

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



ROCKLAND KNOX

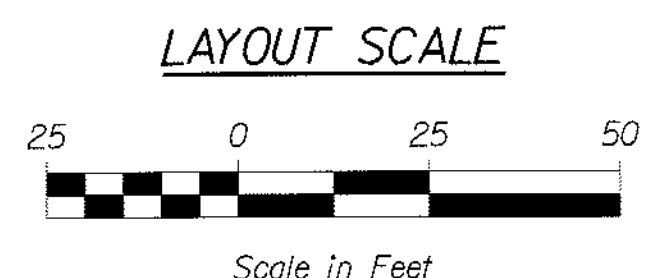
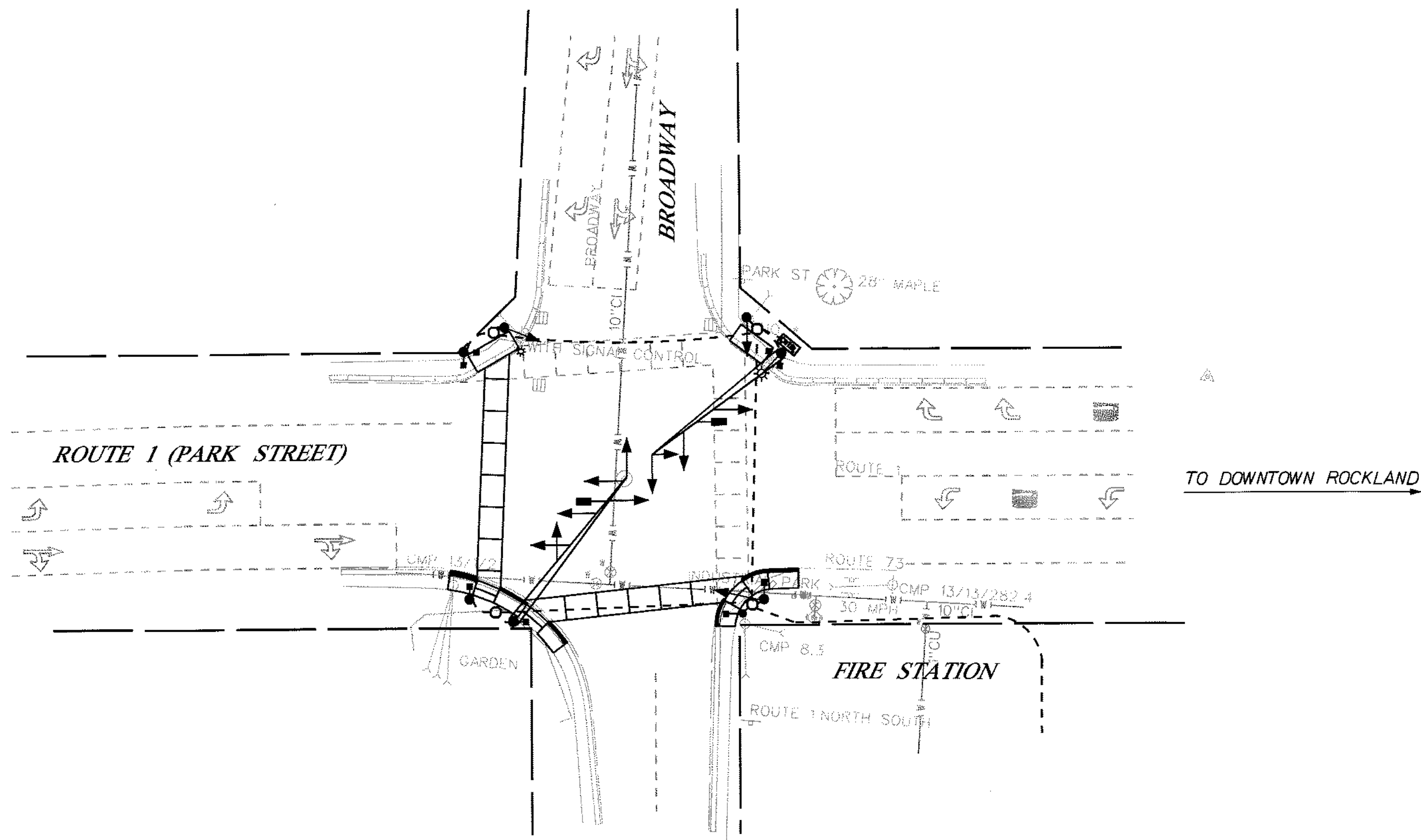
STATE ROUTE 1 (PARK STREET)/BROADWAY FEDERAL AID PROJECT NO. STP-1943(100)X TRAFFIC SIGNAL IMPROVEMENTS

PLAN LEGEND

Town, County, State	Centerline-Existing	Centerline-Proposed
Property Lines	Travelway-Existing	Travelway-Proposed
R/W Lines-Existing	Railroad	Catch Basins
R/W Lines-Proposed	Culvert-Existing	Manholes
Culvert-Proposed	Curb	Proposed Underdrain
Existing	Proposed	Proposed Ditch
Type 1	Type 3	Existing Ditch
Type 3	Type 5	Utility Poles
Outline of Bodies of Water	Ledge	Buildings
Fire Hydrants	Trees	Tree Line
Existing San. Sewer	Existing San. Sewer Manhole	Guardrail-Existing
Existing Water Line	Guardrail-Proposed	Guardrail-Cable, Other
Existing San. Sewer Manhole	Guardrail-Proposed	Guardrail-Cable, Other
Existing San. Sewer Manhole	Guardrail-Proposed	Guardrail-Cable, Other
Existing San. Sewer Manhole	Guardrail-Proposed	Guardrail-Cable, Other

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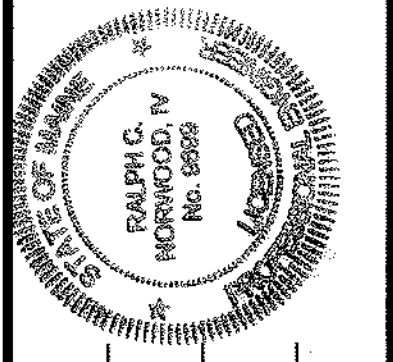
Description	Sheet No.
Title Sheet	1
Traffic Signal Plan	2



GP Gorrill-Palmer Consulting Engineers, Inc.
 PO Box 1237 15 Shaker Road Gray, ME 04039
 Engineering Excellence Since 1998
 207-657-6910 Fax: 207-657-6912
 E-Mail: mailbox@gorrillpalmer.com

PROJECT LOCATION:	In the City of Rockland at the intersection of State Route 1 (Park Street) & Broadway
PROGRAM AREA:	Operational and safety improvements
OUTLINE OF WORK:	Traffic Signal Project

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	DATE 3/28/12
APPROVED	3/28/12
COMMISSIONER	
CHIEF ENGINEER	



Ralph Morrill
 SIGNATURE
 9898
 P.E. NUMBER
 4-23-12
 DATE

PROGRAM	TRAFFIC
PROJECT MANAGER	S. LANDRY
DESIGNER	R. NORWOOD
CONSULTANT	GORRILL-PALMER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

ROCKLAND
STATE ROUTE 1 (PARK STREET)
TITLE SHEET

SHEET NUMBER	1
OF 2	

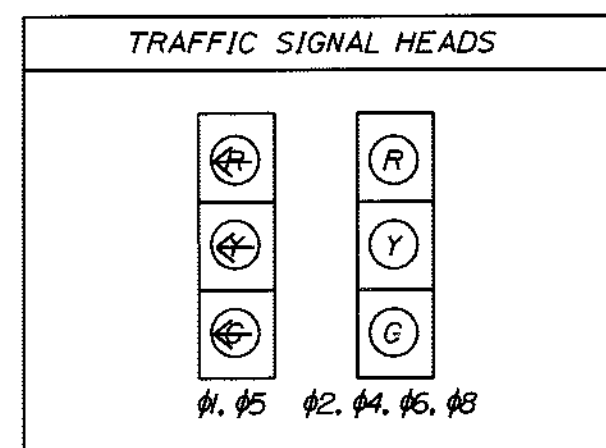
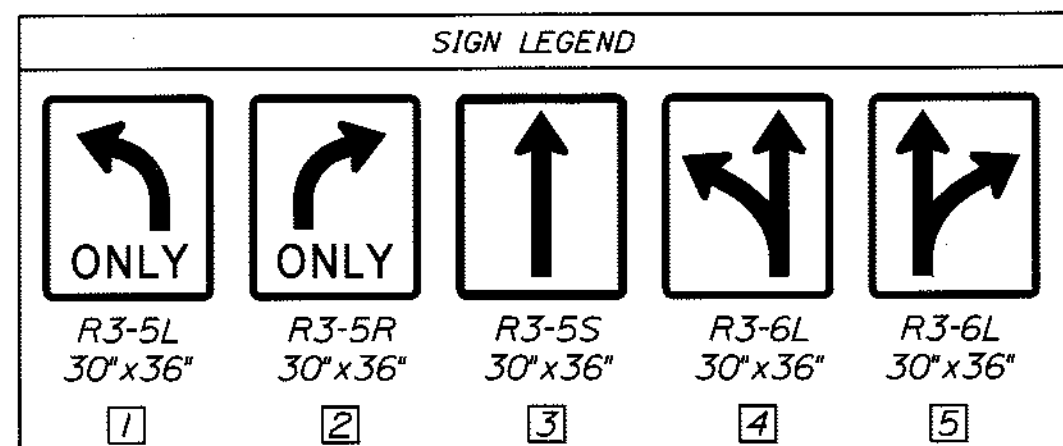
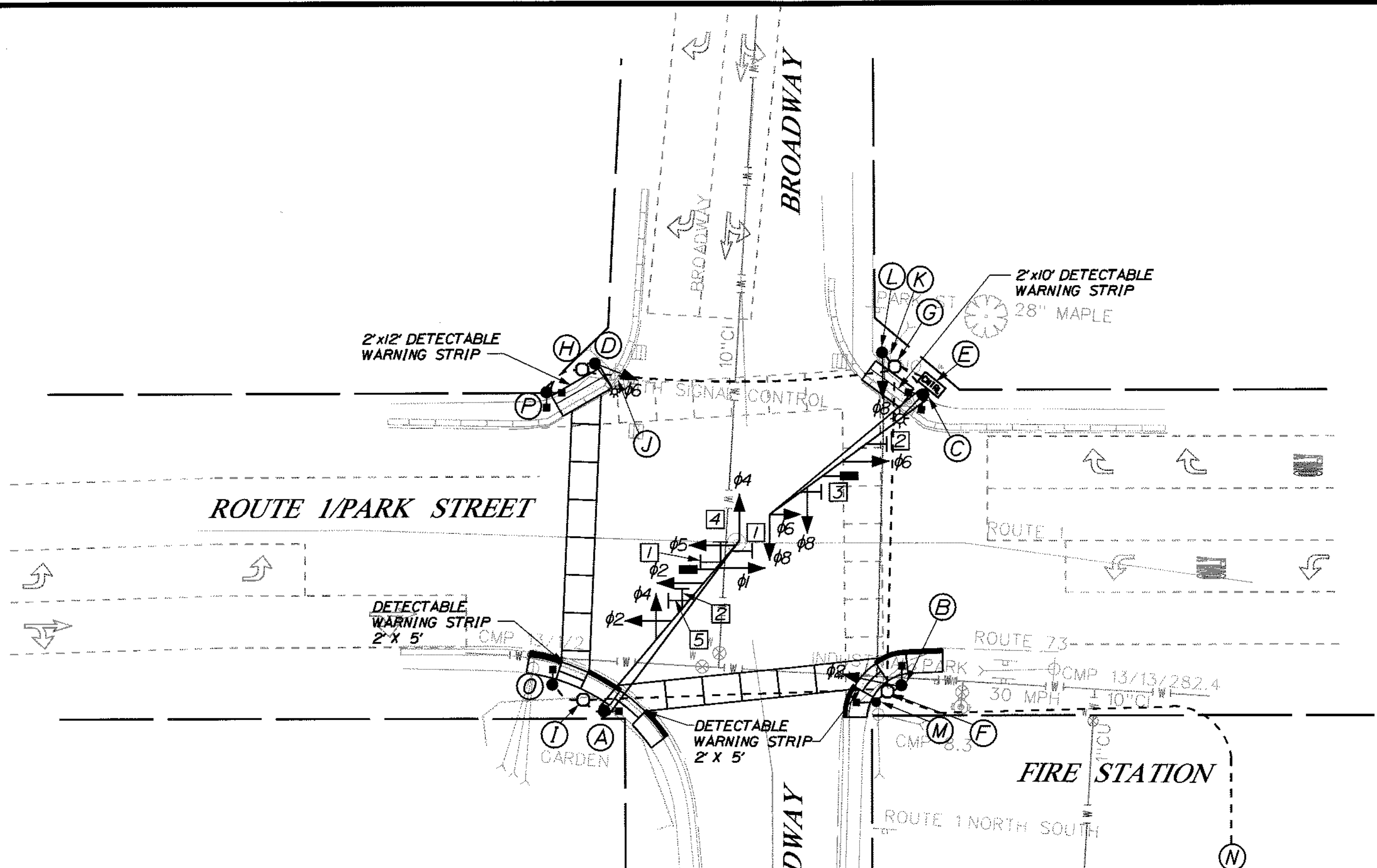
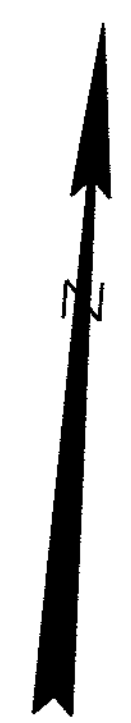
PIN 19431.00 STP-1943(100)X

Date: 3/23/2012

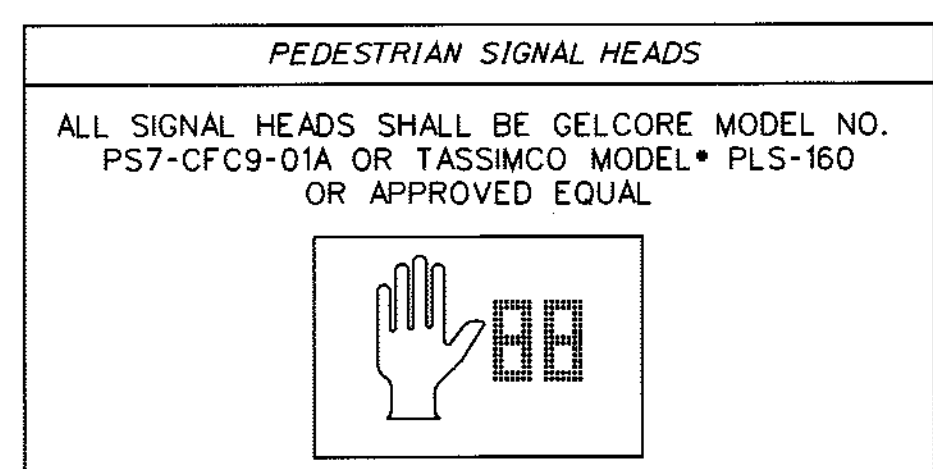
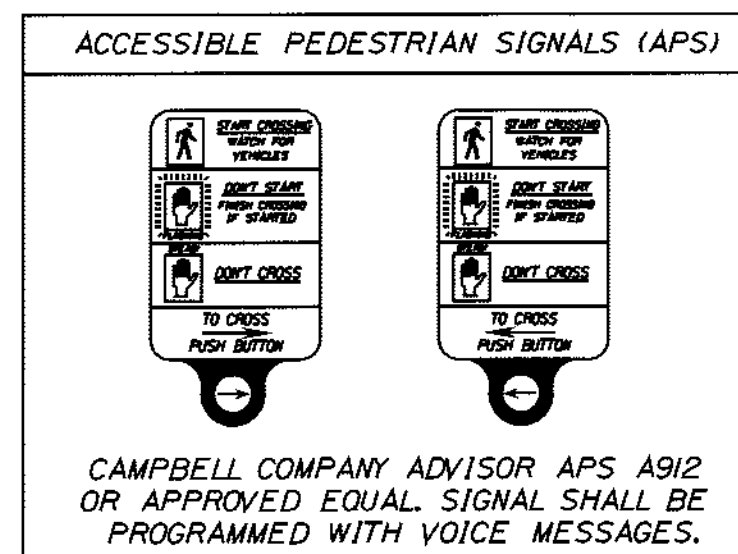
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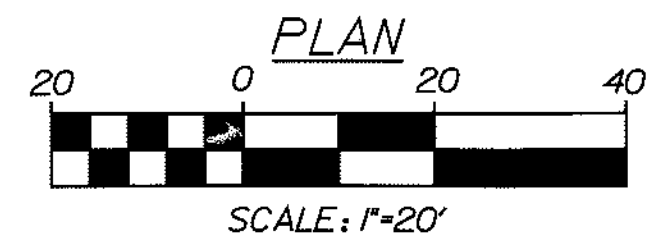
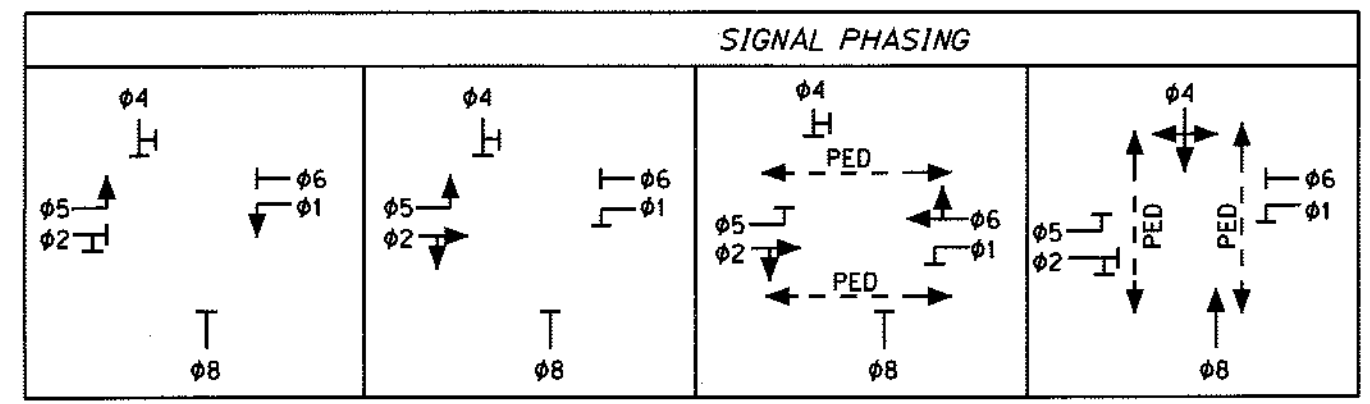


ALL NEW SIGNAL HEADS
12" L.E.D. WITH BACK PLATES



SIGNAL TIMING

PHASE	1	2	3	4	5	6	7	8
MINIMUM INITIAL	4	8	-	4	4	8	-	4
PASSAGE TIME	3	3	-	3	3	3	-	3
MAXIMUM GREEN	5	28	-	22	14	24	-	22
MAX 11	10	33	-	27	19	29	-	27
YELLOW	3	3	-	3	3	3	-	3
ALL RED	2	2	-	2	2	2	-	2
FLASH	R	Y	-	R	R	Y	-	R
PHASE RECALL	-	SOFT	-	-	SOFT	-	-	-
WALK	-	4	-	4	-	4	-	4
PEDESTRIAN CLEARANCE	-	16	-	16	-	16	-	16
MEMORY	-	-	-	-	-	-	-	-
DETECTOR MODE	PR	PR	-	PR	PR	PR	-	PR
DETECTOR DELAY	-	-	-	-	-	-	-	-

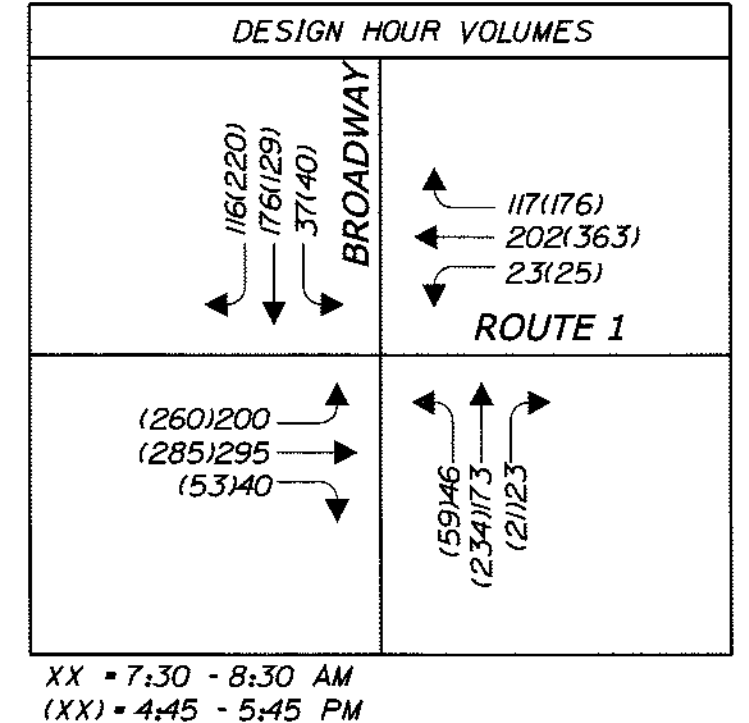
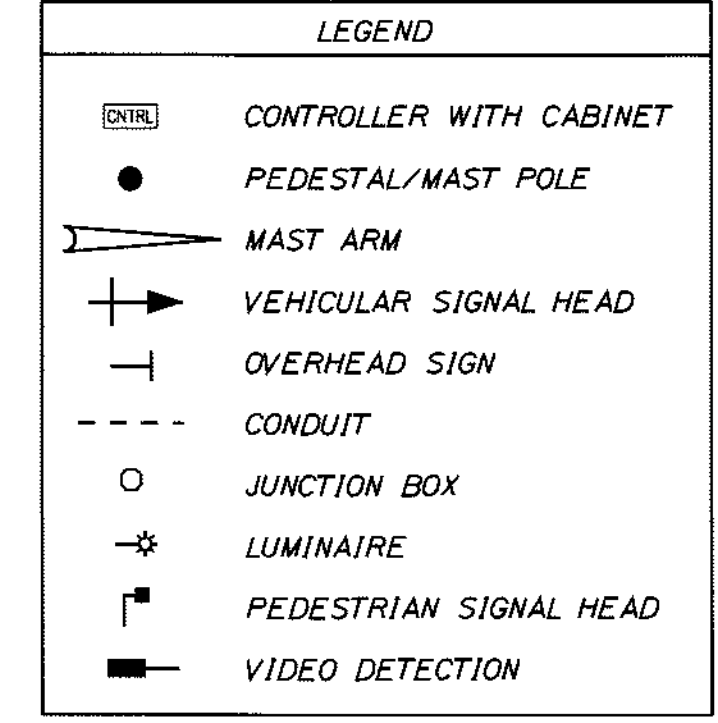


EQUIPMENT SCHEDULE

DESIGNATION	FATIGUE CATEGORY	ITEM	DESCRIPTION
A	II	21' MAST POLE WITH 45' MAST ARM	SIGNAL HEADS, PEDESTRIAN HEAD, PUSH BUTTON AND SIGN
D		16' PEDESTAL POLE	SIGNAL HEAD, PEDESTRIAN HEAD, PUSH BUTTON AND SIGN, 150 WATT LUMINAIRE WITH MONGOOSE FIXTURE
C	II	21' MAST POLE WITH 40' MAST ARM 10' LUMINAIRE ARM	SIGNAL HEADS, LANE USE SIGNS, PEDESTRIAN HEAD, PUSH BUTTON AND SIGN AND 250 WATT LUMINAIRE WITH MONGOOSE LIGHT FIXTURE, WEATHER HEAD FOR OVERHEAD ELECTRIC DROP
B, O, L, M, P		8' PEDESTAL POLE	SIGNAL HEAD, PEDESTRIAN HEAD AND PUSH BUTTON AND SIGN
E		CONTROLLER CABINET	POLE MOUNTED
F, G, H & I		JUNCTION BOX	PRECAST CONCRETE
J & K		EXISTING SIGNAL POLES	TO BE REMOVED
N		FIRE STATION	SEE NOTE #21

CONDUIT SCHEDULE

RUN	CENTER TO CENTER (LINEAR FEET)	COMMENTS
A-I	5	3 IN PVC
J-F	64	3 IN PVC
B-F	3	2 IN PVC
G-E	5	3 IN PVC
F-G	66	3 IN PVC
G-C	8	4 IN PVC
G-H	65	3 IN PVC
D-H	3	2 IN PVC
M-F	4	2 IN PVC
L-G	3	2 IN PVC
M-N	130	2 IN PVC
I-O	7	2 IN PVC
P-H	10	2 IN PVC



- NOTES:**
1. THE CONTRACTOR MUST MEET ALL UTILITY REQUIREMENTS FOR THE SERVICE CONNECTION.
 2. ALL SPLICES WILL BE MADE IN THE CABINETS OR POLES MEETING MAINEDOT SPECIFICATIONS.
 3. THE BOTTOM OF THE HOUSING OF THE SIGNAL FACE SHALL BE AT LEAST 16 FEET BUT NOT MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
 4. 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".
 5. TWO COPIES OF THE SIGNAL CONTROLLER MANUAL AND TWO COPIES OF RECORD DRAWINGS SHALL BE LEFT IN THE CONTROLLER CABINET.
 6. CONTRACTOR SHALL PROVIDE AND INSTALL ALL JUNCTION BOXES.
 7. 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.
 8. 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.
 9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING MAINEDOT AND CITY OPENING PERMITS, IF NECESSARY.
 10. IT IS THE INTENT OF THIS WORK TO HAVE A COMPLETE OPERATIONAL TESTED AND ACCEPTED TRAFFIC SIGNAL UPON COMPLETION OF THIS CONTRACT.
 11. 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.
 12. ALL PUSH BUTTONS SHALL BE LOCATED WITHIN 1' FROM THE EDGE OF THE SIDEWALK. IF PLACED GREATER THAN 1' FROM THE SIDEWALK, CONTRACTOR SHALL PAVE AN APRON TO THE BUTTON FOR A DISTANCE NOT TO EXCEED 5'.
 13. ALL TRAFFIC SIGNALS SHALL BE 12" INCH DIAMETER WITH L.E.D. LENSES AND SHALL HAVE 4 INCH BACK PLATES.
 14. MAST POLES A AND C SHALL BE ON 36" MINIMUM DIAMETER FOUNDATIONS.
 15. PEDESTAL POLES SHALL BE ON 18" FOUNDATIONS.
 16. FOUNDATIONS SHALL BE CONSTRUCTED WITH LP CONCRETE AND ACCEPTANCE METHOD SHALL BE TYPE 'C'.
 17. ALL TRAFFIC SIGNAL EQUIPMENT BE PAINTED FEDERAL BLACK. MAST POLES/ARMS SHALL BE GALVANIZED WITH A FEDERAL BLACK POWDERCOAT FINISH.
 18. THE COST OF THE OVERHEAD LANE USE SIGNS SHALL BE INCIDENTAL TO ITEM 643.80.
 19. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE NEW.
 20. CONTRACTOR SHALL REMOVE THE EXISTING TRAFFIC SIGNAL ONCE THE NEW ONE IS OPERATIONAL.
 21. A TRAFFIC SIGNAL PREEMPTION SYSTEM SHALL BE CONSTRUCTED THAT WILL GIVE ALL APPROACHES A RED LIGHT EXCEPT FOR ROUTE 1 (PARK ST.) EASTBOUND PHASES 1 AND 6 WHICH SHALL GET A GREEN LIGHT WHEN A BUTTON IS PUSHED IN THE FIRE STATION. THE PREEMPTION SYSTEM SHALL HAVE THE FOLLOWING FEATURES AS A MINIMUM AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TESTING AND ETC. TO PROVIDE A FULLY FUNCTIONING SYSTEM. THIS SHALL BE INCIDENTAL TO ITEM 643.8.
 - A. A BUTTON SHALL BE PROVIDED IN THE FIRE STATION LOCATED ADJACENT TO THE BAY DOORS AT THE FRONT SIDE OF THE FIRE STATION. EXACT LOCATIONS OF THE BUTTONS TO BE DETERMINED BY THE FIRE CHIEF OR THEIR REPRESENTATIVE.
 - B. THE DURATION OF THE PREEMPTION PHASE SHALL BE ADJUSTABLE FROM 30 SECONDS TO 240 SECONDS. THE CONTRACTOR SHALL BE ONSITE DURING A TRIAL RUN WITH THE FIRE DEPARTMENT TO ADJUST THE ACTUAL LENGTH OF THE PREEMPTION CYCLE THAT WILL BE REQUIRED.
 - C. A CONFIRMATION STROBE SHALL BE MOUNTED ON EACH OF THE TRAFFIC SIGNAL MAST ARMS.
 - D. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE PREEMPTION SYSTEM TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
 22. VIDEO DETECTION SYSTEM SHALL PROVIDE PRESENCE DETECTION FOR EACH LANE. VIDEO DETECTION SYSTEM SHALL INCLUDE ALL VIDEO DETECTORS, CONTROL BOARDS AND OTHER INCIDENTALS NECESSARY FOR A FULLY FUNCTIONAL VIDEO DETECTION SYSTEM

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1943(100)X

PROJ. MANAGER	DESIGNER	CHECKED	DATE
R. NORWOOD	T. GORRILL		SEP 2011
DESIGNED BY	DESIGNED BY	DESIGNED BY	DESIGNED BY
REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4
FIELD CHANGES			

ROCKLAND
ROUTE 1 (PARK STREET)
TRAFFIC SIGNAL PLAN

SHEET NUMBER
2
OF 2

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Engineering Excellence Since 1998
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