

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



BANGOR-BREWER
PENOBSCOT COUNTY
JOSHUA CHAMBERLAIN BRIDGE
OVER
PENOBSCOT RIVER
US 1A & ROUTE 9
FEDERAL AID PROJECT NO. BH-1832(000)X
PROJECT LENGTH 0.000 mi.
BRIDGE NO. 5312

LOADING

Live Load HS 20 (from existing plans)

TRAFFIC DATA

Current (2012) AADT 14,690

MATERIALS

Structural Steel:
All Material (except as noted)..... ASTM A 709, Grade 50W (unpainted)
High Strength Bolts ASTM A 325, Type 3

UTILITIES

Bangor Water District
Maine Central Railroad
Bangor Hydro - Electric Company
City of Bangor (Sewer & Lights)
Maine Fiber Company (Future)

Time Warner Cable
City of Brewer (Lights)
Oxford Networks
Fairpoint Communications

MAINTENANCE OF TRAFFIC

Maintain one 12'-0" wide lane of one - way traffic.

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| | |
|-------------------|--|
| PROJECT LOCATION: | Towns of Bangor & Brewer which carries US 1A and Rte 9 over the Penobscot River. Lat. 44°47'46.70"/ Long. -68°46'05.4" |
| PROGRAM AREA: | Bridge Program |
| OUTLINE OF WORK: | Painting and repair of Joshua Chamberlain bridge #5312 in Bangor which carries US 1A and Rte 9 over the Penobscot River. |

| | | | | |
|--|-----------------|--|-------------------------|------------------------------|
| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | | APPROVED <i>[Signature]</i> COMMISSIONER: <i>[Signature]</i> CHIEF ENGINEER: <i>[Signature]</i> | | DATE 11/14/12 11/14/12 |
| PROJECT INFORMATION | | SIGNATURE <i>Michael Wright</i> 8089 | | DATE 11/14/2012 |
| PROGRAM | BRIDGE PROGRAM | P.E. NUMBER | DATE | |
| PROJECT MANAGER | PROJECT MANAGER | PROJECT RESIDENT | PROJECT COMPLETION DATE | |
| DESIGNER | MHW | PROJECT RESIDENT | PROJECT COMPLETION DATE | |
| CONSULTANT | | CONTRACTOR | PROJECT COMPLETION DATE | |
| BH-1832(000)X | | | | |
| WIN 18320.00 | | | | |
| BANGOR-BREWER JOSHUA CHAMBERLAIN BRIDGE | | | | |
| TITLE SHEET | | | | |
| SHEET NUMBER | | | | |
| 1 | | | | |
| OF 18 | | | | |

As-Built Plans Tim Hebert, Resident Inspector

| ESTIMATED QUANTITIES | | | |
|----------------------|--|----------|------|
| ITEM NO. | DESCRIPTION | QUANTITY | UNIT |
| 201.23 | REMOVING SINGLE TREE TOP ONLY | 2 | EA |
| 202.14 | REMOVING EXISTING RAILINGS (PROPERTY OF CONTRACTOR) | 340 | LF |
| 504.81 | REMOVAL OF RIVETS & REPLACEMENT W/HIGH-STRENGTH BOLTS | 170 | EA |
| 504.811 | STRUCTURAL STEEL REPAIR | 2090 | LB |
| 504.842 | NEW HIGH STRENGTH BOLT | 152 | EA |
| 506.144 | FIELD PAINTING NEW AND EXISTING STRUCTURAL STEEL | 1 | LS |
| 506.17 | SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL | 1 | LS |
| 506.18 | CONTAINMENT AND POLLUTION CONTROL | 1 | LS |
| 506.191 | DISPOSAL OF SPECIAL WASTE OR HAZARDOUS WASTE MATERIAL | 1 | LS |
| 507.084 | STEEL PIPE HAND RAILING | 340 | LF |
| 510.10 | SP. DET. 14 FT. ROADWAY WIDTH VEH. & PED. TRAFFIC NOT SEP. | 1 | LS |
| 526.301 | TEMPORARY CONCRETE BARRIER - TYPE I (500 LF) | 1 | LS |
| 527.34 | WORK ZONE CRASH CUSHIONS | 4 | UN |
| 607.503 | INSPECTION ACCESS GATE (Bangor Abutment) | 1 | EA |
| 607.503 | INSPECTION ACCESS GATE (Brewer Abutment) | 1 | EA |
| 627.511 | TEMPORARY PAVEMENT LINE TAPE, YELLOW OR WHITE | 410 | SF |
| 627.512 | REMOVABLE BLACK LINE MASKING TAPE | 895 | SF |
| 627.513 | TEMPORARY PAVEMENT MARKING TAPE, YELLOW OR WHITE | 615 | SF |
| 627.733 | 4 INCH WHITE OR YELLOW PAINTED PAVE MRK LINE | 450 | LF |
| 627.75 | WHITE OR YELLOW PAVEMENT AND CURB MARKING | 410 | SF |
| 627.77 | REMOVING PAVEMENT MARKINGS | 50 | SF |
| 627.811 | TEMPORARY BI-DIRECTIONAL YELLOW DELINEATORS | 50 | EA |
| 627.812 | TEMPORARY BI-DIRECTIONAL WHITE DELINEATORS | 50 | EA |
| 639.18 | FIELD OFFICE TYPE A | 1 | EA |
| 643.711 | TRAFFIC SIGNAL MODIFICATION (TEMPORARY) | 1 | LS |
| 652.31 | TYPE I BARRICADE | 10 | EA |
| 652.311 | TYPE II BARRICADE | 8 | EA |
| 652.312 | TYPE III BARRICADE | 8 | EA |
| 652.33 | DRUM | 100 | EA |
| 652.34 | CONE | 25 | EA |
| 652.35 | CONSTRUCTION SIGNS | 1000 | SF |
| 652.361 | MAINTENANCE OF TRAFFIC CONTROL DEVICES | 1 | LS |
| 652.38 | FLAGGER | 200 | HR |
| 652.381 | TRAFFIC OFFICERS | 80 | HR |
| 652.41 | PORTABLE CHANGEABLE MESSAGE SIGN | 4 | EA |
| 659.10 | MOBILIZATION | 1 | LS |
| 660.21 | ON-THE-JOB TRAINING (BID) | 1000 | HR |
| | | | |

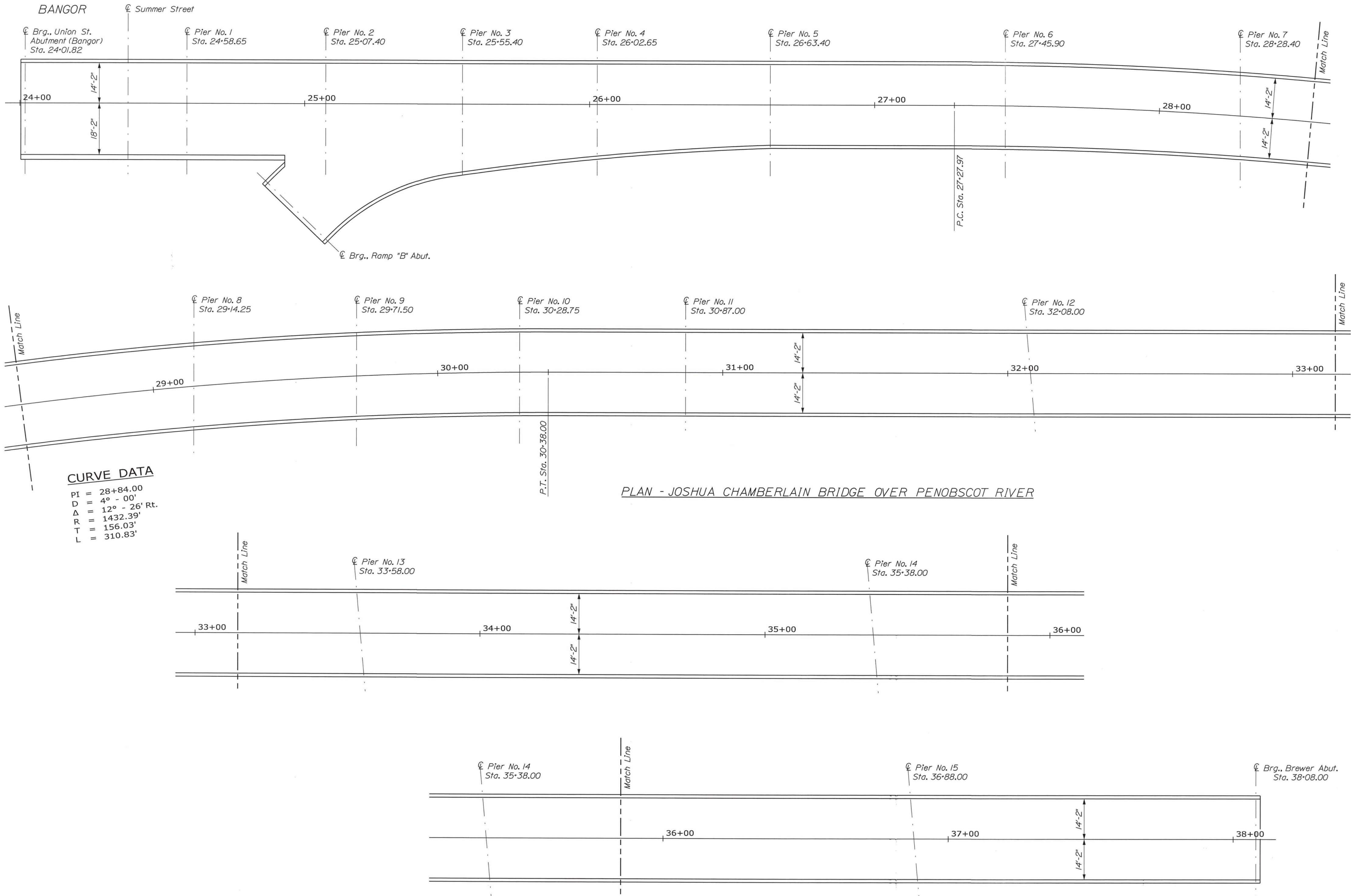
GENERAL CONSTRUCTION NOTES

- 1) The steel portions of the existing bridge are coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the process of removal of the bridge rail. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge rail is removed at designated locations, the Contractor is solely responsible for the care, custody and control of the components of the existing bridge and any hazardous waste generated as a result of the storage, recycling or disposal of the bridge components, including lead-coated steel. The Contractor shall recycle or reuse the steel in accordance with the Maine Department of Environmental Protection's "Maine Hazardous Waste management Regulation," Chapter 850. A copy of this regulation is available at MaineDOT's offices on Child Street in Augusta. Payment for all labor, materials, equipment and other costs required to remove and dispose of lead based paint coated steel components will be considered incidental to related contract items.
- 2) Prior to re-coating any bridge bearings, bearing seat areas shall be removed of all debris. This work shall be considered incidental to the related 506 Contract items.
- 3) The bridge drain downspouts consist of galvanized steel and shall not be painted.
- 4) Existing plans are available at the Maine DOT web address:
http://www.maine.gov/mdot/contractors/*projecttbl
- 5) The Contractor shall field weld the toe and/or kick plates attached to the rail posts at locations where the existing welds are broken as directed by the Resident. The weld shall be a 5/16 inch fillet weld between the top of the kick plate and the rail posts. Most of the toe/kick plates are hot dip galvanized. This work shall be done in accordance with Maine Department of Transportation Standard Specifications section 504-Structural Steel. This work shall not be paid for directly, but considered incidental to related contract items.
- 6) The following trees shall be removed and paid for under item 201.23 Removing Single Tree Top Only:

Station 25+00, 30'+/- left
Station 40+80, 32'+/- left
- 7) The Contractor shall replace missing or damaged bolts that attach the existing bridge and/or approach rail to the rail posts as directed by the Resident. The anticipated number of bolts to be replaced is approximately twenty. This work shall be done in accordance with Special Provision 507 Railing - Steel Pedestrian Railing. This work will not be paid for directly, but shall be considered incidental to related contract items.
- 8) The approximate total weight of structural steel is 1,140 tons.

As-Built T.H.

| | | |
|--|---|--|
| JOSHUA CHAMBERLAIN BRIDGE PENOBSCOT RIVER BANGOR-BREWER PENOBSCOT COUNTY ESTIMATED QUANTITIES AND GENERAL CONSTRUCTION NOTES | STATE OF MAINE DEPARTMENT OF TRANSPORTATION BH-1832(000)X | BRIDGE NO. 5312 WIN 18320.00 BRIDGE PLANS |
| | SIGNATURE P.E. NUMBER DATE | |
| | SHEET NUMBER 2 OF 18 | |



BREWER
As-Built T.H.

| | | | | | | | |
|--|--|----------|--|--|--|-------------|--|
| JOSHUA CHAMBERLAIN BRIDGE PENOBSCOT RIVER BANGOR-BREWER PENOBSCOT COUNTY | | | | STATE OF MAINE DEPARTMENT OF TRANSPORTATION | | | |
| GENERAL PLAN | | | | BH-1832(000)X | | | |
| | | | | BRIDGE NO. 5312 | | | |
| | | | | PIN 18320.00 | | | |
| | | | | BRIDGE PLANS | | | |
| | | | | | | | |
| SHEET NUMBER | | 3 | | OF 18 | | | |
| PROJ. MANAGER | | S. BODGE | | BY | | DATE | |
| DESIGN-DETAILED | | M. WIGHT | | D. SHAW | | | |
| CHECKED-REVIEWED | | | | | | SIGNATURE | |
| DESIGN-DETAILED02 | | | | | | | |
| DESIGN-DETAILED03 | | | | | | | |
| REVISIONS 1 | | | | | | P.E. NUMBER | |
| REVISIONS 2 | | | | | | | |
| REVISIONS 3 | | | | | | | |
| REVISIONS 4 | | | | | | DATE | |
| FIELD CHANGES | | | | | | | |



1. ALL WORK PERFORMED UNDER THIS CONTRACT TO BE GOVERNED BY AND IN CONFORMITY WITH THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (DECEMBER 2002), STANDARD DETAILS HIGHWAYS AND BRIDGES (DECEMBER 2002) AND SUPPLEMENTAL THERETO EXCEPT AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.
2. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE TO MEDOT STANDARD SPECIFICATION & STANDARD DETAILS SECTION 627 & THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
3. ALL SIGNAL MODIFICATIONS SHALL BE IN ACCORDANCE TO MEDOT STANDARD SPECIFICATION & STANDARD DETAILS SECTION 643 & THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
4. THE CONTRACTOR SHALL INSTALL THE LOCAL CONTROLLER SIGNAL TIMING VALUES SHOWN ON THE PLANS. THE SIGNAL CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A 72 HOUR NOTICE OF WHEN THEY WILL BE INSTALLING TIMING PLANS.
5. ENGINEER WILL MONITOR TRAFFIC OPERATIONS ONCE EVENT TIMING PLANS HAVE BEEN INSTALLED. SIGNAL CONTRACTOR SHALL BE AVAILABLE FOR A TWO WEEK PERIOD FOLLOWING EACH TIMING INSTALLATION TO ADJUST TIMINGS BASED ON ENGINEER'S RECOMMENDATION OF ACTUAL FIELD CONDITIONS.

WILSON & MAIN STREETS
SEE SHEET 12

MAIN & BETTON STREETS
SEE SHEET 12

STATE & NORTH MAIN STREETS
SEE SHEET 11

STATE & PENOBSCOT STREETS
SEE SHEET 11

OAK & WASHINGTON STREETS
SEE SHEET 9
PENOBSCOT CORRIDOR SYSTEM MASTER

HANCOCK & OAK STREETS
SEE SHEET 9

—STATE STREET &
BROADWAY
SEE SHEET 8

STATE & HARLOW STREETS
SEE SHEET 8

MAIN & HAMMOND STREETS
SEE SHEET 6

STATE & HARLOW STREETS
SEE SHEET 8

HARLOW &
CENTRAL STREETS
SEE SHEET 7

WASHINGTON & BROAD STREETS
SEE SHEET 10

WASHINGTON & EXCHANGE STREETS
SEE SHEET 10

LOCATION OF BRIDGE-
PAINTING PROJECT

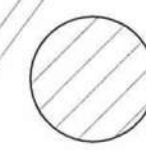
MAIN & WATER STREETS
SEE SHEET 6.

MAIN & UNION STREETS
SEE SHEET 5

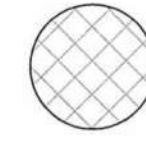
MAIN & CEDAR STREETS
SEE SHEET 5



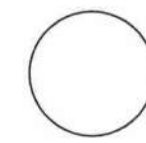
LEGEND OF TRAFFIC SIGNALS REQUIRING TIMING MODIFICATIONS



TRAFFIC SIGNAL
INCLUDED IN DOWNTOWN
COORDINATED SYSTEM



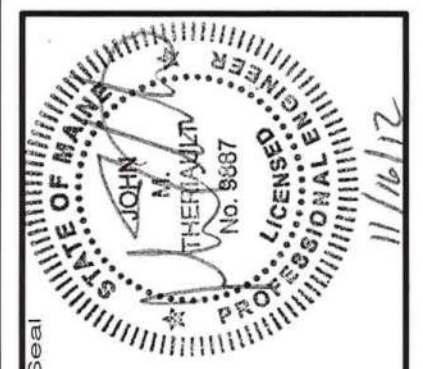
TRAFFIC SIGNAL
INCLUDED IN PENOBSCOT
COORDINATED SYSTEM



ISOLATED INTERSECTION

[illegible]

| MAINE DEPARTMENT OF TRANSPORTATION | | Designed By | Drawn By |
|---|-------|--------------------|----------------|
| AUGUSTA, Project Location BANGOR & BREWER, MAINE | MAINE | JLT | GLC |
| | | Date 11/16/2012 | |
| | | Scale 1" = 400' | |
| Drawing Description TRAFFIC SIGNALS LOCATION PLAN | | Approved JLT | Checked BCH |



Project No. **83308E** MDOT WIN 18320.00

Engineer

Phase
CONSTRUCT

As-Built T.H.

SIGNAL DATA
MAIN & CEDAR STREETS

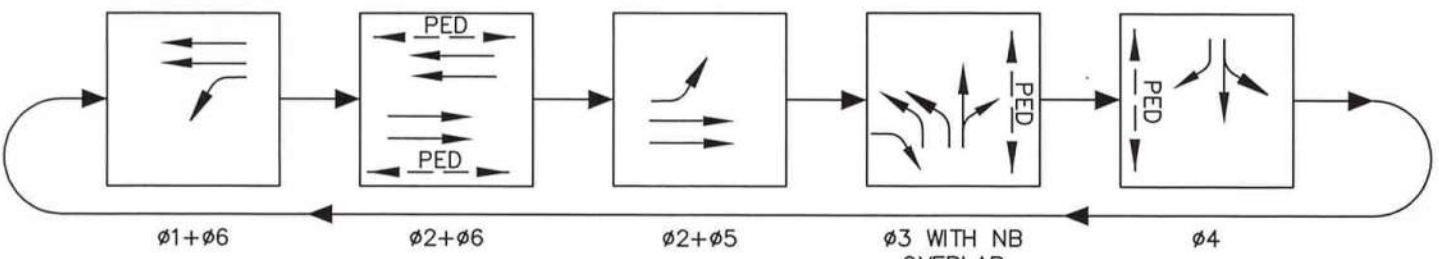
EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 | PHASE 5 | PHASE 6 |
|-----------------------|---------|---------|---------|---------|---------|---------|
| PHASE | | | | | | |
| TIMING IN SECONDS | | | | | | |
| INITIAL INTERVAL | 6 | 16 | 15 | 5 | 6 | 16 |
| VEHICLE EXTENSION | 3 | 3 | 3 | 3 | 3 | 3 |
| MAX. GREEN 1 | 6 | 25 | 24 | 11 | 6 | 25 |
| MAX. GREEN 2 | - | - | - | - | - | - |
| YELLOW | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| ALL RED | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| PEDESTRIAN WALK | 8 | 8 | 8 | 8 | 8 | 8 |
| PEDESTRIAN DON'T WALK | 20 | 15 | 18 | | | |
| RECALL | | SOFT | | | | SOFT |

8 PHASE NEMA CONTROLLER

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|------------------|-------------|--------------|--------------|
| | | | |
| MAIN ST. NB LEFT | MAIN ST. NB | CEDAR ST. WB | CEDAR ST. EB |
| PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 |
| | | NOT USED | NOT USED |
| MAIN ST. NB LEFT | MAIN ST. NB | NOT USED | NOT USED |

PROPOSED SEQUENCE



PROPOSED TIME OF DAY PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | - | - | - | - |
| REFERENCE PHASE | - | - | - | - |
| SPLIT TIME PHASE 1 | 13 | 12 | 15 | 17 |
| SPLIT TIME PHASE 2 | 31 | 29 | 26 | 26 |
| SPLIT TIME PHASE 3 | 24 | 26 | 23 | 25 |
| SPLIT TIME PHASE 4 | 27 | 28 | 26 | 27 |
| SPLIT TIME PHASE 5 | 13 | 14 | 15 | 15 |
| SPLIT TIME PHASE 6 | 31 | 27 | 26 | 28 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.

DAILY SCHEDULE MAIN & CEDAR STREETS

| DAY 1 SATURDAY | CONST. PHASE 1 | CONST. PHASE 2 |
|------------------------|----------------|----------------|
| 0:00 - 6:00 | FLASH | FLASH |
| 6:00 - 8:00 | PLAN 1 | PLAN 3 |
| 8:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 19:00 | PLAN 1 | PLAN 3 |
| 19:00 - 23:59 | FREE | FREE |
| DAY 2-6 MON. - FRI. | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 6:00 | FLASH | FLASH |
| 6:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 18:00 | PLAN 2 | PLAN 4 |
| 18:00 - 23:59 | FREE | FREE |
| DAY 7 SUNDAY | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 6:00 | FLASH | FLASH |
| 6:00 - 10:00 | FREE | FREE |
| 10:00 - 16:00 | PLAN 1 | PLAN 3 |
| 16:00 - 23:59 | FREE | FREE |

SIGNAL DATA
MAIN & UNION STREETS

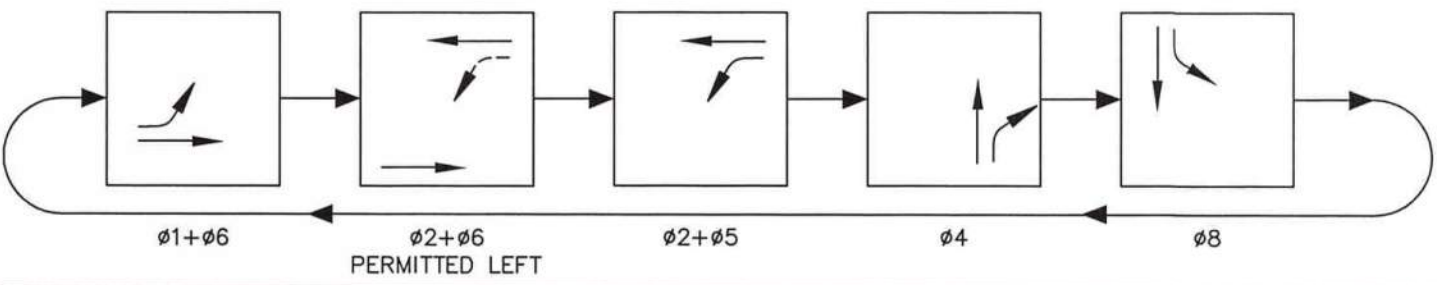
EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 1 | PHASE 2 | PHASE 4 | PHASE 5 | PHASE 6 | PHASE 8 |
|-----------------------|---------|---------|---------|---------|---------|---------|
| PHASE | | | | | | |
| TIMING IN SECONDS | | | | | | |
| INITIAL INTERVAL | 5 | 5 | 5 | 5 | 5 | 5 |
| VEHICLE EXTENSION | 5 | 5 | 5 | 5 | 5 | 5 |
| MAX. GREEN 1 | 15 | 40 | 35 | 15 | 40 | 35 |
| MAX. GREEN 2 | - | - | - | - | - | - |
| YELLOW | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| ALL RED | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2 |
| PEDESTRIAN WALK | 8 | 7 | | | 8 | |
| PEDESTRIAN DON'T WALK | 10 | 8 | | | 10 | |
| RECALL | MAX | MAX | MAX | MAX | MAX | MAX |

8 PHASE NEMA CONTROLLER

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|------------------|-------------|----------|--------------|
| | | NOT USED | |
| MAIN ST. NB LEFT | MAIN ST. NB | NOT USED | UNION ST. WB |
| PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 |
| | | NOT USED | |
| MAIN ST. NB LEFT | MAIN ST. NB | NOT USED | UNION ST. EB |

PROPOSED SEQUENCE



PROPOSED COORDINATION PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | 73 | 86 | 40 | 90 |
| REFERENCE PHASE | 2-SBTL | 2-SBTL | 2-SBTL | 2-SBTL |
| SPLIT TIME PHASE 1 | 15 | 13 | 13 | 14 |
| SPLIT TIME PHASE 2 | 30 | 28 | 25 | 29 |
| SPLIT TIME PHASE 4 | 28 | 31 | 30 | 30 |
| SPLIT TIME PHASE 5 | 12 | 12 | 12 | 12 |
| SPLIT TIME PHASE 6 | 33 | 29 | 26 | 31 |
| SPLIT TIME PHASE 8 | 22 | 23 | 22 | 22 |

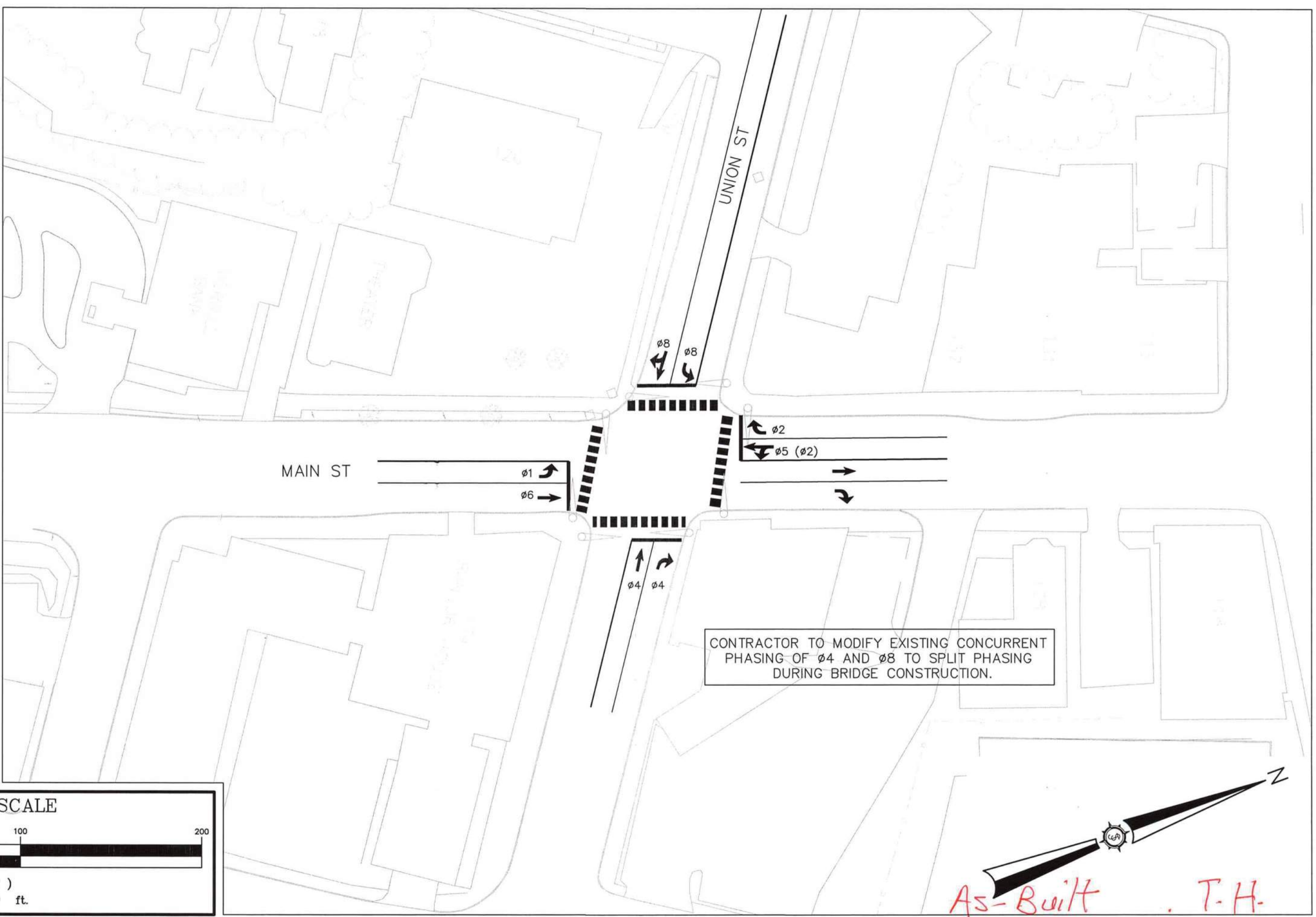
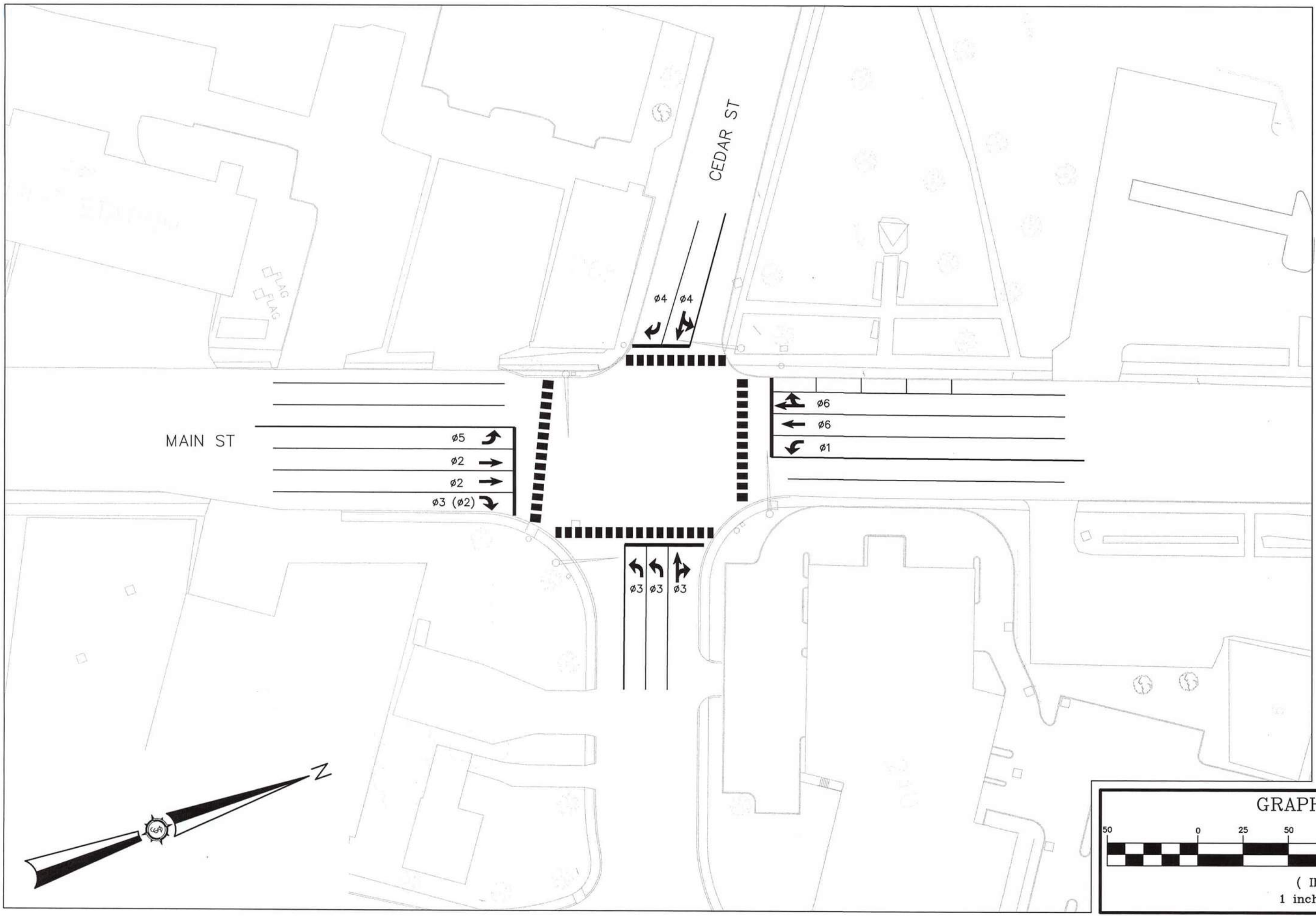
PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME.

THE FOLLOWING INTERSECTIONS ARE PART OF THE DOWNTOWN COORDINATED SIGNAL SYSTEM:
MAIN & UNION STREETS
MAIN & HAMMOND & CENTRAL STREETS
HARLOW & CENTRAL STREETS

ALL CONTROLLERS ARE EAGLE CONTROLLERS EPAC 300 MODELS.

DAILY SCHEDULE DOWNTOWN SYSTEM

| DAY 1 SATURDAY | CONST. PHASE 1 | CONST. PHASE 2 |
|------------------------|----------------|----------------|
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 2-6 MON. - FRI. | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 18:30 | PLAN 2 | PLAN 4 |
| 18:30 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 7 SUNDAY | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |



MAINE DEPARTMENT OF TRANSPORTATION

Project No. 83308E MDOT WIN 18320.00

Phase CONSTRUCT

Sheet No. 5

Project Location
BANGOR & BREWER, MAINE

Project Location
MAINE

Project Location
11/19/2012

Scale
1" = 50'

Checked
JMT

Approved
BCH

Project No. 83308E

MDOT WIN 18320.00

AN INTEGRATED TEAM OF
GEOSPATIAL ENGINEERING,
SURVEYING AND NATURAL
RESOURCE CONSULTANTS

SEWALL

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Professional Engineer

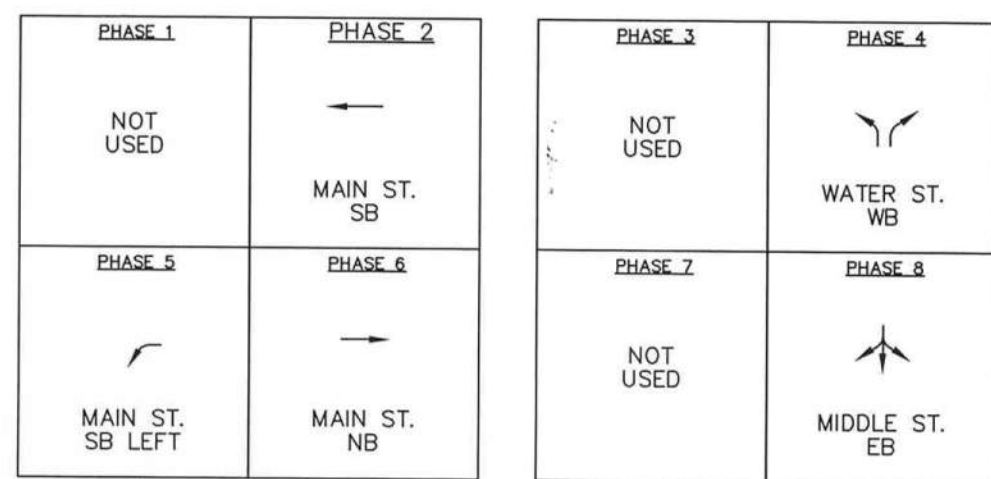
11/16/12

SIGNAL DATA MAIN & WATER STREETS

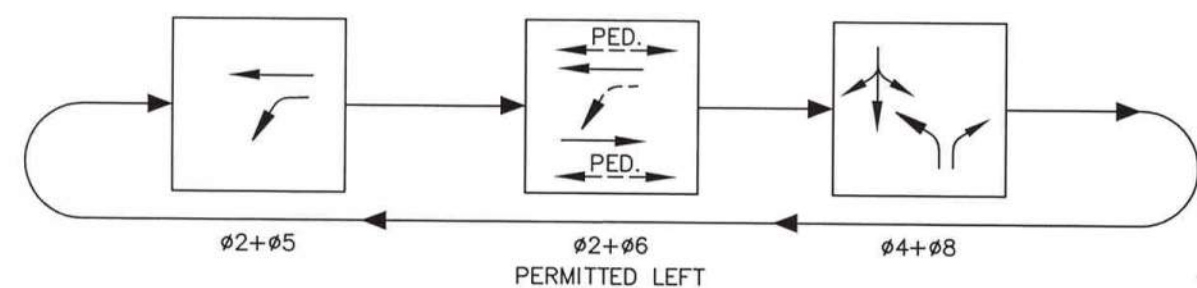
EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 2 | PHASE 4 | PHASE 5 | PHASE 6 | PHASE 8 |
|-----------------------|---------------------|----------------------|--------------------------|---------------------|-----------------------|
| PHASE | ← MAIN ST. SB | ↖ WATER ST. WB | ↗ MAIN ST. SB LEFT | → MAIN ST. NB | ↗ MIDDLE ST. EB |
| TIMING IN SECONDS | | | | | |
| INITIAL INTERVAL | 5 | 5 | 5 | 5 | 5 |
| VEHICLE EXTENSION | 5 | 5 | 5 | 5 | 5 |
| MAX. GREEN 1 | 45 | 20 | 17 | 45 | 20 |
| MAX. GREEN 2 | — | — | — | — | — |
| YELLOW | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| ALL RED | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 |
| PEDESTRIAN WALK | 7 | | | 7 | |
| PEDESTRIAN DON'T WALK | 8 | | | 8 | |
| RECALL | MAX | MAX | MAX | MAX | MAX |

8 PHASE NEMA CONTROLLER



PROPOSED SEQUENCE



PROPOSED COORDINATION PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | 53 | 65 | 18 | 70 |
| REFERENCE PHASE | 2+6 | 2+6 | 2+6 | 2+6 |
| SPLIT TIME PHASE 2 | 68 | 69 | 62 | 67 |
| SPLIT TIME PHASES 4 & 8 | 27 | 26 | 28 | 28 |
| SPLIT TIME PHASE 5 | 15 | 15 | 15 | 20 |
| SPLIT TIME PHASE 6 | 53 | 54 | 47 | 47 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME.

THE FOLLOWING INTERSECTIONS ARE PART OF THE DOWNTOWN COORDINATED SIGNAL SYSTEM:
MAIN & UNION STREETS
MAIN & HAMMOND & CENTRAL STREETS
HARLOW & CENTRAL STREETS
ALL CONTROLLERS ARE EAGLE CONTROLLERS, EPAC 300 MODELS.

DAILY SCHEDULE DOWNTOWN SYSTEM

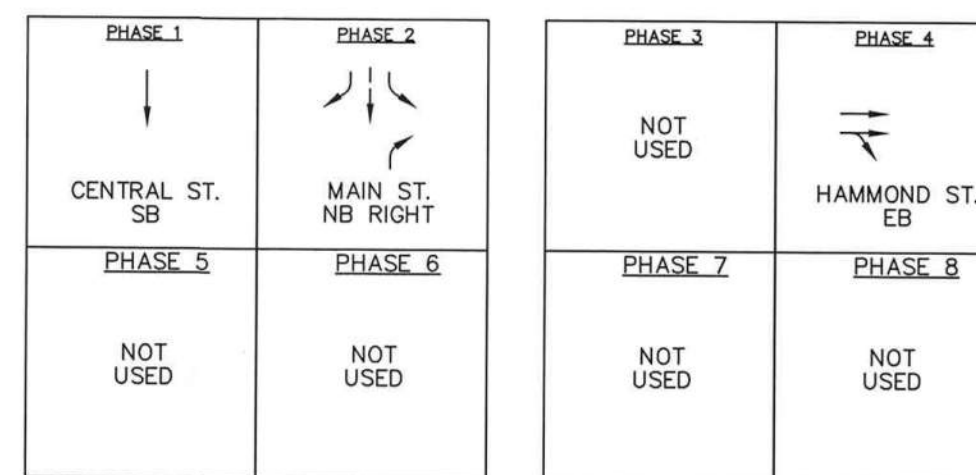
| DAY 1 SATURDAY | CONST. PHASE 1 | CONST. PHASE 2 |
|------------------------|-------------------|-------------------|
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 2-6 MON. - FRI. | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 18:30 | PLAN 2 | PLAN 4 |
| 18:30 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 7 SUNDAY | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |

SIGNAL DATA MAIN & HAMMOND STREETS

EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 1 | PHASE 2 | PHASE 4 |
|-----------------------|------------------------|---------------------------|------------------------|
| PHASE | ↓ CENTRAL ST. SB | ↖ MAIN ST. NB RIGHT | ↗ HAMMOND ST. EB |
| TIMING IN SECONDS | | | |
| INITIAL INTERVAL | 5 | 5 | 5 |
| VEHICLE EXTENSION | 5 | 5 | 5 |
| MAX. GREEN 1 | 18 | 40 | 35 |
| MAX. GREEN 2 | — | — | — |
| YELLOW | 3.0 | 4.0 | 4.0 |
| ALL RED | 1.0 | 2.0 | 2.0 |
| PEDESTRIAN WALK | 8 | | 10 |
| PEDESTRIAN DON'T WALK | 10 | | 16 |
| RECALL | MAX | MAX | MAX |

8 PHASE NEMA CONTROLLER



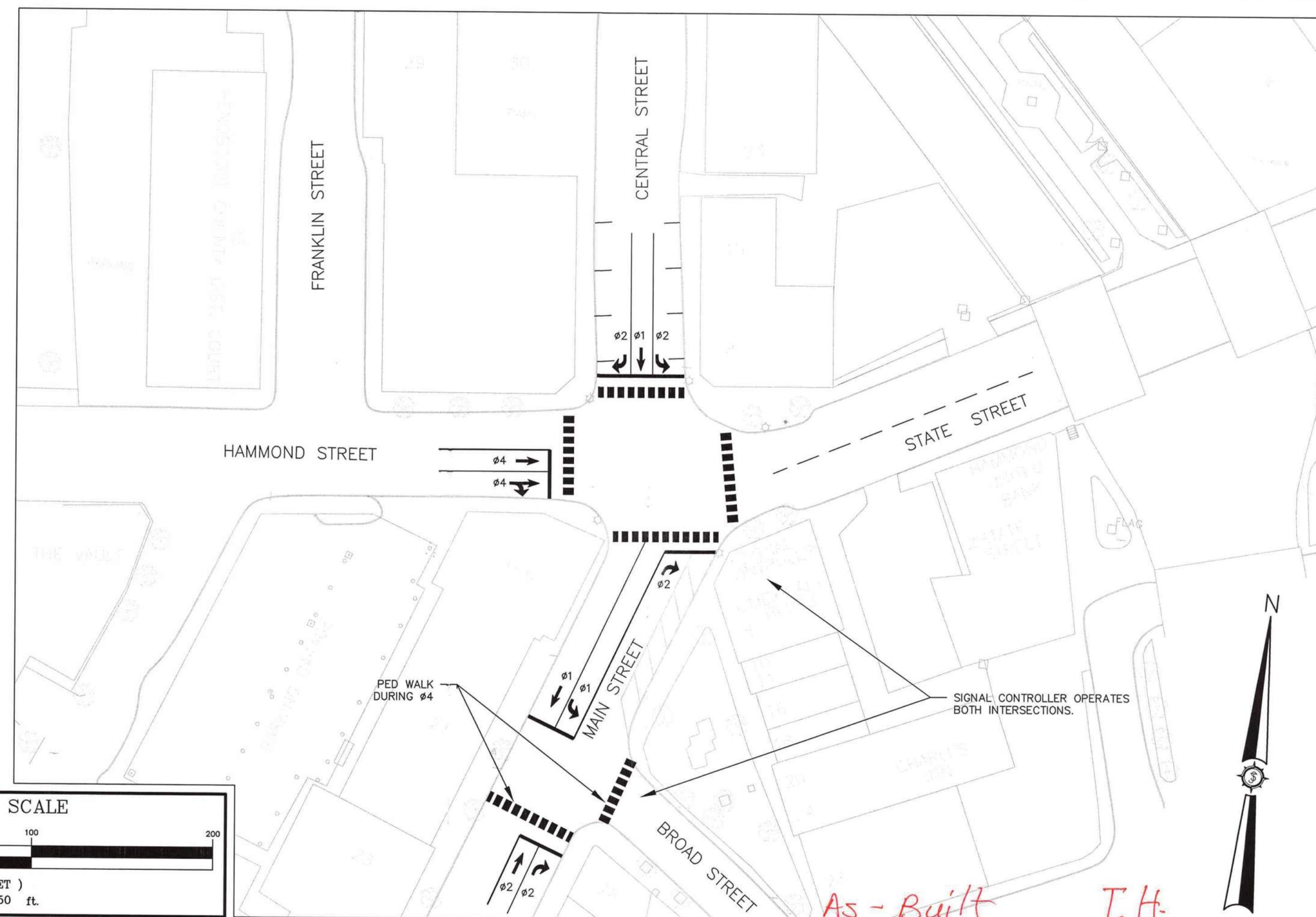
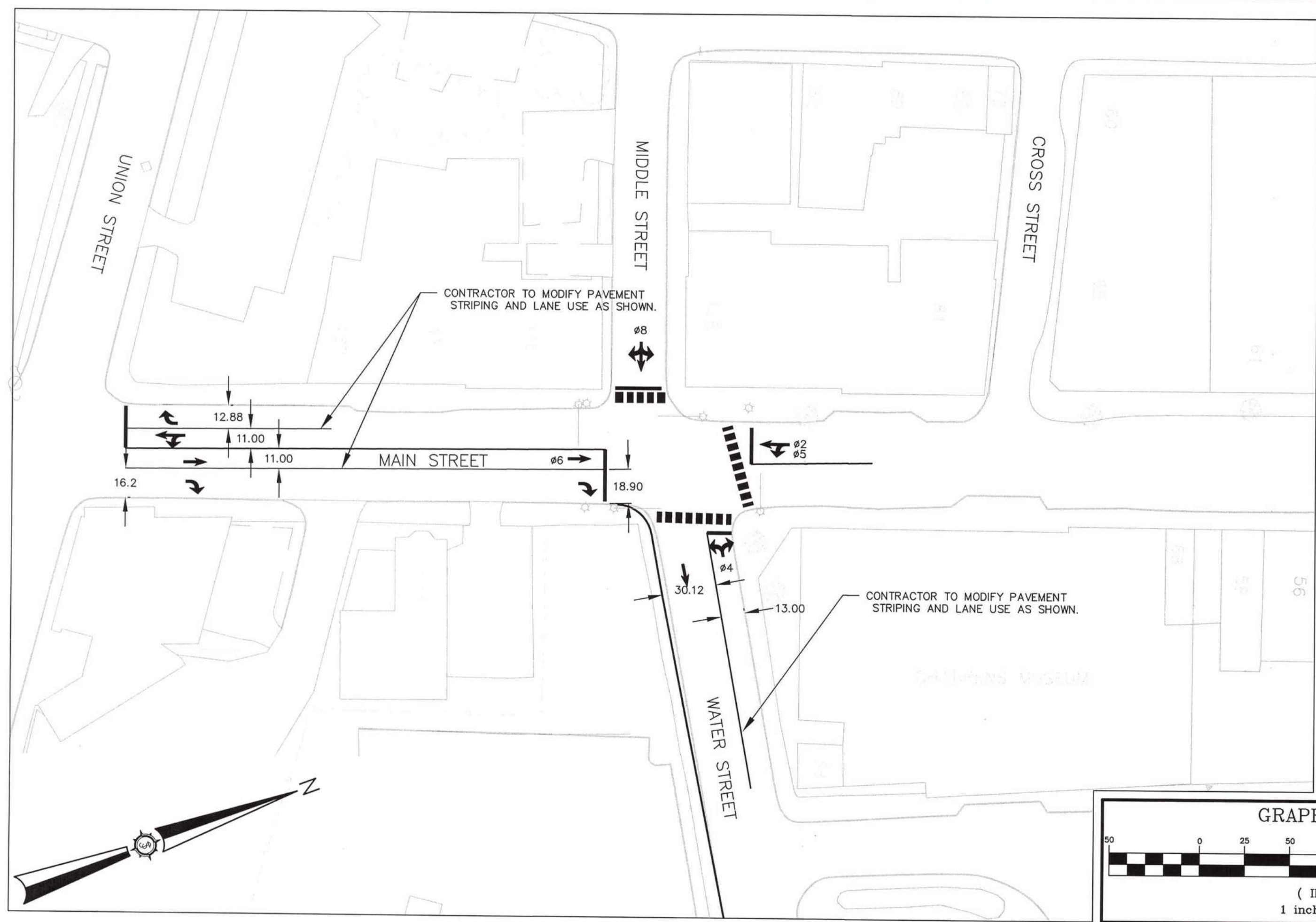
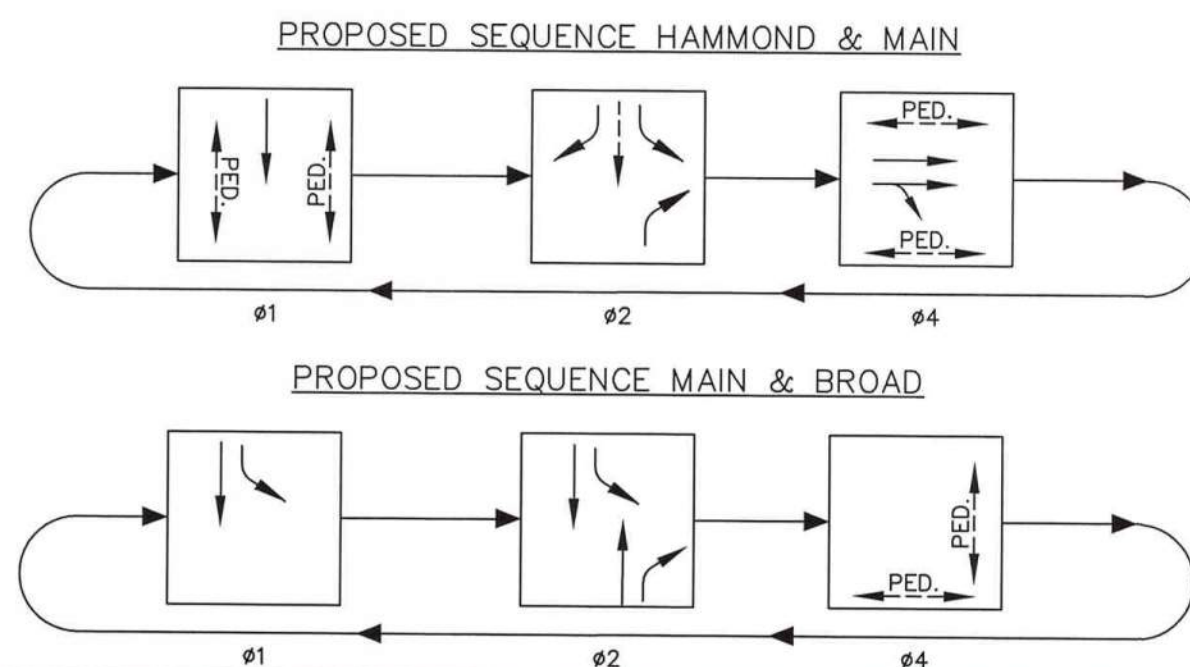
PROPOSED COORDINATION PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | 77 | 75 | 35 | 76 |
| REFERENCE PHASE | 2-SBTL | 2-SBTL | 2-SBTL | 2-SBTL |
| SPLIT TIME PHASE 1 | 23 | 21 | 21 | 21 |
| SPLIT TIME PHASE 2 | 43 | 48 | 42 | 47 |
| SPLIT TIME PHASE 4 | 29 | 26 | 27 | 27 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME.

DAILY SCHEDULE DOWNTOWN SYSTEM

| DAY 1 SATURDAY | CONST. PHASE 1 | CONST. PHASE 2 |
|------------------------|-------------------|-------------------|
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 2-6 MON. - FRI. | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 18:30 | PLAN 2 | PLAN 4 |
| 18:30 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 7 SUNDAY | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |



Project No. 83308E MDOT WIN 18320.00

Engineer

Phase CONSTRUCT

Sheet No. 6

Seal

MAINE DEPARTMENT OF TRANSPORTATION

AUGUSTA, MAINE

Project Location BANGOR & BREWER, MAINE

Drawing Description MAIN & WATER STREETS
MAIN & HAMMOND STREETS

11/16/12

11/16/12

AN INTEGRATED TEAM OF
GEOSPATIAL ENGINEERING,
SURVEYING AND NATURAL
RESOURCE CONSULTANTS

SEWALL

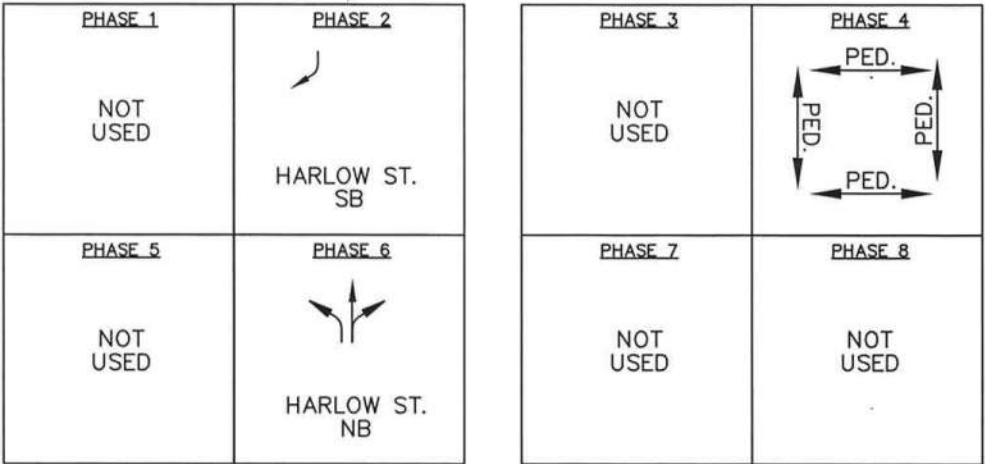
JAMES W. SEWALL COMPANY Since 1880
SEWALL.COM

SIGNAL DATA
HARLOW & CENTRAL STREETS

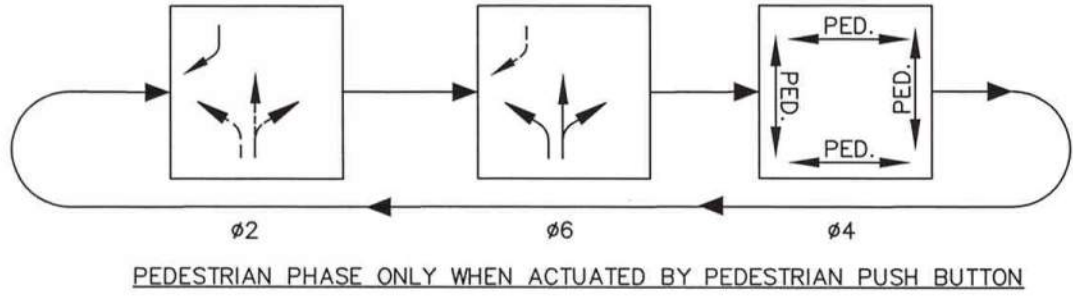
EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 2 | PHASE 4 | PHASE 6 | | |
|-----------------------|---------|---------|---------|--|--|
| PHASE | | | | | |
| INITIAL INTERVAL | 22 | | 25 | | |
| VEHICLE EXTENSION | 5 | | 5 | | |
| MAX. GREEN 1 | 45 | | 45 | | |
| MAX. GREEN 2 | - | | - | | |
| YELLOW | 4.0 | | 4.0 | | |
| ALL RED | 1.0 | | 1.0 | | |
| PEDESTRIAN WALK | | 7 | | | |
| PEDESTRIAN DON'T WALK | | 8 | | | |
| RECALL | MIN | | | | |

8 PHASE NEMA CONTROLLER



PROPOSED PHASE SEQUENCE



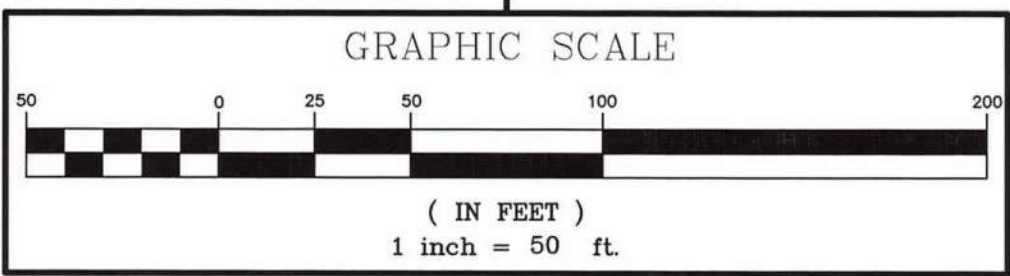
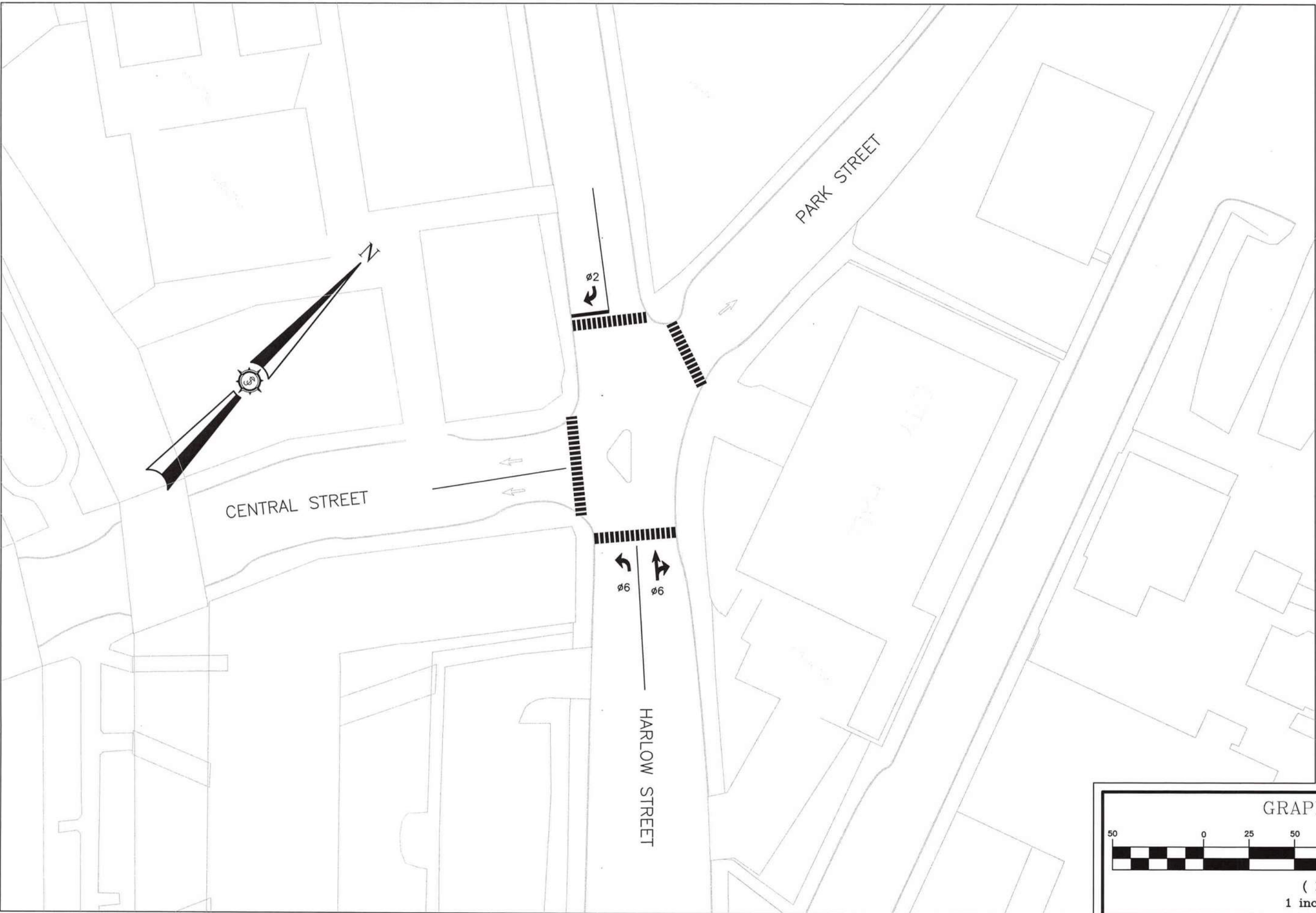
PROPOSED COORDINATION PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | 0 | 0 | 0 | 0 |
| REFERENCE PHASE | 2-NWTL | 2-NWTL | 2-NWTL | 2-NWTL |
| SPLIT TIME PHASE 2 | 39 | 41 | 36 | 41 |
| SPLIT TIME PHASE 4 | 16 | 16 | 16 | 16 |
| SPLIT TIME PHASE 6 | 40 | 38 | 38 | 38 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME.

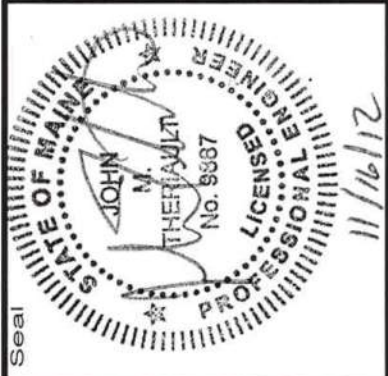
DAILY SCHEDULE DOWNTOWN SYSTEM

| DAY 1 | CONST. | PHASE 1 | CONST. | PHASE 2 |
|-------------|---------------|---------|--------|---------|
| SATURDAY | 0:00 - 5:00 | FLASH | FLASH | |
| | 5:00 - 10:00 | PLAN 1 | PLAN 3 | |
| | 10:00 - 16:00 | PLAN 2 | PLAN 4 | |
| | 16:00 - 23:59 | PLAN 1 | PLAN 3 | |
| DAY 2-6 | | | | |
| MON. - FRI. | 0:00 - 5:00 | FLASH | FLASH | |
| | 5:00 - 10:00 | PLAN 1 | PLAN 3 | |
| | 10:00 - 18:30 | PLAN 2 | PLAN 4 | |
| | 18:30 - 23:59 | PLAN 1 | PLAN 3 | |
| DAY 7 | | | | |
| SUNDAY | 0:00 - 5:00 | FLASH | FLASH | |
| | 5:00 - 10:00 | PLAN 1 | PLAN 3 | |
| | 10:00 - 16:00 | PLAN 2 | PLAN 4 | |
| | 16:00 - 23:59 | PLAN 1 | PLAN 3 | |



| Rev. # | Desc | By | Date |
|--------|------|-----|-----------|
| 1 | | JMT | 5/16/2012 |

| | | |
|---|------------------|--------------|
| MAINE DEPARTMENT OF TRANSPORTATION | Designed By: JMT | Drawn By: JC |
| AUGUSTA | Date: 5/16/2012 | |
| Project Location: BANGOR & BREWER, MAINE | Scale: 1" = 50' | |
| Drawing Description: HARLOW & CENTRAL STREETS | Approved: JMT | Checked: BOH |



| | |
|--------------------|--|
| Project No. 83308E | MDOT WIN 18320.00 |
| Engineer: SEWALL | AN INTEGRATED TEAM OF CONSULTANTS, ENGINEERS, ARCHITECTS, AND PLANNERS |
| | JAMES W. SEWALL COMPANY, Since 1880 |
| | 800.644.1202 |

| |
|------------------|
| Phase: CONSTRUCT |
| Sheet No. 7 |

As-Built T.H.

SIGNAL DATA
STATE & HARLOW STREETS

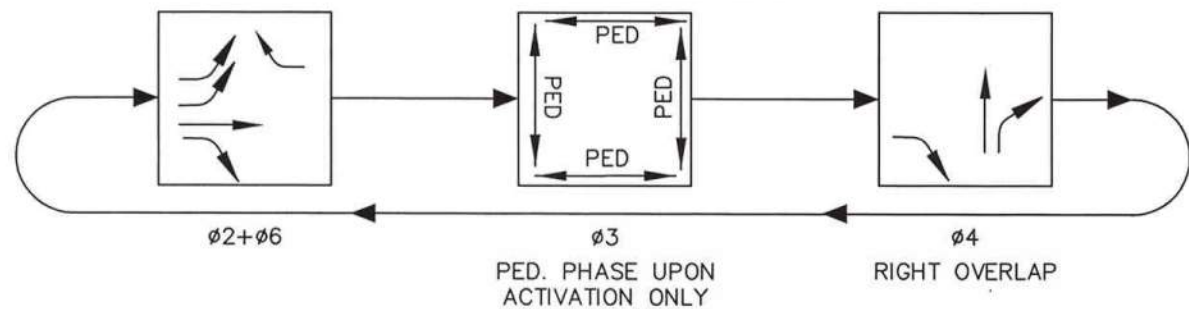
EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 2 | PHASE 3 | PHASE 4 | PHASE 6 |
|-----------------------|---------|---------|---------|---------|
| PHASE | | | | |
| TIMING IN SECONDS | | | | |
| INITIAL INTERVAL | 7 | | 7 | 7 |
| VEHICLE EXTENSION | 5 | | 5 | 5 |
| MAX. GREEN 1 | 55 | | 30 | 65 |
| MAX. GREEN 2 | - | | - | - |
| YELLOW | 4.0 | | 4.0 | 4.0 |
| ALL RED | 2.0 | | 2.0 | 2.0 |
| PEDESTRIAN WALK | | 7 | | |
| PEDESTRIAN DON'T WALK | | 10 | | |
| RECALL | MAX | | MAX | MAX |

8 PHASE NEMA CONTROLLER

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|----------|---------|----------|----------|
| NOT USED | | | |
| PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 |
| NOT USED | | NOT USED | NOT USED |

PROPOSED SEQUENCE



PROPOSED COORDINATION PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | 14 | 16 | 77 | 16 |
| REFERENCE PHASE | 2-EBTL | 2-EBTL | 2-EBTL | 2-EBTL |
| SPLIT TIME PHASES 2 & 6 | 47 | 48 | 41 | 47 |
| SPLIT TIME PHASE 3 | 17 | 17 | 17 | 17 |
| SPLIT TIME PHASE 4 | 31 | 30 | 32 | 31 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.

THE FOLLOWING INTERSECTIONS ARE PART OF THE DOWNTOWN COORDINATED SIGNAL SYSTEM:
MAIN & UNION STREETS
MAIN & HAMMOND & CENTRAL STREETS
HARLOW & CENTRAL STREETS
MAIN & WATER STREETS
STATE & HARLOW STREETS

ALL CONTROLLERS ARE EAGLE CONTROLLERS, EPAC 300 MODELS.

DAILY SCHEDULE DOWNTOWN SYSTEM

| DAY 1 SATURDAY | CONST. PHASE 1 | CONST. PHASE 2 |
|------------------------|-------------------|-------------------|
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 2-6 MON. - FRI. | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 18:30 | PLAN 2 | PLAN 4 |
| 18:30 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 7 SUNDAY | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |

SIGNAL DATA
STATE STREET & BROADWAY

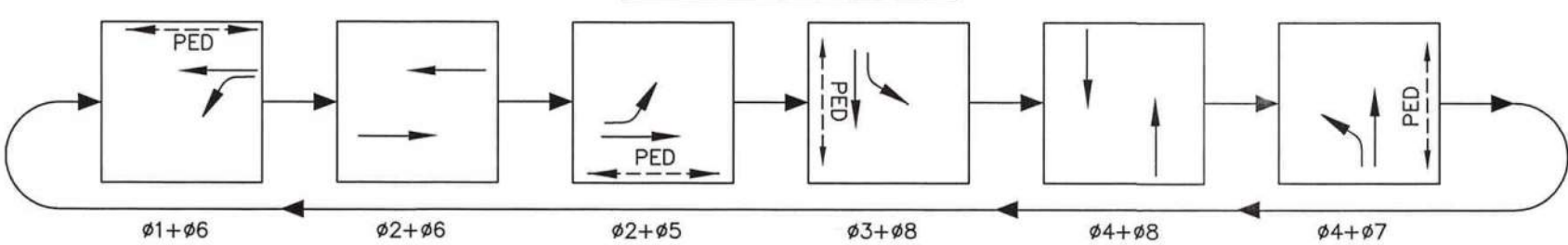
EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 | PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| PHASE | | | | | | | | |
| TIMING IN SECONDS | | | | | | | | |
| INITIAL INTERVAL | 5 | 5 | 5 | 10 | 5 | 5 | 5 | 10 |
| VEHICLE EXTENSION | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| MAX. GREEN 1 | 10 | 30 | 21 | 29 | 15 | 35 | 21 | 29 |
| MAX. GREEN 2 | - | - | - | - | - | - | - | - |
| YELLOW | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| ALL RED | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.6 |
| PEDESTRIAN WALK | | 7 | | 7 | | 7 | | 7 |
| PEDESTRIAN DON'T WALK | | 12 | | 14 | | 12 | | 12 |
| RECALL | | | | SOFT | | | | SOFT |

8 PHASE NEMA CONTROLLER

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|---------|---------|---------|---------|
| | | | |
| PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 |
| | | | |

PROPOSED SEQUENCE



PROPOSED COORDINATION PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 100 | 90 | 95 |
| OFFSET (SEC.) | - | - | - | - |
| REFERENCE PHASE | - | - | - | - |
| SPLIT TIME PHASE 1 | 20 | 21 | 17 | 23 |
| SPLIT TIME PHASE 2 | 24 | 26 | 24 | 22 |
| SPLIT TIME PHASE 3 | 21 | 21 | 21 | 21 |
| SPLIT TIME PHASE 4 | 30 | 32 | 28 | 29 |
| SPLIT TIME PHASE 5 | 12 | 12 | 15 | 15 |
| SPLIT TIME PHASE 6 | 32 | 35 | 26 | 30 |
| SPLIT TIME PHASE 7 | 12 | 12 | 15 | 15 |
| SPLIT TIME PHASE 8 | 39 | 41 | 34 | 35 |

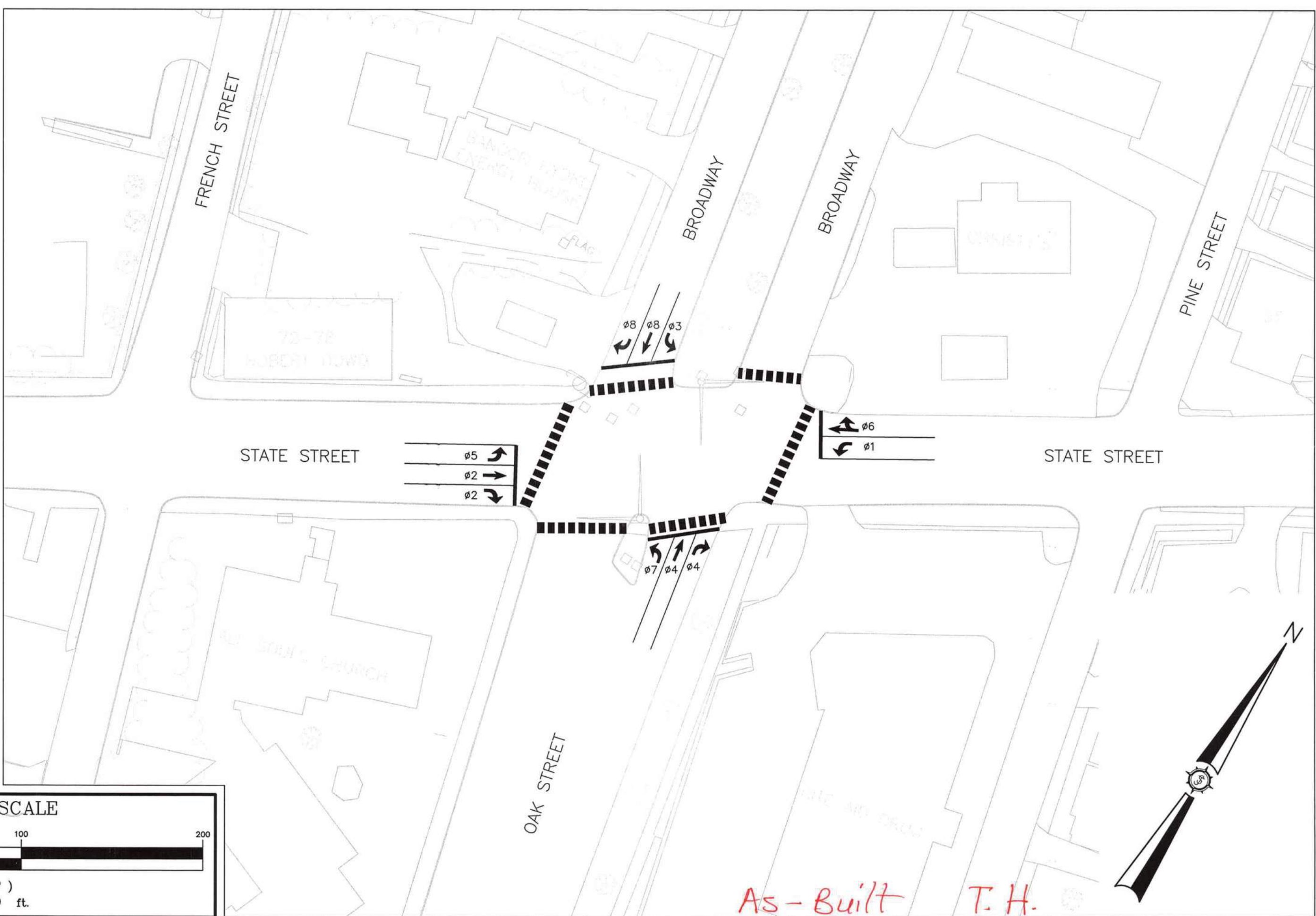
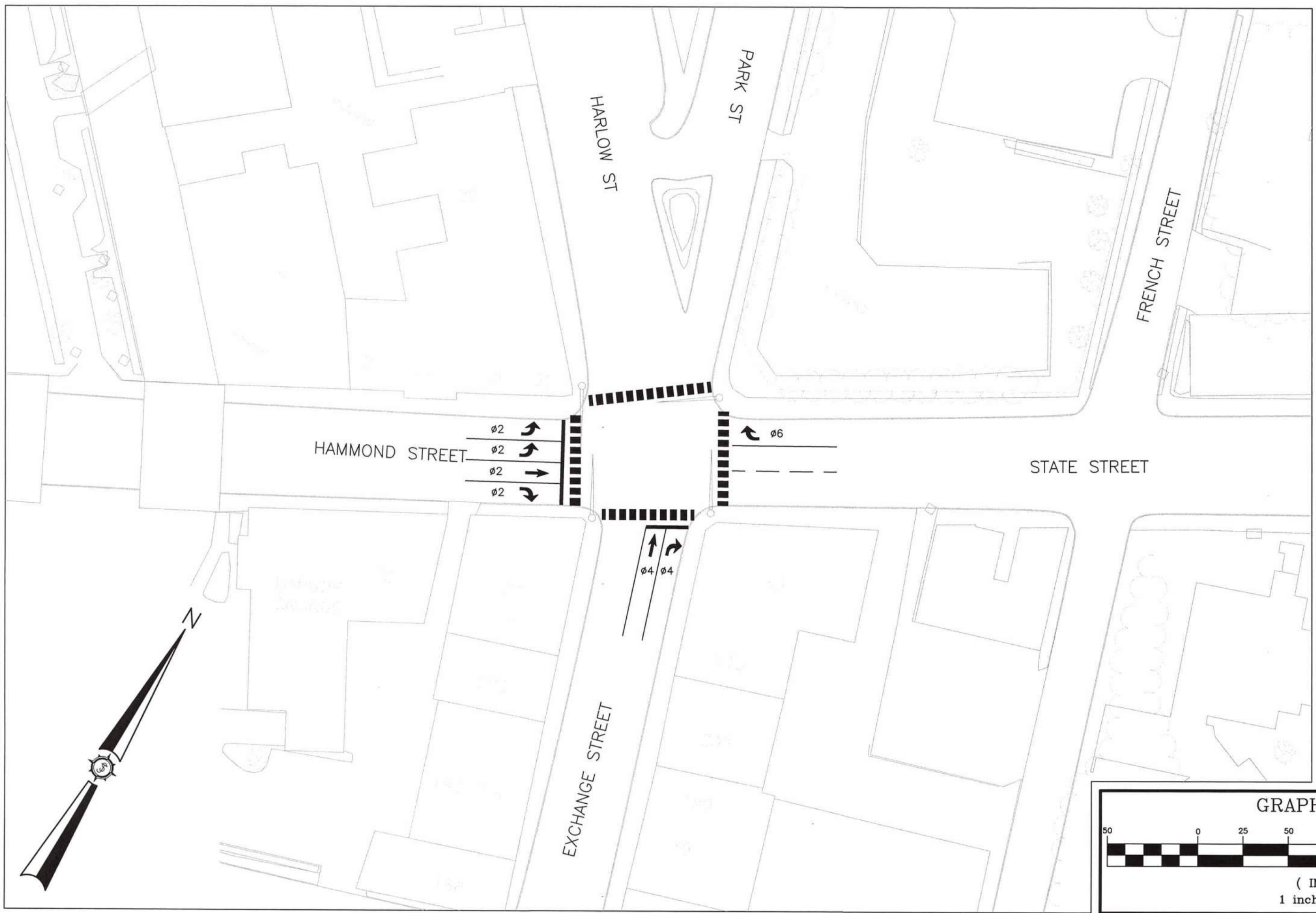
PHASE TIME INCLUDES CLEARANCE INTERVALS.

THE FOLLOWING INTERSECTIONS ARE PART OF THE PENOBSCOT CORRIDOR COORDINATED SIGNAL SYSTEM:
OAK & HANCOCK STREETS
WASHINGTON & EXCHANGE STREETS
STATE & NORTH MAIN STREETS
OAK & WASHINGTON STREETS
STATE & PENOBSCOT STREETS
NORTH MAIN & BETTON (PARKER) STREETS

STATE STREET & BROADWAY (OAK STREET) IS PART OF SYSTEM BUT OPERATES INDEPENDENTLY.

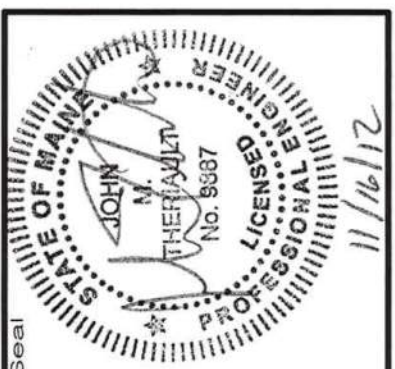
DAILY SCHEDULE PENOBSCOT CORRIDOR

| DAY 1 SATURDAY | CONST. PHASE 1 | CONST. PHASE 2 |
|------------------------|-------------------|-------------------|
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 8:00 | FREE | FREE |
| 8:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 19:00 | PLAN 1 | PLAN 3 |
| 19:00 - 23:59 | FREE | FREE |
| DAY 2-6 MON. - FRI. | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 4:30 | FLASH | FLASH |
| 4:30 - 6:30 | FREE | FREE |
| 6:30 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 18:30 | PLAN 2 | PLAN 4 |
| 18:30 - 20:00 | PLAN 1 | PLAN 3 |
| 20:00 - 23:59 | FREE | FREE |
| DAY 7 SUNDAY | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | FREE | FREE |
| 10:00 - 18:00 | PLAN 1 | PLAN 3 |
| 18:00 - 23:59 | FREE | FREE |



| Rev. | By | Description | Date |
|------|-----|-------------|------------|
| 1 | JMT | Initial | 11/16/2012 |
| 2 | JMT | Revised | 11/16/2012 |
| 3 | JMT | Revised | 11/16/2012 |
| 4 | JMT | Revised | 11/16/2012 |
| 5 | JMT | Revised | 11/16/2012 |
| 6 | JMT | Revised | 11/16/2012 |
| 7 | JMT | Revised | 11/16/2012 |
| 8 | JMT | Revised | 11/16/2012 |
| 9 | JMT | Revised | 11/16/2012 |
| 10 | JMT | Revised | 11/16/2012 |
| 11 | JMT | Revised | 11/16/2012 |
| 12 | JMT | Revised | 11/16/2012 |
| 13 | JMT | Revised | 11/16/2012 |
| 14 | JMT | Revised | 11/16/2012 |
| 15 | JMT | Revised | 11/16/2012 |
| 16 | JMT | Revised | 11/16/2012 |
| 17 | JMT | Revised | 11/16/2012 |
| 18 | JMT | Revised | 11/16/2012 |
| 19 | JMT | Revised | 11/16/2012 |
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| 21 | JMT | Revised | 11/16/2012 |
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| 36 | JMT | Revised | 11/16/2012 |
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| 84 | JMT | Revised | 11/16/2012 |
| 85 | JMT | Revised | 11/16/2012 |
| 86 | JMT | Revised | 11/16/2012 |
| 87 | JMT | Revised | 11/16/2012 |
| 88 | JMT | Revised | 11/16/2012 |
| 89 | JMT | Revised | 11/16/2012 |
| 90 | JMT | Revised | 11/16/2012 |
| 91 | JMT | Revised | 11/16/2012 |
| 92 | JMT | Revised | 11/16/2012 |
| 93 | JMT | Revised | 11/16/2012 |
| 94 | JMT | Revised | 11/16/2012 |
| 95 | JMT | Revised | 11/16/2012 |
| 96 | JMT | Revised | 11/16/2012 |
| 97 | JMT | Revised | 11/16/2012 |
| 98 | JMT | Revised | 11/16/2012 |
| 99 | JMT | Revised | 11/16/2012 |
| 100 | JMT | Revised | 11/16/2012 |

| Designed By | Drawn By | Scale | Project Location | Project Description |
|-------------|----------|----------|---------------------------------|--|
| JMT | JMT | 1" = 50' | MAINE BANGOR & BREWER, MAINE | STATE STREET & HARLOW STREETS STATE STREET & BROADWAY |
| Checked | BOH | | | |
| Approved | JMT | | | |



| | | |
|---|-----------------|-------------------|
| Project No. | 83308E | MDOT WIN 18320.00 |
| Engineer | JAMES W. SEWALL | |
| AN INTEGRATED TEAM OF GEOSPATIAL ENGINEERING, SURVEYING AND NATURAL RESOURCE CONSULTANTS | | |
| SEWALL | | |
| JAMES W. SEWALL COMPANY / Since 1880 | | |
| SEWALL.COM | | |
| 880.616.4302 | | |

| | |
|-----------|-----------|
| Phase | CONSTRUCT |
| Sheet No. | 8 |

SIGNAL DATA
HANCOCK & OAK STREETS

EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 1 | PHASE 2 | | | |
|-----------------------|---------|---------|--|--|--|
| PHASE | | | | | |
| TIMING IN SECONDS | | | | | |
| INITIAL INTERVAL | 10 | 5 | | | |
| VEHICLE EXTENSION | 3 | 3 | | | |
| MAX. GREEN 1 | 25 | 25 | | | |
| MAX. GREEN 2 | - | - | | | |
| YELLOW | 3.0 | 3.0 | | | |
| ALL RED | 2.0 | 2.0 | | | |
| PEDESTRIAN WALK | 7 | 7 | | | |
| PEDESTRIAN DON'T WALK | 13 | 13 | | | |
| RECALL | SOFT | | | | |

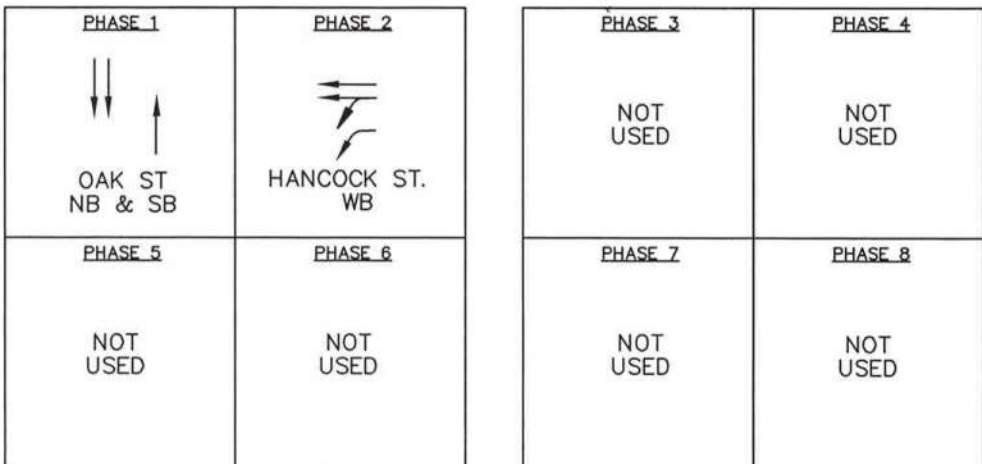
PROPOSED COORDINATION PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | 23 | 13 | 20 | 15 |
| REFERENCE PHASE | 1-NBSB | 1-NBSB | 1-NBSB | 1-NBSB |
| SPLIT TIME PHASES 1 | 60 | 56 | 58 | 56 |
| SPLIT TIME PHASES 2 | 35 | 39 | 32 | 39 |

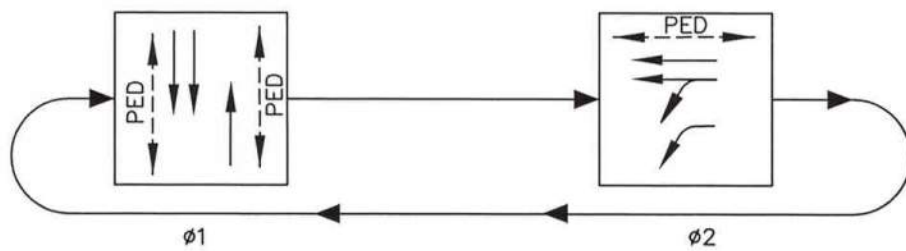
PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME.

THE FOLLOWING INTERSECTIONS ARE PART OF THE PENOBSCOT CORRIDOR COORDINATED SIGNAL SYSTEM:
OAK & HANCOCK STREETS
WASHINGTON & EXCHANGE STREETS
STATE & NORTH MAIN STREETS
OAK & WASHINGTON STREETS
STATE & PENOBSCOT STREETS
NORTH MAIN & BETTON (PARKER) STREETS
THE SYSTEM MASTER IS LOCATED AT THE INTERSECTION OF WASHINGTON AND OAK STREETS.

8 PHASE NEMA CONTROLLER



PROPOSED SEQUENCE



SIGNAL DATA
OAK & WASHINGTON STREETS

EXISTING CONTROLLER PROGRAMMING

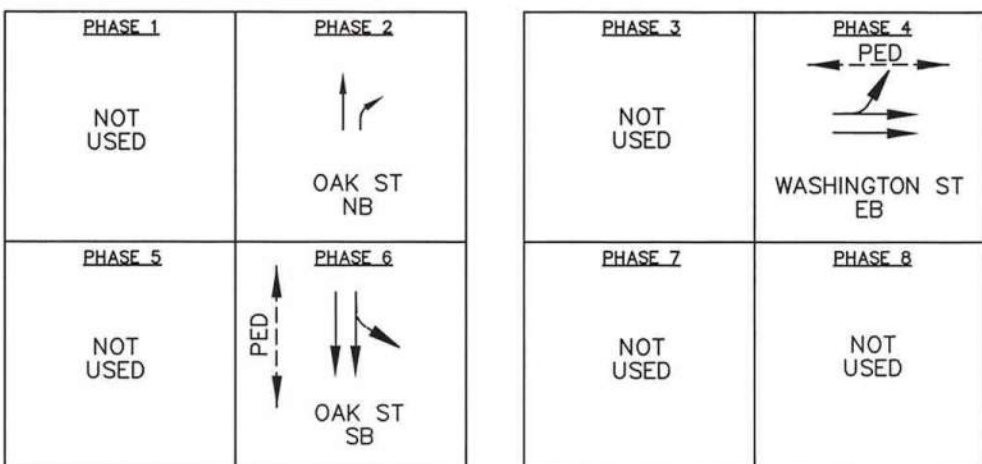
| INTERVAL | PHASE 2 | PHASE 4 | PHASE 6 |
|-----------------------|---------|---------|---------|
| PHASE | | | |
| TIMING IN SECONDS | | | |
| INITIAL INTERVAL | 10 | 5 | 10 |
| VEHICLE EXTENSION | 3 | 3 | 3 |
| MAX. GREEN 1 | 20 | 20 | 20 |
| MAX. GREEN 2 | - | - | - |
| YELLOW | 3.0 | 3.0 | 3.0 |
| ALL RED | 2.0 | 2.0 | 2.0 |
| PEDESTRIAN WALK | | 5 | 5 |
| PEDESTRIAN DON'T WALK | | 9 | 8 |
| RECALL | SOFT | | SOFT |

PROPOSED COORDINATION PLANS:

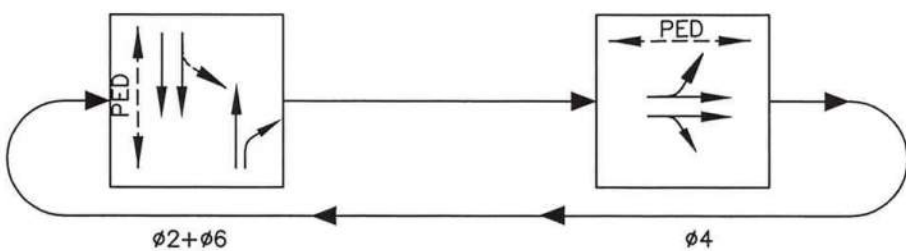
| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | 0 | 0 | 0 | 0 |
| REFERENCE PHASE | 2+6 | 2+6 | 2+6 | 2+6 |
| SPLIT TIME PHASES 2 & 6 | 63 | 57 | 59 | 52 |
| SPLIT TIME PHASES 4 | 32 | 38 | 31 | 43 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME.

8 PHASE NEMA CONTROLLER

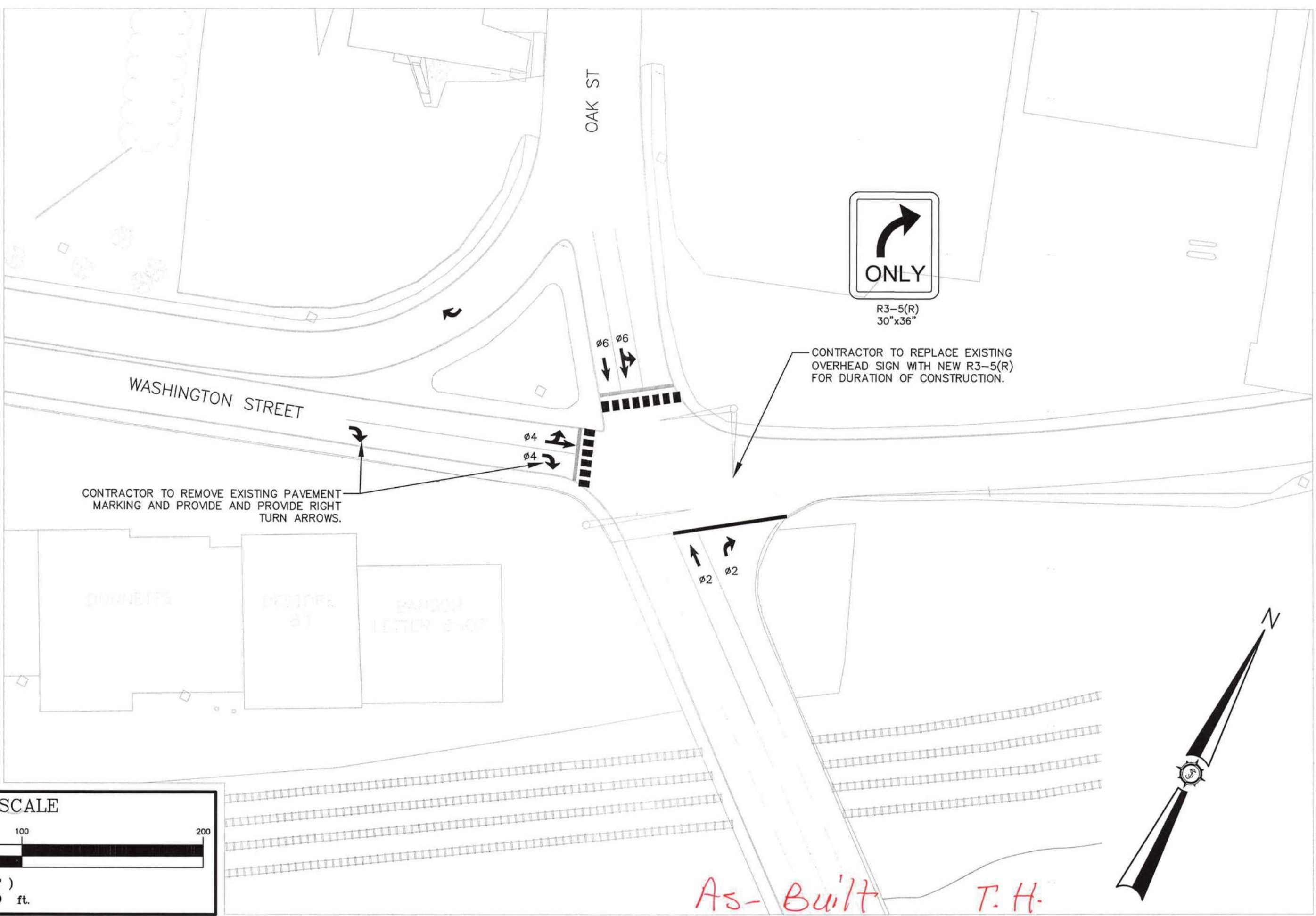
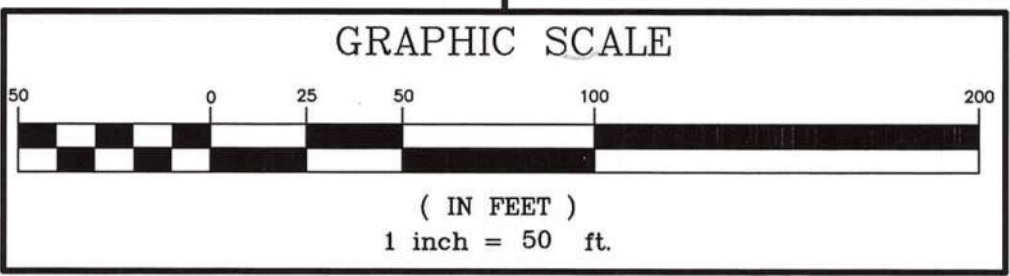
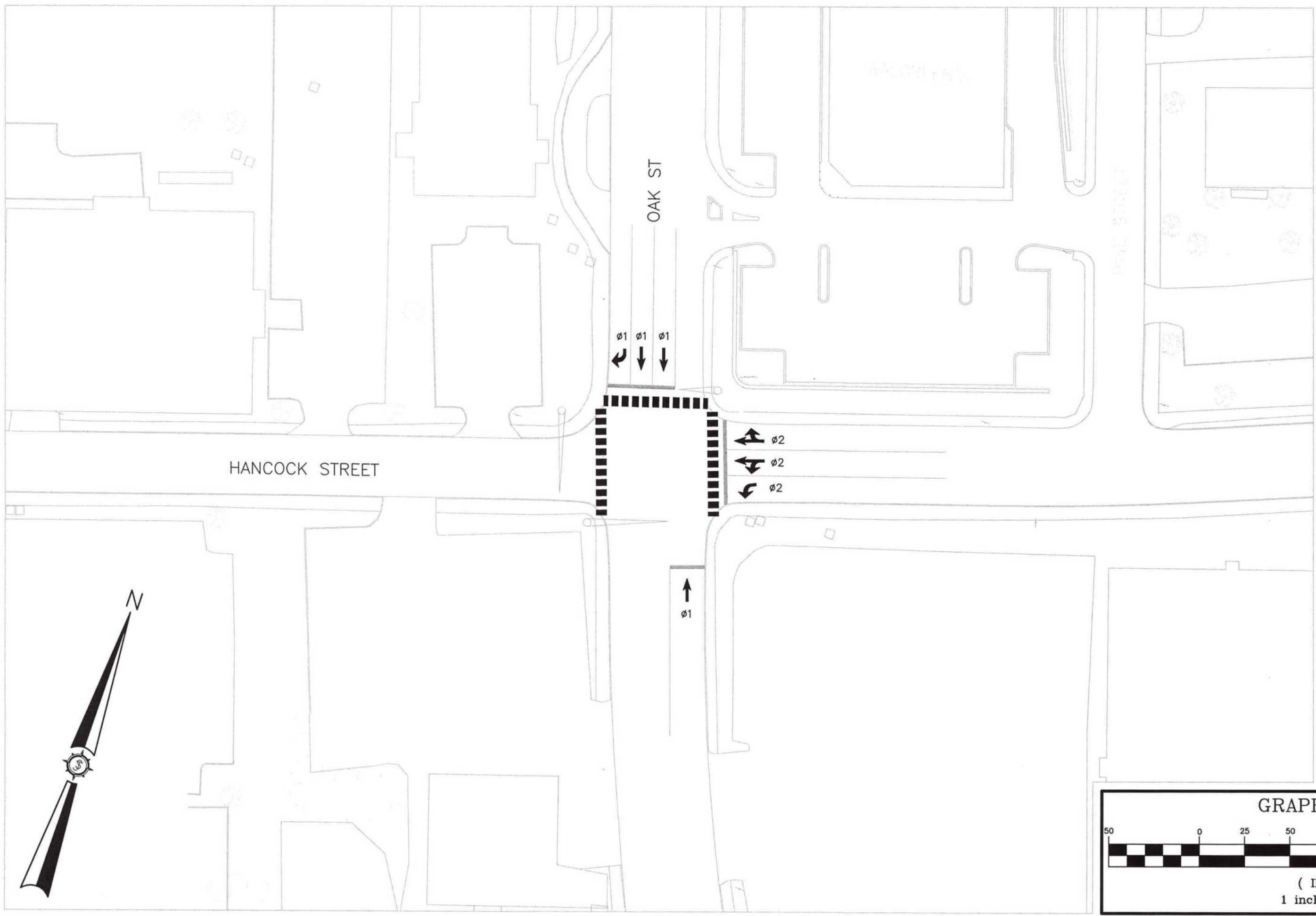


PROPOSED SEQUENCE



DAILY SCHEDULE PENOBSCOT CORRIDOR

| DAY 1 SATURDAY | CONST. PHASE 1 | CONST. PHASE 2 |
|------------------------|-------------------|-------------------|
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 8:00 | FREE | FREE |
| 8:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 19:00 | PLAN 1 | PLAN 3 |
| 19:00 - 23:59 | FREE | FREE |
| DAY 2-6 MON. - FRI. | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 4:30 | FLASH | FLASH |
| 4:30 - 6:30 | FREE | FREE |
| 6:30 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 18:30 | PLAN 2 | PLAN 4 |
| 18:30 - 20:00 | PLAN 1 | PLAN 3 |
| 20:00 - 23:59 | FREE | FREE |
| DAY 7 SUNDAY | CONST. PHASE 1 | CONST. PHASE 2 |
| 0:00 - 5:00 | FLASH | FLASH |
| 5:00 - 10:00 | FREE | FREE |
| 10:00 - 18:00 | PLAN 1 | PLAN 3 |
| 18:00 - 23:59 | FREE | FREE |



Project No. 83308E MDOT WIN 18320.00

Engineer JAMES W. SEWALL COMPANY / Since 1880 800.616.1302

Phase CONSTRUCT

Sheet No. 9

MAINE DEPARTMENT OF TRANSPORTATION

AUGUSTA, MAINE

Project Location BANGOR & BREWER, MAINE

Drawing Description HANCOCK & OAK STREETS
OAK & WASHINGTON STREETS

Seal

Professional Engineer

11/16/12

Designed By JMT

Date 11/16/2012

Scale 1" = 50'

Approved JMT

Checked BOH

SIGNAL DATA
WASHINGTON & BROAD STREETS

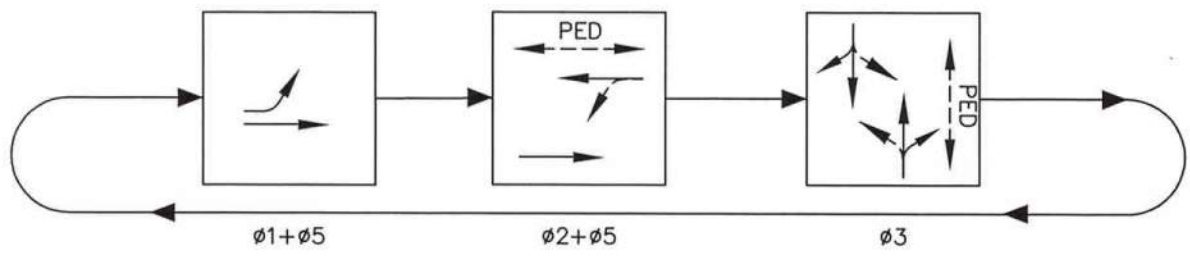
EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 1 | PHASE 2 | PHASE 3 | PHASE 5 |
|-----------------------|------------------------|------------------|------------------------------|-------------------|
| PHASE | INDEPENDENT EB LEFT | WASHINGTON WB | BROAD ST. SB FRONT ST. NB | INDEPENDENT EB |
| TIMING IN SECONDS | | | | |
| INITIAL INTERVAL | 10 | 15 | 10 | 10 |
| VEHICLE EXTENSION | 5 | 5 | 5 | 5 |
| MAX. GREEN 1 | 15 | 35 | 20 | 25 |
| MAX. GREEN 2 | - | - | - | - |
| YELLOW | 4.0 | 4.0 | 4.0 | 4.0 |
| ALL RED | 2.0 | 2.0 | 2.0 | 2.0 |
| PEDESTRIAN WALK | | 7.0 | 7.0 | |
| PEDESTRIAN DON'T WALK | | 8.0 | 8.0 | |
| RECALL | | MAX | MAX | MAX |

8 PHASE NEMA CONTROLLER

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|----------------------------|----------------------|------------------------------|----------|
| INDEPENDENT ST. EB LEFT | WASHINGTON ST. WB | BROAD ST. SB FRONT ST. NB | NOT USED |
| PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 |
| INDEPENDENT ST. EB | NOT USED | NOT USED | NOT USED |

PROPOSED SEQUENCE



PROPOSED TIME OF DAY PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | - | - | - | - |
| REFERENCE PHASE | - | - | - | - |
| SPLIT TIME PHASE 1 | 12 | 12 | 13 | 12 |
| SPLIT TIME PHASE 2 | 26 | 34 | 46 | 43 |
| SPLIT TIME PHASE 3 | 57 | 49 | 31 | 40 |
| SPLIT TIME PHASE 5 | 38 | 46 | 59 | 55 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME.

THE INTERSECTION OF WASHINGTON AND BROAD STREETS
FUNCTIONS A PRETIMED AND ISOLATED INTERSECTION.

DAILY SCHEDULE WASHINGTON & BROAD

| DAY 1 SATURDAY | CONST. PHASE 1 | CONST. PHASE 2 |
|------------------------|-------------------|-------------------|
| 0:00 - 5:00 | FLASH PLAN 1 | FLASH PLAN 3 |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 2-6 MON. - FRI. | | |
| 0:00 - 5:00 | FLASH PLAN 1 | FLASH PLAN 3 |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 18:30 | PLAN 2 | PLAN 4 |
| 18:30 - 23:59 | PLAN 1 | PLAN 3 |
| DAY 7 SUNDAY | | |
| 0:00 - 5:00 | FLASH PLAN 1 | FLASH PLAN 3 |
| 5:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 23:59 | PLAN 1 | PLAN 3 |

SIGNAL DATA
WASHINGTON & EXCHANGE STREETS

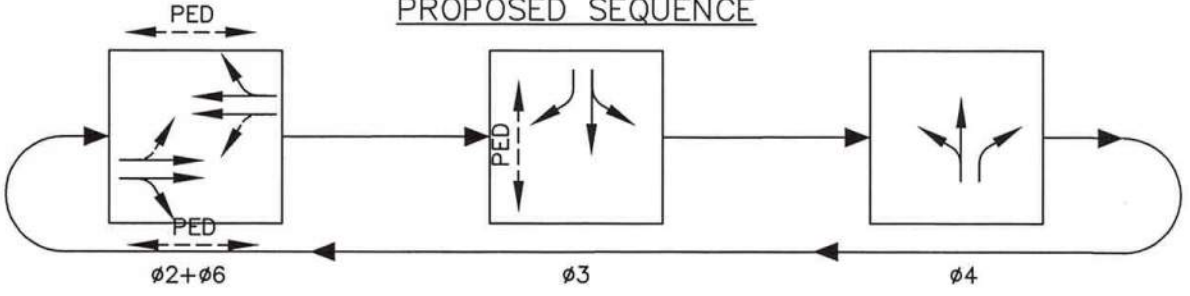
EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 2 | PHASE 3 | PHASE 4 | PHASE 6 |
|-----------------------|------------------|----------------|-------------|------------------|
| PHASE | WASHINGTON EB | EXCHANGE SB | PLAZA NB | WASHINGTON WB |
| TIMING IN SECONDS | | | | |
| INITIAL INTERVAL | 10 | 5 | 5 | 10 |
| VEHICLE EXTENSION | 3 | 3 | 3 | 3 |
| MAX. GREEN 1 | 31 | 20 | 24 | 31 |
| MAX. GREEN 2 | - | - | - | - |
| YELLOW | 3.0 | 3.0 | 3.0 | 3.0 |
| ALL RED | 2.0 | 2.0 | 2.0 | 2.0 |
| PEDESTRIAN WALK | 7 | | 7 | 7 |
| PEDESTRIAN DON'T WALK | 17 | | 12 | 17 |
| RECALL | SOFT | | | SOFT |

8 PHASE NEMA CONTROLLER

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|----------|------------------|----------------|-------------|
| NOT USED | WASHINGTON EB | EXCHANGE SB | PLAZA NB |
| PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 |
| NOT USED | WASHINGTON WB | NOT USED | NOT USED |

PROPOSED SEQUENCE



PROPOSED COORDINATION PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | 49 | 48 | 41 | 48 |
| REFERENCE PHASE | 2-EBTL | 2-EBTL | 2-EBTL | 2-EBTL |
| SPLIT TIME PHASES 2 & 6 | 48 | 49 | 46 | 52 |
| SPLIT TIME PHASES 3 | 25 | 26 | 23 | 23 |
| SPLIT TIME PHASES 4 | 22 | 20 | 21 | 20 |

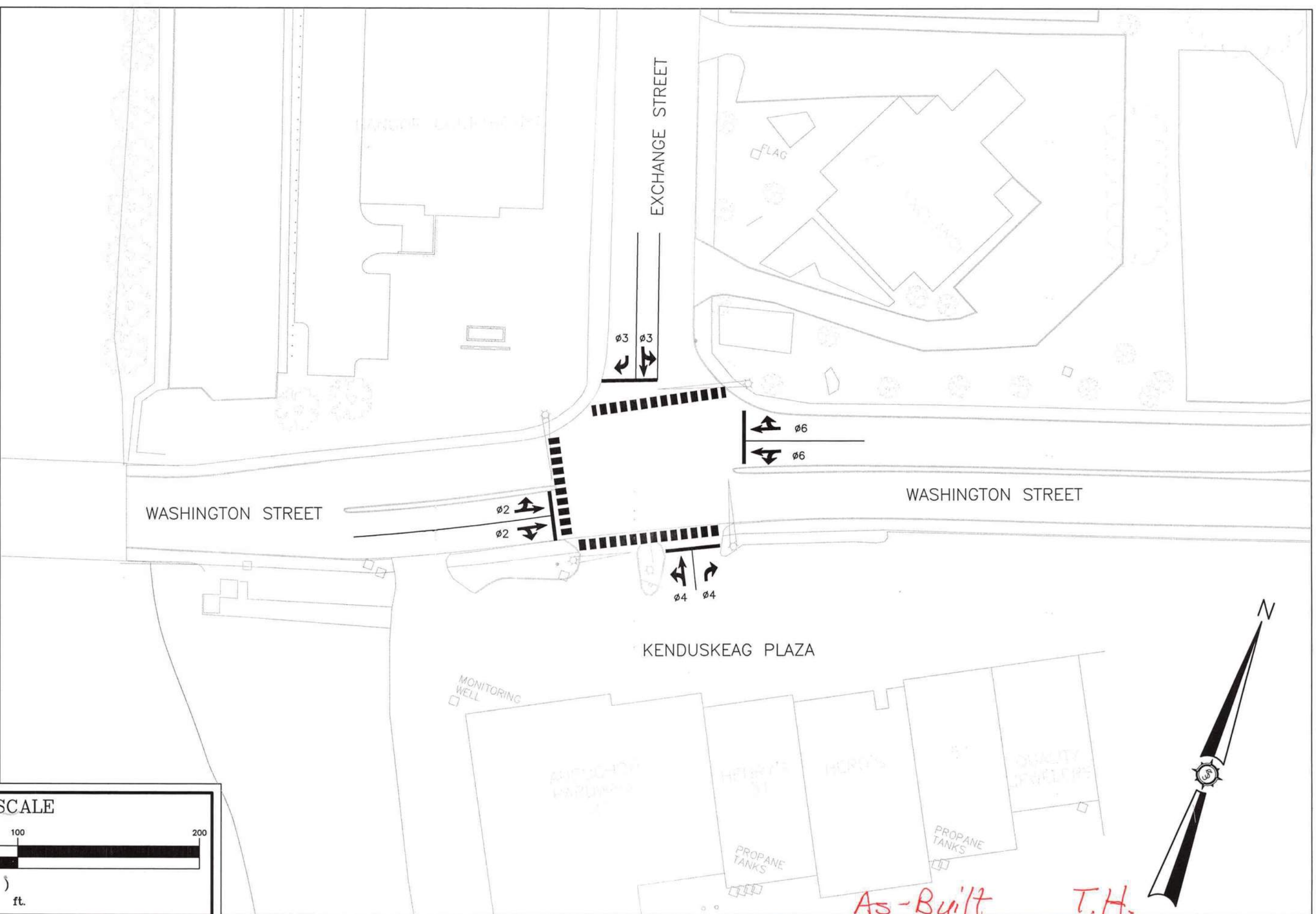
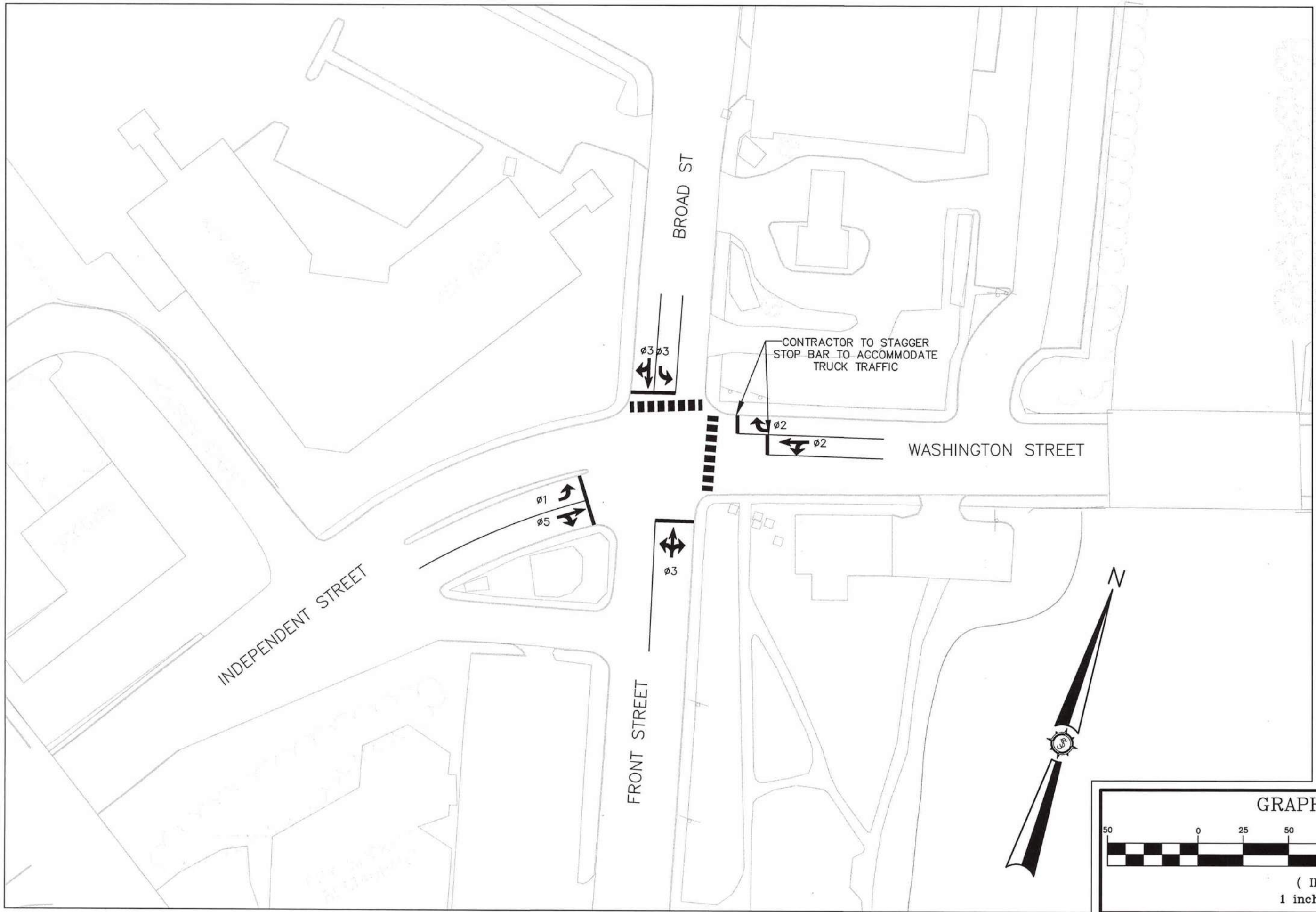
PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME.

THE FOLLOWING INTERSECTIONS ARE PART OF THE PENOBSCOT CORRIDOR COORDINATED SIGNAL SYSTEM:
OAK & HANCOCK STREETS
WASHINGTON & EXCHANGE STREETS
STATE & NORTH MAIN STREETS
OAK & WASHINGTON STREETS
STATE & PENOBSCOT STREETS
NORTH MAIN & BETTON (PARKER) STREETS

ALL INTERSECTION CONTROLLERS ARE EAGLE CONTROLLERS, EPAC 300 MODEL.

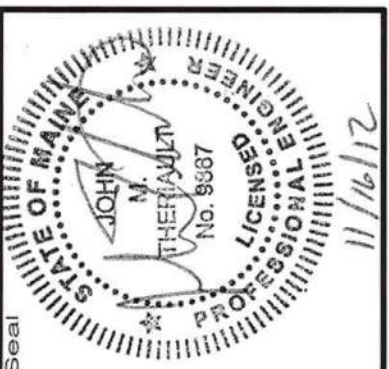
DAILY SCHEDULE PENOBSCOT CORRIDOR

| DAY 1 SATURDAY | CONST. PHASE 1 | CONST. PHASE 2 |
|------------------------|-------------------|-------------------|
| 0:00 - 5:00 | FLASH PLAN 1 | FLASH PLAN 3 |
| 5:00 - 8:00 | FREE | FREE |
| 8:00 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 16:00 | PLAN 2 | PLAN 4 |
| 16:00 - 19:00 | PLAN 1 | PLAN 3 |
| 19:00 - 23:59 | FREE | FREE |
| DAY 2-6 MON. - FRI. | | |
| 0:00 - 4:30 | FLASH PLAN 1 | FLASH PLAN 3 |
| 4:30 - 6:30 | FREE | FREE |
| 6:30 - 10:00 | PLAN 1 | PLAN 3 |
| 10:00 - 18:30 | PLAN 2 | PLAN 4 |
| 18:30 - 20:00 | PLAN 1 | PLAN 3 |
| 20:00 - 23:59 | FREE | FREE |
| DAY 7 SUNDAY | | |
| 0:00 - 5:00 | FLASH PLAN 1 | FLASH PLAN 3 |
| 5:00 - 10:00 | FREE | FREE |
| 10:00 - 18:00 | PLAN 1 | PLAN 3 |
| 18:00 - 23:59 | FREE | FREE |



| Rev. | By | Description | Date |
|------|-----|-------------|------------|
| 1 | JMT | | 11/16/2012 |
| 2 | JMT | | 11/16/2012 |
| 3 | JMT | | 11/16/2012 |
| 4 | JMT | | 11/16/2012 |
| 5 | JMT | | 11/16/2012 |
| 6 | JMT | | 11/16/2012 |
| 7 | JMT | | 11/16/2012 |
| 8 | JMT | | 11/16/2012 |
| 9 | JMT | | 11/16/2012 |
| 10 | JMT | | 11/16/2012 |

| | | |
|---------------------------|--|---|
| Designed By JMT | Drawn By JC | Checked BOH |
| Date 11/16/2012 | Scale 1" = 50' | Approved JMT |
| Project Location MAINE | Project Location BANGOR & BREWER, MAINE | Project Location WASHINGTON & EXCHANGE STREETS |



| | | |
|-----------------------|-------------------|---|
| Project No. 83308E | MDOT WIN 18320.00 | AN INTEGRATED TEAM OF GEOSPATIAL ENGINEERING, SURVEYING AND NATURAL RESOURCE CONSULTANTS |
| Engineer JMT | | SEWALL JAMES W. SEWALL COMPANY / Since 1880 SEWALL.COM |

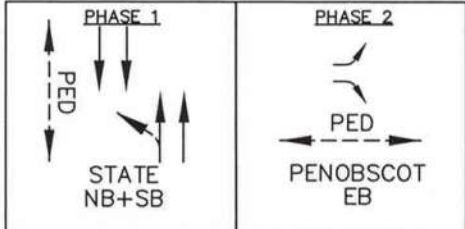
| |
|--------------------|
| Phase CONSTRUCT |
| Sheet No. 10 |

SIGNAL DATA

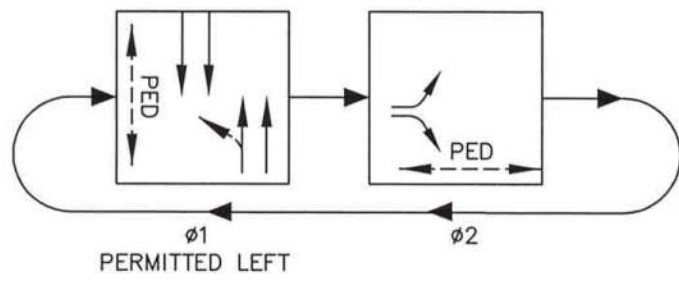
EXISTING CONTROLLER PROGRAMMING

| PHASE 1 | PHASE 2 |
|--------------------|---------------------|
| <p>STATE NB+SB</p> | <p>PENOBSCOT EB</p> |

8 PHASE NEMA CONTROLLER



PROPOSED COORDINATION PLANS



COORDINATION PLANS: PROPOSED

| PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|------------------------------|------------------------------|------------------------------|------------------------------|
| 95 | 95 | 90 | 95 |
| 21 | 7 | 18 | 4 |
| 1-NWSE | 1-NWSE | 1-NWSE | 1-NWSE |
| 65 | 70 | 61 | 70 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME

THE FOLLOWING INTERSECTIONS ARE PART OF THE PENOBSCOT CORRIDOR COORDINATED SIGNAL SYSTEM:







| | |
|-------------------------------|--------------------------------------|
| OAK & HANCOCK STREETS | OAK & WASHINGTON STREETS |
| WASHINGTON & EXCHANGE STREETS | STATE & PENOBSCOT STREETS |
| STATE & NORTH MAIN STREETS | NORTH MAIN & BETTON (PARKER) STREETS |

DAILY SCHEDULE PENOBSCOT CORRIDOR

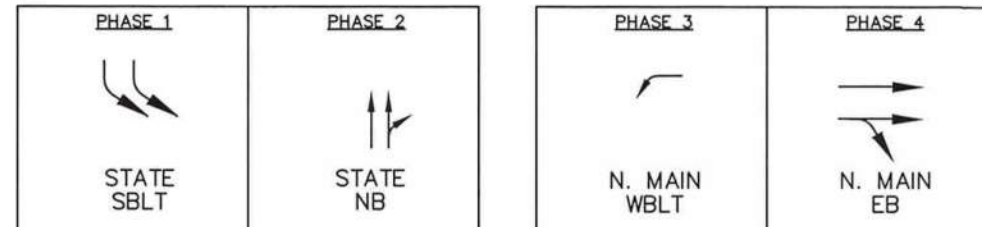
| DAY 1 | | CONST. | CONST. |
|---------------|--------|---------|---------|
| SATURDAY | | PHASE 1 | PHASE 2 |
| 0:00 — 5:00 | FLASH | FLASH | |
| 5:00 — 8:00 | FREE | FREE | |
| 8:00 — 10:00 | PLAN 1 | PLAN 3 | |
| 10:00 — 16:00 | PLAN 1 | PLAN 4 | |
| 16:00 — 19:00 | PLAN 2 | PLAN 3 | |
| 19:00 — 23:59 | FREE | FREE | |
| DAY 2-6 | | | |
| MON. — FRI. | | | |
| 0:00 — 4:30 | FLASH | FLASH | |
| 4:30 — 6:30 | FREE | FREE | |
| 6:30 — 10:00 | PLAN 1 | PLAN 3 | |
| 10:00 — 18:30 | PLAN 2 | PLAN 4 | |
| 18:30 — 20:00 | PLAN 1 | PLAN 3 | |
| 20:00 — 23:59 | FREE | FREE | |
| DAY 7 | | | |
| SUNDAY | | | |
| 0:00 — 5:00 | FLASH | FLASH | |
| 5:00 — 10:00 | FREE | FREE | |
| 10:00 — 18:00 | PLAN 1 | PLAN 3 | |
| 18:00 — 23:59 | FREE | FREE | |



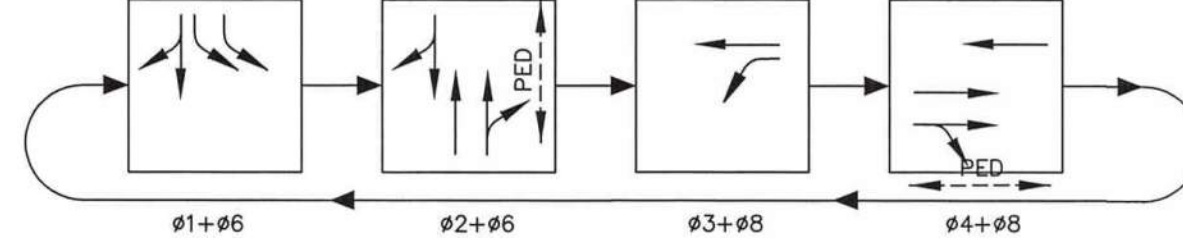
CONTROLLER PROGRAMMINGEXISTING

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 | PHASE 6 | PHASES |
|--|---|--|---|---|---|
|  <p>STATE SB LEFT</p> |  <p>STATE NB</p> |  <p>N. MAIN WB LEFT</p> |  <p>N. MAIN EB</p> |  <p>STATE SB</p> |  <p>N. MA WB</p> |

8 PHASE NEMA CONTROLLER



PROPOSED COORDINATION PLANS



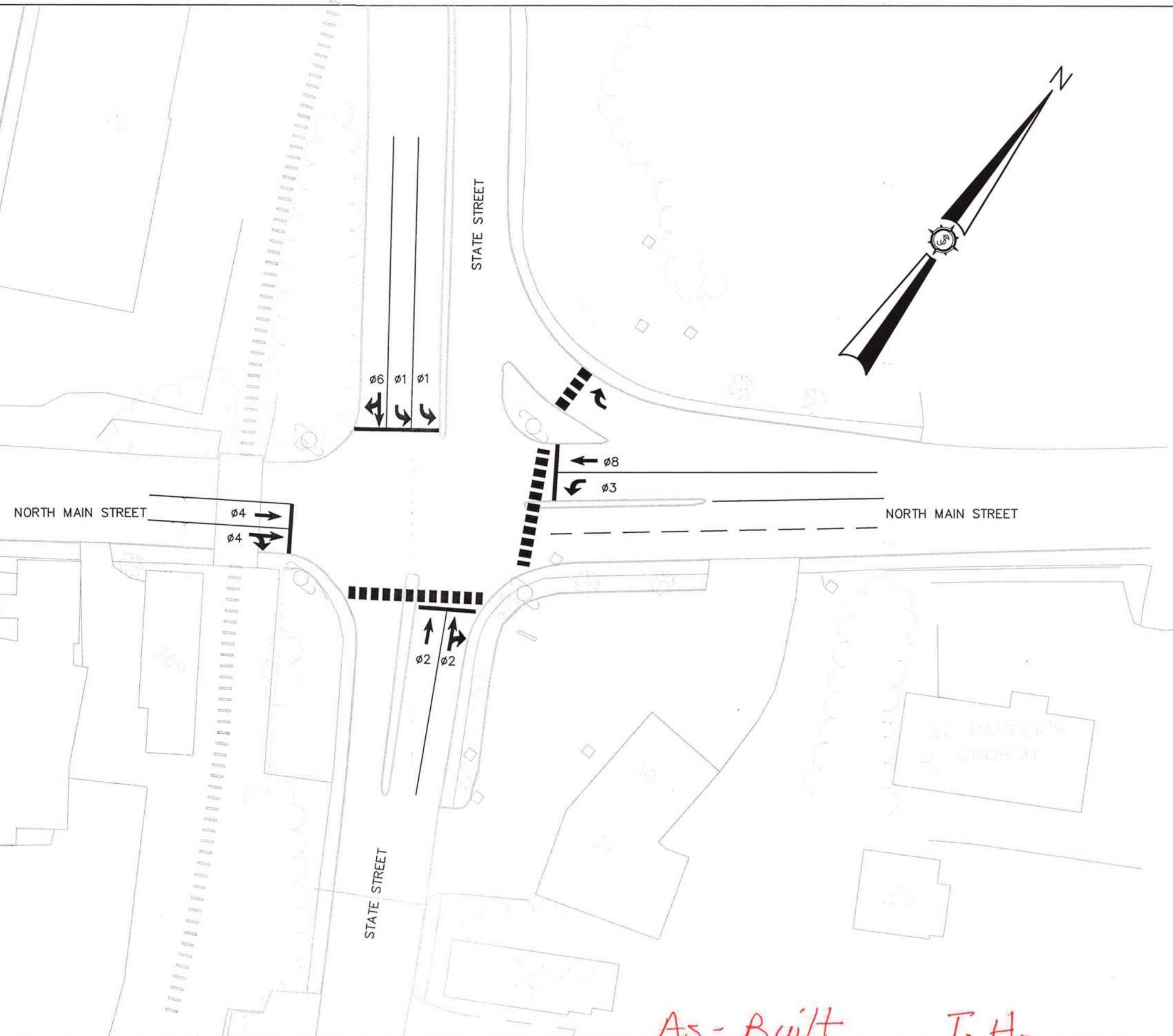
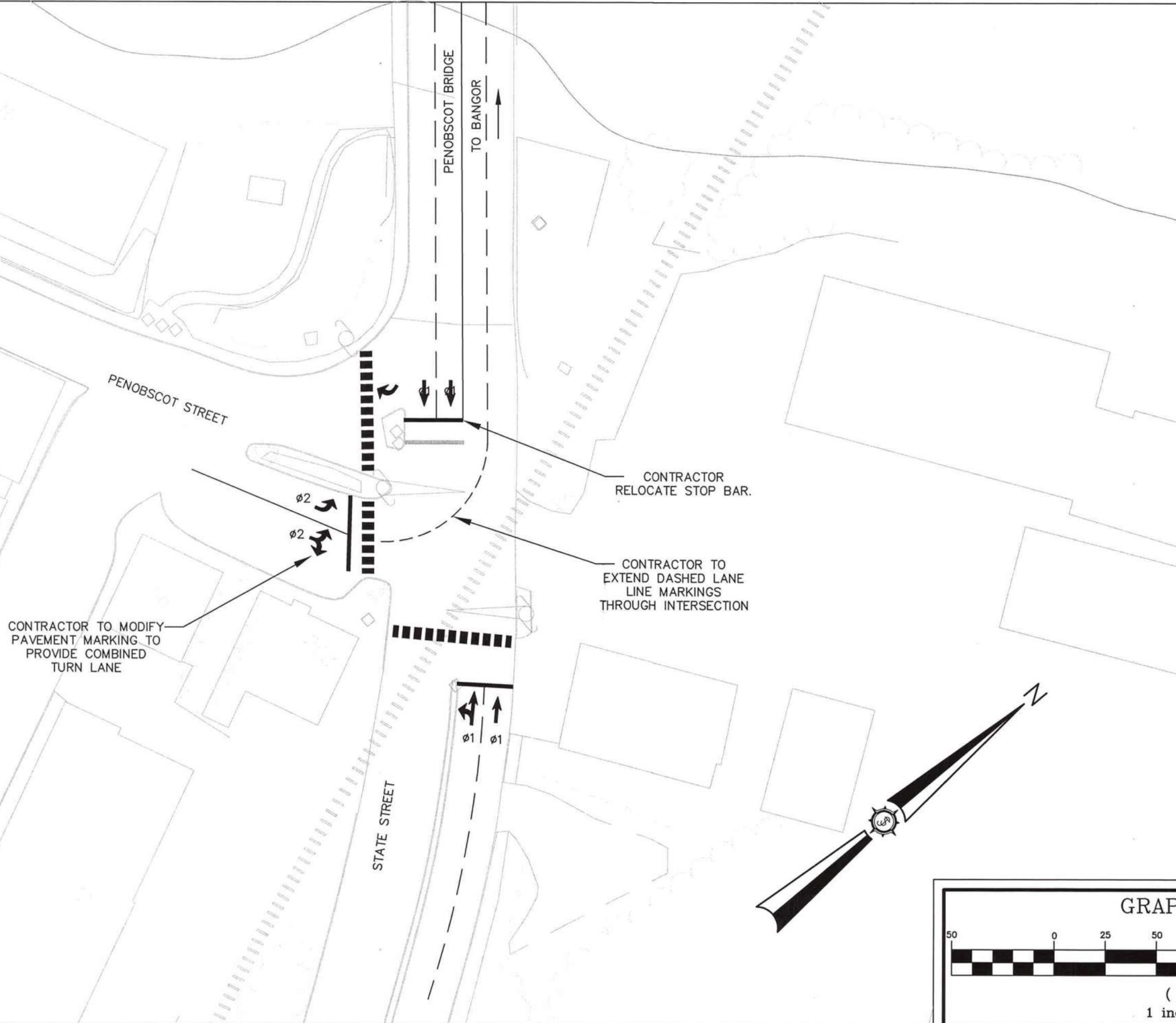
PROPOSED COORDINATION PLANS:

| PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|------------------------------|------------------------------|------------------------------|------------------------------|
| 95 | 95 | 90 | 95 |
| 37 | 24 | 30 | 20 |
| 6-SET | 6-SET | 6-SET | 6-SET |
| 20 | 26 | 20 | 26 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME

DAILY SCHEDULE PENOBSCOT CORRIDOR

| DAY 1 | | CONST. | |
|-------------|---------|---------|---------|
| SATURDAY | | PHASE 1 | PHASE 2 |
| 0:00 | ~ 5:00 | FLASH | FLASH |
| 5:00 | ~ 8:00 | FREE | FREE |
| 8:00 | ~ 10:00 | PLAN 1 | PLAN 3 |
| 10:00 | ~ 16:00 | PLAN 2 | PLAN 4 |
| 16:00 | ~ 19:00 | PLAN 1 | PLAN 3 |
| 19:00 | ~ 23:59 | FREE | FREE |
| DAY 2-6 | | | |
| MON. - FRI. | | | |
| 0:00 | ~ 4:30 | FLASH | FLASH |
| 4:30 | ~ 6:30 | FREE | FREE |
| 6:30 | ~ 10:00 | PLAN 1 | PLAN 3 |
| 10:00 | ~ 18:30 | PLAN 2 | PLAN 4 |
| 18:30 | ~ 20:00 | PLAN 1 | PLAN 3 |
| 20:00 | ~ 23:59 | FREE | FREE |
| DAY 7 | | | |
| SUNDAY | | | |
| 0:00 | ~ 5:00 | FLASH | FLASH |
| 5:00 | ~ 10:00 | FREE | FREE |
| 10:00 | ~ 18:00 | PLAN 1 | PLAN 3 |
| 18:00 | ~ 23:59 | FREE | FREE |

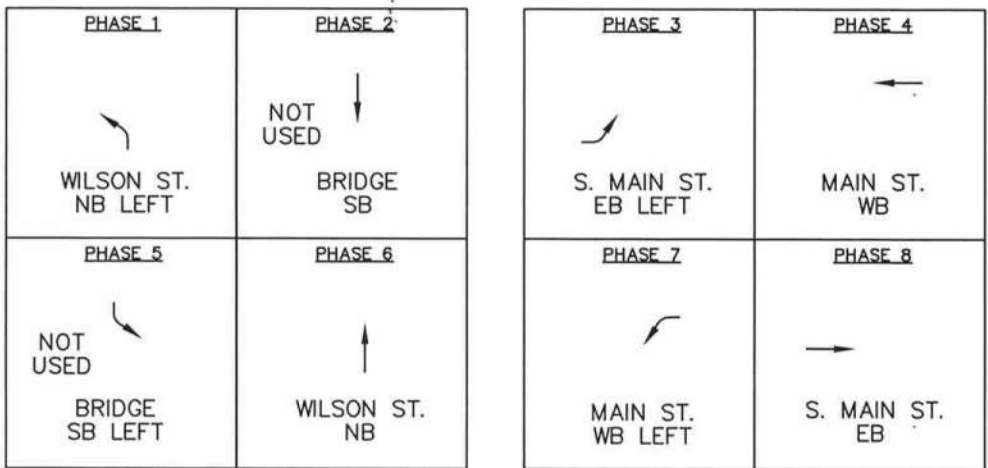


SIGNAL DATA
NORTH MAIN & WILSON STREETS

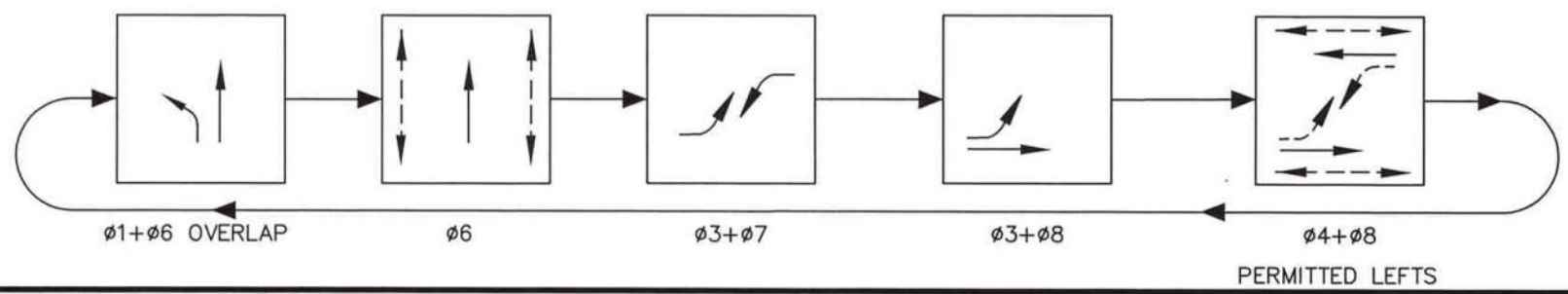
CONTROLLER PROGRAMMING

| INTERVAL | PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 | PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 |
|-----------------------|--------------------|-----------|---------------------|-------------|----------------|-----------|------------------|----------------|
| PHASE | WILSON ST. NB LEFT | BRIDGE SB | S. MAIN ST. EB LEFT | MAIN ST. WB | BRIDGE SB LEFT | WILSON NB | MAIN ST. WB LEFT | S. MAIN ST. EB |
| TIMING IN SECONDS | | | | | | | | |
| INITIAL INTERVAL | 5 | 8 | 5 | 5 | 5 | 8 | 5 | 5 |
| VEHICLE EXTENSION | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| MAX. GREEN 1 | 10 | 36 | 10 | 24 | 10 | 36 | 10 | 29 |
| MAX. GREEN 2 | - | - | - | - | - | - | - | - |
| YELLOW | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| ALL RED | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| PEDESTRIAN WALK | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| PEDESTRIAN DON'T WALK | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| RECALL | SOFT | SOFT | SOFT | SOFT | SOFT | SOFT | SOFT | SOFT |

8 PHASE NEMA CONTROLLER



PROPOSED SEQUENCE:



PROPOSED TIME OF DAY PLANS:

| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|---------------------|------------------------|------------------------|------------------------|------------------------|
| CYCLE LENGTH (SEC.) | 95 | 90 | 90 | 95 |
| OFFSET (SEC.) | - | - | - | - |
| REFERENCE PHASE | - | - | - | - |
| SPLIT TIME PHASE 1 | 13 | 12 | 12 | 12 |
| SPLIT TIME PHASE 3 | 16 | 12 | 13 | 13 |
| SPLIT TIME PHASE 4 | 31 | 31 | 30 | 35 |
| SPLIT TIME PHASES 6 | 48 | 47 | 47 | 47 |
| SPLIT TIME PHASE 7 | 13 | 12 | 13 | 13 |
| SPLIT TIME PHASE 8 | 34 | 31 | 30 | 35 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.
THE INTERSECTION OF NORTH MAIN & WILSON STREETS IS NOT PART OF A COORDINATED SYSTEM.
CONCURRENT PEDESTRIAN PHASE ON ACTUATION ONLY.

DAILY SCHEDULE WILSON & MAIN STREETS

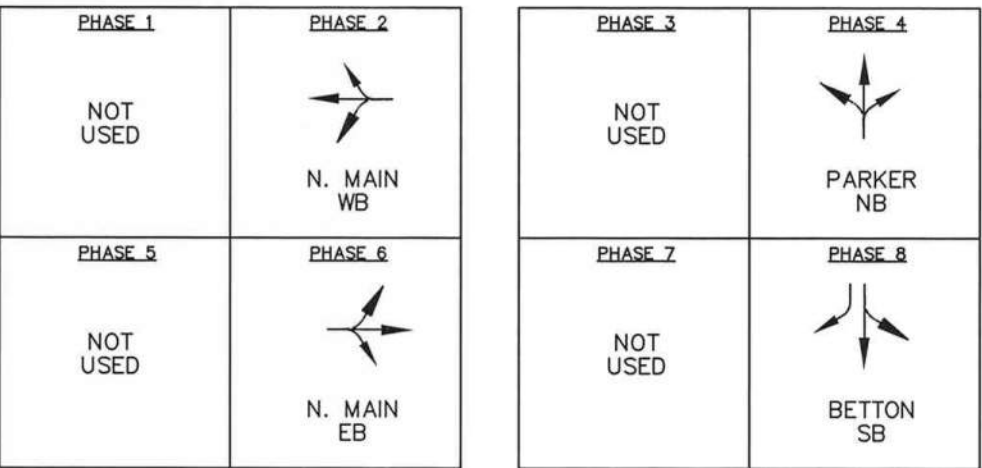
| DAY | CONST. PHASE 1 | CONST. PHASE 2 |
|---------------------|--|-------------------------------------|
| DAY 1 SATURDAY | 0:00 - 5:00 FLASH 5:00 - 10:00 PLAN 1 10:00 - 16:00 PLAN 2 16:00 - 23:59 PLAN 1 | FLASH PLAN 3 PLAN 4 PLAN 3 |
| DAY 2-6 MON. - FRI. | 0:00 - 5:00 FLASH 5:00 - 10:00 PLAN 1 10:00 - 18:30 PLAN 2 18:30 - 23:59 PLAN 1 | FLASH PLAN 3 PLAN 4 PLAN 3 |
| DAY 7 SUNDAY | 0:00 - 5:00 FLASH 5:00 - 10:00 PLAN 1 10:00 - 16:00 PLAN 2 16:00 - 23:59 PLAN 1 | FLASH PLAN 3 PLAN 4 PLAN 3 |

SIGNAL DATA
NORTH MAIN & BETTON STREETS

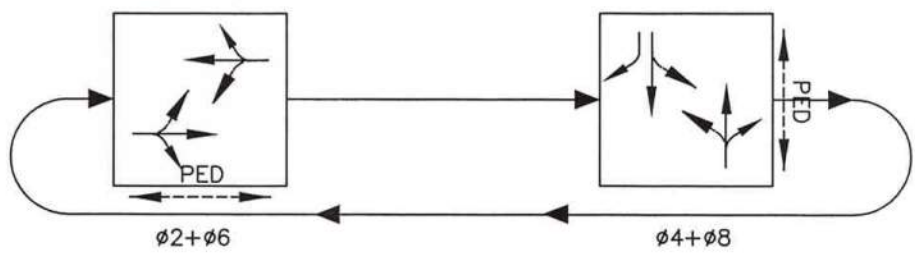
EXISTING CONTROLLER PROGRAMMING

| INTERVAL | PHASE 2 | PHASE 4 | PHASE 6 | PHASE 8 |
|-----------------------|------------|-----------|------------|-----------|
| PHASE | N. MAIN WB | PARKER NB | N. MAIN EB | BETTON SB |
| TIMING IN SECONDS | | | | |
| INITIAL INTERVAL | 5 | 10 | 5 | 10 |
| VEHICLE EXTENSION | 3 | 3 | 3 | 3 |
| MAX. GREEN 1 | 22 | 23 | 22 | 23 |
| MAX. GREEN 2 | - | - | - | - |
| YELLOW | 3.0 | 3.0 | 3.0 | 3.0 |
| ALL RED | 2.0 | 2.0 | 2.0 | 2.0 |
| PEDESTRIAN WALK | 4 | 4 | 4 | 4 |
| PEDESTRIAN DON'T WALK | 12 | 9 | 13 | 13 |
| RECALL | SOFT | SOFT | SOFT | SOFT |

8 PHASE NEMA CONTROLLER



PROPOSED SEQUENCE:



PROPOSED COORDINATION PLANS:

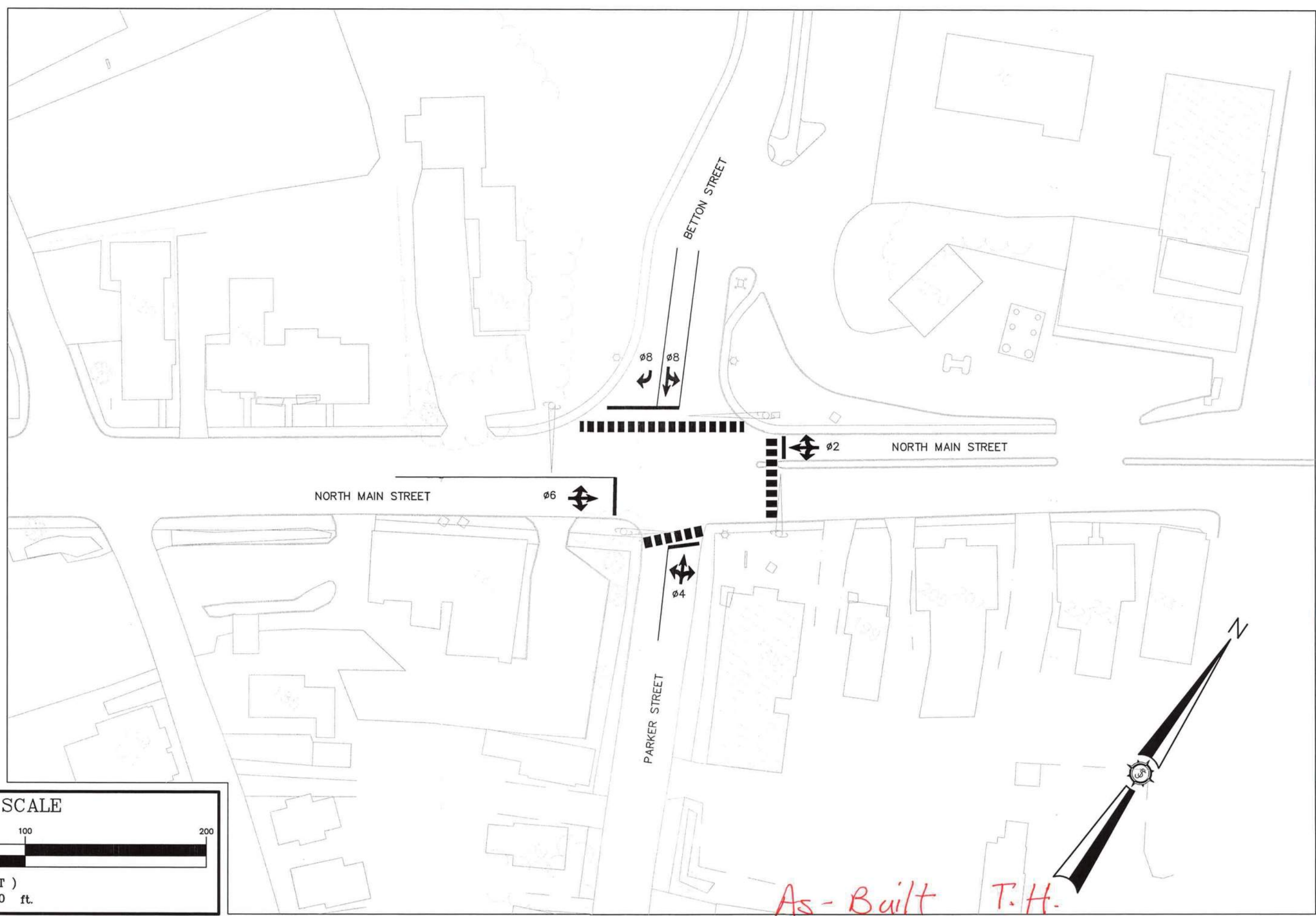
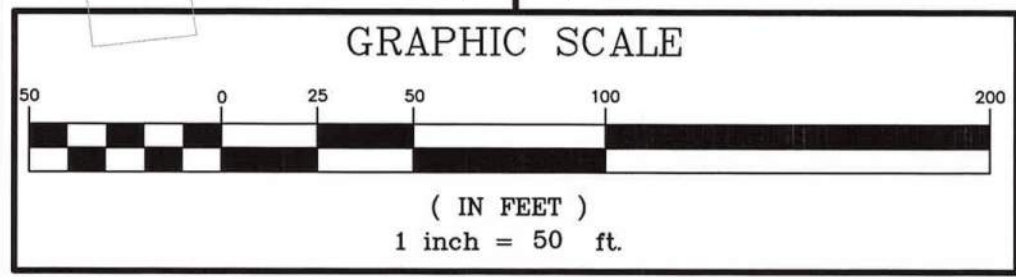
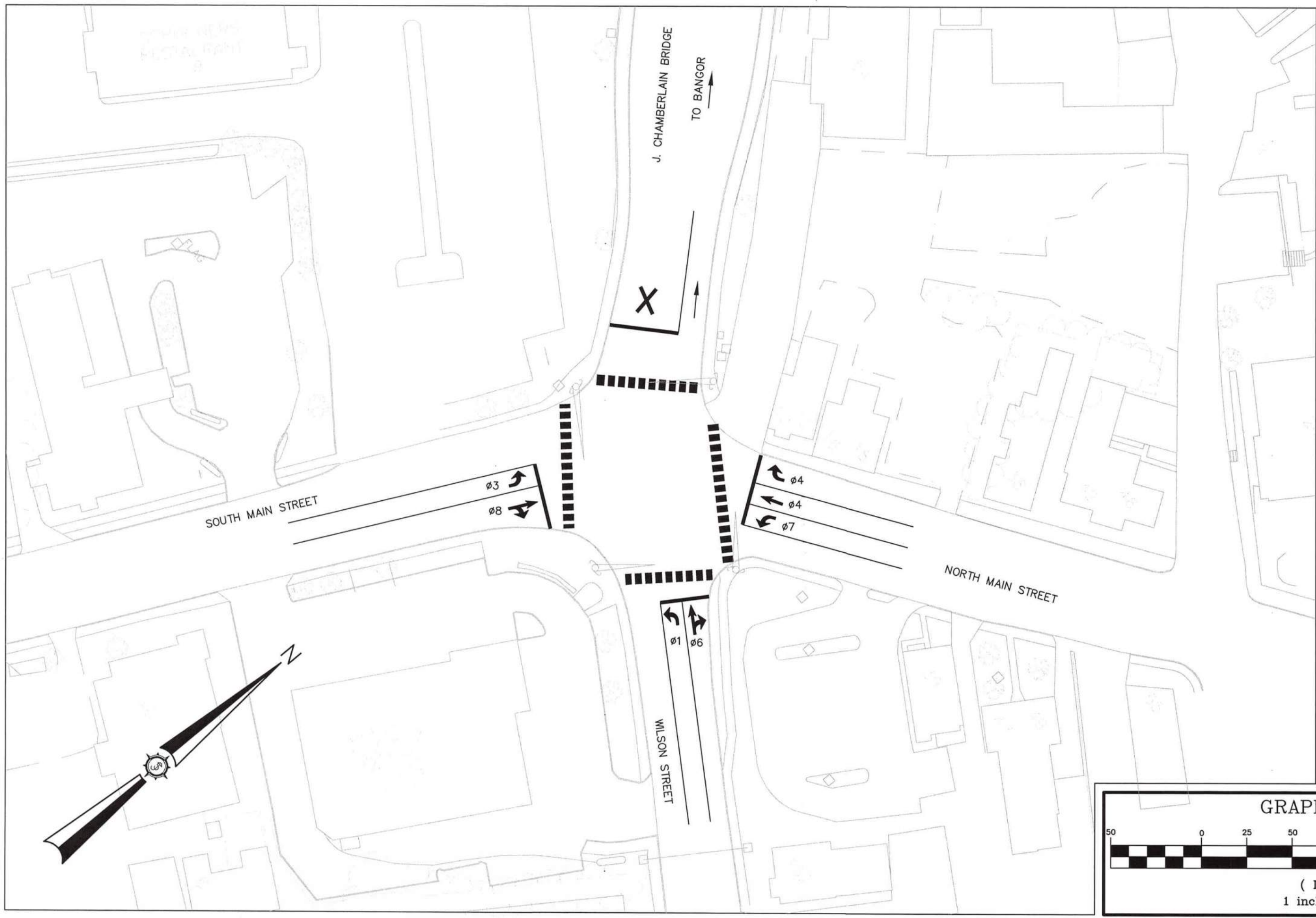
| | PHASE 1 AM PEAK PLAN 1 | PHASE 1 PM PEAK PLAN 2 | PHASE 2 AM PEAK PLAN 3 | PHASE 2 PM PEAK PLAN 4 |
|-------------------------|------------------------|------------------------|------------------------|------------------------|
| CYCLE LENGTH (SEC.) | 95 | 95 | 90 | 95 |
| OFFSET (SEC.) | 69 | 58 | 64 | 52 |
| REFERENCE PHASE | 6-EBTL | 6-EBTL | 6-EBTL | 6-EBTL |
| SPLIT TIME PHASES 2 & 6 | 69 | 57 | 64 | 57 |
| SPLIT TIME PHASES 4 & 8 | 26 | 38 | 26 | 38 |

PHASE TIME INCLUDES CLEARANCE INTERVALS.
REFERENCE PHASE IS TO START OF GREEN TIME.

THE FOLLOWING INTERSECTIONS ARE PART OF THE PENOBSCOT CORRIDOR COORDINATED SIGNAL SYSTEM:
OAK & HANCOCK STREETS
WASHINGTON & EXCHANGE STREETS
STATE & NORTH MAIN STREETS
OAK & WASHINGTON STREETS
STATE & PENOBSCOT STREETS
NORTH MAIN & BETTON (PARKER) STREETS

DAILY SCHEDULE PENOBSCOT CORRIDOR

| DAY | CONST. PHASE 1 | CONST. PHASE 2 |
|---------------------|--|---|
| DAY 1 SATURDAY | 0:00 - 5:00 FLASH 5:00 - 8:00 FREE 8:00 - 10:00 PLAN 1 10:00 - 16:00 PLAN 2 16:00 - 19:00 PLAN 1 19:00 - 23:59 FREE | FLASH FREE PLAN 3 PLAN 4 PLAN 3 FREE |
| DAY 2-6 MON. - FRI. | 0:00 - 4:30 FLASH 4:30 - 6:30 FREE 6:30 - 10:00 PLAN 1 10:00 - 18:30 PLAN 2 18:30 - 20:00 PLAN 1 20:00 - 23:59 FREE | FLASH FREE PLAN 3 PLAN 4 PLAN 3 FREE |
| DAY 7 SUNDAY | 0:00 - 5:00 FLASH 5:00 - 10:00 FREE 10:00 - 18:00 PLAN 1 18:00 - 23:59 FREE | FLASH FREE PLAN 3 FREE |



As-Built T.H.

Project No. 83308E MDOT WIN 18320.00

Phase CONSTRUCT

Sheet No. 12

MAINE DEPARTMENT OF TRANSPORTATION

Project Location AUGUSTA, MAINE

Drawing Description BANGOR & BREWER, MAINE

Project Engineer

Checked BOH

Approved JMT

Seal

Professional Engineer

11/16/12

AN INTEGRATED TEAM OF

GEOSPATIAL ENGINEERING,

SURVEYING AND NATURAL

RESOURCE CONSULTANTS

SEWALL

JAMES W. SEWALL COMPANY Since 1880

800 614 1302



GENERAL NOTES - DETOUR PHASE 1

1. ALL WORK PERFORMED UNDER THIS CONTRACT TO BE GOVERNED BY AND IN CONFORMITY WITH THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (DECEMBER 2002), STANDARD DETAILS HIGHWAYS AND BRIDGES (DECEMBER 2002) AND SUPPLEMENTAL THERETO EXCEPT AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.
2. ALL TEMPORARY PAVEMENT MARKINGS SHALL BE IN ACCORDANCE TO MEDOT STANDARD SPECIFICATION & STANDARD DETAILS SECTION 627 & THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
3. ALL CONSTRUCTION SIGNS & BARRIERS SHALL BE IN ACCORDANCE TO MEDOT STANDARD SPECIFICATIONS & STANDARD DETAILS & THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
4. ON-STREET PARKING ON SOUTH SIDE OF WATER STREET IS TO BE ELIMINATED FROM MAIN STREET TO THE FIRST KEY BANK ENTRANCE.
5. WATER STREET SHALL BE RE-STRIPED AT THE INTERSECTION WITH MAIN STREET FOR ONE WESTBOUND LANE. SEE SIGNAL PLAN 6.
6. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED BY GRINDING. PAVEMENT MARKING REMOVAL TO BE PAID UNDER ITEM 627.77. AT PROJECT COMPLETION, THE ORIGINAL PAVEMENT MARKINGS ARE TO BE RESTORED AND THE TEMPORARY PAVEMENT MARKINGS REMOVED.
7. EXACT LOCATION OF SIGNS TO BE FIELD DETERMINED AND APPROVED BY RESIDENT.

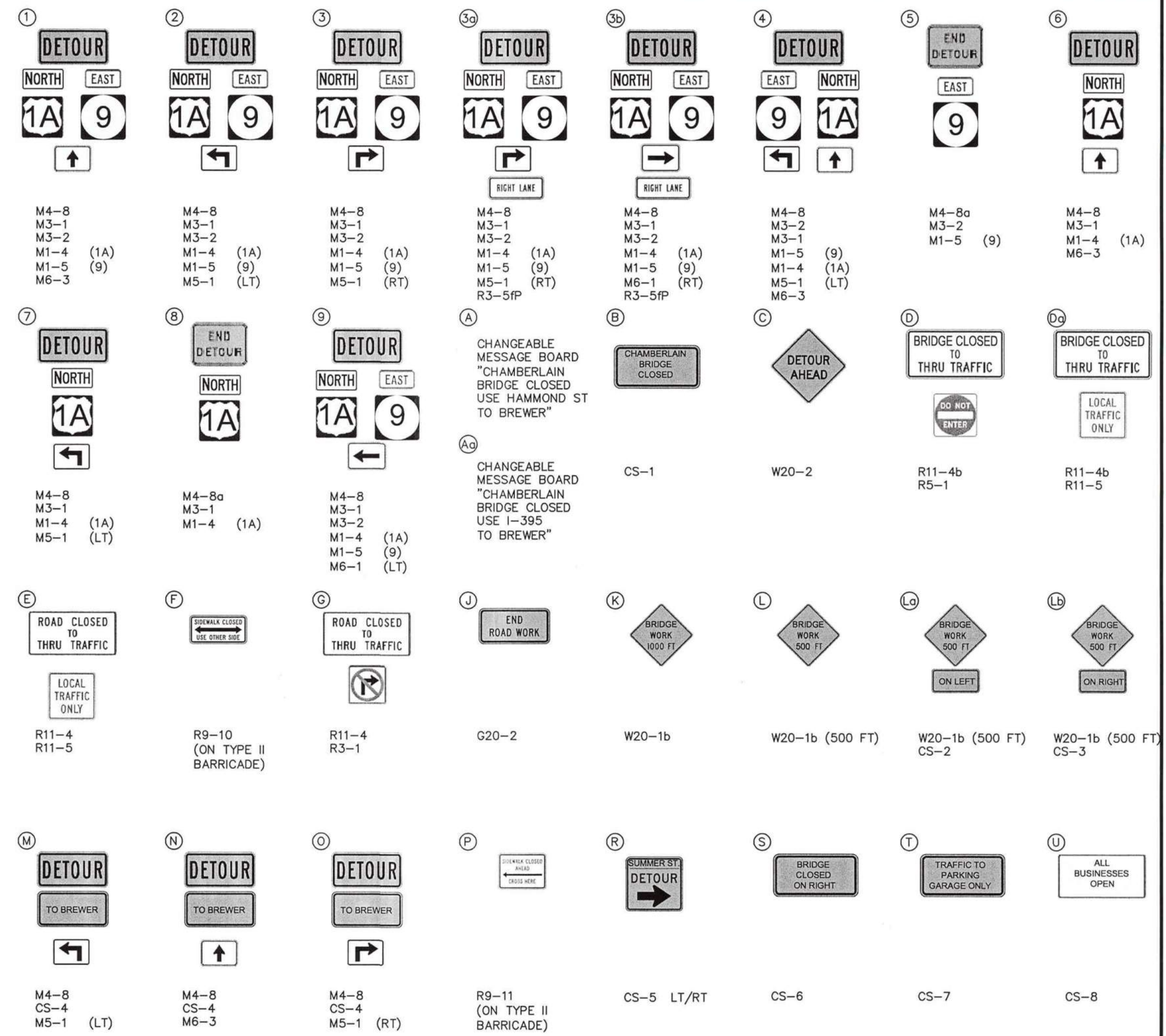
LEGEND

- ▲ SIGN LOCATION
- ① SIGN DESCRIPTION
- ↑ TRAVEL DIRECTION
- X LANE CLOSED
- TYPE 3 BARRICADE
- TEMPORARY CONCRETE BARRIER AND/OR DRUMS

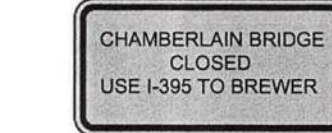
SIGN DIMENSIONS

| SIGN | DIM. (IN.) |
|--------|------------|
| G20-2 | 36X18 |
| M1-4 | 24X24 |
| M1-5 | 24X24 |
| M3-1 | 24X12 |
| M3-2 | 24X12 |
| M4-8 | 24X12 |
| M4-8a | 24X12 |
| M5-1 | 21X15 |
| M6-1 | 21X15 |
| M6-3 | 21X15 |
| R3-1 | 24X24 |
| R3-5P | 30X12 |
| R5-1 | 30X30 |
| R9-10 | 24X12 |
| R9-11 | 24X12 |
| R11-4 | 60X30 |
| R11-4b | 60X30 |
| R11-5 | 24X24 |
| W20-1b | 36X36 |
| W20-2 | 36X36 |

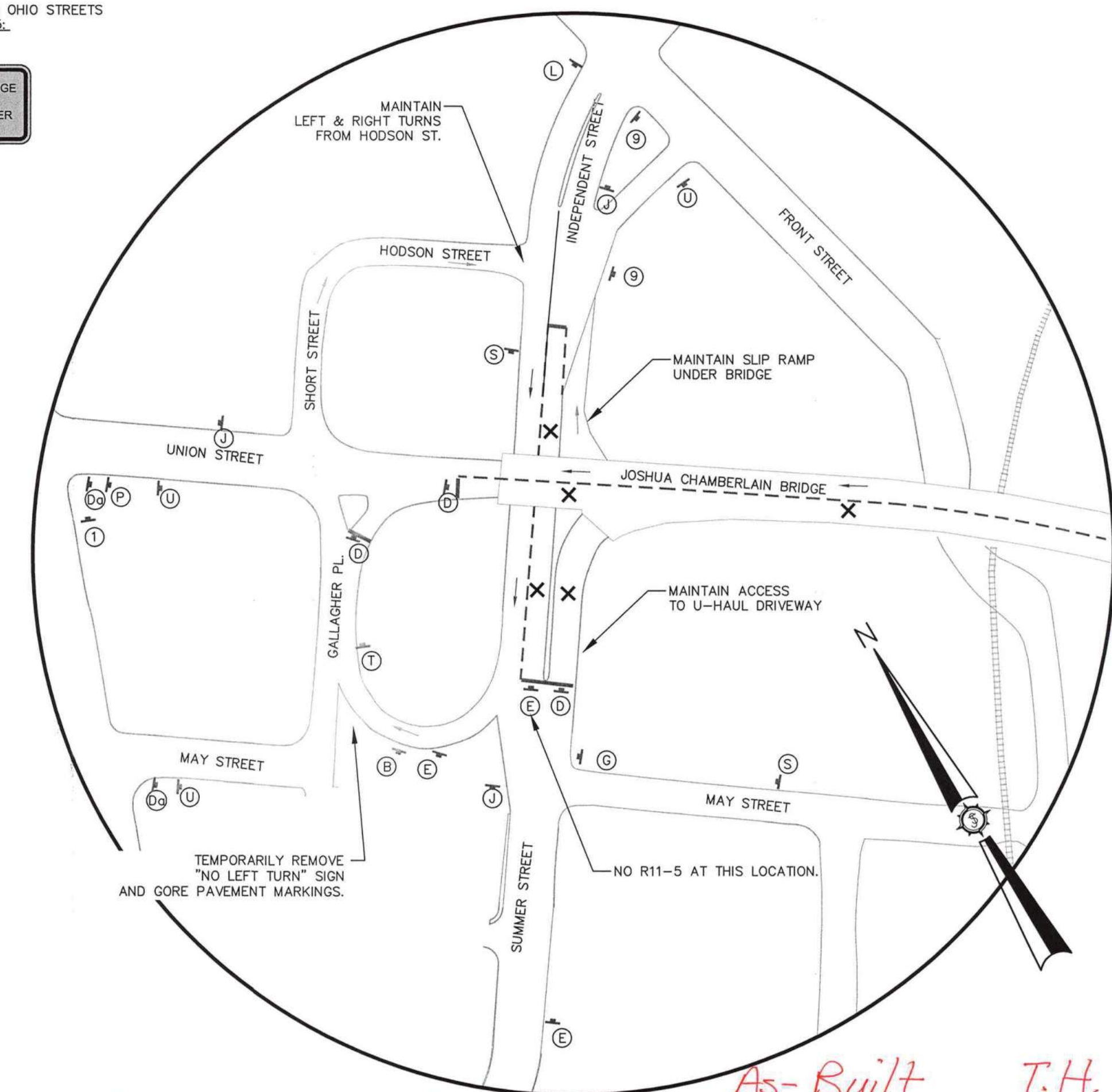
| SIGN | DIM. (IN.) |
|------|------------|
| CS-1 | 60X30 |
| CS-2 | 36X12 |
| CS-3 | 36X12 |
| CS-4 | 36X12 |
| CS-5 | 30X30 |
| CS-6 | 48X24 |
| CS-7 | 36X36 |
| CS-8 | 48X24 |
| CS-9 | 60X30 |



SIGNS FOR UNION & OHIO STREETS
NORTHWEST OF I-95:



CS-9



| | |
|---|--|
| Date: _____ | |
| Rev. of: _____ | |
| Drawn By: _____ | |
| Checked: _____ | |
| Approved: _____ | |
| Project Location: _____ | |
| Scale: 1" = 1,000' | |
| Date: 11/16/2012 | |
| Maine | |
| Project Location: BANGOR & BREWER, MAINE | |
| Drawing Description: DETOUR PLAN PHASE 1 | |
| Project No.: 83308E | |
| MDOT WIN 18320.00 | |
| AN INTEGRATED TEAM OF GEOSPATIAL ENGINEERING, SURVEYING AND NATURAL RESOURCE CONSULTANTS | |
| SEWALL | |
| JAMES W. SEWALL COMPANY 800.688.5202 | |
| Phase: CONSTRUCT | |
| Sheet No.: 13 | |



GENERAL NOTES -- DETOUR PHASE 2

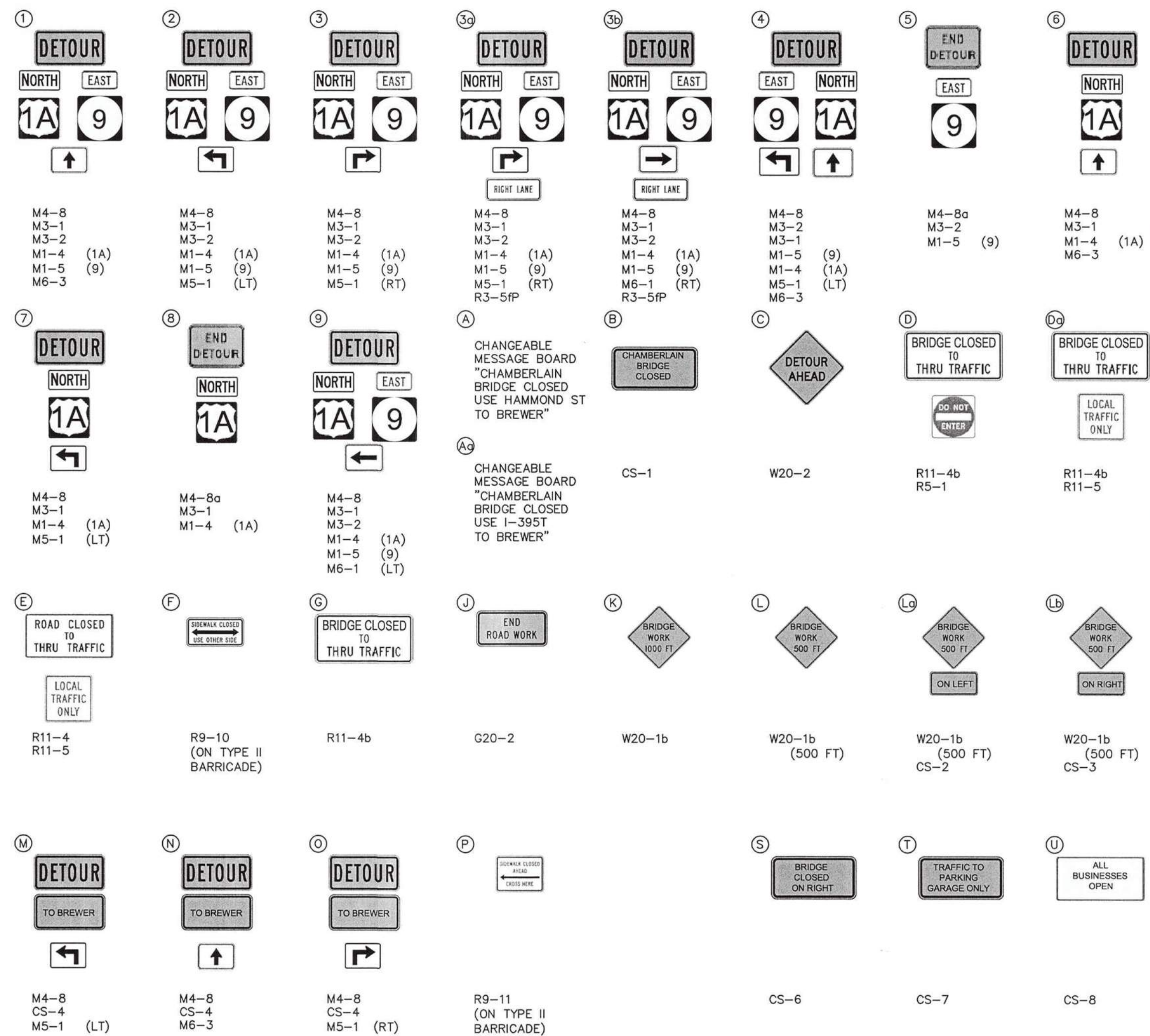
- ALL WORK PERFORMED UNDER THIS CONTRACT TO BE GOVERNED BY AND IN CONFORMITY WITH THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (DECEMBER 2002), STANDARD DETAILS HIGHWAYS AND BRIDGES (DECEMBER 2002) AND SUPPLEMENTAL THERETO EXCEPT AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.
- ALL TEMPORARY PAVEMENT MARKINGS SHALL BE IN ACCORDANCE TO MDOT STANDARD SPECIFICATION & STANDARD DETAILS SECTION 627 & THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
- ALL CONSTRUCTION SIGNS & BARRIERS SHALL BE IN ACCORDANCE TO MDOT STANDARD SPECIFICATIONS & STANDARD DETAILS & THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
- WATER STREET SHALL BE RE-STRIPED AT THE INTERSECTION WITH MAIN STREET FOR ONE WESTBOUND LANE. SEE SIGNAL PLAN 6.
- ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED BY GRINDING. PAVEMENT MARKING REMOVAL TO BE PAID UNDER ITEM 627.77. AT PROJECT COMPLETION, THE ORIGINAL PAVEMENT MARKINGS ARE TO BE RESTORED AND THE TEMPORARY PAVEMENT MARKINGS REMOVED.

LEGEND

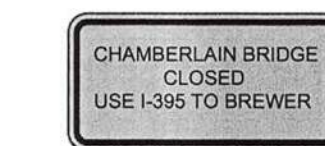
- SIGN LOCATION
- SIGN DESCRIPTION
- TRAVEL DIRECTION
- LANE CLOSED
- TYPE 3 BARRICADE
- TEMPORARY CONCRETE BARRIER AND/OR DRUMS

SIGN DIMENSIONS

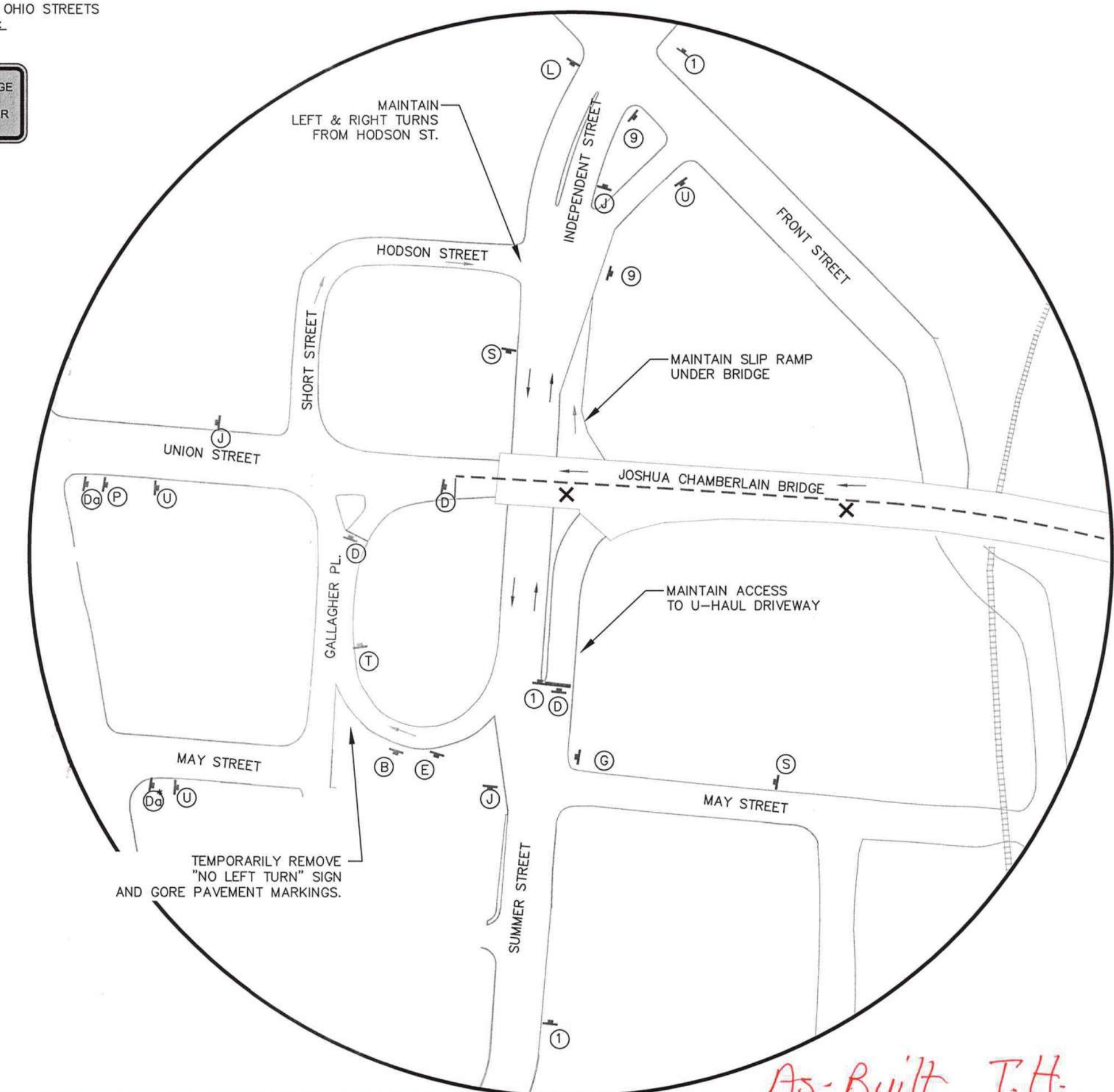
| SIGN | DIM. (IN.) | SIGN | DIM. (IN.) |
|--------|------------|------|------------|
| G20-2 | 36X18 | CS-1 | 60X30 |
| M1-4 | 24X24 | CS-2 | 36X12 |
| M1-5 | 24X24 | CS-3 | 36X12 |
| M3-1 | 24X12 | CS-4 | 36X12 |
| M3-2 | 24X12 | CS-5 | 30X30 |
| M4-8 | 24X12 | CS-6 | 48X24 |
| M4-8a | 24X12 | CS-7 | 36X36 |
| M5-1 | 21X15 | CS-8 | 48X24 |
| M6-1 | 21X15 | CS-9 | 60X30 |
| M6-3 | 21X15 | | |
| R3-5IP | 30X12 | | |
| R5-1 | 30X30 | | |
| R9-10 | 24X12 | | |
| R9-11 | 24X12 | | |
| R11-4 | 60X30 | | |
| R11-4b | 60X30 | | |
| R11-5 | 24X24 | | |
| W20-1b | 36X36 | | |
| W20-2 | 36X36 | | |



SIGNS FOR UNION & OHIO STREETS
NORTHWEST OF I-95:

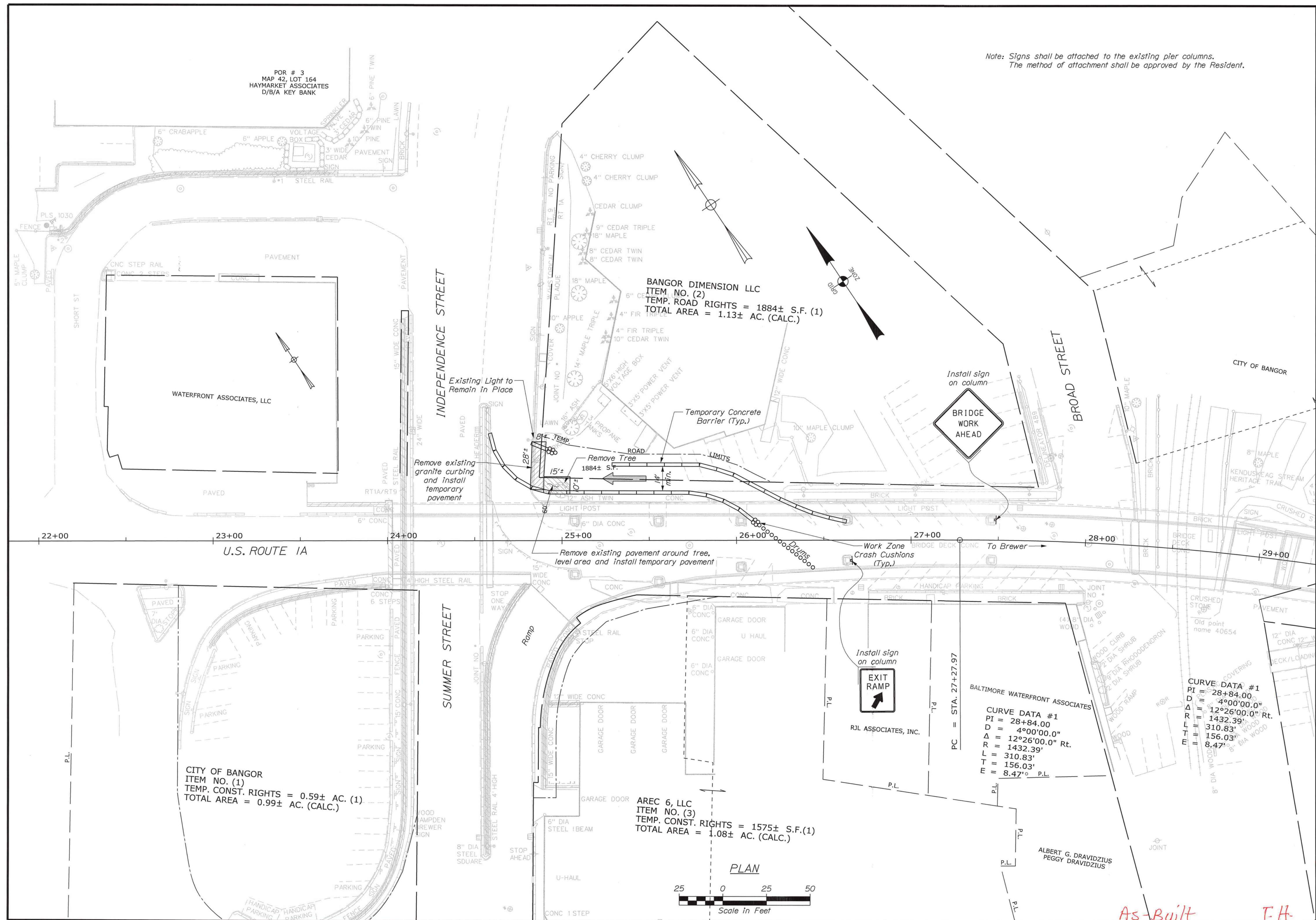


CS-9



As-Built T.H.

| | | | | | | | |
|------------------------------------|--|-------------------|--|--|--|-------------------------|--|
| Date | | Rev. # | | Drawn By | | Checked | |
| 11/16/2012 | | 1 | | JC | | | |
| MAINE DEPARTMENT OF TRANSPORTATION | | | | PROJECT LOCATION | | | |
| AUGUSTA, MAINE | | | | BANGOR & BREWER, MAINE | | | |
| Scale 1" = 1,000' | | | | Drawing Description | | | |
| | | | | DETOUR PLAN PHASE 2 | | | |
| Project No. 83308E | | MDOT WIN 18320.00 | | AN INTEGRATED TEAM OF SURVEYING AND NATURAL RESOURCE CONSULTANTS | | JAMES W. SEWALL COMPANY | |
| Engineer | | | | SEWALL | | JAMES W. SEWALL COMPANY | |
| Phase | | CONSTRUCT | | Sheet No. | | 14 | |



Date: 11/20/2012

Username: David.Shaw

Division: BRIDGE

Filename: ... \MSTA\015_Detour_Spans234.dgn

| | |
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| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | |
| BH-1832(000)X | |
| BRIDGE NO. 5312 | WIN 18320.00 |
| BRIDGE PLANS | |

| | | |
|-----------|-------------|------|
| SIGNATURE | P.E. NUMBER | DATE |
|-----------|-------------|------|

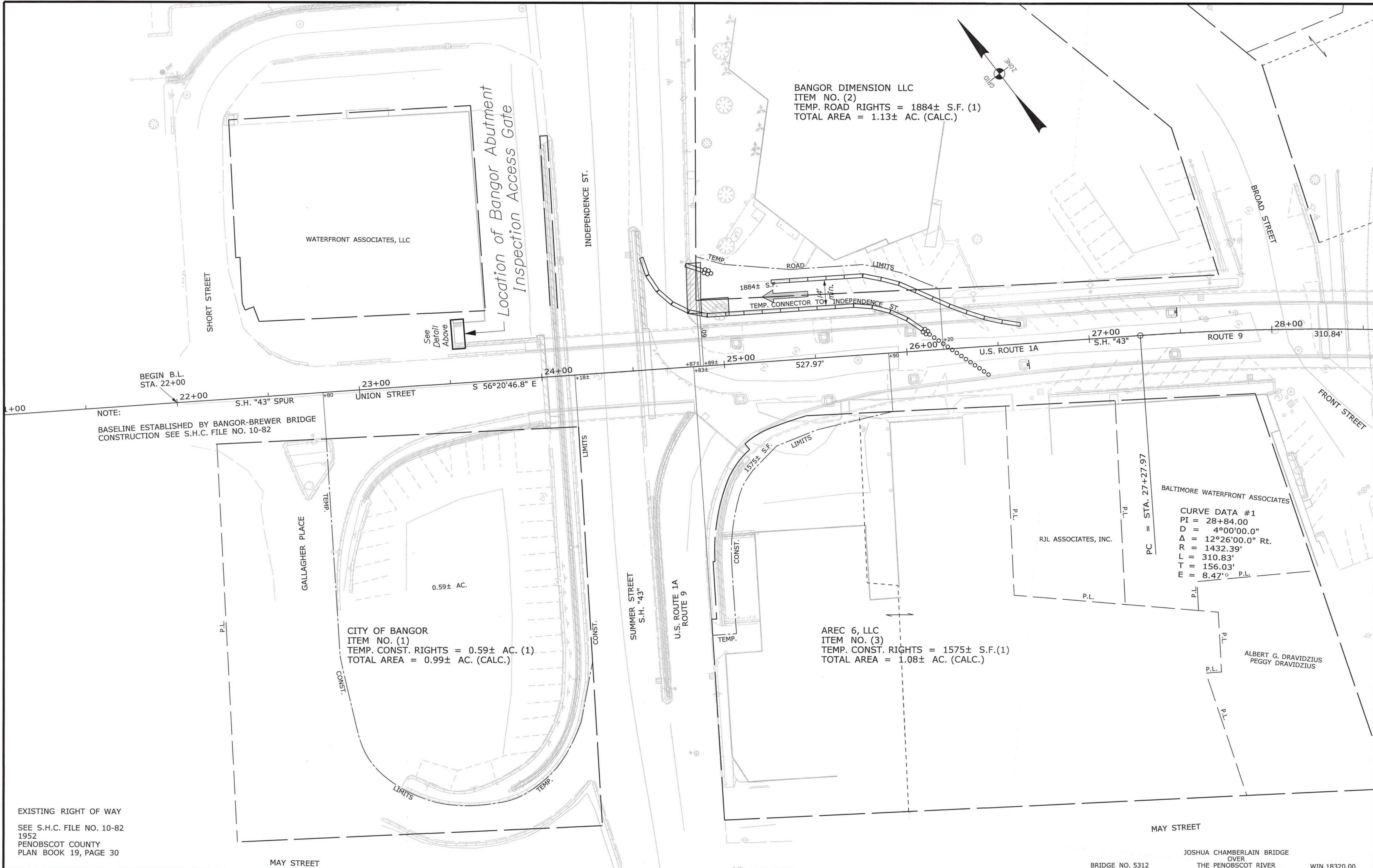
| PROJ. MANAGER | S. BOODE | BY | DATE |
|--------------------|----------|---------|------|
| DESIGN-DETAILED | M. WIGHT | D. SHAW | |
| CHECKED-REVIEWED | ----- | | |
| DESIGN-2-DETAILED2 | ----- | | |
| DESIGN-3-DETAILED3 | ----- | | |
| REVISIONS 1 | ----- | | |
| REVISIONS 2 | ----- | | |
| REVISIONS 3 | ----- | | |
| REVISIONS 4 | ----- | | |
| FIELD CHANGES | ----- | | |

JOSHUA CHAMBERLAIN BRIDGE
PENOBSCOT RIVER
BANGOR-BREWER PENOBSCOT COUNTY
DETOUR FOR WORK ON
SPANS 2, 3 AND 4

SHEET NUMBER

15

OF 18



EXISTING RIGHT OF WAY
SEE S.H.C. FILE NO. 10-82
1952
PENOBSCOT COUNTY
PLAN BOOK 19, PAGE 30

| REVISIONS | | | | PLAN FILED IN PLAN BOOK | | | | PAGE COUNTY RECORD | | | |
|-----------|------|-------------|----|-------------------------|---------|------------|------|--------------------|------|--|--|
| NO. | DATE | DESCRIPTION | BY | NO. | GRANTOR | INSTRUMENT | DATE | BOOK | PAGE | | |
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DAVID BERNHARDT
COMMISSIONER
KENNETH L. SWEENEY
CHIEF ENGINEER

DATE

As-Built T.H.

STATE HIGHWAY "43"
U.S. ROUTE 1A\ROUTE 9 UNION STREET
BANGOR PENOBSCOT COUNTY
FEDERAL AID PROJECT NO. BH-1832(000)X

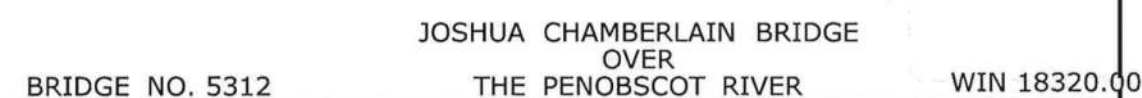
OCTOBER 2012
SCALE 1" = 25'

RIGHT-OF-WAY MAP
SHEET 1 OF 3

D.O.T. FILE NO. 10-479

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016
BANGOR
RIGHT OF WAY MAP

| ITEM | TECH | CHECKED | SYMBOLS |
|-------------|------|---------|---|
| BASE MAP | | | OWELL (WELL) GRADING LIMIT LINE CONSTRUCTION LIMIT LINE PROPERTY LINE LIMITS OF VARIOUS PORTION (L.O.V.P.) EXISTING RIGHT OF WAY NEW RIGHT OF WAY NEW ROW WITHIN EXIST. ROW CONTROL OF ACCESS |
| EXIST. R/W | BDM | | IRON PIPE OR PIN FOUND SEPTIC TANK ROW MONUMENT TRAVELER POINT WATER LINE GAS LINE ELECTRIC LINE TELEPHONE LINE SEWER LINE |
| PROP. LINES | BDM | | |
| AREAS | BDM | | |



As-Built T.H.

STATE HIGHWAY "43"
U.S. ROUTE 1A/ROUTE 9 UNION STREET
BANGOR-BREWER PENOBSCOT COUNTY
FEDERAL AID PROJECT NO. BH-1832(000)X

| | | |
|----------------|----------------------------------|------------------------|
| OCTOBER 2012 | RIGHT-OF-WAY MAP SHEET 2 OF 3 | D.O.T. FILE NO. 10-479 |
| SCALE 1" = 25' | | |

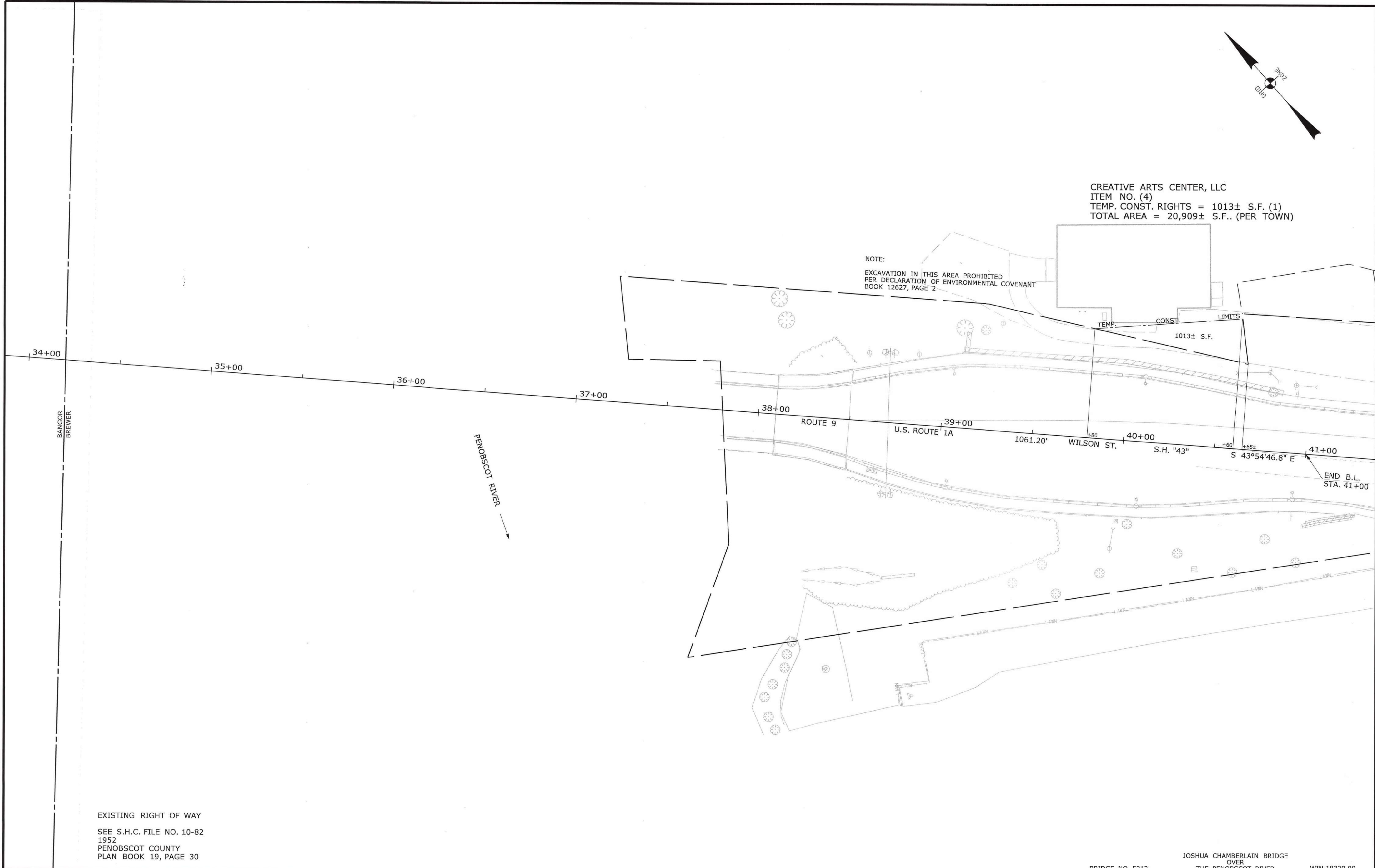
| STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 BANGOR RIGHT OF WAY MAP | | ITEM | TECH | CHECKED | SYMBOLS | |
|---|-----|------|------|--|--|--|
| BASE MAP | | | | * # OF ● PIPE (IRON PIPE or PIN FOUND) □ S.T. (SEPTIC TANK) □ ROW MONUMENT Δ BM (TRAVERSE POINT) | ○ WELL (WELL) ○ GRADING LIMIT LINE ○ CONSTRUCTION LIMIT LINE ○ PROPERTY LINE ○ FL ○ LIMITS OF VROUGHT PORTION (L.O.V.P.) ○ EXISTING RIGHT OF WAY ○ NEW RIGHT OF WAY ○ NEW ROW WITHIN EXIST. ROW ○ CONTROL OF ACCESS | |
| EXIST. R/W | BDM | | | — W — WATER LINE — G — GAS LINE — E — ELECTRIC LINE — T — TELEPHONE LINE — S — SEWER LINE | | |
| PROP. LINES | BDM | | | | | |
| AREAS | BDM | | | | | |

Filename: ...\\00\\ROW\\MSTA\\003_RWPLAN3.dgn

Date:11/20/2012

Username: David.Shaw

Division: BRIDGE



EXISTING RIGHT OF WAY
SEE S.H.C. FILE NO. 10-82
1952
PENOBSCOT COUNTY
PLAN BOOK 19, PAGE 30

JOSHUA CHAMBERLAIN BRIDGE
OVER
THE PENOBSCOT RIVER
BRIDGE NO. 5312 WIN 18320.00

| REVISIONS | | | | PLAN FILED IN PLAN BOOK | | | | PAGE COUNTY RECORD | | | | DAVID BERNHARDT COMMISSIONER KENNETH L. SWEENEY CHIEF ENGINEER DATE |
|-----------|------|-------------|----|-------------------------|---------|------------|------|--------------------|------|--|--|---|
| NO. | DATE | DESCRIPTION | BY | NO. | GRANTOR | INSTRUMENT | DATE | BOOK | PAGE | | | |
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| | | | | | | | | | | | | |

DAVID BERNHARDT
COMMISSIONER
KENNETH L. SWEENEY
CHIEF ENGINEER

DATE

As-Built T.H.

| STATE HIGHWAY "43" | | |
|---------------------------------------|------------------|------------------------|
| U.S. ROUTE 1A/ROUTE 9 WILSON STREET | | |
| BANGOR-BREWER PENOBSCOT COUNTY | | |
| FEDERAL AID PROJECT NO. BH-1832(000)X | | |
| OCTOBER 2012 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 10-479 |
| SCALE 1" = 25' | SHEET 3 OF 3 | |

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 BANGOR RIGHT OF WAY MAP | | | | SHEET NUMBER | | | |
|---|--|--|--|--------------|--|--|--|
| | | | | 18 | | | |
| | | | | OF 18 | | | |

| SYMBOLS | | CHECKED | | TECH | | ITEM | |
|----------------------------------|----------------------------------|---------|--|------|--|-------------|-----|
| IP or | PF (IRON PIPE OR PIN FOUND) | | | | | BASE MAP | |
| ST | SEPTIC TANK | | | | | EXIST. R/W | BDM |
| ARM | ARM (TRAVERSE POINT) | | | | | PROP. LINES | BDM |
| W | WATER LINE | | | | | AREAS | BDM |
| G | GAS LINE | | | | | | |
| E | ELECTRIC LINE | | | | | | |
| T | TELEPHONE LINE | | | | | | |
| S | SEWER LINE | | | | | | |
| WELL | WELL | | | | | | |
| GRADING LIMIT LINE | GRADING LIMIT LINE | | | | | | |
| CONSTRUCTION LIMIT LINE | CONSTRUCTION LIMIT LINE | | | | | | |
| PROPERTY LINE | PROPERTY LINE | | | | | | |
| LIMITS OF WRIGHT PORTION (LOW P) | LIMITS OF WRIGHT PORTION (LOW P) | | | | | | |
| EXISTING RIGHT OF WAY | EXISTING RIGHT OF WAY | | | | | | |
| NEW RIGHT OF WAY | NEW RIGHT OF WAY | | | | | | |
| NEW FROM WITHIN EXIST. ROW | NEW FROM WITHIN EXIST. ROW | | | | | | |
| CONTROL OF ACCESS | CONTROL OF ACCESS | | | | | | |