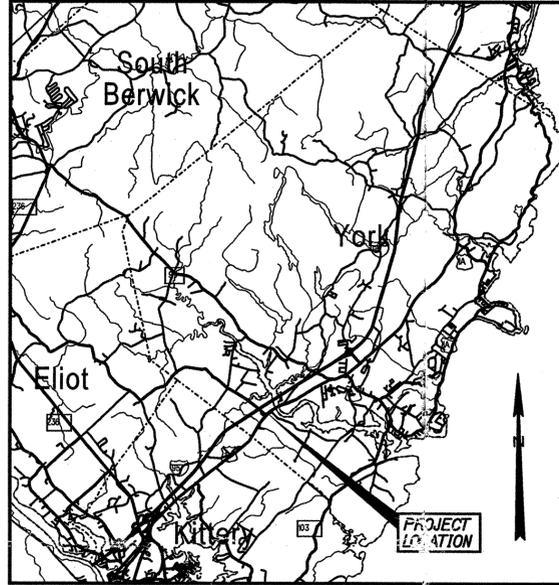


# STATE OF MAINE DEPARTMENT OF TRANSPORTATION



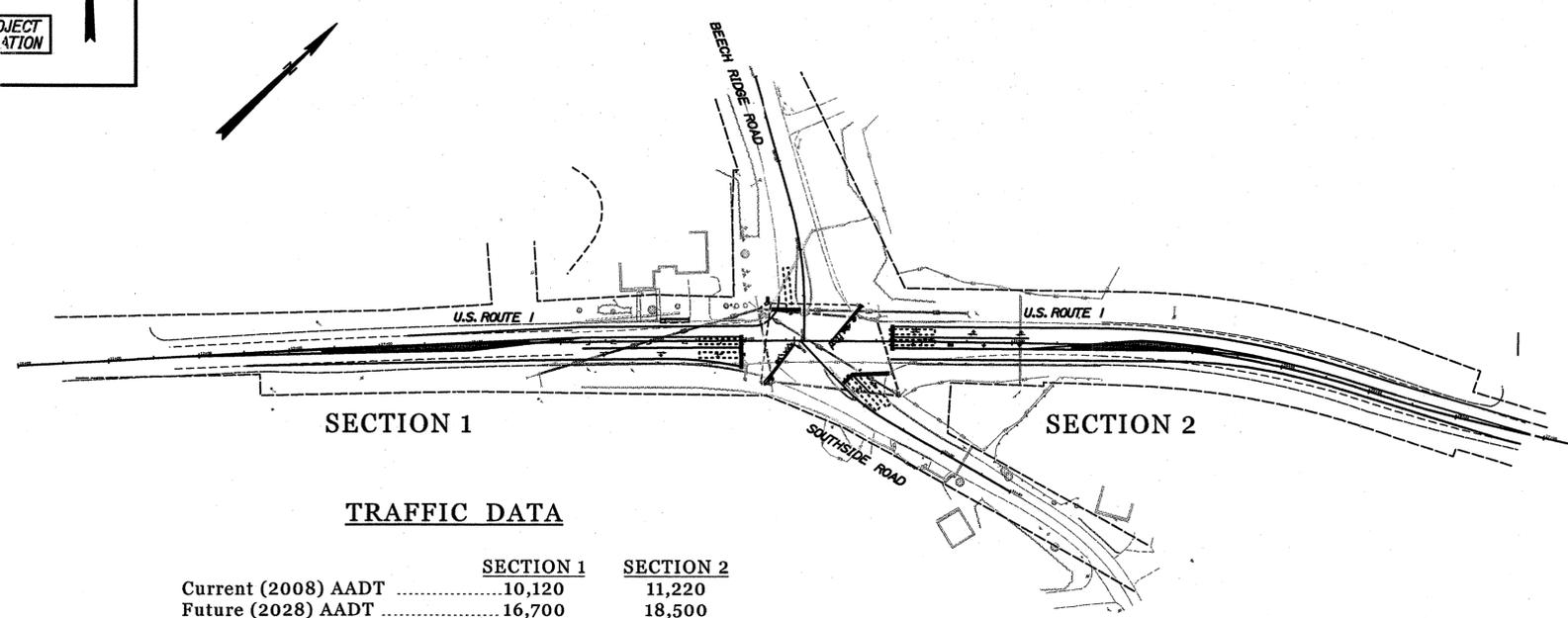
## YORK YORK COUNTY

### ROUTE 1/BEECH RIDGE ROAD/SOUTH SIDE STREET STP-1724(900)X TRAFFIC SIGNAL IMPROVEMENTS



LOCATION MAP

| <u>INDEX OF SHEETS</u> |                  |
|------------------------|------------------|
| <u>Description</u>     | <u>Sheet No.</u> |
| Title Sheet .....      | 1                |
| Signal Plan .....      | 2                |
| Striping Plans .....   | 3-5              |



#### TRAFFIC DATA

|                                      | <u>SECTION 1</u> | <u>SECTION 2</u> |
|--------------------------------------|------------------|------------------|
| Current (2008) AADT .....            | 10,120           | 11,220           |
| Future (2028) AADT .....             | 16,700           | 18,500           |
| DHV - % of AADT .....                | 12%              | 12%              |
| Design Hour Volume .....             | 1200             | 1400             |
| % Heavy Trucks (AADT) .....          | 4%               | 5%               |
| % Heavy Trucks (DHV) .....           | 3%               | 4%               |
| Directional Distribution (DHV) ..... | 56%              | 51%              |
| Design Speed (mph) .....             | 45               | 45               |

#### LAYOUT SCALE



|  |                 |
|--|-----------------|
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | DATE<br>7/1/10  |
| APPROVED                                       | DATE<br>6/23/10 |



|                    |             |         |
|--------------------|-------------|---------|
| SIGNATURE          | P.E. NUMBER | DATE    |
| <i>J. Williams</i> | 10826       | 5-28-10 |

| <u>PROJECT INFORMATION</u> |                |
|----------------------------|----------------|
| PROGRAM                    | TRAFFIC        |
| PROJECT MANAGER            | J. WANSIE      |
| DESIGNER                   | J. WILLIAMS    |
| CONSULTANT                 | GORRILL-PALMER |
| PROJECT RESIDENT           |                |
| CONTRACTOR                 |                |
| PROJECT COMPLETION DATE    |                |

STP-1724(900)X      PIN 17249.00

YORK  
ROUTE 1  
TITLE SHEET

SHEET NUMBER

1

OF 5

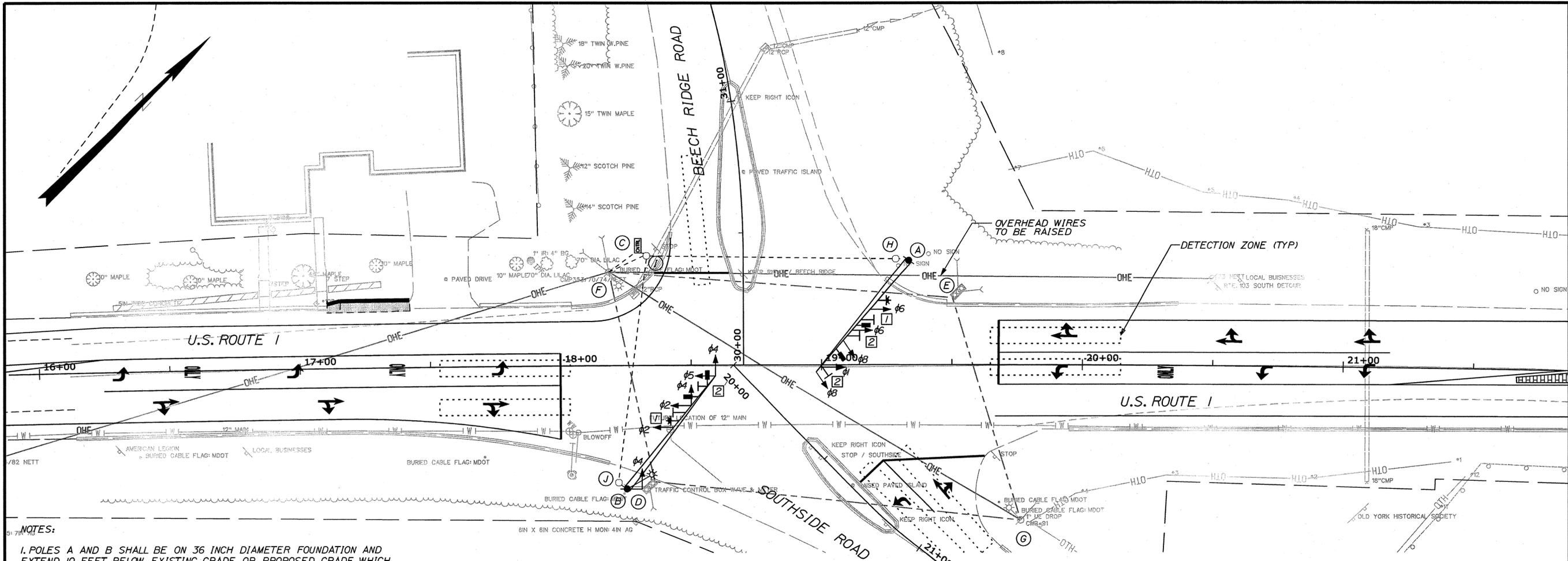
**GP Gorrill-Palmer Consulting Engineers, Inc.**  
 PO Box 1237    Engineering Excellence Since 1998    207-857-8910  
 15 Shaker Road    Grey, ME 04039    FAX: 207-857-8912  
 E-Mail: mail@gorrillpalmer.com

Date: 7/30/2010

Username: DBurgess

Division: HIGHWAY

Filename: ... \HIGHWAY\MSTA\002\_signal01.dgn

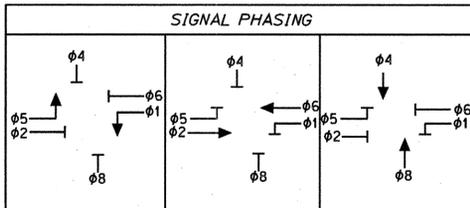


**NOTES:**

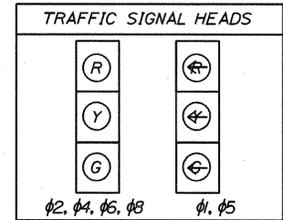
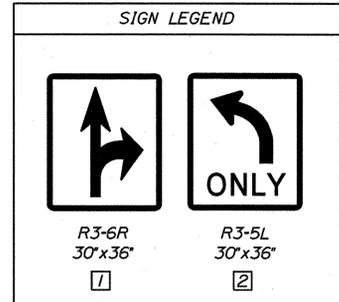
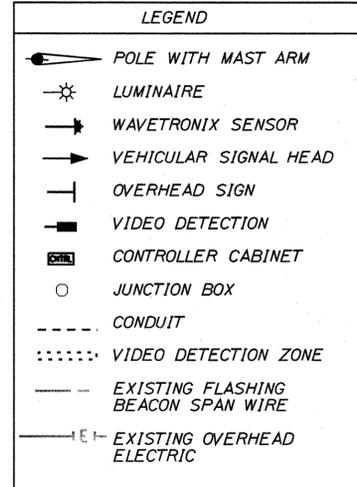
- POLES A AND B SHALL BE ON 36 INCH DIAMETER FOUNDATION AND EXTEND 10 FEET BELOW EXISTING GRADE OR PROPOSED GRADE, WHICH EVER IS LOWER, AS A MINIMUM.
- THE CONTRACTOR MUST MEET ALL UTILITY REQUIREMENTS FOR THE SERVICE CONNECTION.
- ALL SPLICES WILL BE MADE IN THE CABINETS OR POLES MEETING MAINEDOT SPECIFICATIONS.
- ALL MATERIALS AND WORK COMPLETED UNDER THIS CONTRACT SHALL CONFORM TO THE MAINEDOT STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND STANDARD DETAILS AND WITH THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL JUNCTION BOXES.
- UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR FINDING EXACT LOCATIONS OF UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-DIG-SAFE.
- CONTRACTOR SHALL CONTACT AND COORDINATE WITH UTILITIES UPON AWARD OF THE CONTRACT. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES SO THAT THE TRAFFIC SIGNAL INSTALLATION IS DONE AFTER THE UTILITIES HAVE BEEN RELOCATED BY THE RESPECTIVE UTILITY COMPANIES.
- IT IS THE INTENT OF THIS WORK TO HAVE A COMPLETE OPERATIONAL, TESTED AND ACCEPTED TRAFFIC SIGNAL UPON COMPLETION OF THIS CONTRACT.
- THE PROPOSED TRAFFIC SIGNAL TIMING AND PHASING PLAN SHALL BE INPUT BY THE CONTRACTOR UNDER OBSERVATION BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE TO THE ENGINEER.
- ADVANCE DETECTION SHALL BE WAVETRONIX SMART SENSOR ADVANCE WITH SAFE ARRIVAL TECHNOLOGY AND BE AIMED 500 FEET FROM THE STOP BAR. NO SUBSTITUTIONS WILL BE ALLOWED.
- EXISTING FLASHING BEACON SHALL REMAIN ACTIVE UNTIL TRAFFIC SIGNAL FLASH MODE IS OPERATIONAL. ADVANCED FLASHING WARNING SIGNS SHALL REMAIN OPERATIONAL UNTIL TRAFFIC SIGNAL IS ACTIVATED.
- ALL MAST POLES AND ARMS SHALL BE HOT-DIPPED GALVANIZED WITH A BLACK POWDER COAT FINISH. ALL OTHER SIGNAL EQUIPMENT SHALL HAVE A BLACK FINISH.
- EXISTING "STOP" SIGNS SHALL BE REMOVED ONCE SIGNAL IS FULLY OPERATIONAL.
- TRENCH RESTORATION SHALL BE CONSIDERED INCIDENTAL TO THE SECTION 626 AND 643 ITEMS.
- CONTROLLERS SHALL BE TS-2.

| SIGNAL TIMING        |    |          |   |    |    |          |   |    |
|----------------------|----|----------|---|----|----|----------|---|----|
| PHASE                | 1  | 2        | 3 | 4  | 5  | 6        | 7 | 8  |
| MINIMUM INITIAL      | 4  | 4        | - | 4  | 4  | 4        | - | 4  |
| PASSAGE TIME         | 3  | 7        | - | 3  | 3  | 7        | - | 3  |
| MAXIMUM GREEN        | 11 | 27       | - | 22 | 11 | 27       | - | 22 |
| YELLOW               | 3  | 3        | - | 3  | 3  | 3        | - | 3  |
| ALL RED              | 4  | 4        | - | 3  | 3  | 4        | - | 3  |
| FLASH                | R  | Y        | - | R  | R  | Y        | - | R  |
| PHASE RECALL         | -  | SOFT     | - | -  | -  | SOFT     | - | -  |
| WALK/DON'T WALK      | -  | -        | - | -  | -  | -        | - | -  |
| PEDESTRIAN CLEARANCE | -  | -        | - | -  | -  | -        | - | -  |
| MEMORY               | -  | -        | - | -  | -  | -        | - | -  |
| DETECTOR MODE        | PR | PR/PULSE | - | PR | PR | PR/PULSE | - | PR |
| DETECTOR DELAY       | -  | -        | - | -  | -  | -        | - | -  |

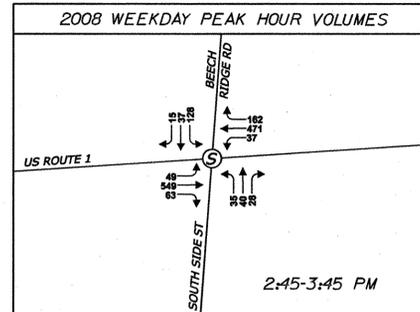
| EQUIPMENT SCHEDULE |                  |                     |  |  |
|--------------------|------------------|---------------------|--|--|
| DESIGNATION        | FATIGUE CATEGORY | STATION, OFFSET     | ITEM   | DESCRIPTION  |
| A                  | 1                | 19+33.40, 39.35' LT | 21' POLE WITH 55' MAST ARM (19' TO TOP OF ARM) | SIGNAL HEADS, LANE USE SIGNS, VIDEO DETECTION AND WAVETRONIX SENSOR                              |
| B                  | 1                | 18+25.13, 47.26' RT | 30' POLE 55' MAST ARM                          | SIGNAL HEADS, LANE USE SIGNS, VIDEO DETECTION, WAVETRONIX SENSOR AND 10' ARM WITH 150W LUMINAIRE |
| C                  |                  |                     | CONTROLLER CABINET                             | NEW CONTROLLER AND CABINET. CABINET SHALL BE A 'P' CABINET WITH BASE EXTENSION                   |
| D & E              |                  |                     | EXISTING WOOD POLES, GUY WIRES & ANCHORS       | TO BE REMOVED  |
| F                  |                  |                     | EXISTING UTILITY POLES                         | REMOVE FLASHING BEACON EQUIPMENT, ADD RISER  |
| G                  |                  |                     | EXISTING UTILITY POLES                         | REMOVE FLASHING BEACON EQUIPMENT   |
| H, I, J            |                  |                     | JUNCTION BOX                                   | CONCRETE   |



| CONDUIT SCHEDULE |             |                    |
|------------------|-------------|--------------------|
| RUN              | LENGTH (ft) | COMMENTS           |
| A-H              | 4           | 4" PVC SCHEDULE 80 |
| H-I              | 94          | 4" PVC SCHEDULE 80 |
| I-C              | 2           | 4" PVC SCHEDULE 80 |
| I-F              | 70          | 4" PVC SCHEDULE 80 |
| I-J              | 85          | 4" PVC SCHEDULE 80 |
| J-B              | 3           | 4" PVC SCHEDULE 80 |
| F-C              | 13          | 2" STEEL           |



ALL SIGNAL HEADS 12" L.E.D. WITH BACK PLATES

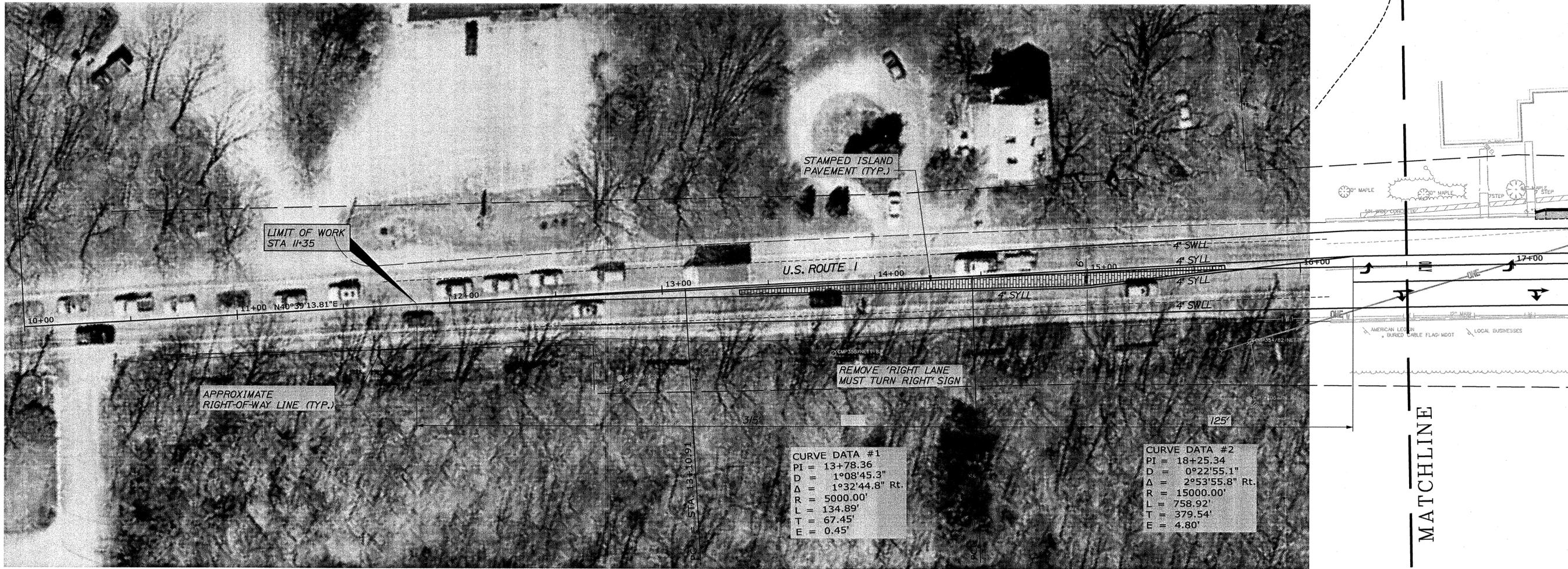


STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
STP-1724(900)  
PIN 17249.00  
HIGHWAY PLANS

| PROJ. MANAGER    | J. WANSER   | DATE     | BY | DATE | SIGNATURE |
|------------------|-------------|----------|----|------|-----------|
| DESIGN-DETAILED  | D. BURGESS  | 05-28-10 |    |      |           |
| CHECKED-REVIEWED | R. NORWOOD  | 05-28-10 |    |      |           |
| DESIGN-DETAILED2 | J. WILLIAMS | 05-28-10 |    |      |           |
| DESIGN-DETAILED3 |             |          |    |      |           |
| REVISIONS 1      |             |          |    |      |           |
| REVISIONS 2      |             |          |    |      |           |
| REVISIONS 3      |             |          |    |      |           |
| REVISIONS 4      |             |          |    |      |           |
| FIELD CHANGES    |             |          |    |      |           |

YORK  
ROUTE 1  
TRAFFIC SIGNAL PLAN

SHEET NUMBER  
2  
OF 5



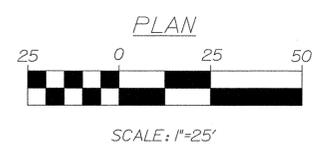
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 PI = 13+78.36  
 D = 1°08'45.3"  
 Δ = 1°32'44.8" Rt.  
 R = 5000.00'  
 L = 134.89'  
 T = 67.45'  
 E = 0.45'

**CURVE DATA #2**  
 PI = 18+25.34  
 D = 0°22'55.1"  
 Δ = 2°53'55.8" Rt.  
 R = 15000.00'  
 L = 758.92'  
 T = 379.54'  
 E = 4.80'

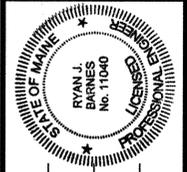
**STRIPING LEGEND**  
 SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION AND REFLECTIVITY.

12" SL - 12" WIDTH STOP LINE  
 4" SWLL - 4" WIDTH SOLID WHITE LANE LINE  
 4" SYLL - 4" WIDTH SOLID YELLOW LANE LINE  
 4" DYCL - 4" WIDTH DOUBLE YELLOW CENTERLINE

REPLACE 'ENTERING TRAFFIC AHEAD' SIGN WITH 'SIGNAL AHEAD' SIGN AND REMOVE FLASHING BEACON AND RELATED EQUIPMENT, INCLUDING POWER SUPPLY. THIS WORK SHALL BE COMPLETED THE SAME DAY THE TRAFFIC SIGNAL IS ACTIVATED.



STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION  
 STP-1724(900)  
 PIN 17249.00  
 HIGHWAY PLANS



PROJ. MANAGER  
 J. MANSB  
 DESIGN-DETAILED  
 CHECKED-REVIEWED  
 DESIGN-DETAILED  
 DESIGN-DETAILED  
 REVISIONS 1  
 REVISIONS 2  
 REVISIONS 3  
 REVISIONS 4  
 FIELD CHANGES

| BY          | DATE     |
|-------------|----------|
| D. BURGESS  | 05-28-10 |
| R. NORWOOD  | 05-28-10 |
| J. WILLIAMS | 05-28-10 |

SIGNATURE: *[Signature]*  
 P.E. NUMBER: 11040  
 DATE: 7-21-10

YORK  
 ROUTE 1  
 STRIPING PLAN - 1

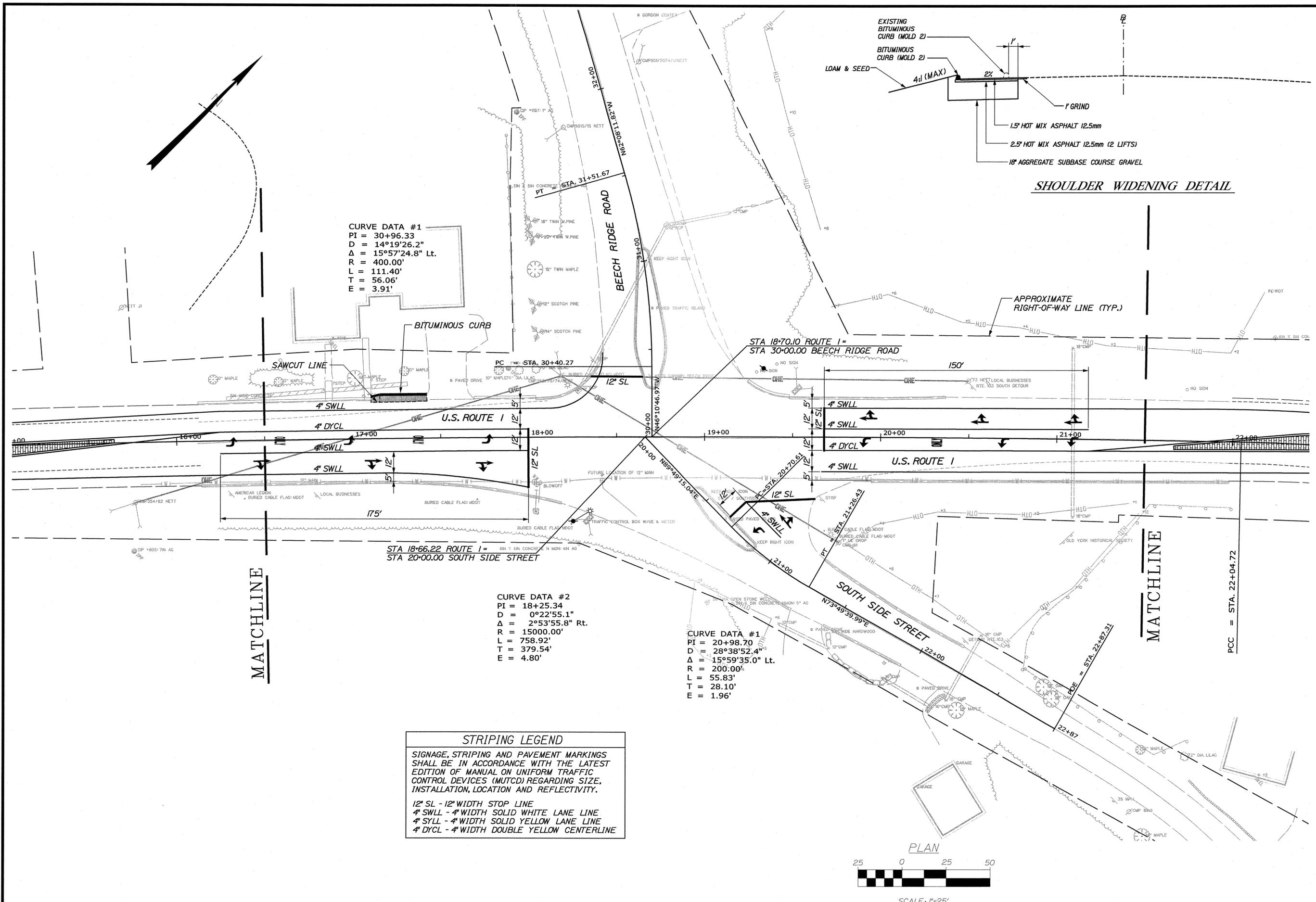
SHEET NUMBER  
 3  
 OF 5

Date: 7/21/2010

Username: DBurgess

Division: HIGHWAY

Filename: ... \MSTAV004\_stripping02.dgn



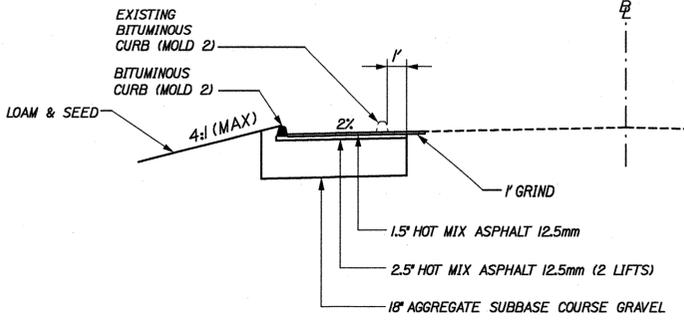
**CURVE DATA #1**  
 PI = 30+96.33  
 D = 14°19'26.2"  
 Δ = 15°57'24.8" Lt.  
 R = 400.00'  
 L = 111.40'  
 T = 56.06'  
 E = 3.91'

**CURVE DATA #2**  
 PI = 18+25.34  
 D = 0°22'55.1"  
 Δ = 2°53'55.8" Rt.  
 R = 15000.00'  
 L = 758.92'  
 T = 379.54'  
 E = 4.80'

**CURVE DATA #1**  
 PI = 20+98.70  
 D = 28°38'52.4"  
 Δ = 15°59'35.0" Lt.  
 R = 200.00'  
 L = 55.83'  
 T = 28.10'  
 E = 1.96'

**STRIPING LEGEND**  
 SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION AND REFLECTIVITY.

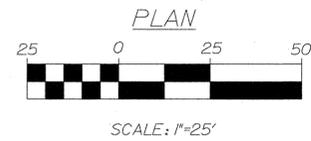
12' SL - 12" WIDTH STOP LINE  
 4' SWLL - 4" WIDTH SOLID WHITE LANE LINE  
 4' SYLL - 4" WIDTH SOLID YELLOW LANE LINE  
 4' DYCL - 4" WIDTH DOUBLE YELLOW CENTERLINE



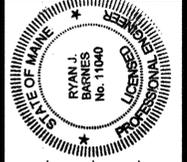
SHOULDER WIDENING DETAIL

MATCHLINE

MATCHLINE



STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION  
 STP-1724(900)  
 PIN 17249.00  
 HIGHWAY PLANS

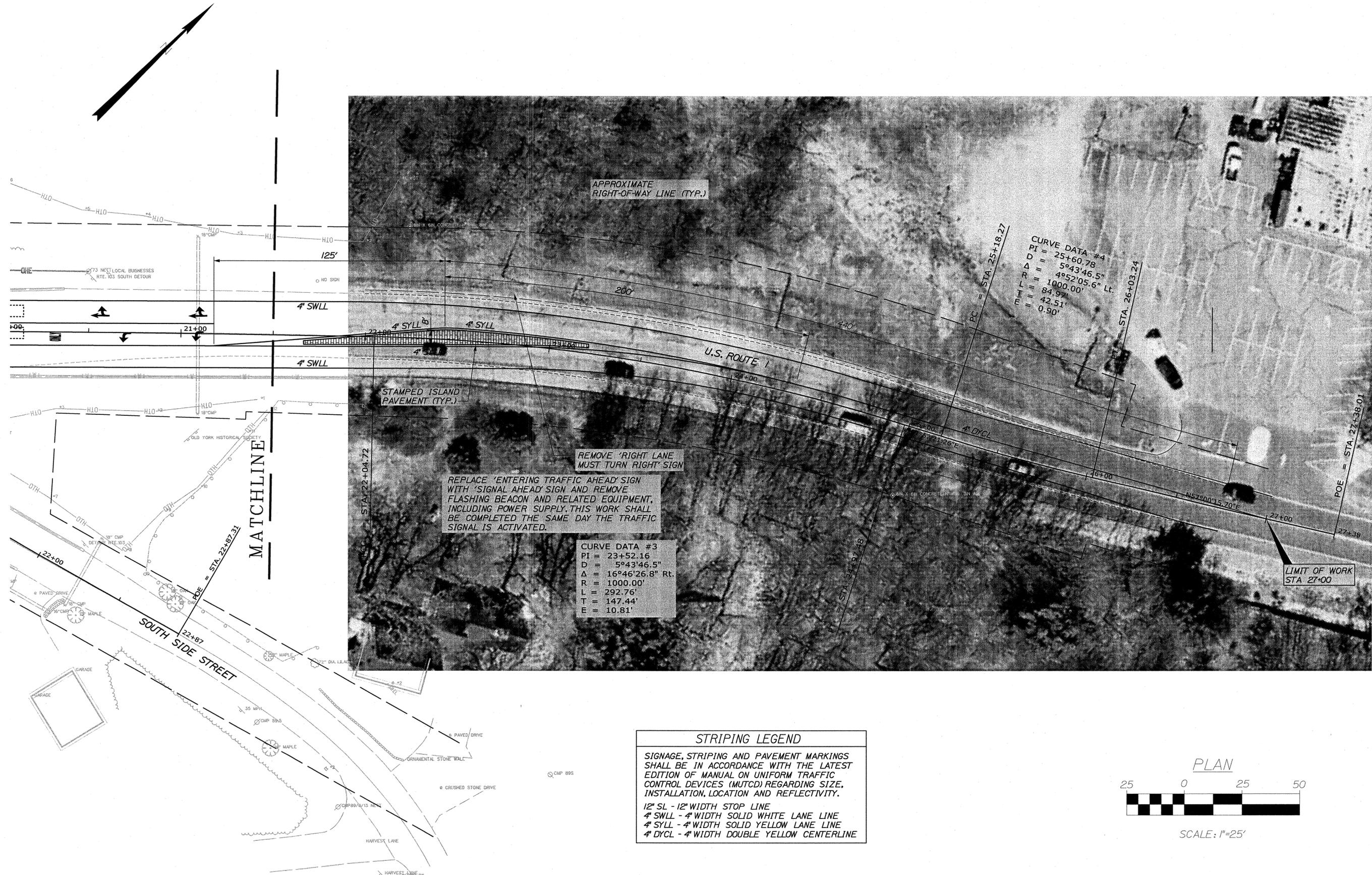


PROJ. MANAGER: J. MANSER  
 DESIGN-DETAILED: D. BURGESS  
 CHECKED-REVIEWED: R. NORWOOD  
 DESIGNED-DETAILED: J. WILLIAMS  
 SIGNATURE: [Signature]  
 P.E. NUMBER: 11040  
 DATE: 7-21-10

| PROJ. MANAGER     | DATE |
|-------------------|------|
| J. MANSER         |      |
| DESIGN-DETAILED   |      |
| CHECKED-REVIEWED  |      |
| DESIGNED-DETAILED |      |
| REVISIONS 1       |      |
| REVISIONS 2       |      |
| REVISIONS 3       |      |
| REVISIONS 4       |      |
| FIELD CHANGES     |      |

YORK  
 ROUTE 1  
 STRIPING PLAN - 2

SHEET NUMBER  
 4  
 OF 5



APPROXIMATE RIGHT-OF-WAY LINE (TYP.)

STAMPED ISLAND PAVEMENT (TYP.)

REMOVE 'RIGHT LANE MUST TURN RIGHT' SIGN

REPLACE 'ENTERING TRAFFIC AHEAD' SIGN WITH 'SIGNAL AHEAD' SIGN AND REMOVE FLASHING BEACON AND RELATED EQUIPMENT. INCLUDING POWER SUPPLY. THIS WORK SHALL BE COMPLETED THE SAME DAY THE TRAFFIC SIGNAL IS ACTIVATED.

**CURVE DATA #3**  
 PI = 23+52.16  
 D = 5°43'46.5"  
 Δ = 16°46'26.8" Rt.  
 R = 1000.00'  
 L = 292.76'  
 T = 147.44'  
 E = 10.81'

**CURVE DATA #4**  
 PI = 25+60.78  
 D = 5°43'46.5"  
 Δ = 4°52'05.6" Lt.  
 R = 1000.00'  
 L = 84.97'  
 T = 42.51'  
 E = 0.90'

**STRIPING LEGEND**

SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION AND REFLECTIVITY.

- 12" SL - 12" WIDTH STOP LINE
- 4" SWLL - 4" WIDTH SOLID WHITE LANE LINE
- 4" SYLL - 4" WIDTH SOLID YELLOW LANE LINE
- 4" DYCL - 4" WIDTH DOUBLE YELLOW CENTERLINE



SCALE: 1"=25'



Signature: Ryan J. Barnes  
 P.E. NUMBER: 11040  
 DATE: 7-21-10

| PROJ. MANAGER     | J. WANSIR   | DATE     |
|-------------------|-------------|----------|
| DESIGN-DETAILED   | D. BURGESS  | 05-28-10 |
| CHECKED-REVIEWED  | R. NORWOOD  | 05-28-10 |
| DESIGN2-DETAILED2 | J. WILLIAMS | 05-28-10 |
| DESIGN3-DETAILED3 |             |          |
| REVISIONS 1       |             |          |
| REVISIONS 2       |             |          |
| REVISIONS 3       |             |          |
| REVISIONS 4       |             |          |
| FIELD CHANGES     |             |          |

YORK  
 ROUTE 1  
 STRIPING PLAN - 3

SHEET NUMBER

5

OF 5