STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PLAN LEGEND

Town, County, State		Catch Basins	Existing ■ Proposed
Property Lines		Manholes	Existing ● Proposed
R/W Lines-Existing		Proposed Underdrain	
R/W Lines-Proposed		Proposed Ditch	
Culvert-Existing		Existing Ditch	
Culvert Proposed		Utility Poles	Existing ⌽ Proposed
Curbing	Existing / Proposed	Fire Hydrants	Existing ⍟ Proposed
Type 1		Existing Water Line	
Type 3		Existing San. Sewer	
Type 5		Existing San. Sewer Manhole	◎
Outline of Bodies of Water		Guardrail-Existing	
Exposed Bedrock		Guardrail-Proposed	
Buildings		Guardrail-Cable, Other	
Trees	Conifer / Deciduous	Centerline-Existing	
Tree Line		Centerline-Proposed	10+00
Clearing Limit Line		Travelway-Existing	
Railroad		Travelway-Proposed	

Boring — HB-XXX-###

Pavement Core — PC-#

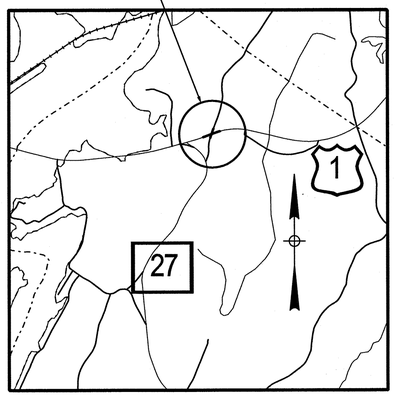
Test Pit — TP-XXX-###

Probe — P-#.#X

#.# = Depth

X = W (Weathered Rock)
R (Refusal)
NR (No Refusal)

PROJECT LOCATION



LOCATION MAP

EDGECOMB

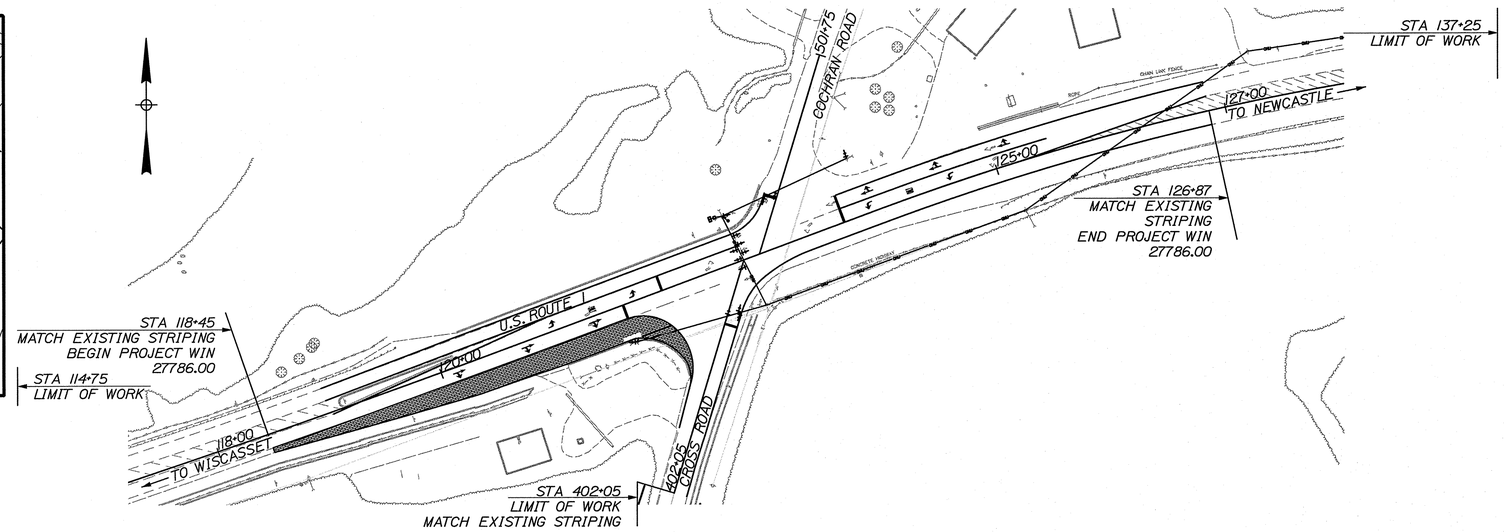
LINCOLN COUNTY

U.S. ROUTE 1

FEDERAL AID PROJECT NO. 2778600

PROJECT LENGTH : .16 MILES

INDEX OF SHEETS



LAYOUT SCALE

100 0 100 200

Scale in Feet

TRAFFIC DATA

	US 1 (E/O CROSS RD)	US 1 (W/O COCHRAN RD)	COCHRAN ROAD	CROSS ROAD
Current (2025) AADT	12,300	10,920	130	1,480
Future (2045) AADT	13,530	12,010	140	1,630
DHV - % of AADT	10%	10%	11%	10%
Design Hour Volume	1,402	1,251	17	170
% Heavy Trucks (AADT)	8%	8%	9%	10%
% Heavy Trucks (DHV)	4%	4%	6%	5%
Directional Distribution (DHV)	51%	51%	52%	52%
18 kip Equivalent P 2.0	862	747	4	56
18 kip Equivalent P 2.5	821	711	4	53
Design Speed (mph)	45 mph	45 mph	25 mph	30 mph
Corridor Priority	1	1	5	2

HNTB

PROJECT LOCATION:	In the town of Edgecomb located at the intersection of U.S. Route 1, Cross Road and Cochran Road.
PROGRAM AREA:	Multimodal
SCOPE OF WORK:	Intersection safety improvement including traffic signal installation

27786.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED — DATE

COMMISSIONER: — 3/18/25

CHIEF ENGINEER: Jacqui Van Sayler — 3/18/2025

STATE OF MAINE — ARIEL R. GREENLAW No. 15094 — PROFESSIONAL ENGINEER

Ariel Greenlaw

PROJECT INFORMATION	
PROGRAM	MULTIMODAL
PROJECT MANAGER	MACKENZIE KERSBERGEN, P.E.
DESIGNER	HNTB
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

Ariel Greenlaw — SIGNATURE — 15094 — P.E. NUMBER — March 4, 2025 — DATE

EDGECOMB
U.S. ROUTE 1

TITLE SHEET

SHEET NUMBER

1

OF 8

Date:3/4/2025 Username: Division: Filename: 001_Title.dgn

GENERAL NOTES

1. SCOPE OF WORK:
TRAFFIC SIGNAL WORK AT THE INTERSECTION OF U.S. ROUTE 1, COCHRAN RD, AND CROSS RD CONSISTS OF REPLACING EXISTING FLASHING BEACONS WITH A FULLY FUNCTIONING TRAFFIC SIGNAL SYSTEM. THE WORK INCLUDES BUT IS NOT LIMITED TO: FURNISHING AND INSTALLING A COMPLETE GROUND-MOUNTED ADVANCED TRAFFIC CONTROLLER (ATC) SIGNAL CABINET AND FOUNDATION, FIELD MONITORING UNIT (FMU), MONITORING MALFUNCTION UNIT (MMU), STOP BAR VIDEO (SBVD) AND ADVANCED DETECTION, VEHICULAR SIGNAL HEADS WITH RETROREFLECTIVE BACKPLATES, WIRING, SIGNAL CABLE, OVERHEAD SPAN WIRE MOUNTED SIGNS, LUMINAIRES, CONDUIT, WIRELESS POINT-TO-POINT (PTP) COMMUNICATION, ROAD SIDE UNIT (RSU), AND INCIDENTALS REQUIRED FOR A COMPLETE FUNCTIONING SIGNAL INSTALLATION.

   IN ADDITION, THE PROJECT WILL PROVIDE THE MEANS FOR REMOTE COMMUNICATION TO THE TRAFFIC SIGNAL CABINET BY FMU FROM MAINEDOT'S EXISTING CLOUD-BASED CENTRAL MANAGEMENT SYSTEM (CMS) VIA A SECURE VIRTUAL PRIVATE NETWORK TUNNEL. THE PROJECT ADDITIONALLY PROVIDES FOR CONNECTED VEHICLE INTEGRATED WITH THE ADVANCED TRANSPORTATION CONTROLLER AND MAINEDOT TRAFFIC MANAGEMENT CENTER.

2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING THE PROJECT WITH WORKING AND FULLY CONFIGURED TRAFFIC SIGNAL CONTROLLERS FOR THE INTERSECTION, COMPLETE WITH INTEGRATION INTO THE CLOUD BASED CENTRAL MANAGEMENT SYSTEM, SIGNAL PERFORMANCE MEASURE APPLICATION, CONNECTED VEHICLE SYSTEM, INSTALLATION OF THE CENTRAL AND LOCATION INTERSECTION COMMUNICATION INTERFACE AND COORDINATION WITH THE MAINEDOT OFFICE OF INFORMATION TECHNOLOGY. THE CONTRACTOR IS FURTHER RESPONSIBLE FOR SYSTEM START-UP AND SYSTEM LOADING, ACCEPTANCE TESTING, AND TRAINING.

3. TRAFFIC SIGNAL WORK SHALL BE COMPLETED IN A MANNER AND ORDER THAT WILL CAUSE THE MINIMUM DISRUPTION TO TRAFFIC AND THE LEAST AMOUNT OF DOWNTIME TO THE TRAFFIC SIGNAL OPERATION. ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH THE LATEST REVISIONS OF THE MAINEDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGE, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS FOR THIS CONTRACT; THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE NATIONAL ELECTRIC CODE AND ANY ADDITIONAL UTILITY REQUIREMENTS.

4. AS IDENTIFIED ON THE PLAN, "NEW TRAFFIC PATTERN AHEAD" (W23-2) SIGNS SHALL BE INSTALLED IN ADVANCE OF THE INTERSECTION FOR ALL APPROACHES. THESE SHALL BE REMOVED APPROXIMATELY 12 MONTHS AFTER SIGNAL ACCEPTANCE, BY MAINEDOT'S TRAFFIC ENGINEERING DESIGN GROUP.

UTILITY COORDINATION AND ACCESS NOTES

1. LOCATIONS OF ANY EXISTING UNDERGROUND AND OVERHEAD UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE PRESENCE OF ALL UTILITIES PRIOR TO COMMENCING ANY EXCAVATION WORK OR INSTALLATION OF POLES, FOUNDATIONS, CONDUIT, JUNCTION BOXES OR OTHER WORK INVOLVING SUBSURFACE OR OVERHEAD DISTURBANCE.

   THE CONTRACTOR SHALL NOTIFY UTILITIES OF ANY PROPOSED WORK BELOW GROUND IN ACCORDANCE WITH MRSA TITLE 23 SECTION 3360-A, MAINE "DIG SAFE" SYSTEM. CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST THREE WORKING DAYS PRIOR TO THE BEGINNING OF EXCAVATION AND UTILITY COMPANIES AT LEAST TWO WORKING DAYS BEFORE ANY OPERATIONS THAT COULD CONFLICT WITH AERIAL UTILITIES.

2. ALL EXISTING DRIVEWAY AND MAILBOX ACCESS SHALL BE MAINTAINED AT ALL TIMES. IN ADDITION, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING ALL EXISTING OPERATIONAL BUSINESS DIRECTIONAL SIGNS (OBDS) TO ENSURE THAT THEY ARE VISIBLE TO THE TRAVELING PUBLIC. THIS WORK IS INCIDENTAL TO THE TRAFFIC SIGNAL ITEM (643.80).

3. THE CONTRACTOR SHALL PROVIDE THE RESIDENT AND MAINEDOT WITH A SCHEDULE OF WORK FOR CONSTRUCTING THE TRAFFIC IMPROVEMENTS AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF WORK.

4. RIGHT-OF-WAY, WHERE NOTED IN THE PLANS, IS APPROXIMATE. NO ADDITIONAL GROUND SURVEY WAS OBTAINED FOR THIS PROJECT, THE PROPOSED DESIGN WAS COMPLETED USING A COMBINATION OF SURVEY AND DESIGN FILES FROM PROJECT 021783.00.

5. PLANS OF PREVIOUSLY CONSTRUCTED PROJECTS ARE AVAILABLE UPON REQUEST. THE MOST RECENT PROJECT AT THE INTERSECTION IS: WIN 021783.00: EDGECOMB.

6. THE CONTRACTOR IS RESPONSIBLE FOR ASSESSING THE SITE TO DETERMINE THE VIABILITY OF USING EXISTING POLES AND GUY WIRES FOR THE PROPOSED EQUIPMENT. ANY REPLACEMENT OF POLES OR MODIFICATIONS TO GUY WIRES ARE INCIDENTAL TO ITEM 643.71.

METHOD OF WORK NOTES

1. ANY DAMAGE TO THE SLOPES CAUSED BY THE CONTRACTOR'S EQUIPMENT, PERSONNEL, OR OPERATION SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT. ALL WORK, EQUIPMENT AND MATERIALS REQUIRED TO MAKE REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE.

2. NO SEPARATE PAYMENT FOR SUPERINTENDENT OR FOREMAN WILL BE MADE FOR THE SUPERVISION OF EQUIPMENT AND LAYOUT OF WORK BEING PAID FOR UNDER THE EQUIPMENT RENTAL ITEMS.

3. FINAL STRIPING FOR THE PROJECT SHALL BE DONE BY THE CONTRACTOR PER THE STRIPING LAYOUT IN THE CONTRACT DOCUMENTS OR AS PROVIDED BY THE DEPARTMENT. PAYMENT SHALL BE MADE UNDER APPROPRIATE CONTRACT ITEMS.

4. THE RESIDENT AND MAINEDOT SHALL HAVE THE RIGHT AND AUTHORITY TO DETERMINE THE ACCEPTABILITY OF WORK AND MATERIALS IN PROGRESS OR COMPLETED AND SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIALS WHICH DO NOT CONFORM, IN ITS SOLE OPINION, TO THE PLANS OR SPECIFICATIONS.

5. THE MAINTENANCE OF THE PROPOSED TRAFFIC SIGNALS SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY MAINEDOT.

6. THE EXISTING CMS AND ALL ASSOCIATED ASSOCIATED SHALL BE REMOVED. BASED ON PIN 12747.00, ALL THESE COMPONENTS ARE WITHIN THE STATE'S RIGHT OF WAY.

TRAFFIC SIGNAL EQUIPMENT NOTES

1. TWO COPIES OF AS-BUILT PLANS, WIRING DIAGRAMS, BOX PRINTS, AND EQUIPMENT MANUALS SHALL BE LEFT IN EACH OF THE CONTROLLER CABINETS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING RED-LINE AS-BUILT DRAWINGS OF THE FINAL WORK TO THE RESIDENT. THOSE DRAWINGS SHALL BE ON A CLEAN SET OF PLANS SHOWING ALL CHANGES OR MODIFICATIONS TO THE BID PLANS.

3. THE CONTRACTOR IS DIRECTED TO PROJECT SPECIAL PROVISION 718 FOR ADDITIONAL INFORMATION RELATED TO THE FOLLOWING. THE SPECIAL PROVISION EXPANDS UPON THE INFORMATION FOUND IN THESE GENERAL NOTES:

   718.13 TRAFFIC CONTROL SYSTEM
   718.14 FIELD MONITORING UNIT (NOTE: DIFFERS FROM MAINEDOT REPAIR SPEC).

4. SPECIFIED LOCATION FOR THE CONTROLLER CABINET AND FOUNDATION IS MEASURED TO THE CENTER OF THE CONTROLLER FOUNDATION. FINAL LOCATION TO BE APPROVED IN THE FIELD BY THE RESIDENT TO PROVIDE OPTIMAL VISIBILITY OF THE INTERSECTION WHILE MAINTAINING SAFE ACCESS FOR FUTURE MAINTENANCE WORK.

5. ALL EQUIPMENT SCHEDULES SHOWN ON THE PLANS ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULES BASED UPON PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

ELECTRICAL NOTES

1. CONDUIT FROM THE POWER SOURCE TO THE METER SHALL BE RIGID METAL CONDUIT. OTHER CONDUIT NOT UNDER PAVEMENT SHALL BE 3 INCH PVC SCHEDULE 40. MINIMUM BURIAL DEPTH SHALL BE 36".

2. TOP 3" OF CONDUIT SHALL BE SEALED TO PREVENT ENTRY BY RODENTS. BUSHINGS SHALL BE INSTALLED ON ALL CONDUIT TERMINATION AND PULL WIRE SHALL BE INSTALLED IN ALL CONDUIT. ALL CONDUIT HEADS ARE TO BE REDHEADED. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE ASSOCIATED CONDUIT ITEM.

3. THERE SHALL BE NO SPLICES OR JUNCTION BOXES EXCEPT AS NOTED ON THE PROJECT PLANS OR APPROVED BY THE RESIDENT. JUNCTION BOXES ARE INTENDED FOR WIRE PULLING ACCESS ONLY. JUNCTION BOX COVERS SHALL BE LABELED 'TRAFFIC' AND SHALL BE GROUNDED.

LIGHTNING NOTES

1. PROPOSED LUMINAIRE AND MOUNTING ARM SHALL BE CONSIDERED INCIDENTAL TO ITEM 643.80 - TRAFFIC SIGNAL AT: U.S. ROUTE 1, CROSS RD AND COCHRAN RD.

2. PROPOSED LUMINAIRE SHALL BE MOUNTED TO WOOD SIGNAL POLE AS SHOWN ON THE PLANS.

3. PROPOSED LUMINAIRE ON WP-02 SHALL MATCH EXISTING LUMINAIRE ON WP-04.

VEHICLE DETECTION NOTES

1. DETECTION ZONES SHOWN IN THE PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY. FINAL DETECTION ZONES SHALL BE FIELD LOCATED AND APPROVED BY MAINEDOT AND THE RESIDENT.

2. THE CONTRACTOR SHALL FURNISH AND INSTALL STOP LINE VIDEO AND ADVANCED DETECTION AS APPROVED BY MAINEDOT AND THE RESIDENT.

3. THE VEHICLE DETECTORS ARE TO BE CONNECTED TO THE INTERSECTION TRAFFIC CONTROLLER FOR LOCAL VEHICLE DETECTION AND REMOTELY CONNECTED TO THE MAINEDOT TRAFFIC MANAGEMENT CENTER TO ALLOW FOR VISUAL CONFIRMATION (STOP LINE) AND ADJUSTMENT OF THE DETECTION ZONES AS SHOWN IN THE PLANS. WORK SHALL BE CONSTRUCTED AND PAID FOR AS OUTLINED IN SPECIAL PROVISION 643.

4. THE LOCATION OF THE DEVICES SHOWN IN THE PLANS ARE CONCEPTUAL FOR OPTIMAL APPROACH COVERAGE. ACTUAL NUMBER OF DETECTION DEVICES AND MOUNTING LOCATIONS SHALL BE PROVIDED PER MANUFACTURER'S RECOMMENDATION TO ACHIEVE APPROVED DETECTION AREAS.

5. ADVANCED DETECTION MAY BE MOUNTED TO THE POLE OR SPAN WIRE WITH TETHER IF DETECTION AREAS CAN BE ACHIEVED AND DETECTION IS NOT AFFECTED BY WIND.

6. THE RESIDENT RESERVES THE RIGHT TO DIRECT THE CONTRACTOR TO ADJUST DETECTOR MOUNTING HEIGHT OR LOCATION FOR LOCAL CONDITIONS IDENTIFIED DURING OR AFTER INSTALLATION AT NO ADDITIONAL COST FOR INSTALLATION OR WIRING. THIS WORK WILL BE INCIDENTAL TO THE STOP BAR DETECTION.

7. IF A 360 DEGREE/FISHEYE VIDEO BASED DETECTION CAMERA IS TO BE INSTALLED, TWO CAMERAS SHALL BE REQUIRED.

8. THE CONTRACTOR SHALL RE-INSPECT EACH SIGNALIZED INTERSECTION DURING THE ACCEPTANCE TESTING PERIOD AND CERTIFY DETECTORS ARE FUNCTIONING PROPERLY BEFORE FINAL ACCEPTANCE IS GRANTED.

SIGNAL HEAD NOTES

1. ALL NEW SIGNAL HEADS SHALL BE MOUNTED TO WOOD POLES OR SPAN WIRE AS INDICATED ON PLANS.

2. ALL NEW VEHICULAR SIGNAL HEADS SHALL BE EQUIPPED WITH NEW LED LENSES 12 INCHES IN DIAMETER AND EQUIPPED WITH NEW 5-INCH LOUVERED BACK PLATES, INCLUDING 3" RETRO REFLECTIVITY.

3. THE BOTTOM OF THE HOUSING OF ANY NEW SIGNAL FACES SHALL BE AT LEAST 17 FEET BUT NOT MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY. FOR POLE MOUNTED SIGNAL HEADS, THE BOTTOM OF THE HOUSING SHALL BE MOUNTED AT LEAST 8 FEET BUT NO MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE HIGH POINT OF THE ROAD.

4. ASSEMBLIES SHALL HAVE DOUBLE SPAN WIRE SUPPORT. SIGNAL ASSEMBLIES AND SIGNAGE ATTACHED TO SPAN WIRES SHALL BE STABILIZED WITH A BOTTOM TETHER. THE CONTRACTOR SHALL REVIEW SIGNAL HEAD LOCATIONS AND COMPLETE ANY ADJUSTMENTS NECESSARY OR AS DIRECTED BY THE RESIDENT TO MAINTAIN CLEAR SIGHT LINES TO THE SIGNAL HEADS ON ALL APPROACHES.

ROADSIDE UNIT (RSU) NOTES

1. THE CONTRACTOR MAY MOUNT THE RSU ON ANY SIGNAL POLE PROVIDED THE ANTENNA HAVE A CLEAR LINE OF SIGHT FOR ALL APPROACHES. THIS PROVISION IS TO BETTER ASSIST THE CONTRACTOR WITH COMMUNICATIONS LIMITATIONS.

COMMUNICATIONS NOTES

1. THE SYSTEM SHALL SUPPORT COMMUNICATIONS TO ADVANCED TRAFFIC CONTROLLERS, ASSOCIATED EQUIPMENT, AND VEHICLE DETECTION AS SHOWN IN THE PLANS. ALL CONNECTIONS TO THE CLOUD-BASED CENTRAL MANAGEMENT SYSTEM SHALL BE VIA A SECURE VPN NETWORK. COMMUNICATIONS FROM THE CLOUD-BASED SYSTEM TO THE ON-STREET TRAFFIC SIGNAL CONTROLLERS SHALL BE MADE THROUGH THE FMU.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING WHICH COMPATIBLE CELLULAR PROVIDER CAN PROVIDE THE BEST NETWORK COVERAGE TO THE FMU FOR REMOTE COMMUNICATIONS AND PROVIDE THE PROPER SIM CARD.

3. CONTRACTOR SHALL PROCURE A HIGH GAIN ANTENNA IN LIEU OF THE STANDARD FMU PETRI DISH ANTENNA.

TRAFFIC SYSTEM STARTUP AND SYSTEM LOADING NOTES

1. THE SIGNAL SHALL BE INSTALLED IN FLASH TWO WEEKS PRIOR TO ACTIVATION MATCHING THE EXISTING PATTERN. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE LOCATED ON ALL APPROACHES PRIOR TO THE INTERSECTION FOR TWO WEEKS PRIOR TO STARTUP THROUGH ACCEPTANCE WITH THE FOLLOWING MESSAGES AS APPLICABLE:

   NEW SIGNAL SYSTEM ACTIVE XX/XX/XXXX
   NEW SIGNAL SYSTEM AHEAD

2. WHEN FULL SIGNAL OPERATION IS ACTIVATED, REMOVE ALL EXISTING STOP SIGNS AND INTERSECTION WARNING SIGNS.

3. THE SYSTEM SUPPLIER SHALL INITIATE COMPLETE SYSTEM OPERATION INCLUDING ATC, CMS, SPM, SBVD, ADVANCED VEHICLE DETECTION SYSTEM, CONNECTED VEHICLE SYSTEM, HOSTED CLOUD BASED SYSTEMS, FMU COMMUNICATIONS, REMOTE MONITORING, AND CONTROL OF OPERATIONS AS SHOWN ON THE PLANS AND/OR DIRECTED BY MAINEDOT AND THE RESIDENT.

4. AFTER THE SUPPLIER HAS INITIATED SYSTEM OPERATION ON SITE, THE SYSTEM SHALL BE RUN FOR A CONTINUOUS 7-DAY INITIAL TESTING PERIOD. THE SUPPLIER SHALL ADVISE MAINEDOT AND/OR THE RESIDENT THAT THE SYSTEM IS READY FOR START-UP PHASE.

5. ANY MAJOR SYSTEM MALFUNCTION ENCOUNTERED DURING THE START-UP PHASE SHALL BE CORRECTED BY THE SUPPLIER, AND THE TEST RESTARTED. DURING THIS PERIOD MAINEDOT AND/OR THE RESIDENT MAY MAKE MODIFICATION TO THE SYSTEM TIMING PARAMETERS, BUT THIS WILL NOT CAUSE RESTARTING OF THE TESTING PERIOD. AT THE COMPLETION OF THE TESTING PERIOD, THE SYSTEM WILL BE DEEMED READY FOR FINAL ACCEPTANCE TESTING AS DESCRIBED IN ACCEPTANCE TESTING NOTES.

TRAFFIC SIGNAL SYSTEM ACCEPTANCE TESTING NOTES

1. UPON COMPLETION OF THE 7-DAY STARTUP PERIOD, MAINEDOT AND/OR THE RESIDENT SHALL EVALUATE SYSTEM OPERATIONS. IT IS EXPECTED THAT THE COMPLETE SYSTEM SHALL OPERATE FULLY FUNCTIONAL FOR A PERIOD OF 30 CONSECUTIVE DAYS WITHOUT MALFUNCTION. MINOR MALFUNCTIONS OF INOPERABILITY NOT THE FAULT OF THE CONTRACTOR, AS JUDGED BY MAINEDOT AND/OR THE RESIDENT, ARE NOT INCLUDED IN THE 30-DAY PERIOD.

   IF THE SYSTEM FAILS TO OPERATE AS INTENDED BY THIS SPECIFICATION THE MALFUNCTION SHALL BE CORRECTED BY THE CONTRACTOR AT ITS COST AND A NEW 30-DAY TESTING PERIOD SHALL BEGIN. THIS PROCESS SHALL CONTINUE UNTIL A COMPLETELY OPERABLE SYSTEM IS DEMONSTRATED FOR A CONSECUTIVE 30-DAY PERIOD.

2. ACCEPTANCE TESTING MUST DEMONSTRATE TO MAINEDOT AND/OR THE RESIDENT A REASONABLE SATISFACTION THAT THE HARDWARE AND LICENSED SOFTWARE FUNCTION IN ACCORDANCE WITH THE SPECIFICATIONS, REQUIREMENTS, FUNCTIONALITIES, PERFORMANCE CRITERIA OR OTHER BENEFITS STATED IN DOCUMENTATION, PROPOSALS AND/OR DEMONSTRATIONS GIVEN TO MAINEDOT.

SALVAGE RIGHT NOTES

1. MAINEDOT SHALL HAVE FIRST RIGHTS TO ALL EQUIPMENT REMOVED OR REPLACED BY THE PROJECT. CONTACT: BROOKE.GLIDDEN@MAINEDOT.GOV. THE TOWN OF EDGECOMB HAS SECOND SALVAGE RIGHTS TO ALL EQUIPMENT NOT CLAIMED BY MAINEDOT.

2. THE CONTRACTOR SHALL CAREFULLY REMOVE AND STORE ALL EQUIPMENT CLAIMED BY EITHER MAINEDOT OR THE MUNICIPALITY. THE STORAGE AREA SHALL BE SECURE. ALL CONTROL EQUIPMENT REMOVED THAT HAS COMPUTER CHIP TECHNOLOGY SHALL BE STORED IN AN INTERIOR CLIMATE CONTROLLED ENVIRONMENT.

3. ANY EQUIPMENT NOT CLAIMED BY EITHER MAINEDOT OR THE MUNICIPALITY FOR SALVAGE SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF IN A MANNER ACCEPTABLE TO THE RESIDENT.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02778600

WIN 027786.00

HIGHWAY PLANS

PROJ. MANAGER	M. Kersbergen	BY	
DESIGN-DETAILED	E. Mihok	BY	DATE
CHECKED-REVIEWED	E. Raymond	E. Mihok	02\25
DESIGN2-DETAILED2	L. Driscoll	A. Greenlaw	02\25
DESIGN3-DETAILED3	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

SIGNATURE

P.E. NUMBER

DATE

EDGECOMB
U.S. ROUTE 1

GENERAL NOTES

SHEET NUMBER

2

OF 8

Date:3/4/2025
Username:
Division:
Filename: 002_GeneralNotes.dgn

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
403.1021	TEXTURED ASPHALT PAVEMENT W/ COLOR COATING	590	SY
615.07	LOAM	5	CY
618.14	SEEDING METHOD NUMBER 2	1	UN
619.12	MULCH	1	UN
626.11	PRECAST CONCRETE JUNCTION BOX	3	EA
626.21	METALLIC CONDUIT	50	LF
626.22	NON-METALLIC CONDUIT	60	LF
626.38	GROUND MOUNTED CABINET FOUNDATION	1	EA
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	3400	LF
627.75	WHITE OR YELLOW PAVEMENT & CURB MARKING	450	SF
627.77	REMOVING EXISTING PAVEMENT MARKING	850	SF
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	HR
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	10	HR
631.18	CHAIN SAW RENTAL (INCLUDING OPERATOR)	10	HR
639.20	FIELD OFFICE, TYPE C	1	EA
643.21	NON-INVASIVE DETECTION - STOP BAR: U.S. ROUTE 1, CROSS RD AND COCHRAN RD	1	LS
643.22	NON-INVASIVE DETECTION - ADVANCE: U.S. ROUTE 1, CROSS RD AND COCHRAN RD	1	LS
643.80	TRAFFIC SIGNAL AT: U.S. ROUTE 1, CROSS RD AND COCHRAN RD	1	LS
645.106	DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	26	EA
645.108	DEMOUNT POLE	11	EA
645.116	REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	11	EA
645.118	REINSTALL POLE	2	EA
645.292	REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGNS, TYPE II	90	SF
645.517	RED SIGNAL AHEAD ADVANCED WARNING SYSTEM	1	EA
652.33	DRUM	40	EA
652.34	CONE	40	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGERS	460	HR
652.381	TRAFFIC OFFICER	60	HR
652.41	PORTABLE-CHANGEABLE MESSAGE SIGN	4	EA
654.351	CONNECTED ROADSIDE UNIT (RSU)	1	EA
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

ITEM 645.106 DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN

U.S. ROUTE 1	QTY
STA. 117+46.0, 37.8' RT.	1
STA. 118+37.1, 40.8' RT.	2
STA. 119+64.7, 29.0' RT.	1
STA. 122+40.3, 34.5' LT.	1
STA. 124+02.8, 39.3' LT.	10
STA. 125+50.0, 37.0' LT	1
STA. 127+53.2, 39.3' LT.	2
STA. 129+69.9, 38.3' LT.	6
CROSS ROAD	
STA. 400+51.4, 21.8' RT.	1
COCHRAN ROAD	
STA. 500+27.0, 32.0' LT.	1

ITEM 645.108 DEMOUNT POLE

U.S. ROUTE 1	QTY
STA. 117+46.0, 37.8' RT.	1
STA. 118+37.1, 40.8' RT.	1
STA. 119+64.7, 29.0' RT.	1
STA. 122+40.3, 34.5' LT.	1
STA. 124+02.8, 39.3' LT.	1
STA. 125+50.0, 37.0' LT.	1
STA. 127+53.2, 39.3' LT.	1
STA. 129+69.9, 38.3' LT.	2
CROSS ROAD	
STA. 400+51.4, 21.8' RT.	1
COCHRAN ROAD	
STA. 500+27.0, 32.0' LT.	1

ITEM 645.116 REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN

U.S. ROUTE 1	QTY
STA. 115+00.0, 27.2' RT.	1
STA. 128+00.0, 36.0' LT.	10

ITEM 645.118 REINSTALL POLE

U.S. ROUTE 1	QTY
STA. 115+00.0, 27.2' RT.	1
STA. 128+00.0, 36.0' LT.	1

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02778600

WIN
027786.00

HIGHWAY PLANS

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	M. Kershaw gen	BY	DATE
DESIGN-DETAILED	E. Raymond	E. Mihok	02\25
CHECKED-REVIEWED	L. Driscoll	A. Greenlaw	02\25
DESIGN2-DETAILED2	-	-	-
DESIGN3-DETAILED3	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

EDGECOMB
U.S. ROUTE 1

ESTIMATED QUANTITIES &
CONSTRUCTION NOTES

SHEET NUMBER

3

OF 8

Filename: 003_Estimated Qtys.dgn Division: Username: Date:3/4/2025

Filename: 004_StripingPlan01.dgn Division: Username: Date:3/4/2025

CURVE DATA #2
PI = 116+37.92
D = 0°39'58.4"
Δ = 5°04'21.4" Lt.
R = 8600.00'
L = 761.39'
T = 380.94'
E = 8.43'

STA. 114+75
LIMIT OF WORK

STA. 118+45
BEGIN PROJECT WIN 27786.00
MATCH EXISTING STRIPING

P.L.

SLOPE

EASEMENT

RETAIN

PT = STA. 120+18.37

STATE OF MAINE

STA. 122+87.00 U.S. ROUTE 1 ℄ =
STA. 500+00.00 COCHRAN RD ℄

REMOVE & RESET

REMOVE

STOP

RETAIN

R=45'

SDYL

501+00

COCHRAN ROAD

N17°00'26.77"E

501+75

POE = STA. 501+75.00

NEW TRAFFIC PATTERN AHEAD

W23-2
TO BE PLACED 400' BEHIND
STOP BAR ALONG COCHRAN ROAD
(WITHIN DOT RIGHT OF WAY)

DLC ENTERPRISES LLC

TO SOUTH 27 1
TO NORTH 27 1

COCHRAN RD

RETAIN

REMOVE & RESET
TO STA. 128+00

TO SOUTH, NORTH & SOLAR ARROWS & PANELS

R3-8b

NO LEFT TURN

SWL

U.S. ROUTE 1 SOUTHBOUND

SYL

SDYL

REMOVE (TYP.)

11.00'

12.00'

0.00'

118+00

119+00

120+00

121+00

122+00

123+00

124+00

125+00

N69°42'42.23"E

500+00

400+00

SWL

SDYL

U.S. ROUTE 1 NORTHBOUND

STOP BAR (TYP.)

R=135'

STA. 122+73.00 U.S. ROUTE 1 ℄ =
STA. 400+00.00 CROSS RD ℄

CONCRETE HIGHWAY

OHU

COMMUNICATION TO RUN
FROM CABINET TO ADVANCED
WARNING SIGN (TYP.)

505/82/1

WATCH FOR TURNING TRAFFIC
SPEED LIMIT 40
SLT/THRU/RT ONLY

REMOVE

WATCH FOR TURNING TRAFFIC
40 M.P.H.

EASEMENT

SLOPE

EXISTING

ONLY/ONLY/ONLY

R3-8b

TEXTURED ASPHALT
PAVEMENT WITH RED
COLOR COATING (TYP.)

HAND WOVEN TEXTILES

R=45'

401+00

SDYL

SWL

EXISTING

SLOPE

EASEMENT

RETAIN

R=60'

REMOVE

NEW TRAFFIC PATTERN AHEAD

RESET - W23-3
TO BE
PLACED AT
STA. 115+00, RT.

W2-1
TO BE REMOVED
AT STA. 117+46, RT.

P.L.

40 M.P.H.

W3-3 & W13-1
TO BE PLACED
AT STA. 117+00, RT.

N/F
BARBARA D. STANDARD
PIA STANDARD MARANCIK

SANDRA R. GRIFFIN

CURVE DATA #3
PI = 130+41.30
D = 2°38'17.4"
Δ = 33°02'17.9" Rt.
R = 2171.80'
L = 1252.32'
T = 644.11'
E = 93.50'

PC = STA. 123+97.19

RETAIN

NORTH 1

STA. 402+05
LIMIT OF WORK
MATCH EXISTING STRIPING

402+00

CROSS ROAD

POE = STA. 402+05.38

P.L.±

W3-3
TO BE PLACED 310' BEHIND
STOPBAR ALONG CROSS ROAD
(WITHIN DOT RIGHT OF WAY)

W23-2
TO BE PLACED 200' BEHIND
W3-3 ALONG CROSS ROAD
(WITHIN DOT RIGHT OF WAY)

LEGEND

SWL SOLID WHITE LINE (4")
SYL SOLID YELLOW LINE (4")
BWL BROKEN WHITE LINE (4")
BYL BROKEN YELLOW LINE (4")
SDYL SOLID DOUBLE YELLOW LINE (4")

PLAN

25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02778600

WIN
027786.00

HIGHWAY PLANS

	BY	DATE
PROJ. MANAGER	M. Kerksbergen	
DESIGN-DETAILED	E. Raymond	02\25
CHECKED-REVIEWED	E. Mihok	02\25
DESIGN2-DETAILED2	L. D'Iscoll	-
DESIGN3-DETAILED3	A. Greenlaw	-
REVISIONS 1		-
REVISIONS 2		-
REVISIONS 3		-
REVISIONS 4		-
FIELD CHANGES		-

SIGNATURE

P.E. NUMBER

DATE

EDGECOMB
U.S. ROUTE 1

SIGNING AND PAVEMENT MARKING PLAN

SHEET NUMBER
4
OF 8

Username:

Division:

Filename: 005_StripingPlan02.dgn

Date:3/4/2025

DLC ENTERPRISES LLC

RONALD L. LEEMAN
SHARONF. LEEMAN

SANDRA R. GRIFFIN, TRUSTEE
SANDRA R. GRIFFIN REALTY TRUST

SANDRA R. GRIFFIN

BLUEBERRY LANE

FOX DEN ROAD

EASEMENT

CHAIN LINK FENCE

ROPE

207 AUTO REPAIR

U.S. ROUTE 1 SOUTHBOUND

U.S. ROUTE 1 NORTHBOUND

COD COVE INN
MAINE STATE AQUARIUM
DOWN EAST GALLERY

EDGECOMB POTTERS
WATERSHED CENTER

COASTAL SHIP
BLANCHARD'S

TO SOUTH RTE. 27
DIR. ARROWS

TO NORTH RTE. 27
DIR. ARROWS

SPEED LIMIT 45

SPEED LIMIT 50

503/18/8

504/4/10

505/82

505/82/1

COMMUNICATION TO RUN FROM CABINET TO ADVANCED WARNING SIGN (TYP.)

REMOVE

R3-8

REMOVE

RESET ROUTE 27 SIGN PACKAGE

RETAIN

POWER FOR ADVANCED WARNING SIGN FROM EXISTING UTILITY POLE

PRECAST CONCRETE JUNCTION BOX (TYP.)

REMOVE

FLASHING "RED SIGNAL AHEAD" ADVANCED WARNING SIGN ON NEW WOOD POLE. POWER AND COMMUNICATION FROM CONTROLLER CABINET, BATTERY BACKUP PROVIDED.

STA. 137+25
LIMIT OF WORK

W23-2
TO BE PLACED
AT STA. 137+25, LT.
(WITHIN DOT RIGHT OF WAY)

W3-3 & W13-1
TO BE PLACED
AT STA. 135+25, LT.
(WITHIN DOT RIGHT OF WAY)

REMOVE AND DISPOSE OF EXISTING CHANGEABLE MESSAGE SIGN (CMS) AT STA. 134+46, LT.

STA. 126+87
END PROJECT WIN 27786.00
MATCH EXISTING STRIPING

CURVE DATA #3
PI = 130+41.30
D = 2°38'17.4"
Δ = 33°02'17.9" Rt.
R = 2171.80'
L = 1252.32'
T = 644.11'
E = 93.50'

125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00

LEGEND

SWL SOLID WHITE LINE (4")
SYL SOLID YELLOW LINE (4")
BWL BROKEN WHITE LINE (4")
BYL BROKEN YELLOW LINE (4")
SDYL SOLID DOUBLE YELLOW LINE (4")

PLAN

25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02778600

WIN
027786.00

HIGHWAY PLANS

		BY	DATE
PROJ. MANAGER	M. Kerstetgen		
DESIGN-DETAILED	E. Raymond	E. Mihok	02\25
CHECKED-REVIEWED	L. Driscoll	A. Greenlaw	02\25
DESIGN2-DETAILED2	-	-	-
DESIGN3-DETAILED3	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

SIGNATURE

P.E. NUMBER

DATE

EDGECOMB
U.S. ROUTE 1

SIGNING AND PAVEMENT MARKING PLAN

SHEET NUMBER

5

OF 8

SIGNAL PLAN LEGEND

	EXISTING	PROPOSED
Signal Head		
Control Cabinet & Foundation		
Junction Box		
Span Wire Mounted Sign		
Detector Zone		
Video Detector		
Advanced Detection		
3" Underground Conduit	EI	EI
Pole		
Roadside Unit (RSU)		
Luminaire		
360 Degree Cameras		
Pre-emption Receiver		
Confirmation Strobe		

EXISTING SIGNALS

PROPOSED SIGNALS

A3, B3 — A1, A2, A4 B1, B2, B4 C2, D1, D3 — C1, C3, D2

PROPOSED SIGN SUMMARY

LEFT ON GREEN ARROW ONLY	ONLY
R10-5 30"x36"	R3-8b 30"x30"
2 PROPOSED	2 PROPOSED

STATE OF MAINE

DLC ENTERPRISES LLC

PRECAST JUNCTION BOX

NEW ATC CABINET WITH FOUNDATION AND POWER METER

PROP. SPAN, TETHER AND SIGNAL CONTROL WIRE (TYP.)

501+00 COCHRAN ROAD

501+75

N17°00'26.77"E

COCHRAN RD

SLOPE

EASEMENT

NO LEFT TURN

ROADSIDE UNIT (RSU)

PROPOSED VEHICLE DETECTION ZONE (TYP.)

U.S. ROUTE 1 SOUTHBOUND

REMOVE AND SALVAGE EXISTING FLASHING BEACON SYSTEM (INCIDENTAL TO ITEM 643.80)

118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00

500+00

400+00

N69°42'42.23"E

FURNISH AND INSTALL LIGHT BASED EMERGENCY VEHICLE SYSTEM, COMPLETE (TYP.)

U.S. ROUTE 1 NORTHBOUND

STOP BAR (TYP.)

KEEP RIGHT OBJECT MARKER

WATCH FOR TURNING TRAFFIC SPEED LIMIT 40

LT/THRU/RT ONLY

CROSS RD

CONCRETE HIGHWAY

COMMUNICATION TO RUN FROM CABINET TO ADVANCED WARNING SIGN (TYP.)

ATTACH NEW SPAN, CONTROL AND TETHER WIRES TO EXISTING UTILITY POLE. REMOVE FLASHING BEACON AND ASSOCIATED APPURTENANCES

SANDRA R. GRIFFIN

HAND WOVEN TEXTILES

N/F
BARBARA D. STANDARD
PIA STANDARD MARANCIK

401+00

402+00 CROSS ROAD

P.L.±

2025 SYSTEM DESIGN VOLUMES

AM PEAK
(PM PEAK)

COCHRAN RD: (2) 2 / (0) 1 / (2) 0

U.S. ROUTE 1: (3) 2 / (531) 533 / (79) 69

U.S. ROUTE 1: (7) 3 / (618) 582 / (5) 5

CROSS RD: (0) 5 / (2) 1 / (72) 73

STRUCTURES LIST

ID	DESCRIPTION	STA	OFFSET
CC-1	PROP. CONTROLLER CABINET	122+58	42' LT
WP-1	EXIST. WOOD POLE	121+64	37' RT
WP-2	EXIST. WOOD POLE	122+68	41' LT
WP-3	EXIST. WOOD POLE	123+84	50' LT
WP-4	EXIST. WOOD POLE	122+79	45' RT

PLAN

25 0 25 50

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02778600

WIN 027786.00

HIGHWAY PLANS

PROJ. MANAGER	BY	DATE
DESIGN-DETAILED	M. Kerstbergen	
CHECKED-REVIEWED	E. Raymond	02\25
DESIGN2-DETAILED2	E. Mihok	02\25
DESIGN3-DETAILED3	L. D'Iscoll	-
REVISIONS 1	A. Greenlaw	-
REVISIONS 2		-
REVISIONS 3		-
REVISIONS 4		-
FIELD CHANGES		-

SIGNATURE

P.E. NUMBER

DATE

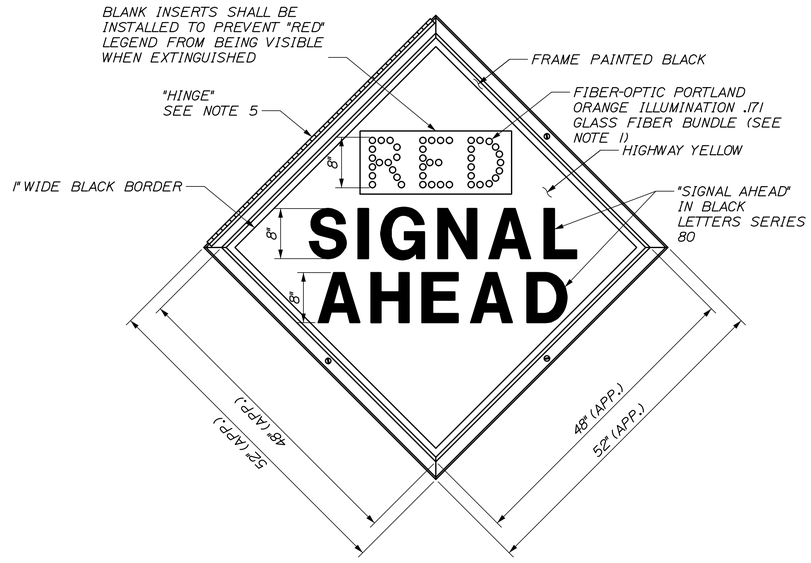
EDGECOMB
U.S. ROUTE 1

TRAFFIC SIGNAL PLAN

SHEET NUMBER

6

OF 8



RED SIGNAL AHEAD SIGN

NOTES:

1. "RED" LIGHTING SHALL FOLLOW THE FOLLOWING CONDITIONS BASED ON THE ROUTE 1 SOUTHBOUND APPROACH:
   - "RED" TO BE DIM WHEN SIGNAL IS GREEN
   - "RED" TO BE FLASHING WHEN SIGNAL IS YELLOW
   - "RED" TO BE SOLID WHEN SIGNAL IS RED

2. MINIMUM OF 2 LAMPS REQUIRED FOR EACH LINE OF LEGEND.

3. FIBER-OPTIC BUNDLES TO BE ARRANGED UTILIZING BIFURCATED COMBED RANDOMIZATION.

4. SIGN CASE SHALL BE FULLY GASKETED AND WATERTIGHT.

5. HINGE AND ALL HARDWARE SHALL BE STAINLESS STEEL.

6. RED BLANKOUT WORDS SHALL FLASH WHEN THE YELLOW INDICATION IS ACTIVE.

7. RED BLANKOUT WORDS SHALL BE SOLID WHEN THE RED SIGNAL INDICATION IS ACTIVE.

8. THE SIGN SHALL COMMUNICATE WITH THE SIGNAL VIA FIBER FROM THE SIGNAL. (PAYMENT FOR FIBER SHALL BE INCIDENTAL TO ITEM 645.517)

9. THE SIGN SHALL RECEIVE POWER FROM THE NEARBY SERVICE POLE WITH AN 8 HOUR BATTERY BACKUP ALSO REQUIRED. (PAYMENT FOR POWER SHALL BE INCIDENTAL TO ITEM 645.517)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02778600

WIN
027786.00

HIGHWAY PLANS

PROJ. MANAGER	M. Kerstergen	BY	DATE
DESIGN-DETAILED	E. Raymond	E. Mihok	02\25
CHECKED-REVIEWED	L. Driscoll	A. Greenlaw	02\25
DESIGN2-DETAILED2	-	-	
DESIGN3-DETAILED3	-	-	
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

SIGNATURE

P.E. NUMBER

DATE

EDGECOMB
U.S. ROUTE 1

TRAFFIC SIGN DETAIL

SHEET NUMBER

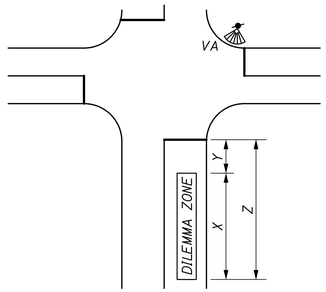
7

OF 8

LIST OF MAJOR ITEMS

EQUIPMENT AND WORK ITEMS (ITEM 643.80 - TRAFFIC SIGNAL AT: U.S. ROUTE 1, CROSS RD & COCHRAN RD)	QTY
REMOVE AND SALVAGE EXISTING BEACON SYSTEM INCLUDING POST MOUNTED CABINET	1
FURNISH AND INSTALL NEW ATC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT WIRING INCLUDING BATTERY BACKUP WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL NEW 16-CHANNEL ETHERNET EQUIPPED ENHANCED MALFUNCTION MANAGEMENT UNIT (MMU)	1
FURNISH AND INSTALL AI FIELD MONITORING UNIT (FMU)	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12 INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY	11
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12 INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY	3
IMPLEMENT LOCAL AND COORDINATED SYSTEM SIGNAL TIMINGS.	1
FURNISH AND INSTALL 4-CHANNEL PRE-EMPTION PHASE SELECTOR WITH CHASSIS	1
FURNISH AND INSTALL LIGHT-BASED PRE-EMPTION RECEIVERS WITH DETECTOR CABLE	1
FURNISH AND INSTALL PRE-EMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL COMMUNICATION WIRE TO RUN FROM TRAFFIC SIGNAL CABINET TO THE RED SIGNAL AHEAD SIGN.	1
FURNISH AND INSTALL LUMINAIRE ON WP2 IN THE NORTHWEST CORNER OF THE INTERSECTION.	1
FURNISH AND INSTALL SPAN WIRE SIGNS R3-8B AND R10-5	4
FURNISH AND INSTALL PRECAST JUNCTION BOX (ITEM 626.11)	3
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.38)	1
FURNISH AND INSTALL 3-INCH METALLIC CONDUIT (626.21)	50
FURNISH AND INSTALL 3-INCH NON-METALLIC CONDUIT (626.22)	60
FURNISH AND INSTALL NON-INVASIVE STOPLINE VEHICLE DETECTION SYSTEM FOR ALL APPROACHES (ITEM 643.21)	4
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR U.S. ROUTE 1 NORTHBOUND, AND SOUTHBOUND AND CROSS RD APPROACHES (ITEM 643.22)	3
FURNISH AND INSTALL C-V2X ROADSIDE UNIT (ITEM 654.351)	1
FURNISH AND INSTALL POINT-TO-POINT WIRELESS LINK FOR FLASHING ADVANCED WARNING SIGN (ITEM 654.34)	1
FURNISH AND INSTALL RED SIGNAL AHEAD WARNING SIGN WITH DUAL POWER AND COMMUNICATION. COMMUNICATION PROVIDED FROM CONTROLLER CABINET. BATTERY BACKUP PROVIDED. (ITEM 645.517)	1

NOTE: THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY



TYPICAL DILEMMA ZONE APPLICATION

SOURCE: TRAFFIC DETECTOR HANDBOOK: THIRD EDITION - VOLUME 1

SPEED MILES PER HOUR	X (DISTANCE)	Y (DISTANCE)	Z (DISTANCE)
35	152'	102'	254'
40	162'	122'	284'
45	175'	152'	327'
50	181'	172'	353'
55	152'	234'	386'

NOTES

1. CROSS ROAD IS TO BE TREATED AS A 35 MPH ZONE.

DETECTOR SCHEDULE

DETECTOR ZONE NO.	DETECTOR	LOCATION	φ CALLED	φ EXT.	INDICATION R-RED G-GREEN	MODE A-ADVANCE B-STOPLINE	DELAY TIME	EXT. TIME
1	V1	U.S. ROUTE 1: NB L	φ5	φ5	-	B	-	-
2		U.S. ROUTE 1: NB TR	φ2	φ2	-	B	-	-
3		CROSS ROAD: WB LTR	φ4	φ4	-	B	15	-
4	V2	U.S. ROUTE 1: SB L	φ1	φ1	-	B	-	-
5		U.S. ROUTE 1: SB TR	φ6	φ6	-	B	-	-
6		COCHRAN ROAD: EB LTR	φ3	φ3	-	B	-	-
51	AV1	U.S. ROUTE 1: NB LTR	-	φ2	G	A	-	3
52	AV2	U.S. ROUTE 1: SB LTR	-	φ6	G	A	-	3
53	AV3	CROSS ROAD: WB LTR	-	φ4	G	A	-	3

NOTES

1. VIDEO DETECTION ZONES SHOWN ARE APPROXIMATE AND THE CONTRACTOR IS RESPONSIBLE FOR SETTING-UP THE DETECTION ZONES IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
2. VIDEO DETECTION CAMERAS ARE SHOWN ON THE PLAN AS 360-DEGREE OR FISHEYE CAMERAS. IF THESE CAMERAS ARE USED, TWO ARE REQUIRED.

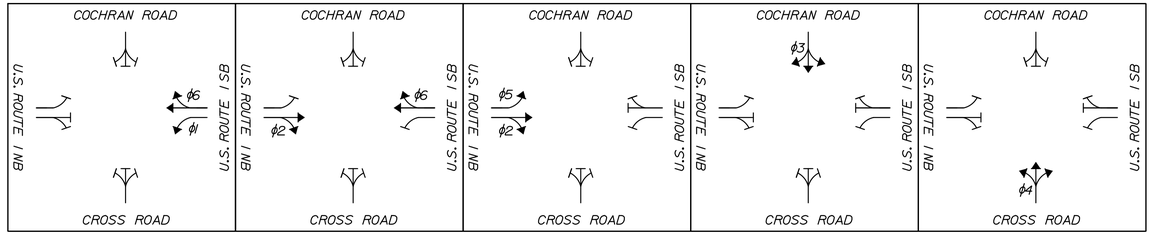
PROPOSED SIGNAL TIMING - U.S. ROUTE 1 AT COCHRAN ROAD AND CROSS ROAD

	U.S. ROUTE 1	U.S. ROUTE 1	COCHRAN RD	CROSS RD	U.S. ROUTE 1	U.S. ROUTE 1	NOT USED	NOT USED
	SBL	NBTR	EBLTR	WBLTR	NBL	SBTR	-	-
	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MINIMUM GREEN	5	10	5	5	5	10	-	-
VEHICLE EXTENSION	5	5	3	3	5	5	-	-
MAXIMUM 1	10	30	10	10	10	30	-	-
MAXIMUM 2	-	-	-	-	-	-	-	-
YELLOW	3	3	3	3	3	3	-	-
ALL RED	4	4	2	3	4	4	-	-
PEDESTRIAN PHASE	N	N	N	N	N	N	-	-
RECALL MODE	NONE	SOFT	NONE	NONE	NONE	SOFT	-	-
DUAL ENTRY	N	Y	N	N	N	Y	-	-
DYNAMIC STEP	-	15	-	-	-	15	-	-
DUAL ENTRY	-	45	-	-	-	45	-	-
FLASH	RED	YELLOW	RED	RED	RED	YELLOW	-	-

SIGNAL OPERATION NOTES

1. SIGNAL SHALL OPERATE IN COLORS AT ALL TIMES
2. SIGNAL SHALL OPERATE IN FLASH IN EMERGENCIES ONLY.
3. SIGNALS SHALL BE ALL RED FOR 3 SECONDS TO RESUME FROM FLASH.

SIGNAL PHASING SEQUENCE - U.S. ROUTE 1 AT COCHRAN ROAD AND CROSS ROAD



EMERGENCY VEHICLE PREEMPTION OPERATION

PREEMPT ASSIGNMENT	TSP ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
1		NOT USED/RESERVED	
2		NOT USED/RESERVED	
3	7	1	φ1&φ6 (SB)
4	8	2	φ2&φ5 (NB)
5	9	3	φ4 (WB)
6		NOT USED/RESERVED	

NOTE: ALL MATERIALS SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULES BASED UPON PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02778600

WIN 027786.00

HIGHWAY PLANS

			DATE
PROJ. MANAGER	M. Kersbergen	BY	
DESIGN-DETAILED	E. Raymond	E. Mihok	02\25
CHECKED-REVIEWED	L. Driscoll	A. Greenlaw	02\25
DESIGN2-DETAILED2	-	-	-
DESIGN3-DETAILED3	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

SIGNATURE

P.E. NUMBER

DATE

EDGECOMB
U.S. ROUTE 1

TRAFFIC SIGNAL SCHEDULE

SHEET NUMBER

8

OF 8

Username:

Date:3/4/2025

Division:

Filename: 008_Signal_Notes.dgn