFFIC CONTROLLER SIGNAL SHALL RETURN TO NORMAL OPERATION, PHASE 2.

RAILROAD PRE-EMPTION (FAIL-SAFE AND EMERGENCY FLASHING OPERATION)

TRAIN ENTERS TRACK CIRCUIT-R.R. PROVIDES IMMEDIATE PRE-EMPTION CIRCUIT TO THE TRAFFIC SIGNAL CABINET.
THE FLASHING OPERATION IMMEDIATELY REVERTS TO A SOLID RED ON FACES 3 AND 4. FACES 1, 2, 5, AND 6 WILL REMAIN FLASHING AND THE SIGNAL WILL HOLD IN THIS INTERVAL.
THE TURN RESTRICTION SIGNS SHALL BE ILLUMINATED IMMEDIATELY UPON RECEIPT OF THE RAILROAD PRE-EMPTION CALL.
THE R.R. FLASHING LIGHTS, GATES AND BELLS WILL COMMENCE OPERATION 15 SECONDS AFTER TRAIN HAS ENTERED THE TRACK CIRCUIT. STANDARD R.R. TIMING FOR LIGHTS, GATES AND BELLS WILL COMMENCE A MINIMUM OF 29 SECONDS PRIOR TO THE TRAIN ENTERING THE CROSSING.
WHEN THE TRAIN HAS LEFT THE CROSSING AND THE TRACK CIRCUIT, THE RAILROAD DEVICES AND ILLUMINATED SIGNS WILL DEACTIVATE, AND THE TRAFFIC CONTROL SIGNAL SHALL RETURN TO FLASHING OPERATION.

TECHNICAL NOTES (CONTINUED)

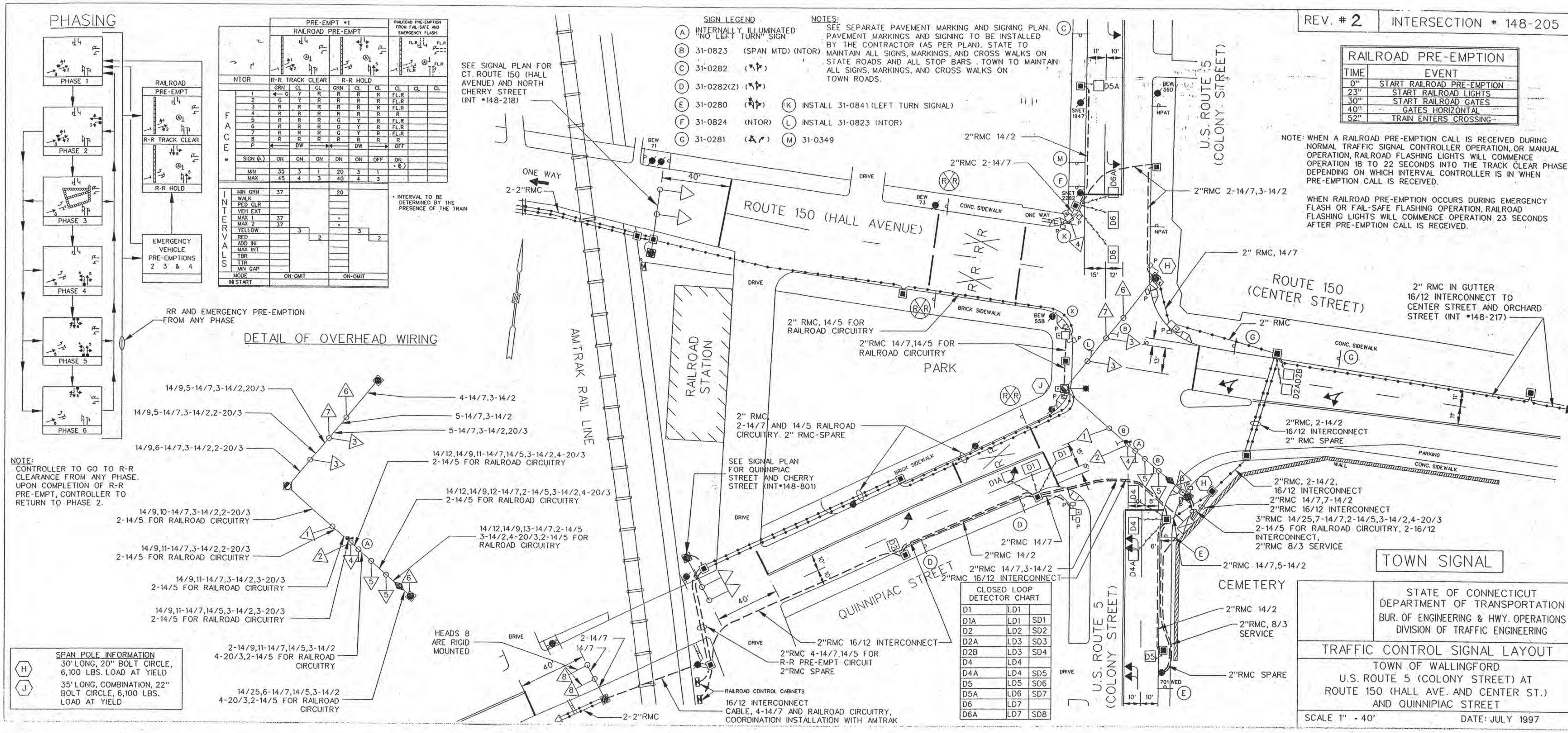
5 PHASE 3 TO ALWAYS FOLLOW PHASE 2, EXCEPT WHEN PRE-EMPTION IS NEXT.
6 END OF PHASE 4 GREEN TO PROVIDE YIELD TO PHASE 2 GREEN AT ADJACENT WALGREENS TRAFFIC SIGNAL (148-219).
7 * INTERVAL TO BE DETERMINED BY PRESENCE OF TRAIN.
8 IF RAILROAD PRE-EMPTION OCCURS DURING CLEARANCE INTERVAL OF ANY PHASE, CONTROLLER TO DROP NEXT PHASE CALL, FINISH TIMING CLEARANCE INTERVALS AND THEN GO DIRECTLY TO PHASE 7.
9 FIRE PRE-EMPTION TO BE INOPERATIVE DURING FLASH OR R.R. PRE-EMPTION.
10 CONTROLLER SHALL BE A "MENU DRIVEN TYPE" WITH INTERNAL RAILROAD PRE-EMPTION.
11 POLICE BOX MANUAL CONTROL 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.
(12) SIGNAL SHALL NOT BE PLACED ON PROGRAMMED FLASH.
13 PEDESTRIAN CALL TO IMMEDIATELY ADVANCE OUT OF WALK AND PEDESTRIAN CLEARANCE INTERVAL AND TIME 3 SECOND ALL RED INTERVAL, THEN GO IMEDIATELY TO PHASE 7 DURING RAILROAD PRE-EMPTION.
14 TRAFFIC SIGNAL TO BE IMMEDIATELY FORCED OUT OF CLOSED LOOP COORDINATION OPERATION UPON RECEIPT OF RAILROAD PRE-EMPTION CALL.
15 ANY CHANGE IN THE CLEARANCE INTERVALS DENOTED ON THIS PLAN MAY REQUIRE A MODIFICATION OF THE RAILROAD TRACK CIRCUIT.
(16) RAILROAD FLASHING LIGHTS TO START 15 SECONDS INTO THIS INTERVAL.
17 PHASE 2 TO FOLLOW RAILROAD PRE-EMPTION.

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

5T



RAILROAD PRE-EMPTION

TIME	EVENT
0"	START RAILROAD PRE-EMPTION
23"	START RAILROAD LIGHTS
30"	START RAILROAD GATES
40"	GATES HORIZONTAL
52"	TRAIN ENTERS CROSSING

CLOSED LOOP DETECTOR CHART

D1	LD1	
D1A	LD1	SD1
D2	LD2	SD2
D2A	LD3	SD3
D2B	LD3	SD4
D4	LD4	
D4A	LD4	SD5
D5	LD5	SD6
D5A	LD6	SD7
D6	LD7	
D6A	LD7	SD8

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

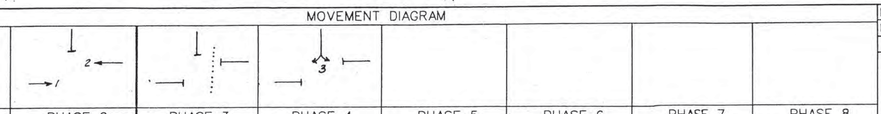
TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
U.S. ROUTE 5 (COLONY STREET) AT
ROUTE 150 (HALL AVE. AND CENTER ST.)
AND QUINNIPIAC STREET

SCALE 1" = 40'   DATE: JULY 1997

6T

MOVEMENT DIAGRAM



	NTOR	PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			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
FACE #	1				G	Y	R	R	R	R	R	R	R												
	2				G	Y	R	R	R	R	R	R	R												
	3				R	R	R	R	R	R	G	Y	R												
	P				DI	DW	DW	W/FDW	DW	DW															
	Min				20	3	1	7/7			10	3	1												
	Max				90	5	3	14/10			30	5	3												
INTERVALS	MIN GRN										5														
	WALK				15																				
	PED CLR				14			8																	
	VEH EXT				1			8			2														
	MAX 1				25						14														
	MAX 2				25						14														
	YELLOW					3			0.1			3													
	RED						1			0			1												
	ADD INIT																								
	MAX INIT																								
	?BR																								
	TTR																								
	MIN GAP																								
MODE					Min Recall			Non Lock			Non Lock														
INI START					This Phase																				

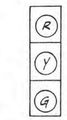
DETECTORS				PROGRAM			COORDINATION TYPE-												PERMIS PERIOD		SYSTEM LOC
IDENT	SIZE (WXL)	TURNS	MODE	FUNCTION	TIME	DAYS	CYCLE	PHASE SPLITS Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	SEC/% SEC	%	OFFSET SEC	%	Ø	SEC	MASTER
04	6×6	3	Presence	Flash	2200-0600	Daily																148-
04A	6×6	3	Presence	Max 1	All Other Times	Daily																148-
				Max 2	Future																	148-239

STANDARD OVERLAP SKIP FEATURES APPLY	TECHNICAL NOTES
Timings Shown are for Free Operations	
Actual Timings to be Determined by Central Computer	

ENERGY BY- | METER # - | INTERSECTION # 148-239

MAINT 24hr ☒ Norm ☐ | SERVICE POLE-

SIGNAL FACES



OFFICE RECORD

STC #	SM #
Interconnected to Intersection 148-	
Added to closed loop System	

LEGEND

R	RED		PROPOSED CONTROLLER
Y	YELLOW		EXISTING CONTROLLER
G	GREEN		PROPOSED HANDHOLE
◀R	RED ARROW		EXISTING HANDHOLE
◀Y	YELLOW ARROW		PROPOSED (R.M.C.) RIGID METAL CONDUIT
◀G	GREEN ARROW		EXISTING (R.M.C.) RIGID METAL CONDUIT
WB	WALK/ FL. D.W.		CABLE CLOSURE
D.W.	DON'T WALK		DET. LEADS IN SAW CUT
FL.	FLASHING		AUXILIARY TERMINATION CABINET
	PROPOSED WOOD SPAN POLE		AUXILIARY EQUIPMENT CABINET
	EXISTING WOOD SPAN POLE		AUDIBLE PEDESTRIAN SIGNAL
	PROPOSED STEEL SPAN POLE		
	EXISTING STEEL SPAN POLE		
	PROPOSED UTILITY POLE		
	EXISTING UTILITY POLE		
	PEDESTAL MOUNTING		
	PEDESTRIAN PUSH BUTTON & SIGN		
	TRAFFIC SIGNAL FACE		
	PEDESTRIAN SIGNAL FACE		
	LOOP DETECTOR		
	MAGNETIC DETECTOR		
SD	SYSTEM DETECTOR		
	OPTICAL DETECTOR		

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

Town of Wallingford
Conn Rt 150 at Drive to Silver Pond Apartments

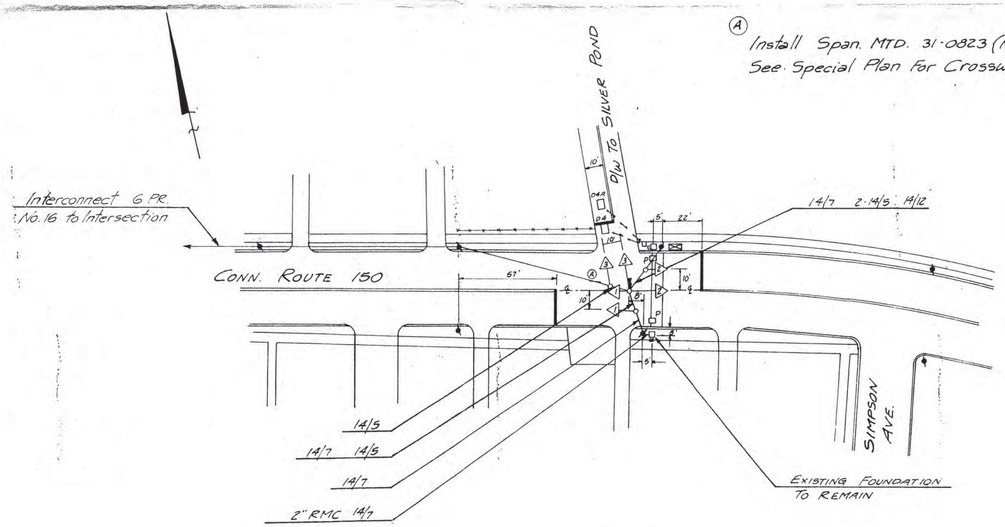
REV #	TRAFFIC DATE	ELECTRICAL DATE
ENGINEER		
DRAFTER	Town of	
CHECKED BY	WALLINGFORD	
SUBMITTED BY		
APPROVED BY	4/97	
DATE		

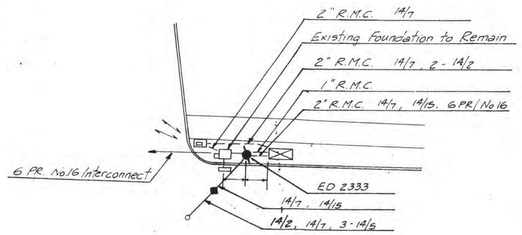
CONSTRUCTION NOTES

1. All traffic signal equipment is new except as noted
2. Remove all abandoned traffic signal equipment including but not limited to conduit, cable, and span wire.
3. Unless otherwise directed, all traffic signal equipment being removed is to be returned to the Town of Wallingford.
4. Existing pedestal foundation to be reused.
5. Install four phase controller cabinet on new type II foundation.
6. Controller to include model 3821 Eight Phase Timer, and Model 12ELRA Conflict Monitor manufactured by Peek Traffic, Tallahasse, Florida. Cabinet to include all necessary equipment for closed loop operation
7. Install loop detectors 2' off edge of drive and centerline of drive and 8' apart. Rear loop will serve as system and local detector and will be wired separately to its own amplifier.
8. Interconnect cable will be installed continuosly to the controller at Rt. 150 and Elm Street. Prior to bidding, the contractor shall contact Officer Rick Doll, Wallingford Traffic, and the utility Co. for information and costs for overhead attachments
9. A 60 Amp. Weatherproof Cutler Hammer Disconnect shall be installed 11' from ground level on Existing Wood Span Pole.
10. Audible Pedestrian Signal shall be Installed to most current Conn. DOT Spec.
11. All work shall be done in accordance with Conn. DOT Form 814A unless otherwise noted.
12. The Contractor shall notify "Call Before You Dig" prior to any construction

REV. #	INTERSECTION #

Ⓐ Install Span. MTD. 31-0823 (N.T.O.R.)
See Special Plan for Crosswalks





TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
CONN. RT. 150 AT DRIVE TO SILVER POND APARTMENTS

SCALE : ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

REV. # | INTERSECTION #

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

R.D.

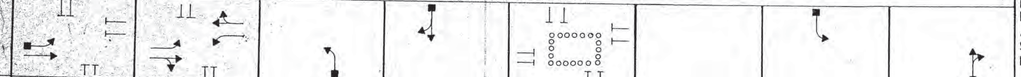
TRAFFIC CONTROL SIGNAL

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO	YEAR	ROUTE NO.	SHEET NO.
1	CONN.						

V-223

(25T)

MOVEMENT DIAGRAM



MONITOR	PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			PHASE 7			PHASE 8		
	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	G/←	G/←Y	G	G	Y	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R
2	G	G	G	G	Y	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R
3	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R
4	R	R	R	R	R	R	R/←	R/←Y	R	R	R	R	R	R	R				R	R	R	G	Y	R
5	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R				R	R	R	G	Y	R
6	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R				R/←	R/←Y	R	R	R	R
7	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R				R	R	R	R	R	R
P	←						DW					→	W Ø	DW	DW				←		DW			→
					YIELD																			
MIN.	4	3	1	20	3	1	4	3	1	10	3	1	7/12	0	0.1				4	3	1	10	3	1
MAX.	15	5	5	70	5	5	15	5	5	40	5	5	10/16	3	3				15	5	5	40	5	5

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	3	40	3	8			3	8
WALK					7			
PED CLR					12			
VEH. EXT	2		2	4			2	4
MAX 1	8	40	8	25	20		8	25
MAX 2	10	50	10	30	20		10	30
YELLOW	3	3	3	3	0		3	3
RED	1	2	1	2	.1		1	2
ADD INT								
MAX INT								
TBR								
TTR								
MIN GAP								
MODE	NON LOCK	MIN. RECALL	NON LOCK	LOCK	LOCK	OFF	NON LOCK	LOCK
INI START		THIS PHASE						

FLASHING OPERATION: Y Y R R Y Y R R OFF

MAINT: 24hr ☐ Norm ☐

DETECTORS				PROGRAM			COORDINATION						SYSTEM LOC
IDENT	SIZE	TURNS	MODE	FUNCTION	TIME	DAYS	CYCLE SAFETY CRT	OFFSET %/SEC	YIELD PT %	PERMIS PERIOD	FORCE OFF % Ø	Ø	Ø	MASTER
D1	6x10	3	PRES.											WPD
D3	6x10	3	PRES.	DIAL 1	ALL OTHER TIMES		80 SEC							
D4	6x8	3	PRES.	DIAL 2	NOT USED									
D7	6x10	3	PRES.	DIAL 3	15:15 TO 17:30	MON-SAT	100 SEC.							
D8	6x8	3	PRES.											
SD1	6x17	3	PRES.											

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
Ø2 ON OMITS Ø1

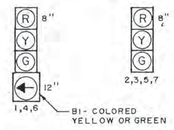
THIS INTERSECTION WILL BE INCLUDED IN A CLOSED LOOP SYSTEM. THE MASTER WILL BE INSTALLED AT INTERSECTION 148-234 (FUTURE)
THIS LOCATION WILL OPERATE ON THE BACKUP TIME OF DAY PROGRAM

ENERGY BY - TOWN	NORMAL 1.13	kW 730	h_r/mo = 825 kWh/mo
SERVICE POLE # ED 2119	FLASH	kW	h_r/mo = kWh/mo

OFFICE RECORD	
REVISION # 2	
JOB # 148-8508-01 SM #	
ELIM. PROGRAMMED FLASH OPERATION	
REVISED TIMING	
REVISION # 3	
REVISED SEQUENCE & TIMING	
ADDED NORTH AND SOUTH BOUND EXCLUSIVE TURN PHASES	
ADDED DETECTORS AND ACTUATED PEDESTRIAN PHASE	

INTERSECTION # 148-215

SIGNAL FACES



LEGEND

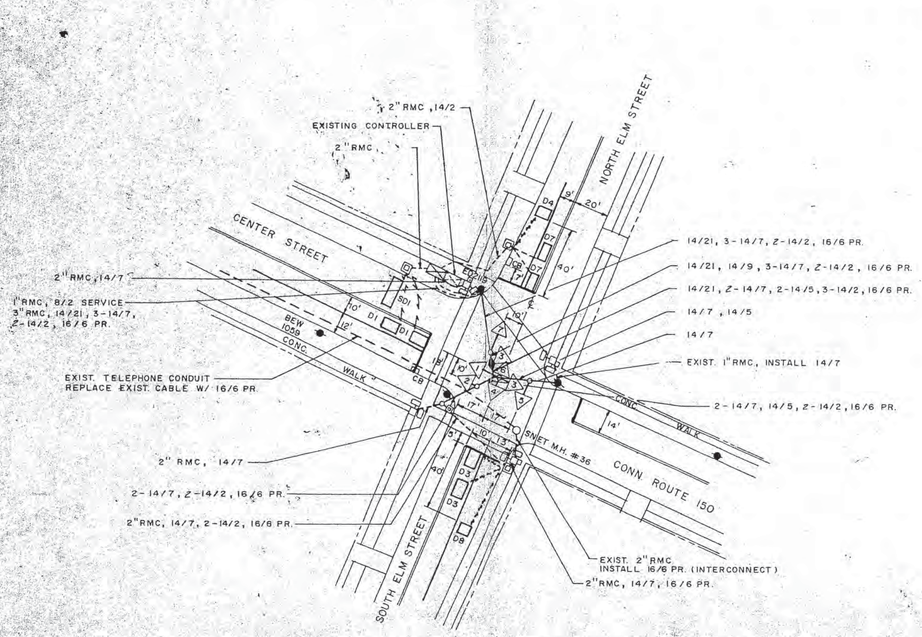
R RED
Y YELLOW
G GREEN
RED ARROW
YELLOW ARROW
GREEN ARROW
WD WALK/FL DW
DW DON'T WALK
FL FLASHING
PROPOSED WOOD SPAN POLE
EXISTING WOOD SPAN POLE
PROPOSED STEEL SPAN POLE
EXISTING STEEL SPAN POLE
PROPOSED UTILITY POLE
EXISTING UTILITY POLE
PEDESTAL MOUNTING
PEDESTRIAN PUSH BUTTON & SIGN
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
MAGNETIC DETECTOR
SD SYSTEM DETECTOR
CONTROLLER
MANHOLE
RIGID METAL CONDUIT (R.M.C.)
STRAIN INSULATOR
MAGNETOMETER PROBES
CABLE CLOSURE
GET LEADS IN SAW CUT
AUXILIARY TERMINATION CABINET
RADIO ANTENNA

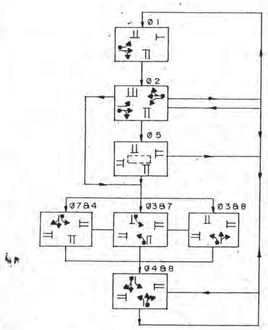
TOWN SIGNAL

STATE OF CONNECTICUT'
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DIVISION OF TRAFFIC
TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
RTE. 150 (CENTER ST.) AT
NORTH ELM ST. & SOUTH ELM ST.

REV. # 3	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY				
ENGINEER	MARLIN CONTROLS INC	4/90		
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE				





INTERSECTION # 148-215

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DIVISION OF TRAFFIC
TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
RTE. 150 (CENTER ST.) AT
NORTH ELM ST. & SOUTH ELM ST.

SCALE: 1" = 40'

FORM TRA-035 REV. 1-85

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.							

CONSTRUCTION NOTES

1. ALL EQUIPMENT IS NEW EXCEPT WHERE NOTED. PEDESTAL FOUNDATIONS ARE TO REMAIN.
2. ALL EXISTING SIGNAL EQUIPMENT, SURFACE CONDUIT, CABLE AND CONTROLLER INCLUDING PEDESTALS ARE TO BE REMOVED AND RETURNED TO THE TOWN OR DISPOSED OF AS DIRECTED.
3. UNLESS OTHERWISE DIRECTED BY THE TOWN, ALL CONSTRUCTION SHALL CONFORM TO THE STATE OF CONNECTICUT, STANDARD SPECIFICATIONS - FORM 814 AND ALL SUPPLEMENTALS THERE TO.
4. THE CONTROLLER DOOR SHALL OPEN TOWARD THE SIDEWALK.
5. LOOP DETECTORS SHALL BE INSTALLED 6' APART AND BE CENTERED IN THE LANE.
6. THE ELECTRIC COMPANY WILL INSTALL A NEW WOOD POLE AND GUYS ON THE SOUTHWEST CORNER FOR THE NEW SPAN WIRE ATTACHMENT.
   ELECTRIC COMPANY CONTACT - CARLOS DURAN - 265-1201
7. THE EXISTING INTERCONNECT CABLE SHALL BE REMOVED AND REPLACED BETWEEN THIS LOCATION AND RTE. 150 AT NORTH MAIN STREET WITH 6 PAIR, NO. 16 A.W.G. SHIELDED CABLE. THE CABLE SHALL BE FROM CONTROLLER TO CONTROLLER WITHOUT SPLICES. THE REMOVAL SHALL INCLUDE A SECTION OF CABLE WHICH RUNS FROM THE TELEPHONE MANHOLE AT #350 CENTER STREET INTO THE BUILDING (OLD POLICE DEPT.) TO A JUNCTION BOX.
   TELEPHONE CONTACT - JOE ST. ONGE - 287-0595
8. PAVEMENT MARKINGS AND SIGNS - SEE SEPARATE PLAN. THE MARKINGS ARE EXISTING. THE CONTRACTOR SHALL INSTALL PAVEMENT MARKINGS TO A POINT 150' AWAY FROM THE INTERSECTION ON ALL APPROACHES.

CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIVISION OF TRAFFIC

TRAFFIC CONTROL SIGNAL

V-245 (26T)

FORM TRA-035 REV. 1-88

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.						L-10	

MOVEMENT DIAGRAM

NTOR	PHASE 1 GRN	PHASE 1 CL	PHASE 1 CL	PHASE 2 GRN	PHASE 2 CL	PHASE 2 CL	PHASE 3 GRN	PHASE 3 CL	PHASE 3 CL	PHASE 4 GRN	PHASE 4 CL	PHASE 4 CL	PHASE 5 GRN	PHASE 5 CL	PHASE 5 CL	PHASE 6 GRN	PHASE 6 CL	PHASE 6 CL	PHASE 7 GRN	PHASE 7 CL	PHASE 7 CL	PHASE 8 GRN	PHASE 8 CL	PHASE 8 CL	FLASHING OPERATION
FACE # 1	R←	R ←Y	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R				Y
2	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R				Y
3	R	R	R	G	Y	R	R	R	R	R	R	R	R←	R ←Y	R	R	R	R	R	R	R				Y
4	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R				Y
5	R	R	R	R	R	R	R	R	R	R←	R ←Y	R	R	R	R	R	R	R	G	Y	R				R
6	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R				R
7	R	R	R	R	R	R	R	R	R	R←	R ←Y	R	R	R	R	R	R	R	G	Y	R				R
8	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R				R
P	←			DW		→	WØ	←						DW							→				OFF
					← YEILD POINT												← YEILD POINT								
MIN	3	3	0	15	3	1	22	0	0	3	3	0	3	3	0	15	3	1	7	3	1				
MAX.	15	5	2	60	5	3	30	1	1	15	5	2	15	5	2	60	5	3	60	5	3				

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	3	25		3	3	25	8	
WALK		24	7			24		
PED CLR		1	15			1		
VEH EXT	2			2	2		4	
MAX 1	10	45		8	10	45	30	
MAX 2								
YELLOW	3	3	0	3	3	3	3	
RED	1	1	0	1	1	1	1	
ADD INI								
MAX INT								
TBR								
TTR								
MIN GAP								
MODE	NON LOCK	MIN. RECALL	LOCK	NON LOCK	NON LOCK	MIN. RECALL	LOCK	OFF
INI START		THIS PHASE				THIS PHASE		

MAINT: 24hr ☐ Norm ☐

DETECTORS

IDENT	SIZE	TURNS	MODE
D1	6 x 6	3	PRES.
D4	6 x 6	3	PRES.
D4A	6 x 6	3	PRES.
D7	~~15 x 6~~	~~3~~	~~PRES.~~
D7A	20 x 6	3	PRES.
SD1	15 x 6		PULSE
SD2	15 x 6		PULSE
D5	6 x 6	3	PRES.

PROGRAM

FUNCTION	TIME	DAYS
DIAL 1	ALL OTHER TIMES	
DIAL 3	15:15 - 17:30	MON - SAT
FLASH	— FUTURE	

COORDINATION

CYCLE SAFETY CRT	OFFSET %/SEC	YIELD PT %	PERMIS PERIOD	FORCE OFF % Ø	Ø	Ø
75	60/73					
100	99/99					

SYSTEM LOC
MASTER 148-234
148-215
148-217
148-205
148-218
148-240

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

TIMINGS SHOWN INDICATE FREE OPERATION
ACTUAL TIMINGS TO BE DETERMINED BY CLOSED LOOP MASTER

PHASE 2 AND 6 ON OMIT PHASES 1 AND 5.

ENERGY BY - TOWN
SERVICE POLE - UNDERGROUND

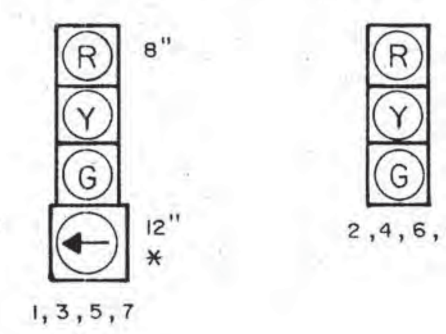
OFFICE RECORD
Previous Record See Rev #2 (STC #148-0010-01) Rev. #3
JOB # 148-9107-01 SM # N/A
REVISION # 3 Signal Revised
REVISED SEQUENCE AND TIMING, ADDED DETECTORS
REVISION #4
ADD CONSTUCTION NOTES

INTERSECTION # 148-234

NORMAL	kW	hr/mo	kWh/mo
FLASH	kW	hr/mo	kWh/mo

SERVICE METERED

SIGNAL FACES



* BI-COLORED ARROW

TOWN SIGNAL

Rev. #3

LEGEND

R RED
Y YELLOW
G GREEN
←R— RED ARROW
←Y— YELLOW ARROW
←— GREEN ARROW
WØ WALK/FL DW
DW 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 AND SIGN
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
MAGNETIC DETECTOR
SD SYSTEM DETECTOR
CONTROLLER
HANDHOLE
(RMC) RIGID METAL CONDUIT
STRAIN INSULATOR
MAGNETOMETER PROBES
CABLE CLOSURE
DET. LEADS IN SAW CUT
AUXILIARY TERMINATION CABINET
RADIO ANTENNA

STATE OF CONNECTICUT
DEPT. OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIV. OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL

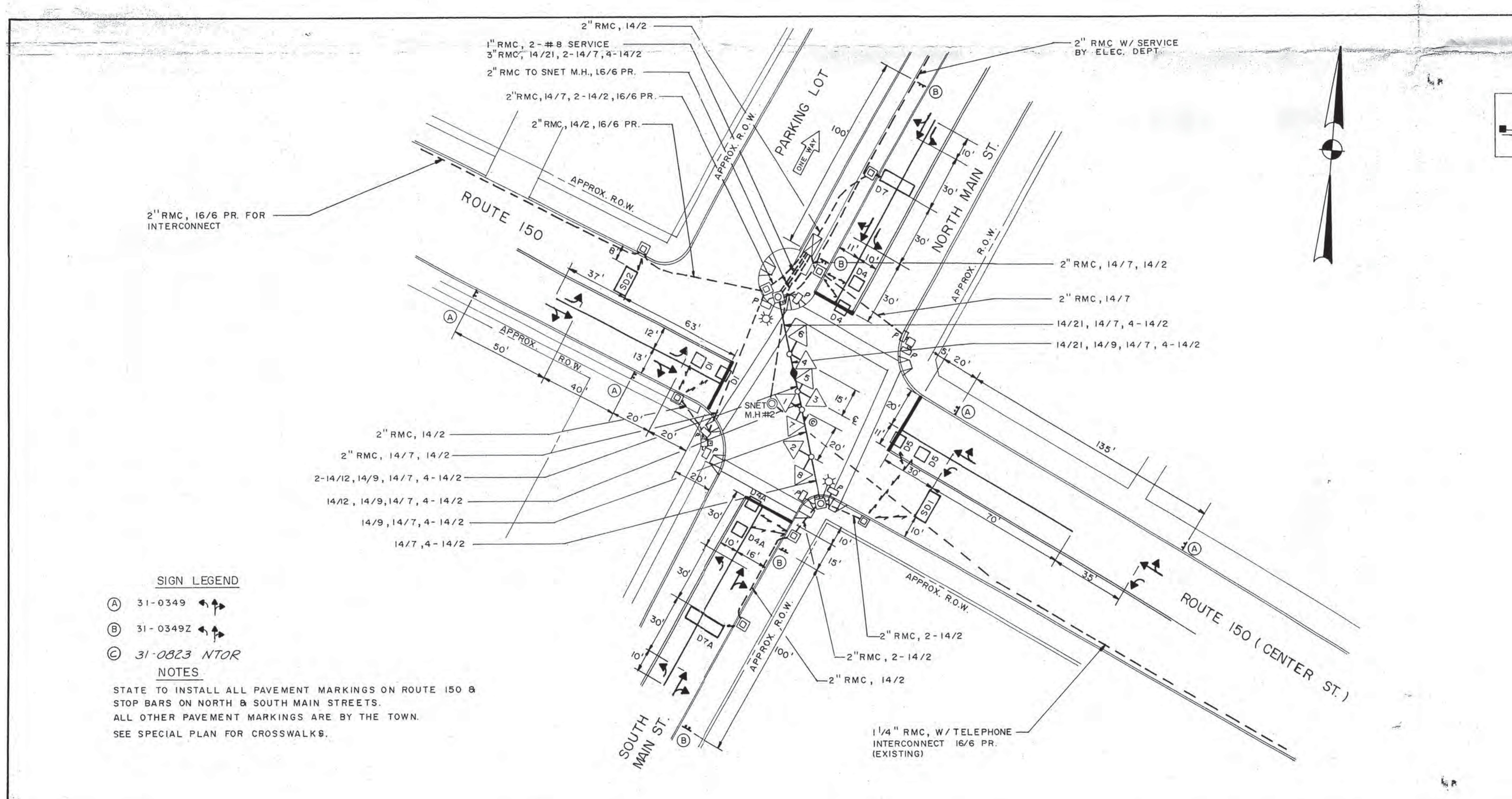
TOWN OF WALLINGFORD
ROUTE 150 (CENTER ST.) AT
NORTH MAIN ST. & SOUTH MAIN ST.

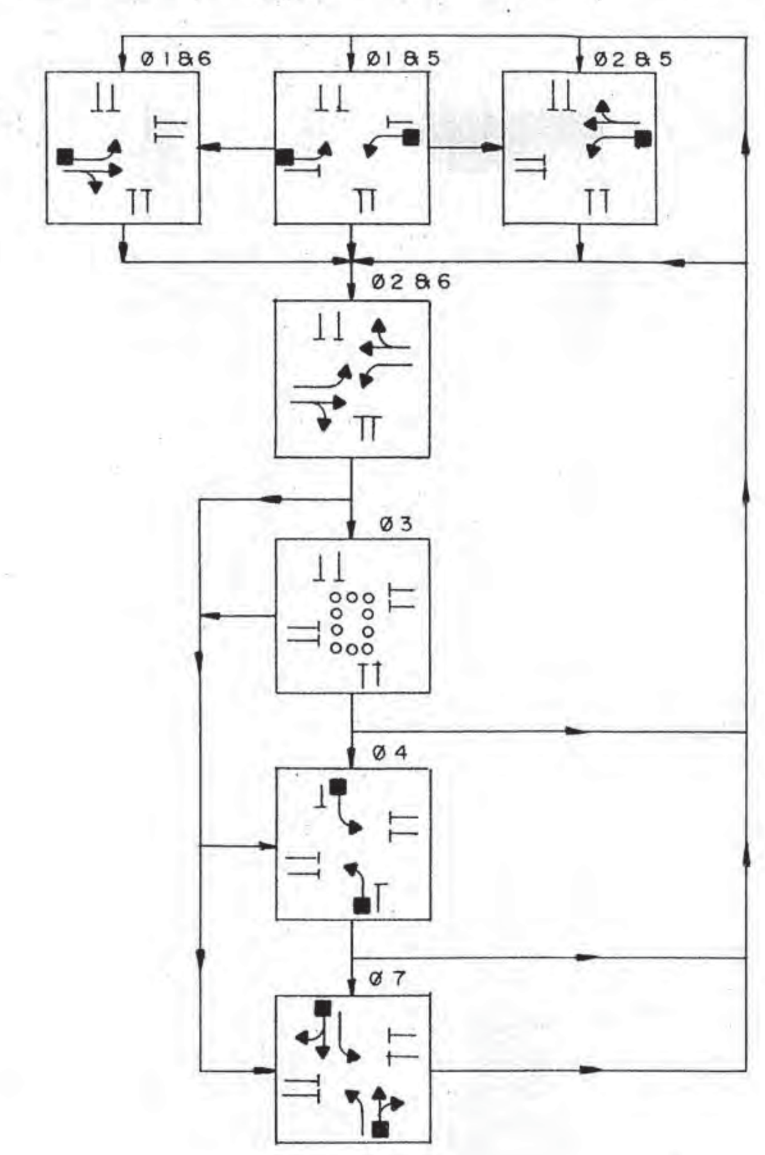
REV.# 3	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY				
ENGINEER	MARLIN	CONTROLS		4/91
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE				

CONSTRUCTION NOTES

1. ALL EQUIPMENT IS NEW.
2. ALL EXISTING SIGNAL EQUIPMENT, SURFACE CONDUIT, CABLE AND CONTROLLER INCLUDING PEDESTALS AND SPAN POLES ARE TO BE REMOVED AND RETURNED TO THE TOWN OR DISPOSED OF AS DIRECTED.
3. UNLESS OTHERWISE DIRECTED BY THE TOWN, ALL CONSTRUCTION SHALL CONFORM TO THE STATE OF CONNECTICUT, STANDARD SPECIFICATIONS - FORM 814 AND ALL SUPPLEMENTALS THERETO.
4. THE CONTROLLER DOOR SHALL OPEN TO THE FIELD SIDE, OR A.O.B.E.
5. LOOP DETECTORS SHALL BE INSTALLED 8' APART AND 3' FROM THE EDGE OF THE ROAD UNLESS OTHERWISE NOTED.
6. PAVEMENT MARKING AND SIGNS - THE CONTRACTOR SHALL INSTALL PAVEMENT MARKINGS TO A POINT 150' AWAY FROM THE INTERSECTION ON ALL APPROACHES OR A.O.B.E.
7. THE COMBINATION STEEL SPAN POLES SHALL BE SIZE 0 GAUGE 13.0" X 32'-0" OR COMPARABLE FOR A MINIMUM LOAD AT YIELD OF 6700 LBS. A STANDARD 6 FOOT LONG BRACKET WILL BE FURNISHED FOR THE LUMINAIRE. THE PORTION OF THE BRACKET UPON WHICH THE LUMINAIRE IS TO BE MOUNTED, SHALL BE SIZED AS REQUIRED BY THE TOWN'S ELECTRIC DIVISION TO ACCEPT THEIR LUMINAIRE.
8. DETECTORS D1, D4, D5, + D4A SHALL BE INSTALLED 2' IN FRONT OF STOP BARS.

REV. # 3 INTERSECTION # 148-234





SIGN LEGEND

Ⓐ 31-0349
Ⓑ 31-0349Z
Ⓒ 31-0823 NTOR

NOTES

STATE TO INSTALL ALL PAVEMENT MARKINGS ON ROUTE 150 & STOP BARS ON NORTH & SOUTH MAIN STREETS.
ALL OTHER PAVEMENT MARKINGS ARE BY THE TOWN.
SEE SPECIAL PLAN FOR CROSSWALKS.

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIV. OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL LAYOUT
TOWN OF WALLINGFORD
ROUTE 150 (CENTER ST.) AT
NORTH MAIN ST. & SOUTH MAIN ST.
SCALE: 1" = 40'

REV # 3 INTERSECTION # 148-234
REV #4 MAY 29, 1991

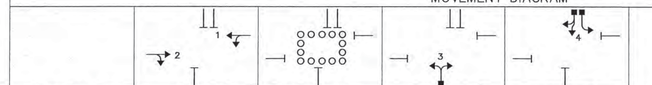
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

V-239

27T

MOVEMENT DIAGRAM



	PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			PHASE 7			PHASE 8		
NTOR	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				G	Y	R	R	R	R	R	R	R	R	R	R									
FACE # 2				G	Y	R	R	R	R	R	R	R	R	R	R									
FACE # 3				R	R	R	R	R	R	G	Y	R	R	R	R									
FACE # 4				R	R	R	R	R	R	R	R	R	G	Y	R									
FACE # P				← DW →			Wø	←			DW →		←		→									
MIN				15	3	2	7	0.1	0	8	3	2	8	3	2									
MAX				40	5	3	9/12	0.1	1	30	5	3	30	5	3									
INTERVALS: MIN GRN				15						8			8											
WALK							7	AUDIBLE PEDESTRIAN SIGNAL																
PED CLR							12																	
VEH EXT				3						3			3											
MAX 1				40						15			15											
MAX 2				40						15			15											
YELLOW					3			0.1			3			3										
RED						2			0			2			2									
ADD INI																								
MAX INT																								
TBR																								
TTR																								
MIN GAP																								
MODE	— OFF			MAX—RECALL			NON—LOCK			NON—LOCK			LOCK			OFF			OFF			OFF		
INI START				THIS PHASE																				

FLASHING OPERATION: Y, Y, R, R, OFF

MAINT: 24hr ☐ Norm [X]

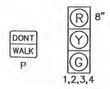
ENERGY BY— TOWN
SERVICE POLE— SNET#715
PREVIOUS OFFICE RECORD SEE REV #4

REVISION # 5
JOB # 148-000119 SM # N/A
SIGNAL REVISED
MODIFIED NO. ORCHARD ST. TO ONE-WAY SB, ADDED SIGNAL HEADS AND DETECTORS FOR NO. ORCHARD ST. APPROACH, AND ESTABLISHED NTOR FOR NO. ORCHARD ST.

INTERSECTION # 148-217

	kW	hr/mo	kWh/mo
NORMAL	0.866	730	632
FLASH			

SIGNAL FACES



TOWN SIGNAL

LEGEND

R RED
Y YELLOW
G GREEN
RED ARROW
YELLOW ARROW
GREEN ARROW
W/ WALK/ FL. D.W.
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
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
MAGNETIC DETECTOR
SD SYSTEM DETECTOR
PROPOSED CONTROLLER
EXISTING CONTROLLER
PROPOSED HANDHOLE
EXISTING HANDHOLE
PROPOSED (R.M.C.) RIGID METAL CONDUIT
EXISTING (R.M.C.) RIGID METAL CONDUIT
CABLE CLOSURE
DET. LEADS IN SAW CUT
AUXILIARY TERMINATION CABINET
RADIO ANTENNA

TOWN OF WALLINGFORD
DEPARTMENT OF ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
(ROUTE 150) CENTER STREET
AT NO. ORCHARD STREET/ SO. ORCHARD STREET

	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY				
ENGINEER				
DRAFTER				
CHECKED BY	TOWN OF WALLINGFORD DEPT. OF ENGINEERING			
SUBMITTED BY				
APPROVED BY				
DATE	MAY 2004		MAY 2004	

DETECTORS

IDENT	SIZE	TURNS	MODE
D1	6 X 6	3	PRESENCE
D2	6 X 6	3	PRESENCE
D5	6 X 6	3	PRESENCE
D5A	6 X 6	3	PRESENCE
S1	6 X 6	3	SYSTEM

PROGRAM

FUNCTION	TIME	DAYS
FLASH	EMERGENCY ONLY	
CYCLE 1	0700-0900	M-F
CYCLE 2	1500-1800	M-F
CYCLE 3	ALL OTHER TIMES	ALL OTHERS

COORDINATION TYPE— CLOSED LOOP

CYCLE SAFETY CRT	OFFSET # /SEC	YIELD PT %	PERMIS PERIOD	FORCE OFF % ø	ø	ø

SYSTEM LOC MASTER: 148-234, 148-205, 148-803, 148-802, 148-801, 148-240, 148-218

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
ACTUAL TIMINGS TO BE DETERMINED BY MASTER
(1) AUDIBLE PEDESTRIAN BUZZER 'ON' DURING PHASE 3

NOTES:

PAVEMENT MARKINGS AND SIGNING ON CENTER STREET (S.R. 150) TO BE MAINTAINED BY STATE OF CONNECTICUT. PAVEMENT MARKINGS ON NO. & SO. ORCHARD STREETS TO BE MAINTAINED BY TOWN OF WALLINGFORD.

SPAN MOUNTED SIGNS TO BE MAINTAINED BY TOWN OF WALLINGFORD.

(S) BAR TYPE X-WALK (16"-16"x8' MIN) STATE MAINTAINED

(T) BAR TYPE X-WALK (16"-16"x8' MIN) TOWN MAINTAINED

SIGN LEGEND:

(A) REMOVE SPAN MTD 31-0823 (NTOR)
INSTALL SPAN MTD 31-1604 (NO RT TURN)

(B) EXISTING SPAN MTD 31-0823 (NTOR)

(C) INSTALL 31-1109 (DO NOT ENTER)
INSTALL 31-1177(88) (ONE WAY)

(D) INSTALL 31-0165 (ONLY)

(E) INSTALL CUSTOM

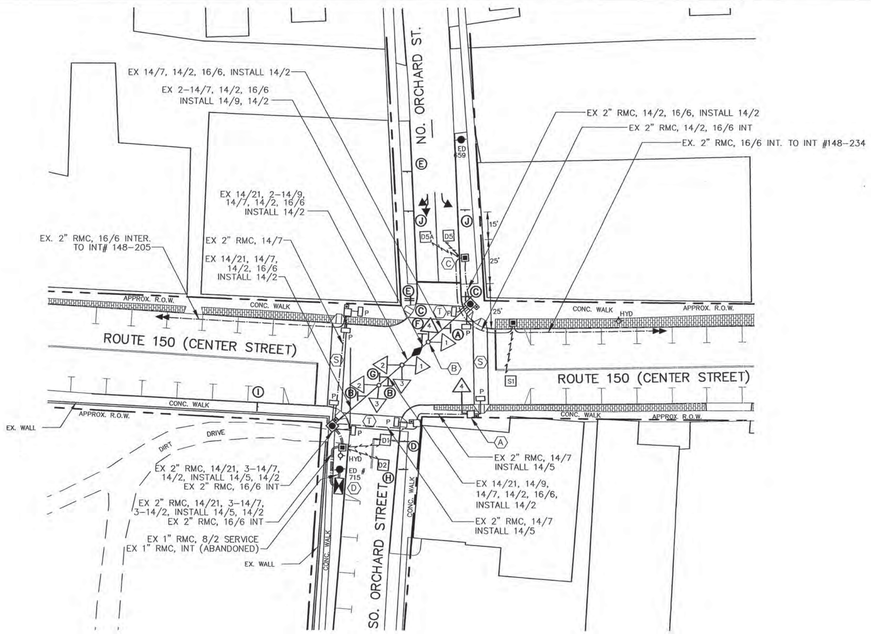
(F) INSTALL SPAN MTD 31-0823 (NTOR)

(G) INSTALL SPAN MTD 31-1603 (NO LT TURN)

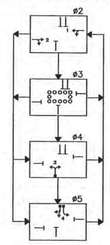
(H) EXISTING 31-0600 (NO PARKING THIS SIDE)

(I) EXISTING 31-0643 (2 HR PARKING)

(J) REMOVE 31-1112 (WRONG WAY)



PHASING SEQUENCE:



TOWN SIGNAL

TOWN OF WALLINGFORD
DEPARTMENT OF ENGINEERING

TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
(ROUTE 150) CENTER STREET
AT NO. ORCHARD STREET/ SO. ORCHARD STREET

SCALE 1" = 40'

REV. #5 | INTERSECTION # 148-217

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD		–	2004	150		

CONSTRUCTION NOTES (REV #5)

ALL TRAFFIC SIGNAL EQUIPMENT IS EXISTING, EXCEPT AS NOTED.

EXISTING CONDITIONS ARE BASED ON COMPILATION OF BEST AVAILABLE MAPPING AND SHOULD BE VERIFIED IN THE FIELD.

INSTALL LOOP DETECTORS 3' OFF EDGE OF ROAD AND 8' APART UNLESS OTHERWISE SPECIFIED.

SEGMENTED LOOPS TO BE INSTALLED IN SERIES.

DETECTORS "D5" AND "D5A" ARE NEW.

SIGNAL HEAD #4 IS NEW, ALL OTHERS ARE EXISTING.

NOTIFY THE UTILITY CONTACTS LISTED BELOW AT LEAST 72 HOURS PRIOR TO CONDUCTING WORK.

NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455 72 HOURS PRIOR.

ALL PAVEMENT MARKINGS ARE EXISTING EXCEPT ON NORTH ORCHARD STREET WHICH ARE TO BE NEW. CONTRACTOR SHALL REMOVE PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED.

(A) REPLACE 8' PEDESTAL WITH NEW 10' PEDESTAL ON EXISTING FOUNDATION, AND INSTALL NEW 8" 3-SECTION SIGNAL FACE. RELOCATE EXISTING PEDESTRIAN SIGNAL FACES, PUSHBUTTON AND SIGN TO NEW PEDESTAL.

(B) CONVERT EXISTING 1-WAY TRAFFIC SIGNAL HEAD TO 2-WAY. INSTALL NEW 14/9 CONDUCTOR BACK TO CABLE CLOSURE. USE EXISTING 14/21 CONDUCTOR BACK TO CABINET.

(C) EXTEND NEW LOOP LEADS INTO EXISTING HAND HOLE AND SPLICE TO NEW 14/2 CONDUCTOR.

(D) MODIFY EXISTING SOLID STATE 8-PHASE CONTROLLER (TRANSYT MODEL 3000) FOR NEW PHASE (PHASE 5) AND INSTALL NEW LOOP VEHICLE DETECTOR.

UTILITY CONTACTS

Ms. Suzanne P. Paddock
Surpervisor – O.N.E
Southern New England Telephone
1441 North Colony Road
Meriden, CT. 06450
(203) 238-5620

Mr. Rob Baltramaitis, P.E.
Assistant Town Engineer
29 Town Farm Road
Wallingford, CT. 06492
(203) 294-2035

Mr. Art Dutra
Wallingford Electric
100 John Street
Wallingford, CT. 06492
(203) 294-2271

Mr. Leo Luciano
Yankee Gas Services
47 Eagle Street
Waterbury, CT. 06708
(203) 596-3104

Mr. Dean P. Muratori
Construction Manager
AT&T Cable Services
222 New Park Drive
Berlin, CT. 06037
(860) 505-8248

Mr. Vincent Mascia
Town Of Wallingford Water & Sewer Dept.
377 South Cherry Street
P.O. Box 725
Wallingford, CT. 06492
(203) 949-2672

TOWN SIGNAL

TOWN OF WALLINGFORD
DEPARTMENT OF ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
(ROUTE 150) CENTER STREET
AT NO. ORCHARD STREET/ SO. ORCHARD STREET

REV. #5 | INTERSECTION # 148-217

28T

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN	WALLINGFORD	STPN-2565 (2)	148-163	1997	150	27A	54

STATE OF CONNECTICUT - DEPT. OF TRANSPORTATION FORM NO. ENG 116 REV 1-88

MOVEMENT DIAGRAM

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

FACE #	P1 GRN	P1 CL	P1 CL	P2 GRN	P2 CL	P2 CL	P3 GRN	P3 CL	P3 CL	P4 GRN	P4 CL	P4 CL	P5 GRN	P5 CL	P5 CL	P6–P8
1				◄	Y	R	R	R	R	R	R	R	R	R	R	
2				G	Y	R	R	R	R	R	R	R	R	R	R	
3				R	R	R	R	R	R	►	Y	R	R	R	R	
4				R	R	R	R	R	R	◄	Y	R	R	R	R	
5				R	R	R	R	R	R	R	R	R	G	Y	R	
6				R	R	R	R	R	R	R	R	R	G	Y	R	
7				G	G ③	G ④	G	G ③	G ④	G	G ③	G ④	G	G ③	G ④	
P				DW			WALK	DW	DW	DW			DW			
				YIELD												
MIN				10	3	1	7	0 ⑤	0 ⑥	3	3	1	7	3	1	
MAX				40	5	3	20	1 ⑤	1 ⑥	15	5	3	40	5	3	

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN		10		3	7			
WALK			7					
PED CLR			10					
VEH EXT		2	AUDIBLE PEDESTRIAN SIGNAL	2	2			
MAX 1		30		12	24			
MAX 2		30		10	25			
YELLOW		3	0. ⑤	3	3			
RED		2	0 ⑥	1	2			
ADD INI								
MAX INI								
TBR								
TTR								
MIN GAP								
MODE	OFF	MIN. RECALL	NON-LOCK	NON-LOCK	NON-LOCK	OFF	OFF	OFF
INI START		THIS PHASE						

FLASHING OPERATION: R R R R R R R OFF ⑧

MAINT. 24hr [X] Norm [ ]

ENERGY BY: TOWN
SERVICE POLE - BEW 2268
METER #40530

STC # SM #
SIGNAL REVISED: 2/2/2000
INSTALLED ALL NEW EQUIPMENT INCLUDING POLES, PEDESTALS, CONTROLLER, SIGNAL HEADS, PEDESTRIAN SIGNALS, ILLUMINATED SIGNS, VEHICLE DETECTORS, INTERCONNECT CABLE, EMERGENCY VEHICLE AND RAILROAD PRE-EMPT UNDER PROJECT #148-163
AS-BUILT PLAN DRAWN 8/01

INTERSECTION # 148-218

METERED SERVICE

DETECTORS

IDENT	SIZE	TURNS	MODE
D2	15' X6'	3	PRESENCE
D2A	15' X6'	3	PRESENCE
D2B	15' X6'	3 ①	4" DELAY
D4	6' X10'	3	PRESENCE
D4A	6' X6'	4	PRESENCE
D5	6' X10'	3	PRESENCE
D5A	6' X6'	4	PRESENCE
D5B	6' X10'	3	PRESENCE
D5C	6' X6'	4	PRESENCE
SD6-SD8	6' X6'	4	PRESENCE

PROGRAM

FUNCTION	TIME	DAYS
FLASH	② EMERGENCY	ONLY
MAX 1	ALL TIMES	
MAX 2	FUTURE	
PATTERN 1	0700-0900, 1500-1900	M-F
PATTERN 2	ALL OTHER TIMES	DAILY
FREE	2100-0700	DAILY

COORDINATION TYPE- CLOSED LOOP

CYCLE	OFFSET #	OFFSET /SEC	YIELD P %	PERMIS PERIOD	FORCE OFF % Ø	Ø	Ø
65	1	0	0				
65	2	0	0				

SYSTEM LOC
MASTER 148-234
148-803
148-802
148-801
148-240
148-218
148-217
148-205

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY.

PHASE 3 ACTUATION SHALL INITIATE AUDIBLE PEDESTRIAN SIGNAL.

① PRE-EMPT 4 CALLED BY D2B WITH 4 SECOND DELAY ON LOOP AMPLIFIER. DELAY NOT INHIBITED BY 02 GRN. DET. DOES NOT EXTEND 02

RAILROAD PRE-EMPT TO OVER-RIDE ALL OTHER OPERATIONS

EMERGENCY VEHICLE PRE-EMPT INOPERATIVE DURING FLASH.

TIMINGS SHOWN INDICATE FREE OPERATION. ACTUAL TIMINGS TO BE CONTROLLED BY THE CLOSED LOOP COORDINATION UNIT.

② TRAFFIC SIGNAL SHALL NOT BE PLACED ON PROGRAMMED FLASH

③ TO BE Y IF RAILROAD PRE-EMPTION IS NEXT.

④ TO BE R IF RAILROAD PRE-EMPTION IS NEXT.

PHASE 2 DETECTORS TO BE INOPERATIVE DURING COORDINATION

⑤ TO BE 3 SECONDS IF RR PRE EMPT NEXT

⑥ TO BE 1 SECOND IF RR PRE EMPT NEXT

UNUSED TIME TO BE REALLOCATED.

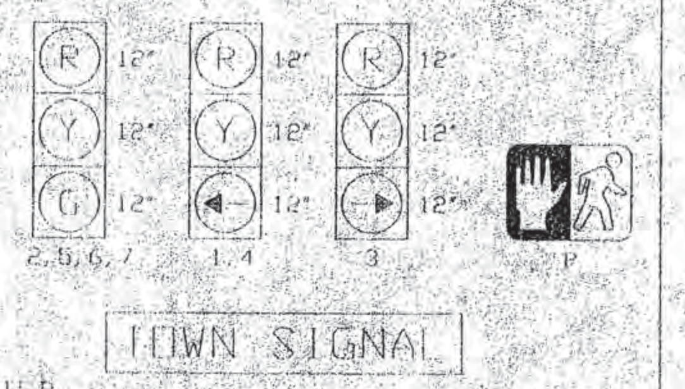
PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2&4	PRE-EMPT 3
PRIORITY	YES	NO	NO
DET. LOCK	NO	YES	YES
DELAY	0	0	0
ALT. MIN. GRN.	0	5	5
ALT. YELLOW	3	3	3
ALT. RED	2	2	2
ALT. PED. CLR.	0	10	10
TRACK CLR GRN	33		
TRACK CLR YLW	3		
TRACK CLR RED	2		
HOLD GREEN	12*	15	15
HOLD YELLOW	3	3	3
HOLD RED	2	2	2
HOLD PHASE	RR HOLD	2	4
EXIT PHASE	2	2	2
EXIT CALL	NONE	NONE	NONE

* CONTROLLER TO CYCLE BETWEEN RR HOLD1 AND RR HOLD2

HEAD(S) 7 ARE RIGID MOUNTED
ALL INDICATIONS ARE L.E.D. LAMPS

SIGNAL FACES



TOWN SIGNAL

LEGEND

R	RED		PROPOSED CONTROLLER
Y	YELLOW		EXISTING CONTROLLER
G	GREEN		PROPOSED HANDHOLE
◄R	RED ARROW		EXISTING HANDHOLE
◄Y	YELLOW ARROW		PROPOSED (R.M.C.) RIGID METAL CONDUIT
◄	GREEN ARROW		EXISTING (R.M.C.) RIGID METAL CONDUIT
WD	WALK/ FL. D.W.		CABLE CLOSURE
D.W.	DON'T WALK		DET. LEADS IN SAW CUT
FL	FLASHING		AUXILIARY TERMINATION CABINET
	PROPOSED WOOD SPAN POLE		RADIO ANTENNA
	EXISTING WOOD SPAN POLE		SIGN
	PROPOSED STEEL SPAN POLE		OPTICAL DETECTOR
	EXISTING STEEL SPAN POLE		AUDIBLE PEDESTRIAN SIGNAL
	PROPOSED UTILITY POLE		
	EXISTING UTILITY POLE		
	PEDESTAL MOUNTING		
	PEDESTRIAN PUSH BUTTON & SIGN		
	TRAFFIC SIGNAL FACE		
	PEDESTRIAN SIGNAL FACE		
	LOOP DETECTOR		
	MAGNETIC DETECTOR		
SD	SYSTEM DETECTOR		

MMI

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL
TOWN OF WALLINGFORD
CONN. ROUTE 150 (HALL AVENUE)
AND NORTH CHERRY STREET

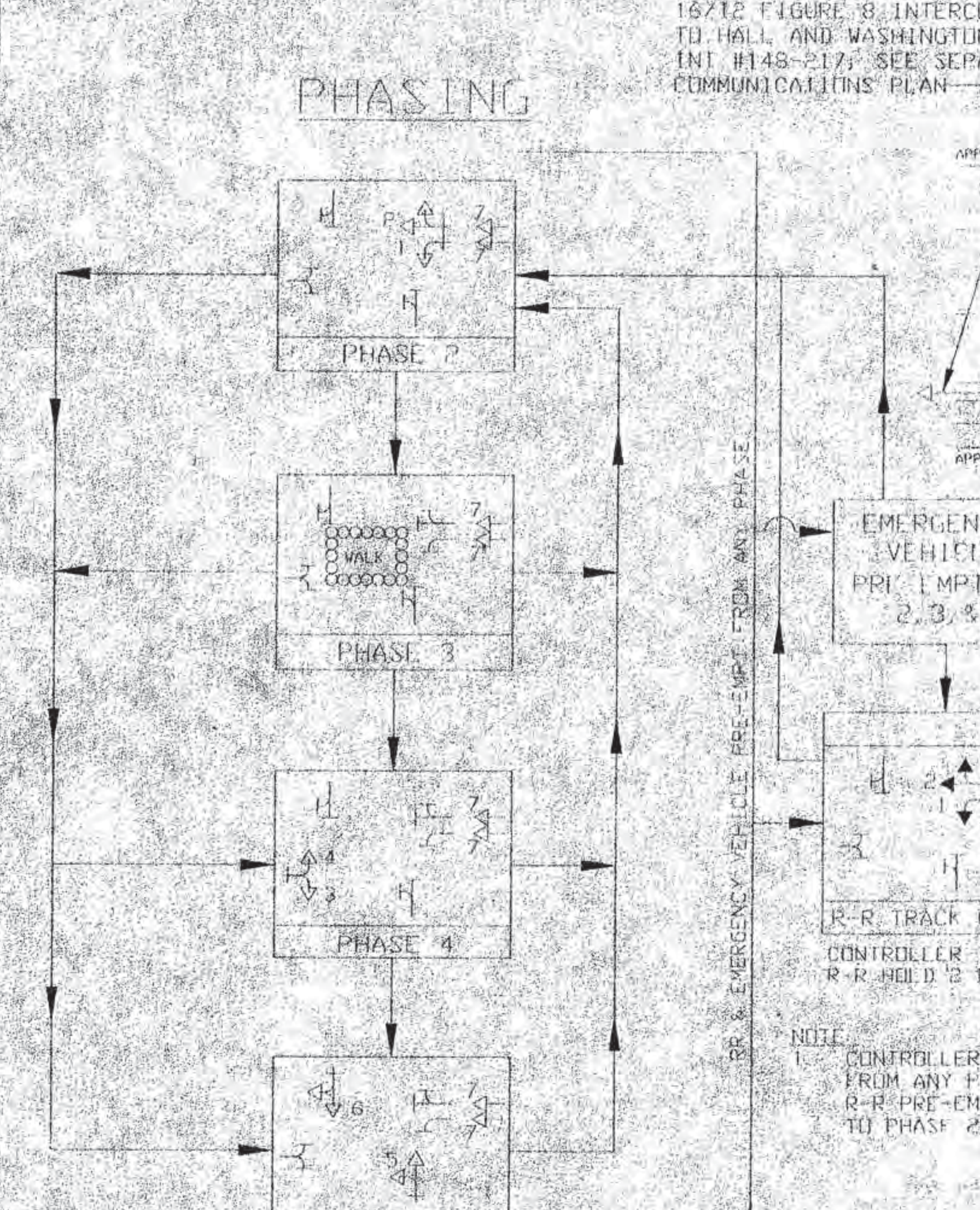
REV. #	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY	MILONE & MACBROOM, INC.		MILONE & MACBROOM, INC.	
ENGINEER				
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE	JULY 1997		JULY 1997	

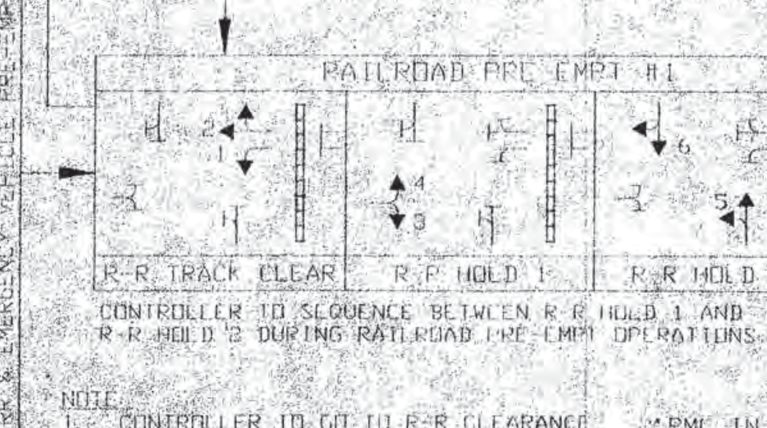
Surveyed	Plotted	Traced	Designed	New Const.	Top. Field Chk.	Noted

PLAN / NOTEBOOK

CLOSED LOOP DETECTOR CHART		
D2	LD1	
D2A	LD1	SD1
D2B	---	
D4	LD2	
D4A	LD2	SD3
D5	LD3	
D5A	LD3	SD4
D5B	LD4	
D5C	LD4	SD5
SD6	---	SD6
SD7	---	SD7
SD8	---	SD8

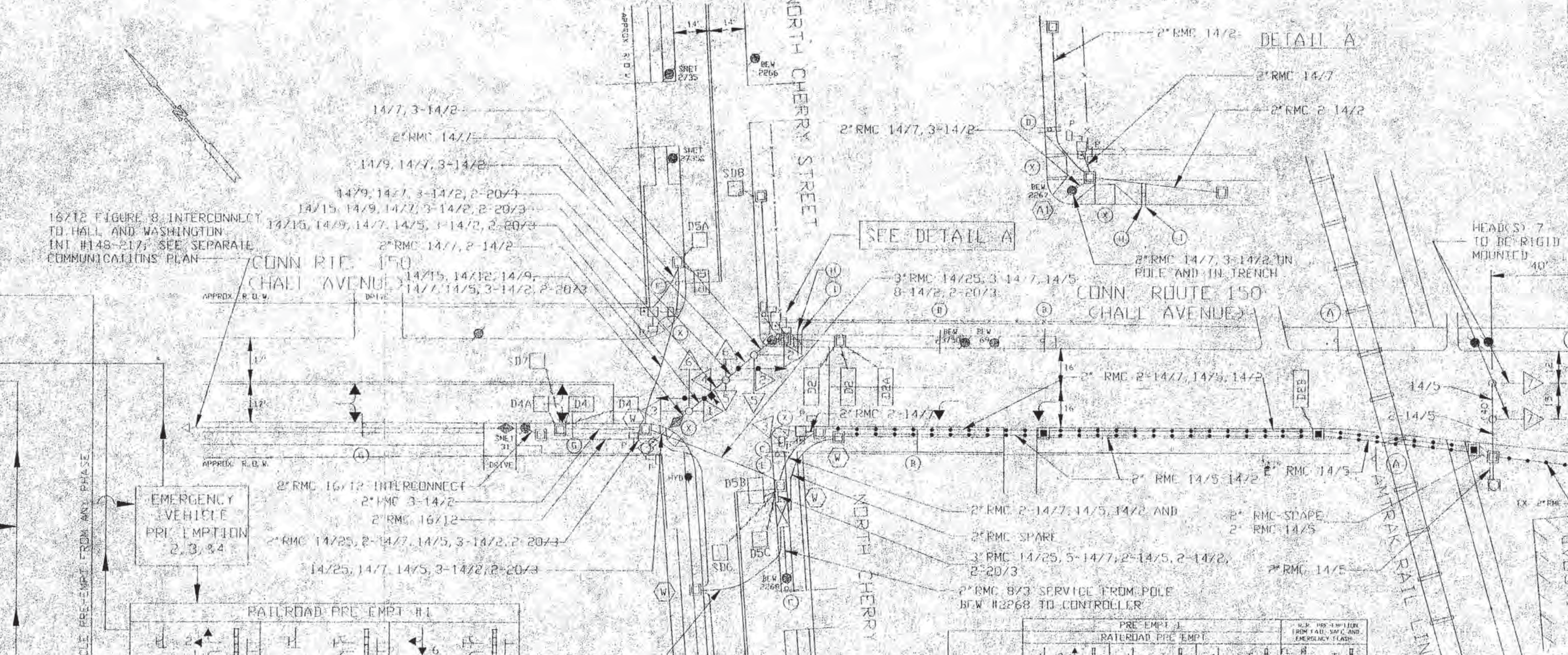
PHASING





CONTROLLER TO SEQUENCE BETWEEN R-R HOLD 1 AND R-R HOLD 2 DURING RAILROAD PRE-EMPT OPERATIONS.

NOTE:
1. CONTROLLER TO GO TO R-R CLEARANCE FROM ANY PHASE. UPON COMPLETION OF R-R PRE-EMPT, CONTROLLER TO RETURN TO PHASE 2.



	R-R TRACK CLEAR GRN	CL	CL	R-R HOLD 1 GRN	CL	CL	R-R HOLD 2 GRN	CL	CL	R.R. PRE-EMPTION FROM FAIL SAFE AND EMERGENCY FLASH FL	CL	CL
NTOR: NONE	PRE-EMPT 1 RAILROAD PRE-EMPT											
1	◄	Y	R	R	R	R	R	R	R	FL R		
2	G	Y	R	R	R	R	R	R	R	FL R		
3	R	R	R	►	Y	R	R	R	R	FL R		
4	R	R	R	◄	Y	R	R	R	R	FL R		
5	R	R	R	R	R	R	G	Y	R	FL R		
6	R	R	R	R	R	R	G	Y	R	FL R		
7	R	R	R	R	R	R	R	R	R	R		
P	DW			DW			DW			OFF ⑦		
MIN	30	3	1	10	3	1	10	3	1			
MAX	40	4	3	20	4	3	20	4	3			
MIN GRN	33			12			12					
MAX 1	33											
MAX 2	33											
YELLOW		3			3			3				
RED			2			2			2			
MODE	UN-OMIT			UN-OMIT			UN-OMIT					
INI START	* SEE TIMING NOTES											

* INTERVAL TO BE DETERMINED BY PRESENCE OF TRAIN

RAILROAD PRE-EMPTION

TIME	EVENT
0"	START RAILROAD PRE-EMPTION
20"	START RAILROAD LIGHTS
27"	START RAILROAD GATES
37"	GATES HORIZONTAL
49"	TRAIN ENTERS CROSSING

NOTE: WHEN A RAILROAD PRE-EMPTION CALL IS RECEIVED DURING NORMAL OPERATION, OR MANUAL OPERATION, RAILROAD FLASHING LIGHTS WILL COMMENCE OPERATION 15 TO 19 SECONDS INTO THE TRACK CLEAR PHASE DEPENDING UPON WHICH INTERVAL THE CONTROLLER IS IN WHEN THE PRE-EMPTION CALL IS RECEIVED.

WHEN RAILROAD PRE-EMPTION OCCURS DURING EMERGENCY FLASH OR FAIL-SAFE FLASHING OPERATION, RAILROAD FLASHING LIGHTS WILL COMMENCE OPERATION 20 SECONDS AFTER THE PRE-EMPTION CALL IS RECEIVED.

SPAN POLE INFORMATION
28' LONG, 20" BOLT CIRCLE, 6,100 LBS. LOAD AT YIELD

MAST ARM INFORMATION
40' MAST ARM, 21' SHAFT, 20" BOLT CIRCLE, MIN. EQUIVALENT END LOADINGS = 250 LBS AND 30 SQ. FT. * RIGID MOUNTED TRAFFIC SIGNAL

REV. # INTERSECTION # 148-218

SIGN LEGEND

Ⓐ #31-0410 (DO NOT STOP ON TRACKS)
Ⓑ #31-0349
Ⓒ #31-0077 (ONE WAY RT)
Ⓓ #31-0088 (ONE WAY LT)
Ⓔ #31-0517 (Z) AND #31-0518 (NO RIGHT TURN)
Ⓕ #31-0519 (Z) AND #31-0520 (NO LEFT TURN)
Ⓖ #31-0563
Ⓗ #31-0509 (DO NOT ENTER)
Ⓘ #41-0327 AND #41-0328
Ⓙ #31-0802 (STOP HERE ON RED)

NOTES:
SEE SEPARATE PAVEMENT MARKING AND SIGNING PLAN. PAVEMENT MARKINGS AND SIGNING TO BE INSTALLED BY THE CONTRACTOR (AS PER PLAN). THE STATE IS TO MAINTAIN ALL SIGNS, MARKINGS, AND CROSS WALKS ON STATE ROADS AND ALL STOP BARS. THE TOWN IS TO MAINTAIN ALL SIGNS, MARKINGS, AND CROSS WALKS ON TOWN ROADS.

Ⓦ 30" X 30" HANDHOLE

TOWN SIGNAL

MMI

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL LAYOUT
TOWN OF WALLINGFORD
CONN. ROUTE 150 (HALL AVENUE)
AND NORTH CHERRY STREET
SCALE 1" = 40' DATE: JULY 1997

RAILROAD PRE-EMPTION NOTES

RAILROAD PRE-EMPTION SHALL TAKE PRECEDENCE OVER ALL OTHER OPERATIONS.

RAILROAD PRE-EMPTION (NORMAL OPERATION)

1. TRAIN ENTERS TRACK CIRCUIT - R.R. 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 VIA THE PROPER YELLOW AND RED CLEARANCE INTERVALS. IF PEDESTRIAN PHASE IS IN OPERATION PHASE WILL BE IMMEDIATELY TERMINATED.
3. THE TRACK CLEARANCE INTERVAL WILL TERMINATE AND THE TRAFFIC CONTROLLER WILL HOLD AND SEQUENCE BETWEEN PRE-EMPT HOLD #1 AND PRE-EMPT HOLD #2.
4. THE RAILROAD FLASHING LIGHTS WILL COMMENCE OPERATION 15 TO 19 SECONDS INTO THE TRACK CLEAR PHASE DEPENDING UPON WHAT INTERVAL TRAFFIC CONTROLLER IS IN WHEN THE PRE-EMPTION CALL IS RECEIVED. STANDARD R.R. TIMING FOR BELLS, LIGHTS, AND GATES WILL COMMENCE 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 - R.R. PROVIDES IMMEDIATE PRE-EMPTION CIRCUIT TO THE TRAFFIC SIGNAL CONTROLLER CABINET.
2. THE FLASHING OPERATION IMMEDIATELY CHANGES TO SOLID RED ON FACE 7, AND REMAINS FLASHING RED ON ALL OTHER INDICATIONS.
3. THE RAILROAD FLASHING LIGHTS WILL COMMENCE 20 SECONDS AFTER THE RECEIPT OF THE PRE-EMPT CALL. STANDARD R.R. TIMING FOR BELLS, LIGHTS, 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 REVERT TO FLASHING RED ON ALL SIGNAL FACES AND THE RAILROAD DEVICES SHALL DEACTIVA[TE]

TECHNICAL NOTES CONTINUED

CONTROLLER SHALL IMMEDIATELY ADVANCE OUT OF ANY GREEN, INCLUDING MIN GREEN, INTO CLEARANCE INTERVALS GOING TO PRE-EMPTION, AND THEN GO DIRECTLY TO RAILROAD TRACK CLEAR PHASE DURING RAILROAD PRE-EMPTION.

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 DIRECTLY TO RAILROAD TRACK CLEAR PHASE.

PEDESTRIAN TIMING TO IMMEDIATELY ADVANCE OUT OF THE WALK AND PED CLEARANCE INTERVAL INTO THE CLEARANCE INTERVAL TIMINGS GOING TO PRE-EMPTION, THEN GO IMMEDIATELY TO RAILROAD TRACK CLEAR PHASE.

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 RAILROAD HOLD PHASE AND RETURNS TO PHASE 2 GREEN.

ANY CHANGE IN THE CLEARANCE INTERVALS DENOTED ON THIS PLAN MAY REQUIRE A MODIFICATION OF THE RAILROAD TRACK CIRCUIT.

THE CONTROLLER SHALL BE A "MENU DRIVEN" TYPE WITH INTERNAL RAILROAD PRE-EMPTION.

⑦ RAILROAD FLASHING LIGHTS TO START 20 SECONDS INTO THIS INTERVAL.

TRAFFIC SIGNAL TO BE IMMEDIATELY FORCED OUT OF CLOSED LOOP COORDINATED OPERATION UPON RECEIPT OF RAILROAD PRE-EMPTION CALL.

⑧ FLASHING OPERATION TO REVERT TO RR PRE-EMPTION FROM FAIL-SAFE FLASH UPON RECEIPT OF RR PRE-EMPTION CALL.

GENERAL PRE-EMPTION NOTES

1. RAILROAD PRE-EMPT OPERATIONS SHALL BE MAINTAINED AT ALL TIMES DURING BOTH ACTIVE AND NON CONSTRUCTION TIME PERIODS.
2. IF FOR ANY REASON NORMAL RAILROAD PRE-EMPT OPERATIONS ARE INTERRUPTED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE WALLINGFORD POLICE DEPARTMENT, THE CONNECTICUT DEPARIMENT OF TRANSPORTATION AND AMTRAK.
3. ANY MODIFICATIONS TO THESE TIMINGS AND RAILROAD PRE-EMPTION OPERATIONS MUST BE APPROVED BY THE TOWN, STATE AND AMTRAK.
4. ANY WORK ON RAILROAD PROPERTY SHALL BE APPROVED BY AND AUTHORIZED BY AMTRAK.

EMERGENCY VEHICLE PRE-EMPTION NOTES

1. THE OPTICAL DETECTOR(S) SHALL BE MOUNTED MID-SPAN, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. A SEPARATE 2073 CABLE (FOR EACH OPTICAL DETECTOR) SHALL BE INSTALLED (UNSPLICED) DIRECTLY TO THE CONTROLLER CABINET.

UTILITY/PROJECT CONTACTS

SNET: BOB BOUFFARD (800)748-1693
AT&T: RON TARINI (203)269-2565
WALLINGFORD ELECTRIC: ART DUTRA (203)265-0808
AMTRAK: JOE HOFBAUER (215)349-1038
TCI CABLE: ADAM BURR (203)483-2300
TOWN ENGINEER: JOHN P. THOMPSON (203)271-1773

OWNERS NAME
TOWN OF WALLINGFORD

REV. # INTERSECTION # 148-218

SEE SHEET 32 FOR CONSTRUCTION NOTES.

REVISIONS			
NO.	DATE	INIT.	DESCRIPTION
A	5/98	CRM	REVISED PEDESTRIAN INDICATI[ON] WHEN PRE-EMT FROM FLASH TO "OFF".

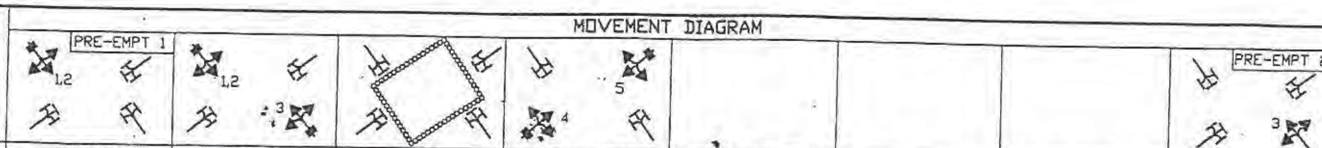
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

Rt. 150 (Hall Ave.) & No. Cherry St.

TRAFFIC CONTROL SIGNAL

29T

MOVEMENT DIAGRAM



NTOR	PHASE 1 GRN	PHASE 1 CL	PHASE 1 CL	PHASE 2 GRN	PHASE 2 CL	PHASE 2 CL	PHASE 3 GRN	PHASE 3 CL	PHASE 3 CL	PHASE 4 GRN	PHASE 4 CL	PHASE 4 CL	PHASE 5	PHASE 6	PHASE 7	PHASE 7 (PRE-EMPT 2) GRN	PHASE 7 CL	PHASE 7 CL	FLASHING OPERATION
1	← G	←Y G	G	G	Y	R	R	R	R	R	R	R				R	R	R	Y
2	G	G	G	G	Y	R	R	R	R	R	R	R				R	R	R	Y
3	R	R	R	G	Y	R	R	R	R	R	R	R				G	Y	R	Y
4	R	R	R	R	R	R	R	R	R	G	Y	R				R	R	R	R
5	R	R	R	R	R	R	R	R	R	G	Y	R				R	R	R	R
P	←	DW	→	←	DW	→	WØ	DW	DW	←	DW	→				DW	DW	DW	OFF
					←	YIELD	POINT												
MIN	5	3	1	10	3	1	14	0.1	0	7	3	1							
MAX	25	5	3	50	5	3	25	1	1	35	5	3							

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PRE-EMPT
MIN GRN	5	15		7				15
WALK			7					
PED CLR			10					
VEH EXT	2	2		2				
MAX I	12	34		20				15
MAX 2	15	40		25				15
YELLOW	3	3	0.1	3				4
RED	1	2	0	2				2
ADD INI								
MAX INT								
TBR								
TTR								
MIN GAP								
MODE / START	NON-LOCK	MIN. RECALL THIS PHASE	NON-LOCK	NON-LOCK	OFF	OFF	OFF	ON/OMIT

PHASE 3: AUDIBLE PEDESTRIAN SIGNAL

PRE-EMPT: EMERGENCY VEHICLE PRE-EMPT PHASE ONLY

MAINT: 24hr [X] Norm [ ]

DETECTORS SIZE	TURNS	MODE
6'X10'	3	PRESENCE
6'X6'	4	PRESENCE
6'X10'	3	PRESENCE
6'X6'	4	PRESENCE
6'X10'	3	PRESENCE
6'X6'	4	PRESENCE
6'X10'	3	PRESENCE
6'X6'	4	PRESENCE
6'X6'	4	PRESENCE

PROGRAM FUNCTION	TIME	DAYS	CYCLE	OFFSET #	OFFSET /SEC	YIELD PT %	PERMIS PERIOD	FORCE OFF % Ø	Ø	Ø
FLASH	EMERGENCY	ONLY								
MAX 1	ALL TIMES									
MAX 2	FUTURE									
PATTERN 1	0700-0900,1500-1800	M-F	65"	1	10	15%				
PATTERN 2	ALL OTHER TIMES	DAILY	65"	2	10	15%				
FREE	2100-0700	DAILY								

COORDINATION TYPE:- CLOSED LOOP

SYSTEM LOC
MASTER
148-234
148-205
148-803
148-802
148-801
148-240
148-218
148-217

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
PHASE 3 ACTIVATION TO CALL FOR PEDESTRIAN BUZZER
TIMINGS SHOWN INDICATE FREE OPERATION. ACTUAL TIMINGS SHOWN TO BE CONTROLLED BY THE CLOSER LOOP LOCAL COORDINATION UNIT.
PHASE 2 ON TO OMIT PHASE 1
EMERGENCY VEHICLE PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION
DETECTORS D1 AND D1A TO CALL AND EXTEND PHASE 1 AND EXTEND PHASE 2.
PHASE 2 DETECTORS TO BE IN OPERATIVE DURING COORDINATION
UNUSED TIME TO BE REALLOCATED

ENERGY BY- TOWN
SERVICE POLE- BEW #45

STC# SM#
SIGNAL REVISED
INSTALLED ALL NEW EQUIPMENT; INCLUDING POLES, PEDESTALS, CONTROLLER, SIGNAL HEADS, PEDESTRIAN SIGNALS, VEHICLE DETECTORS, INTERCONNECT CABLE AND EMERGENCY VEHICLE PRE-EMPT UNDER PROJECT #148-163

INTERSECTION # 148-240

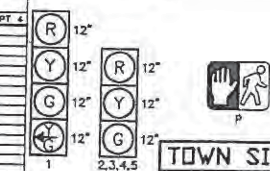
METERED SERVICE

PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2	PRE-EMPT 3	PRE-EMPT 4
PRIORITY	NO	NO		
DET. LOCK	YES	YES		
DELAY	0	0		
ALT. MIN. GRN.	5	5		
ALT. YELLOW	3	3		
ALT. RED	2	2		
ALT. PED. CLR.	10	10		
TRACK CLR GRN	-	-		
TRACK CLR YLW	-	-		
TRACK CLR RED	-	-		
HOLD GREEN	15	15		
HOLD YELLOW	3	3		
HOLD RED	2	2		
HOLD PHASE	1	8		
EXIT PHASE	2	2		
EXIT CALL	NONE	NONE		

NOTE:
FACE #1 TO BE FURNISHED WITH BI-COLORED Y/G ARROW FIBER OPTIC TURN SIGNAL
ALL RED INDICATIONS SHALL BE L.E.D. LAMPS

SIGNAL FACES



TOWN SIGNAL

LEGEND

Symbol	Meaning	Symbol	Meaning
R	RED		PROPOSED CONTROLLER
Y	YELLOW		EXISTING CONTROLLER
G	GREEN		PROPOSED HANDHOLE
←R	RED ARROW		EXISTING HANDHOLE
←Y	YELLOW ARROW		PROPOSED (R.M.C.) RIGID METAL CONDUIT
←	GREEN ARROW		EXISTING (R.M.C.) RIGID METAL CONDUIT
WØ	WALK/ FL. D.V.		CABLE CLOSURE
D.W.	DON'T WALK		DET. LEADS IN SAW CUT
FL.	FLASHING		AUXILIARY TERMINATION CABINET
	PROPOSED WOOD SPAN POLE		RADIO ANTENNA
	EXISTING WOOD SPAN POLE		SIGN
	PROPOSED STEEL SPAN POLE		OPTICAL DET.
	EXISTING STEEL SPAN POLE		AUDIBLE PEDESTRIAN SIGNAL
	PROPOSED UTILITY POLE		
	EXISTING UTILITY POLE		
	PEDESTAL MOUNTING		
	PEDESTRIAN PUSH BUTTON & SIGN		
	TRAFFIC SIGNAL FACE		
	PEDESTRIAN SIGNAL FACE		
	LOOP DETECTOR		
	MAGNETIC DETECTOR		
SD	SYSTEM DETECTOR		

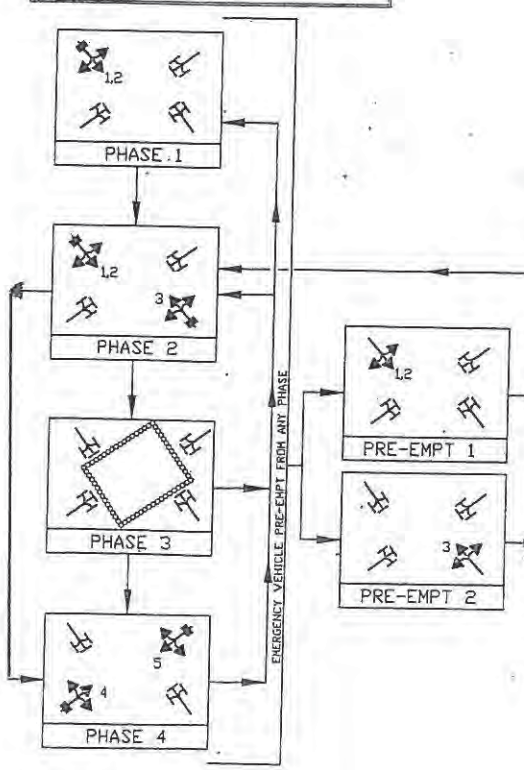
MMI
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
CT. ROUTE 150 (HALL AVENUE)
AND WASHINGTON STREET

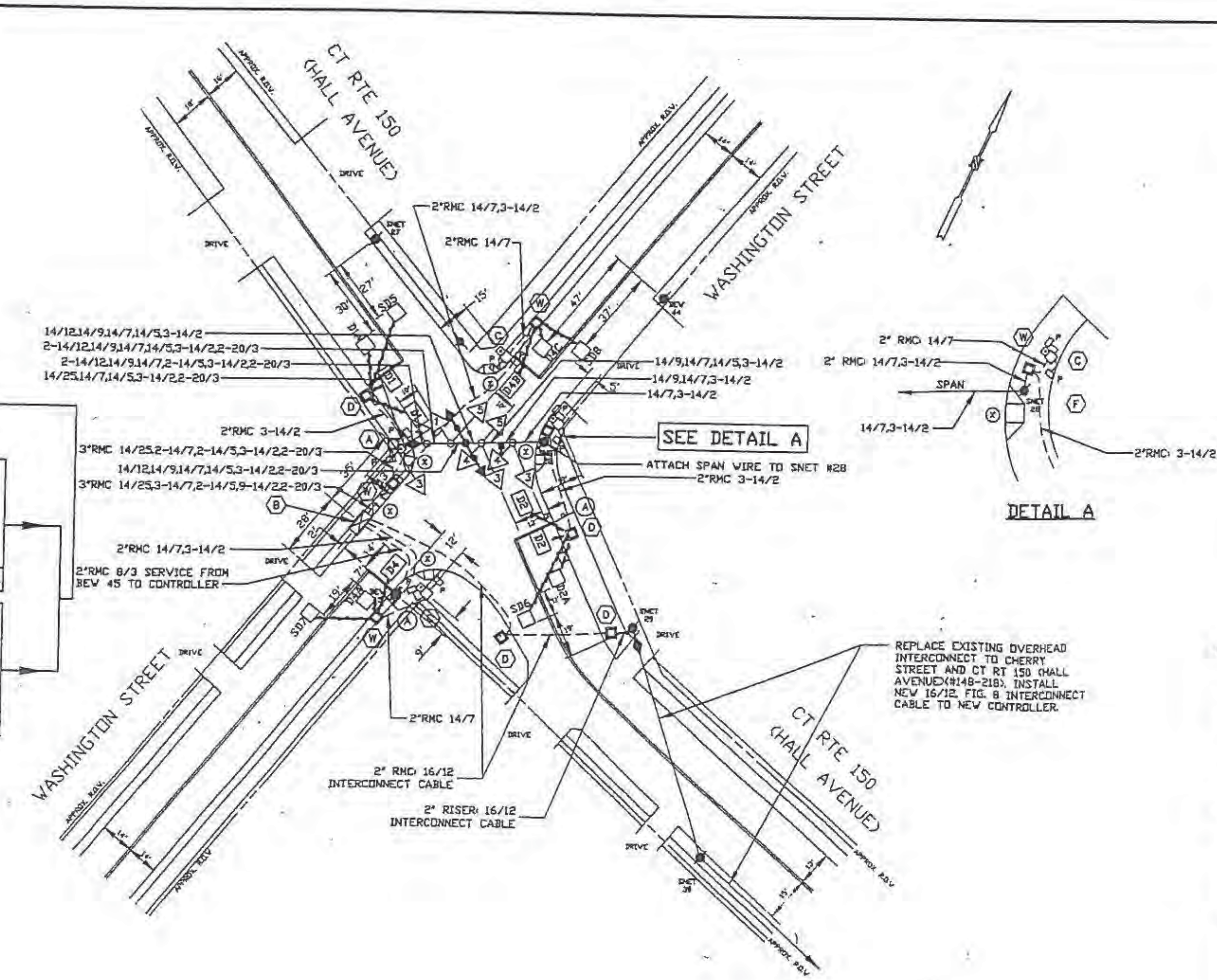
REV. # -	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY	MILONE & MACBROOM, INC		MILONE & MACBROOM, INC	
ENGINEER				
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE	JULY 1997		JULY 1997	

PHASING

CONTROLLER TO GO TO EMERGENCY VEHICLE PRE-EMPT #1 OR #2 FROM ALL PHASES. CONTROLLER TO RETURN TO PHASE 2 FOLLOWING THE COMPLETION OF PRE-EMPT PHASES.



SPAN POLE INFORMATION
(A) 28' LONG, 20' BOLT CIRCLE, 6,100 LBS. LOAD AT YIELD



REV. # | INTERSECTION # 148-240

SIGN LEGEND

(A) ERECT #31-0802 (STOP HERE ON RED)

CLOSED LOOP DETECTOR CHART		
D1	LD1	
D1A	LD1	SD1
D2	LD2	
D2A	LD2	SD2
D4	LD3	
D4A	LD3	SD3
D4B	LD4	
D4C	LD4	SD4
SD5		SD5
SD6		SD6
SD7		SD7
SD8		SD8

NOTES:
SEE SEPARATE PAVEMENT MARKING AND SIGNING PLAN. PAVEMENT MARKINGS AND SIGNING TO BE INSTALLED BY THE CONTRACTOR (AS PER PLAN). THE STATE IS TO MAINTAIN ALL SIGNS, MARKINGS AND CROSSWALKS ON STATE ROADS AND ALL STOP BARS. THE TOWN IS TO MAINTAIN ALL SIGNS, MARKINGS AND CROSSWALKS ON TOWN ROADS.

TOWN SIGNAL

MMI
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL LAYOUT
TOWN OF WALLINGFORD
CT. ROUTE 150 (HALL AVENUE)
AND WASHINGTON STREET

STATE OF CONNECTICUT - DEPT. OF TRANSPORTATION

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.
1	CONN	WALLINGFORD	STPN-2565 (2)	148-163	1997	150	28

CONSTRUCTION NOTES

1. ALL TRAFFIC CONTROL EQUIPMENT UNLESS OTHERWISE NOTED, IS NEW. ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO THE FORM 814A AND AS AMENDED. ALL NEW TRAFFIC CONTROL EQUIPMENT SHALL BE FIELD LOCATED AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. ALL CABLING SHALL BE NEW AND INSTALLED WITHOUT SPLICES.
3. SPAN WIRE SHALL BE 3/8",120 DIA. EXTRA STRENGTH 15,400 LBS. MINIMUM BREAKING STRENGTH.
4. (X) TYPE 3 PEDESTRIAN SIDEWALK RAMPS.
5. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (1-800-922-4455) PRIOR TO ANY EXCAVATION.
6. ALL WORK TO BE COORDINATED WITH THE TOWN OF WALLINGFORD POLICE DEPARTMENT, CONTACT OFFICER R. A. DOLL 294-2250.
7. THE CONTRACTOR WILL SCHEDULE HIS CONSTRUCTION WORK SO THAT POSITIVE TRAFFIC CONTROL (STOP SIGNS, TEMPORARY SIGNALS, ETC.) ARE IN PLACE AND OPERATIONAL AT ALL TIMES.
8. THE CONTRACTOR SHALL SUPPLY, INSTALL AND MAKE FULLY OPERATIONAL THE FOLLOWING:
   - (A) 28' (8.53 METERS) STEEL SPAN POLE ON STANDARD SPAN POLE FOUNDATION WITH ONE-WAY THREE SECTION VEHICLE SIGNAL; ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY AND 2 ONE-WAY PEDESTRIAN SIGNALS.
   - (B) INSTALL TOWN APPROVED (STANDARD) FULL ACTUATED 8 PHASE CONTROLLER ON NEW TYPE IV CONTROLLER FOUNDATION. CONTROLLER SHALL BE EQUIPPED WITH INTERNAL EMERGENCY VEHICLE PRE-EMPT CAPABILITY. THE CONTROLLER SHALL BE EQUIPPED WITH ALL NECESSARY AND /OR REQUIRED COMPONENTS AND INTERNAL COMMUNICATION MODULES FOR INCLUSION IN AND FULL COMPATIBILITY WITH THE TOWN'S EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM. THE CONTROLLE TYPE IV CABINET SHALL BE EQUIPPED WITH A WALLINGFORD ELECTRIC DIVISION APPROVED METER SOCKET, AND A WEATHERPROOF DISCONNECT.
   - (C) INSTALL 8'-0" (2.438 METERS) ALUMINUM PEDESTAL ON EXISTING PEDESTAL FOUNDATION, WITH ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY, AND TWO-WAY PEDESTRIAN SIGNAL.
   - (D) INSTALL TYPE II CONCRETE HANDHOLE (TYPICALLY 1'-0" (0.305 METERS) FROM NEW CURB, UNLESS OTHERWISE NOTED.
   - INSTALL TOWN/STATE APPROVED AUDIBLE PEDESTRIAN SIGNAL WITH ADJUSTABLE RHEOSTAT IN CONTROLLER CABINET.
   - (F) EXISTING GUY FOR UTILITY POLE SNET #28 TO REMAIN.
   - (W) INSTALL 30"X30" CONCRETE HANDHOLE, ALL OTHERS TO BE TYPE II.
9. THE CONTRACTOR SHALL REPLACE THE ENTIRE SECTION OF SIDEWALK DAMAGED DUE TO INSTALLATION OF TRAFFIC SIGNAL EQUIPMENT.
10. ELECTRICAL SERVICE TO THE CONTROLLER SHALL BE COORDINATED WITH THE WALLINGFORD ELECTRICAL DIVISION. THE CONTRACTOR SHALL PAY ALL FEES AND COSTS FOR OBTAINING. CONTACT MR. ART DUTRA AT WALLINGFORD ELECTRIC DIVISION (203) 265-0308 TO COORDINATE.
11. THE CONTRACTOR SHALL COORDINATE WITH AND PAY ANY APPLICABLE FEES ASSOCIATED WITH THE REATTACHMENT OF THE NEW SPAN WIRE (TO SNET POLE #28) TO THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY.
12. THE OPTICOM RECEIVER(S) SHALL BE MOUNTED MID-SPAN IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND SHALL BE APPROVED BY AN AUTHORIZED REPRESENTATIVE OF 3-M PRIOR TO INSTALLATION OR TURN-ON. A SEPARATE 20/3 CABLE (FOR EACH OPTICAL DETECTOR) SHALL BE INSTALLED (UNSPLICED) DIRECTLY TO THE CONTROLLER CABINET.
13. ALL SIGNALS SHALL BE HUNG SO THAT A MINIMUM VERTICAL CLEARANCE OF 16 FEET (4.88 METERS) IS MAINTAINED BETWEEN THE FINAL ROADWAY SURFACE AND THE BOTTOM OF THE SIGNALS.
14. INSTALL LOOP DETECTORS IN EXISTING PAVEMENT, CENTERED IN LANE AND 8' (2.438 METERS) APART UNLESS OTHERWISE NOTED. SEGMENTED LOOPS TO BE SPLICED IN SERIES.
15. ALL EXISTING TRAFFIC CONTROL EQUIPMENT THAT IS NOT TO BE REUSED SHALL BE CAREFULLY REMOVED AND EQUIPMENT NOTED IN THE SPECIAL PROVISIONS SHALL BE DELIVERED TO THE TOWN'S TRAFFIC MAINTENANCE FACILITY ON WASHINGTON STREET OR OTHER LOCATION AS MAY BE DIRECTED BY THE TOWN.
16. INSTALL TRAFFIC SIGNAL CABLE CLOSURE, ON SPAN, 5 FEET± FROM CURBLINE.
17. INSTALL 2" RMC STAND-OFF ON UTILITY POLES BEW #45, SNET #28 AND SNET #29. INSTALL POLE MOUNTED SERVICE DISCONNECT 10 FEET ABOVE THE GROUND ON POLE BEW#45.
18. CONTACT NOTED UTILITY COMPANIES A MINIMUM OF TWO (2) WEEKS PRIOR TO CONSTRUCTION.
19. ALL TRAFFIC SIGNAL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH CONNDOT'S AND WALLINGFORD'S STANDARDS.
20. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE THE PLACEMENT OF ALL NEW TRAFFIC CONTROL APPURTENANCES WITH THE TOWN, ADJACENT PRIVATE PROPERTY OWNERS AND THE SERVING UTILITY COMPANIES.
21. ATTACH SPANWIRE TO UTILITY POLE SNET #28 AT APPROXIMATELY 24.2 FEET ABOVE THE GROUND.
22. ANCHOR BOLTS FOR POLE FOUNDATIONS SHALL BE SET SQUARE TO THE SPAN POLE SUCH THAT TWO BOLTS ARE IN TENSION AND TWO ARE IN COMPRESSION.

UTILITY/PROJECT CONTACTS
TOWN / POLICE: R. A. DOLL: 294-2250
SNET: BOB BOUFFARD: (800)748-1693
AT&T: RON TARINI: (203)269-2565
WALLINGFORD ELECTRIC: ART DUTRA: (203)265-0308
TCI CABLE: ADAM BURR: (203)483-2300
DESIGNER: M.M.I., JOHN P. THOMPSON (203)271-1773

REV. # | INTERSECTION # 148-240

OWNERS NAME
TOWN OF WALLINGFORD

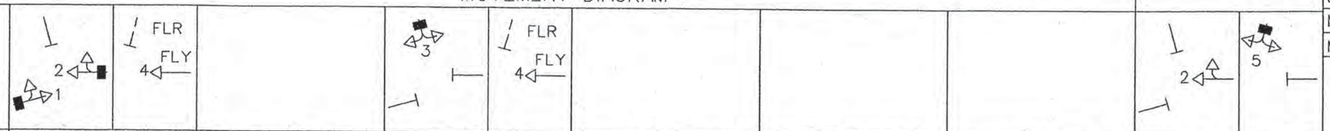
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

30T

NONE

MOVEMENT DIAGRAM



NTOR			PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			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
FACE 1	Y					G	Y	R				R	R	R										R	R	R
FACE 2	Y					G	Y	R				R	R	R										G	G	G
FACE 3	R					R	R	R				G	Y	R										R	R	R
FACE 4	Y					FLY	FLY	FLY				FLY	FLY	FLY										R	R	R
FACE 5	R					FLR	FLR	FLR				FLR	FLR	FLR										G	Y	R
# MIN						8	3	0.5				5	3	0.5												
# MAX						60	5	3				35	5	3												
INTERVALS MIN GRN						15						5														
INTERVALS WALK																										
INTERVALS PED CLR																										
INTERVALS VEH EXT						3						1														
INTERVALS MAX 1						40						20														
INTERVALS MAX 2						40						20														
INTERVALS YELLOW							3						3													
INTERVALS RED								2						2												
INTERVALS ADD INIT																										
INTERVALS MAX INIT																										
INTERVALS TBR																										
INTERVALS TTR																										
INTERVALS MIN GAP																										
MODE			OFF			MIN RECALL			OFF			NON-LOCK												ON/OMIT		
INI START						THIS PHASE																				

DETECTORS

IDENT	SIZE (WXL)	TURNS	MODE
D2	10'X6'	3	PRESENCE
D2A	12'X6'	3	PRESENCE
D4	6'X6'	3	PRESENCE

PROGRAM

FUNCTION	T I M E	DAYS
FLASH	FUTURE	
MAX 1	ALL OTHER TIMES	DAILY
MAX 2	FUTURE	

COORDINATION TYPE- NONE

CYCLE	PHASE SPLITS SEC/% 01	02	03	04	05	06	07	08	OFFSET SEC	%	PERMIS PERIOD 0	SEC

SYSTEM LOC: MASTER

TECHNICAL NOTES

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

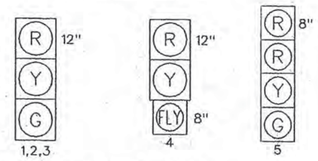
ENERGY BY- TOWN | METERED SERVICE
MAINT 24hr ☒ Norm ☐ | SERVICE POLE- ED5674
METERED

INTERSECTION # 148-231

OFFICE RECORD

REVISION #3
STC # N/A SM# N/A
UPDATED TRAFFIC SIGNAL EQUIPMENT AT MASONIC DR.
REVISED PAVEMENT MARKINGS
REPLACED ALL LOOP DETECTORS
Signal Revised 1-21-99

SIGNAL FACES



FACE 5 HAS TUNNEL VISORS
FACES 1,2,3 TO HAVE LED LAMPS

EMERGENCY VEHICLE PRE-EMPT SETTINGS

	PRE-EMPT 1
PRIORITY	NO
DET. LOCK	YES
DELAY	10
ALT. MIN. GRN.	5
ALT. MIN. YELLOW	PARENT
ALT. RED	PARENT
ALT. PED. CLR.	NO
HOLD GREEN	25
HOLD YELLOW	3.0
HOLD RED	2.0
HOLD PHASE	8
EXIT PHASE	2
EXIT CALL	NONE

PLAN SEALED FOR REVISION #3 ONLY

TOWN SIGNAL

LEGEND

R RED
Y YELLOW
G GREEN
RED ARROW
YELLOW ARROW
GREEN ARROW
WØ WALK/ FL. D.W.
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
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
MAGNETIC DETECTOR
SD SYSTEM DETECTOR
OPTICAL DETECTOR
PROPOSED CONTROLLER
EXISTING CONTROLLER
PROPOSED HANDHOLE
EXISTING HANDHOLE
PROPOSED (R.M.C.) RIGID METAL CONDUIT
EXISTING (R.M.C.) RIGID METAL CONDUIT
CABLE CLOSURE
DET. LEADS IN SAW CUT
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
AUDIBLE PEDESTRIAN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
RTE. 150 (HALL AVENUE) AT
FIRE HOUSE AND MASONIC HOME

REV # 3	TRAFFIC	DATE	ELECTRICAL	DATE
ENGINEER				
DRAFTER		MMI		
CHECKED BY		FEB.1998		
SUBMITTED BY				
APPROVED BY				
DATE				

32T

MOVEMENT DIAGRAM

NTOR	PHASE 1			PHASE 2			PHASE 3			PHASE 4 (PRE-EMPT 1)			PHASE 5			PHASE 6			PHASE 7			PHASE 8			FLASHING OPERATION
FACE #	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	G ◄—	G ◄Y	G	G	Y	R				R	R	R													Y
2	G	G	G	G	Y	R				R	R	R													Y
3	R	R	R	G	Y	R				R	R	R													Y
4	R	R	R	R	R	R				G	Y	R													R
5	R	R	R	R	R	R				G	Y	R													R
MIN	10	3	1	15	3	1				10	3	1													
MAX	30	5	3	60	5	3				50	5	3													

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	5	15		7				
WALK				12				
PED CLR				1				
VEH EXT	2	4		3				
MAX 1	12	25		18				
MAX 2	15	35		25				
YELLOW	3	3		3				
RED	1	2		1				
ADD INI								
MAX INT								
TBR								
TTR								
MIN GAP								
MODE	NON-LOCK	MIN-RECALL	OFF	NON-LOCK	OFF	OFF	OFF	OFF
INI START		THIS PHASE						

MAINT: 24hr [X] Norm [ ]

ENERGY BY- TOWN
SERVICE POLE- WED # 7653

STC# SM#
SIGNAL IN OPERATION. 6-18-97
SIGNAL INSTALLED UNDER PROJECT # 148-72.
AS BUILT PLAN DRAWN 4/98.

INTERSECTION # 148-807

METERED SERVICE

DETECTORS

IDENT	SIZE	TURNS	MODE
D1	6'X10'	3	8' DELAY
D1A	6'X6'	3	PRESENCE
D2A	6'X15'	3	PRESENCE
D2B	6'X15'	3	PRESENCE
D4	6'X10'	3	8' DELAY
D4A	6'X6'	3	PRESENCE
D4B	6'X10'	3	PRESENCE
D4C	6'X6'	3	PRESENCE
SD1	6'X6'	3	PRESENCE
SD2	6'X6'	3	PRESENCE
SD3	6'X6'	3	PRESENCE

PROGRAM

FUNCTION	TIME	DAYS
FLASH	EMERGENCY	ONLY
MAX 1	ALL TIMES	
MAX 2	FUTURE	

COORDINATION TYPE- NONE

CYCLE	OFFSET # /SEC	YIELD PT %	PERMIS PERIOD	FORCE OFF % Ø	Ø	Ø	SYSTEM LOC
							MASTER 148-807

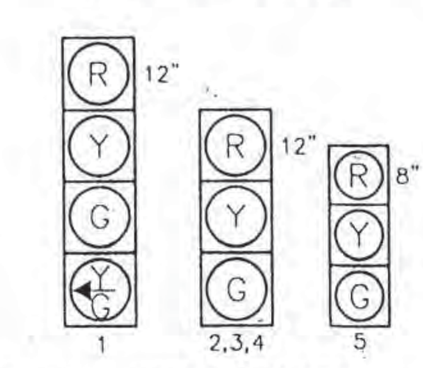
TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY
DETECTOR D1 AND D1A TO CALL Ø1 AND EXTEND Ø2
DETECTOR D2A & D2B CALL AND EXTEND Ø2
DETECTOR D4, D4A, D4B & D4C TO CALL AND EXTEND Ø4
DETECTOR D1 TO BE SET AT 8 SECOND DELAY

REAR DETECTORS; D1A, D4A, AND D4C TO BE 6'X6' AND WIRED SEPARATELY TO PROVIDE COUNT DATA.

EMERGENCY VEHICLE PRE-EMPT SETTINGS	PRE-EMPT 1
PRIORITY	YES
DET. LOCK	YES
DELAY	0
ALT. MIN. GRN.	5
ALT. YELLOW	NO
ALT. RED	NO
ALT. PED. CLR.	NO
HOLD GREEN	15
HOLD YELLOW	4
HOLD RED	2
HOLD PHASE	4
EXIT PHASE	2
EXIT CALL	NO

SIGNAL FACES



TOWN SIGNAL

NOTES:
SIGNAL HEAD #5 TO BE EQUIPPED WITH TUNNEL VISOR AND LOUVERS.
SIGNAL HEAD #1 TO BE EQUIPPED WITH DUAL COLOR Y/G FIBER-OPTIC TURN SIGNAL.
ALL RED INDICATIONS SHALL BE EQUIPPED WITH L.E.D. LAMPS.

LEGEND

R RED; Y YELLOW; G GREEN; RED ARROW; YELLOW ARROW; GREEN ARROW; WØ WALK/ FL. D.W.; 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; TRAFFIC SIGNAL FACE; PEDESTRIAN SIGNAL FACE; LOOP DETECTOR; MAGNETIC DETECTOR; SD SYSTEM DETECTOR; PROPOSED CONTROLLER; EXISTING CONTROLLER; PROPOSED HANDHOLE; EXISTING HANDHOLE; PROPOSED (R.M.C.) RIGID METAL CONDUIT; EXISTING (R.M.C.) RIGID METAL CONDUIT; CABLE CLOSURE; DET. LEADS IN SAW CUT; AUXILIARY TERMINATION CABINET; RADIO ANTENNA; SIGN; OPTICAL DETECTOR; AUDIBLE PEDESTRIAN BUZZER

MMI

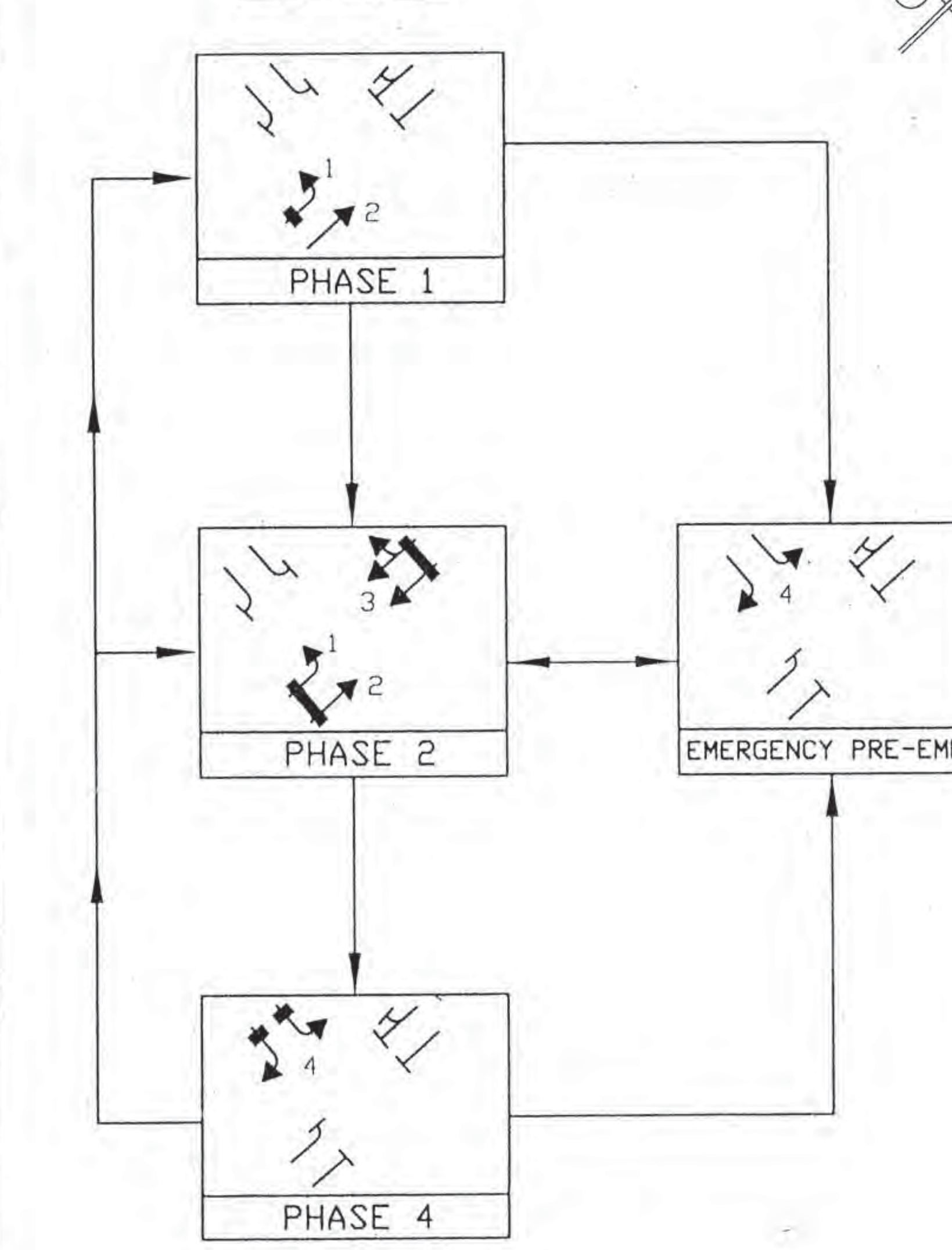
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL
TOWN OF WALLINGFORD
COOK HILL ROAD AND
SOUTH TURNPIKE ROAD

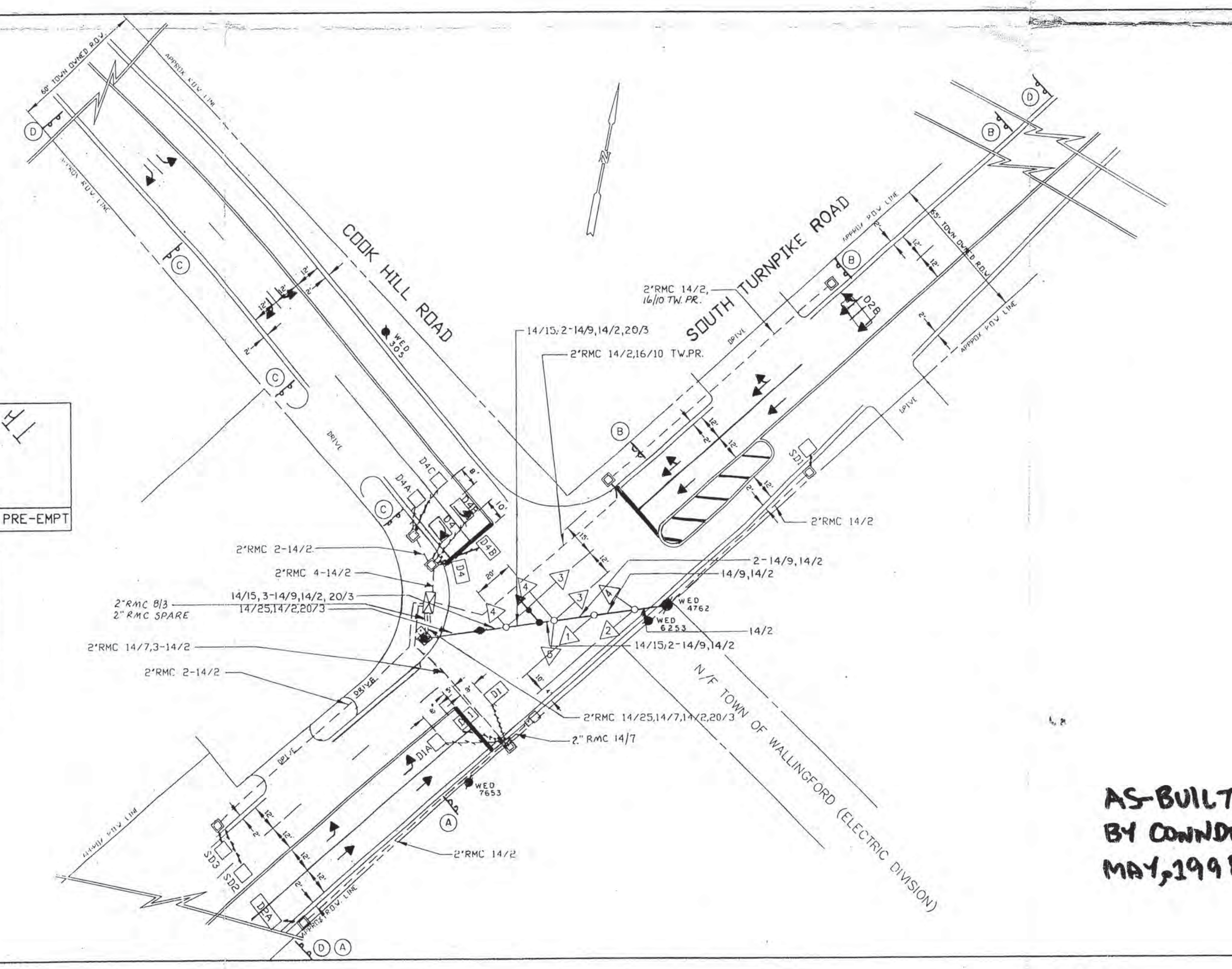
REV. # -	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY	MILONE & MACBROOM, INC		MILONE & MACBROOM, INC	
ENGINEER		FEB.1996		FEB.1996
DRAFTER		FEB.1996		FEB.1996
CHECKED BY				
SUBMITTED BY				
APPROVED BY	AS-BUILT BY			
DATE	CONN DOT MAY, 1998			

Surveyed___ Plotted___ Traced___ Designed___ New Const. Noted___ Top. Field Chk. Noted___
PLAN
NOTEBOOK NO.___

REV. # INTERSECTION # 148-807

PHASING

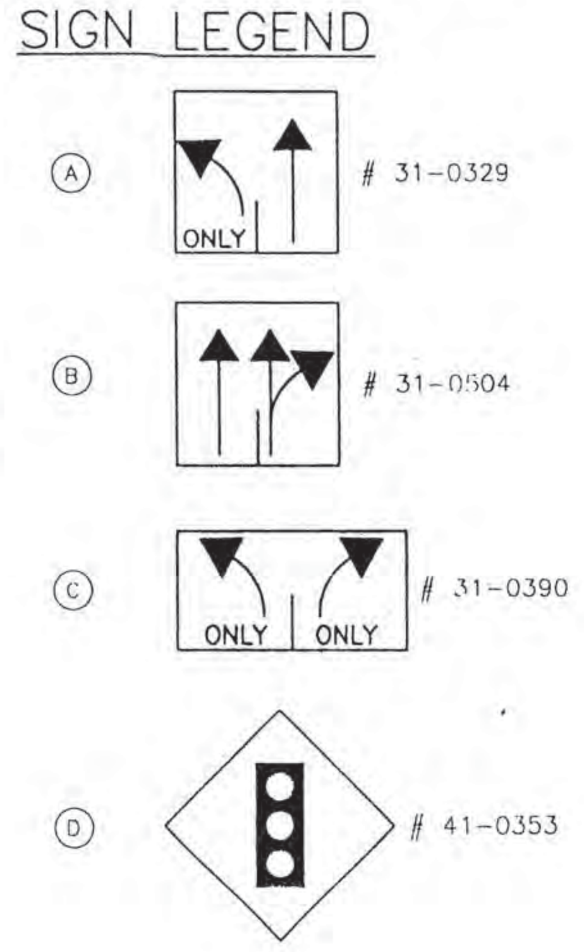




SPAN POLE INFORMATION
(A)(B) 30' LONG, 20" BOLT CIRCLE, 7,800 LBS. LOAD AT YEILD FOUNDATION TO BE SQUARE TO SPAN

AS-BUILT BY CONNDOT MAY, 1998

SIGN LEGEND



TOWN SIGNAL

MMI

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL LAYOUT
TOWN OF WALLINGFORD
COOK HILL ROAD AND
SOUTH TURNPIKE ROAD

SCALE 1" = 40' DATE: FEB. 199?

STATE OF CONNECTICUT - DEPT. OF TRANSPORTATION FORM NO.ENG.11A REV.1-88

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	WALLINGFORD	STPN-2571(1)	148-172	1996	--	13	28

CONSTRUCTION NOTES

1. ALL TRAFFIC CONTROL EQUIPMENT IS NEW. ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO THE FORM 814A AND AS AMENDED. THE LOCATIONS OF ALL THE TRAFFIC CONTROL EQUIPMENT SHALL BE STAKED, AND APPROVED BY THE TOWN/ENGINEER PRIOR TO CONSTRUCTION.
2. ALL CABLING SHALL BE NEW AND INSTALLED WITHOUT SPLICES.
3. SPAN WIRE SHALL BE 3/8",120 DIA. EXTRA STRENGTH 15,400 LBS. MAXIMUM BREAKING STRENGTH.
4. ~~CONSTRUCT STANDARD CONNDOT APPROVED PEDESTRIAN SIDEWALK RAMPS, SEE SEPARATE CONSTRUCTION PLAN AND DETAILS.~~
5. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" PRIOR TO ANY EXCAVATION. (1-800-922-4455)
6. ALL WORK TO BE COORDINATED WITH THE TOWN OF WALLINGFORD POLICE DEPARTMENT, CONTACT OFFICER R. A. DOLL (203)294-2250.
7. THE CONTRACTOR WILL SCHEDULE HIS CONSTRUCTION WORK SO THAT POSITIVE TRAFFIC CONTROL (STOP SIGNS, TEMPORARY SIGNALS, ETC.) ARE IN PLACE AND OPERATIONAL AT ALL TIMES.
8. THE CONTRACTOR SHALL SUPPLY, INSTALL AND MAKE FULLY OPERATIONAL; TO THE SATISFACTION OF THE TOWN THE FOLLOWING:

(A) ~~30' (9.14 METERS) STEEL SPAN POLE ON STANDARD SPAN POLE FOUNDATION STATION 9+52, 24' LEFT.~~ ATTACH SPAN WIRE TO EXISTING POLE WED 4762

(B) 30' (9.14 METERS) STEEL SPAN POLE ON STANDARD SPAN POLE FOUNDATION WITH POLE MOUNTED ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY, STATION 10+42,28' RIGHT. IN ACCORDANCE WITH ALL APPLICABLE NEC CODES, THE CONTRACTOR SHALL FURNISH AND INSTALL A 60 AMP WEATHER-PROOF DISCONNECT. THE DISCONNECT SHALL BE A CUTLER-HAMMER SAFETY SWITCH, HEAVY-DUTY SINGLE THROW, 222 NDK-NEMA RATED 12 (3R) DEVICE. THE DISCONNECT SHALL BE MOUNTED TEN (10) FEET ABOVE THE ADJACENT GRADE, AND IN ACCORDANCE THE TOWN'S AND MANUFACTURER'S RECOMMENDATIONS. THE COST FOR THE DISCONNECT SHALL BE INCLUDED IN THE SPAN POLE.

(C) INSTALL TOWN APPROVED (STANDARD) FULL ACTUATED 8 PHASE (MASTER) CONTROLLER ON NEW TYPE IV CONTROLLER FOUNDATION. IN "NEW STYLE BC4T" MASTER CABINET AS MANUFACTURED BY THE SOUTHERN MANUFACTURING COMPANY, ORLANDO, FLORIDA, STATION ~~9+32~~ 9+55, 24' LEFT. CONTROLLER SHALL BE EQUIPPED WITH INTERNAL EMERGENCY VEHICLE PRE-EMPT CAPABILITY. THE CONTROLLER SHALL BE EQUIPPED WITH ALL NECESSARY AND/OR REQUIRED COMPONENTS AND INTERNAL COMMUNICATION MODULES FOR INCLUSION IN AND FULL COMPATABILITY WITH THE TOWNS EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM.THE CONTROLLER CABINET SHALL BE FURNISHED WITH WALLINGFORD ELECTRIC DIVISION APPROVED METER SOCKET, SPECIAL DOOR IN DOOR ASSEMBLY AND WEATHERPROOF DISCONNECT UNIT. WORK WILL ALSO INCLUDE THE INSTALLATION OF A 3'-0" X ~~5'-0"~~ 4'-0" CONCRETE PAD ON THE DOOR SIDE OF THE CONTROLLER. THE DOOR TO THE CABINET WILL OPEN FIELD SIDE.

(D) INSTALL 4'-4" (1.30 METERS) ALUMINUM PEDESTAL ON TYPE I PEDESTAL FOUNDATION, WITH ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY, STATION 9+65, 27' RIGHT.

(E) INSTALL TYPE II HANDHOLES, (TYPICALLY 1'-0" (0.305 METERS) FROM NEW CURB, UNLESS OTHERWISE NOTED)

(E1) INSTALL TYPE II HANDHOLES AND 1" RMC WITH 16/10 TWISTED PAIR CABLE TO THE NEAREST RELOCATED UTILITY POLE.

(F) INSTALL 1 1/2" RMC (IN TRENCH/ON POLE) TO NEAREST SNET POLE, WITH CABLE BETWEEN POLE AND MODEM IN CONTROLLER CABINET. THE CONTRACTOR SHALL PAY ALL FEES OR COSTS TO SNET FOR THE INSTALLATION OF THE TELEPHONE SERVICE.

(G) ~~INSTALL 4000 L.F.± 16/10 TWISTED PAIR FIGURE 8 COMMUNICATION CABLE ON RELOCATED AND EXISTING UTILITY POLES ALONG SOUTH TURNPIKE ROAD BETWEEN COOK HILL ROAD AND CHESHIRE ROAD. ALL COSTS ASSOCIATED WITH THIS WORK WILL BE INCLUDED IN THE LINEAR FOOT PRICE BID FOR THIS ITEM.~~ 16/10 TWISTED PAIR FIGURE 8 COMMUNICATION CABLE TO BE INSTALLED UNDER PROJECT NO. 148-156/168.

(W) INSTALL 30" X 30" CONCRETE HANDHOLES.

9. ELECTRICAL SERVICE TO THE CONTROLLER SHALL BE COORDINATED WITH THE WALLINGFORD ELECTRICAL DIVISION. THE CONTRACTOR SHALL PAY ALL FEES AND COSTS FOR OBTAINING. CONTACT MR. JAMES H. RAINEY AT WALLINGFORD ELECTRIC DIVISION (203) 265-0308 TO COORDINATE.
10. ALL SIGNALS SHALL BE HUNG SO THAT A MINIMUM VERTICAL CLEARANCE OF 17 FEET (5.18 METERS) IS MAINTAINED BETWEEN THE FINAL ROADWAY SURFACE AND THE BOTTOM OF THE SIGNALS.
11. THE OPTICOM RECEIVER(S) SHALL BE MOUNTED ON THE SPAN WIRE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. A SEPERATE 20/3 CABLE SHALL BE INSTALLED (UNSPLICED) DIRECTLY TO THE CONTROLLER.
12. INSTALL LOOP DETECTORS IN BASE COURSE OF EXISTING PAVEMENT 3' (0.914 METERS) OFF OF CURB LINE OR EDGE OF ROAD, AND 8' (2.438 METERS) APART UNLESS OTHERWISE NOTED. SEGMENTED LOOPS TO BE SPLICED IN SERIES.
13. THE CONTRACTOR SHALL STAKE ALL R.O.W. PRIOR TO ANY EXCAVATION.
14. INSTALL CABLE CLOSURE ON SPAN ±5' FROM CURB LINE.
15. INSTALL RMC STAND-OFFS ON ALL UTILITY POLES WHERE REQUIRED.
16. CONTACT BELOW NOTED UTILITY/PROJECT REPRESENTATIVES A MINIMUM OF TWO (2) WEEKS PRIOR TO CONSTRUCTION.
17. ALL TRAFFIC SIGNAL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF WALLINGFORD AND CONNDOT'S STANDARD INSTALLATION DETAIL SHEETS.
18. ALL STATIONING AND OFFSETS REFER TO THE CONSTRUCTION BASELINE FOR THE OVERALL INTERSECTION RECONSTRUCTION PROJECT. SEE SHEET NUMBER 3 FOR BASELINE COORDINATES. SEE SHEET NUMBER 13 FOR LOCATIONS OF PAVEMENT MARKING AND SIGNING.
19. ALL LOOP DETECTOR INSTALLATIONS AND WIRING SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD CONSTRUCTION DETAILS IN ORDER TO ACHIEVE THE REQUIRED VEHICLE DETECTION AND TRAFFIC COUNT FUNCTIONS.
20. FOLLOWING CONSTRUCTION, AND ACCEPTANCE OF ALL TRAFFIC CONTROL EQUIPMENT, (INCLUDING THE EMERGENCY VEHICLE PRE-EMPT EQUIPMENT) THE TOWN OF WALLINGFORD WILL OWN, OPERATE AND MAINTAIN.

REV. # | INTERSECTION # 148-807

UTILITY/PROJECT CONTACTS
TOWN / POLICE: R. A. DOLL: 294-2250
SNET: BOB WENTWORTH: (203)725-4436
AT&T: RON TARINI: (203)269-2565
WALLINGFORD ELECTRIC: JAMES RAINEY: 265-0308
TCI CABLE: JIM HUBBARD: (203)483-3623
DESIGNER: M.M.I., JOHN P. THOMPSON (203)271-1773

OWNERS NAME
TOWN OF WALLINGFORD

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

RECORD PLAN
TRAFFIC CONTROL SIGNAL
BY CONNDOT
MAY, 1998

THIS SHEET ... V-237

54T

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO	YEAR	ROUTE NO.	SHEET NO.
1	CONN.	WALLINGFORD	DPM-0009(4)	148-156	1996	15	14[illegible]

RECONSTRUCTION OF INTERCHANGE 64
ROUTE 15 S.B. (WILBUR CROSS PARKWAY)
CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

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

INSTALL LOOP DETECTORS 3' OFF EDGE OF ROAD AND 8' APART UNLESS OTHERWISE SPECIFIED.

SEGMENTED LOOPS TO BE SPLICED IN SERIES.

INSTALL HANDHOLES APPROX. 1' BEHIND CURB OR EDGE OF ROAD UNLESS OTHERWISE SPECIFIED.

INSTALL R.M.C. STAND-OFFS ON ALL UTILITY POLES.

(E) RUN SPARE CONDUIT TO BASE OF SNET 1615. CAP END OF CONDUIT 1' UP FROM GROUND.

INSTALL CONCRETE SIDEWALK ON CABINET DOOR SIDE OF CONTROLLER FOUNDATION AS SHOWN ON TYPICAL INSTALLATION DETAIL SHEET.

CABINET DOOR TO OPEN FIELD SIDE.

TWO WEEKS PRIOR TO INSTALLATION CONTACT WALLINGFORD ELECTRIC DIVISI[ON] REPRESENTATIVE ART DUTRA AT (203) 265-0308 AND SNET REPRESENTATIVE LEROY WALKER AT (860) 725-4514.

TRAFFIC SIGNAL CABLE CLOSURE SHALL BE INSTALLED ON THE SPAN ± 5' FROM THE CURBLINE.

PRE-EMPTION IS TO OPERATE THROUGH THE INTERNAL PRE-EMPTION OF THE SIGNAL CONTROLLER.

OPTICAL DETECTOR LOCATIONS ON SPAN WIRE ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR THEIR DESIGNATED REPRESENTATIVE.

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

MOVEMENT DIAGRAM

NONE | PHASE 1 | PRE-EMPTION 1 (PHASE 2) | PHASE 3 | PHASE 4 | PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8

FACE	FLASH	PH1 GRN	PH1 CL	PH1 CL	PH2 GRN	PH2 CL	PH2 CL	PH3 GRN	PH3 CL	PH3 CL	PH4 GRN	PH4 CL	PH4 CL	PH5 GRN	PH5 CL	PH5 CL	PH6 GRN	PH6 CL	PH6 CL	PH7 GRN	PH7 CL	PH7 CL	PH8 GRN	PH8 CL	PH8 CL
1	Y	G←	G ←Y	G	G	G	G	G	Y	R				R	R	R									
2	Y	G	G	G	G	G	G	G	Y	R				R	R	R									
3	Y	R	R	R	G	G	G	G	Y	R				R	R	R									
4	R	R	R	R	R	R	R	R	R	R				G	Y	R									
FL SIGN	OFF	← OFF			→ ←			ON →						← ON →											
						← YIELD PT.																			
MIN.		5	3	0.1	15	0.1	0	7	3	1				6	3	1									
MAX.		15	5	0.1	35	0.1	0	7	5	3				30	5	3									

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN	5	15	7		6			
WALK								
PED CLR								
VEH EXT	2				3			
MAX 1	8	18	7		24			
MAX 2	10	21	7		24			
YELLOW	3	0.1	3		3			
RED	0.1	0	2		1			
ADD INI								
MAX INT								
TBR								
TTR								
MIN GAP								
MODE	NON-LOCK	MAX. RECALL THIS PHASE	NON-LOCK	OFF	NON-LOCK	OFF	OFF	OFF
INISTART								

DETECTORS

IDENT	SIZE (WXL)	TURNS	MODE
D1	6X6	3	PRESENCE
D5A	8X6	3	8" DELAY
D5B	11X6	3	8" DELAY
D5C	19X6	3	8" DELAY

PROGRAM

FUNCTION	TIME	DAYS
FLASH	2300-0600	DAILY
MAX. 1	ALL OTHER TIMES	
MAX. 2	1500-1800	DAILY
CYCLE 1	ALL OTHER TIMES	
CYCLE 2	1500-1800	DAILY
CYCLE 3	FUTURE	
FREE	FUTURE	

COORDINATION TYPE- CLOSED LOOP

CYCLE	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	OFFSET SEC	OFFSET %	PERMIS PERIOD Ø	PERMIS PERIOD SEC
70"	16/11	26/18	17/12		40/28				7	10		
75"	18/13	28/21	16/12		37/28				8	11		

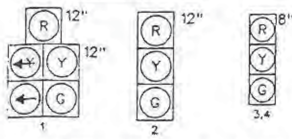
SYSTEM LOC	TECHNICAL NOTES
MASTER	STANDARD OVERLAP SKIP FEATURES APPLY
148-263	PHASE 2 ON TO OMIT PHASE 1.
148-246	
148-905	PHASE 3 TO ALWAYS FOLLOW PHASE 2.
	PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
	UNUSED TIME TO BE REALLOCATED.

ENERGY BY- TOWN	METER # -
MAINT 24hr ☐ Norm ☐	SERVICE POLE-SNET 1615

METERED SERVICE

INTERSECTION # 148-905

SIGNAL FACES



ALL CIRCULAR RED INDICATIONS SHALL BE LED LAMPS.

PRE-EMPTION SETTINGS

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

TOWN SIGNAL

OFFICE RECORD

REVISION#

STC #	SM #
SIGNAL REVISED	
WIDENED SOUTH TURNPIKE RD. TO PROVIDE FOR A NORTHBOUND LEFT TURN LANE AND TWO SOUTHBOUND THRU LANES; REVISED TRAFFIC SIGNAL FROM FULL ACTUATED TO SEMI-ACTUATED, ADDED INTERCONNECT TO INTERSECTIONS #148-263 AND #148-246; ADDED PRE-EMPTION UNDER PROJ. 148-156.	

LEGEND

R RED
Y YELLOW
G GREEN
RED ARROW
YELLOW ARROW
GREEN ARROW
WØ WALK/ FL. D.W.
DW 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
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
MAGNETIC DETECTOR
SD SYSTEM DETECTOR
OPTICAL DETECTOR
PROPOSED CONTROLLER
EXISTING CONTROLLER
PROPOSED HANDHOLE
EXISTING HANDHOLE
PROPOSED (R.M.C.) RIGID METAL CONDUIT
EXISTING (R.M.C.) RIGID METAL CONDUIT
CABLE CLOSURE
DET. LEADS IN SAW CUT
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
AUDIBLE PEDESTRIAN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
SOUTH TURNPIKE ROAD
AT CHESHIRE ROAD

REV #	TRAFFIC	DATE	ELECTRICAL	DATE
ENGINEER	JNT	11-95	AS	3-96
DRAFTER	PSF	11-95	PSF	3-96
CHECKED BY	PEW	5-96	RMW	3-96
SUBMITTED BY	CRM	5-28-96	MJG	5-29-96
APPROVED BY	VINCENT AVINO		D.P. McCALL	
DATE	5/29/96		5-29-96	

ORIGINAL SIGNED

REV. #	INTERSECTION # 148-905

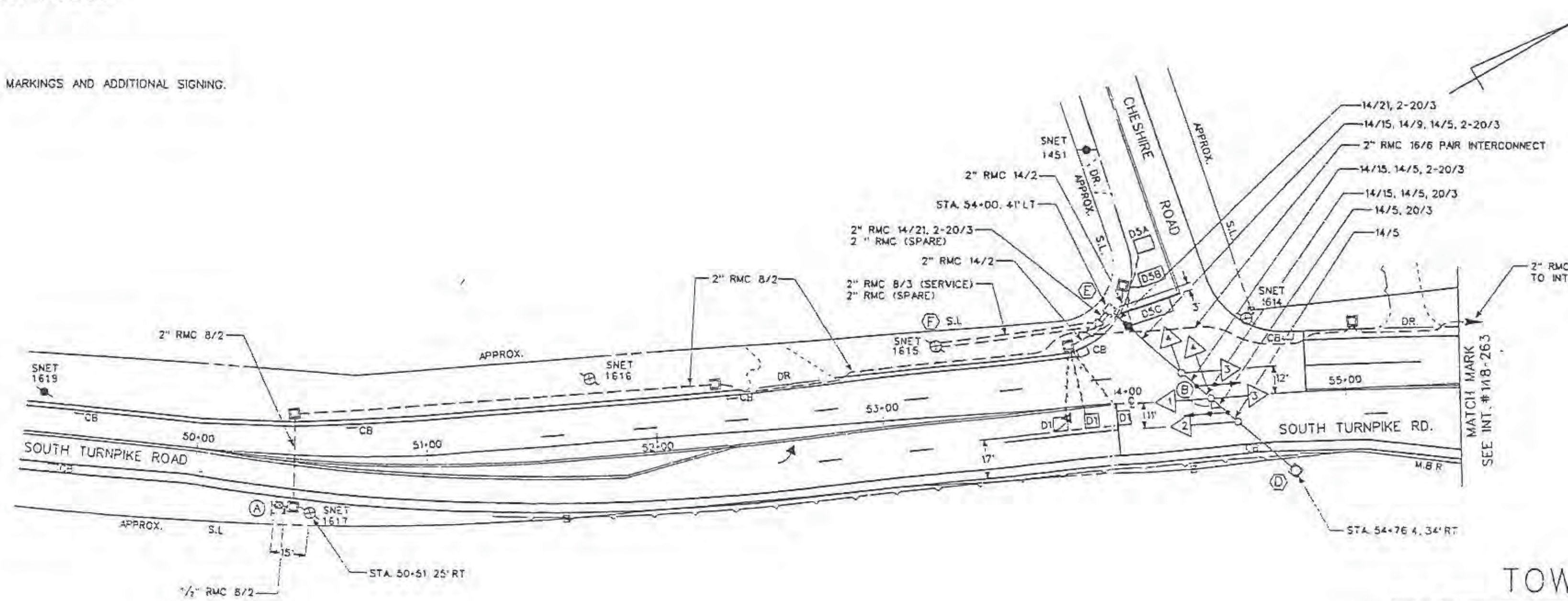
SIGN LEGEND

(A) 41-0434 (WHEN FLASHING STOP AHD.) W/FLASHERS

(B) SPAN MOUNT 31-0135Z

NOTES:

SEE SEPARATE PLAN FOR PAVEMENT MARKINGS AND ADDITIONAL SIGNING.



SPAN POLE INFORMATION

(D) 34', B.C. 22", LOAD AT YIELD 11,200 LBS.

(E) 30', B.C. 20", LOAD AT YIELD 7800 LBS.

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
SOUTH TURNPIKE ROAD
AT CHESHIRE ROAD

SCALE 1" = 40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATI[ONS]
DIVISION OF TRAFFIC ENGINEERING

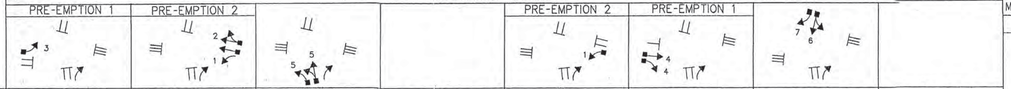
TRAFFIC CONTROL SIGNAL

55T

MOVEMENT DIAGRAM

NONE

PRE-EMPTION 1 | PRE-EMPTION 2 | | | PRE-EMPTION 2 | PRE-EMPTION 1 | |



NTOR		FLASH	PHASE 1 GRN	PHASE 1 CL	PHASE 1 CL	PHASE 2 GRN	PHASE 2 CL	PHASE 2 CL	PHASE 3 GRN	PHASE 3 CL	PHASE 3 CL	PHASE 4 GRN	PHASE 4 CL	PHASE 4 CL	PHASE 5 GRN	PHASE 5 CL	PHASE 5 CL	PHASE 6 GRN	PHASE 6 CL	PHASE 6 CL	PHASE 7 GRN	PHASE 7 CL	PHASE 7 CL	PHASE 8 GRN	PHASE 8 CL	PHASE 8 CL
FACE #	1	Y	R	R	R	G	Y	R	R	R	R				←R	◄YR	R	R	R	R	R	R	R			
	2	Y	R	R	R	G	Y	R	R	R	R				R	R	R	R	R	R	R	R	R			
	3	R	←	◄-	R	R	R	R	R	R	R				R	R	R	R	R	R	R	R	R			
	4	Y	R	R	R	R	R	R	R	R	R				R	R	R	G	Y	R	R	R	R			
	5	R	R	R	R	R	R	R	G←	Y	R				R	R	R	R	R	R	R	R	R			
	6	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R	G←	Y	R			
	7	R	R	R	R	R	R	R	R	R	R				R	R	R	R	R	R	G	Y	R			
						← YIELD PT.													← YIELD PT.							
	MIN		5	3	1	10	3	1	5	3	1				5	3	1	10	3	1	5	3	1			
	MAX		20	5	3	40	5	3	25	5	3				20	5	3	40	5	3	20	5	3			
INTERVALS	MIN GRN		5			10			6						5			10			5					
	WALK																									
	PED CLR																									
	VEH EXT		2						2						2						1					
	MAX 1		11			23			9						11			23			8					
	MAX 2		13			24			12						13			24			7					
	YELLOW			3			3			3						3			3			3				
	RED				2			2			2						2			2			1			
	ADD INI																									
	MAX INT																									
	TBR																									
	TTR																									
	MIN GAP																									
MODE			LOCK			MAX. RECALL			LOCK			OFF			NON-LOCK			MAX. RECALL			NON-LOCK			OFF		
INI START						THIS PHASE												THIS PHASE								

DETECTORS

IDENT	SIZE (WXL)	TURNS	MODE
D1	6X6	3	PRESENCE
D2,2A	6X6	4	PRESENCE
D2B,2C	6X6	3	PRESENCE
D3	6X6	3	PRESENCE
D5	6X6	3	PRESENCE
D5A	6X6	3	ABANDON
D6	6X6	4	3" DELAY
D6A	6X6	3	8" DELAY
D6B	7X6	3	8" DELAY
D6C	10X6	3	8" DELAY

PROGRAM

FUNCTION	T I M E	DAYS
FLASH	EMERGENCY ONLY	
MAX. 1	ALL OTHER TIMES	
MAX. 2	1500-1800	DAILY
CYCLE 1	ALL OTHER TIMES	
CYCLE 2	1500-1800	DAILY
CYCLE 3	FUTURE	
FREE	FUTURE	

COORDINATION TYPE- CLOSED LOOP

CYCLE	PHASE SPLITS Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	%/SEC SEC	%	OFFSET	PERMIS PERIOD Ø SEC
70"	23/16	40/28	20/14		23/16	40/28	17/12		0	0		
75"	24/18	38/29	23/17		24/18	38/29	15/11		0	0		

SYSTEM LOC

MASTER
148-263
148-246
148-905

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

UNUSED TIME TO BE REALLOCATED.

PHASE 5 TO DRIVE FACE 1 ◄Y- AND ← ONLY.

PHASE 2 TO DRIVE FACE 1 R, Y AND G.

DURING COORDINATION, SOUTH TURNPIKE RD. AND QUINNIPIAC STREET DETECTORS ARE DISCONNECTED (PHASES 2 AND 6).

PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.

DISCONNECT D5A IN CONTROLLER CABINET.

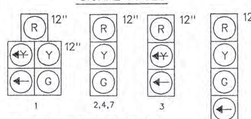
REAR SEGMENT OF LOOPS D1, D6 AND D6A TO ACT AS COUNTING AND LOCAL DETECTORS.

ENERGY BY- TOWN | METER # - | INTERSECTION # 148-263

MAINT 24hr ☒ Norm ☐ | SERVICE POLE-

METERED SERVICE

SIGNAL FACES



ALL CIRCULAR RED INDICATIONS TO HAVE LED LAMPS.

PRE-EMPTION SETTINGS

	PRE-EMPT 1	PRE-EMPT 2
PRIORITY	NO	NO
DET. LOCK	YES	YES
DELAY	0	0
ALT. MIN. GRN	5	5
ALT. YELLOW	PARENT	PARENT
ALT. RED	PARENT	PARENT
ALT. PED. CLR.	0	0
HOLD GREEN	15	15
HOLD YELLOW	3	3
HOLD RED	2	2
HOLD PHASE	1.65	2.65
EXIT PHASE	2.65	2.66
EXIT CALL	NONE	NONE

TOWN SIGNAL

LEGEND

R RED
Y YELLOW
G GREEN
◄ RED ARROW
◄Y YELLOW ARROW
← GREEN ARROW
WØ WALK/ FL. D.W.
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
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
MAGNETIC DETECTOR
SD SYSTEM DETECTOR
OPTICAL DETECTOR
PROPOSED CONTROLLER
EXISTING CONTROLLER
PROPOSED HANDHOLE
EXISTING HANDHOLE
PROPOSED (R.M.C.) RIGID METAL CONDUIT
EXISTING (R.M.C.) RIGID METAL CONDUIT
CABLE CLOSURE
DET. LEADS IN SAW CUT
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
AUDIBLE PEDESTRIAN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
ROUTE 15 S.B. ON/OFF RAMPS AT
QUINNIPIAC ST., SO. TURNPIKE RD.
AND MASONIC AVE.

REV #	TRAFFIC	DATE	ELECTRICAL	DATE
ENGINEER	JNT	11-95	JSS	3-96
DRAFTER	PSF	11-95	PSF	3-96
CHECKED BY	PEW	5-96	RMW	3-96
SUBMITTED BY	CRM	5-29-96	MJG	5-30-96
APPROVED BY	VINCENT AVINO		D.P. McCALL	
DATE	5-30-96		5-30-96	
	ORIGINAL SIGNED			

OFFICE RECORD

REVISION #1

STC # 148-9606-02 SM #

SIGNAL REVISED: 12/3/97

RELOCATED RTE. 15 S.B. RAMPS TO OPPOSITE MASONIC AVE.; CHANGED TRAFFIC SIGNAL FROM MANUALLY OPERATED TO FULL-ACTUATED; ADDED INTERCONNECT TO INT. # 148-246 AND INT. # 148-905 AND ADDED PRE-EMPTION UNDER PROJ. 148-156.

REVISION *

STC # SM #

TRAFFIC DESIGN: J.N.H. ELECT. DESIGN:

SIGNAL REVISED:

REVISED PHASING & SIGNAL HEAD LOCATIONS, ADDED ADDITIONAL DETECTORS D6, REMOVED PEDESTAL FOR RIGHT-TURN ON ROUTE 15 OFF-RAMP.

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD	DPM-0009(4)	148-156	1996	15	140A	

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

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

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

INSTALL HANDHOLES APPROX. 1' BEHIND CURB OR EDGE OF ROAD UNLESS OTHERWISE SPECIFIED.

INSTALL R.M.C. STAND-OFFS ON ALL UTILITY POLES.

INSTALL LOOP DETECTORS 3' OFF EDGE OF ROAD AND 8' APART UNLESS OTHERWISE SPECIFIED. SEGMENTED LOOPS TO BE SPLICED IN SERIES.

LOOP DETECTOR SAWCUT WIRES SHALL BE PULLED THROUGH HANDHOLE Ⓧ (WITH NO SPLICES) AND THROUGH THE 2" R.M.C., THEN SPLICED TO CORRESPONDING LOOPS IN EACH LANE. IN HANDHOLE Ⓨ. TWIST LOOP DETECTOR SAWCUT WIRES INSIDE THE 2" R.M.C. ACCORDING TO TYPICAL PLAN.

INSTALL CONCRETE SIDEWALK ON CABINET DOOR SIDE OF CONTROLLER FOUNDATION AS SHOWN ON TYPICAL INSTALLATION DETAIL SHEET.

CABINET DOOR TO OPEN FIELD SIDE.

TWO WEEKS PRIOR TO INSTALLATION CONTACT WALLINGFORD ELECTRIC DIVISION REPRESENTATIVE ART DUTRA AT (203) 265-0308 AND SNET REPRESENTATIVE LEROY WALKER AT (860) 725-4514.

TRAFFIC SIGNAL CABLE CLOSURE SHALL BE INSTALLED ON THE SPAN ± 5' FROM THE CURBLINE.

SPAN ATTACHMENT ON ED 4569 SHALL BE APPROX. 30'. CONTRACTOR TO VERIFY LOCATION WITH UTILITIES PRIOR TO ATTACHMENT.

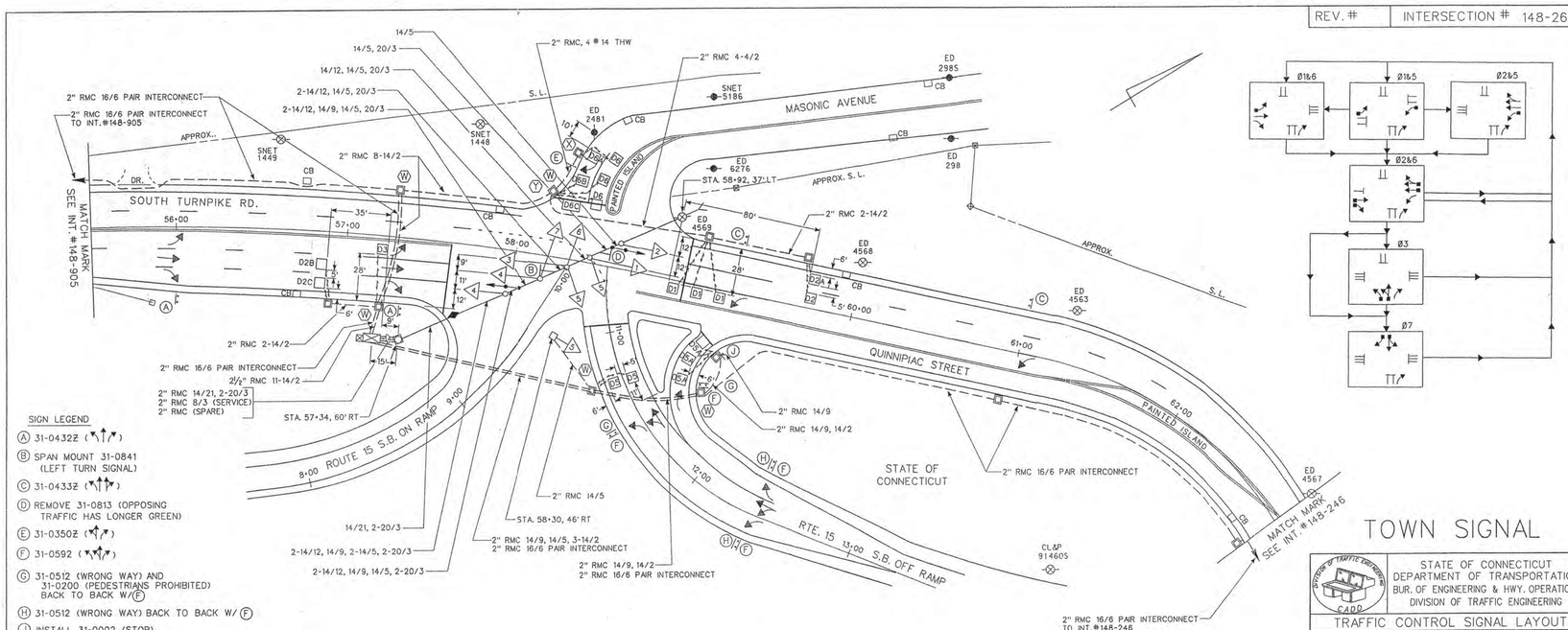
ED 4569 TO BE ANCHORED AND GUYED.

PRE-EMPTION IS TO OPERATE THROUGH THE INTERNAL PRE-EMPTION OF THE SIGNAL CONTROLLER.

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

OPTICAL DETECTOR LOCATIONS ON SPAN WIRE ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR THEIR DESIGNATED REPRESENTATIVE.

REV. # | INTERSECTION # 148-263



SIGN LEGEND

Ⓐ 31-0432Z (◄↑/)
Ⓑ SPAN MOUNT 31-0841 (LEFT TURN SIGNAL)
Ⓒ 31-0433Z (◄↑→)
Ⓓ REMOVE 31-0813 (OPPOSING TRAFFIC HAS LONGER GREEN)
Ⓔ 31-0350Z (◄/)
Ⓕ 31-0592 (◄/→)
Ⓖ 31-0512 (WRONG WAY) AND 31-0200 (PEDESTRIANS PROHIBITED) BACK TO BACK W/Ⓔ
Ⓗ 31-0512 (WRONG WAY) BACK TO BACK W/ Ⓕ
Ⓙ INSTALL 31-0002 (STOP)

SPAN POLE INFORMATION

34', B.C. 22", LOAD AT YIELD 11,200 LBS.

NOTES:

SEE SEPARATE PLAN FOR PAVEMENT MARKINGS AND ADDITIONAL SIGNING.

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
ROUTE 15 S.B. ON/OFF RAMPS AT
QUINNIPIAC ST., SO. TURNPIKE RD.
AND MASONIC AVE.

SCALE : 1" = 40'

REVISIONS		
NO.	DATE	DESCRIPTION
A	6/98	REVISED PHASING & SIGNAL HEAD LOCATIONS, ADDED ADDITIONAL DETECTORS D6, REMOVED PEDESTAL FOR RIGHT-TURN ON ROUTE 15 OFF-RAMP.

PEW 6/98

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

56T

		PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
NTOR	FLASH	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL
1	R	G ← G ← G	G Y R	R R R		R R R			
2	R	G G G	G Y R	R R R		R R R			
3	R	R R R	G Y R	R R R		R R R			
4	R	R R R	R R R	G ← Y R		R R R			
5	R	R R R	R R R	R R R		G ← Y R			
6	R	R R R	R R R	G Y R		R R R			
7	R	R R R	R R R	R R R		G Y R			
8	R	G ← G ← G	G Y R	R R R		R R R			
9	R	R R R	R R R	R R R		G Y R			
MIN		3 3 0.1	9 3 1	9 3 1		9 3 1			
MAX		10 5 0.1	30 5 3	30 5 3		30 5 3			
MIN GREEN		3	9	9		9			
WALK			← YIELD PT.	1		1			
PED CLR				14		14			
VEH EXT		1	2	2		2			
MAX 1		6	19	13		13			
MAX 2		5	22	14		15			
YELLOW		3	4	4		4			
RED		0.1	1	1		1			
ADD INIT									
MAX INIT									
TBR									
TTR									
MIN GAP									
MODE		NON-LOCK	MAX RECALL	LOCK	OFF	NON-LOCK	OFF	OFF	OFF
INI START			THIS PHASE						

DETECTORS			
IDENT	SIZE (WXL)	TURNS	MODE
D1	6X6	3	PRESENCE
D2	6X6	3	PRESENCE
D2A	6X6	3	PRESENCE
D2B	6X6	3	PRESENCE
D3	6X6	3	PRESENCE
D5	17X6	3	8" DELAY
D5A	16X6	3	8" DELAY
D5B	14X6	3	8" DELAY

PROGRAM			COORDINATION TYPE- CLOSED LOOP												PERMISSIVE PERIOD		SYSTEM LOC
FUNCTION	TIME	DAYS	CYCLE	PHASE SPLITS Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	SEC/% SEC	%	OFFSET SEC	%	Ø	SEC	MASTER
FLASH	EMERGENCY ONLY																	148-263
MAX 1	ALL OTHER TIMES																	148-246
MAX 2	1500-1800	DAILY																148-905
CYCLE 1	ALL OTHER TIMES		70	9/13	24/34	18/26		18/26				18	26					
CYCLE 2	1500-1800	DAILY	75	8/11	21/36	19/25		20/27				17	23					
CYCLE 3	FUTURE																	
FREE	FUTURE																	

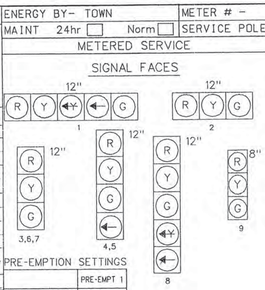
TECHNICAL NOTES
STANDARD OVERLAP SKIP FEATURES APPLY
PHASE 2 ON TO OMIT PHASE 1
DURING COORDINATION, QUINNIPIAC ST. DETECTORS
ARE DISCONNECTED (PHASE 2.)
PRE-EMPTION TO BE INOPERATIVE DURING
FLASHING OPERATION.
UNUSED TIME TO BE REALLOCATED.
P1 TO CALL PHASE 5
P2 TO CALL PHASE 3

ENERGY BY- TOWN | METER # - | INTERSECTION # 148-246

MAINT 24hr ☐ Norm ☐ | SERVICE POLE-SNET 1943

METERED SERVICE

SIGNAL FACES



PRE-EMPTION SETTINGS

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

ALL CIRCULAR RED INDICATIONS TO BE LED LAMPS

SIGNAL FACE 8 TO HAVE TUNNEL VISORS.

OFFICE RECORD

REVISION # | STC # | SM #

SIGNAL REVISED:
ADDED ADVANCE FOR QUINNIPIAC ST. E.B.,
ADDED PRE-EMPTION AND INTERCONNECT TO INT'S. #148-263 AND #148-905, AND TRANSFERRED OWNERSHIP FROM THE STATE TO THE TOWN OF WALLINGFORD UNDER PROJECT 148-156.

TOWN SIGNAL

LEGEND

R RED
Y YELLOW
G GREEN
RA RED ARROW
YA YELLOW ARROW
GA GREEN ARROW
W@ WALK/ FL.D.W.
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
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
MAGNETIC DETECTOR
SD SYSTEM DETECTOR
OPTICAL DETECTOR
PROPOSED CONTROLLER
EXISTING CONTROLLER
PROPOSED HANDHOLE
EXISTING HANDHOLE
PROPOSED (R.M.C.) RIGID METAL CONDUIT
EXISTING (R.M.C.) RIGID METAL CONDUIT
CABLE CLOSURE
DET. LEADS IN SAW CUT
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
AUDIBLE PEDESTRIAN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
ROUTE 15 N.B. OFF-RAMP AT
QUINNIPIAC ST. AND RIVER RD.

REV #	TRAFFIC	DATE	ELECTRICAL	DATE
ENGINEER	JNT	5/96	AS	5/96
DRAFTER	MJC	5/96	MJC	5/96
CHECKED BY	PEW	5/96	JSS	5/96
SUBMITTED BY	CRM	6-3-96	MJC	6-3-96
APPROVED BY	VINCENT AVINO		D.P. McCALL	
DATE	6/4/96		6-4-96	

ORIGINAL SIGNED

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD	DPM-0009(4)	148-156	1996	15	39A	

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW EXCEPT AS NOTED.

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

LOOP DETECTORS D2A AND D2B ARE EXISTING.

INSTALL LOOP DETECTORS 3' OFF EDGE OF ROAD AND 8' APART UNLESS OTHERWISE NOTED.

INSTALL LOOP DETECTORS D1 IN CENTER OF LANE AND 8' APART.

SEGMENTED LOOPS TO BE INSTALLED IN SERIES.

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

INSTALL HANDHOLES APPROX. 1' BEHIND CURB OR EDGE OF ROAD UNLESS OTHERWISE SPECIFIED.

(G) INSTALL PEDESTAL ADJACENT TO SIDEWALK RAMP AT BACK EDGE.

(H) INSTALL DISCONNECT BOX IN PLACE OF FLASHER CABINET.

REPLACE ENTIRE SECTION OF SIDEWALK DAMAGED DUE TO INSTALLATION OF CONDUIT, HANDHOLE OR FOUNDATION.

CABINET DOOR TO OPEN FIELD SIDE.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO FOUNDATIONS, HANDHOLES, CONDUIT RISERS & CABLE, MESSENGER & INTERCONNECT, STEEL POLES, AND WOOD POLES.

TRAFFIC SIGNAL CABLE CLOSURE SHALL BE INSTALLED ON THE SPAN ± 5' FROM THE CURBLINE.

TWO WEEKS PRIOR TO INSTALLATION CONTACT WALLINGFORD ELECTRICAL DIVISION REPRESENTATIVE ART DUTRA AT (203) 265-0308 AND SNET REPRESENTATIVE LEROY WALKER AT (860) 725-4514.

PRE-EMPTION IS TO OPERATE THROUGH THE INTERNAL PRE-EMPTION OF THE SIGNAL CONTROLLER.

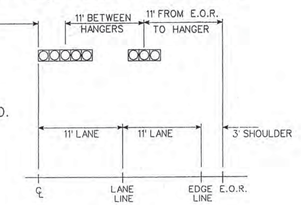
THE CONTRACTOR IS TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.

OPTICAL DETECTOR LOCATIONS ON SPAN WIRE ARE FOR ILLUSTRATION ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER OR HIS DESIGNATED REPRESENTATIVE.

CONTRACTOR TO INITIALLY INSTALL PAVEMENT MARKINGS AS INDICATED BELOW:

- ALL PAVEMENT MARKINGS ON ROUTE 15 OFF RAMP
- ALL PAVEMENT MARKINGS ON QUINNIPIAC ST. EASTBOUND APPROACH.

CONTRACTOR TO CALL D.O.T. 48 HRS. PRIOR TO INSTALLING TRAFFIC SIGNAL HEADS. CALL ANTHONY SERVIDONE AT (860) 594-2990.

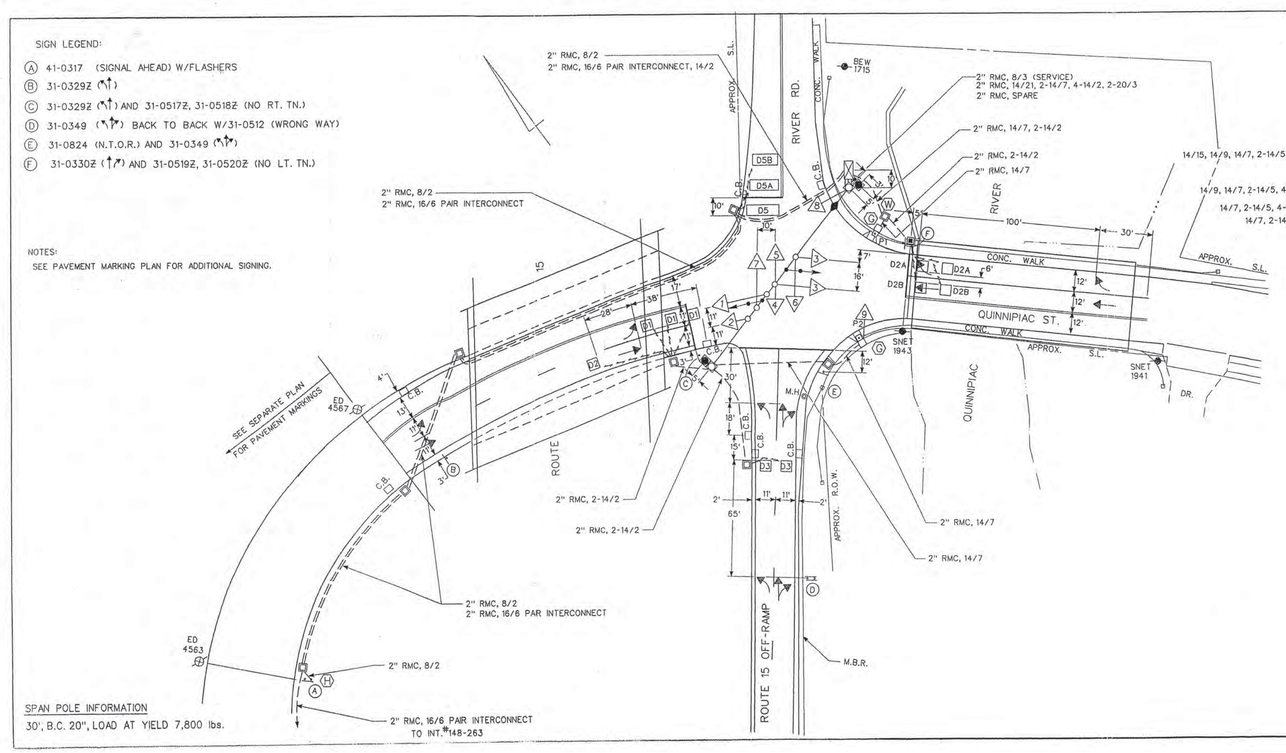


QUINNIPIAC ST. E.B. APPROACH
DETAIL FOR HORIZONTAL SIGNAL HEAD PLACEMENT
SCALE: 1"=10'

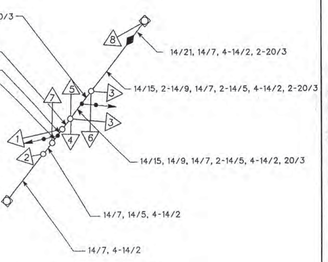
SIGN LEGEND:

(A) 41-0317 (SIGNAL AHEAD) W/FLASHERS
(B) 31-0329Z (↑)
(C) 31-0329Z (↑) AND 31-0517Z, 31-0518Z (NO RT. TN.)
(D) 31-0349 (↖↑) BACK TO BACK W/31-0512 (WRONG WAY)
(E) 31-0824 (N.T.O.R.) AND 31-0349 (↖↑)
(F) 31-0330Z (↑↱) AND 31-0519Z, 31-0520Z (NO LT. TN.)

NOTES:
SEE PAVEMENT MARKING PLAN FOR ADDITIONAL SIGNING.



SPAN POLE INFORMATION
30', B.C. 20", LOAD AT YIELD 7,800 lbs.



SPAN POLE ELECTRICAL CALLOUTS

REV. # | INTERSECTION # 148-246

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
ROUTE 15 N.B. OFF-RAMP AT
QUINNIPIAC ST. AND RIVER RD.

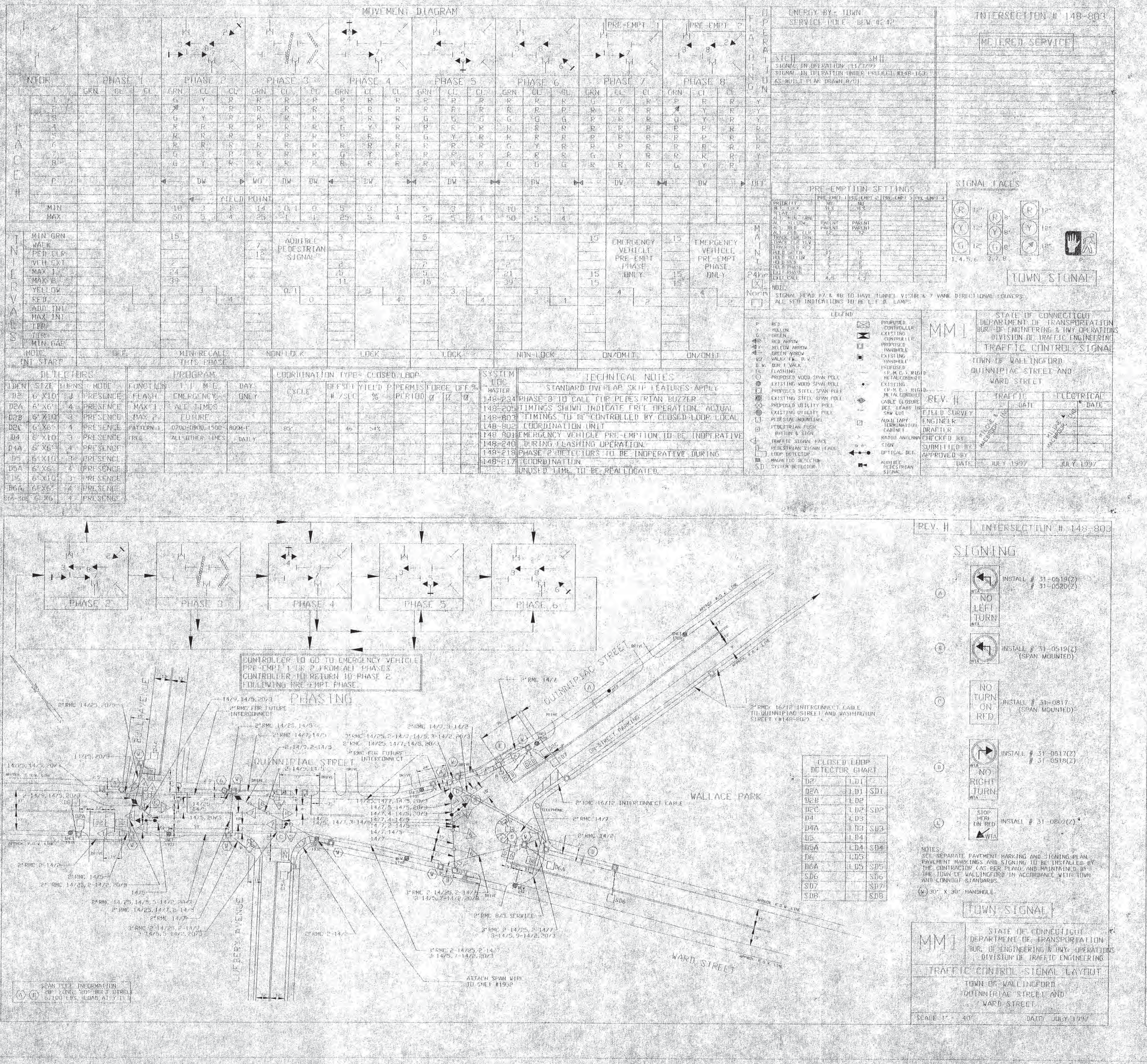
SCALE : 1"=40' | ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	INIT.	DESCRIPTION
A	6/98	PBC 01/21/98	REVISED OFFSETS DUE TO REVISED PHASING OF ADJACENT SIGNAL 148-263

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

57T



STATE OF CONNECTICUT - DEPT. OF TRANSPORTATION

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN	WALLINGFORD	STPN-2565 (2)	148-163	1997		31	54

CONSTRUCTION NOTES

1. ALL TRAFFIC CONTROL EQUIPMENT UNLESS OTHERWISE NOTED IS NEW. ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO THE FORM 814A AND AS AMENDED. ALL NEW TRAFFIC CONTROL EQUIPMENT SHALL BE FIELD LOCATED AND APPROVED BY THE ENGINEER AND THE TOWN PRIOR TO CONSTRUCTION.
2. ALL CABLING SHALL BE NEW AND INSTALLED WITHOUT SPLICES.
3. SPAN WIRE SHALL BE 3/8" (.120 DIA. EXTRA STRENGTH 15,400 LBS. MAXIMUM BREAKING STRENGTH.
4. (X) TYPE 3 PEDESTRIAN SIDEWALK RAMPS.
5. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (1-800-922-4455) PRIOR TO ANY EXCAVATION.
6. ALL WORK TO BE COORDINATED WITH THE TOWN OF WALLINGFORD POLICE DEPARTMENT, CONTACT OFFICER R. A. DOLE 294-2250.
7. THE CONTRACTOR WILL SCHEDULE HIS CONSTRUCTION WORK SO THAT POSITIVE TRAFFIC CONTROL (STOP SIGNS, TEMPORARY SIGNALS, ETC.) ARE IN PLACE AND OPERATIONAL AT ALL TIMES.
8. THE CONTRACTOR SHALL SUPPLY, INSTALL AND MAKE FULLY OPERATIONAL THE FOLLOWING:
   - (A) 28' STEEL SPAN POLE ON STANDARD SPAN POLE FOUNDATION.
   - (B) 28' STEEL SPAN POLE ON STANDARD SPAN POLE FOUNDATION WITH POLE MOUNTED ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY, AND 2 ONE-WAY PEDESTRIAN SIGNALS.
   - (C) INSTALL TOWN APPROVED (STANDARD) FULL ACTUATED 8 PHASE (MASTER) CONTROLLER ON NEW TYPE IV CONTROLLER FOUNDATION. CONTROLLER SHALL BE EQUIPPED WITH INTERNAL EMERGENCY VEHICLE PRE-EMPT CAPABILITY. THE CONTROLLER SHALL BE EQUIPPED WITH ALL NECESSARY AND/OR REQUIRED COMPONENTS AND INTERNAL COMMUNICATION MODULES FOR INCLUSION IN AND FULL COMPATIBILITY WITH THE TOWN'S EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM. THE CONTROLLER TYPE IV CABINET SHALL BE EQUIPMENT WITH A WALLINGFORD ELECTRIC DIVISION APPROVED METER SOCKET, AND A WEATHERPROOF DISCONNECT.
   - (D) INSTALL 8'-0" ALUMINUM PEDESTAL ON TYPE I PEDESTAL FOUNDATION WITH ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY AND TWO-WAY PEDESTRIAN SIGNAL.
   - (E) INSTALL 8'-0" ALUMINUM PEDESTAL ON TYPE I PEDESTAL FOUNDATION WITH ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY AND ONE-WAY PEDESTRIAN SIGNAL.
   - (F) INSTALL TYPE II HANDHOLES, (TYPICALLY 1'-0" FROM NEW CURB) UNLESS OTHERWISE NOTED.
   - (G) INSTALL 10'-0" ALUMINUM PEDESTAL, WITH ONE-WAY VEHICULAR TRAFFIC SIGNAL.
   - (H) INSTALL 10'-0" ALUMINUM PEDESTAL, WITH ONE-WAY VEHICULAR TRAFFIC SIGNAL AND ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY AND ONE-WAY PEDESTRIAN SIGNAL.
   - INSTALL TOWN/STATE APPROVED AUDIBLE PEDESTRIAN SIGNAL WITH ADJUSTABLE RHEOSTAT IN CONTROLLER CABINET.
   - (I) INSTALL 2" RMC FOR TRAFFIC CONTROL. COORDINATE EXACT LOCATION WITH "OTHERS" PERFORMING SIDEWALK AND LIGHTING WORK IN PARK.
   - (J) INSTALL 18"X24" SECONDARY SPLICE BOX (SEE SPECIAL PROVISION FOR ORNAMENTAL LIGHT STANDARDS).
   - (W) INSTALL 30"X30" CONCRETE HANDHOLE. ALL OTHERS TO BE TYPE II.
9. ELECTRICAL SERVICE TO THE CONTROLLER SHALL BE COORDINATED WITH THE WALLINGFORD ELECTRICAL DIVISION. THE CONTRACTOR SHALL PAY ALL FEES AND COSTS FOR OBTAINING. CONTACT MR. ART BUTRA AT WALLINGFORD ELECTRIC DIVISION (203) 265-0308 TO COORDINATE.
10. THE OPTICOM RECEIVER(S) SHALL BE MOUNTED MIN SPAN IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE APPROVED BY AN AUTHORIZED REPRESENTATIVE OF 3M PRIOR TO INSTALLATION OR TURN-ON. A SEPARATE 20/3 CABLE (FOR EACH OPTICAL DETECTOR) SHALL BE INSTALLED (UNSPLICED) DIRECTLY TO THE CONTROLLER CABINET.
11. ALL SIGNALS SHALL BE HUNG SO THAT A MINIMUM VERTICAL CLEARANCE OF 16 FEET (4.88 METERS) IS MAINTAINED BETWEEN THE FINAL ROADWAY SURFACE AND THE BOTTOM OF THE SIGNALS.
12. INSTALL LOOP DETECTORS IN BASE COURSE OF NEW PAVEMENT, CENTER OF LANE AND 8' (2.438 METERS) APART UNLESS OTHERWISE NOTED. SEGMENTED LOOPS TO BE SPLICED IN SERIES.
13. INSTALL TRAFFIC SIGNAL CABLE CLOSURE (ON SPAN) 5 FEET± FROM CURBLINE.
14. INSTALL RMC STAND OFF ON UTILITY POLE BEW #1749. INSTALL POLE MOUNTED SERVICE DISCONNECT 10 FEET ABOVE THE GROUND ON POLE BEW#1749.
15. CONTACT NOTED UTILITY COMPANIES A MINIMUM OF TWO (2) WEEKS PRIOR TO CONSTRUCTION.
16. ALL TRAFFIC SIGNAL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH CONNDOT'S AND WALLINGFORD'S STANDARDS.
17. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE THE PLACEMENT OF THE NEW TRAFFIC CONTROL APPURTENANCES AT WALLACE PARK WITH "OTHERS" WHO MAY BE WORKING IN THE SAME AREA.
18. ATTACH SPANWIRE TO UTILITY POLE SNET #1932 AT APPROXIMATELY 24.5 FEET ABOVE THE GROUND AND UTILITY POLE SNET #1933 AT APPROXIMATELY 23.0 FEET ABOVE THE GROUND.
19. ANCHOR BOLTS FOR POLE FOUNDATIONS SHALL BE SET SQUARE TO THE SPAN POLE SUCH THAT TWO BOLTS ARE IN TENSION AND TWO ARE IN COMPRESSION.
20. CONTRACTOR TO COORDINATE WITH WALLINGFORD ELECTRIC DIVISION TO PROVIDE BACK GUYS AND ANCHORS TO POLES WED #1932 AND 1933 FOR SPAN INSTALLATION.

UTILITY/PROJECT CONTACTS
TOWN / POLICE: R. A. DOLE 294-2250
SNET: BOB BOUFFARD (800) 748 1693
AT&T: RON TARINI (203) 269-2565
WALLINGFORD ELECTRIC: ART BUTRA (203) 265-0308
TCI CABLE: ADAM BURR (203) 483-2300
DESIGNER: M.M.E. - JOHN P. THOMPSON (203) 271-1773

OWNERS NAME
TOWN OF WALLINGFORD

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

QUINNIPIAC ST. & WARD ST.

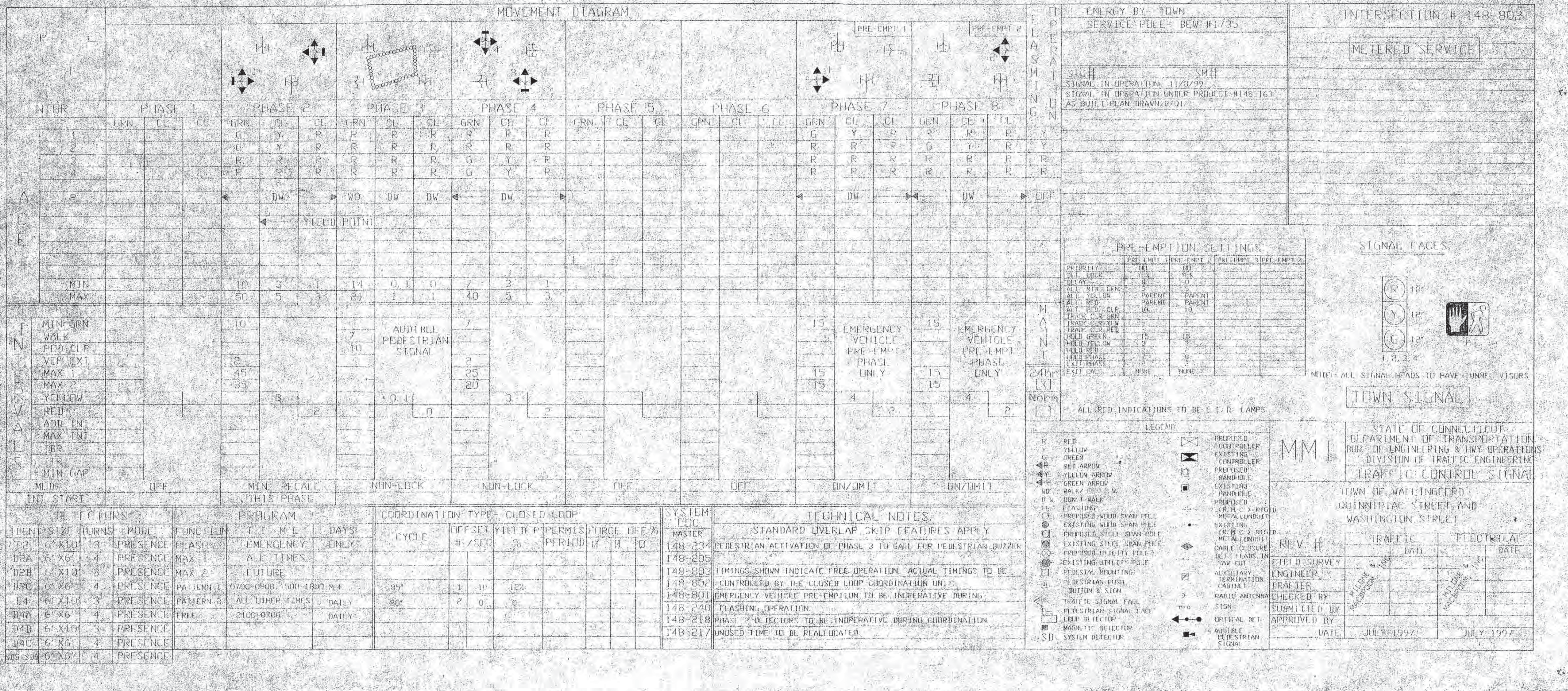
TRAFFIC CONTROL SIGNAL

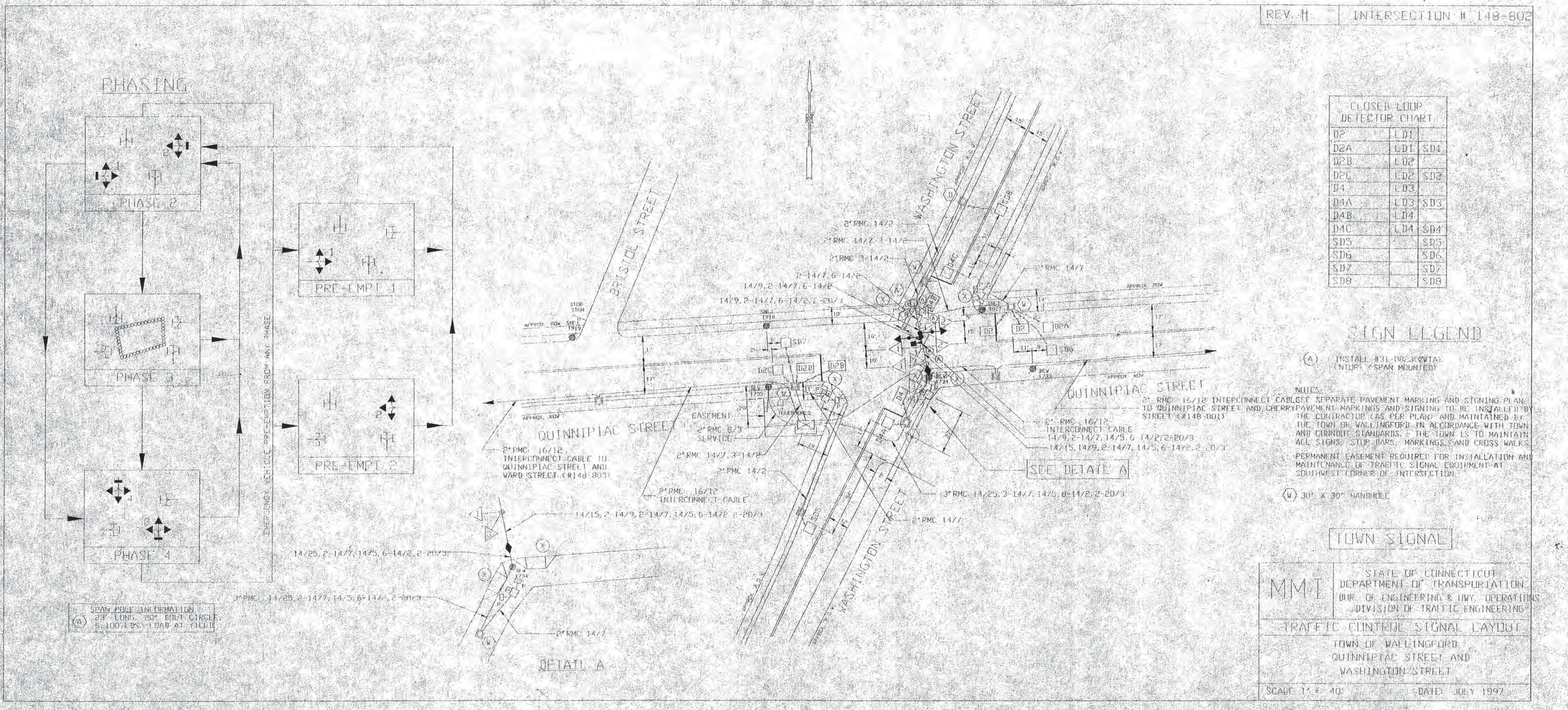
58T

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD	STPN-2565-(2)	148-163	1997		30	54

INTERSECTION # 148-802

METERED SERVICE





CONSTRUCTION NOTES

1. ALL TRAFFIC CONTROL EQUIPMENT, UNLESS OTHERWISE NOTED IS NEW. ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO THE FORM 814A AND AS AMENDED. ALL NEW TRAFFIC CONTROL EQUIPMENT SHALL BE FIELD LOCATED AND APPROVED BY THE ENGINEER AND THE TOWN PRIOR TO CONSTRUCTION.

2. ALL CABLING SHALL BE NEW AND INSTALLED WITHOUT SPLICES.

3. SPAN WIRE SHALL BE 3/8", .120 DIA. EXTRA STRENGTH 15,400 LBS. MAXIMUM BREAKING STRENGTH.

4. (X) TYPE 3 PEDESTRIAN SIDEWALK RAMPS.

5. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (1-800-922-4455) PRIOR TO ANY EXCAVATION.

6. ALL WORK TO BE COORDINATED WITH THE TOWN OF WALLINGFORD POLICE DEPARTMENT, CONTACT OFFICER R. A. DOLL 294-2250.

7. THE CONTRACTOR WILL SCHEDULE HIS CONSTRUCTION WORK SO THAT POSITIVE TRAFFIC CONTROL (STOP SIGNS, TEMPORARY SIGNALS, ETC.) ARE IN PLACE AND OPERATIONAL AT ALL TIMES.

8. THE CONTRACTOR SHALL SUPPLY, INSTALL AND MAKE FULLY OPERATIONAL THE FOLLOWING:

(A) 28' (8.53 METERS) STEEL SPAN POLE ON STANDARD SPAN POLE FOUNDATION WITH POLE MOUNTED ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY, AND 2 ONE-WAY PEDESTRIAN SIGNALS.

(B) INSTALL TOWN APPROVED (STANDARD) FULL ACTUATED 8 PHASE CONTROLLER ON NEW TYPE IV CONTROLLER FOUNDATION. CONTROLLER SHALL BE EQUIPPED WITH INTERNAL EMERGENCY VEHICLE PRE-EMPT CAPABILITY. THE CONTROLLER SHALL BE EQUIPPED WITH ALL NECESSARY AND/OR REQUIRED COMPONENTS AND INTERNAL COMMUNICATION MODULES FOR INCLUSION IN AND FULL COMPATIBILITY WITH THE TOWN'S EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM. THE CONTROLLER TYPE IV CABINET SHALL BE EQUIPPED WITH A WALLINGFORD ELECTRIC DIVISION APPROVED METER SOCKET AND A WEATHERPROOF DISCONNECT. THE CONTRACTOR SHALL INSTALL A 3'X5' CONCRETE SIDEWALK (PAD) ON THE CABINET.

(C) INSTALL 8'-0" (2.438 METERS) ALUMINUM PEDESTAL ON TYPE I PEDESTAL FOUNDATION, WITH ADA APPROVED PUSH BUTTON AND SIGN ASSEMBLY, AND TWO-WAY PEDESTRIAN SIGNAL.

(D) INSTALL TYPE II CONCRETE HANDHOLES, (TYPICALLY 1'-0" (0.305 METERS) FROM NEW CURB, UNLESS OTHERWISE NOTED.

INSTALL TOWN/STATE APPROVED AUDIBLE PEDESTRIAN SIGNAL WITH ADJUSTABLE RHEOSTAT IN CONTROLLER CABINET.

(F) UTILITY POLE BEW 1734 TO BE REPLACED BY OTHERS AS NEW POLE BEW #84 AND TO BE GUYED BY WALLINGFORD ELECTRIC DIVISION.

(W) INSTALL 30"X30" CONCRETE HANDHOLE, ALL OTHERS TO BE TYPE II.

9. ELECTRICAL SERVICE TO THE CONTROLLER SHALL BE COORDINATED WITH THE WALLINGFORD ELECTRICAL DIVISION. THE CONTRACTOR SHALL PAY ALL FEES AND COSTS FOR OBTAINING. CONTACT MR. JAMES H. RAINEY AT WALLINGFORD ELECTRIC DIVISION (203) 265-0308 TO COORDINATE.

10. THE OPTICOM RECEIVER(S) SHALL BE MOUNTED MID-SPAN IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND SHALL BE APPROVED BY AN AUTHORIZED REPRESENTATIVES OF 3-M PRIOR TO INSTALLATION OR TURN-ON. A SEPARATE 20/3 CABLE (FOR EACH OPTICAL DETECTOR) SHALL BE INSTALLED (UNSPLICED) DIRECTLY TO THE CONTROLLER CABINET.

11. ALL SIGNALS SHALL BE HUNG SO THAT A MINIMUM VERTICAL CLEARANCE OF 16 FEET (4.88 METERS) IS MAINTAINED BETWEEN THE FINAL ROADWAY SURFACE AND THE BOTTOM OF THE SIGNALS.

12. INSTALL LOOP DETECTORS IN BASE COURSE OF NEW PAVEMENT, CENTERED IN LANE AND 8' (2.438 METERS) APART UNLESS OTHERWISE NOTED. SEGMENTED LOOPS TO BE SPLICED IN SERIES.

13. INSTALL TRAFFIC SIGNAL CABLE CLOSURE, ON SPAN, 5 FEET± FROM CURBLINE.

14. INSTALL 2" RMC STAND-OFF ON UTILITY POLE BEW #1735 AND 3" RMC STAND OFF ON NEW BEW # 84. INSTALL POLE MOUNTED SERVICE DISCONNECT 10 FEET ABOVE THE GROUND ON POLE BEW#1735.

15. CONTACT NOTED UTILITY COMPANIES A MINIMUM OF TWO (2) WEEKS PRIOR TO CONSTRUCTION.

16. ALL TRAFFIC SIGNAL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH CONNDOT'S AND WALLINGFORD'S STANDARDS.

17. THE CONTRACTOR SHALL RESTORE THE EASEMENT AREA ON THE SOUTHWEST CORNER OF INTERSECTION TO THE SATISFACTION OF TOWN OF WALLINGFORD HOUSING AUTHORITY. THIS WORK WILL INCLUDE ALL NECESSARY REGRADING, LOAMING, SEEDING AND TURF ESTABLISHMENT.

18. ATTACH SPANWIRE TO NEW UTILITY POLE BEW #84 AT APPROXIMATELY 22.5 FEET ABOVE THE GROUND.

19. ANCHOR BOLTS FOR POLE FOUNDATIONS SHALL BE SET SQUARE TO THE SPAN POLE SUCH THAT TWO BOLTS ARE IN TENSION AND TWO ARE IN COMPRESSION.

UTILITY/PROJECT CONTACTS
TOWN / POLICE: R. A. DOLL 294-2250
SNET: BOB BOUFFARD (800) 748-1693
AT&T: RON TARINI (203) 269-2565
WALLINGFORD ELECTRIC: ART DUTRA (203) 265-0308
TCI CABLE: ADAM BURR (203) 483-2300
DESIGNER: M.M.I., JOHN P. THOMPSON (203) 271-1773

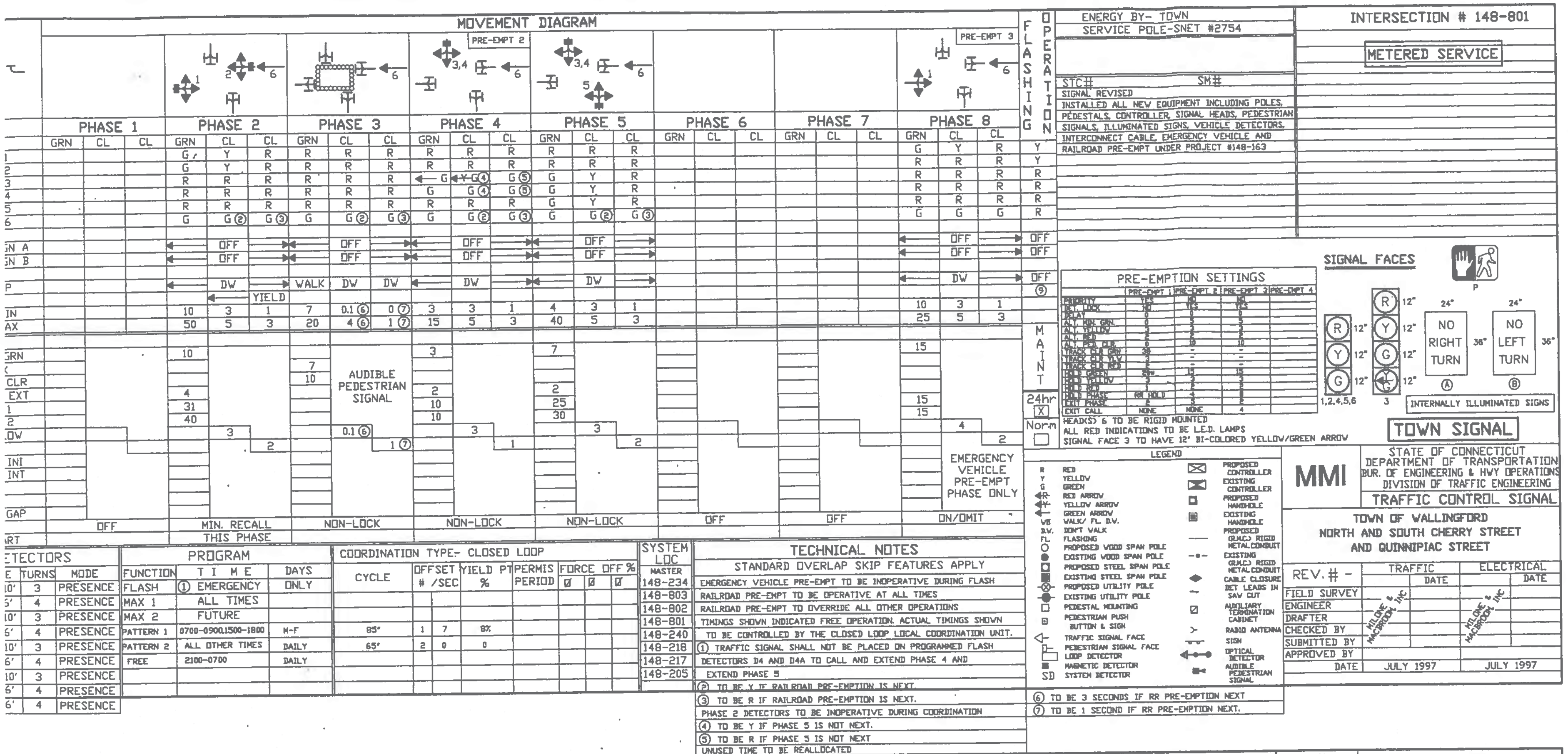
REV. H | INTERSECTION # 148-802

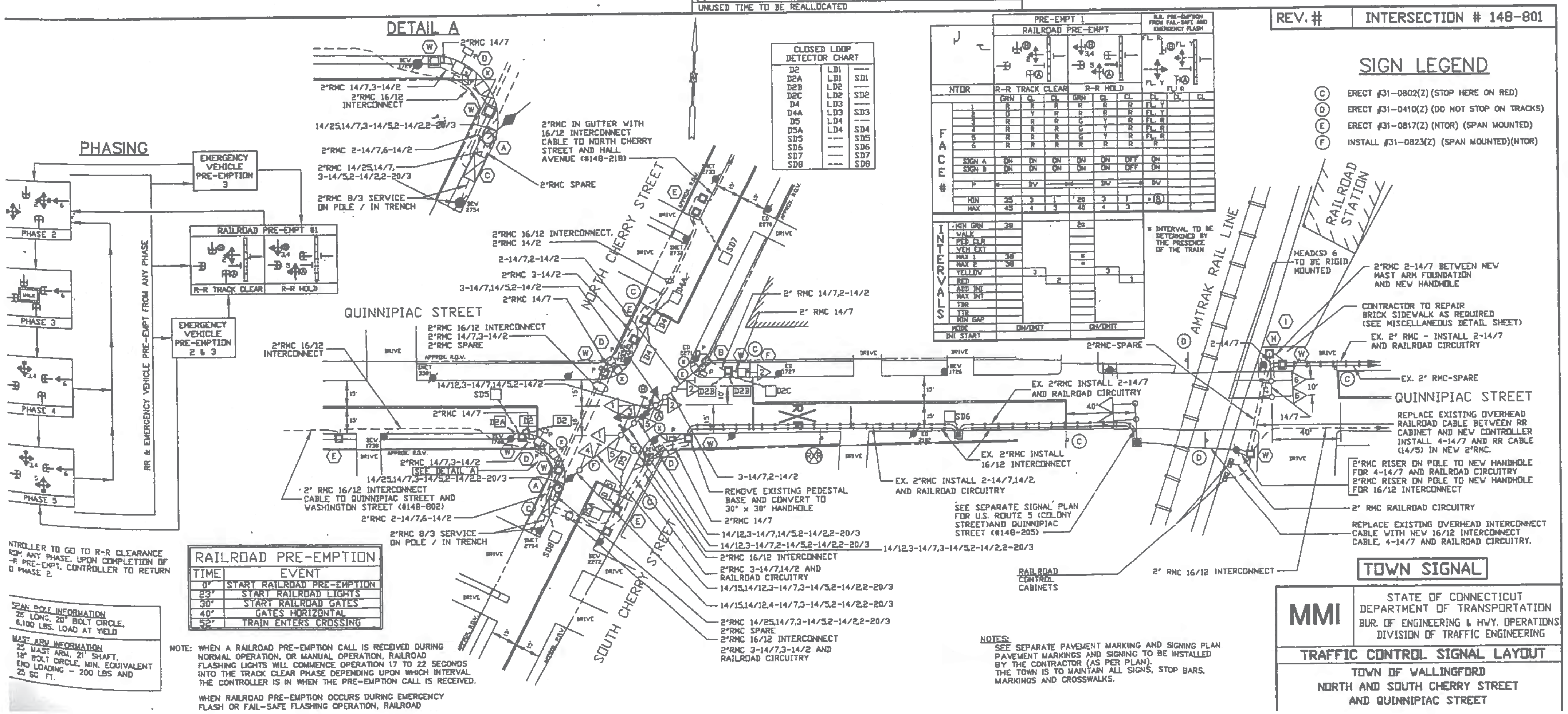
OWNERS NAME
TOWN OF WALLINGFORD

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

Quinnipiac St. & Washington St.

TRAFFIC CONTROL SIGNAL





STATE OF CONNECTICUT – DEPT. OF TRANSPORTATION FORM NO.ENG.11A REV.1-88

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN	WALLINGFORD	STPN-2565 (2)	148-163	1997		29	54

RAILROAD PRE-EMPTION NOTES

RAILROAD PRE-EMPTION SHALL TAKE PRECEDENCE OVER ALL OTHER OPERATIONS

RAILROAD PRE-EMPTION (NORMAL OPERATION)

1. TRAIN ENTERS TRACK CIRCUIT – R.R. 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 VIA THE PROPER YELLOW AND RED CLEARANCE INTERVALS. IF PEDESTRIAN PHASE IS IN OPERATION PHASE WILL BE IMMEDIATELY TERMINATED.
3. THE INTERNALLY ILLUMINATED TURN RESTRICTION SIGNS WILL BE ILLUMINATED IMMEDIATELY WITH THE TRAFFIC SIGNAL PRE-EMPTION.
4. THE TRACK CLEARANCE PHASE WILL TERMINATE AND THE TRAFFIC CONTROLLER WILL HOLD IN THE RAILROAD PRE-EMPTION HOLD PHASE.
5. THE RAILROAD FLASHING LIGHTS WILL COMMENCE OPERATION 17 TO 22 SECONDS INTO THE TRACK CLEAR PHASE DEPENDING UPON WHAT INTERVAL THE TRAFFIC SIGNAL CONTROLLER IS IN WHEN THE PRE-EMPTION CALL IS RECEIVED. STANDARD R.R. TIMING FOR BELLS, LIGHTS AND GATES WILL COMMENCE A MINIMUM 29 SECONDS PRIOR TO THE TRAIN ENTERING THE CROSSING.
6. WHEN THE TRAIN HAS LEFT THE CROSSING AND THE TRACK CIRCUIT, THE RAILROAD DEVICES AND TURN RESTRICTION SIGNS SHALL 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 – R.R. PROVIDES IMMEDIATE PRE-EMPTION CIRCUIT TO THE TRAFFIC SIGNAL CONTROLLER CABINET.
2. THE FLASHING OPERATION IMMEDIATELY CHANGES TO A SOLID RED ON FACE 6, FACES 1 AND 2 REMAIN FLASHING YELLOW AND FACES 3, 4 AND 5 REMAIN FLASHING RED AND WILL HOLD IN THIS MODE.
3. THE INTERNALLY ILLUMINATED TURN RESTRICTION SIGNS WILL BE ILLUMINATED IMMEDIATELY WITH THE TRAFFIC SIGNAL PRE-EMPTION.
4. THE RAILROAD FLASHING LIGHTS WILL COMMENCE OPERATION 23 SECONDS AFTER THE RECEIPT OF THE PRE-EMPTION CALL. STANDARD R.R. TIMING FOR BELLS, LIGHTS AND GATES WILL COMMENCE A MINIMUM 29 SECONDS PRIOR TO THE TRAIN ENTERING THE CROSSING.
5. WHEN THE TRAIN HAS LEFT THE CROSSING AND THE TRACK CIRCUIT, THE TRAFFIC SIGNAL CONTROLLER SHALL RETURN TO FLASHING YELLOW ON FACES 1 AND 2, FLASHING RED ON FACES 3, 4, 5 AND 6 AND THE RAILROAD DEVICES SHALL DEACTIVATE.

TECHNICAL NOTES CONTINUED

CONTROLLER SHALL IMMEDIATELY ADVANCE OUT OF ANY GREEN, INCLUDING MIN GREEN, INTO CLEARANCE INTERVALS GOING TO PRE-EMPTION, AND THEN GO DIRECTLY TO RAILROAD TRACK CLEAR PHASE DURING RAILROAD PRE-EMPTION.

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 DIRECTLY TO RAILROAD TRACK CLEAR PHASE.

PEDESTRIAN TIMING TO IMMEDIATELY ADVANCE OUT OF THE WALK AND PED CLEARANCE INTERVAL INTO THE CLEARANCE INTERVAL TIMINGS GOING TO PRE-EMPTION, THEN GO IMMEDIATELY TO RAILROAD TRACK CLEAR PHASE.

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 RAILROAD HOLD PHASE AND RETURNS TO PHASE 2 GREEN.

ANY CHANGE IN THE CLEARANCE INTERVALS DENOTED ON THIS PLAN MAY REQUIRE A MODIFICATION OF THE RAILROAD TRACK CIRCUIT.

THE CONTROLLER SHALL BE A "MENU DRIVEN" TYPE WITH INTERNAL RAILROAD PRE-EMPTION.

(8) RAILROAD FLASHING LIGHTS TO START 23 SECONDS INTO THIS INTERVAL.

TRAFFIC SIGNAL TO BE IMMEDIATELY FORCED OUT OF CLOSED LOOP COORDINATED OPERATION UPON RECEIPT OF RAILROAD PRE-EMPTION CALL.

(9) FLASHING OPERATION TO REVERT TO RR PRE-EMPT FROM FAIL SAFE FLASH UPON RECEIPT OF RR PRE-EMPTION CALL.

GENERAL PRE-EMPTION NOTES

1. RAILROAD PRE-EMPT OPERATIONS SHALL BE MAINTAINED AT ALL TIMES DURING BOTH ACTIVE AND NON CONSTRUCTION TIME PERIODS.
2. IF FOR ANY REASON NORMAL RAILROAD PRE-EMPT OPERATIONS ARE INTERRUPTED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE WALLINGFORD POLICE DEPARTMENT, THE CONNECTICUT DEPARTMENT OF TRANSPORTATION AND AMTRAK.
3. ANY MODIFICATIONS TO THESE TIMINGS AND RAILROAD PRE-EMPTION OPERATIONS MUST BE APPROVED BY THE TOWN, STATE AND AMTRAK.
4. ANY WORK ON RAILROAD PROPERTY SHALL BE APPROVED BY AND AUTHORIZED BY AMTRAK.

EMERGENCY VEHICLE PRE-EMPTION NOTES

1. THE OPTICAL DETECTOR(S) SHALL BE MOUNTED MID-SPAN; IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. A SEPARATE 20/3 CABLE (FOR EACH OPTICAL DETECTOR) SHALL BE INSTALLED (UNSPLICED) DIRECTLY TO THE CONTROLLER CABINET.

REV. # | INTERSECTION # 148-801

UTILITY/PROJECT CONTACTS
TOWN / POLICE: R. A. DOLL: 294-2250
SNET: BOB BOUFFARD: (800)748-1693
AT&T: RON TARINI: (203)269-2565
WALLINGFORD ELECTRIC: ART DUTRA: (203)265-0308
AMTRAK: JOE HOFBAUER: (215)349-1038
TCI CABLE: ADAM BURR: (203)483-2300
DESIGNER: M.M.I., JOHN P. THOMPSON (203)271-1773

SEE SHEET 32 FOR CONSTRUCTION NOTES

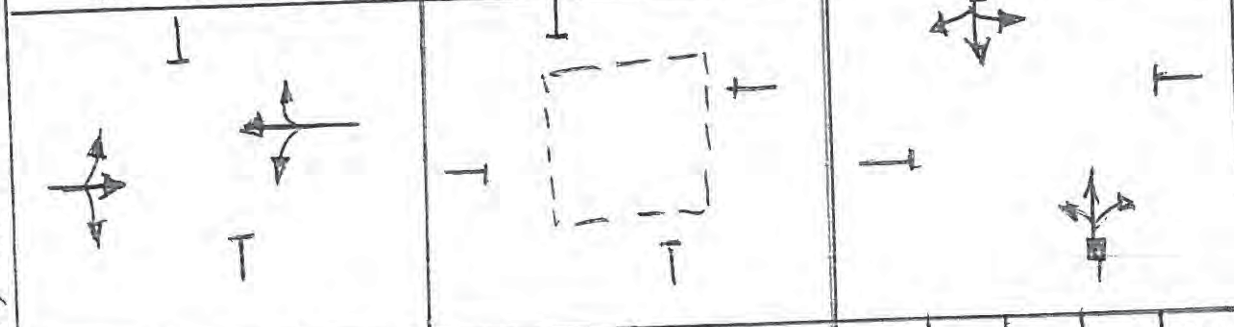
OWNERS NAME
TOWN OF WALLINGFORD

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TIMINGS RECORDED ON MONDAY JUNE 24, 2002 BY RUBI W/ Lt. Z., off. Cue & JPT

WARD STREET			PED. PHASE		CHERRY ST.				
Green	Yellow	All Red	WALK	FL. D. W	MIN.	VEH. EXT.	MAX	Yellow	All RED
25"	3"	2'	8"	10"	8"	4"	30"	3"	2"

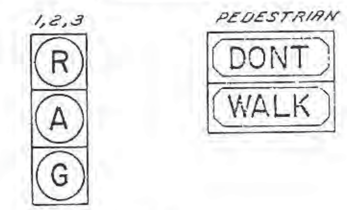


[illegible]	CONN	WALLINGFORD	T-1148(3)	148-54	1973	[illegible]	7

TRAFFIC CONTROL IMPROVEMENTS
WALLINGFORD TOPICS

SCALE IN FEET
40 20 0 40

SIGNAL FACES



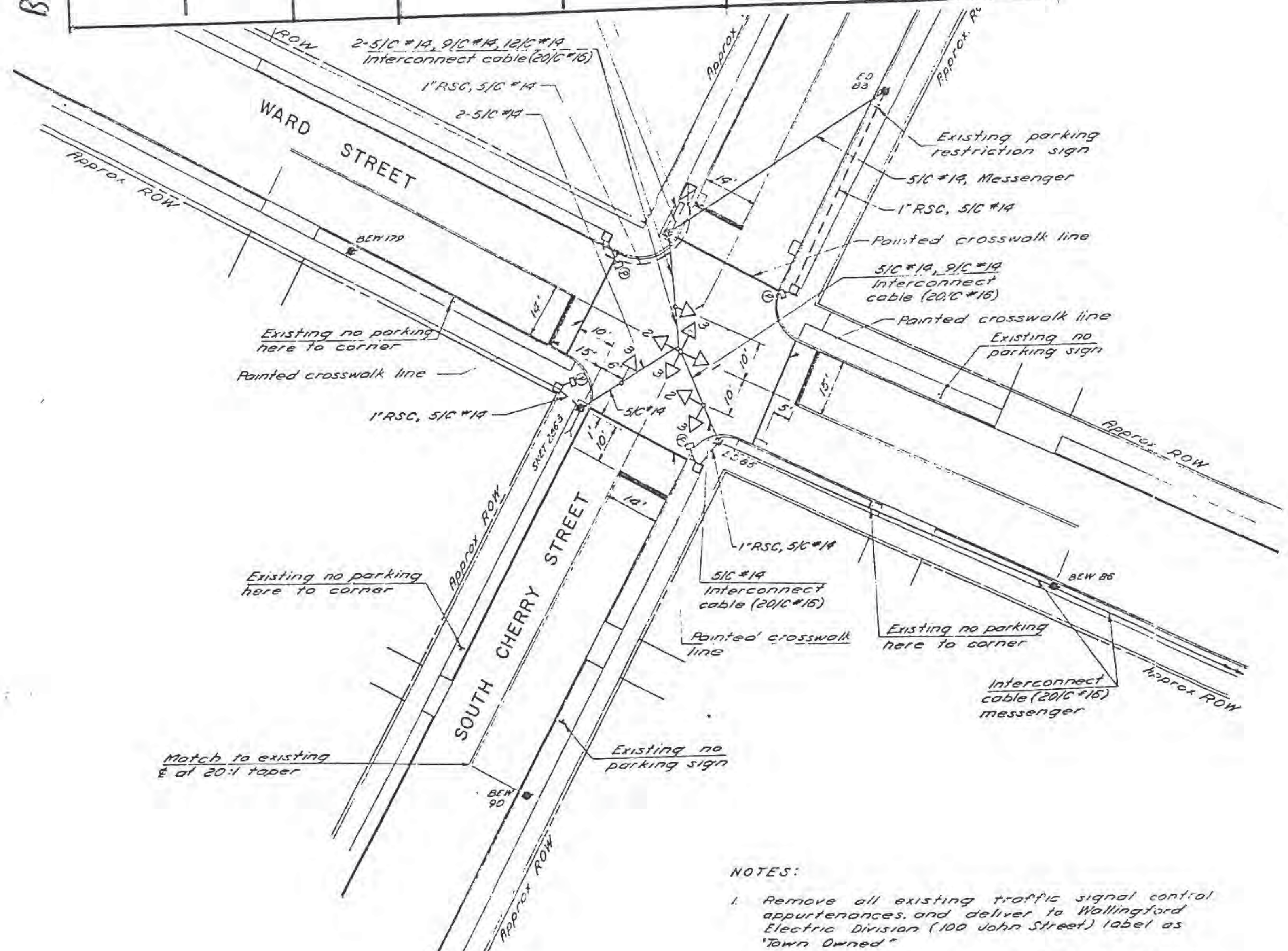
All faces to have 8" lenses

SEQUENCE AND TIMING

FACE NO	PHASE A ART	PHASE A CL 1	PHASE A CL 2	PHASE B SIDE ST	PHASE B CL 1	PHASE B CL 2	PED	PED CL	FLASH OPER
1	[illegible]	[illegible]	R	R	R	R	R	R	FL A
2	[illegible]	[illegible]	[illegible]	R	R	R	R	R	FL R
3	R	[illegible]	[illegible]	G	A	R	R	R	FL R
PED	DW	DW	DW	DW	DW	DW	W	FL DW	OFF

Offset 60% 45.0 sec [illegible] 51.5 3 0.6 16.5 8.25 75" CYCLE
Offset 50 [illegible] sec [illegible] 9 3 0.0 0.5 0.6 [illegible] CYCLE
Offset 99% 75.5 sec [illegible] 4 3 0.6 7.4 6 [illegible] CYCLE
[illegible] 4 3 0.5 7* 7*
[illegible] 5 7 9 10

[illegible] be extinguished during periods of dial 2 operation
[illegible] second index [illegible] used during dial 2 operation
* Min to be 0.0 during periods of dial 2 operation
All intervals having 0.6 seconds duration shall be [illegible] by the cam shaft as per specifications.



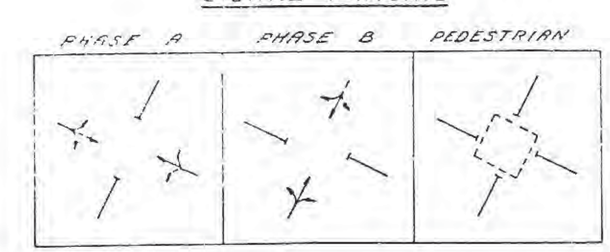
CONTROL EQUIPMENT

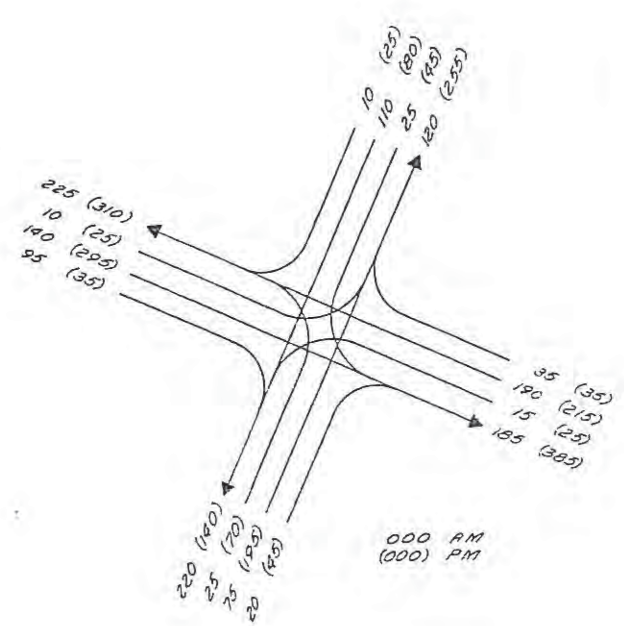
Pre-timed expansible local controller (3 dial) pedestal mounted

NOTES:

1. Remove all existing traffic signal control appurtenances and deliver to Wallingford Electric Division (100 John Street) label as "Town Owned"
2. Paint pavement markings as shown.

SIGNAL PHASING





DESIGN HOUR VOLUMES

61T

TOPICS
CONNECTICUT DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS
TOWN OF WALLINGFORD
WARD STREET AT SOUTH CHERRY STREET
DESIGNED BY CE MAGUIRE, INC.

1" = 20'

NOTEBOOK
NO
Traced
Designed
New Const. Noted
Top. Field Chk Noted

STATE OF CONNECTICUT – DEPT. OF TRANSPORTATION

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD	--		1997	–		

NTOR	PHASE 1 GRN	PHASE 1 CL	PHASE 1 CL	PHASE 2 (PRE-EMPTION 1) GRN	PHASE 2 CL	PHASE 2 CL	PHASE 3 GRN	PHASE 3 CL	PHASE 3 CL	PHASE 4 GRN	PHASE 4 CL	PHASE 4 CL	PHASE 5	PHASE 6	PHASE 7	PHASE 8 (PRE-EMPTION 2) GRN	PHASE 8 CL	PHASE 8 CL	FLASHING OPERATION
FACE # 1				G	Y	R	R	R	R	R	R	R				R	R	R	Y
2				G	Y	R	R	R	R	R	R	R				R	R	R	Y
3				R	R	R	R	R	R	G	Y	R				G	Y	R	R
4				R	R	R	R	R	R	G	Y	R				R	R	R	R
PED'S				DW	DW	DW	WØ	FDW	DW	DW	DW	DW				DW	DW	DW	OFF
MIN				15	3	1	12	0	0	9	3	1							
MAX				50	5	3	20	0.1	0	30	5	3							
					← YIELD POINT														

MOVEMENT DIAGRAM

INTERVALS	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
MIN GRN		15		9				
WALK			7					
PED CLR			6					
VEH EXT				3				
MAX 1		40		20				
MAX 2								
YELLOW		3		3				
RED		2		2				
ADD INI								
MAX INT								
TBR								
TTR								
MIN GAP								
MODE	OFF	MIN RECALL	LOCK	LOCK	OFF	OFF	OFF	ON/OMIT
INI START		THIS PHASE						

MAINT — 24 HR ☐ — NORM ☒

DETECTORS

IDENT	SIZE	TURNS	MODE
D2	6'X6'	3	PRESENCE
D2A	6'X6'	3	PRESENCE
D4	8'X6'	3	PRESENCE
D4A	8'X6'	3	PRESENCE
SD1	6'X6'	3	PRESENCE
SD2	6'X6'	3	PRESENCE

PROGRAM

FUNCTION	TIME (EST)	DAYS
MAX 1	ALL THE TIMES	DAILY
FUTURE	ALL THE TIMES	DAILY

COORDINATION TC–TBC

CYCLE	OFFSET SEC	YIELD PT SEC	PERMIS PERIOD	FORCE OFF % Ø	Ø	Ø

SYSTEM LOC
148–204
148–217
148–219
~~WARD AT~~ S. CHERRY

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

ENERGY BY – TOWN
SERVICE BY – SNET 927

OFFICE RECORD

JOB# SM# N/A
REVISION
REVISION # 2
INSTALL LOOP DETECTORS, SIGNAL HEADS, FIRE PRE-EMPTION AND AUDIBLE PEDESTRAIN SIGNAL

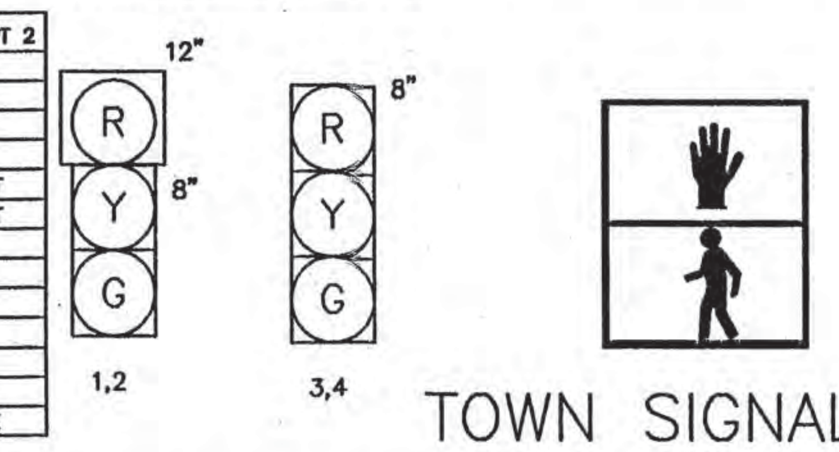
INTERSECTION 148-219 ?

NORMAL	kW	hr/mo	kWh/mo
FLASH	kW	hr/mo	kWh/mo

METER SERVICE

SIGNAL FACES

	PRE-EMPT 1	PRE-EMPT 2
PRIORITY	NO	NO
DET LOCK	YES	YES
DELAY	0	0
ALT MIN GRN	5	5
ALT MIN YELLOW	PARENT	PARENT
ALT RED	PARENT	PARENT
ALT PED CLR	6	6
HOLD GREEN	15	9
HOLD YELLOW	3	3
HOLD RED	2	2
HOLD PHASE	2	8
EXIT PHASE	2	2
EXIT CALL	NONE	NONE



TOWN SIGNAL

LEGEND

R RED
Y YELLOW
G GREEN
–R– RED ARROW
–Y– YELLOW ARROW
–G– GREEN ARROW
WØ WALK/FL DW
DW 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
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
■ EXISTING PEDESTAL MOUNTING
SD SYSTEM DETECTOR
CONTROLLER
HANDHOLE
EXIST. HANDHOLE
EXIST. RIGID METAL CONDUIT
(RMC) RIGID METAL CONDUIT
STRAIN INSULATOR
OPTICAL DETECTOR
◆ CABLE CLOSURE
DET. LEADS IN SAW CUTS
AUXILIARY TERMINATION CABINET
AUDIBLE PEDESTRAIN SIGNAL
☒ AUXILIARY EQUIPMENT CABINET

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIV. OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
WARD STREET AT SOUTH ORCHARD STREET

REV. # 2	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY				
ENGINEER	URS GREINER		INC.	4/07/97
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE				

CONSTRUCTION NOTES

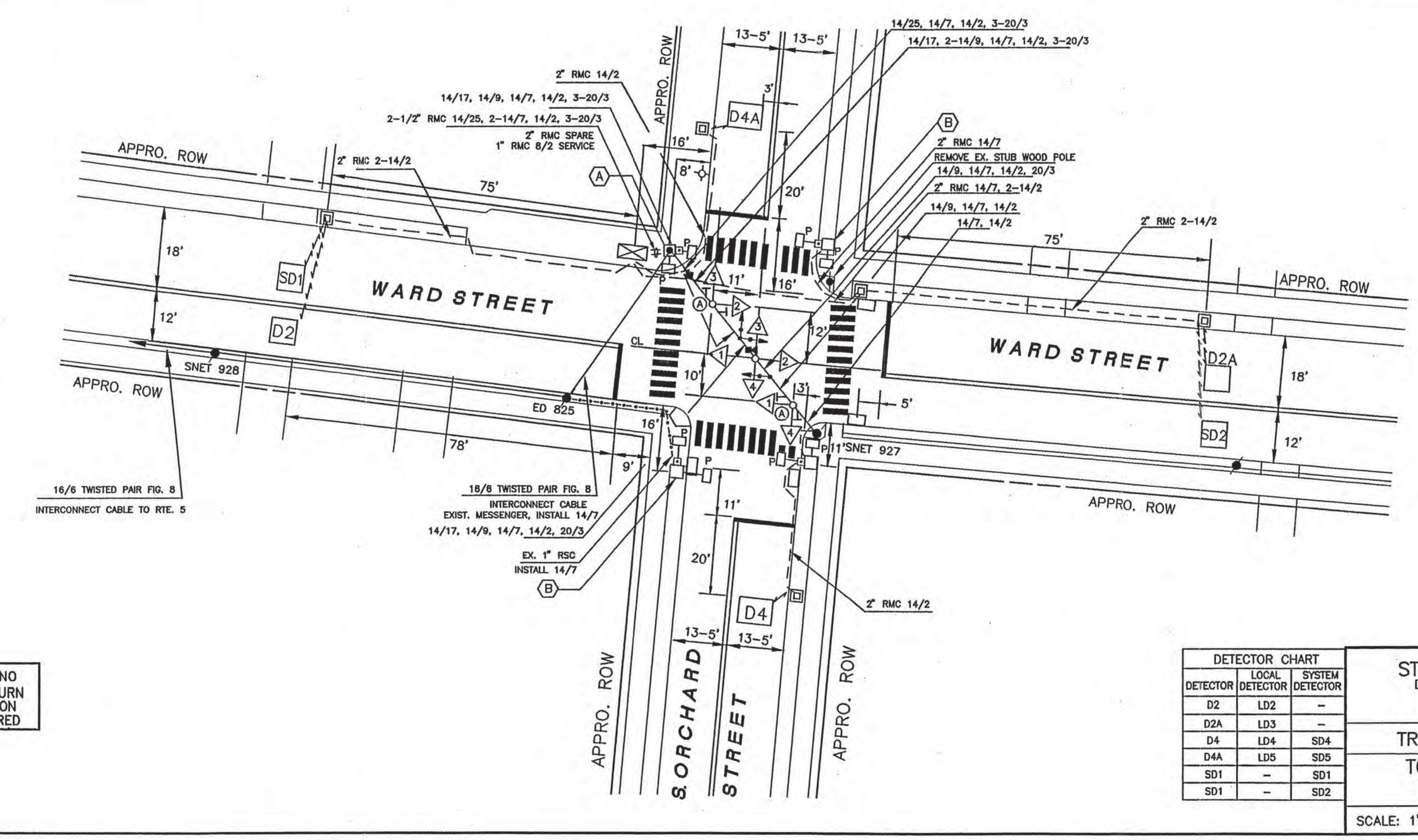
1. CONNDOT LATEST STANDARDS AND SPECIFICATIONS GOVERN.
2. ALL SIGNAL EQUIPMENT ARE NEW UNLESS NOTED.
3. ALL HANDHOLES TO BE INSTALLED 2' OFF EDGE OF ROAD.
4. INSTALL LOOP DETECTORS 3' OFF EDGE OF ROAD AND 8' APART UNLESS OTHERWISE SPECIFIED.
5. REMOVE ALL PAVEMENT MARKINGS/SIGNS THAT CONFLICT WITH THIS PLAN.
6. INSTALL AN EIGHT PHASE CONTROLLER PEEK/TRANSYT MODEL 3000 IN A TYPE C CABINET, ON A TYPE IV FOUNDATION. CABINET DOOR TO OPEN SIDEWALK SIDE.
7. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 48 HOURS PRIOR TO ANY EXCAVATION TO BE PERFORMED (CALL B.U.D. 1-800 922-4455).
8. ALL TRAFFIC CONTROL EQUIPMENT REMOVED DURING CONSTRUCTION SHALL BE DELIVERED TO WALLINGFORD POLICE TRAFFIC MAINTENANCE DIVISION LOCATED AT 282 WASHINGTON STREET.
9. THE SPAN WIRE SHOULD BE A MINIMUM OF 40" ABOVE COMMUNICATION CABLES AND A MINIMUM OF 12" BELOW THE SECONDARY WIRES.
10. CONTACT MR. JAMES RAINEY AT WALLINGFORD ELECTRIC DIVISION (265-0308) FOR ELECTRIC SERVICE.
11. N.T.O.R. SHALL BE SPAN MOUNTED USING COST CAST INC. HAINES CITY, FL..
12. TRANSFER OF INTERSECTION SHALL BE COMPLETED IN ONE WORKING DAY. THERE SHALL BE NO DOWN TIME OF THE INTERSECTION.
13. INSTALL "3M OPTICOM" DETECTORS, OPTICAL DETECTOR LOCATIONS ARE FOR ILLUSTRATION ONLY, EXACT LOCATIONS SHALL BE DETERMINED BY THE MFG. OR HIS DESIGNATED REPRESENTATIVES. DETECTOR CABLE ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH OPTICAL DETECTORS & THE CONTROLLER CABINET.
14. TOWN WILL PROVIDE OFFSETS BETWEEN THE INTERSECTION AS NOTED UNDER THE SYSTEM LOC. CHART.

(A) INSTALL CUTLER HAMMER 60 AMP WEATHER PROOF DICONNECT TO EXISTING STEEL SPAN 11' FROM GROUND LEVEL.

(B) REPLACE PEDESTRIAN SIGNAL FACE, PUSH BUTTON AND PEDESTAL. USE EXISTING PEDESTAL FOUNDATION.

CONTRACTOR TO INSTALL PAVEMENT MARKINGS, AS INDICATED BELOW:
BAR TYPE CROSS WALKS (24"-24"X8')
[illegible]0' OF DYCL ON SOUTH ORCHARD STREET
100' OF DYCL ON WARD STREET
12" STOP BAR

REV.# 2 — INTERSECTION #



SIGN LEGEND

(A) INSTALL 31-0824 — NO TURN ON RED

DETECTOR CHART		
DETECTOR	LOCAL DETECTOR	SYSTEM DETECTOR
D2	LD2	–
D2A	LD3	–
D4	LD4	SD4
D4A	LD5	SD5
SD1	–	SD1
SD1	–	SD2

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIV. OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
WARD STREET AT SOUTH ORCHARD STREET

SCALE: 1"=20'

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIV. OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

SCALE: 1"=20'

REV.# — INTERSECTION

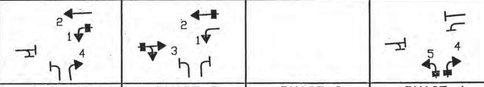
C:\BIJAN\WF 4-07-95 2:55:22 pm EST

V-243

(62T)

NONE

MOVEMENT DIAGRAM



NTOR			PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			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
FACE #	1	Y	← G	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 →Y	R	R	R	R				G	Y ①	R ②												
	5	R	R	R	R	R	R	R				G	Y	R												
	6	R	R	R	R	R	R	R				G	Y	R												
	MIN		5	3	0.1	15	3	1				7	3	1												
	MAX		10	5	0.1	60	5	2				30	5	2												
INTERVALS	MIN GRN		5			15						7														
	WALK					15						13														
	PED CLR					1						1														
	VEH EXT		2			2.5						2														
	MAX 1		9			38						18														
	MAX 2		9			38						18														
	YELLOW			3			3						3													
	RED				0.1			2						1												
	ADD INIT																									
	MAX INIT																									
	TBR																									
	TTR																									
	MIN GAP																									
MODE			NON-LOCK			MIN RECALL			OFF			LOCK			OFF			OFF			OFF			OFF		
INI START			THIS PHASE																							

DETECTORS			
IDENT	SIZE (WXL)	TURNS	MODE
D1	1.8mX1.8m	3	PRESENCE
D2	2.2mX1.8m	3	PRESENCE
D2A	3.0mX1.8m	3	HOLD 2.5'
D2B	3.0mX1.8m	3	PRESENCE
D2C	3.5mX1.8m	3	HOLD 2.5'
D4	7.3mX1.8m	3	DELAY-5'
D4A	4.2mX1.8m	3	DELAY-5'
D4B	2.5mX1.8m	3	DELAY-5'
D4C	1.8mX1.8m	3	DELAY-5'
D4D	1.8mX1.8m	3	PRESENCE
SD1	2.6mX1.8m	3	PRESENCE
SD2	2.1mX1.8m	3	PRESENCE
SD3	2.6mX1.8m	3	PRESENCE

PROGRAM		
FUNCTION	T I M E	DAYS
FLASH	EMERGENCY	ONLY
MAX 1	ALL OTHER TIMES	
MAX 2	FUTURE	

COORDINATION TYPE- CLOSED LOOP

CYCLE	PHASE SPLITS SEC/%								OFFSET		PERMIS PERIOD	
	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8	SEC	%	ø	SEC

SYSTEM LOC.	
MASTER	
BPW OFFICE	

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

① TO BE Y→IF PHASE 1 IS NEXT

② TO BE R→IF PHASE 1 IS NEXT

PHASE 2 ON TO OMIT PHASE 1

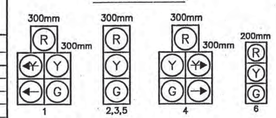
ENERGY BY- TOWN | METER # -

MAINT LEVEL 3 | SERVICE POLE-

INTERSECTION #

METERED SERVICE

SIGNAL FACES



ALL SIGNAL INDICATIONS SHALL BE LED

SIGNAL FACE 6 TO HAVE TUNNEL VISORS

TOWN SIGNAL

OFFICE RECORD

JOB # 148-39283 SM # N/A

SIGNAL IN OPERATION

SIGNAL INSTALLED UNDER STATE PROJECT 148-187

LEGEND

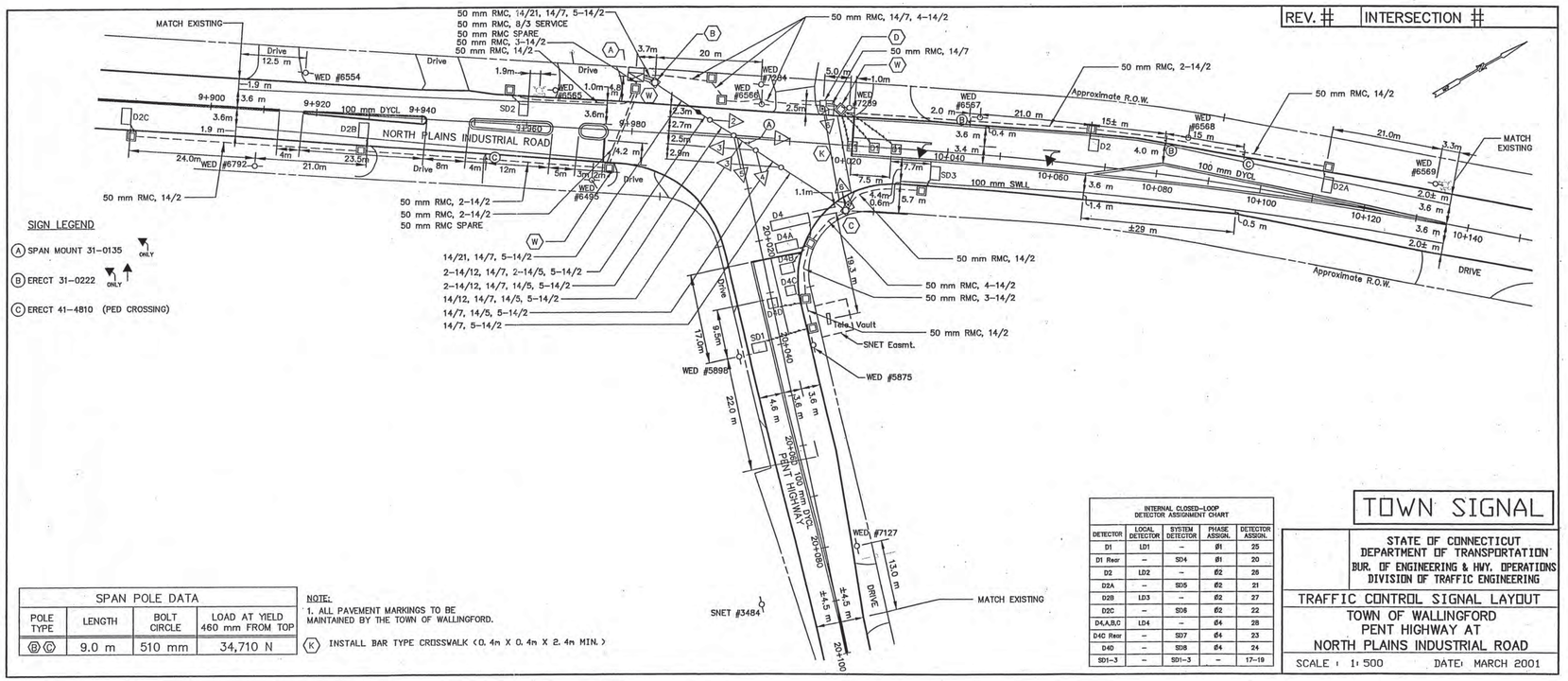
R	RED		PROPOSED CONTROLLER
Y	YELLOW		EXISTING CONTROLLER
G	GREEN		PROPOSED HANDHOLE
◀R▶	RED ARROW		EXISTING HANDHOLE
◀Y▶	YELLOW ARROW		PROPOSED (R.M.C.) RIGID METAL CONDUIT
◀G▶	GREEN ARROW		EXISTING (R.M.C.) RIGID METAL CONDUIT
W/D D.W.	WALK/ FL. D.W. DON'T WALK		CABLE CLOSURE
FL.	FLASHING		DET. LEADS IN SAW CUT
	PROPOSED WOOD SPAN POLE		AUXILIARY TERMINATION CABINET
	EXISTING WOOD SPAN POLE		AUXILIARY EQUIPMENT CABINET
	PROPOSED STEEL SPAN POLE		AUDIBLE PEDESTRIAN SIGNAL
	EXISTING STEEL SPAN POLE		
	PROPOSED UTILITY POLE		
	EXISTING UTILITY POLE		
	PEDESTAL MOUNTING		
	PEDESTRIAN PUSH BUTTON & SIGN		
	TRAFFIC SIGNAL FACE		
	PEDESTRIAN SIGNAL FACE		
	LOOP DETECTOR		
	MAGNETIC DETECTOR		
SD	SYSTEM DETECTOR		
	OPTICAL DETECTOR		

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
PENT HIGHWAY AT
NORTH PLAINS INDUSTRIAL ROAD

REV. #	TRAFFIC		ELECTRICAL	
		DATE		DATE
ENGINEER				
DRAFTER		MMI		
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE	MARCH 2001		MARCH 2001	



SIGN LEGEND

(A) SPAN MOUNT 31-0135 ONLY

(B) ERECT 31-0222 ONLY

(C) ERECT 41-4810 (PED CROSSING)

SPAN POLE DATA			
POLE TYPE	LENGTH	BOLT CIRCLE	LOAD AT YIELD 460 mm FROM TOP
ⒷⒸ	9.0 m	510 mm	34,710 N

NOTE:
1. ALL PAVEMENT MARKINGS TO BE MAINTAINED BY THE TOWN OF WALLINGFORD.

(K) INSTALL BAR TYPE CROSSWALK (0.4m X 0.4m X 2.4m MIN.)

INTERNAL CLOSED-LOOP DETECTOR ASSIGNMENT CHART

DETECTOR	LOCAL DETECTOR	SYSTEM DETECTOR	PHASE ASSIGN.	DETECTOR ASSIGN.
D1	LD1	–	ø1	25
D1 Rear	–	SD4	ø1	20
D2	LD2	–	ø2	26
D2A	–	SD5	ø2	21
D2B	LD3	–	ø2	27
D2C	–	SD6	ø2	22
D4,A,B,C	LD4	–	ø4	28
D4C Rear	–	SD7	ø4	23
D4D	–	SD8	ø4	24
SD1-3	–	SD1-3	–	17-19

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
PENT HIGHWAY AT
NORTH PLAINS INDUSTRIAL ROAD

SCALE : 1:500 DATE: MARCH 2001

CONSTRUCTION NOTES

ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.

ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO FORM 815 AND AS AMMENDED.

STAKE ALL R.O.W. PRIOR TO EXCAVATION. ALL WORK TO BE WITHIN THE EXISTING R.O.W. OR WITHIN THE LIMITS OF EASEMENTS.

ALL WORK TO BE COORDINATED WITH THE TOWN OF WALLINGFORD LEGAL TRAFFIC AUTHORITY.

CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION (1-800-922-4455).

ALL NEW PAVEMENT MARKINGS SHALL BE CONNDOT APPROVED EPOXY RESIN TYPE I PAVEMENT MARKINGS. ALL STOP BARS TO BE 300 MM WIDE.

TWO WEEKS PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES.

INSTALL HANDHOLES APPROX. 0.3 METERS BEHIND CURB OR EDGE OF ROAD UNLESS OTHERWISE SPECIFIED.

SEGMENTED LOOPS TO BE SPLICED IN SERIES.

TRAFFIC SIGNAL CABLE CLOSURE SHALL BE INSTALLED ON THE SPAN ± 1.5 METERS FROM THE CURB LINE.

INSTALL LOOP DETECTORS IN BASE COURSE OR EXISTING PAVEMENT 0.9 METERS OFF EDGE OF ROAD AND 2.4 METERS APART UNLESS OTHERWISE NOTED.

CABINET DOOR TO OPEN FIELD SIDE.

ANCHOR BOLTS FOR SPAN POLE FOUNDATION SHALL BE SET SQUARE WITH THE SPAN POLE SUCH THAT TWO BOLTS ARE IN COMPRESSION AND TWO ARE IN TENSION.

SIGNAL APPURTENANCES (MAST ARMS, SPAN POLES, PEDESTALS, AND HAND HOLES) WHEN IN OR ADJACENT TO SIDEWALKS SHALL BE FIELD LOCATED TO PROVIDE A FREE PATH OF NOT LESS THAN 1.0 METER.

CONTFACTOR SHALL ENSURE THE PLACEMENT OF ALL EQUIPMENT IS NOT IN CONFLICT WITH EXISTING WATER OR SANITARY SERVICES.

(A) INSTALL 8 PHASE FULL ACTUATED CONTROLLER (PEEK TRANSYT SERIES 3000) WITH ISOLATED MONITORING, ELECTRIC METER AND CABINET ON TYPE IV TRAFFIC CONTROL FOUNDATION. INSTALL CONCRETE PAD ADJACENT TO FIELD SIDE OF FOUNDATION.

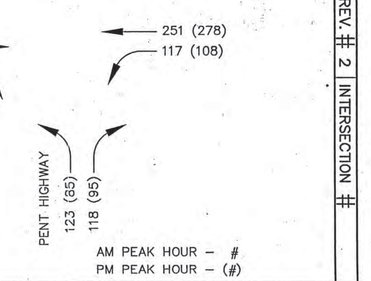
(B) INSTALL SPAN POLE.

(C) INSTALL SPAN POLE WITH 1-WAY, 3 SECTION POLE MOUNTED TRAFFIC SIGNAL AND PEDESTRIAN PUSH BUTTON AND SIGN.

(D) INSTALL 2.4m ALUMINUM PEDESTAL, PEDESTRIAN PUSH BUTTON AND SIGN ON TRAFFIC CONTROL FOUNDATION TYPE I.

(W) INSTALL 750 mm X 750 mm CONCRETE HANDHOLE.

REV. # 2 | INTERSECTION #



UTILITY / PROJECT CONTACTS

1. SOUTHERN NEW ENGLAND TELEPHONE
   MR. ROBERT BOUFFARD
   (203) 238-5620
2. WALLINGFORD ELECTRIC
   MR. ART DUTRA
   (203) 294-2271
3. TCI CABLE
   MR. KEVIN HERZOG
   (203) 505-3478
4. TOWN ENGINEER, TOWN OF WALLINGFORD
   MR. JOHN P. THOMPSON, P.E.
   (203) 294-2035
5. TOWN OF WALLINGFORD, LEGAL TRAFFIC AUTHORITY
   CHIEF DOUGLAS L. DORTENZIO
   (203) 294-2828
6. YANKEE GAS
   RICK CERNIGLIA
   (203)634-2443
7. TOWN OF WALLINGFORD WATER & SEWER DEPT.
   MR. VINCENT MASCIA
   (203)949-2672

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

F. H. W. A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO	YEAR	ROUTE NO.	SHEET NO.
1	CONN.	WALLINGFORD	STP2-1148(101)	148-187	2001		3

637

ST-55

NONE

NTOR		PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
	FLASH		GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL			
FACE #	1 Y		G Y R	R R 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	R R R	G Y R			
	P OFF		DW	WØ	DW				
			YEILD POINT						
	MIN		10 3 1	5	5 3 1	5 3 1			
	MAX		60 5 4	20	30 5 4	30 5 4			
INTERVALS	MIN GRN		20	7	8	6			
	WALK			12					
	PED CLR								
	VEH EXT		3		1.5	1.5			
	MAX 1		35		20	20			
	MAX 2		35		25	25			
	YELLOW		3		3	3			
	RED		2		2	2			
		OFF	MIN RECALL THIS PHASE	NON-LOCK	NON-LOCK	NON-LOCK	OFF	OFF	OFF

PRE-EMPTION I

MOVEMENT DIAGRAM

DETECTORS				PROGRAM			COORDINATION TYPE- CLOSED LOOP											PERMISSIVE PERIOD
IDENT	SIZE (WXL)	TURNS	MODE	FUNCTION	TIME	DAYS	CYCLE	PHASE SPLITS SEC/% 1	2	3	4	5	6	7	8	OFFSET SEC	%	
D2	6' X 8'	3	PRESENCE	FLASH	EMERGENCY ONLY													
D2A	6' X 12'	3	PRESENCE															
D4	6' X 12'	3	8' DELAY															
D4A	6' X 6'	3	PRESENCE	PATTERN 1			70	40/28	27/19	17/12	16/11					25	36	
D5A	6' X 10'	3	8' DELAY	PATTERN 2														
D5	6' X 6'	3	PRESENCE	PATTERN 3														
SD1	6' X 6'	3	PRESENCE	FREE														
SD2	6' X 6'	3	PRESENCE															

SYSTEM I.DC	TECHNICAL NOTES
MASTER	STANDARD OVERLAP SKIP FEATURES APPLY
K-MART	PEDESTRIAN ACTIVATION OF PHASE 3 TO CALL FOR PEDESTRIAN BUZZER.
RTE. 68	TIMINGS SHOWN INDICATE FREE OPERATION. ACTUAL TIMINGS TO BE CONTROLLED BY THE CLOSED LOOP COORDINATION UNIT.
	EMERGENCY VEHICLE PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.
	PHASE 2 DETECTORS TO BE INOPERATIVE DURING COORDINATION. UNUSED TIME TO BE REALLOCATED.

ENERGY BY- TOWN | METER # - SERVICE

MAINT 24hr ☒ Norm ☐ | SERVICE POLE- 5497

NORMAL	kW	hr/mo	kWh/mo
FLASH	kW	hr/mo	kWh/mo

INTERSECTION # 148-

OFFICE RECORD

STC # SM #

SIGNAL IN OPERATION

SIGNAL FACES

12"

R Y G

1,2,3,4

P

RED INDICATIONS TO HAVE LED LAMPS

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

TOWN SIGNAL

LEGEND

R	RED		OPTICAL DETECTOR
Y	YELLOW		PROPOSED CONTROLLER
G	GREEN		EXISTING CONTROLLER
	RED ARROW		PROPOSED HANDHOLE
	YELLOW ARROW		EXISTING HANDHOLE
	GREEN ARROW		PROPOSED (RMC) RIGID METAL CONDUIT
W	WALK/ FL. D.W.		EXISTING (RMC) RIGID METAL CONDUIT
D.W.	DON'T WALK		CABLE CLOSURE
FL.	FLASHING		DET. LEADS IN SAW CUT
	PROPOSED WOOD SPAN POLE		AUXILIARY TERMINATION CABINET
	EXISTING WOOD SPAN POLE		AUXILIARY EQUIPMENT CABINET
	PROPOSED STEEL SPAN POLE		AUDIBLE PEDESTRIAN SIGNAL
	EXISTING STEEL SPAN POLE		
	PROPOSED UTILITY POLE		
	EXISTING UTILITY POLE		
	PEDESTAL MOUNTING		
	PEDESTRIAN PUSH BUTTON & SIGN		
	TRAFFIC SIGNAL FACE		
	PEDESTRIAN SIGNAL FACE		
	LOOP DETECTOR		
	MAGNETIC DETECTOR		
SD	SYSTEM DETECTOR		

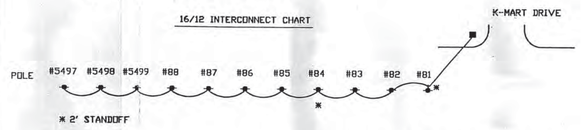
TOWN OF WALLINGFORD
NORTH MAIN ST. EXT.
BEAUMONT RD. & COMMUNITY POOL DR.

REV #	TRAFFIC	ELECTRICAL
	DATE	DATE
ENGINEER		DEC 1998
DRAFTER	RDS ASSOCIATES	
CHECKED BY		
SUBMITTED BY		
APPROVED BY		
DATE		

CONSTRUCTION NOTES

1. ALL TRAFFIC CONTROL EQUIPMENT IS NEW AND SHALL CONFORM TO CONNDOT'S FORM 814A. ALL EQUIPMENT SHALL BE FIELD LOCATED BY THE ENGINEER AND/OR TOWN PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (1-800-922-4455) PRIOR TO EXCAVATION.
3. ALL CABLE SHALL BE INSTALLED WITHOUT SPLICING.
4. ALL WORK TO BE COORDINATED WITH THE TOWN. CONTACT RICK DOLL AT (203)294-2250.
5. ELECTRIC SERVICE TO THE CONTROLLER SHALL BE COORDINATED WITH THE WALLINGFORD ELECTRICAL DIVISION. CONTACT MR. ART DUTRA (203)265-0308. SERVICE TO BE METERED AND INSTALLED IN TRAFFIC CONTROL CABINET USING A 220V METER SOCKET.
6. INSTALL SERVICE WIRE DISCONNECT SWITCH 10 FEET ABOVE GROUND AT POLE #5497.
7. ALL LOOP DETECTORS TO BE INSTALLED AS INDICATED IN CENTER OF TRAVEL LANE AND 8 FEET APART. SEGMENTED LOOPS TO BE SPLICED IN SERIES UNLESS OTHERWISE NOTED.
8. ATTACH 3/8 SPAN WIRE APPROXIMATELY 23 FEET ABOVE GROUND AT POLE #5497.
9. INSTALL CABLE CLOSURE ON SPAN 5 FEET FROM EDGE OF CURB.
10. TWO FOOT STANDOFFS TO BE INSTALLED ON BACK SIDE OF POLE #SNET 84 AND FRONT SIDE OF POLE #SNET 81 TO CARRY 16/12 INTERCONNECT CABLE. ATTACHMENT TO BACK SIDE OF REMAINING POLES SNET # 88, 87, 86, 85, 83, 82 IN COMMUNICATIONS GAIN WILL CARRY 16/12 INTERCONNECT CABLE TO THE ENTRANCE FITTING OF STEEL SPAN POLE AT THE SOUTHWEST SIDE OF KMART DRIVE AND ONTO CONTROLLER CABINET (SEE DIAGRAM).
11. OPTICOM DETECTORS SHALL BE MOUNTED AS NOTED AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS OR DESIGNATED REPRESENTATIVE. DETECTOR CABLES ARE TO BE INSTALLED CONTINUOUS BETWEEN EACH OPTICAL DETECTOR. THE CONTRACTOR IS TO INSTALL A SWITCH IN THE SIGNAL CABINET TO EFFECTIVELY DISCONNECT THE PRE-EMPTION EQUIPMENT FROM THE TRAFFIC SIGNAL CONTROLLER.
12. PRE-EMPTION IS TO OPERATE THROUGH THE INTERNAL PRE-EMPTION OF THE CONTROLLER.
13. INSTALL TOWN APPROVED (STANDARD) FULL ACTUATED 8 PHASE CONTROLLER ON NEW TYPE IV CONTROLLER FOUNDATION. CONTROLLER SHALL BE EQUIPPED WITH INTERNAL EMERGENCY VEHICLE PRE-EMPT CAPABILITY. THE CONTROLLER SHALL BE EQUIPPED WITH ALL NECESSARY AND/OR REQUIRED COMPONENTS AND INTERNAL COMMUNICATION MODULES FOR INCLUSION IN AND FULL COMPATIBILITY WITH THE TOWN'S EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM. THE CONTROLLER TYPE IV CABINET SHALL BE EQUIPPED WITH A WALLINGFORD ELECTRIC DIVISION APPROVED METER SOCKET AND A WEATHERPROOF DISCONNECT. THE CONTRACTOR SHALL INSTALL A 3'X5' CONCRETE SIDEWALK (PAD) ON THE CABINET.
   - (A) INSTALL 30' SPAN POLE ON STANDARD SPAN POLE FOUNDATION W/PUSH BUTTON, SIGN AND TWO WAY PEDESTRIAN SIGNAL.
   - (B) INSTALL 10' ALUMINUM PEDESTAL W/ONE WAY 3 SECTION TRAFFIC SIGNAL AND TWO WAY PEDESTRIAN SIGNAL W/PUSH BUTTON AND SIGN ON TYPE I FOUNDATION.
   - (C) INSTALL 8' ALUMINUM PEDESTAL W/TWO WAY PEDESTRIAN SIGNAL W/PUSH BUTTON AND SIGN ON TYPE I FOUNDATION.
   - (D) INSTALL TYPE II HANDHOLE 1.0 FEET FROM CURB OR EDGE OF ROADWAY.
   - (E) INSTALL AUDIBLE PEDESTRIAN SIGNAL.
   - (W) INSTALL 30"X30" HANDHOLE.

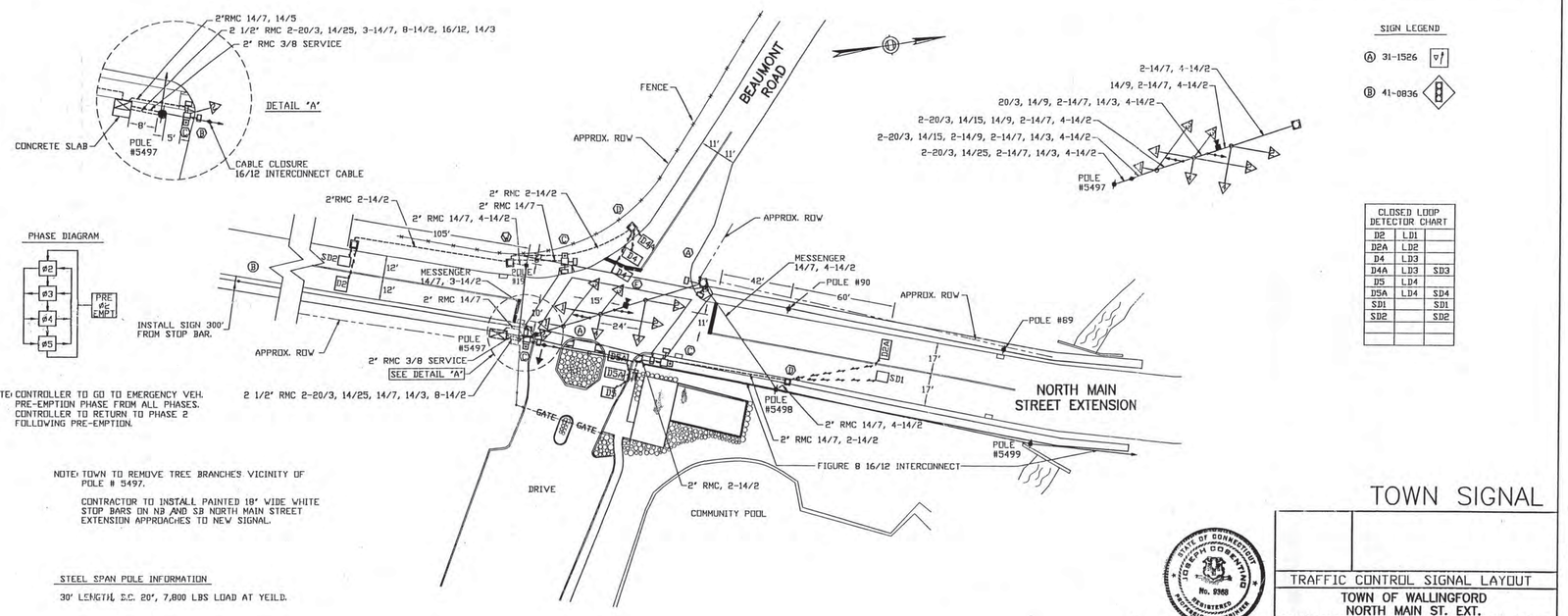
16/12 INTERCONNECT CHART



TOWN SIGNAL

REV.# | INTERSECTION # 148-

REV.# | INTERSECTION # 148 -



SIGN LEGEND

(A) 31-1526

(B) 41-0836

CLOSED LOOP DETECTOR CHART		
D2	LD1	
D2A	LD2	
D4	LD3	
D4A	LD3	SD3
D5	LD4	
D5A	LD4	SD4
SD1		SD1
SD2		SD2

TOWN SIGNAL

TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
NORTH MAIN ST. EXT.
BEAUMONT RD. & COMMUNITY POOL DRIVE

SCALE: 1"=40'-0" ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.

STATE OF CONNECTICUT JOSEPH COPPOLINO No. 9368 REGISTERED PROFESSIONAL ENGINEER

UTILITY/PROJECT CONTACTS

TOWN/POLICE: R. A. DOLL: 294-2250
SNET: BOB BOUFFARD: (800)749-1693
AT&T: RON TARINI: (203)269-2565
WALLINGFORD ELECTRIC: ART DUTRA: (203)265-0308
TCI CABLE: ADAM BURR: (203)483-2300
DESIGNER: RDS ASSOCIATES: (860)721-9338

OWNER:
TOWN OF WALLINGFORD

TOWN OF WALLINGFORD
NORTH MAIN ST. EXT.
BEAUMONT RD. & COMMUNITY POOL DRIVE

TRAFFIC CONTROL SIGNAL

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO	YEAR	ROUTE NO.	SHEET NO.
1	CONN.	WALLINGFORD					

64T

MOVEMENT DIAGRAM

N T O R		PRE-EMPTION 1			PRE-EMPTION 2						PRE-EMPTION 2			PRE-EMPTION 1								
		PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			PHASE 7			PHASE 8		
		GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
F A C E #	1	←R	←Y R	R	R	R	R				R	R	R	R	R	R	G	Y	R						
	2	R	R	R	R	R	R				R	R	R	R	R	R	G	Y	R						
	3	R	R	R	G	Y	R				R	R	R	←R	←Y R	R	R	R	R						
	4	R	R	R	G	Y	R				R	R	R	R	R	R	R	R	R						
	5	R	R	R	R	R	R				G	Y	R	R	R	R	R	R	R						
	6	R	R	R	R	R	R				G	Y	R	R	R	R	R	R	R						
							←YIELD												←YIELD						
	MIN	3	3	1	15	3	1				5	3	1	3	3	1	15	3	1						
	MAX	20	5	3	60	5	3				45	5	3	20	5	3	60	5	3						
I N T E R V A L S	MIN GRN	3			15						5			3			15								
	WALK				14						14						14								
	PED CLR				1						1						1								
	VEH EXT	2			5						3			2			5								
	MAX 1	10			40						20			10			40								
	MAX 2	15			50						30			15			50								
	YELLOW		3			3						3			3			3							
	RED			1			2						2			1			2						
	ADD INI																								
	MAX INI																								
	TBR																								
	TTR																								
	MIN GAP																								
MODE		NON-LOCK			MIN. RECALL THIS PHASE			OFF			NON-LOCK			NON-LOCK			MIN. RECALL THIS PHASE			OFF			OFF		
INI START																									

FLASHING: Y Y Y Y R R

MAINT: 24 HR ☒ NORM ☐

DETECTORS

IDENT	SIZE	TURNS	MODE
D1	6' X 6'	3	PRESENCE
D2	28' X 6'	3	PULSE
D3	9' X 6'	3	5" DELAY
D3A	14' X 6'	3	5" DELAY
D3B	7' X 6'	3	5" DELAY
D3C	11' X 6'	3	5" DELAY
D3D	20' X 6'	3	5" DELAY
D3E	6' X 6'	3	PRESENCE
D5	6' X 6'	3	PRESENCE
D6	15' X 6'	3	PULSE
SD1	7' X 6'	3	PULSE
SD2	7' X 6'	3	PULSE

PROGRAM

FUNCTION	TIME	DAYS
MAX 1	ALL OTHER TIMES	DAILY
MAX 2	1100 - 1400	SAT-SUN
CYCLE 1	ALL OTHER TIMES	DAILY
CYCLE 2	1100 - 1400	SAT-SUN
CYCLE 3	FUTURE	
FREE	2300 - 0600	DAILY

COORDINATION TYPE - CLOSED LOOP

CYCLE SEC	OFFSET #/SEC	OFFSET %	YIELD PT PERIOD	PERMIS Ø	FORCE OFF % Ø	Ø
85	1	0	64			
110	2	0	63			
	3					

SYSTEM LOC: MASTER BARNES IVES

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

TIMINGS SHOWN INDICATE FREE OPERATION.
ACTUAL TIMINGS TO BE DETERMINED BY CLOSED LOOP LOCAL COORDINATION UNIT.
PRE-EMPTION TO BE INOPERATIVE DURING FLASHING OPERATION.

ENERGY BY- DEVELOPER
SERVICE POLE # SNET 80
OFFICE, RECORD

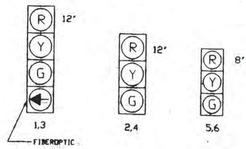
JOB # N/A SM # N/A

INTERSECTION #
METERED SERVICE

PRE-EMPTION SETTINGS

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

SIGNAL FACES



LEGEND

R RED
Y YELLOW
G GREEN
←R- RED ARROW
←Y- YELLOW ARROW
←G- GREEN ARROW
W/F WALK/FL. D.W.
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
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
MAGNETIC DETECTOR
SD SYSTEM DETECTOR
MANHOLE
PROPOSED CONTROLLER
EXISTING HANDHOLE
PROPOSED HANDHOLE
CATCH BASIN GRATE
(RMC) RIGID METAL CONDUIT
STRAIN INSULATOR
MAGNETOMETER PROBES
CABLE CLOSURE
DETECARDS IN SAW CUT
RADIO ANTENNA
12 LIGHT
OPTICOM DETECTORS

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
OFFICE OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
NORTH MAIN ST. AT BARNES INDUSTRIAL ROAD AND KMART DRIVE

	TRAFFIC		ELECTRICAL	
		DATE		DATE
FIELD SURVEY				
ENGINEER	PSC ENGINEERING			
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE				

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD			1995			

CONSTRUCTION NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH TOWN OF WALLINGFORD DETAILS AND SPECIFICATIONS. WHERE THESE SPECIFICATIONS DO NOT EXIST, CONNECTICUT DEPARTMENT OF TRANSPORTATION DETAILS AND SPECIFICATIONS FORM 814A, AS REVISED, SHALL APPLY.

INSTALL LOOP DETECTORS IN EXISTING PAVEMENT 3' OFF EDGE OF ROAD AND 8' APART UNLESS OTHERWISE NOTED.

SEGMENTED LOOPS TO BE INSTALLED IN SERIES.

ALL TRAFFIC EQUIPMENT IS NEW.

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

INSTALL PEEK/TRANSYT MODEL 3800 MASTER AND 3800 LOCAL CONTROLLERS. INSTALL TELEPHONE DROP FOR CLOSED LOOP SYSTEM. CONNECT INTERCONNECT CABLE TO NORTH.

INSTALL 6 TWISTED PAIR, #16 GUAGE, COPPER SHIELD INTERCONNECT CABLE AND MESSENGER. CABLE SHALL MEET IMSA SPECIFICATIONS AND BE ACCEPTABLE TO THE TOWN OF WALLINGFORD. NO SPLICES SHALL BE PERMITTED.

CABINET DOOR TO OPEN STREET SIDE, CONCRETE PAD TO BE 3' X 4'.

TWO WEEKS PRIOR TO INSTALLATION CONTACT WALLINGFORD ELECTRIC DIVISION REPRESENTATIVE ART DUTRA AT (203) 265-0308 AND SNET REPRESENTATIVE BOB WENTWORTH AT (203) 725-4519.

TRAFFIC SIGNAL CABLE CLOSURE SHALL BE INSTALLED ON THE SPAN +/- 5' FROM CURBLINE.

INSTALL 3M OPTICAL DETECTORS, MODEL 511, SYSTEM CHASSIS MODEL 560, AND PHASE SELECTOR MODEL 562. USE OPTICOM DETECTOR CABLE MODEL 138 TO CONNECT EACH DETECTOR SEPERATELY TO PHASE SELECTOR. NO SPLICES SHALL BE PERMITTED. LOCATION OF OPTICOM SENSORS TO BE LOCATED IN FIELD WITH TOWN.

INSTALL 60 AMP WEATHERPROOF DISCONNECT BOX AT SERVICE POLE IN ACCORDANCE WITH TOWN OF WALLINGFORD REQUIREMENTS.

INSTALL AND CONNECT TOWN OF WALLINGFORD APPROVED ELECTRIC METER SOCKET ON OUTSIDE OF CONTROLLER CABINET.

INSTALL STEEL POLE FOUNDATION ADJACENT TO AND WITHIN R.O.W. BOLTS TO BE SET SQUARE TO SPAN.

SPAN WIRE HEIGHT THRU UTILITY LINES APPROXIMATELY: 27.0' ABOVE SPAN POLE FOUNDATION ON NORTHEAST CORNER.

SPAN WIRE SIZE SHALL BE 3/8" Ø.

CABLE CLOSURE TO BE LOCATED 5' OFF OF CURB.

CBYD SHALL BE NOTIFIED.

HANDHOLE SHALL BE 30" BY 30".

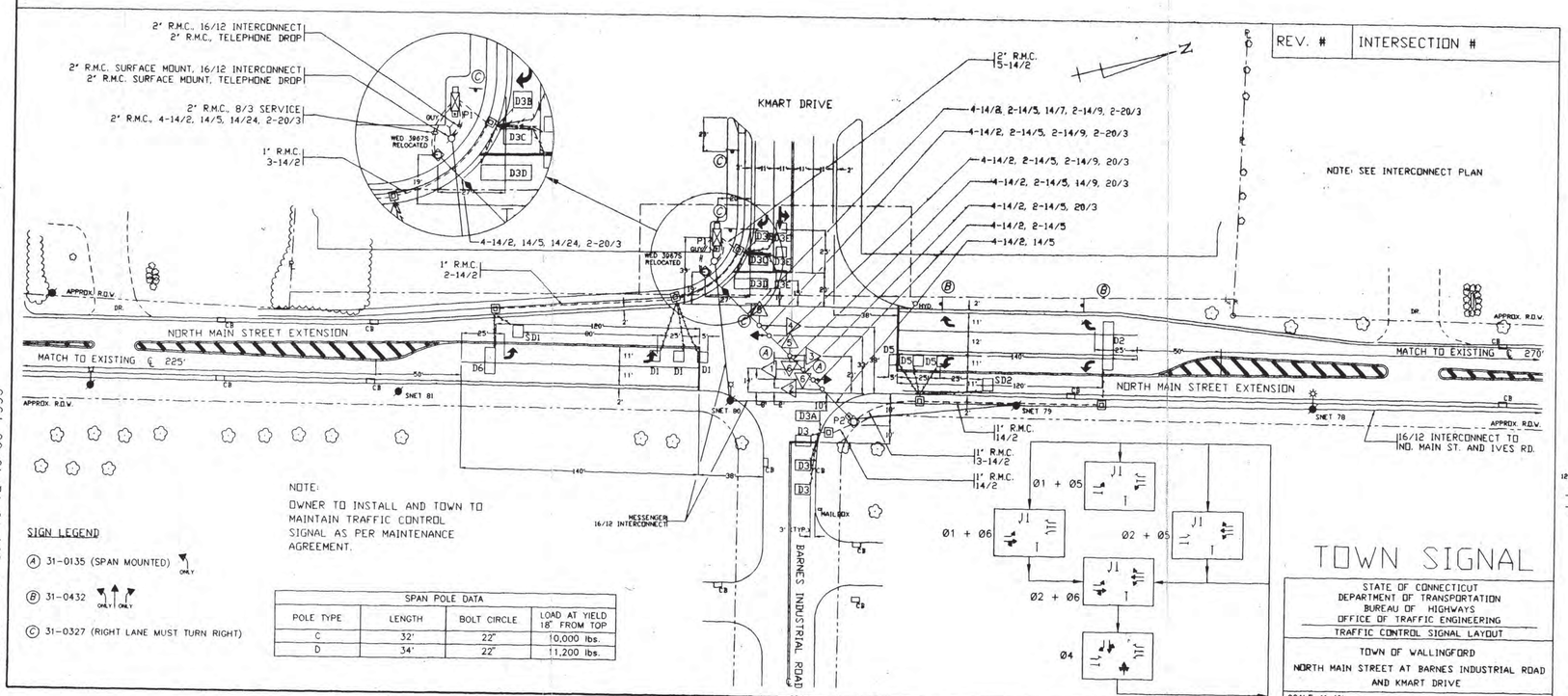
CONTRACTOR TO STAKE R.O.W. PRIOR TO CONSTRUCTION.

PEDESTRIAN PUSHBUTTONS AND SIGNAGE SHALL BE ADA APPROVED. HANDICAPPED RAMPS SHALL BE PROVIDED IN CONJUNCTION WITH PEDESTRIAN PUSHBUTTONS.

ALL SPAN POLE SPECIFICATIONS SHALL BE IN ACCORDANCE WITH CONNECTICUT DEPARTMENT OF TRANSPORTATION, "TYPICAL STEEL SPAN POLE" 4/4/90, REVISIONS 3/90, 3/93.

FINAL TIMINGS AND CYCLE LENGTH WILL BE DETERMINED BY THE TOWN OF WALLINGFORD.

PRE-EMPTION IS TO OPERATE THROUGH THE INTERNAL PRE-EMPTION OF THE SIGNAL CONTROLLER.



NOTE:
OWNER TO INSTALL AND TOWN TO MAINTAIN TRAFFIC CONTROL SIGNAL AS PER MAINTENANCE AGREEMENT.

SIGN LEGEND

(A) 31-0135 (SPAN MOUNTED) ONLY

(B) 31-0432 ONLY ONLY

(C) 31-0327 (RIGHT LANE MUST TURN RIGHT)

SPAN POLE DATA

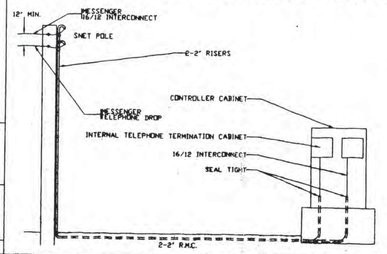
POLE TYPE	LENGTH	BOLT CIRCLE	LOAD AT YIELD 18" FROM TOP
C	32'	22"	10,000 lbs.
D	34'	22"	11,200 lbs.

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
OFFICE OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
NORTH MAIN STREET AT BARNES INDUSTRIAL ROAD AND KMART DRIVE

SCALE: 1"=40'



STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
OFFICE OF TRAFFIC ENGINEERING

6 S (T)

TRAFFIC CONTROL SIGNAL PLAN

(6ST)

10/13/95 #6

V-228

REV. # | INTERSECTION #

B:\KMART2 Fri Oct 13 12:49:36 1995

MOVEMENT DIAGRAM

	NONE	PRE-EMPT 1	PRE-EMPT 2		PRE-EMPT 2	PRE-EMPT 1		
NTOR		PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	PHASE 7	PHASE 8
		GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL	GRN CL CL
FACE #	1	R← R←Y R	R R R		R R R	R R R	G Y R		
	2	R R R	R R R		R R R	R R R	G Y R		
	3	R R R	G Y R		R R R	R←R←Y R	R R R		
	4	R R R	G Y R		R R R	R R R	R R R		
	5	R R R	R R R		G Y R	R R R	R R R		
			←YIELD				←YIELD		
	MIN	3 3 1	15 3 1		5 3 1	3 3 1	15 3 1		
	MAX	20 5 3	60 5 3		40 5 3	20 5 3	60 5 3		
INTERVALS	MIN GRN	3	15		5	3	15		
	WALK		14		14		14		
	PED CLR		1		1		1		
	VEH EXT	2	5		3	2	5		
	MAX 1	10	40		20	10	40		
	MAX 2	15	50		30	15	50		
	YELLOW	3	3		3	3	3		
	RED	1	2		2	1	2		
MODE		NON-LOCK	MIN. RECALL THIS PHASE	OFF	NON-LOCK	NON-LOCK	MIN. RECALL THIS PHASE	OFF	OFF
INI START									

FLASHING OPERATION: Y Y Y Y R

MAINT 24hr ☐ Norm ☐

ENERGY BY—TOWN
SERVICE POLE—SNET 71
OFFICE RECORD
REVISION #1
STC # DATE REVISED:
WIDENED IVES ROAD TO 2 LANE APPROACH

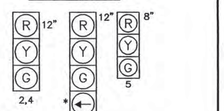
INTERSECTION #

METERED SERVICE

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	3	3
HOLD RED	1	1
HOLD PHASE	1+6	2+5
EXIT PHASE	2+6	2+6
EXIT CALL	NONE	NONE

SIGNAL FACES



* = BICOLOR FIBER OPTIC ARROW

LEGEND

R RED
Y YELLOW
G GREEN
YELLOW ARROW
GREEN ARROW
W/F WALK/ FL. D.W.
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
TRAFFIC SIGNAL FACE
PEDESTRIAN SIGNAL FACE
LOOP DETECTOR
MAGNETIC DETECTOR
SD SYSTEM DETECTOR
PROPOSED CONTROLLER
EXISTING CONTROLLER
PROPOSED HANDHOLE
EXISTING HANDHOLE
PROPOSED (R.M.C.) RIGID METAL CONDUIT
EXISTING (R.M.C.) RIGID METAL CONDUIT
CABLE CLOSURE
DET. LEADS IN SAW CUT
AUXILIARY TERMINATION CABINET
AUXILIARY EQUIPMENT CABINET
OPTICAL DETECTOR

TOWN SIGNAL

TOWN OF WALLINGFORD
STATE OF CONNECTICUT

TRAFFIC CONTROL SIGNAL

NORTH MAIN STREET
AT
IVES RD. & WESTVIEW OFFICE PK.

REV. #1	TRAFFIC	ELECTRICAL
	DATE: JULY 7, 1997	
FIELD SURVEY	BARAKOS-LAMBRO DESIGN GROUP	
ENGINEER	ENGINEERS/PLANNERS/SURVEYORS/LANDSCAPE ARCHITECTS 2911 DIXWELL AVENUE HAMDEN, CT 06518	
DRAFTER		
CHECKED BY		
SUBMITTED BY		
APPROVED BY		
DATE		

DETECTORS

IDENT	SIZE	TURNS	MODE
D1	6'X6'	3	PRESENCE
D2	15'X6'	3	PRESENCE
D4	6'X6'	3	PRESENCE
D4A	7'X6'	3	5" DELAY
D4C	9'X6'	3	5" DELAY
D5	6'X6'	3	PRESENCE
D6	15'X6'	3	PRESENCE
SD1,2	7'X6'	3	PULSE

PROGRAM

FUNCTION	TIME	DAYS
FLASH	NONE	
MAX 1	ALL OTHER TIMES	DAILY
MAX 2	1100-1400	SAT-SUN
CYCLE 1	ALL OTHER TIMES	DAILY
CYCLE 2	1100-1400	SAT-SUN
CYCLE 3	FUTURE	
FREE	2300-0600	DAILY

COORDINATION TYPE—CLOSED LOOP

CYCLE	OFFSET #/SEC	YIELD PT %	PERMIS PERIOD	FORCE OFF ø	ø	ø
85"	1 0					
110"	2 0					

SYSTEM LOC: MASTER BARNES; IVES; STOP/SHOP

TECHNICAL NOTES

STANDARD OVERLAP SKIP FEATURES APPLY

TIMINGS REFLECT FREE OPERATION. ACTUAL TIMINGS TO BE DETERMINED BY CLOSED LOOP LOCAL COORDINATION UNIT.

PRE-EMPTION INOPERATIVE DURING FLASHING OPERATION.

DETECTORS D2&D6 TO BE INOPERATIVE DURING COORDINATED OPERATION.

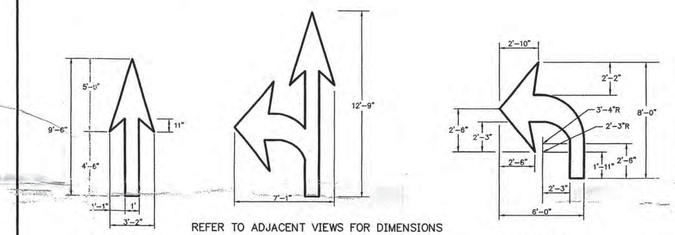
CONSTRUCTION NOTES

1. ALL TRAFFIC SIGNAL EQUIPMENT IS EXISTING UNLESS NOTED OTHERWISE.
2. EXISTING SIGNAL TO REMAIN IN OPERATION AT ALL TIMES.
3. ALL WORK TO BE COORDINATED WITH WIDENING OF IVES ROAD.
4. ANY SALVAGEABLE EQUIPMENT REMOVED TO BE RETURNED TO THE TOWN.
5. LOCATION OF EXISTING SIGNAL EQUIPMENT BASED ON LIMITED FIELD INVESTIGATION AND PREVIOUS TOWN PLAN.
6. INSTALL SIGNS AND MARKINGS ON IVES ROAD. ALL OTHERS EXISTING.
7. RELOCATE EXISTING STREET NAME SIGN AS DIRECTED.
8. DETECTORS D1, SD1, D4 & D4A ARE NEW. PROVIDE 1 NEW AMPLIFIER.
9. INSTALL DETECTORS 3' OFF EDGE OF ROAD AND 8' APART UNLESS NOTED OTHERWISE. SEGMENTED LOOPS TO BE INSTALLED IN SERIES.
10. ALL NEW HANDHOLES TO BE TYPE II UNLESS NOTED OTHERWISE.

(F) LOOP SAWCUT WIRES SHALL BE PULLED THROUGH NEW REAR H.H. & CONDUIT WITH NO SPLICES. TWIST WIRES ACCORDING TO TYPICAL PLAN. SPLICE TO CORRESPONDING LOOP IN NEW FRONT H.H.

(G) INSTALL NEW H.H. OVER EXISTING CONDUIT (APPROX. LOCATION)..

(W) INSTALL 30"X30" HANDHOLE OVER EXISTING CONDUIT (APPROX. LOCATION). REROUTE/EXTEND EXISTING CONDUIT FEEDING DETECTOR "D6" TO NEW 30"X30" H.H. REROUTE 14/2 TO CONTROLLER WITHOUT SPLICE.

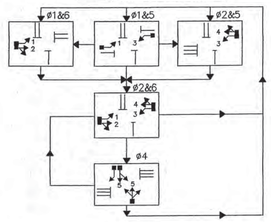


12.5 S.F. REFER TO ADJACENT VIEWS FOR DIMENSIONS 27.0 S.F. 15.5 S.F.

PAVEMENT ARROW DETAILS
(WHITE)
(ARROWS TO BE CENTERED IN TRAVEL LANE)

SIGN LEGEND
- (A) EXIST. SPAN MTD. 31-0135Z (↰) BACK TO BACK
- (B) INSTALL 31-0350Z (↰↑)
- (C) INSTALL 31-0297Z (LT LANE MUST TURN LT)
- (D) INSTALL 31-0001Z (STOP)
- (E) EXISTING "SPEED LIMIT 35"

PHASING SEQUENCE:



SPAN POLE DATA			
POLE TYPE	LENGTH	BOLT CIRCLE	LOAD AT YIELD 18" FROM TOP
EXISTING	30'	20"	7800#

REV. #1 | INTERSECTION #

TOWN SIGNAL

TOWN OF WALLINGFORD
STATE OF CONNECTICUT

TRAFFIC CONTROL SIGNAL LAYOUT

NORTH MAIN STREET
AT
IVES RD. & WESTVIEW OFFICE PK.

SCALE 1" = 40'

REV. #1 | INTERSECTION #

TOWN SIGNAL

TOWN OF WALLINGFORD
STATE OF CONNECTICUT

R.D.

TRAFFIC CONTROL SIGNAL

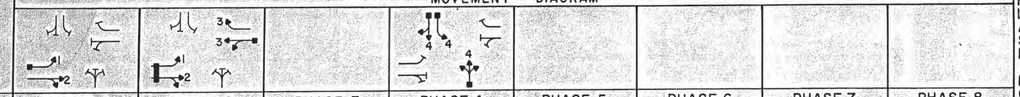
F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO	YEAR	ROUTE NO.	SHEET NO.
1	CONN.	WALLINGFORD	–	–	1997	–	

SG503001.DWG

FORM TRA-035 REV. 4-87

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD	N/A		1988	N/A	19	43

MOVEMENT DIAGRAM



NTOR		PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			PHASE 7			PHASE 8		
		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	←G	←Y	G	G	Y	R				R	R	R												
	2	G	G	G	G	Y	R				R	R	R												
	3	R	R	R	G	Y	R				R	R	R												
	4	R	R	R	R	R	R				G	Y	R												
	MIN.	3	3	0	15	3	0				5	3	0												
	MAX.	12	5	2	40	5	2				20	5	2												
INTERVALS	MIN GRN	3			15						5														
	WALK										10														
	PED CLR										1														
	VEH EXT	2			2						2														
	MAX 1	6			25						15														
	MAX 2	6			25						15														
	YELLOW		3			3						3													
	RED						2						1												
	ADD INI																								
	MAX INT																								
	T B R																								
	T T R																								
	MIN GAP																								
MODE		MIN. - RECALL			MIN. - RECALL			OFF			NON - LOCK														
INI START					THIS PHASE																				

FLASHING OPERATION: Y Y Y R

MAINT: 24hr ☐ Norm ☒

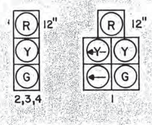
ENERGY BY - SHOPPING CENTER
SERVICE POLE - WED # 1874
OFFICE RECORD

JOB # 148-8810-03 SM # N/A
SIGNAL INSTALLED

INTERSECTION #

NORMAL	0.591	kW	487 hr/mo	287.82 kWh/mo
FLASH	0.308	kW	243 hr/mo	74.84 kWh/mo

SIGNAL FACES



SIGNALS 4 TO HAVE 5" BACK PLATES

LEGEND

- R RED
- Y YELLOW
- G GREEN
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WB WALK/FL DW
- DW 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 AND SIGN
- TRAFFIC SIGNAL FACE
- PEDESTRIAN SIGNAL FACE
- LOOP DETECTOR
- MAGNETIC DETECTOR
- SD SYSTEM DETECTOR
- CONTROLLER
- HANDHOLE
- (RMC) RIGID METAL CONDUIT
- STRAIN INSULATOR
- MAGNETOMETER PROBES
- CABLE CLOSURE
- DET. LEADS IN SAW CUT
- AUXILIARY TERMINATION CABINET
- RADIO ANTENNA

TOWN SIGNAL

STATE OF CONNECTICUT
DEPT. OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIVISION OF TRAFFIC
TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
NORTH MAIN STREET AT
STOP & SHOP SHOPPING CENTER DRIVE

	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY	VANASSE HANGEN		VANASSE HANGEN	
ENGINEER	BRUSTLIN, INC.		BRUSTLIN, INC.	
DRAFTER		8/24/88		8/24/88
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE				

DETECTORS

IDENT	SIZE	TURNS	MODE
D1	6'x6'	3	PRESENCE
D2	6'x6'	3	DELAY 2"
D3	6'x6'	3	PRESENCE
D4	6'x15'	2	DELAY 8"
D5	6'x6'	3	DELAY 8"
D6	6'x10'	3	PRESENCE
D7	6'x10'	3	PRESENCE

PROGRAM

FUNCTION	TIME	DAYS
FLASH	0000 - 0800	DAILY
MAX 1	ALL TIMES	DAILY
MAX 2		FUTURE

COORDINATION

CYCLE SAFETY CRT	OFFSET %/SEC	YIELD PT %	PERMIS PERIOD	FORCE OFF % Ø	Ø	Ø

SYSTEM LOC MASTER

TECHNICAL NOTES

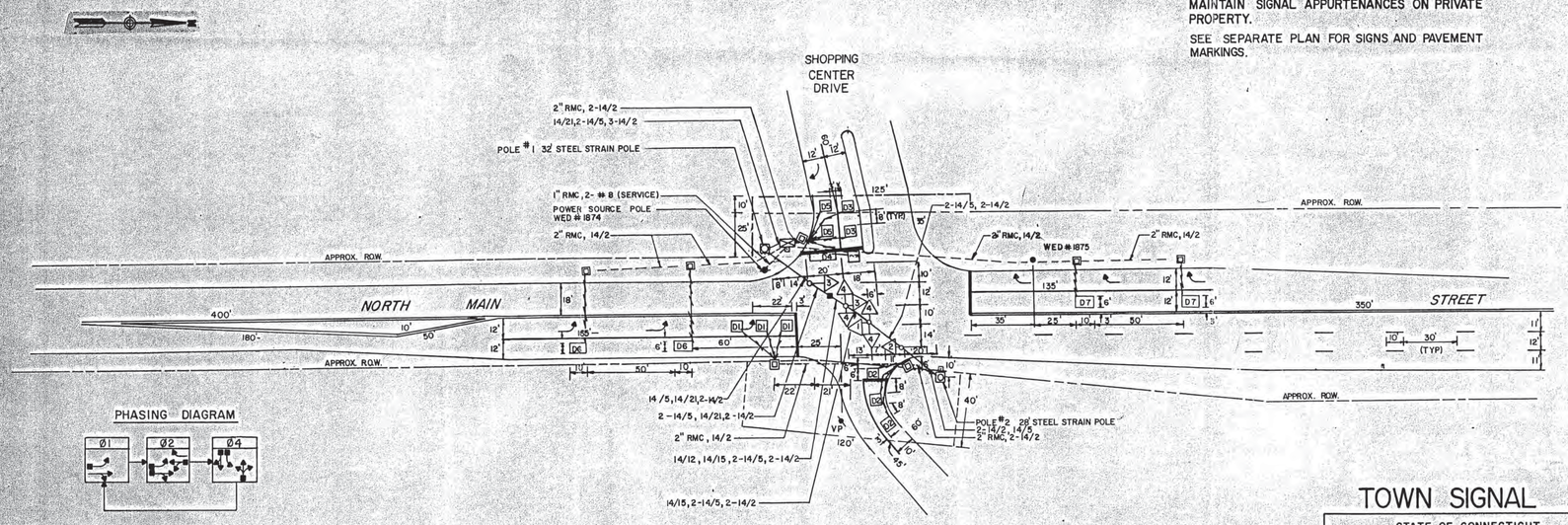
STANDARD OVERLAP SKIP FEATURES APPLY

1. PHASE 2 TO OMIT PHASE 1
2. PHASE 1 MUST PRECEDE PHASE 2

REV. # | INTERSECTION #

NOTES: PERMANENT EASEMENT CONVEYED TO TOWN TO MAINTAIN SIGNAL APPURTENANCES ON PRIVATE PROPERTY.

SEE SEPARATE PLAN FOR SIGNS AND PAVEMENT MARKINGS.



PHASING DIAGRAM

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DIVISION OF TRAFFIC
TRAFFIC CONTROL SIGNAL LAYOUT

TOWN OF WALLINGFORD
NORTH MAIN STREET AT
STOP & SHOP SHOPPING CENTER DRIVE

SCALE: 1" = 40'

JOSEPH MERRITT & COMPANY

CONSTRUCTION NOTES

1. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE NEW.
2. CONTROLLER SHALL BE 4-PHASE TRANSYT MODEL 1880E LARGE FRAME WITH TIME BASE COORDINATOR MANUFACTURED BY TRANSYT CORPORATION OF TALLAHASSEE, FLA
3. DETECTORS SHALL BE CENTERED WITHIN THE LANE AND 8' APART UNLESS OTHERWISE SPECIFIED.
4. STRAIN POLES:

   POLE #1: 32' STEEL STRAIN POLE, Ø GAUGE, F_Y = 48,000 PSI-ASTM A595, 14" DIAMETER, BASE PLATE 2"x20 1/2"x20 1/2"-ASTM A36, BOLT CIRCLE-20" DIAMETER, ANCHOR BOLTS 2"x96" ASTM A-675 GR90 OR APPROVED EQUAL.

   POLE #2: 28' STEEL STRAIN POLE, Ø GAUGE, F_Y = 48,000 PSI-ASTM A595, 14" DIAMETER, BASE PLATE 2"x20 1/2"x20 1/2"-ASTM A36, BOLT CIRCLE-20" DIAMETER, ANCHOR BOLTS 2"x96"-ASTM A-675 GR90 OR APPROVED EQUAL.

5. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE AND INSTALL A 60 AMP WEATHERPROOF DISCONNECT ON THE STEEL SPAN POLE. THE DISCONNECT SHALL BE A CUTLER-HAMMER SAFETY SWITCH, HEAVY DUTY SINGLE THROW, 222 NDK NEMA RATED 12 (3R), OR APPROVED EQUAL. ALL WIRING SHALL BE IN COMPLIANCE WITH TABLE 373-6(b) OF THE NATIONAL ELECTRICAL CODE.
6. OWNER'S NAME AND ADDRESS: MR. MARVIN M. SHILLER
   WALLINGFORD DEVELOPMENT CORPORATION
   C/O M.M. SHILLER ASSOCIATES
   767 FIFTH AVENUE, 27TH FLOOR
   NEW YORK, NEW YORK 10153

   CONTACT INDIVIDUAL: MARVIN M. SHILLER

REV. # | INTERSECTION #

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIVISION OF TRAFFIC

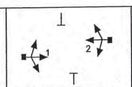
WALLINGFORD
N. MAIN ST./RTE. 68/RTE. 5
TRAFFIC CONTROL SIGNAL PLAN (677)

V-212

STATE OF CONNECTICUT – DEPT. OF TRANSPORTATION

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CONN.	WALLINGFORD	STPZ-2552(105)	148-165	1996	–	2	5

MOVEMENT DIAGRAM



FACE #		PHASE 1 GRN	PHASE 1 CL	PHASE 1 CL	PHASE 2 GRN	PHASE 2 CL	PHASE 2 CL	PHASE 3 GRN	PHASE 3 CL	PHASE 3 CL	PHASE 4 GRN	PHASE 4 CL	PHASE 4 CL	PHASE 5 GRN	PHASE 5 CL	PHASE 5 CL	PHASE 6 GRN	PHASE 6 CL	PHASE 6 CL	PHASE 7 GRN	PHASE 7 CL	PHASE 7 CL	PHASE 8 GRN	PHASE 8 CL	PHASE 8 CL
	1				G	Y	R				R	R	R												
	2				G	Y	R				R	R	R												
	3				R	R	R				G	Y	R												
	4				R	R	R				G	Y	R												
	MIN				15	3	1				9	3	1												
	MAX				50	5	2				30	5	2												

INTERVALS																								
	MIN GRN				15						9														
	WALK																							
	PED CLR																							
	VEH EXT				5						3														
	MAX 1				30						20														
	MAX 2																								
	YELLOW					3							3												
	RED						2						2												
	ADD INI																								
	MAX INT																								
	TBR																								
	TTR																								
	MIN GAP																								
	MODE	OFF			MIN RECALL			OFF			NON LOCK														
	INI START				THIS PHASE																				

MAINT: 24 HR ☐ NORM ☒

FLASHING OPERATION YYRR

ENERGY BY – TOWN
SERVICE BY – ED 6347

OFFICE RECORD

JOB# SM# N/A
REVISION
NEW SIGNAL

INTERSECTION

NORMAL	kW	hr/mo	kWh/mo	
FLASH	kW	hr/mo	kWh/mo	

METER SERVICE

DETECTORS

IDENT	SIZE	TURNS	MODE
D1	8'X6'	3	PRESENCE
D4	6'X6'	3	PRESENCE
D4A	12'X6'	3	8" DELAY
D4B	10'X6'	3	8" DELAY
D4C	9'X6'	3	PRESENCE

PROGRAM

FUNCTION	TIME (EST)	DAYS
MAX 1	ALL THE TIMES	DAILY

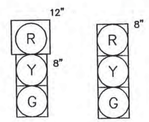
COORDINATION

CYCLE	OFFSET SEC	YIELD PT SEC	PERMIS PERIOD	FORCE OFF % ø	ø	ø

SYSTEM LOC

TECHNICAL NOTES
STANDARD OVERLAP SKIP FEATURES APPLY

SIGNAL FACES



TOWN SIGNAL

LEGEND

- R RED
- Y YELLOW
- G GREEN
- R– RED ARROW
- Y– YELLOW ARROW
- G– GREEN ARROW
- W/F WALK/FL DW
- DW 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 AND SIGN
- TRAFFIC SIGNAL FACE
- PEDESTRIAN SIGNAL FACE
- LOOP DETECTOR
- EXISTING PEDESTAL MOUNTING
- SD SYSTEM DETECTOR
- CONTROLLER
- EXIST.CONTROLLER
- HANDHOLE
- EXIST. HANDHOLE (RMC) RIGID METAL CONDUIT
- STRAIN INSULATOR
- MAGNETOMETER PROBES
- CABLE CLOSURE
- DET. LEADS IN SAW CUTS
- AUXILIARY TERMINATION CABINET
- RADIO ANTENNA
- AUXILIARY EQUIPMENT CABINET

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIV. OF TRAFFIC ENGINEERING

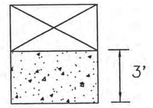
TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
BARNES ROAD AT BARNES INDUSTRIAL ROAD

REV.	TRAFFIC DATE	ELECTRICAL DATE
FIELD SURVEY		
ENGINEER		
DRAFTER		
CHECKED BY		
SUBMITTED BY	GREINER II 8/9/96	
APPROVED BY		
DATE		

CONSTRUCTION NOTES

1. ALL SIGNAL EQUIPMENT ARE NEW.
2. ALL HANDHOLES TO BE INSTALLED 2' OFF EDGE OF ROAD.
3. INSTALL LOOP DETECTORS 3' OFF EDGE OF ROAD AND 8' APART UNLESS OTHERWISE SPECIFIED.
4. REMOVE ALL PAVEMENT MARKINGS/SIGNS THAT CONFLICT WITH THIS PLAN.
5. INSTALL TYPE IV FOUNDATION WITH TYPE B CONTROLLER CABINET. CABINET DOOR TO OPEN ROAD SIDE.

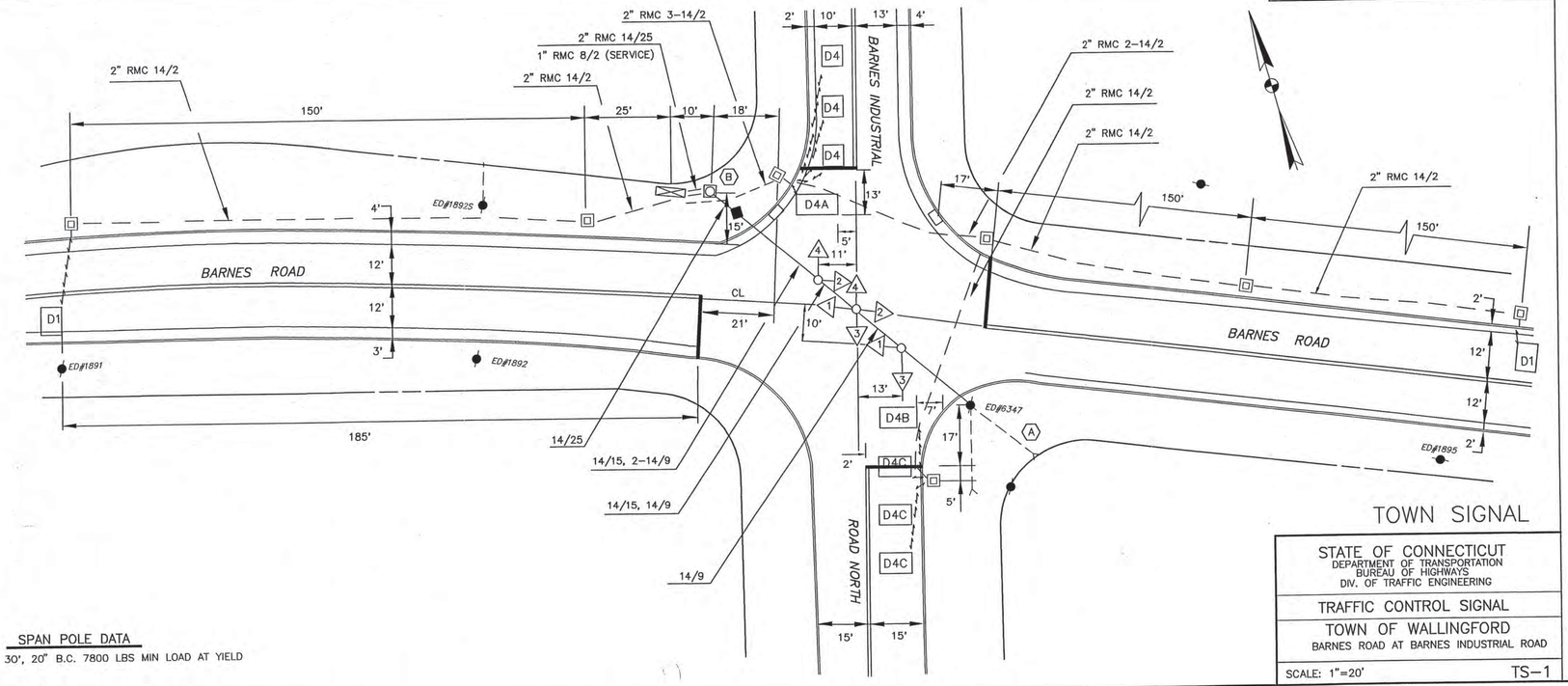


6. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 48 HOURS PRIOR TO ANY EXCAVATION TO BE PERFORMED (CALL B.U.D. 1-800 922-4455).
7. THE SPAN WIRE SHOULD BE A MINIMUM OF 40" ABOVE COMMUNICATION CABLES AND A MINIMUM OF 12" BELOW THE SECONDARY WIRES.
8. CONTACT MR. JAMES RAINEY AT WALLINGFORD ELECTRIC DIVISION (265-0308) FOR ELECTRIC SERVICE AND ANCHOR FOR ED #6347.
7. INSTALL A 60 AMP DISCONNECT ON STEEL SPAN POLE.

(A) ANCHOR WOOD POLE

(B) INSTALL A 60 AMP DISCONNECT ON STEEL SPAN POLE. DISCONNECT TO BE MOUNTED 11' FROM BASE OF STEEL SPAN POLE.

INSTALL TYPE I EPOXY RESIN PAVEMENT MARKINGS ON BARNES ROAD AND BARNES INDUSTRIAL ROAD NORTH AS INDICATED:
12" STOP BARS (140')
4" DYCL (400')
4" WHITE EDGE LINE (400')



SPAN POLE DATA
30', 20" B.C. 7800 LBS MIN LOAD AT YIELD

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIV. OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

TOWN OF WALLINGFORD
BARNES ROAD AT BARNES INDUSTRIAL ROAD

SCALE: 1"=20' TS-1

REV.# | INTERSECTION #

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIV. OF TRAFFIC ENGINEERING

TRAFFIC CONTROL SIGNAL

SCALE: 1"=20' TS-1

C:\WF-SIG1 8-9-96 25522 pm EST

ST-54
(68T)

MOVEMENT DIAGRAM

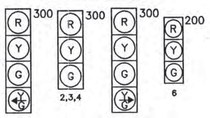
NTOR		PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			PHASE 7			PHASE 8		
	FLASH	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL
1	Y	←/G	←Y/G	G	G	Y	R				R	R	R												
2	Y	R	R	R	G	Y	R				R	R	R												
3	Y	G	Y	R	G	Y	R				G	Y	R												
4	R	R	R	R	R	R	R				G	Y	R												
5	R	R/→	R/Y→	R	R	R	R				G	Y①	R②												
6	R	R	R	R	R	R	R				G	Y	R												
MIN		3	3	0	8	3	2				5	3	2												
MAX		15	3	3	60	5	5				45	3	5												

INTERVALS																									
MIN GRN	5			15						5															
WALK										13															
PED CLR										1															
VEH EXT	1			1						1															
MAX 1	5			45						35															
MAX 2	5			45						35															
YELLOW		3			4						3														
RED			1			2						2													
ADD INIT																									
MAX INIT																									
TBR																									
TTR																									
MIN GAP																									
MODE		NON-LOCK			MIN. RECALL			OFF			LOCK			OFF			OFF			OFF			OFF		
INT START					THIS PHASE																				

ENERGY BY- TOWN | METER # -
MAINT LEVEL 5 | SERVICE POLE- WED 1977

INTERSECTION # 148-
OFFICE RECORD

SIGNAL FACES



ALL INDICATIONS TO BE LED LAMPS
Y/G ARROWS IN HEAD 1&5 TO BE DUAL COLOR

STC # 148- | SM # N/A
SIGNAL IN OPERATION
SIGNAL INSTALL PER TOWN REQUIREMENTS

TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING
TRAFFIC CONTROL SIGNAL

REASEARCH PKWY @
BRISTOL MYERS SQUIBB DRIVE

REV #	TRAFFIC	DATE	ELECTRICAL	DATE
ENGINEER				
DRAFTER				
CHECKED BY	WILBUR SMITH ASSOCIATES		WILBUR SMITH ASSOCIATES	
SUBMITTED BY				
APPROVED BY				
DATE	JUNE 2001		JUNE 2001	

DETECTORS

IDENT	SIZE (WXL)	TURNS	MODE
D1	1800 X 1800	3	PRESENCE
SD1	1800 X 1800	3	PRESENCE
SD2	1800 X 1800	3	PULSE
SD3	1800 X 1800	3	PULSE
D4	3600 X 1800	3	PRESENCE
D4A	2400 X 1800	3	PRESENCE
D4B	3600 X 1800	3	PRESENCE
D4C	2400 X 1800	3	PRESENCE
SD4	1800 X 1800	3	PRESENCE
SD5	1800 X 1800	3	PRESENCE
SD6	1800 X 1800	3	PULSE
SD7	1800 X 1800	3	PULSE
SD8	1800 X 1800	3	PULSE

PROGRAM

FUNCTION	T I M E	DAYS
FLASH	EMERGENCY ONLY	
MAX 1	ALL TIMES	
MAX 2	FUTURE	

COORDINATION TYPE-

CYCLE	OFFSET SEC	OFFSET %	PHASE SPLITS SEC/% Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8

PERMIS PERIOD	Ø	SEC

SYSTEM LOC

MASTER	STANDARD OVERLAP SKIP FEATURES APPLY
TOWN	PHASE 1 SHALL ALWAYS BE FOLLOWED BY PHASE 2.
ENGINEERS	PHASE 4 SHALL ONLY FOLLOW PHASE 2.
OFFICE	① TO BE Y/→ IF PHASE 1 IS NEXT
	② TO BE R/→ IF PHASE 1 IS NEXT
	PHASE 2 ON, OMIT PHASE 1

TECHNICAL NOTES

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

CONSTRUCTION NOTES

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE TOWN OF WALLINGFORD AND THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION.
2. ALL TRAFFIC SIGNAL EQUIPMENT IS NEW.
3. STAKE ALL R.O.W. PRIOR TO EXCAVATION.
4. REPLACE DOUBLE YELLOW CENTERLINE AND LANE LINES ON RESEARCH PARKWAY FROM THE NORTH SIDE OF BARNES ROAD (ROUTE 68) NORTHERLY APPROXIMATELY 265 METERS TO STATION 9+290 AND ON THE BRISTOL MYERS SQUIBB SITE DRIVEWAY FROM RESEARCH PARKWAY EASTERLY APPROXIMATELY 40 METERS.
5. LOOP DETECTORS ARE TO BE INSTALLED 1.0 METERS OFF THE CURB OR EDGE OF ROAD AND 2.4 METERS APART UNLESS OTHERWISE SPECIFIED.
6. INSTALL HANDHOLES APPROXIMATELY 0.3M BEHIND CURB OR EDGE OF ROAD UNLESS OTHERWISE SPECIFIED.
7. CABINET DOOR TO OPEN FIELD SIDE.
8. IN ACCORDANCE WITH ALL APPLICABLE NEC CODES, THE CONTRACTOR SHALL FURNISH AND INSTALL A 60-AMP WEATHERPROOF DISCONNECT SWITCH MOUNTED ON THE STEEL SPAN POLE (C) AT A HEIGHT OF 3 METERS ABOVE FINISHED GRADE. THE DISCONNECT SHALL BE A CUTLER-HAMMER SAFETY SWITCH, HEAVY DUTY SINGLE THROW, 222 NDK-NEMA RATED 12(3R) DEVICE.
9. ALL PAVEMENT MARKINGS TO BE INSTALLED BY CONTRACTOR AS PER PLAN AND IN ACCORDANCE WITH TOWN AND MUTCD STANDARDS. MAINTENANCE OF PAVEMENT MARKINGS WILL BE DONE BY THE TOWN OF WALLINGFORD.

(W) INSTALL 760 X 760 HANDHOLE. ALL OTHERS TYPE II.

(A) INSTALL 8 PHASE FULL ACTUATED MASTER/LOCAL CONTROLLER (PEEK TRANSYT SERIES 3000) WITH EXTERNAL ELECTRIC METER AND TELEPHONE COMMUNICATION MODEM IN CONTROLLER CABINET ON TYPE IV TRAFFIC CONTROL FOUNDATION. DOOR TO OPEN FIELD SIDE. INSTALL CONCRETE PAD ADJACENT TO CONTROLLER DOOR.

(B) 10,500mm SPAN POLE WITH PEDESTRIAN SIGNAL, PEDESTRIAN PUSH BUTTON AND SIGN.

(C) 10,500mm SPAN POLE WITH SERVICE DISCONNECT SWITCH. FOUNDATION FOR POLE (C) MUST BE EXTENDED 0.65m (TOTAL DEPTH EQUALS 3650) AND THE TOP SET AT ELEVATION 108.35 m.

(D) 1,000mm ALUMINUM PEDESTAL WITH PEDESTRIAN PUSH BUTTON AND SIGN.

UTILITY CONTACTS

Ms. Suzanne P. Paddock
Supervisor - O.N.E
Southern New England Telephone
1441 North Colony Road
Meriden, CT. 06450
(203) 238-5620

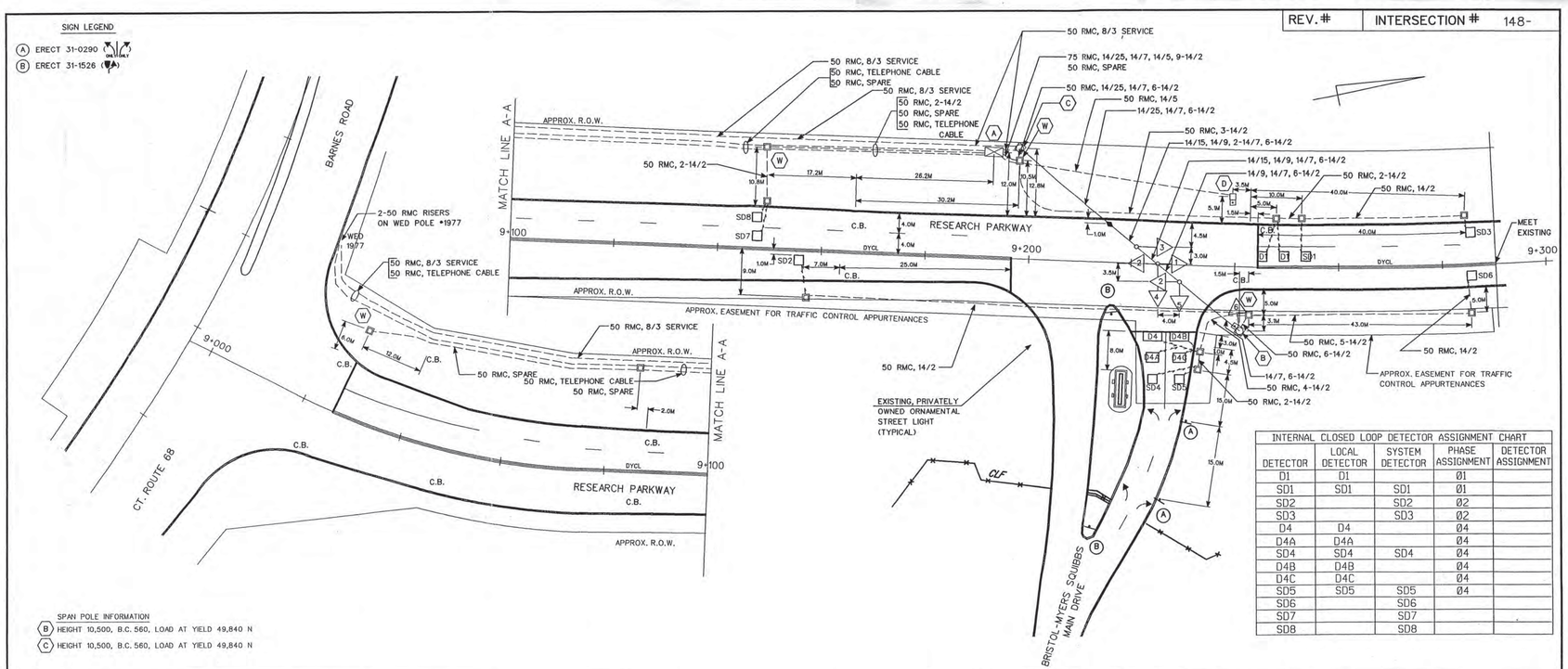
Mr. John P. Thompson, P.E.
Town Engineer, Town of Wallingford
29 Town Farm Road
Wallingford, CT. 06492
(203) 294-2035

Mr. Art Dutra
Wallingford Electric
100 John Street
Wallingford, CT. 06492
(203) 294-2271

Mr. Leo Luciano
Yankee Gas Services
47 Eagle Street
Waterbury, CT. 06708
(203) 596-3104

Mr. Dean P. Muratori
Construction Manager
AT&T Cable Services
222 New Park Drive
Berlin, CT. 06037
(860) 505-6248

Mr. Vincent Mascia
Town Of Wallingford Water & Sewer Dept.
377 South Cherry Street
P.O. Box 725
Wallingford, CT. 06492
(203) 949-2672



INTERNAL CLOSED LOOP DETECTOR ASSIGNMENT CHART

DETECTOR	LOCAL DETECTOR	SYSTEM DETECTOR	PHASE ASSIGNMENT	DETECTOR ASSIGNMENT
D1	D1		Ø1	
SD1	SD1	SD1	Ø1	
SD2		SD2	Ø2	
SD3		SD3	Ø2	
D4	D4		Ø4	
D4A	D4A		Ø4	
SD4	SD4	SD4	Ø4	
D4B	D4B		Ø4	
D4C	D4C		Ø4	
SD5	SD5	SD5	Ø4	
SD6		SD6		
SD7		SD7		
SD8		SD8		

LEGEND:
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
TRAFFIC SIGNAL FACE | PEDESTRIAN SIGNAL HEAD | AUDIBLE PEDESTRIAN SIGNAL | LOOP DETECTOR
MAGNETIC DETECTOR | SD SYSTEM DETECTOR | OPTICAL DETECTOR | PROPOSED CONTROLLER
EXISTING CONTROLLER | PROPOSED HANDHOLE | EXISTING HANDHOLE | PROPOSED R.M.C. (RIGID METAL CONDUIT)
EXISTING R.M.C. (RIGID METAL CONDUIT) | CABLE CLOSURE | DET. LEADS IN SAW CUT
MICROWAVE DETECTOR | STRAIN INSULATOR | AUXILIARY TERMINATION CABINET | AUXILIARY EQUIPMENT CABINET

TRAFFIC CONTROL SIGNAL LAYOUT
CADD FILE NAME: TCSrev.dgn
DATE PLOTTED: 07-24-01
SCALE - 1:500
ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

TOWN SIGNAL

NO.	DATE	INIT.	DESCRIPTION
			REVISIONS

CONNECTICUT DEPARTMENT OF TRANSPORTATION
PROJECT TITLE: TRAFFIC CONTROL SIGNAL
REASEARCH PKWY @ BRISTOL MYERS SQUIBB DRIVE

TOWN SIGNAL

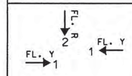
TOWN: WALLINGFORD | PROJECT NO.: -
DRAWING TITLE: TRAFFIC SIGNAL PLAN SHEET | DRAWING NO.:
SHEET NO.:

REV. # | INTERSECTION # 148-

V-250
(69T)

NONE

MOVEMENT DIAGRAM



NTOR		PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			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
1	Y																								
2	R																								
FACE #																									
MIN GRN																									
WALK																									
PED CLR																									
VEH EXT																									
MAX 1																									
MAX 2																									
YELLOW																									
RED																									
ADD INIT																									
MAX INIT																									
TBR																									
TTR																									
MIN GAP																									
MODE																									
INI START																									

INTERVALS

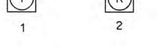
DETECTORS				PROGRAM			COORDINATION TYPE-												PERMIS PERIOD		SYSTEM LOC	TECHNICAL NOTES
DENT	SIZE (WXL)	TURNS	MODE	FUNCTION	T I M E	DAYS	CYCLE	PHASE SPLITS Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	SEC/ % SEC	%	OFFSET SEC	%	Ø	SEC	MASTER	STANDARD OVERLAP SKIP FEATURES APPLY

ENERGY BY- DEVELOPER | METER # -
MAINT 24hr ☐ Norm ☒ | SERVICE POLE-WED #310

INTERSECTION # N/A

METERED SERVICE

SIGNAL FACES



FACE 2 TO BE LED

OFFICE RECORD

STC #	SM #
FLASHING BEACON REVISED	
FLASHING BEACON REVISED BY DEVELOPER	

TOWN SIGNAL

LEGEND

R RED	PROPOSED CONTROLLER
Y YELLOW	EXISTING CONTROLLER
G GREEN	PROPOSED HANDHOLE
RED ARROW	EXISTING HANDHOLE
YELLOW ARROW	PROPOSED (R.M.C.) RIGID METAL CONDUIT
GREEN ARROW	EXISTING (R.M.C.) RIGID METAL CONDUIT
WALK/ FL.D.W.	CABLE CLOSURE
D.W. DON'T WALK	DET. LEADS IN SAW CUT
FL. FLASHING	AUXILIARY TERMINATION CABINET
PROPOSED WOOD SPAN POLE	AUXILIARY EQUIPMENT CABINET
EXISTING WOOD SPAN POLE	AUDIBLE PEDESTRIAN SIGNAL
PROPOSED STEEL SPAN POLE	
EXISTING STEEL SPAN POLE	
PROPOSED UTILITY POLE	
EXISTING UTILITY POLE	
PEDESTAL MOUNTING	
PEDESTRIAN PUSH BUTTON & SIGN	
TRAFFIC SIGNAL FACE	
PEDESTRIAN SIGNAL FACE	
LOOP DETECTOR	
MAGNETIC DETECTOR	
SD SYSTEM DETECTOR	
OPTICAL DETECTOR	

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

FLASHING BEACON

TOWN OF WALLINGFORD
COOK HILL ROAD AND
DRIVE TO OAKDALE THEATER

REV #	TRAFFIC DATE	ELECTRICAL DATE
ENGINEER	LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES. INC.	
DRAFTER		
CHECKED BY		
SUBMITTED BY		
APPROVED BY		
DATE		

RECEIVED
JUL 24 2000
STATE TRAFFIC COMMISSION

CONSTRUCTION NOTES

(1) ALL FLASHING BEACON EQUIPMENT IS NEW. ALL WORK TO BE DONE IN CONFORMANCE WITH 814A AND AS AMENDED. ALL NEW TRAFFIC CONTROL EQUIPMENT AND SIGNS SHALL BE FIELD LOCATED AND APPROVED BY THE TOWN PRIOR TO CONSTRUCTION.

(2) SPAN ATTACHMENT TO UTILITY POLES WED #310 AND WED #311 TO BE BELOW SECONDARYS.

(G) INSTALL TRAFFIC CONTROL CABINET TYPE A ON 4'-4" ALUMINUM PEDESTAL. CABINET DOOR TO OPEN STREET SIDE.

(H) INSTALL 35' CLASS III UTILITY POLE WITH ANCHOR.

(J) INSTALL 4-150 WATT SPOT LIGHT ASSEMBLY AT THE BOTTOM OF THE SIGNAL HOUSING. A MANUAL SWITCH SHALL BE PROVIDED AT THE CABINET WHICH IS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL. THE FLASHER AND SPOT LIGHT SHALL BE WIRED ON SEPARATE SWITCHES.

(3) CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (1-800-922-4455) PRIOR TO ANY EXCAVATION.

(4) SPAN WIRE SHALL BE 3/8" DIA. EXTRA STRENGTH 15,400 LBS MAXIMUM BREAKING STRENGTH.

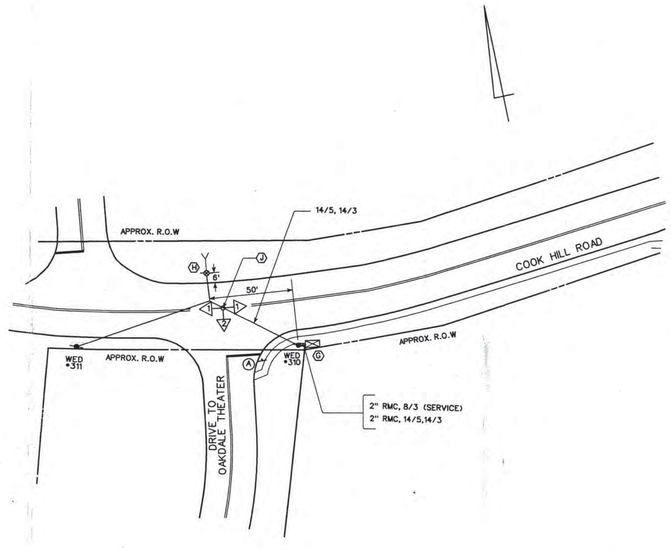
(5) ELECTRICAL SERVICES TO THE CONTROLLER SHALL BE COORDINATED WITH THE WALLINGFORD ELECTRIC DIVISION. CONTACT: MR. ART DUTRA, WALLINGFORD ELECTRIC DIVISION 1-(203) 265-0308 TO COORDINATE. THE CONTRACTOR SHALL PAY ALL COST AND FEES FOR OBTAINING ELECTRICAL SERVICES.

TOWN OF WALLINGFORD CONTACT

LT. ALAN ZAKRZEWSKI
WALLINGFORD POLICE
TRAFFIC MAINTENANCE DIVISION
1-203-294-2815

NOTES:

ALL PAVEMENT MARKINGS ARE EXISTING.



SIGN LEGEND

(A) EXISTING 31-0002Z (STOP SIGN)

REV. # | INTERSECTION # N/A

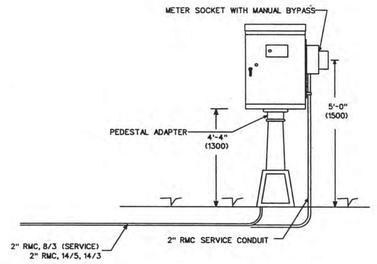
TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

FLASHING BEACON LAYOUT

TOWN OF WALLINGFORD
COOK HILL ROAD AND
DRIVE TO OAKDALE THEATER

SCALE : 1"=40'



PEDESTAL MOUNTED
TRAFFIC CONTROLLER CABINET (TYPE A)
WITH METERED SERVICE
NOT TO SCALE

REV. #

INTERSECTION #

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

FLASHING BEACON

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO	YEAR	ROUTE NO.	SHEET NO.
1	CONN.	WALLINGFORD	N/A	N/A	97	N/A	

F.F.#346 JOB NO.1152901

(71T)

\cad_data\oakdale\cookhill.dgn Oct. 24, 1997 09:44:04

MOVEMENT DIAGRAM

INSTALL 4" OF 12 INCH YELLOW REFLECTORIZED PAINT TRANSVERSE MARKINGS

NONE

FL. Y 1 — 2 FL. R — FL. Y 1

NTOR		PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			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
FACE # 1	Y																								
2	R																								

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

DETECTORS				PROGRAM			COORDINATION TYPE-											PERMIS PERIOD		SYSTEM LOC	TECHNICAL NOTES
IDENT	SIZE (WXL)	TURNS	MODE	FUNCTION	TIME	DAYS	CYCLE	PHASE SPLITS SEC/ % Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	OFFSET SEC	%	Ø	SEC	MASTER	STANDARD OVERLAP SKIP FEATURES APPLY

ENERGY BY- DEVELOPER	METER # -	INTERSECTION # N/A
MAINT 24hr ☐ Norm ☒	SERVICE POLE-WED # 1551	

METERED SERVICE-

SIGNAL FACES

(Y) 12" — 1

(R) 12" — 2

FACE 2 TO BE LED

OFFICE RECORD

STC #	SM #
FLASHING BEACON IN OPERATION	
FLASHING BEACON INSTALLED BY DEVELOPER	

TOWN SIGNAL

LEGEND

R	RED		PROPOSED CONTROLLER
Y	YELLOW		EXISTING CONTROLLER
G	GREEN		PROPOSED HANDHOLE
	RED ARROW		EXISTING HANDHOLE
	YELLOW ARROW		PROPOSED (R.M.C.) RIGID METAL CONDUIT
	GREEN ARROW		EXISTING (R.M.C.) RIGID METAL CONDUIT
WØ	WALK/ FL. D.W.		CABLE CLOSURE
D.W.	DON'T WALK		DET. LEADS IN SAW CUT
FL.	FLASHING		AUXILIARY TERMINATION CABINET
	PROPOSED WOOD SPAN POLE		AUXILIARY EQUIPMENT CABINET
	EXISTING WOOD SPAN POLE		AUDIBLE PEDESTRIAN SIGNAL
	PROPOSED STEEL SPAN POLE		
	EXISTING STEEL SPAN POLE		
	PROPOSED UTILITY POLE		
	EXISTING UTILITY POLE		
	PEDESTAL MOUNTING		
	PEDESTRIAN PUSH BUTTON & SIGN		
	TRAFFIC SIGNAL FACE		
	PEDESTRIAN SIGNAL FACE		
	LOOP DETECTOR		
	MAGNETIC DETECTOR		
SD	SYSTEM DETECTOR		
	OPTICAL DETECTOR		

STATE OF CONNECTICUT KEITH LAWRENCE COOTTOS? LICENSED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

FLASHING BEACON

TOWN OF WALLINGFORD
SOUTH TURNPIKE ROAD AND
DRIVE TO OAKDALE THEATER

REV #	TRAFFIC	DATE	ELECTRICAL	DATE
ENGINEER	LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC.			
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE				

RECEIVED
JUL 24 2000
STATE TRAFFIC COMMISSION

CONSTRUCTION NOTES

① ALL FLASHING BEACON EQUIPMENT IS NEW. ALL WORK TO BE DONE IN CONFORMANCE WITH 814A AND AS AMENDED. ALL NEW TRAFFIC CONTROL EQUIPMENT AND SIGNS SHALL BE FIELD LOCATED AND APPROVED BY THE TOWN PRIOR TO CONSTRUCTION.

② SPAN ATTACHMENT TO UTILITY POLES WED #1551 AND WED #5535 TO BE BELOW SECONDARYS.

Ⓖ INSTALL TRAFFIC CONTROLLER CABINET TYPE A ON SPAN POLE. CABINET DOOR TO OPEN STREET SIDE.

Ⓗ INSTALL SPAN POLE FOUNDATION AND 30' SPAN POLE.

Ⓙ INSTALL 4-150 WATT SPOT LIGHT ASSEMBLY AT THE BOTTOM OF THE SIGNAL HOUSING. A MANUAL SWITCH SHALL BE PROVIDED AT THE CABINET WHICH IS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL. THE FLASHER AND SPOT LIGHT SHALL BE WIRED ON SEPARATE SWITCHES.

③ CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" (1-800-922-4455) PRIOR TO ANY EXCAVATION.

④ SPAN WIRE SHALL BE 3/8" DIA. EXTRA STRENGTH 15,400 LBS MAXIMUM BREAKING STRENGTH.

⑤ ELECTRICAL SERVICES TO THE CONTROLLER SHALL BE COORDINATED WITH THE WALLINGFORD ELECTRIC DIVISION. CONTACT: MR. ART DUTRA, WALLINGFORD ELECTRIC DIVISION 1-(203) 265-0308 TO COORDINATE. THE CONTRACTOR SHALL PAY ALL COST AND FEES FOR OBTAINING ELECTRICAL SERVICES.

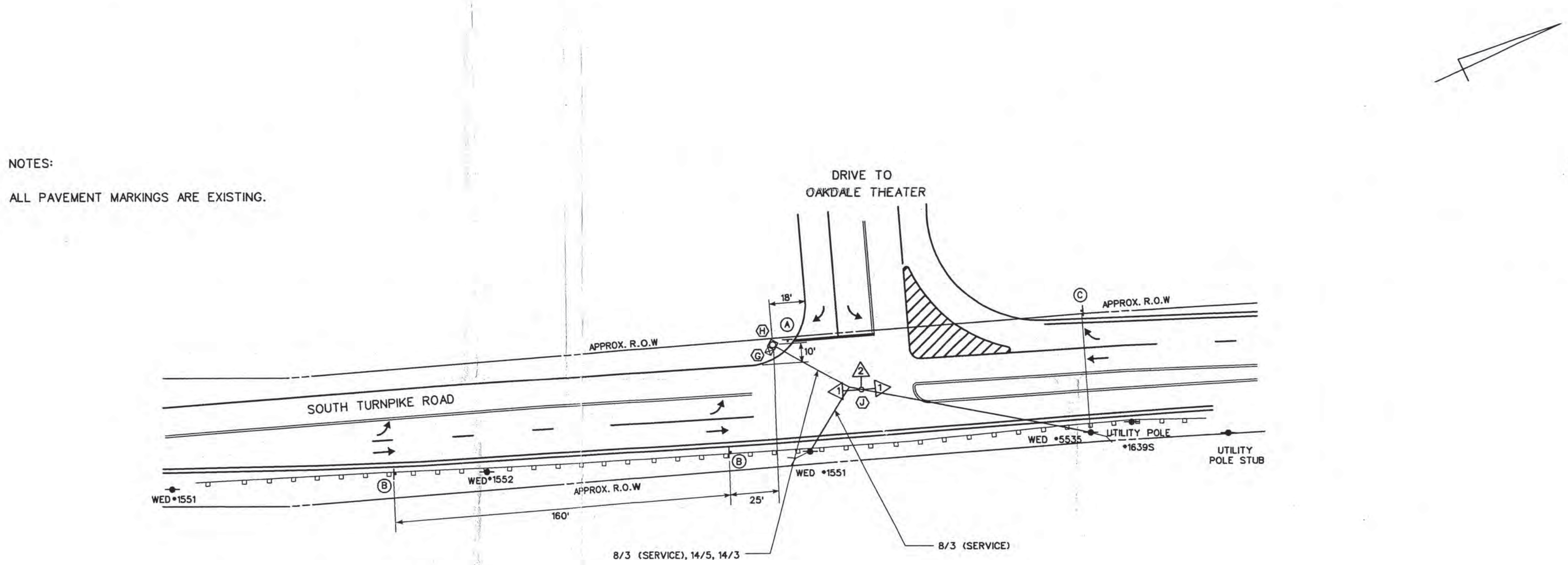
TOWN OF WALLINGFORD CONTACT

LT. ALAN ZAKRZEWSKI
WALLINGFORD POLICE
TRAFFIC MAINTENANCE DIVISION
1-203-294-2815

REV. #	INTERSECTION # N/A

NOTES:

ALL PAVEMENT MARKINGS ARE EXISTING.



SIGN LEGEND

Ⓐ EXISTING 31-0002Z (STOP SIGN)

Ⓑ INSTALL 31-0329Z (↖↑)

Ⓒ INSTALL 31-0330Z (↑↗)

SPAN POLE INFORMATION

30' IN LENGTH, B.C. 20" AT YIELD 7800 LBS

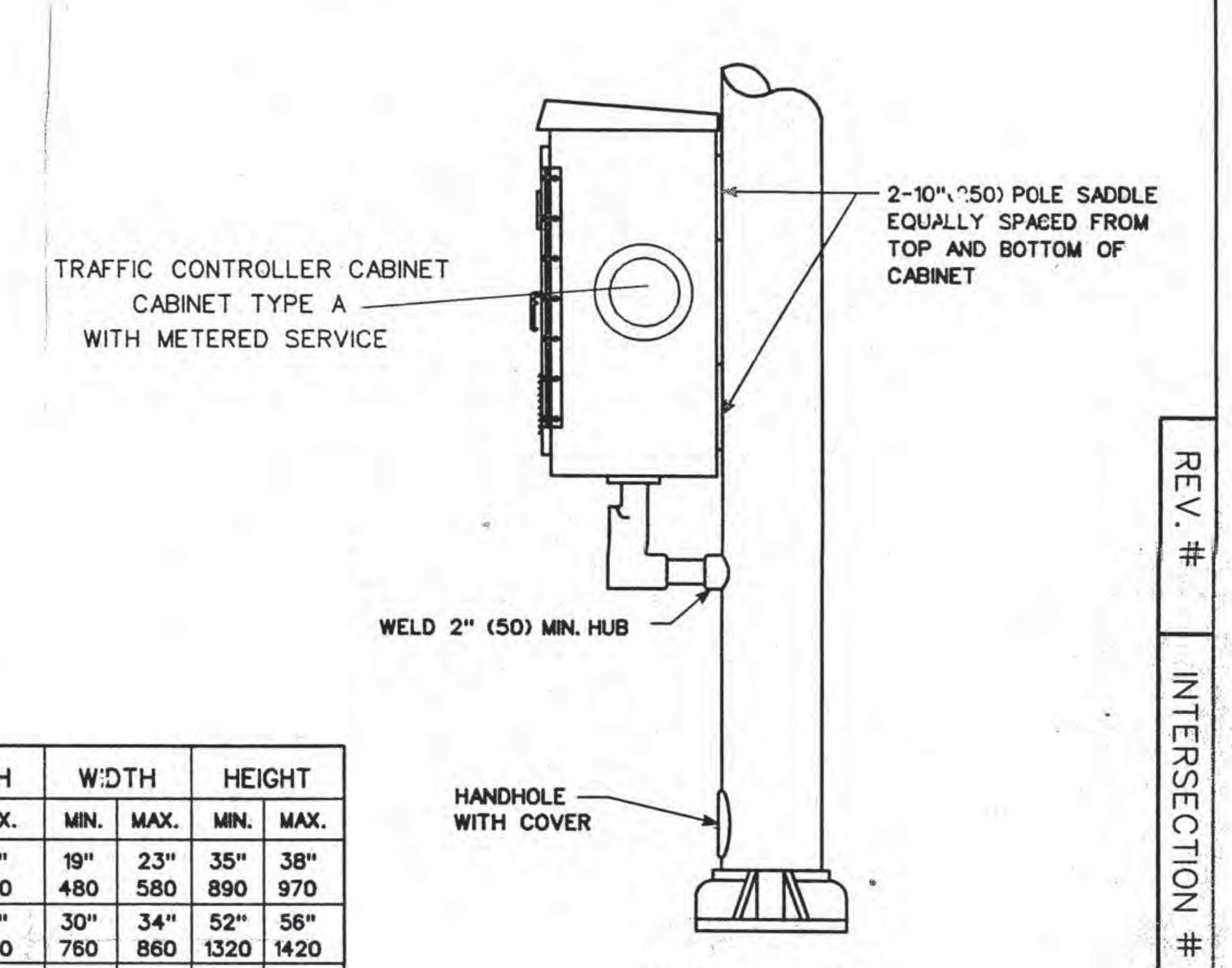
TOWN SIGNAL

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUR. OF ENGINEERING & HWY. OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

FLASHING BEACON LAYOUT

TOWN OF WALLINGFORD
SOUTH TURNPIKE ROAD AND
DRIVE TO OAKDALE THEATER

SCALE : 1"=40'



POLE MOUNTED CONTROLLER

CABINET TYPE	DEPTH MIN.	DEPTH MAX.	WIDTH MIN.	WIDTH MAX.	HEIGHT MIN.	HEIGHT MAX.
A	14" 350	16" 400	19" 480	23" 580	35" 890	38" 970
B	17" 430	19" 480	30" 760	34" 860	52" 1320	56" 1420
C	25" 630	27" 690	42" 1070	45" 1140	54" 1370	58" 1470

REV. # | INTERSECTION #

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING & HIGHWAY OPERATIONS
DIVISION OF TRAFFIC ENGINEERING

FLASHING BEACON

72T

F.H.W.A. REGION NO.	STATE	TOWN	FED. AID PROJ. NO.	PROJ. NO	YEAR	ROUTE NO.	SHEET NO.
1	CONN.	WALLINGFORD	N/A	N/A	97	N/A	

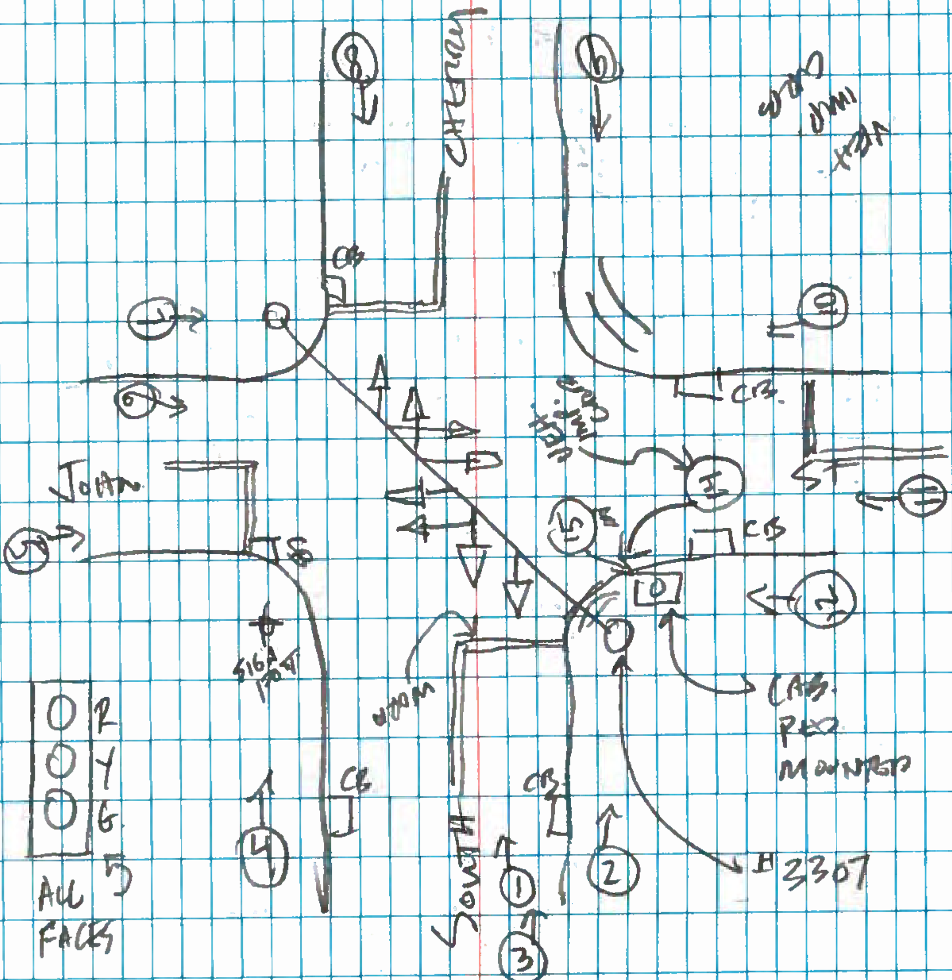
F.F.#346 JOB NO.1152901

10/23/97 10:43

I:\cad_data\oakdale\sturnpke.dgn Oct. 24, 1997 09:49:46

73-T - SOUTH CHERRY + JOHN ST.

START 2:25 P.M



FINISH - 2:40 P.M.

75 T - OVERHEAD LIGHTS @ CHURCH ST.

START - 2:50 PM

FORM TRA-035 REV. 1-85

Normal Operation: FL.Y, FL.R, FL.Y

Fire Pre-Emption: 2, 2

MOVEMENT DIAGRAM

NTOR		PHASE 1			PHASE 2			PHASE 3			PHASE 4			PHASE 5			PHASE 6			PHASE 7			PHASE 8		
		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	FL.Y	Y	R	R	R	R																		
	2	FL.R	R	R	G	Y	R																		
	Min. Setting		3	1	30	3	1																		
	Max. Setting		4	2	120	4	2																		
INTERVALS	MIN GRN				45																				
	WALK																								
	PED CLR																								
	VEH EXT																								
	MAX 1																								
	MAX 2																								
	YELLOW		3			3																			
	RED			2			1																		
	ADD INI																								
	MAX INI																								
	TBR																								
	TTR																								
	MIN GAP																								
MODE																									
INI START																									

FLASHING OPERATION

MAINT
24hr ☐
Norm ☐

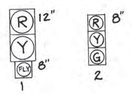
ENERGY BY
SERVICE POLE #
NORMAL kW hr/mo = kWh/mo
FLASH kW hr/mo = kWh/mo

OFFICE RECORD

JOB # SM #

INTERSECTION #

SIGNAL FACES



DETECTORS				PROGRAM			COORDINATION							SYSTEM LOC	TECHNICAL NOTES
IDENT	SIZE	TURNS	MODE	FUNCTION	TIME	DAYS	CYCLE SAFETY CRT	OFFSET %/SEC	YIELD PT %	PERMIS PERIOD	FORCE OFF % Ø	Ø	Ø	MASTER	STANDARD OVERLAP SKIP FEATURES APPLY

LEGEND

- R RED
- Y YELLOW
- G GREEN
- ◀R RED ARROW
- ◀Y YELLOW ARROW
- ◀G GREEN ARROW
- WD WALK/FL D W
- DW 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
- TRAFFIC SIGNAL FACE
- PEDESTRIAN SIGNAL FACE
- LOOP DETECTOR
- ■ MAGNETIC DETECTOR
- SD SYSTEM DETECTOR
- CONTROLLER
- HANDHOLE
- (R M C) RIGID METAL CONDUIT
- STRAIN INSULATOR
- MAGNETOMETER PROBES
- CABLE CLOSURE
- DET. LEADS IN SAW CUT
- AUXILIARY TERMINATION CABINET
- RADIO ANTENNA

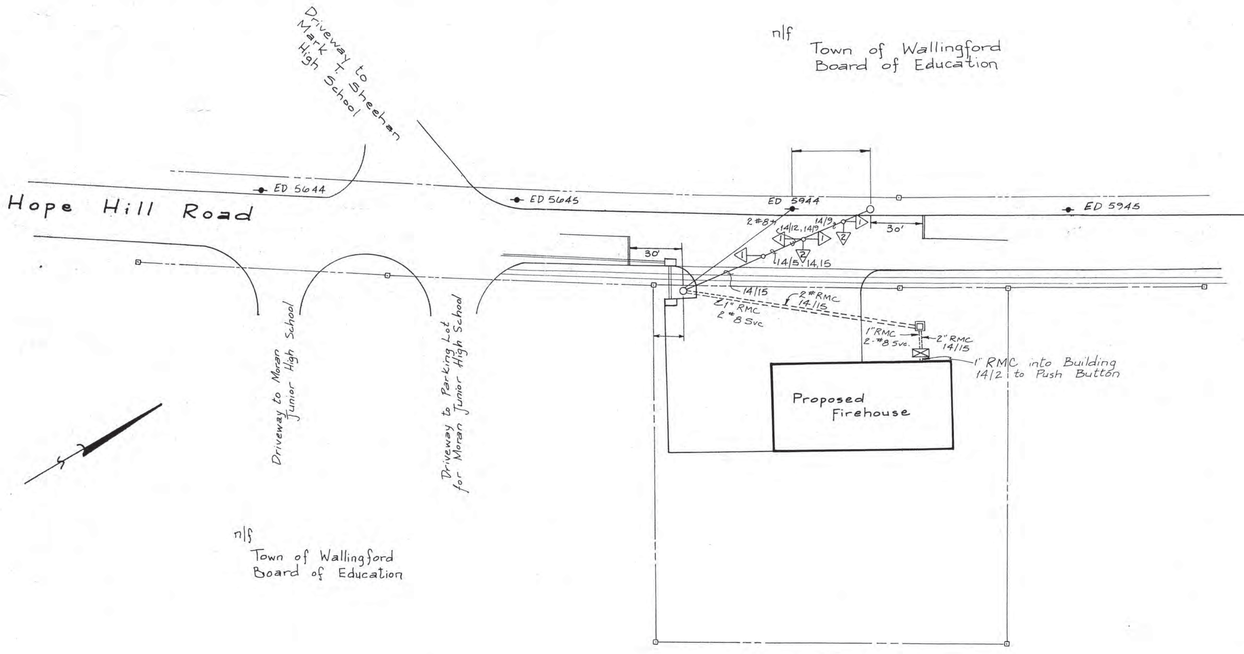
TOWN OF WALLINGFORD
DEPARTMENT OF ENGINEERING
DEPARTMENT OF POLICE SERVICES
TRAFFIC DIVISION

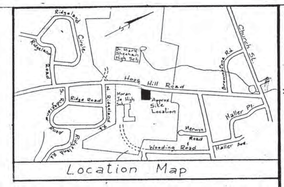
TRAFFIC CONTROL SIGNAL

	TRAFFIC	DATE	ELECTRICAL	DATE
FIELD SURVEY				
ENGINEER				
DRAFTER				
CHECKED BY				
SUBMITTED BY				
APPROVED BY				
DATE				

CONSTRUCTION NOTES

1. The Town of Wallingford will provide and install wooden poles with guys.





INTERSECTION #

TOWN OF WALLINGFORD
DEPARTMENT OF ENGINEERING
DEPARTMENT OF POLICE SERVICES
TRAFFIC DIVISION

TRAFFIC CONTROL SIGNAL LAYOUT

PROPOSED TRAFFIC CONTROL
FOR THE YALESVILLE VOLUNTEER FIRE STATION
HOPE HILL RD., WALLINGFORD, CT 06492

SCALE 1" = 40'

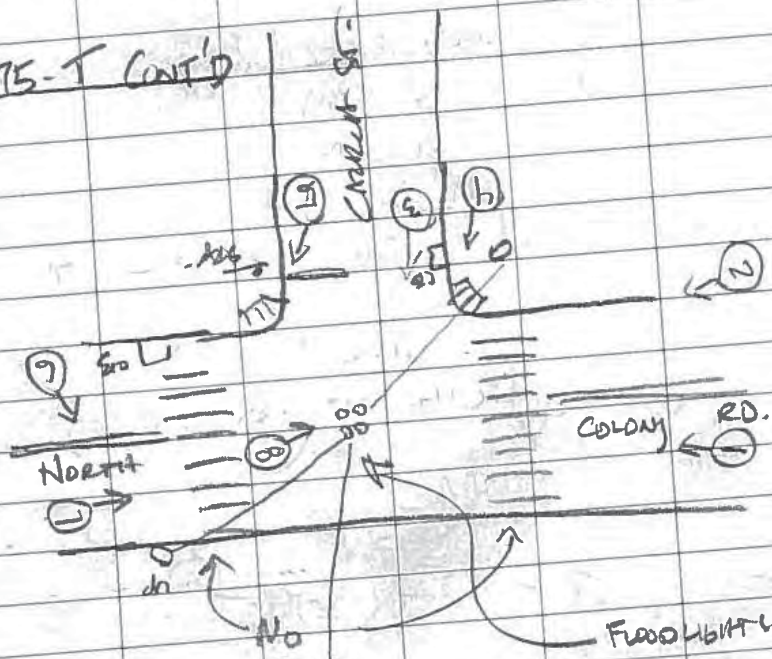
TOWN OF WALLINGFORD
DEPARTMENT OF ENGINEERING
DEPARTMENT OF POLICE SERVICES
TRAFFIC DIVISION

PROPOSED TRAFFIC CONTROL
FOR THE
YALESVILLE VOLUNTEER FIRE STATION
HOPE HILL ROAD, WALLINGFORD, CT

747

8 OF

75-T CONT'D



242 PHOTOS TAKEN.
FINISH 3:00 PM

40 OF

APPENDIX B - FIELD INSPECTION SHEETS

4T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN__________ JOB#__________ DATE 7/2/12 LOCATION S. Colony Rd @ Walgreens (04 T)

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	5	N/A	1	4/12	1	1
Make	Peek		EDI	North star Sarasota		3M	PDC	PDC	Peek
Model #	3000 E		NSM-12	NT11-E 535T		752 opticom	SSS-87WP	SSF-87WP	5523
Serial #	N/A		232551			N/A	N/A	N/A	N/A

Comments:

VEHICLE SIGNAL INVENTORY

	Size 8"	Size 12"
Red	3	4
Yellow	3	4
Green	3	4
R-Arrow		
Y-Arrow		1
G-Arrow		1

Comments:

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY Size 9"	12"	16"	Illumination Method Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?
1 Section - Word								
1 Section - Symbol								
2 Section - Word								
2 Section - Symbol								

PUSHBUTTON ASSEMBLY

	Quantity	Working?	ADA Compliant?
Button	2		No
Legend	2		
Audible	0		

Comments: R, Y, G 8" signal used as ped signals

Omit Ø1 if Ø2 is on
8Ø Sequ.

04T

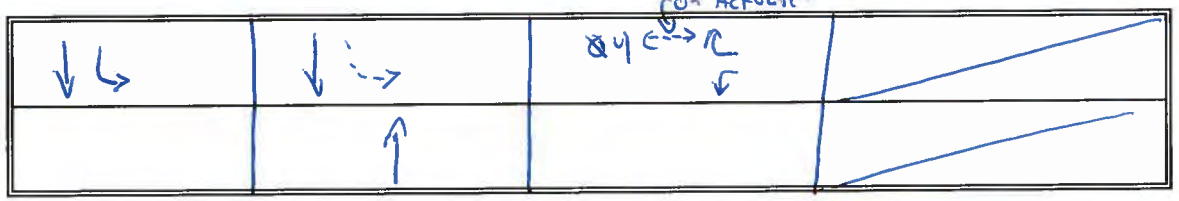
SIGNAL SUPPORT QUANTITIES

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Post	Good					✓	
	Fair			X	X	X	X
	Poor			X	X	X	X

Comments:

φ Set	1	2	3	4	5	6	7	8	9
Min	3	15		5					
Ext.				2.0					
Max I	3	32		12					
Max II	3	32		12					
Yel	3.0	4.0		3.0					
Red	0.1	2.0		1.0					
Walk		15							
Ped Cl		1							
Lock				NL					
Recall	Max	Max							

Sketch of intersection signal phasing and signal layout:

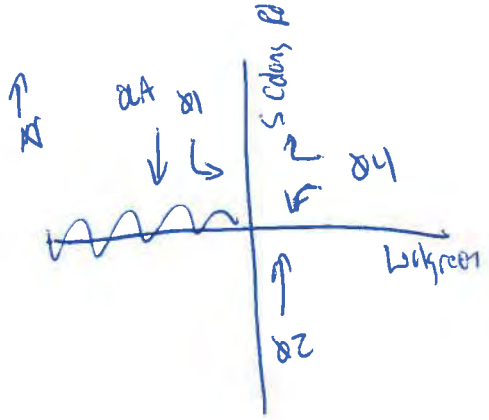


☑OUTLET ☑FAN/THERMOSTAT ☑LAMP No Bulb
☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL
VEH SIG ☑8" ☑12" Sect: ☑3 ☐4 ☐Bi ☑5 ☑DH
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow/black ☐Backplate ☑Visor
PED SIG ☐9" ☐12" ☐16"
☐Inc ☐FO ☑LED ☐Failure
☐Word ☐Symbol ☑Red/Yellow/green
☑Pushbutton ☐Audible ☐Failure
DETECTION ☑Loop ☐Video ☐Magnetic
☐Microwave ☐Infrared ☐Failure
ADVANCE SIGNING ☑None ☐Static ☐Illuminated
NUMBER OF PHASES ☐2 ☑3 ☐4 ☐5 ☐6 ☐7 ☐8
LEFT-TURN ☑Perm. ☑Prot. ☐Lead ☐Lag ☐Simult
PED PHASE ☐None ☐Exclusive ☑Concurrent
CYCLE LENGTH Max_____ Min_____
☑CABINET PHOTOS

Det. Ch	Ø
1-6	1-6
17	4
18	4
25	4
26	4

CPAI	Ø2
WRM	All
Int Max	All
Ped Req	All

OLA = Ø1 & Ø2
No Coordination



BETA
ENGINEERING SUCCESS TOGETHER

Project:
City:
Location:

Sheet: 04 T
By: MWW
Date: 2/3/12

- [x] Enable Run
- [ ] Railroad Preempt
- [x] Input Lock
- [ ] Go to Higher Run
- [x] NEMA Priority
- [ ] Override UCF

Maximum Intervals:	3
User Priority:	1
Duration Service:	0
Preempt Delay:	0
Reservice Time:	0

- [ ] Inhibit Double Clearing OVL's

Min. Green:	5.0
Min. Yellow:	0
Min. Red:	0
Min. Ped. Clearance:	0
Min. Overlap Yellow:	0

- [x] Go to Exit Phase
- [ ] Go to Next Demand
- [ ] Resume Sequence
- [ ] To Coordination

Valid 1-3
Dwell 1
Fixed 1-3
Exit 1

FUNC\PH	1	2	3	4	5	6	7	8
Phases	☐	☑	☐	☐	☐	☐	☐	☐
Calls	☐	☐	☐	☐	☐	☐	☐	☐

RUN	1																	
INTVL #	TIME	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
1	15		VEH	G															
TYPE			PED																
TENTHS			VEH O/L	G															
EXIT			PED O/L																
			OUTS																
PC->YEL																			

RUN	1																	
INTVL #	TIME	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
2	4		VEH	Y															
TYPE			PED																
TENTHS			VEH O/L	Y															
EXIT			PED O/L																
			OUTS																
PC->YEL																			

RUN	1																	
INTVL #	TIME	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
3	2		VEH																
TYPE			PED																
TENTHS			VEH O/L																
EXIT			PED O/L																
			OUTS																
PC->YEL																			

RUN																		
INTVL #	TIME	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
			VEH																
TYPE			PED																
TENTHS			VEH O/L																
EXIT			PED O/L																
			OUTS																
PC->YEL																			

DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 4-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - SOUTH COLONY + WALBRIDGE DR. CONTRACTOR'S REP. - JFB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 2/3/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	Y (1)
COVER & CONDUITS BONDED	Y (1)
DUCT SEAL IN CONDUITS	Y (1)

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK.
I.D. TAG	OK
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK.

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK (2)
FACES: TYPE & LOCATION	OK (2)
VISORS / LOUVERS / BACK PLATES	OK (2)
MISSING HARDWARE: BOTTOM CAPS, ETC.	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	OK
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	OK

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	OK
42" MOUNTING HEIGHT	OK
ACCESIBLE FROM SIDEWALK/RAMP	OK

ADA REQUIREMENTS	
CROSSWALKS	OK
SIDEWALK (CLEAR PATH, MIN 36")	OK
RAMPS W/ DETECTABLE WARNING STRIP	Y

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	OK.
NTOR SIGNS	N/A
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	N/A
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK.
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A

NOTES: (1) FOR THOSE OBSERVED
(2) DOGHOUSE SIGNAL DAMAGED

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

5T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

OST

CITY/TOWN_____ JOB#_____ DATE_____ LOCATION S Colony Rd @ Ward St

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	1	1	9	N/A	1	6	1	1
Make	Peek	Peek	Trans yt	Sarasota		3M	SSP/ PDC/TSC	PDC	Peek
Model #	3000	M3000	12ELRA	(3) 535T (6) 515TGPZ		TEC Opticom	(1) 200K (4) 333-87WP	SSF-87WP	5524
Serial #	N/A	N/A	N/A			N/A	(1) Cute 200 N/A	N/A	N/A
Comments:	5074 V5.0 01/10	Out of service						Not sure flash load switch is working no lights	

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red	8	2
Yellow	8	2
Green	8	2
R-Arrow		
Y-Arrow		
G-Arrow		

Comments: 1 R/G bi-modal

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word			6		6				Button	4	4	4
1 Section - Symbol			2		6	2			Legend	4		
2 Section - Word									Audible	0		
2 Section - Symbol												

Comments:

SIGNAL SUPPORT QUANTITIES

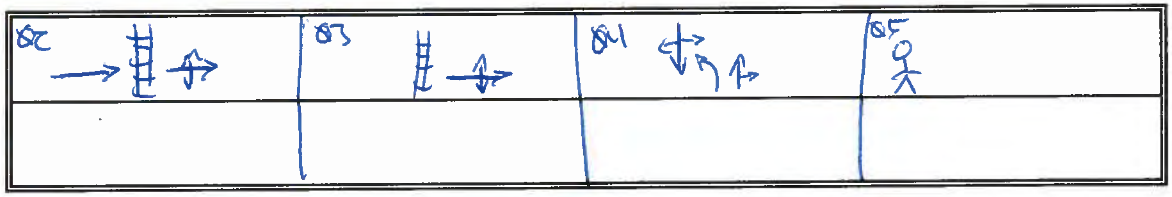
		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Post	Good					✓	
	Fair			X	X	X	X
	Poor			X	X	X	X

Comments:

8ø Seqn

φ Set	~~1~~	2	3	4	5	~~6~~	~~7~~	~~8~~	9
Min		9	5	15	0	0	5	5	
Ext.		3.0	2.0	3.0	0.0	0.0			
Max I		24	9	34	0	0	30	30	
Max II		31	9	27	0	0	30	30	
Yel		4.0	4.0	4.0	0.1	0.0	4.0	3.0	
Red		2.0	1.0	1.0	0.0	0.0	2.0	1.0	
Walk		14			7				
Ped Cl		1			7				
Lock			NL		NL				
Recall		Min							

Sketch of intersection signal phasing and signal layout:



☑OUTLET ☑FAN/THERMOSTAT ☑LAMP

☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL

VEH SIG ☑8" ☑12" Sect: ☑3 ☑4 ☑Bi ☐5 ☐DH
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow/Black ☐Backplate ☑Visor

PED SIG ☐9" ☐12" ☑16"
☑Inc ☐FO ☑LED ☐Failure
☑Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☐Audible ☐Failure

DETECTION ☑Loop ☐Video ☐Magnetic
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☑None ☐Static ☑Illuminated

NUMBER OF PHASES ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8

LEFT-TURN ☑Perm. ☐Prot. ☐Lead ☐Lag ☐Simult

PED PHASE ☐None ☑Exclusive ☐Concurrent

CYCLE LENGTH Max__________ Min__________

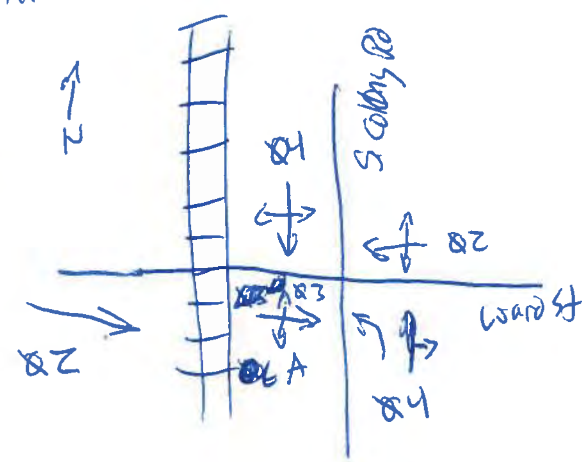
☐ CABINET PHOTOS

Det. chn	ø
1-8 to	1-8
17	2
18	2
25	2
26	2,3
27	2
28	2
29	4
30	4
31	4

No Left turn / No right turn.

CNA I ø2
WRM All
Ink Max All
Ped Recy All

O/L Cnd Enable = N
OL A = 2,3



Pre-empt 1 (1052)

- [x] Enable Run
- [x] Railroad Preempt
- [x] Input Lock
- [x] Go to Higher Run
- [ ] NEMA Priority
- [x] Override UCF

Maximum Intervals:	6
User Priority:	1
Duration Service:	20
Preempt Delay:	0
Reservice Time:	0

- [ ] Inhibit Double Clearing OVL's

Min. Green:	0
Min. Yellow:	0
Min. Red:	0
Min. Ped. Clearance:	0
Min. Overlap Yellow:	0

- [x] Go to Exit Phase
- [ ] Go to Next Demand
- [ ] Resume Sequence
- [ ] To Coordination

FUNC\PH	1	2	3	4	5	6	7	8
Phases	☐	☑	☐	☐	☐	☐	☐	☐
Calls	☐	☐	☐	☐	☐	☐	☐	☐

	1	2	3	4	5	6
Actuated	X	X	X	X	X	X
Ped			X			
Fixed	X	X	X	X	X	X
Emt			X			

BETA ENGINEERING SUCCESS TOGETHER

Project:
City:
Location:

Sheet: 05T
By: MWW
Date: 2/1/12

RUN	1																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	22	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH			G													
TENTHS			PED																
EXIT			VEH O/L	G															
			PED O/L																
PC->YEL			OUTS	X1															

RUN	1																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	4	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH			Y													
TENTHS			PED																
EXIT			VEH O/L	Y															
			PED O/L																
PC->YEL			OUTS	X1															

RUN	1																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3	2	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS	X1															

RUN	1																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	20	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH				G												
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS	X1															

Pre-empt 1 (2 of 2)

- ☐ Enable Run
- ☐ Railroad Preempt
- ☐ Input Lock
- ☐ Go to Higher Run
- ☐ NEMA Priority
- ☐ Override UCF

Maximum Intervals:	
User Priority:	
Duration Service:	
Preempt Delay:	
Reservice Time:	

☐ Inhibit Double Clearing OVL's

Min. Green:	
Min. Yellow:	
Min. Red:	
Min. Ped. Clearance:	
Min. Overlap Yellow:	

- ☐ Go to Exit Phase
- ☐ Go to Next Demand
- ☐ Resume Sequence
- ☐ To Coordination

FUNC\PH	1	2	3	4	5	6	7	8
Phases	☐	☐	☐	☐	☐	☐	☐	☐
Calls	☐	☐	☐	☐	☐	☐	☐	☐

BETA ENGINEERING SUCCESS TOGETHER

Project:
City:
Location:

RUN	1																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
5	3	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH				Y												
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS	1X															

RUN	1																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
6	1	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS	1X															

RUN																		
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN																		
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

Sheet: 05 T
By: MW
Date: 2/3/12

Pre-empt 2

- [x] Enable Run
- [ ] Railroad Preempt
- [x] Input Lock
- [x] Go to Higher Run
- [ ] NEMA Priority
- [ ] Override UCF

Maximum Intervals:	3
User Priority:	2
Duration Service:	0
Preempt Delay:	0
Reservice Time:	0

- [ ] Inhibit Double Clearing OVL's

Min. Green:	5.0
Min. Yellow:	0.0
Min. Red:	0.0
Min. Ped. Clearance:	0
Min. Overlap Yellow:	0.0

- [x] Go to Exit Phase
- [ ] Go to Next Demand
- [ ] Resume Sequence
- [ ] To Coordination

FUNC\PH	1	2	3	4	5	6	7	8
Phases	☐	☑	☐	☐	☐	☐	☐	☐
Calls	☐	☐	☐	☐	☐	☐	☐	☐

Valid 1 2 3
Dwell X X X
Fixed X X X
Exit X

BETA ENGINEERING SUCCESS TOGETHER

Project:
City:
Location:

RUN	2																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	15																		
TYPE			VEH				G												
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN	2																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
2	4																		
TYPE			VEH				Y												
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN	2																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
3	2																		
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN																		
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

By: MWW
Date: 2/9/2012
Sheet: 051

Preempt 3

- [x] Enable Run
- [ ] Railroad Preempt
- [x] Input Lock
- [x] Go to Higher Run
- [ ] NEMA Priority
- [ ] Override UCF

Maximum Intervals:	3
User Priority:	2
Duration Service:	0
Preempt Delay:	0
Reservice Time:	0

- [ ] Inhibit Double Clearing OVL's

Min. Green:	5.0
Min. Yellow:	0.0
Min. Red:	0.0
Min. Ped. Clearance:	0
Min. Overlap Yellow:	0.0

- [x] Go to Exit Phase
- [ ] Go to Next Demand
- [ ] Resume Sequence
- [ ] To Coordination

Veh 1-3
Dwell 1
Fixed 1-3
Exit 1

FUNC\PH	1	2	3	4	5	6	7	8
Phases	☐	☐	☑	☐	☐	☐	☐	☐
Calls	☐	☐	☐	☐	☐	☐	☐	☐

RUN	3																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	15	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH		G														
TENTHS			PED																
EXIT			VEH O/L	G															
			PED O/L																
PC->YEL			OUTS																

RUN	3																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	4	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH		Y														
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN	3																	
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3	2	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN																		
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

Project:
City:
Location:

Sheet: 6 of 7
By: MWW
Date: 2/3/12

DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 5-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - SOUTH COLONY AT HALL ST. CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 2/3/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	Y (1)
COVER & CONDUITS BONDED	N (1)
DUCT SEAL IN CONDUITS	N (1)

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK.
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK.
I.D. TAG	UNK.
1 SPAN CLAMP PER ATTACHMENT	OK.

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK
BONDED TO GROUND ROD	UNK
CRUSHED STONE IN FOUNDATION CENTER	UNK

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK.
HEIGHT 16'-17' TO BOTTOM	OK.
SIGHT DISTANCE (VISIBILITY)	OK.
UTILITY CLEARANCES	OK.

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	(2)
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	(2)

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	Y
42" MOUNTING HEIGHT	Y
ACCESIBLE FROM SIDEWALK/RAMP	Y

ADA REQUIREMENTS	
CROSSWALKS	Y (3)
SIDEWALK (CLEAR PATH, MIN 36")	Y
RAMPS W/ DETECTABLE WARNING STRIP	N (4)

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	OK
NTOR SIGNS	
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A
INT. ILLUM SIGNS	OK.

PAVEMENT MARKINGS	
LANE ARROWS	OK (3)
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK (5)
ELEPHANT TRACKS	N/A

NOTES:
(1) FOR THOSE OBSERVED
(2) VARIOUS TYPES USE SOME NEWER STYLE
(3) IN POOR CONDITION
(4) AT ONE LOC. NEW RAMP (S/E COR.)
(5) COULD BE MOVED BACK @ NB APPROACH.

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

6T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN_____JOB#_____DATE_____LOCATION_____

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	6	N/A	2	10	1	1
Make	3000 E Peek		Peek	Sarasota		3M	PDC	PDC	Peek
Model #	↓		12ELRA	222 6P6		752 Opticom	Model 200	Model 204	9443
Serial #	N/A		0900			N/A	N/A	N/A	~~None~~ 10282E

Comments: Mice had nest & have @ some point cleared out since. 2nd Preemption Card Pulled out.

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red		10
Yellow		10
Green		10
R-Arrow		
Y-Arrow		
G-Arrow		

Comments:

Bi modal G/Y arrow 5

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button	6		Y
1 Section - Symbol			12	0		12			Legend	6		
2 Section - Word									Audible	1		
2 Section - Symbol												

Comments:

SIGNAL SUPPORT INVENTORY

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Mast Arm							
Post	8'						
	Poor						

Comments:

φ Set	1	2	3	4	5	6	7	8	9
Min									
Ext.									
Max I									
Max II									
Yel									
Red									
Walk									
Ped Cl									
Lock									
Recall									

Sketch of intersection and signal layout:

☑OUTLET ☑FAN ☑LAMP
☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL
VEH SIG ☐8" ☑12" Sect. ☑3 ☑4 ☑Bi ☐5
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor
PED SIG ☐9" ☐12" ☑16"
☐Inc ☐FO ☑LED ☐Failure
☐Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☑Audible ☐Failure
DETECT ☑Loop ☐Magnetic ☐Video
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☑N ☐Static ☐Illuminated
NUMBER OF PHASES ☐2 ☐3 ☐4 ☐5 ☐6

LEFT TURN ☑Perm ☑Prot ☑Lead ☑Lag ☐Simult
PED PHASE ☐N ☑Exclusive ☐Concurrent

CYCLE LENGTH Max 120 Min 60

Cycle
Source — Closest loop
Split — "
offset — "
Free — "
Flash — "

Yield
short way

Split Cycle

		Ø1	Ø2	Ø3	Ø4	Ø5	Ø6
1	1	13	33	5	16	20	13
1	2	13	29	5	16	24	13
1	3	13	28	5	15	26	13
1	4	11	33	5	16	22	13

Dynamic "No Left Turn"
"No Right Turn"

T.O.D.

Mon-Fri

0:00 - 6:30	Free
6:30 - 9:00	1/1/1
9:00 - 15:00	3/1/1
15:00 - 18:30	2/1/1
18:30 - 24:00	Free

Sat & Sun
Free

Preempt exits to phase 2

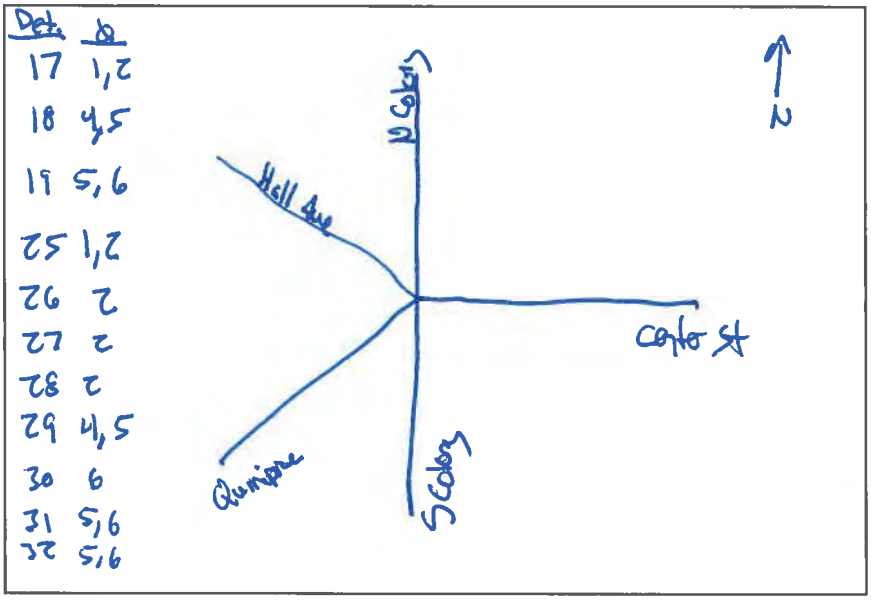
BETA Group, Inc.
Engineers • Scientists • Planners

Project:
City: Wallingford, CT
Location: N./S. Colony @ Quinnipiac & Hall & Cedar St

Sheet: 6T
By: MWW
Date: 1/18/2017

SIGNAL TIMING SHEET

INTERSECTION DIAGRAM



Coordinated X opp to Free
Pretimed
Semi-Actuated
Fully-Actuated

NOTES: Omit Phase 1 if #2 on
8 phase Sequential
Inhibit max yes to all
Ped Recycle yes to all
WRM yes to all

OVERLAPS

	A	B	C & E	D
Phases	1,2,3,4,5,6	1,2	4,5	5,6

PRE-EMPTION

Phases				

PHASE TIMES

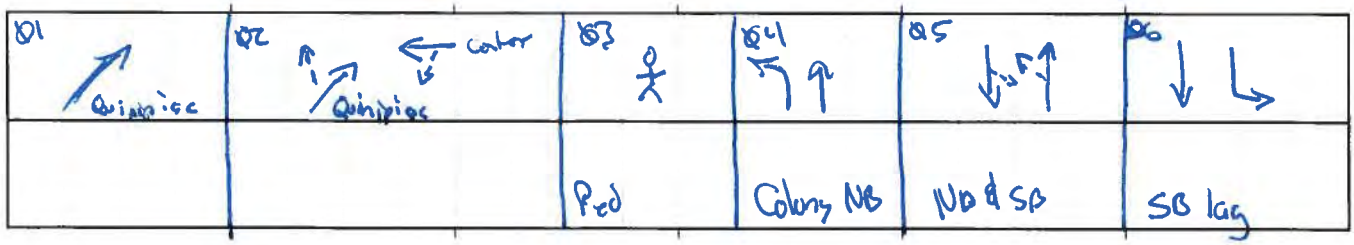
Phase	1	2	3	4	5	6	~~7~~	~~8~~
Lock / NLock	NL		NL	NL		NL		
Recall (Max, Min, None)		~~Max~~ Min						
Walk		9	7					
Don't Walk		1	10					
Min Green	5	15	0	4	12	4		
Extension	2.0	3.0	0.0	2.0	3.0	2.0		
Recall Green								
Max I Green	5	28	0	6	25	5		
Max II Green	15	40	0	15	25	5		
Max III Green								
Yellow	3.0	3.0	0.1	3.0	3.0	3.0		
All Red	0.1	2.0	0.0	0.1	4.0	4.0		
Total Split I								
Total Split II								

Coord

TIME OF DAY SETTINGS

Cycle ~~MAX~~ I	
Time Period:	AM Peak 6:30-9:00
Cycle Length:	100 Min 60
Offset:	20
Cycle ~~MAX~~ II	
Time Period:	PM Peak 15:00 - 18:30
Cycle Length:	120 Min 60
Offset:	25
Cycle ~~MAX~~ III	
Time Period:	Mid-day 9:00 - 15:00
Cycle Length:	100 Min 60
Offset:	25

SIGNAL PHASING DIAGRAM



DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 6-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - _____ LOCATION - ROUTE 150 & US ROUTE 5 AT QUINNIPIAC ST. CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 1/18/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	(1)
SET ON CRUSHED STONE BASE	Y
COVER & CONDUITS BONDED	N
DUCT SEAL IN CONDUITS	N
WIRE NUTS	Y

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK (2)
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	(3)
BONDED TO GROUND ROD	N
I.D. TAG	Y
1 SPAN CLAMP PER ATTACHMENT	Y

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK.

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS M/H.	TR-1102_01
CORRECT TYPE / SIZE	OK
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	OK

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	OK
42" MOUNTING HEIGHT	OK
ACCESIBLE FROM SIDEWALK/RAMP	OK

ADA REQUIREMENTS	
CROSSWALKS	OK.
SIDEWALK (CLEAR PATH, MIN 36")	OK
RAMPS W/ DETECTABLE WARNING STRIP	NO

SIGNS	
SPAN & POST MOUNT	OK (4)
LANE USE ARROWS	OK.
NTOR SIGNS	OK
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	OK.
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A
R/R XNG	(5)

NOTES:
(1) SEVERAL ARE NOT FLUSH
(2) POLE AT N.E. COR. RTE 150 & US RTE NEEDS WORK @ BASE
(3) SOME MISSING OR RUSTED SIGNT
(4) LANE USE SIGN OBSCURED @ US RTE 5 SB
(5) POOR COND. ON ALL AVE.

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

25T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

25T

CITY/TOWN_____ JOB#_____ DATE 2/3/12 LOCATION_____

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	1	N/A	N/A	3/8	1	1
Make	Peek		Transyt	Swarco			PDC	PDC	Peek
Model #	3000		Model 1200	222 GP6			SSS-87WP	SSF-87WP	7786
Serial #	5907		171	N/A			N/A	N/A	112210
Comments:									

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red		6
Yellow		6
Green		6
R-Arrow		
Y-Arrow		
G-Arrow		
Comments:		

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button	2		2
1 Section - Symbol			2		2				Legend	2		
2 Section - Word									Audible	1	✓	
2 Section - Symbol												
Comments:												

SIGNAL SUPPORT QUANTITIES

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Post	Good					✓	
	Fair			X	X	X	X
	Poor			X	X	X	X

Comments:

80 Seqs.

φ Set	~~1~~	2	3	4	~~5~~	~~6~~	~~7~~	~~8~~	9
Min		15		8					
Ext.		2.0		3.0					
Max I		30	25	20					
Max II		30	25	20					
Yel		3.0		3.0					
Red		1.0	0.1	1.0					
Walk			9						
Ped Cl			12						
Lock				NL					
Recall		Min							

Sketch of intersection signal phasing and signal layout:

Ø2	Ø3	Ø4

☑OUTLET ☑FAN/THERMOSTAT ☑LAMP

☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL

VEH SIG ☐8" ☑12" Sect: ☐3 ☐4 ☐Bi ☐5 ☐DH
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color_____ ☐Backplate ☑Visor

PED SIG ☐9" ☐12" ☑16"
☑Inc ☐FO ☐LED ☐Failure
☐Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☑Audible ☐Failure

DETECTION ☐Loop ☐Video ☐Magnetic
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☑None ☐Static ☐Illuminated

NUMBER OF PHASES ☐2 ☑3 ☐4 ☐5 ☐6 ☐7 ☐8

LEFT-TURN ☑Perm. ☐Prot. ☐Lead ☐Lag ☐Simult

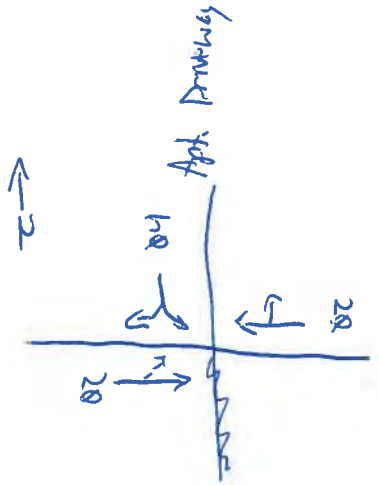
PED PHASE ☐None ☑Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____

☐ CABINET PHOTOS

Det ohn	Ø
1-6 to 1-8	
9	4
10	4
25	4
29	5
30	5
31	6
32	6

CNA I Ø2
WRM All



DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - RTE 150 @ SILVER D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - _____ LOCATION - 25-T AND 27T CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 2/3/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	
DUCT SEAL IN CONDUITS	

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	N
SET ON CRUSHED STONE BASE	UNKN.
COVER & CONDUITS BONDED	N
DUCT SEAL IN CONDUITS	N

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	N/A
BASE GROUTED	
PROPER RAKE. PLUMB UNDER LOAD	
HEIGHT / ARM LENGTH	
H.H. CVR. POLE CAP, BOLT CVR	
BONDED TO GROUND ROD	
I.D. TAG	
1 SPAN CLAMP PER ATTACHMENT	

PEDESTALS	TR-1102_01
LOCATION	OK N/A-F
PLUMB	OK
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK.

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	N/A
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	Y
FACING PED. TRAFFIC	Y
PROPER ADVISORY SIGNS	N/A

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	Y
42" MOUNTING HEIGHT	OK
ACCESIBLE FROM SIDEWALK/RAMP	N

ADA REQUIREMENTS	
CROSSWALKS	(1)
SIDEWALK (CLEAR PATH, MIN 36")	(1)
RAMPS W/ DETECTABLE WARNING STRIP	N

SIGNS	
SPAN & POST MOUNT	OK.
LANE USE ARROWS	N/A.
NTOR SIGNS	OK.
STOP, STOP AHEAD, INT WARNING	N/A.
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A.

PAVEMENT MARKINGS	
LANE ARROWS	N/A
PROPER LANE & SHOULDER WIDTH	OK.
CENTER LINES	OK
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A

NOTES:

(1) NO RAMPS / SW @ CROSSWALK LOC. (DRIVEWAYS)
* IN POOR LOCATIONS (TYP.)

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

26T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

(26T)

CITY/TOWN ____________ JOB# ____________ DATE 2/3/12 LOCATION Carter St @ S Elm St

CONTROLLER CABINET INVENTORY									
Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	6	N/A	N/A	9/12	1	1
Make	Peek		Transyt	Sarasota			PDC	PDC	Southern
Model #	3000		12ELR	575T GPZ			SSS-87I/P	SSF-87I/P	~~[illegible]~~ 44 type V
Serial #	N/A		N/A	N/A			N/A	N/A	N/A

Comments: Couldn't access Cabinet key 1 required recon door for key 2

VEHICLE SIGNAL INVENTORY	Size	
	8"	12"
Red	4	4
Yellow	8	
Green	8	
R-Arrow		
Y-Arrow		
G-Arrow		

Comments: 3 Y/G Arrow Bi-modal

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY: Size			Illumination Method					
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?	
1 Section - Word									
1 Section - Symbol			8			8			
2 Section - Word									
2 Section - Symbol									

PUSHBUTTON ASSEMBLY	Quantity	Working?	ADA Compliant?
Button	4	✓	2 Yes 2 No
Legend	4		
Audible	1	✓	

Comments:

SIGNAL SUPPORT QUANTITIES

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Post	Good	4				✓	
	Fair						
	Poor						

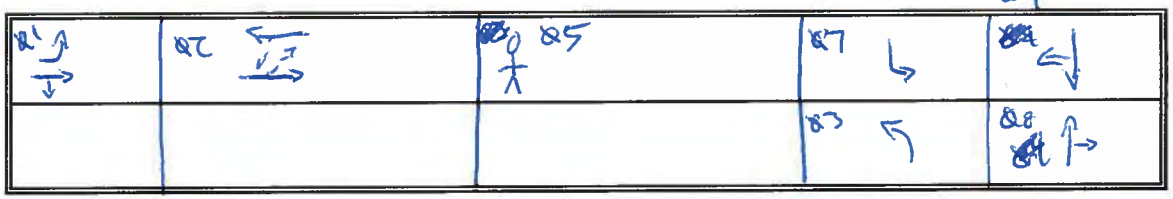
Comments:

Omit Ø1 if Ø2 is on 8 & Segm.

1 2 3 4
5 6 7 8

φ Set	1	2	3	4	5	6	7	8	9
Min	3	7.5	3	8	4	0	3	8	
Ext.	2.0	0.0	2.0	4.0	0.0	0.0	2.0	4.0	
Max I	10	30	10	25	23	0	10	25	
Max II	10	30	10	25	23	0	10	25	
Yel	3.0	3.0	3.0	3.0	0.1	0.0	3.0	3.0	
Red	1.0	2.0	1.0	2.0	0.0	0.0	1.0	2.0	
Walk		19			9				
Ped Cl		1			12				
Lock									
Recall									

Sketch of intersection signal phasing and signal layout:



☑OUTLET ☑FAN/THERMOSTAT ☑LAMP

☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL

VEH SIG ☑8" ☑12" Sect: ☑3 ☑4 ☑Bi ☐5 ☐DH
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor

PED SIG ☐9" ☐12" ☑16"
☐Inc ☐FO ☑LED ☐Failure
☐Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☑Audible ☐Failure

Det ch# Ø
1-8 to 1-8

DETECTION ☑Loop ☐Video ☐Magnetic
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☑None ☐Static ☐Illuminated

NUMBER OF PHASES ☐2 ☐3 ☐4 ☐5 ☐6 ☑7 ☐8

LEFT-TURN ☑Perm. ☑Prot. ☐Lead ☐Lag ☐Simult

PED PHASE ☐None ☑Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____

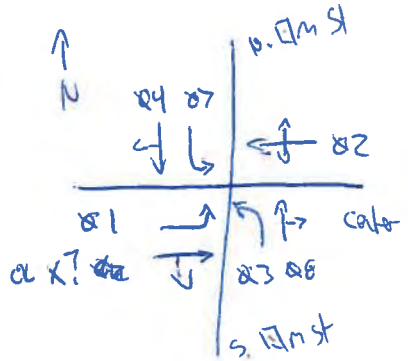
☐ CABINET PHOTOS

WRN Ø2
Inh Max All
Ped Rcy All

Dual Entry Ø4 & Ø8

O/L Card enabled = Y

Operating Free



DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # RTE 150 @ -N/S ELM STS. D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - 24-T CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 2/3/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	N
DUCT SEAL IN CONDUITS	N

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	UNK.
COVER & CONDUITS BONDED	UNK.
DUCT SEAL IN CONDUITS	UNK.

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	N/A
BASE GROUTED	
PROPER RAKE. PLUMB UNDER LOAD	
HEIGHT / ARM LENGTH	
H.H. CVR. POLE CAP, BOLT CVR	
BONDED TO GROUND ROD	
I.D. TAG	
1 SPAN CLAMP PER ATTACHMENT	

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK.
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK.

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK.
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	N.
HEIGHT 16'-17' TO BOTTOM	OK.
SIGHT DISTANCE (VISIBILITY)	OK.
UTILITY CLEARANCES	OK.

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE M/H	OK
FACING PED. TRAFFIC	OK.
PROPER ADVISORY SIGNS	(3)

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	CD
42" MOUNTING HEIGHT	OK.
ACCESIBLE FROM SIDEWALK/RAMP	Y

ADA REQUIREMENTS	
CROSSWALKS	(2)
SIDEWALK (CLEAR PATH, MIN 36")	Y
RAMPS W/ DETECTABLE WARNING STRIP	N

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	OK
NTOR SIGNS	OK
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A.

PAVEMENT MARKINGS	
LANE ARROWS	OK
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK.
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A

NOTES:

(1) NOT ALL
(2) WORN
(3) OLD - PUSH BUTT. FOR WALK TYPE.

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

27T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN Wallingford, CT JOB# _____ DATE _____ LOCATION Center St @ N./S. Main St. 27T

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	1	1	4	N/A	N/A	8/12	1	1
Make	Peek	Peek	Peek	Sarasota			6 PDC 2 TSC	PDC	Southern
Model #	3000 5074 V4.5 HZ	M3000 5581 V2.5 c6/c6	Double Diamond	516T GPZ			6 SSS-67WP 2 Cube 200	SSF-67WP	N/A
Serial #	N/A	N/A	N/A	N/A			N/A	N/A	N/A

Comments: Difficult to get door open & turn key

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red	8	
Yellow	8	
Green	8	
R-Arrow		
Y-Arrow		
G-Arrow		

Comments: 4 Y/G Arrow 3-head

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button	4	✓	✓
1 Section - Symbol			8			8			Legend	4		
2 Section - Word									Audible	1	✓	
2 Section - Symbol												

Comments:

SIGNAL SUPPORT QUANTITIES

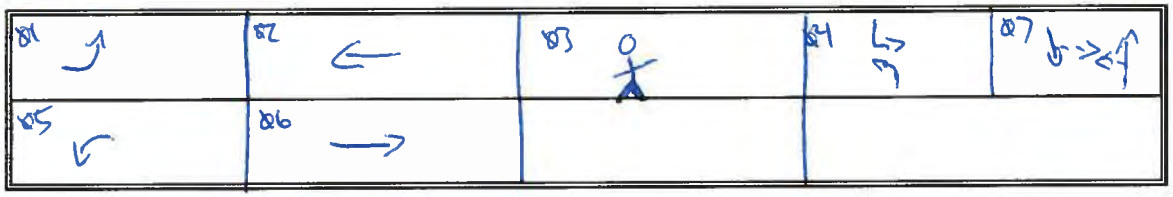
		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Post	Good					✓	
	Fair			X	X	X	X
	Poor			X	X	X	X

Comments:

12 3478 omit 05 wlo 07 is on
56 omit 01 wlo 06 is on

φ Set	1	2	3	4	5	6	7	~~8~~	9
Min	3	15		6	3	15	8		
Ext.	2	0		02	2	4	4		
Max I	10	25	25	10	10	25	30		
Max II	10	40	25	8	10	40	35		
Yel	3	3		3	3	3	3		
Red	1	2	2	1	1	2	2		
Walk		15	9			15			
Ped Cl		1	12			1			
Lock	NL			NL	NL				
Recall		Min Max				Min Max			

Sketch of intersection signal phasing and signal layout:



☑OUTLET ☑FAN/THERMOSTAT ☑LAMP bulb burned out

☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL

VEH SIG ☑8" ☑12" Sect: ☑3 ☑4 ☐Bi ☐5 ☐DH
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor

Det. chn 8
1-8 to 1-8

PED SIG ☐9" ☐12" ☑16"
☐Inc ☐FO ☑LED ☐Failure
☐Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☑Audible ☐Failure

Sys	
1	17
2	16

DETECTION ☑Loop ☐Video ☐Magnetic
☐Microwave ☐Infrared ☐Failure

CPAI 02 & 06
WRM All
Int Max 02 06

ADVANCE SIGNING ☑None ☐Static ☐Illuminated

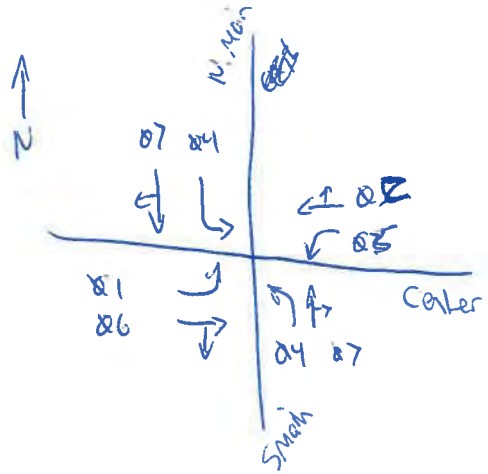
NUMBER OF PHASES ☐2 ☐3 ☐4 ☐5 ☐6 ☑7 ☐8

LEFT-TURN ☑Perm. ☑Prot. ☐Lead ☐Lag ☐Simult

PED PHASE ☐None ☑Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____

☑CABINET PHOTOS



BETA
ENGINEERING SUCCESS TOGETHER

Project: _____ Sheet: 27T

City: _____ By: MWW

Location: _____ Date: 2/3/12

Operating Modes

Source:	Cycle	Split	Offset	Free	Flash
TOD	☐	☐	☐	☐	☐
Closed Loop	☒	☒	☒	☒	☒
Interconnect	☐	☐	☐	☐	☐

City Zero Midnight Cycles:

1	2	3	4	5	6

- ☐ Auto Permissives
- ☐ End of Main Street
- ☐ Enhanced Permissives
- ☐ Fixed Force-Off
- ☐ Yellow Offset
- ☑ Central Override
- ☐ No PCL Offset Adjust
- ☐ Offset Entry In %
- ☐ Perm-Pa Entry In %
- ☐ Invert Free Input
- ☐ Split Matrix
- ☐ 4 Splits/Cycle
- ☐ No Early Coord Ped

Out of Step to Free: _____

Ped Permissive: 0

Interconnect TOD Revert: 0

Percent Yield: 5

Percent EGB: 0

Percent RGB: 0

SYNC Source:	Type of Perm:	Offset Seeking:
☑ TOD/CL/INTER	☑ Yield	☐ Add
☐ City Zero	☐ Single	☐ Dwell
☐ Absolute	☐ Multiple	☑ Short Route

Conditions to Free:

No. of Cycles w/No Sync: 0

No. of Sec. w/No offset: 0

No. of Sec. w/Multi Offsets: 0

Phase Allocation

Coord ø 2≠6

Cyc/Splt \ Phase	1	2	3	4	5	6	7	8
All 24 splits	0	0	0	0	0	0	0	0

BETA
ENGINEERING SUCCESS TOGETHER

Project: ____________ Sheet: ____________
City: ____________ By: ____________
Location: ____________ Date: ____________

Cycle/Dwell/Offset

Cycle :	1	2	3	4	5	6
Cycle Length:	0	0	0	0	0	0
Max Dwell/ Min. Cycle:	0	0	0	0	0	0
Offset 1:	0					
Offset 2:						
Offset 3:						
Offset 4:						
Offset 5:						

Week Plan

Sun	Mon	Tue	Wed	Thu	Fri	Sat
No	Week	Plans				

Day Plan

Plan #	Time	Ckt Plan	C/O/S	Ckt	Plan #	Time	Ckt Plan	C/O/S	Ckt
No Day Plans									

DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 27-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - MAIN ST. NT CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____
ROUTE 150

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 2/3/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	N

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y (1)
SET ON CRUSHED STONE BASE	Y (2)
COVER & CONDUITS BONDED	N
DUCT SEAL IN CONDUITS	N

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK.
H.H. CVR. POLE CAP, BOLT CVR	N
BONDED TO GROUND ROD	UNK
I.D. TAG	UNK.
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK
BONDED TO GROUND ROD	UNK
CRUSHED STONE IN FOUNDATION CENTER	UNK

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	
PLUMB APPEARANCE	
FACES: TYPE & LOCATION	
VISORS / LOUVERS / BACK PLATES	
MISSING HARDWARE: BOTTOM CAPS, ETC..	
HEIGHT 16'-17' TO BOTTOM	
SIGHT DISTANCE (VISIBILITY)	
UTILITY CLEARANCES	

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	OK (3)
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	OK (3)

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	N
42" MOUNTING HEIGHT	OK
ACCESIBLE FROM SIDEWALK/RAMP	OK

ADA REQUIREMENTS	
CROSSWALKS	OK
SIDEWALK (CLEAR PATH, MIN 36")	OK
RAMPS W/ DETECTABLE WARNING STRIP	N

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	OK
NTOR SIGNS	OK.
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	OK
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A

NOTES: (1) SOME ARE RAISED +/- 1"
(2) FOR THOSE OBSERVED
(3) EQUIPMENT IS MISMATCHED

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

28T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN Wallingford, CT JOB# _____ DATE 2/3/12 LOCATION Center St @ N. Orchard St

28T

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	3	N/A	N/A	4/12	1	1
Make	Peek		Trnsyt	Sourcesafe			PDC	PDC	Southern
Model #	3000		12 ELR	515T GPZ			SSL-87WP	SSF-87WP	N/A
Serial #	8232		3300	N/A			N/A	N/A	N/A

Comments: Old Trnsyt 1600EL sitting in cabinet

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red	8	
Yellow	8	
Green	8	
R-Arrow		
Y-Arrow		
G-Arrow		

Comments: All LED

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button	5		
1 Section - Symbol			8			8			Legend	5		
2 Section - Word									Audible	1		
2 Section - Symbol												

Comments:

SIGNAL SUPPORT QUANTITIES

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Post	Good					✓	
	Fair			X	X	X	X
	Poor			X	X	X	X

Comments:

ea Sqw.

φ Set	1	2	3	4	5	6	7	8	9
Min	1	30		8	8	1	1	1	
Ext.				4.0	4.0				
Max I	30	35	30	15	15	30	30	30	
Max II	30	30	30	30	30	30	30	30	
Yel		3.0		3.0	3.0				
Red		2.0	0.1	2.0	2.0				
Walk			7						
Ped Cl			12						
Lock									
Recall		Min							

Sketch of intersection signal phasing and signal layout:

Ø2	Ø3	Ø4	Ø5

☑OUTLET ☑FAN/THERMOSTAT ☑LAMP bulb burned out

☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL

VEH SIG ☑8" ☐12" Sect: ☑3 ☐4 ☐Bi ☐5 ☐DH
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow/black ☐Backplate ☑Visor

PED SIG ☐9" ☐12" ☑16"
☐Inc ☐FO ☑LED ☐Failure
☐Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☑Audible ☐Failure

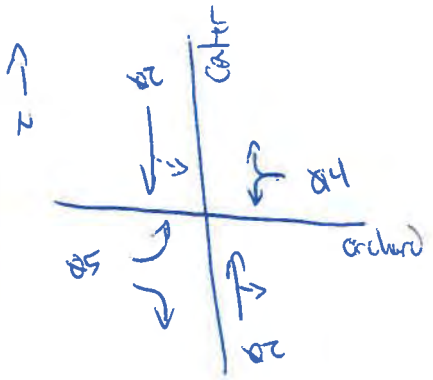
Det ch	Ø
1-8	1-8

WRM All
Int Max All
Ped Recy All

Free operation 24/7
No Coordination
No Pre-emption

DETECTION ☑Loop ☐Video ☐Magnetic
☐Microwave ☐Infrared ☐Failure

All detection working



ADVANCE SIGNING ☑None ☐Static ☐Illuminated

NUMBER OF PHASES ☐2 ☐3 ☑4 ☐5 ☐6 ☐7 ☐8

LEFT-TURN ☑Perm. ☐Prot. ☐Lead ☐Lag ☐Simult

PED PHASE ☐None ☑Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____

☑CABINET PHOTOS

DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 28-T _____ D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - Wallingford LOCATION - Rte 150 @ N/S Oakwood St. CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 2/3/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	ND

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	N
COVER & CONDUITS BONDED	N
DUCT SEAL IN CONDUITS	N

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	N
BONDED TO GROUND ROD	UNK.
I.D. TAG	UNK
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK.
BONDED TO GROUND ROD	UNK
CRUSHED STONE IN FOUNDATION CENTER	UNK

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK.

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	OK
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	N

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	OK
42" MOUNTING HEIGHT	OK
ACCESIBLE FROM SIDEWALK/RAMP	OK

ADA REQUIREMENTS	
CROSSWALKS	OK.
SIDEWALK (CLEAR PATH, MIN 36")	OK
RAMPS W/ DETECTABLE WARNING STRIP	No

SIGNS	
SPAN & POST MOUNT	OK (1)
LANE USE ARROWS	
NTOR SIGNS	
STOP, STOP AHEAD, INT WARNING	
SIGNAL AHEAD	
FLASHING "STOP AHEAD"	

PAVEMENT MARKINGS	
LANE ARROWS	
PROPER LANE & SHOULDER WIDTH	
CENTER LINES	
STOP BAR PLACEMENT	
ELEPHANT TRACKS	

NOTES: (1) - ONE SPAN SIGN IS OUT OF PLUMB

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

29T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN_____JOB#_____DATE_____LOCATION_____

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	6	N/A	1	5	1	1
Make	Peek		Peek	Sarasota		3M	PDC	PDC	Peek
Model #	3000		12ELRA	222 GP6		752 Opticom	Model 200	Model 204	9444
Serial #	101818		20101056	N/A		N/A	N/A	N/A	102283
Comments:	Opticom Card pulled out.								

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red		
Yellow		
Green		
R-Arrow		
Y-Arrow		
G-Arrow		
Comments:		

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button			
1 Section - Symbol									Legend			
2 Section - Word									Audible			
2 Section - Symbol												
Comments:												

SIGNAL SUPPORT INVENTORY

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Mast Arm			3			✓	
Post	8'						
	Poor						

Comments:

φ Set	1	2	3	4	5	6	7	8	9
Min									
Ext.									
Max I									
Max II									
Yel									
Red									
Walk									
Ped Cl									
Lock									
Recall									

Sketch of intersection and signal layout:

☑OUTLET ☑FAN ☑LAMP
☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL
VEH SIG ☐8" ☑12" Sect. ☐3 ☐4 ☐Bi ☐5
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor
PED SIG ☐9" ☐12" ☑16"
☐Inc ☐FO ☑LED ☐Failure
☐Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☑Audible ☐Failure
DETECT ☑Loop ☐Magnetic ☐Video
☐Microwave ☐Infrared ☐Failure

Source
Cycle — closed loop
Split — n
O/S — n
Free — n
Flash — n

Yield
Shoot way

Cycle #	Ø1	Ø2	Ø3	Ø4	Ø5
1		30	5	36	29
2		30	5	36	29
3		30	5	36	29
4		30	5	36	29

ADVANCE SIGNING ☑N ☐Static ☐Illuminated
NUMBER OF PHASES ☐2 ☐3 ☐4 ☐5 ☐6

ID 6

LEFT TURN ☑Perm ☑Prot ☐Lead ☐Lag ☐Simult
PED PHASE ☐N ☑Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____

TOD
Mon-Fri.
0100 - 6:30 Free
6:30 - 9:00 1/1/1
9:00 - 15:00 3/1/1
15:00 - 18:30 2/1/1
18:30 - 24:00 Free

SAT.
0:00 - 9:00 Free
9:00 - 15:00 4/1/1
15:00 - 24:00 Free

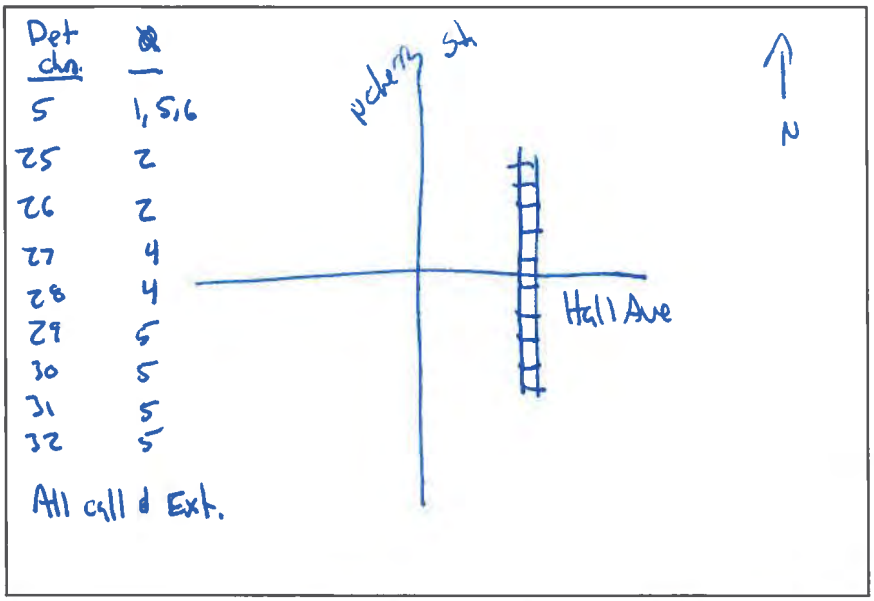
Sun
0:00 - 24:00 Free

BETA Group, Inc.
Engineers • Scientists • Planners

Project: _____ Sheet: 29T
City: _____ By: MHW
Location: Hall Ave @ N. cherry St. Date: 1/18/2012

SIGNAL TIMING SHEET

INTERSECTION DIAGRAM



Coordinated X
Pretimed
Semi-Actuated
Fully-Actuated X

NOTES:

8 phase Sequ.
time in controller good

OVERLAPS

	A	B	C	D
Phases	2,3,4,5			

PHASE TIMES

Phase	~~1~~	2	3	4	5	~~6~~	~~7~~	~~8~~
Lock / NLock			NL	NL	NL			
Recall (Max, Min, None)		Min.						
Walk		9	7					
Don't Walk		1	10					
Min Green		8	6	8	6			
Extension		2.0	0.0	2.0	2.0			
Recall Green								
Max I Green		30	0	12	24			
Max II Green		30	0	10	25			
Max III Green								
Yellow		3.0	0.1	3.0	3.0			
All Red		2.0	0.0	1.0	2.0			
Total Split I								
Total Split II								

PRE-EMPTION

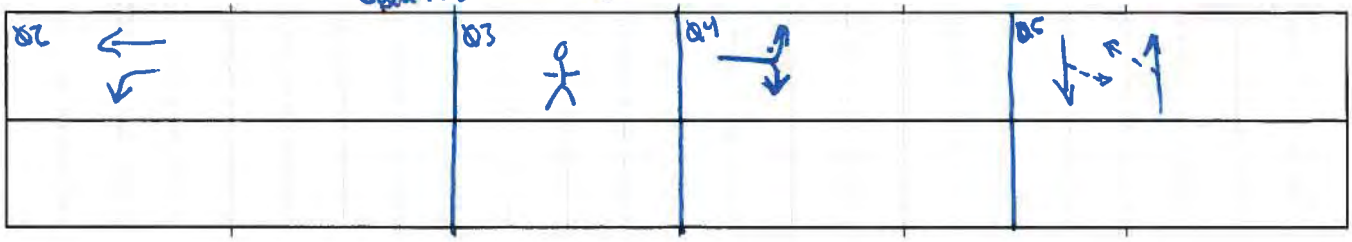
Phases				

TIME OF DAY SETTINGS

Cycle ~~MAX~~ I	
Time Period:	AM
Cycle Length:	50 Min 30
Offset:	32
Cycle 2 ~~MAX II~~	
Time Period:	PM
Cycle Length:	60 Min 30
Offset:	21
Cycle 3 ~~MAX III~~	
Time Period:	MIDY
Cycle Length:	50 Min 30
Offset:	17

Coord Cycle 1 & 3 Coord Cycle 4

SIGNAL PHASING DIAGRAM



DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 29-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - E/E 150 & NORTH CHERRY STS. CONTRACTOR'S REP. - JZB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 1/13/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	(1)
COVER & CONDUITS BONDED	N
DUCT SEAL IN CONDUITS	N

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK
I.D. TAG	UNK.
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK.

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK.
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK.
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK.
UTILITY CLEARANCES	OK (4)

PEDESTRIAN SIGNALS N/A	TR-1102_01
CORRECT TYPE / SIZE	OK
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	OK

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	OK
42" MOUNTING HEIGHT	OK
ACCESIBLE FROM SIDEWALK/RAMP	OK

ADA REQUIREMENTS	
CROSSWALKS	Y (5)
SIDEWALK (CLEAR PATH, MIN 36")	Y
RAMPS W/ DETECTABLE WARNING STRIP	(2)

SIGNS	
SPAN & POST MOUNT	OK (3)
LANE USE ARROWS	OK
NTOR SIGNS	N/A
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	OK (5)
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A

NOTES: (1) SOME YES - SOME UNK.
(2) - N/W & S/W COR. - YES OTHERS NO.
(3) - NRT - ON S/E COR. LEANING
(4) - APPEARS UTILITY POLE #2260B BEING REPLACED - REASON FOR POLE TO POLE TO WEATHERHEAD WIRING PHOTO #0096
(5) WORN

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

30T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN_____ JOB#_____ DATE 1/19/12 LOCATION Hall Ave @ Washington St (30T)

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	6	N/A	1	5/12	1	1
Make	Peek		Peek	Sarasota		3M	PDC	PDC	Peek
Model #	3000 E		Double Diamond	ZZZ GP6		Opticom 752	SSS-87WP	SSF-87WP	9445
Serial #	N/A		N/A	N/A		N/A	N/A	N/A	102282

Comments: Coordination Settings not progressed. Signal operates in Free mode Signal Comm Cable is in Cabinet

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red		9
Yellow		9
Green		9
R-Arrow		
Y-Arrow		
G-Arrow		

Comments:

Y/G Arrow 1 (12")

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button	4	4	4
1 Section - Symbol			8	0	8				Legend	4		
2 Section - Word									Audible	1		
2 Section - Symbol												

Comments:

Actuated uncoordinated Signal

8 Ø Sequ.

SIGNAL SUPPORT INVENTORY

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Mast Arm			3			✓	
Post	8'						
	Poor						

Comments:

☑OUTLET ☑FAN ☑LAMP
☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL
VEH SIG ☐8" ☑12" Sect. ☑3 ☑4 ☑Bi ☐5
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor
PED SIG ☐9" ☐12" ☑16"
☑Inc ☐FO ☐LED ☐Failure
☐Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☑Audible ☐Failure
DETECT ☑Loop ☐Magnetic ☐Video
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☑N ☐Static ☐Illuminated
NUMBER OF PHASES ☐2 ☐3 ☑4 ☐5 ☐6

LEFT TURN ☑Perm ☑Prot ☑Lead ☐Lag ☐Simult
PED PHASE ☐N ☑Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____

Det ch	Ø
1	1
2	2
3	3
4	4
9	1,2
10	1,2
11	2
12	2
13	4
14	4
15	4
16	4
25	1,2
26	1,2
27	2
28	2
29	4
30	4
31	4
32	4

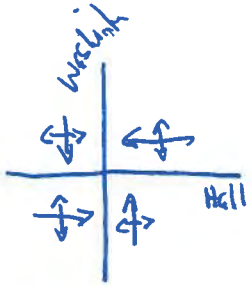
φ Set	1	2	3	4	5	6	7	8	9
Min	8	10	1	8					
Ext.	4.0	4.0	0.1	4.0					
Max I	10	20	30	20					
Max II	30	30	30	30					
Yel	4.0	4.0	3.0	4.0					
Red	2.0	2.0	0.0	2.0					
Walk			7						
Ped Cl			10						
Lock									
Recall		Max							

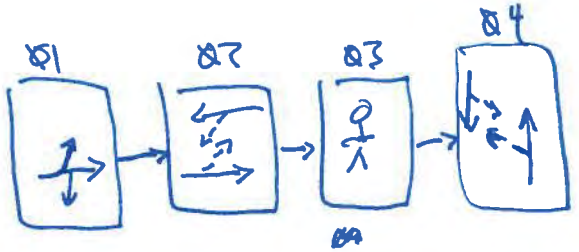
Sketch of intersection and signal layout:

WRUM	X	X	X	X
IntMax	X	X	X	X
Ped Req	X	X	X	X

Coord operation mode = TOD

OLA = 1,2
OLB = 2





* Const call on Sys Det on ~~Fifth~~ Ave. Washington

* Constant call on Stop bar Det on Hall Ave WB

DJ

DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 30-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - WASHINGTON ST & RTE 150 (MAIN ST) CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 1/19/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y (1)
SET ON CRUSHED STONE BASE	Y (1)
COVER & CONDUITS BONDED	Y (2)
DUCT SEAL IN CONDUITS	Y (2)

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK.
I.D. TAG	UNK.
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK.

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC.	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	OK
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	OK

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	OK
42" MOUNTING HEIGHT	OK
ACCESIBLE FROM SIDEWALK/RAMP	OK

ADA REQUIREMENTS	
CROSSWALKS	OK (3)
SIDEWALK (CLEAR PATH, MIN 36")	OK
RAMPS W/ DETECTABLE WARNING STRIP	Y (3)

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	N/A
NTOR SIGNS	N/A
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	N/A
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A
CROSSWALKS	(4)

NOTES:
(1) NOT PER PLANS
(2) FOR THOSE OBSERVED.
(3) NEW RAMPS
(4) BAD COND.

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

32T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN_____ JOB#_____ DATE_____ LOCATION Hall Ave (Route 150) @ Masonic Ave / Fire station (32T)

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	3	N/A		5	1	1
Make	Transyt		Transyt	Sarasota		Direct wire to Fire station	PDC	PDC	N/A
Model #	1080 EL		Model 1200	515T GP2			SSS-87WP	SSF-87WP	N/A
Serial #	N/A		N/A	N/A					N/A
Comments:				1 unknown					

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red	(1)	(2) 7
Yellow	(4)	(2) 7
Green	(1)	7
R-Arrow		
Y-Arrow		
G-Arrow		

Comments: (Fire Station) Intersection

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button			
1 Section - Symbol									Legend			
2 Section - Word									Audible			
2 Section - Symbol												

Comments: No Ped heads or pushbuttons

SIGNAL SUPPORT INVENTORY

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Mast Arm						✓	
Post	8'						
	Poor						

Comments:

φ Set	1	2	~~3~~	4	~~5~~	~~6~~	~~7~~	~~8~~	~~9~~
Min	10	25		10					
Ext.	3.0	4.0		3.0					
Max I	15	35		25					
Max II	30	25		25					
Yel	3.0	3.0		3.0					
Red	1.0	2.0		1.0					
Walk				8	9				
Ped Cl				10					
Lock									
Recall		Min Max							

Sketch of intersection and signal layout:

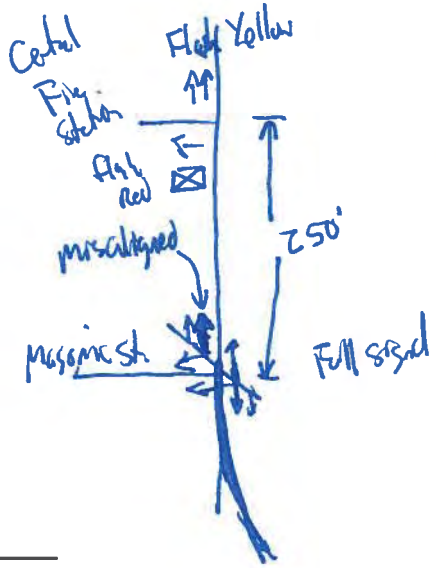
☑OUTLET ☑FAN ☐LAMP
☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL
VEH SIG ☑8" ☑12" Sect. ☑3 ☑4 ☐Bi ☐5
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Green & Yellow ☐Backplate ☑Visor
PED SIG ☐9" ☐12" ☐16"
none ☐Inc ☐FO ☐LED ☐Failure
☐Word ☐Symbol ☐Red/Yellow
☐Pushbutton ☐Audible ☐Failure
DETECT ☑Loop ☐Magnetic ☐Video
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☑N ☐Static ☐Illuminated
NUMBER OF PHASES ☐2 ☑3 ☐4 ☐5 ☐6

LEFT TURN ☑Perm ☐Prot ☐Lead ☐Lag ☐Simult
PED PHASE ☑N ☐Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____

OLA = 1, 2
OLB = 2, 4



Amp 1 NB works
Amp 2 SB nonresp.
Amp 3 EB works with Delay (7 sec)

DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 32-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - Wallingford LOCATION - Hall Ave & Masonic Drive CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 1/20/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	N
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	Y/O
COVER & CONDUITS BONDED	N
DUCT SEAL IN CONDUITS	N

SPAN POLES / MAST ARMS (2)	TR-1103_01
LOCATION	N/A
BASE GROUTED	N/A
PROPER RAKE. PLUMB UNDER LOAD	
HEIGHT / ARM LENGTH	
H.H. CVR. POLE CAP, BOLT CVR	
BONDED TO GROUND ROD	
I.D. TAG	
1 SPAN CLAMP PER ATTACHMENT	

PEDESTALS	TR-1102_01
LOCATION	N/A
PLUMB	
BONDED TO GROUND ROD	
CRUSHED STONE IN FOUNDATION CENTER	

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	N/A
FACING PED. TRAFFIC	
PROPER ADVISORY SIGNS	

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	N/A
42" MOUNTING HEIGHT	
ACCESIBLE FROM SIDEWALK/RAMP	

ADA REQUIREMENTS	
CROSSWALKS	N/A
SIDEWALK (CLEAR PATH, MIN 36")	
RAMPS W/ DETECTABLE WARNING STRIP	

SIGNS	
SPAN & POST MOUNT	N/A
LANE USE ARROWS	N/A
NTOR SIGNS	N/A
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	N/A
PROPER LANE & SHOULDER WIDTH	
CENTER LINES	
STOP BAR PLACEMENT	
ELEPHANT TRACKS	

NOTES: (1) FOR THOSE OBSERVED
(2) WOOD UTIL. POLES.

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

54T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN_____ JOB#_____ DATE_____ LOCATION S. Turnpike @ Cook Hill Rd (54T)

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1 Peek	11	N/A	1	4/12	1	1
Make	Peek			Sarcom		3M	PDC	PDC	Peek
Model #	3000		Double Diamond	535T		Opticom 562	SSS-87WP	SSF-87WP	5187
Serial #	170138		1090707	N/A		N/A	N/A	N/A	964350-L
Comments:									

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red	1	7
Yellow	1	7
Green	1	7
R-Arrow		
Y-Arrow		
G-Arrow		1
Comments:		

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button	2	2	2?
1 Section - Symbol									Legend	2		
2 Section - Word									Audible			
2 Section - Symbol												
Comments:												

D1A D1 D2A D2B D4A D4 D4C D4B SD1 SD2 SD3 Omit Ø1 when Ø2 is on

Ø & Sequ.

~~Coord By TOD~~ Free operation

SIGNAL SUPPORT INVENTORY

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Mast Arm						✓	
Post	8'						
	Poor						

Comments: 1 4' pole for ped button

φ Set	1	2	~~3~~	4	~~5~~	~~6~~	~~7~~	~~8~~	~~9~~
Min	5	15		7					
Ext.	2.0	4.0		3.0					
Max I	12	25		18					
Max II	15	35		25					
Yel	3.0	3.0		3.0					
Red	1.0	2.0		2.0					
Walk				12					
Ped Cl				1					
Lock	NL		R	NL					
Recall		Min							

☑OUTLET ☑FAN ☑LAMP
☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL
VEH SIG ☑8" ☑12" Sect. ☑3 ☑4 ☐Bi ☐5
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor
PED SIG ☐9" ☐12" ☐16"
☐Inc ☐FO ☐LED ☐Failure
☐Word ☐Symbol ☐Red/Yellow
☑Pushbutton ☐Audible ☐Failure
DETECT ☑Loop ☐Magnetic ☐Video
☐Microwave ☐Infrared ☐Failure

RH/6

ADVANCE SIGNING ☑N ☐Static ☐Illuminated
NUMBER OF PHASES ☐2 ☑3 ☐4 ☐5 ☐6

LEFT TURN ☑Perm ☑Prot ☑Lead ☐Lag ☐Simult
PED PHASE ☐N ☐Exclusive ☑Concurrent

CYCLE LENGTH Max__________ Min__________

Det Chn.	Ø
17	1
18	4
19	4
20	-
21	-
22	-
23	-
24	-
25	1
26	2
27	2
28	4
29	4
30	-
31	-
32	

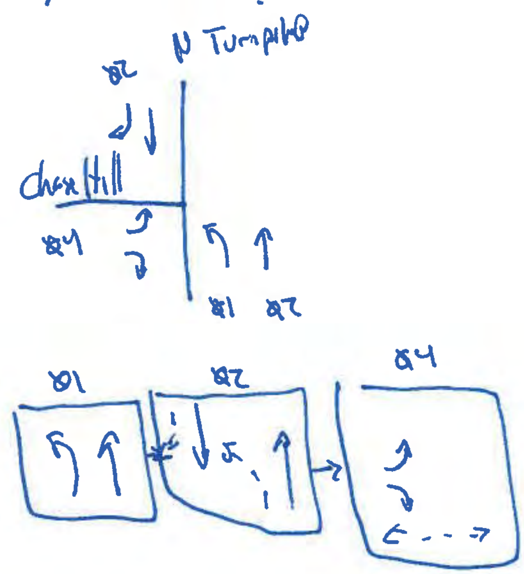
3 Sys Det.

Sketch of intersection and signal layout:

WRM x x x x x x x x
Int Max x x x x x x x x
Ped Req x x x x x x x x

Preempt Run 1 Chase Hill Road

OLA = 1,2



DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 54-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - SOUTH TURNPIKE CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____
RD AT COOK HILL RD.

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 1/20/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y (1)
SET ON CRUSHED STONE BASE	Y (2)
COVER & CONDUITS BONDED	Y (3)
DUCT SEAL IN CONDUITS	Y (2)

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK.
I.D. TAG	UNK
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK (4)
PLUMB	OK
BONDED TO GROUND ROD	UNK
CRUSHED STONE IN FOUNDATION CENTER	UNK

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	N/A
FACING PED. TRAFFIC	N/A
PROPER ADVISORY SIGNS	N/A

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	OK.
42" MOUNTING HEIGHT	OK.
ACCESIBLE FROM SIDEWALK/RAMP	N

ADA REQUIREMENTS	
CROSSWALKS	N/A.
SIDEWALK (CLEAR PATH, MIN 36")	
RAMPS W/ DETECTABLE WARNING STRIP	

SIGNS	
SPAN & POST MOUNT	OK (5)
LANE USE ARROWS	OK
NTOR SIGNS	N/A
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	OK
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK.
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A

NOTES:
(1) SEVERAL H.H. NOT FOUND IN FIELD
(2) FOR THOSE OBSERVED
(3) NOT COVERS
(4) NOT ADA ACCESSIBLE
(5) LANE USE SIGN MISSING @ SB COOK HILL.

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

55T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN_____ JOB#_____ DATE_____ LOCATION S Turnpike Rd @ Chestnut Rd (SST)

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	2	N/A	1	5/12	1	1
Make	Peek		Peek	Sarasota		3M	PDC	PDC	Southern Manufacturing
Model #	3000		IZELRA	1-515T GP2 1-535T		Opticom 762	SSS-87WP	SSF-87WP	N/A
Serial #	N/A		N/A			N/A with Shelf Rack	N/A	N/A	N/A
Comments:									

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red	4	2
Yellow	4	2
Green	4	2
R-Arrow		0
Y-Arrow		1
G-Arrow		1
Comments:		

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button			
1 Section - Symbol									Legend			
2 Section - Word									Audible			
2 Section - Symbol												
Comments: No Ped signals or buttons												

SIGNAL SUPPORT INVENTORY

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Mast Arm							
Post	8'						
	Poor						

Comments:

☑OUTLET ☑FAN ☑LAMP 2 neither are working
☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL
VEH SIG ☑8" ☐12" Sect. ☑3 ☐4 ☐Bi ☑5
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor
PED SIG ☐9" ☐12" ☐16"
None ☐Inc ☐FO ☐LED ☐Failure
☐Word ☐Symbol ☐Red/Yellow
☐Pushbutton ☐Audible ☐Failure
DETECT ☑Loop ☐Magnetic ☐Video
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☐N ☐Static ☑Illuminated
NUMBER OF PHASES ☐2 ☑3 ☐4 ☐5 ☐6

LEFT TURN ☑Perm ☑Prot ☐Lead ☐Lag ☐Simult
PED PHASE ☑N ☐Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____

Det Chn | Ø
25 | 1
26 | 5

OLA = 1,2,3
OLB = 2,3

Cycle	Split	offset	Ø1	Ø2	Ø3	Ø5	Ø6
1	1	10	16	25	19	40	70
2	1	11	18	26	19	37	75

"when Flashing Step Ahead"

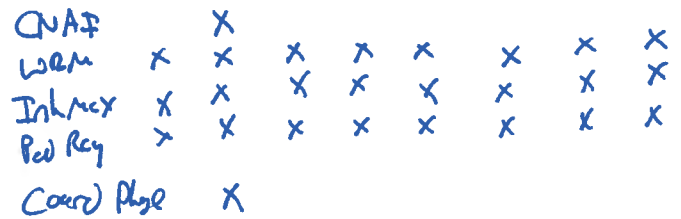
TOD
Plan 1 (7 days)
0700 - 1500 1/1/1
1500 - 1800 2/1/1
1800 - 0700 1/1/1

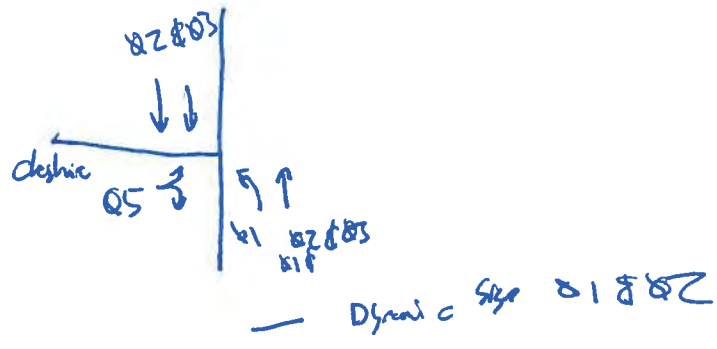
Cleshie RD Det Malfunctioning

omit Ø1 if Ø2 is on
Ø8 Seqn.

φ Set	1	2	3	4	5	6	7	8	9
Min	5	15	7		6				
Ext.	2.0				3.0				
Max I	8	18	7		24				
Max II	10	21	7		24				
Yel	3.0	0.1	3.0		3.0				
Red	0.1	0.0	2.0		1.0				
Walk		9							
Ped Cl		1							
Lock	NL		NL						
Recall		Max	Min						

Sketch of intersection and signal layout:





DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 55-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - SOUTH TURNPIKE RD & CHESHIRE RD. CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 1/20/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	UNK.
COVER & CONDUITS BONDED	UNK.
DUCT SEAL IN CONDUITS	UNK.

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK.
I.D. TAG	Y
1 SPAN CLAMP PER ATTACHMENT	Y

PEDESTALS	TR-1102_01
LOCATION	N/A
PLUMB	↓
BONDED TO GROUND ROD	↓
CRUSHED STONE IN FOUNDATION CENTER	↓

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	N/A
FACING PED. TRAFFIC	↓
PROPER ADVISORY SIGNS	↓

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	N/A
42" MOUNTING HEIGHT	↓
ACCESIBLE FROM SIDEWALK/RAMP	↓

ADA REQUIREMENTS	
CROSSWALKS	N/A
SIDEWALK (CLEAR PATH, MIN 36")	↓
RAMPS W/ DETECTABLE WARNING STRIP	↓

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	OK
NTOR SIGNS	N/A
STOP, STOP AHEAD, INT WARNING	OK.
SIGNAL AHEAD	OK.
FLASHING "STOP AHEAD"	OK

PAVEMENT MARKINGS	
LANE ARROWS	N/A
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK.
STOP BAR PLACEMENT	OK.
ELEPHANT TRACKS	N/A

NOTES:

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

56T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

SGT

CITY/TOWN_____JOB#_____DATE_____LOCATION_____

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	12	N/A	1	6/12	1	1
Make	Peek		Transyt	Sarasota		3M	PDC	PDC	Peek
Model #	3000		12 EL	535T		Optera 562	SSS-87WP	SSF-87WP	5410
Serial #	N/A		N/A	N/A		N/A	N/A	N/A	N/A
Comments:									

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red		10
Yellow		10
Green		10
R-Arrow		
Y-Arrow		1
G-Arrow		4
Comments:		

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button			
1 Section - Symbol									Legend			
2 Section - Word									Audible			
2 Section - Symbol												
Comments:												

top 20 19 18 17 25 27
bottom 8 32 30 31 22 21 Detectors

12 3478
56

SIGNAL SUPPORT INVENTORY

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Mast Arm						✓	
Post	8'						
	Poor						

Comments:

φ Set	1	2	3	4	5	6	7	8	9
Min	5	10	6		5	10	5		
Ext.	2.0	0.0	3.0		2.0	0.0	1.0		
Max I	11	23	12		11	23	8		
Max II	13	24	15		13	24	7		
Yel	3.0	3.0	3.0		3.0	3.0	3.0		
Red	2.0	2.0	2.0		2.0	2.0	2.0		
Walk		9				9			
Ped Cl		1				1			
Lock					NL		NL		
Recall		Max				Max			

☑OUTLET ☑FAN ☑LAMP burnt out
☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL
VEH SIG ☐8" ☑12" Sect. ☐3 ☐4 ☐Bi ☐5
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor
PED SIG ☐9" ☐12" ☐16"
None ☐Inc ☐FO ☐LED ☐Failure
☐Word ☐Symbol ☐Red/Yellow
☐Pushbutton ☐Audible ☐Failure
DETECT ☑Loop ☐Magnetic ☐Video
☐Microwave ☐Infrared ☐Failure

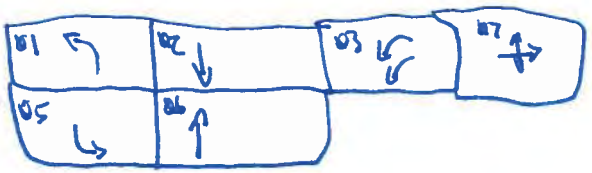
Coord by TOD

Det Ch	Ø
17	2
18	2
19	6
20	6
21	3
22	3
23	—
24	7
25	5
26	—
27	1
28	—
29	—
30	5
31	7
32	7

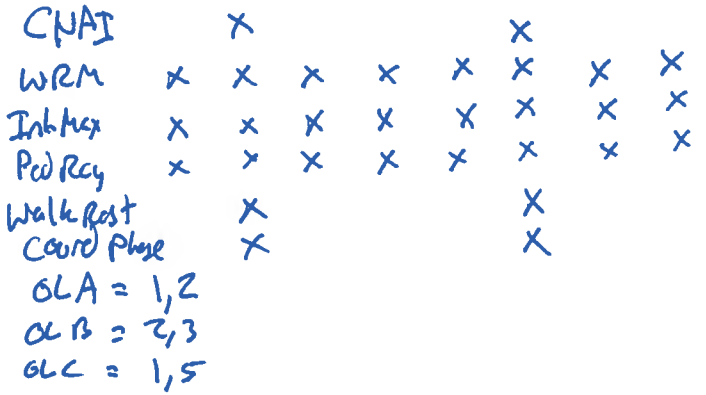
ADVANCE SIGNING ☐N ☐Static ☐Illuminated
NUMBER OF PHASES ☐2 ☐3 ☐4 ☐5 ☑6

LEFT TURN ☐Perm ☑Prot ☐Lead ☐Lag ☐Simult
PED PHASE ☑N ☐Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____



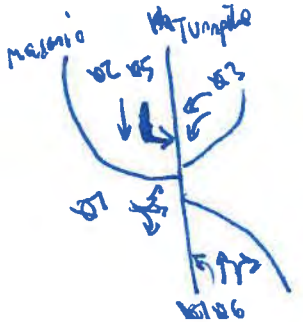
Sketch of intersection and signal layout:



Cycle	Split	Offset	Max Ø1	Min Ø1	Ø1	Ø2	Ø3	Ø5	Ø6	Ø7
1	1	0	70	75	23	37	23	23	37	17
2	1	0	30	30	24	35	26	24	35	15

T.O.D.
Plan 1 (7 days)

0:00 – 15:00	1/1/1
15:00 – 18:00	2/1/1
18:00 – 0:00	1/1/1



DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 56-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - QUINNIPIAC ST. @ CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____
ROUTE 15 + MASONIC AVE

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: _____

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	N (1)
COVER & CONDUITS BONDED	(2)
DUCT SEAL IN CONDUITS	Y (3)

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK.
I.D. TAG	OK
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	N
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC.	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	N/A
FACING PED. TRAFFIC	
PROPER ADVISORY SIGNS	

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	N/A
42" MOUNTING HEIGHT	
ACCESIBLE FROM SIDEWALK/RAMP	

ADA REQUIREMENTS	
CROSSWALKS	N/A
SIDEWALK (CLEAR PATH, MIN 36")	
RAMPS W/ DETECTABLE WARNING STRIP	

SIGNS	
SPAN & POST MOUNT	OK (4)
LANE USE ARROWS	OK
NTOR SIGNS	N/A
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	OK
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A
STOP BARS	(5)

NOTES:
(1) WATER PRESENT @ ONE LOC.
(2) CONDUITS BONDED - COVERS NOT
(3) FOR THOSE OBSERVED
(4) 1 SIGN DOWN OTHERS DAMAGED OR LEANING
(5) WORN ON QUINNIPIAC ST.

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

57T

Field Inspection

12345

SIGNAL EQUIPMENT EVALUATION FORM

57T

CITY/TOWN Wallingford, CT JOB# _____ DATE 6/12/12 LOCATION River Rd @ Quinnipiac St

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	6	N/A	1	5/12	1	1
Make	Peek		Transyt	Sarasota		3M	PDC	TSC	Peek
Model #	3000		12 ELITE	535T		Opticom 762	SSS-67UP	Cobra 204	5411
Serial #	9120		4180	N/A		N/A	N/A	N/A	970953
Comments:	Fault on detector D2B (02)								

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red	1	9
Yellow	1	9
Green	1	9
R-Arrow		
Y-Arrow		3
G-Arrow		3

Comments: EB heads mounted horizontal

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button	2	2	2
1 Section - Symbol									Legend			
2 Section - Word									Audible			
2 Section - Symbol												

Comments: None

Coord Status = Free, input override Omit Ø1 if Ø2 is on Ø8 Sequ.

SIGNAL SUPPORT QUANTITIES

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Post	Good					X	
	Fair						
	Poor						

Comments:

φ Set	1	2	3	~~4~~	5	~~6~~	~~7~~	~~8~~	9
Min	3	9	9		9				
Ext.	1.0	2.0	2.0		2.0				
Max I	10	25	15		15				
Max II	5	22	14		15				
Yel	3.0	4.0	4.0		4.0				
Red	0.1	1.0	1.0		1.0				
Walk		9	11		11				
Ped Cl		1	1		1				
Lock	NL								
Recall		Max							

Sketch of intersection signal phasing and signal layout:

Ø4 Ø1	Ø4 Ø2	Ø3	Ø5

☑OUTLET ☑FAN/THERMOSTAT ☑LAMP

☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL

VEH SIG ☑8" ☑12" Sect: ☒3 ☒4 ☒Bi ☐5 ☐DH
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor

PED SIG ☐9" ☐12" ☐16"
☐Inc ☐FO ☐LED ☐Failure
None ☐Word ☐Symbol ☐Red/Yellow
☐Pushbutton ☐Audible ☐Failure

DETECTION ☑Loop ☐Video ☐Magnetic
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☐None ☐Static ☑Illuminated

NUMBER OF PHASES ☐2 ☐3 ☑4 ☐5 ☐6 ☐7 ☐8

LEFT-TURN ☑Perm. ☑Prot. ☐Lead ☐Lag ☐Simult

PED PHASE ☐None ☐Exclusive ☑Concurrent

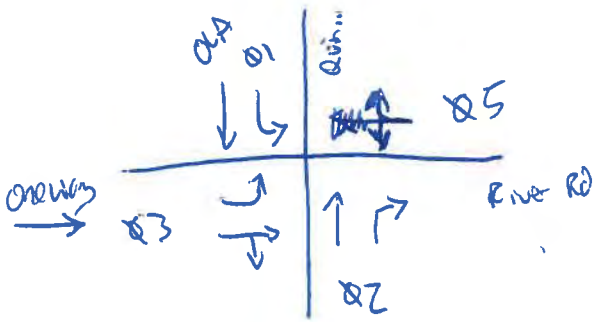
CYCLE LENGTH Max_____ Min_____

☐ CABINET PHOTOS

Det chn.	Ø
1-8	1-8
25	1
26	2
27	2
28	2
29	3
30	3
31	5
32	—

CMAI X
WRM X X X X X X X X
Ink Max X →
Ped Recy X →
Coord Place X

OL card is programmed.



DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 57-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - QUINNIPIAC ST NT RTE 15 OFF RAMP & PECKER RD. CONTRACTOR'S REP. - JCB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 2/2/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y (1)
SET ON CRUSHED STONE BASE	Y
COVER & CONDUITS BONDED	N
DUCT SEAL IN CONDUITS	Y (2)

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK
I.D. TAG	OK
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK (3)
VISORS / LOUVERS / BACK PLATES	OK (4)
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK (5)
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE R/Y/G	OK
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	OK

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	Y
42" MOUNTING HEIGHT	Y
ACCESIBLE FROM SIDEWALK/RAMP	Y

ADA REQUIREMENTS	
CROSSWALKS	N
SIDEWALK (CLEAR PATH, MIN 36")	Y
RAMPS W/ DETECTABLE WARNING STRIP	N

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	OK
NTOR SIGNS	OK
STOP, STOP AHEAD, INT WARNING	OK
SIGNAL AHEAD	OK
FLASHING "STOP AHEAD"	OK

PAVEMENT MARKINGS	
LANE ARROWS	OK
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A

NOTES:
(1) SOME COULD NOT BE LOCATED.
(2) FOR THOSE OBSERVED.
(3) SOME INDICATIONS PARTIALLY OUT.
(4) PEELING PAINT ON MOST SIGNALS
(5) ADVANCE SIGN ON QUINNIPIAC.

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

BETA
ENGINEERING SUCCESS TOGETHER

Project:
City: Wallingford, CT
Location: River Rd @ Quinnipiac St.

Sheet: 57T
By: MWW
Date: 2/2/12

Operating Modes

Source:	Cycle	Split	Offset	Free	Flash
TOD	☒	☒	☒	☒	☒
Closed Loop	☐	☐	☐	☐	☐
Interconnect	☐	☐	☐	☐	☐

City Zero Midnight Cycles:

1	2	3	4	5	6

- ☑ Auto Permissives
- ☑ End of Main Street
- ☐ Enhanced Permissives
- ☐ Fixed Force-Off
- ☐ Yellow Offset
- ☑ Central Override
- ☐ No PCL Offset Adjust
- ☑ Offset Entry In %
- ☑ Perm-Pa Entry In %
- ☐ Invert Free Input
- ☑ Split Matrix
- ☑ 4 Splits/Cycle
- ☐ No Early Coord Ped

Out of Step to Free:	
Ped Permissive:	0
Interconnect TOD Revert:	0
Percent Yield:	5
Percent EGB:	0
Percent RGB:	0

SYNC Source:	Type of Perm:	Offset Seeking:
☑ TOD/CL/INTER	☑ Yield	☐ Add
☐ City Zero	☐ Single	☐ Dwell
☐ Absolute	☐ Multiple	☑ Short Route

Conditions to Free:

No. of Cycles w/No Sync	0
No. of Sec. w/No offset	0
No. of Sec. w/Multi Offsets	0

Phase Allocation

Cyc/Splt \ Phase	1	2	3	4	5	6	7	8
C1/S1	13	33	27		27			
C2/S1	11	37	25		27			

BETA
ENGINEERING SUCCESS TOGETHER

Project:
City: Wallingford, CT
Location: River Rd @ Quinnipiac St

Sheet: 5A
By: MRW
Date: 2/2/12

Cycle/Dwell/Offset

Cycle :	1	2	3	4	5	6
Cycle Length:	70	75				
Max Dwell/ Min. Cycle:	30	30				
Offset 1:	26	23				
Offset 2:						
Offset 3:						
Offset 4:						
Offset 5:						

Week Plan

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	1	1	1	1	1	1

Cycle	1	2	3	4	5	6
offset 1	1	1	1	1	1	1
offset 2	1	1			1	1

Day Plan

Plan #	Time	Ckt Plan	C/O/S	Ckt
1	0:00		1/1/1	
	0:00			Free Off
	15:00		2/1/1	
	18:00		1/1/1	

Plan #	Time	Ckt Plan	C/O/S	Ckt

- [x] Enable Run
- [ ] Railroad Preempt
- [x] Input Lock
- [ ] Go to Higher Run
- [x] NEMA Priority
- [ ] Override UCF

Maximum Intervals:	3
User Priority:	1
Duration Service:	5
Preempt Delay:	0
Reservice Time:	0

- [ ] Inhibit Double Clearing OVL's

Min. Green:	5.0
Min. Yellow:	0.0
Min. Red:	0.0
Min. Ped. Clearance:	0
Min. Overlap Yellow:	0.0

- [x] Go to Exit Phase
- [ ] Go to Next Demand
- [ ] Resume Sequence
- [ ] To Coordination

FUNC\PH	1	2	3	4	5	6	7	8
Phases	[x]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Calls	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

	1	2	3
Valid	x	x	x
Dwell	x		
Fixed	x	x	x
Exit	x		

BETA ENGINEERING SUCCESS TOGETHER

Project:
City: Wallingford, CT
Location: River Rd. @ Quinnipiac St.
Sheet: 57T
By: MWW
Date: 2/2/12

RUN	2	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL #	TIME																		
1	15																		
TYPE			VEH					G											
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN	2	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL #	TIME																		
2	3																		
TYPE			VEH					Y											
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN	2	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL #	TIME																		
3	1																		
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN		FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL #	TIME																		
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

☑ Enable Run	Maximum Intervals: 3
☐ Railroad Preempt	User Priority: 1
☑ Input Lock	Duration Service: 5
☐ Go to Higher Run	Preempt Delay: 0
☑ NEMA Priority	Reservice Time: 0
☑ Override UCF	

☐ Inhibit Double Clearing OVL's	
Min. Green:	5.0
Min. Yellow:	0.0
Min. Red:	0.0
Min. Ped. Clearance:	0
Min. Overlap Yellow:	0.0

☑ Go to Exit Phase
☐ Go to Next Demand
☐ Resume Sequence
☐ To Coordination

FUNC\PH	1	2	3	4	5	6	7	8
Phases	☐	☑	☐	☐	☐	☐	☐	☐
Calls	☐	☐	☐	☐	☐	☐	☐	☐

	1	2	3
Valid	x	x	x
Pwell	x		
Fixed	x	x	x
Exit	x		

BETA ENGINEERING SUCCESS TOGETHER

Project:
City: Wallingford, CT
Location: River Rd. @ Quinnipiac St.

Sheet: 5T
By: MWW
Date: 4/4/12

RUN	1																		
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	15	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH		G														
TENTHS			PED																
EXIT			VEH O/L	G															
			PED O/L																
PC->YEL			OUTS																

RUN	1																		
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	4	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN	1																		
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3	15	PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN																			
INTVL #	TIME	FLASH	SIG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		PLAN	OUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

58T

Field Inspection

2345

SIGNAL EQUIPMENT EVALUATION FORM

58T

CITY/TOWN Wallingford, CT JOB# _____ DATE 2/2/12 LOCATION Quinnipiac St @ Ward St/Bull Ave / Lufberg Ave.

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	1	7	N/A	1	9/12	1	1
Make	Peek		Transyt	Sarasota		3M	PDC	PDC	Peek
Model #	3000		12 ELRA	222 GPG		optacom 752	SSE-87WP	SSF-87WP	9448
Serial #	134788		7110135	N/A		N/A	N/A	N/A	~~N/A~~ 102284

Comments: tough to open door Controller Rev. = 5074 V4.5 Coord status: Coord, Local TOD-Master

Flashing failure on detector # ch. 15 (D6)

VEHICLE SIGNAL INVENTORY

	Size 8"	Size 12"
Red	2+4 (6)	4+2+5 (11)
Yellow	2+4 (6)	4+2+5 (11)
Green	2+4 (6)	4+2+2 (8)
R-Arrow		
Y-Arrow		
G-Arrow		(3)

Comments:

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY: Size 9"	Size 12"	Size 16"	Countdown	Illumination Method: Incandescent	LED	Fiber Optic	Poor Cond.?	PUSHBUTTON ASSEMBLY	Quantity	Working?	ADA Compliant?
1 Section - Word									Button	5	5	5
1 Section - Symbol			6		6				Legend			
2 Section - Word									Audible			
2 Section - Symbol												

Comments:

SIGNAL SUPPORT QUANTITIES

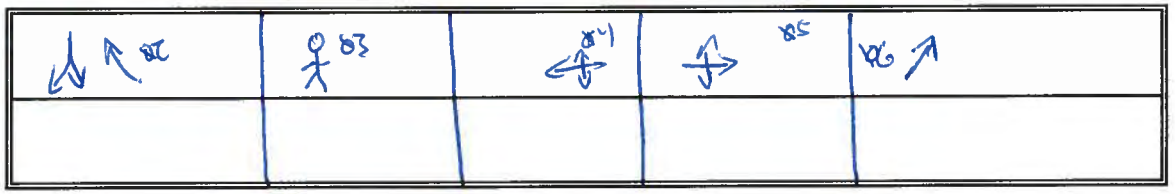
		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Post	Good					✓	
	Fair			X	X	X	X
	Poor			X	X	X	X

Comments:

8Ø Sequ.

φ Set	1	2	3	4	5	6	7	8	9
Min		15		5	5	9			
Ext.		3.0		2.0	2.0	3.0			
Max I		52		18	18	42			
Max II		39		11	15	39			
Yel		3.0	0.1	3.0	3.0	3.0			
Red		4.0	0.0	4.0	4.0	1.0			
Walk			7						
Ped Cl			12						
Lock			NL		NL				
Recall		Min							

Sketch of intersection signal phasing and signal layout:



☑OUTLET ☑FAN/THERMOSTAT ☑LAMP

☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL

VEH SIG ☑8" ☑12" Sect: ☑3 ☐4 ☐Bi ☐5 ☐DH
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow/black ☐Backplate ☑Visor

PED SIG ☐9" ☐12" ☑16"
☑Inc ☐FO ☐LED ☐Failure
☐Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☑Audible ☐Failure

DETECTION ☑Loop ☐Video ☐Magnetic
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☑None ☐Static ☐Illuminated

NUMBER OF PHASES ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8

LEFT-TURN ☑Perm. ☐Prot. ☐Lead ☐Lag ☐Simult

PED PHASE ☐None ☒Exclusive ☐Concurrent

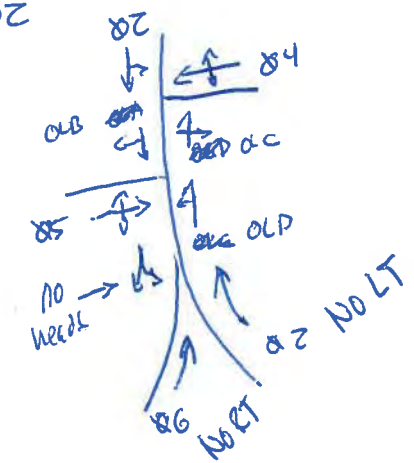
CYCLE LENGTH Max_____ Min_____

☐ CABINET PHOTOS

Det chn.	Ø
1-8	1-8
17	2
18	2
19	–
20	–
21	–
22	–
23	–
24	–
25	2
26	2
27	4
28	4
29	5
30	5
31	6
32	6

Cab I Ø2
WRM All
Ink Max 2-6
Walk Rest Ø2
Coord Phase Ø2

OLA = 2, 4
OL B = 2
OL C = 2, 5, 6
OL P = 2, 6



DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 5B-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - QUINNIPIAC ST. @ BULL/LUFBERRY/WAND STS. CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 2/2/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y (1)
SET ON CRUSHED STONE BASE	Y
COVER & CONDUITS BONDED	Y/N (2)
DUCT SEAL IN CONDUITS	Y (2)

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	OK
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK
I.D. TAG	UNK.
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK (3)
BONDED TO GROUND ROD	UNK
CRUSHED STONE IN FOUNDATION CENTER	UNK.

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE N/A	OK.
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	OK

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	Y
42" MOUNTING HEIGHT	Y
ACCESIBLE FROM SIDEWALK/RAMP	Y

ADA REQUIREMENTS	
CROSSWALKS	OK
SIDEWALK (CLEAR PATH, MIN 36")	OK
RAMPS W/ DETECTABLE WARNING STRIP	N

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	OK
NTOR SIGNS	OK
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	N/A
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK.
ELEPHANT TRACKS	N/A

NOTES: (1) SOME COULD NOT BE LOCATED
(2) FOR THOSE OBSERVED
(3) ONE DAMAGED OFF BULL NE

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

- [x] Enable Run
- [ ] Railroad Preempt
- [x] Input Lock
- [ ] Go to Higher Run
- [x] NEMA Priority
- [ ] Override UCF

Maximum Intervals:	3
User Priority:	1
Duration Service:	15
Preempt Delay:	0
Reservice Time:	5

- [ ] Inhibit Double Clearing OVL's

Min. Green:	5.0
Min. Yellow:	0.0
Min. Red:	0.0
Min. Ped. Clearance:	12
Min. Overlap Yellow:	0.0

- [x] Go to Exit Phase
- [ ] Go to Next Demand
- [ ] Resume Sequence
- [ ] To Coordination

FUNC\PH	1	2	3	4	5	6	7	8
Phases	☐	☑	☐	☐	☐	☐	☐	☐
Calls	☐	☐	☐	☑	☑	☐	☐	☐

	1	2	3
Valid	X	X	X
Dwell	X		
Fixed	X	X	X
Exit	X		

RUN	2	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL #	TIME																		
1	15																		
TYPE			VEH								G								
TENTHS			PED																
EXIT			VEH O/L		G	G	G												
			PED O/L																
PC->YEL			OUTS																

RUN	2	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL #	TIME																		
2	4																		
TYPE			VEH								Y								
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN	2	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL #	TIME																		
3	2																		
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

RUN		FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL #	TIME																		
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

BETA ENGINEERING SUCCESS TOGETHER

Project:
City: Wallingford, CT
Location: Quinnipiac / Ward / Hall / Lufbery

Sheet: 58T
By: MWW
Date: 2/2/12

- [x] Enable Run
- [ ] Railroad Preempt
- [x] Input Lock
- [ ] Go to Higher Run
- [x] NEMA Priority
- [ ] Override UCF

Maximum Intervals:	3
User Priority:	1
Duration Service:	15
Preempt Delay:	0
Reservice Time:	5

- [ ] Inhibit Double Clearing OVL's

Min. Green:	5.0
Min. Yellow:	0.0
Min. Red:	0.0
Min. Ped. Clearance:	12
Min. Overlap Yellow:	0.0

- [x] Go to Exit Phase
- [ ] Go to Next Demand
- [ ] Resume Sequence
- [ ] To Coordination

FUNC\PH	1	2	3	4	5	6	7	8
Phases	☐	☑	☐	☐	☐	☐	☐	☐
Calls	☐	☐	☐	☑	☑	☐	☐	☐

	1	2	3
Valid	X	X	X
Dwell	X		
Fixed	X	X	X
Exit	X		

BETA
ENGINEERING SUCCESS TOGETHER

RUN	1	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL # / TIME	1 / 15																		
TYPE			VEH		G														
TENTHS			PED																
EXIT			VEH O/L	G															
			PED O/L																
PC->YEL			OUTS																

RUN	1	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL # / TIME	2 / 4																		
TYPE			VEH		G														
TENTHS			PED																
EXIT			VEH O/L	G															
			PED O/L																
PC->YEL			OUTS																

RUN	1	FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL # / TIME	3 / 2																		
TYPE			VEH		G														
TENTHS			PED																
EXIT			VEH O/L	G															
			PED O/L																
PC->YEL			OUTS																

RUN		FLASH PLAN	SIG OUTS	1 A	2 B	3 C	4 D	5 E	6 F	7 G	8 H	9 I	10 J	11 K	12 L	13 M	14 N	15 O	16 P
INTVL # / TIME																			
TYPE			VEH																
TENTHS			PED																
EXIT			VEH O/L																
			PED O/L																
PC->YEL			OUTS																

Project:
City: Wallingford, CT
Location: Quinnipiac/Ward / Bell / [illegible]

Sheet: 56T
By: MWW
Date: 2/2/12

BETA
ENGINEERING SUCCESS TOGETHER

Project:
City: Wallingford, CT
Location: Quinnipiac St @ Ward St / Bull Ave / Lufberg Ave

Sheet: 58T
By: MWW
Date: 2/2/12

Operating Modes

Source:	Cycle	Split	Offset	Free	Flash
TOD	☐	☐	☐	☐	☐
Closed Loop	☑	☑	☑	☑	☑
Interconnect	☐	☐	☐	☐	☐

City Zero Midnight Cycles:

1	2	3	4	5	6

- ☑ Auto Permissives
- ☑ End of Main Street
- ☐ Enhanced Permissives
- ☐ Fixed Force-Off
- ☐ Yellow Offset
- ☑ Central Override
- ☐ No PCL Offset Adjust
- ☑ Offset Entry In %
- ☑ Perm-Pa Entry In %
- ☐ Invert Free Input
- ☑ Split Matrix
- ☑ 4 Splits/Cycle
- ☐ No Early Coord Ped

Out of Step to Free:
Ped Permissive: 0
Interconnect TOD Revert: 0

Percent Yield: 5
Percent EGB: 0
Percent RGB: 0

SYNC Source:	Type of Perm:	Offset Seeking:
☑ TOD/CL/INTER	☑ Yield	☐ Add
☐ City Zero	☐ Single	☐ Dwell
☐ Absolute	☐ Multiple	☑ Short Route

Conditions to Free:
No. of Cycles w/No Sync: 0
No. of Sec. w/No offset: 0
No. of Sec. w/Multi Offsets: 0

Phase Allocation

Cyc/Splt \ Phase	1	2	3	4	5	6	7	8
C1/S1	~~33~~	~~33~~ 33	~~5~~ 5	~~16~~ 16	17	29		
C2/S1		33	5	16	17	29		
C3/S1		37	5	16	17	25		

BETA
ENGINEERING SUCCESS TOGETHER

Project:
City: Wallingford, CT
Location:

Sheet: 56T
By: MWW
Date: 2/2/12

Cycle/Dwell/Offset

Cycle :	1	2	3	4	5	6
Cycle Length:	100	120	100			
Max Dwell/ Min. Cycle:	80	80	80			
Offset 1:	65	65	65			
Offset 2:						
Offset 3:						
Offset 4:						
Offset 5:						

Week Plan

Sun	Mon	Tue	Wed	Thu	Fri	Sat
2	1	1	1	1	1	2

Cycle 1-6 →
offset ↓ 5
All 1

Day Plan

Plan #	Time	Ckt Plan	C/O/S	Ckt
1	0:00			Free on
	6:30		1/1/1	
	6:30			Free off
	9:00		3/1/1	
	15:00		2/1/1	
	18:30			Free on
2	0:00			Free On

Plan #	Time	Ckt Plan	C/O/S	Ckt

59T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN_____JOB#_____DATE_____LOCATION_____

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	N/A	~~1~~	4	N/A	1	4	1	1
Make	Peek		Trasyt	3 - Sarasota 1 Eberle		3M	PDC	PDC	Peek
Model #	3000		12EL	222 Omni 12		752 Optical	Model 200	Model 204	9447
Serial #	5207		N/A	N/A		N/A	N/A	N/A	982241

Comments: Old 3000 Series Controller Sitting in cabinet. Chn 16 Det broken. Chn 13 Det broken. Opticom Pulled out of Slot.

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red		8
Yellow		8
Green		8
R-Arrow		
Y-Arrow		
G-Arrow		

Comments:

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button	4	Y	Y
1 Section - Symbol			8	0		8			Legend	4		
2 Section - Word									Audible	1		
2 Section - Symbol												

Comments:

SIGNAL SUPPORT INVENTORY

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Mast Arm						✓	
Post	8'	2					
	Poor						

Comments:

φ Set	1	2	3	4	5	6	7	8	9
Min									
Ext.									
Max I									
Max II									
Yel									
Red									
Walk									
Ped Cl									
Lock									
Recall									

Sketch of intersection and signal layout:

Detector chn 9/10 11/2 to phase 2
13/4 15/6 to phase 4

Source
Cycle Closed loop
Split "
Offset "
Free "
Flash "

Yield
Starting

Day 1
0:00 – 6:30 Free
6:30 – 9:00 1/1/1
9:00 – 15:00 3/1/1
15:00 – 18:30 2/1/1
18:30 – 0:00 Free

Day 2
9:00 – 15:00 4/1/1
Free all others

☑ OUTLET ☑ FAN ☑ LAMP
☐ MAST ARM ☑ SPAN WIRE ☐ ORNAMENTAL
VEH SIG ☐ 8" ☑ 12" Sect. ☑ 3 ☐ 4 ☐ Bi ☐ 5
☐ Inc ☐ FO ☑ LED ☐ OP ☐ Failure
☐ Fixed ☑ Freeswing ☐ Tether
Color Yellow ☐ Backplate ☑ Visor
PED SIG ☐ 9" ☐ 12" ☑ 16"
☐ Inc ☐ FO ☑ LED ☐ Failure
☐ Word ☑ Symbol ☐ Red/Yellow
☑ Pushbutton ☑ Audible ~~☐ Failure~~ Tone
DETECT ☑ Loop ☐ Magnetic ☐ Video
☐ Microwave ☐ Infrared ☐ Failure

ADVANCE SIGNING ☑ N ☐ Static ☐ Illuminated
NUMBER OF PHASES ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6

LEFT TURN ☑ Perm ☐ Prot ☐ Lead ☐ Lag ☐ Simult
PED PHASE ☐ N ☑ Exclusive ☐ Concurrent

CYCLE LENGTH Max 60 Min 40

DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 59-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - QUINNIPIAC & WASHINGTON STS CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 1/18/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES (1)	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	Y
COVER & CONDUITS BONDED	Y
DUCT SEAL IN CONDUITS	N

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	Y
PROPER RAKE. PLUMB UNDER LOAD	OK
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK
I.D. TAG	(2)
1 SPAN CLAMP PER ATTACHMENT	OK

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	X
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK.

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	Y
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK.
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	OK.
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS M/H	TR-1102_01
CORRECT TYPE / SIZE	OK
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	OK

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	OK
42" MOUNTING HEIGHT	OK
ACCESIBLE FROM SIDEWALK/RAMP	Y

ADA REQUIREMENTS	
CROSSWALKS	OK
SIDEWALK (CLEAR PATH, MIN 36")	OK
RAMPS W/ DETECTABLE WARNING STRIP	N

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	N/A
NTOR SIGNS	OK.
STOP, STOP AHEAD, INT WARNING	N/A.
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS	
LANE ARROWS	N/A
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK
ELEPHANT TRACKS	N/A

NOTES: (1) ONLY ONE H.H. WAS OPENED @ S.E. COR (WIRE NUTS FND.)
(2) NOT OBSERVED

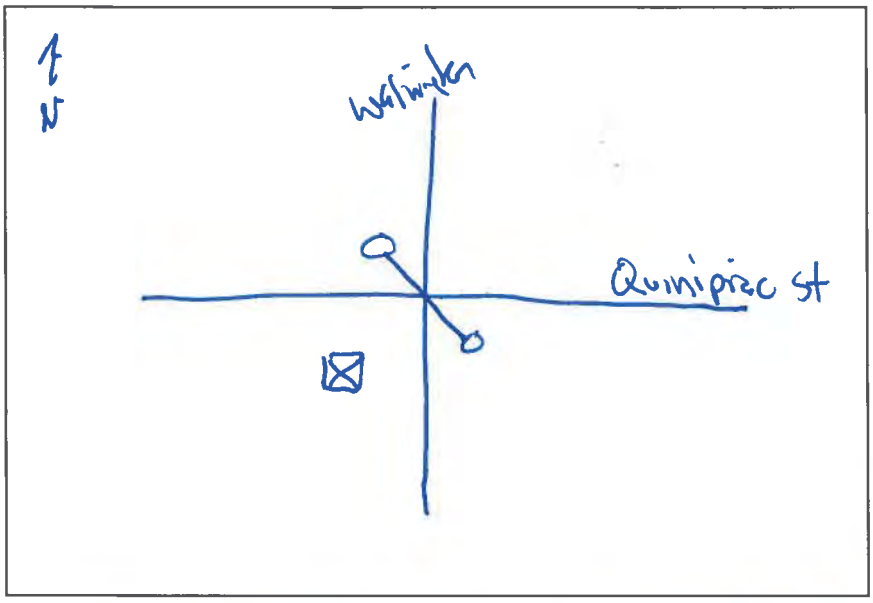
REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN

BETA Group, Inc.
Engineers • Scientists • Planners

Project: _____ Sheet: 59T
City: _____ By: MWW
Location: Quinipiac St @ Washington Date: 1/18/2012

SIGNAL TIMING SHEET

INTERSECTION DIAGRAM



Coordinated X
Pretimed
Semi-Actuated
Fully-Actuated X

both loops
So opp. as Pretimed

NOTES:

8 phase sequential

time clock good

OVERLAPS

	A	B	C	D
Phases	2	2		

PHASE TIMES

Phase	~~1~~	2	3	4	~~5~~	~~6~~	~~7~~	~~8~~
Lock / NLock		Min	NL	NL				
Recall (Max, Min, None)		CNA1		MAX				
Walk			7					
Don't Walk			10					
Min Green		15	0	8				
Extension		3.0	0	3.0				
Recall Green								
Max I Green		30		70				
Max II Green		35		70				
Max III Green								
Yellow		3.0	0.1	3.0				
All Red		2.0	0.0	2.0				
Total Split I		60	5	35				
Total Split II		60	5	35				

Split III Same Coord

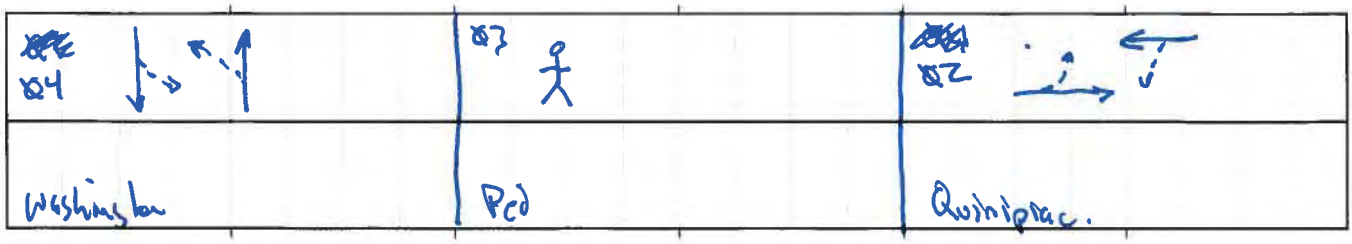
PRE-EMPTION

Phases				

TIME OF DAY SETTINGS

Cycle ~~MAX~~ I	
Time Period:	AM
Cycle Length:	50 min 60
Offset:	0
Cycle ~~MAX~~ II	
Time Period:	PM
Cycle Length:	60 min 60
Offset:	0
Cycle ~~MAX~~ III	
Time Period:	Midday
Cycle Length:	50 min 60
Offset:	0

SIGNAL PHASING DIAGRAM



60T

Field Inspection

SIGNAL EQUIPMENT EVALUATION FORM

CITY/TOWN_____JOB#_____DATE_____LOCATION_____

CONTROLLER CABINET INVENTORY

Component	Local Controller	Master Controller	CM / MMU	Detector Amplifier	Time Clock	Preemption	Load Switches	Flasher	Cabinet
Quantity	1	0	1	4 + 2 spare	N/A	1	7	1	1
Make	Peek		Peek	Sarasota		3M	PDC	TSC	Peek
Model #	3000		12ELRA	222 GPG		752 optical	Model 200	204	9446
Serial #	135054		0791	N/A		N/A	N/A	N/A	982241

Comments: Opticom card not active (pulled out of 882 Card slot) Det. Cards in chs 11/12 -> 15/16

VEHICLE SIGNAL INVENTORY

	Size	
	8"	12"
Red		8
Yellow		8
Green		8
R-Arrow		
Y-Arrow		
G-Arrow		

Comments:

PEDESTRIAN SIGNAL INVENTORY

	QUANTITY								PUSHBUTTON ASSEMBLY			
	Size				Illumination Method							
	9"	12"	16"	Countdown	Incandescent	LED	Fiber Optic	Poor Cond.?		Quantity	Working?	ADA Compliant?
1 Section - Word									Button	4	Y	Y
1 Section - Symbol			8	0		8			Legend	4	Y	
2 Section - Word									Audible	1	Y	
2 Section - Symbol												

Comments:

SIGNAL SUPPORT INVENTORY

		Post		Mast Arm		Span Wire	
		8'	10'	Truss	Monlever	Free	Tether
Mast Arm							
Post	8'						
	Poor						

Comments:

φ Set	1	2	3	4	5	6	7	8	9
Min									
Ext.									
Max I									
Max II									
Yel									
Red									
Walk									
Ped Cl									
Lock									
Recall									

Sketch of intersection and signal layout:

☑OUTLET ☑FAN ☑LAMP
☐MAST ARM ☑SPAN WIRE ☐ORNAMENTAL
VEH SIG ☐8" ☑12" Sect. ☑3 ☑4 ☑Bi ☐5
☐Inc ☐FO ☑LED ☐OP ☐Failure
☐Fixed ☑Freeswing ☐Tether
Color Yellow ☐Backplate ☑Visor
PED SIG ☐9" ☐12" ☑16"
☐Inc ☐FO ☑LED ☐Failure
☐Word ☑Symbol ☐Red/Yellow
☑Pushbutton ☑Audible ☐Failure
DETECT ☑Loop ☐Magnetic ☐Video
☐Microwave ☐Infrared ☐Failure

ADVANCE SIGNING ☐N ☐Static ☑Illuminated
NUMBER OF PHASES ☐2 ☐3 ☐4 ☐5 ☐6

LEFT TURN ☑Perm ☑Prot ☐Lead ☐Lag ☐Simult
PED PHASE ☐N ☑Exclusive ☐Concurrent

CYCLE LENGTH Max_____ Min_____

Cycle	1	2	3
Len	50	60	50
min Ln	40	30	30
o/s	34	11	11

#	C/O/S/Free					
1	7/6/25	1	CH1	WRM	IM1	IM2
2	7/6/25	2	POM			

0:00 - 6:30 Free
6:30 - 9:00 1/1/1
9:00 - 15:00 3/1/1
15:00 - 18:30 2/1/1
18:30 - 24:00 Free

Cycle	Source	CL
	Split	CL
	o/s	CL
	Free	CL
	Flash	CL

End of Main Y

	2	3	4	5
Cycle 1	44	5	22	29
Split 1				
Cycl 2 Split 1	45	5	20	30
Cycle 3	44	5	20	31
	46	5	16	33

DEPARTMENT OF TRANSPORTATION

PROJECT - _____ LOCATION # - 60-T D.O.T. INSPECTOR - _____ DATE OF NEW SERVICE - _____
TOWN - WALLINGFORD LOCATION - N & S. CITERRY CONTRACTOR'S REP. - JLB CHANGE OVER DATE - _____
@ QUINNIPIAC ST

LOOP DETECTOR TEST - (PERFORMED BY CONTRACTOR) SEE STANDARD SHEET TR-1000_01

TEST	INSULATION RESISTANCE (MEGGER)	LOOP CIRCUIT RESISTANCE	POWER INTERUPTION
DATE			

PRELIMINARY VISUAL INSPECTION - (PERFORMED BY INSPECTOR) DATE: 1/18/12

FOUNDATIONS	TR-1002_01
CTRL FND 4" ABOVE GROUND	Y
CONCRETE PAD (3'X4')	Y
CAST IN PLACE, BRUSH FINISHED	Y
CONDUITS BONDED TO GROUND ROD	Y
DUCT SEAL IN CONDUITS	Y

HANDHOLES	TR-1010_01
FLUSH WITH GRADE	Y
SET ON CRUSHED STONE BASE	Y (1)
COVER & CONDUITS BONDED	(1)
DUCT SEAL IN CONDUITS	(1)

SPAN POLES / MAST ARMS	TR-1103_01
LOCATION	OK
BASE GROUTED	Y
PROPER RAKE. PLUMB UNDER LOAD	Y
HEIGHT / ARM LENGTH	OK
H.H. CVR. POLE CAP, BOLT CVR	OK
BONDED TO GROUND ROD	UNK
I.D. TAG	(2)
1 SPAN CLAMP PER ATTACHMENT	Y

PEDESTALS	TR-1102_01
LOCATION	OK
PLUMB	OK
BONDED TO GROUND ROD	UNK.
CRUSHED STONE IN FOUNDATION CENTER	UNK.

TRAFFIC SIGNALS	TR-1105_01
SPAN LAYOUT	OK
PLUMB APPEARANCE	OK
FACES: TYPE & LOCATION	OK
VISORS / LOUVERS / BACK PLATES	OK
MISSING HARDWARE: BOTTOM CAPS, ETC..	OK
HEIGHT 16'-17' TO BOTTOM	OK
SIGHT DISTANCE (VISIBILITY)	(3)
UTILITY CLEARANCES	OK

PEDESTRIAN SIGNALS	TR-1102_01
CORRECT TYPE / SIZE	OK
FACING PED. TRAFFIC	OK
PROPER ADVISORY SIGNS	OK

PUSH BUTTONS	TR-1107_01
ADA TYPE BUTTON, (2" DIA.), PIEZO	
42" MOUNTING HEIGHT	OK
ACCESIBLE FROM SIDEWALK/RAMP	OK

ADA REQUIREMENTS	
CROSSWALKS	(4)
SIDEWALK (CLEAR PATH, MIN 36")	OK
RAMPS W/ DETECTABLE WARNING STRIP	N - (5)

SIGNS	
SPAN & POST MOUNT	OK
LANE USE ARROWS	OK
NTOR SIGNS	OK
STOP, STOP AHEAD, INT WARNING	N/A
SIGNAL AHEAD	N/A
FLASHING "STOP AHEAD"	N/A

PAVEMENT MARKINGS (6)	
LANE ARROWS	N/A
PROPER LANE & SHOULDER WIDTH	OK
CENTER LINES	OK
STOP BAR PLACEMENT	OK.
ELEPHANT TRACKS	N/A

NOTES:

(1) H.H COULD NOT BE OPENED @ THIS LOC.
(2) NOT OBSERVED
(3) OK EXCEPT FOR SIG. HEAD #2 (W.B. QUINNIPIAC ST)
(4) - BAR STYLE - IN POOR CONDITION
(5) - SOME RAMPS APPEAR GREATER THAN 1" PER FT SLOPE
(6) - MAST P.M. IN POOR COND.

REV'D 3-11
FLASH-ELEC-CHKLSTCO.DGN