STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

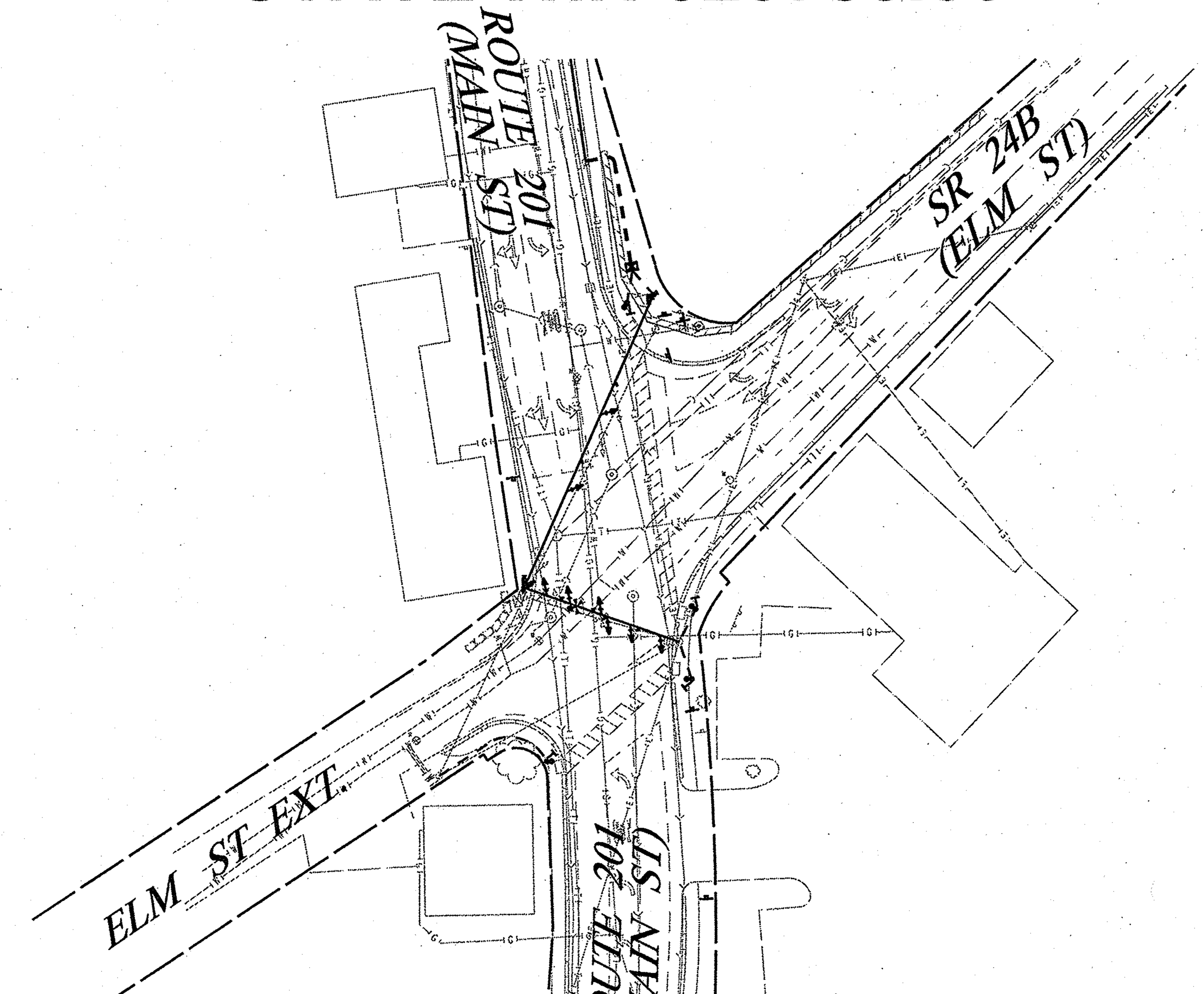
PLAN LEGEND

Town, County, State		Centerline-Existing	
Property Lines		Centerline-Proposed	
R/W Lines-Existing		Travelway-Existing	
R/W Lines-Proposed		Travelway-Proposed	
Culvert-Existing		Railroad	
Culvert Proposed		Catch Basins	Existing / Proposed
Curbing	Existing / Proposed	Manholes	Existing / Proposed
Type 1		Proposed Underdrain	
Type 3		Proposed Ditch	
Type 5		Existing Ditch	
Outline of Bodies of Water		Utility Poles	Existing / Proposed
Exposed Bedrock		Fire Hydrants	Existing / Proposed
Buildings		Existing Water Line	
Trees	Conifer / Deciduous	Existing San. Sewer	
Tree Line		Existing San. Sewer Manhole	
Clearing Limit Line	CLL	Guardrail-Existing	
Boring	HB-XXX-###	Guardrail-Proposed	
		Guardrail-Cable, Other	

	Existing	Proposed
Controller with Cabinet		
Vehicular Signal Head		
Video Detection Camera		
Emergency Vehicle Preemption Reciever		
Emergency Preemption Confirmation Strobe		
Junction Box		
Post or Span Wire Mounted Sign		

TOPSHAM
SAGADAHOC COUNTY
TRAFFIC SIGNAL MODERNIZATION

FEDERAL PROJECT NO. 2378300
STATE WIN 023783.00



INDEX OF SHEETS

Description	Sheet No.
Title Sheet	1
General Notes	2
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Interconnect Plan	5
System Network and Architecture	6
Foundation and Boring Plan	7

TRAFFIC DATA

	US 201 (MAIN ST) N/O SR 24B (ELM ST)	SR 24B/US 201 (MAIN ST) S/O SR 24B (ELM ST)	SR 24B (ELM ST) NE/O US 201 (MAIN ST)
Current (2019) AADT	12,430	13,520	4,250
Future (2039) AADT	13,670	14,870	4,680
DHV - % of AADT	10%	9%	10%
Design Hour Volume	1,367	1,338	468
% Heavy Trucks (AADT)	6%	5%	6%
% Heavy Trucks (DHV)	4%	4%	4%
Directional Distribution (DHV)	53%	53%	50%
18 kip Equivalent P 2.0	244	246	47
18 kip Equivalent P 2.5	256	259	49
Design Speed (mph)	30	25	25
Functional Class:	Minor Arterial	Minor Arterial	Major/Urban Collector

LAYOUT SCALE

50 0 50 100

Scale in Feet

vhb

PROJECT LOCATION:	In the Town of Topsham at Route 201 (Main Street) and SR 24 (Elm Street) / Elm Street Extension
PROGRAM AREA:	Multimodal
OUTLINE OF WORK:	Traffic Signal Design and Other Incidental Work

WIN 023783.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED	DATE
COMMISSIONER: [signature]	1/31/22
CHIEF ENGINEER: [signature]	1-31-2022

Christopher L. Ensley 9374 STATE OF MAINE LICENSED PROFESSIONAL ENGINEER

SIGNATURE [signature]
P.E. NUMBER 9374
DATE 1/11/2022

PROJECT INFORMATION

PROGRAM	MULTIMODAL
PROJECT MANAGER	B. KEEZER
DESIGNER	M. GRAHAM
CONSULTANT	VHB
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

TOPSHAM
ROUTE 201 (MAIN ST) AND
SR 24B (ELM ST) / ELM ST EXT.

TITLE SHEET

SHEET NUMBER
1
OF 7

Date: 1/11/2022 Username: jarobert Division: HIGHWAY Filename: 001_Title.dgn

GENERAL NOTES:

1. WORK FOR THIS PROJECT WILL RESULT IN THE MODERNIZATION OF TRAFFIC CONTROL SIGNALS AND PEDESTRIAN CROSSING FACILITIES IN TOPSHAM. EQUIPMENT INCLUDES BUT IS NOT LIMITED TO, FURNISHING AND INSTALLING COMPLETE NEW ADVANCED TRANSPORTATION CONTROL CABINET ON NEW FOUNDATION WITH RACK MOUNTED ADVANCED TRANSPORTATION CONTROLLER, STRAIN POLES AND FOUNDATIONS, PEDESTAL POLES AND FOUNDATIONS, VEHICULAR AND PEDESTRIAN SIGNAL HEADS WITH COUNTDOWN TIMERS, NEW LIGHT-EMITTING DIODE INDICATIONS, RETROREFLECTIVE BACKPLATES ON VEHICLE SIGNAL HEADS, WIRING, SIGNAL CABLE, SPAN WIRE MOUNTED SIGNS, NON-INVASIVE STOP BAR VEHICLE DETECTION, EMERGENCY VEHICLE PREEMPTION, AND ALL APPURTENANCES AND INCIDENTALS REQUIRED FOR COMPLETE FUNCTIONING INSTALLATIONS. IN ADDITION, THE PROJECT WILL PROVIDE THE MEANS FOR REMOTE COMMUNICATIONS TO THE TRAFFIC SIGNAL CONTROL CABINET EQUIPMENT VIA A NEW INSTALL OF AERIAL FIBER INTRANET CONNECTION TO THE TOPSHAM TOWN HALL HOUSING CONNECTIONS TO THE ATMS.NOW SIGNAL MANAGEMENT SYSTEM.

2. ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH THE LATEST REVISIONS OF THE STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES, MAINEDOT STANDARD DETAILS, SUPPLEMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS FOR THIS CONTRACT, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE NATIONAL ELECTRICAL CODE, AND ANY REQUIREMENTS OF THE POWER COMPANY.

3. LOCATIONS OF ANY EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR FINDING EXACT LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. IN ACCORDANCE WITH MRSA TITLE 23 SECTION 3360-A, THE CONTRACTOR SHALL CONTACT DIG-SAFE AND APPROPRIATE AUTHORITIES PRIOR TO ANY SUBSURFACE ACTIVITIES.

4. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY OPERATIONS ARE CONDUCTED THAT COULD POTENTIALLY CONFLICT WITH AERIAL UTILITIES.

5. ANY RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITY FACILITIES WILL BE MADE BY THE RESPECTIVE UTILITIES IN COORDINATION WITH THE WORK OF THE CONTRACTOR.

6. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL AND/OR RELOCATION OF EXISTING POWER METER . THIS WORK WILL BE INCIDENTAL TO ITEM 643.71 AS APPLICABLE TO THE LOCATION OF THE WORK.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY OPENING PERMITS.

8. WHERE NOTED ON THE PLANS, 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-INCH RETROREFLECTIVE BORDER.

9. ALL NEW SIGNAL HEADS SHALL BE TETHERED TO SPAN WIRE, AS INDICATED ON PLANS.

10. THE BOTTOM OF THE HOUSING OF 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 NOT MORE THAN 19 FEET ABOVE THE SIDEWALK, OR IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE HIGH POINT OF THE ROAD.

11. TRAFFIC SIGNAL WORK SHALL BE COMPLETED IN A MANNER AND ORDER THAT WILL CAUSE THE MINIMUM DISRUPTION TO TRAFFIC AND THE LEAST AMOUNT OF DOWN TIME TO THE TRAFFIC SIGNAL OPERATIONS.

12. ALL EXISTING DRIVEWAY ACCESSES SHALL BE MAINTAINED AT ALL TIMES.

13. 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.

14. ALL NON-PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED AND SEEDED, UNLESS OTHERWISE DIRECTED BY THE OWNER. ALL PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR. COSTS FOR REPAIR OF DISTURBED AREAS SHALL BE INCIDENTAL TO OTHER CONTRACT ITEMS.

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

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

17. TRAFFIC SIGNAL EQUIPMENT

CONTRACTOR FURNISHED EQUIPMENT THE TRAFFIC SIGNAL CONTROLLER, CABINET, AND VARIOUS OTHER EQUIPMENT ITEMS SHOWN ON THE PLANS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE TRAFFIC SIGNAL CONTROLLER SUPPLIED UNDER THIS CONTRACT SHALL BE ETHERNET EQUIPPED TRAFFICWARE ADVANCED TRANSPORTATION CONTROLLER FOR FULL COMPATIBILITY WITHIN THE TOWN'S EXISTING ATMS.NOW SIGNAL SYSTEM. THE CONTROL CABINET SUPPLIED UNDER THIS CONTRACT SHALL BE ADVANCED TRANSPORTATION CONTROL CABINETS AS DESCRIBED IN MAINEDOT STANDARD SPECIFICATION 718.08.

17. TRAFFIC SIGNAL EQUIPMENT CONT.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING THE PROJECT WITH WORKING AND FULLY CONFIGURED TRAFFIC SIGNAL CONTROLLER, DELIVERY AND COMPLETE SET-UP WITH THE EXISTING CENTRAL MANAGEMENT SYSTEM, AND INSTALLATION OF THE CENTRAL AND LOCAL INTERSECTION COMMUNICATIONS INTERFACE. THE CONTRACTOR IS FURTHER RESPONSIBLE FOR SYSTEM START-UP AND SYSTEM LOADING, ACCEPTANCE TESTING, AND TRAINING. IN ADDITION, THE CONTRACTOR SHALL FURNISH AND INSTALL THE LIGHT-BASED EMERGENCY VEHICLE PREEMPTION SYSTEM COMPATIBLE WITH THE PREEMPTION EMITTERS OWNED BY THE MUNICIPAL FIRE DEPARTMENT.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR FURNISHING AND INSTALLING ALL OTHER EQUIPMENT DETAILED IN GENERAL NOTE 1 AND SHALL BE AWARE OF AND CONFORM TO ALL DETAILS FOR THE MATERIAL SPECIFICATIONS IN SPECIAL PROVISION 718.

18. PAINTING

UNLESS OTHERWISE DIRECTED BY MAINEDOT OR THROUGH THE RESIDENT, ALL EXTERIOR PARTS OF THE LISTED EQUIPMENT SHALL BE DELIVERED TO THE PROJECT FINISHED AS FOLLOWS:

- STRAIN POLE AND BASE - BLACK
- VEHICULAR SIGNAL HEADS - YELLOW
- PEDESTRIAN SIGNAL HEADS - YELLOW
- ACCESSIBLE PEDESTRIAN SIGNALS (APS) - YELLOW
- SIGNAL BACKPLATES - BLACK AND LOUVERED W/FLUORESCENT YELLOW RETROREFLECTIVE STRIP
- CONTROLLER CABINETS - BLACK
- PEDESTAL POSTS AND BASES - BLACK

19. COMMUNICATIONS

THE SYSTEM SHALL SUPPORT COMMUNICATIONS TO THE ADVANCED TRANSPORTATION CONTROLLER, ASSOCIATED EQUIPMENT, AND VEHICLE DETECTION AS SHOWN IN THE PLANS. INTERSECTION CONTROLLER SHALL BE CAPABLE OF COMMUNICATING WITH THE SYSTEM, AT A RATE OF ONCE-PER-SECOND. COMMUNICATIONS FROM THE TRAFFIC SIGNAL MANAGEMENT SERVER TO THE ON-STREET TRAFFIC SIGNAL CONTROLLER SHALL BE MADE THROUGH FIBER OPTIC INTERCONNECT CABLE. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL FIBER OPTIC INTERCONNECTION AS SHOWN IN THE PLANS.

THE NEW FIBER OPTIC CABLE SHALL BE TIED INTO THE EXISTING TOWN OF TOPSHAM SYSTEM. THE CONTRACTOR SHALL INSTALL AND SPLICE NEW FIBER OPTIC CABLE ALONG US ROUTE 201 (MAIN STREET) FROM THE SERVER ROOM AT THE TOPSHAM TOWN OFFICES TO 2 MUNICIPAL POLES TO CENTRAL MAINE POWER (CMP) POLE 55 SOUTH ALONG MAIN STREET ALONG 30 POLES TO CMP 22 TO PROPOSED POLE RISER AND THROUGH PROPOSED CONDUIT TO THE PROPOSED TRAFFIC SIGNAL CONTROL CABINET AT THE INTERSECTION OF MAIN STREET AND ELM STREET/WINTER STREET. THE CONTRACTOR SHALL VERIFY THAT THE EXISTING FIBERS IDENTIFIED FOR SPLICING ARE NOT LIT PRIOR TO CUTTING ANY FIBERS. CONTRACTOR SHALL NOT CUT ANY FIBERS CURRENTLY IN USE BY THE TOWN OF TOPSHAM. IF INTERRUPTIONS IN THE TOWN NETWORK ARE REQUIRED, INTERRUPTIONS SHALL BE LIMITED TO OFF-PEAK HOURS AND SHALL BE SCHEDULED WITH THE TOPSHAM IT DEPARTMENT. ALL SPLICES SHALL BE WATERTIGHT FUSION SPLICES. AT LEAST 2 DAYS PRIOR TO BEGINNING WORK ON THE TOWN S IT INFRASTRUCTURE, THE CONTRACTOR SHALL CONTRACT DENNIS COX AT 207.725.1728 TO SCHEDULE THE PROPOSED WORK.

20. VEHICLE DETECTION

THE CONTRACTOR SHALL FURNISH AND INSTALL NON-INVASIVE STOP LINE VEHICLE DETECTION AS SHOWN IN THE PLANS. AS PAYMENT FOR THIS WORK, THE CONTRACTOR SHALL SUBMIT A LUMP SUM BID FOR NON-INVASIVE STOP LINE DETECTION. THE VEHICLE DETECTORS ARE TO BE CONNECTED TO THE INTERSECTION TRAFFIC CONTROLLER FOR LOCAL VEHICLE DETECTION AND REMOTELY CONNECTED TO THE TOPSHAM TRAFFIC SIGNAL MANAGEMENT SERVER TO ALLOW VISUAL CONFIRMATION AND ADJUSTMENT OF THE DETECTION ZONES AS SHOWN IN THE PLANS. WORK SHALL BE CONSTRUCTED AND PAID FOR AS OUTLINED IN SPECIAL PROVISION 643.

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

THE LOCATION OF THE DETECTION DEVICES SHOWN IN THE PLANS ARE CONCEPTUAL FOR OPTIMAL APPROACH COVERAGE ASSUMING ONE DEVICE PER APPROACH. THE ACTUAL NUMBER OF DETECTION DEVICES AND MOUNTING LOCATIONS SHALL BE PER MANUFACTURES RECOMMENDATION.

THE RESIDENT RESERVES THE RIGHT TO DIRECT THE CONTRACTOR TO ADJUST THE VIDEO DETECTOR MOUNTING HEIGHT FOR LOCAL CONDITIONS IDENTIFIED DURING OR AFTER INSTALLATION. NO ADDITIONAL COST WILL BE ALLOWED FOR FIELD ADJUSTING THE PIPE EXTENSIONS OR REWIRING AS NECESSARY. THIS WORK WILL BE INCIDENTAL TO THE 643.83 ITEM.

21. FOUNDATIONS

NEW TRAFFIC SIGNAL CONTROL CABINET, STRAIN POLE, AND PEDESTAL POLE FOUNDATIONS SHALL BE CONSTRUCTED IN LOCATIONS SHOWN ON THE PLANS. THE PROPOSED FOUNDATIONS AS SHOWN ARE TO BE WITHIN EXISTING RIGHT-OF-WAY OR PROPOSED EASEMENTS TO AVOID UNDERGROUND CONFLICTS BASED ON AVAILABLE INFORMATION PROVIDED DURING DESIGN; HOWEVER, THE CONTRACTOR MAY UPON CONSULTATION AND APPROVAL FROM THE RESIDENT, RELOCATE CABINET AND STRAIN POLE FOUNDATIONS AS NEEDED TO AVOID UNANTICIPATED CONFLICTS AS LONG AS THE FINAL LOCATION MEETS THE GUIDELINES IN SECTION 4E.08 OF THE MUTCD, DOES NOT VIOLATE ADA, AND THE STRUCTURE IS INSTALLED COMPLETELY WITHIN THE EXISTING ROW OR AVAILABLE EASEMENTS.

WHERE NEW CONTROL CABINET FOUNDATIONS ARE CALLED FOR IN THE PLANS, EACH FOUNDATION SHALL PROVIDE SUFFICIENT CONDUIT SWEEPS TO SERVICE THE SIGNALIZED INTERSECTION WHILE MEETING THE NATIONAL ELECTRICAL CODE CHAPTER 9, TABLE 1 REQUIREMENTS FOR CONDUIT FILL.

22. STRAIN POLES

NEW STEEL STRAIN POLE B-SI ON NORTHWEST SIDE OF INTERSECTION TO BE INSTALLED AS CLOSE AS POSSIBLE TO EXISTING WOOD POLE.

23. START-UP AND SYSTEM LOADING

THE SYSTEM SUPPLIER SHALL INITIATE COMPLETE SYSTEM OPERATION INCLUDING ATC, ATCC, STOP LINE VEHICLE DETECTION SYSTEM, THE COMMUNICATIONS SYSTEM, AND REMOTE MONITORING AS SHOWN ON THE PLANS AND/OR DIRECTED BY MAINEDOT AND THE RESIDENT. AFTER THE SUPPLIER HAS INITIATED SYSTEM OPERATION, THE SYSTEM SHALL BE RUN FOR A CONTINUOUS 7-DAY INITIAL OPERATIONAL TESTING PERIOD. IF ANY MAJOR FUNCTIONS OF THE SYSTEM FAIL TO OPERATE DURING THIS TESTING PERIOD, AS DETERMINED BY MAINEDOT AND/OR THE RESIDENT, THE SUPPLIER SHALL CORRECT OR REPAIR THE SYSTEM AND THE CONTINUOUS 7-DAY TESTING PERIOD SHALL BE RESTARTED. AT THE COMPLETION OF A SUCCESSFUL 7-DAY TESTING PERIOD, THE SUPPLIER SHALL ADVISE MAINEDOT AND/OR THE RESIDENT THAT THE SYSTEM IS READY FOR THE START-UP PHASE. ANY MAJOR SYSTEM MALFUNCTIONS ENCOUNTERED DURING THIS TESTING PERIOD SHALL BE CORRECTED BY THE SUPPLIER, AND THE TEST RESTARTED. DURING THIS PERIOD, MAINEDOT AND/OR THE RESIDENT MAY MAKE MODIFICATIONS 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.

24. ACCEPTANCE TESTING

UPON COMPLETION OF THE 7-DAY TESTING 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.

ACCEPTANCE TESTING MUST DEMONSTRATE TO MAINEDOT AND/OR THE RESIDENT S 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 AND THE TOWN OF TOPSHAM.

25. SALVAGE RIGHTS

MAINEDOT SHALL HAVE FIRST RIGHTS TO ALL EQUIPMENT REMOVED OR REPLACED BY THE PROJECT (CONTACT CHARLOTTE ALLRAN AT 207.441.3058). HE TOWN OF TOPSHAM SHALL HAVE SECOND SALVAGE RIGHTS TO ALL EQUIPMENT NOT CLAIMED BY MAINEDOT. THE CONTRACTOR SHALL CAREFULLY REMOVE AND STORE ALL EQUIPMENT CLAIMED BY EITHER MAINEDOT OR THE TOWN OF TOPSHAM AT A CENTRAL LOCATION ON SITE FOR RETRIEVAL BY MAINEDOT OR THE TOWN OF TOPSHAM. THE STORAGE AREA SHALL BE SECURE AND ALL CONTROL EQUIPMENT REMOVED THAT HAS COMPUTER CHIP TECHNOLOGY SHALL BE STORED IN AN INTERIOR HEATED ENVIRONMENT.

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

26. 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, IT ITS SOLE OPINION, TO THE PLANS OR SPECIFICATIONS.

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

28. 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.

29. THE CONTRACTOR SHALL REMAIN ALERT FOR ANY EVIDENCE OF CONTAMINATED SOILS. THE CONTRACTOR SHALL EMPLOY APPROPRIATE HEALTH AND SAFETY MEASURES TO PROTECT ITS WORKERS AGAINST HAZARDS ASSOCIATED WITH EXCAVATING AND WORKING NEAR CONTAMINATED SOILS. IF THE CONTRACTOR ENCOUNTERS EVIDENCE OF SOIL OR GROUNDWATER CONTAMINATION, THE CONTRACTOR SHALL SECURE THE EXCAVATION, STOP WORK IN THE CONTAMINATED AREA, AND IMMEDIATELY NOTIFY THE RESIDENT. THE RESIDENT SHALL CONTACT THE HYDROGEOLOGIST IN MAINEDOT'S ENVIRONMENTAL OFFICE AT 207-624-3100 AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AT 800-482-0777. WORK MAY ONLY CONTINUE WITH AUTHORIZATION FROM THE RESIDENT.

30. THE CONTRACTOR IS DIRECTED TO PROJECT SPECIAL PROVISION 718 FOR ADDITIONAL INFORMATION RELATED TO THE FOLLOWING:

- 718.13 TRAFFIC SIGNAL CONTROL SYSTEM
- 718.14 MESSENGER WIRE
- 718.15 EMERGENCY VEHICLE PREEMPTION SYSTEM
- 718.16 SINGLE MODE FIBER OPTIC CABLE
- 718.17 TWELVE (12) POSITION FIBER OPTIC PATCH PANEL
- 718.18 ETHERNET SWITCH WITH FIBER OPTIC INTERFACES
- 718.19 PEDESTRIAN CROSSING SYSTEM

SPECIAL PROVISION 718 EXPANDS UPON THE INFORMATION FOUND IN THESE GENERAL NOTES, MAINEDOT STANDARD SPECIFICATIONS DATED MARCH 2020, AND MAINEDOT STANDARD DETAILS DATED MARCH 2020. AS SUCH, THE MORE RESTRICTIVE LANGUAGE BETWEEN THESE GENERAL NOTES, MAINEDOT STANDARD SPECIFICATIONS, MAINEDOT STANDARD DETAILS, AND SPECIAL PROVISION 718 SHALL GOVERN THE WORK TO BE PERFORMED UNDER THIS PROJECT.

31. RIGHT-OF-WAY

RIGHT-OF-WAY WHERE NOTED IN THE PLANS IS APPROXIMATE. THE CONTRACTOR SHALL NOT BEGIN WORK AT THESE LOCATIONS UNTIL MEETING WITH RESIDENT TO ENSURE NO DISTURBANCE WILL OCCUR OUTSIDE OF RIGHT-OF-WAY.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2378300

WIN 023783.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. NICHOLS		
DESIGN-DETAILED	MLG	JAR	06/19
CHECKED-REVIEWED	CMB	CMB	06/19
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TOPSHAM
ROUTE 201(MAIN ST) AND
SR 24B (ELM ST) / ELM ST EXT.

GENERAL NOTES

SHEET NUMBER

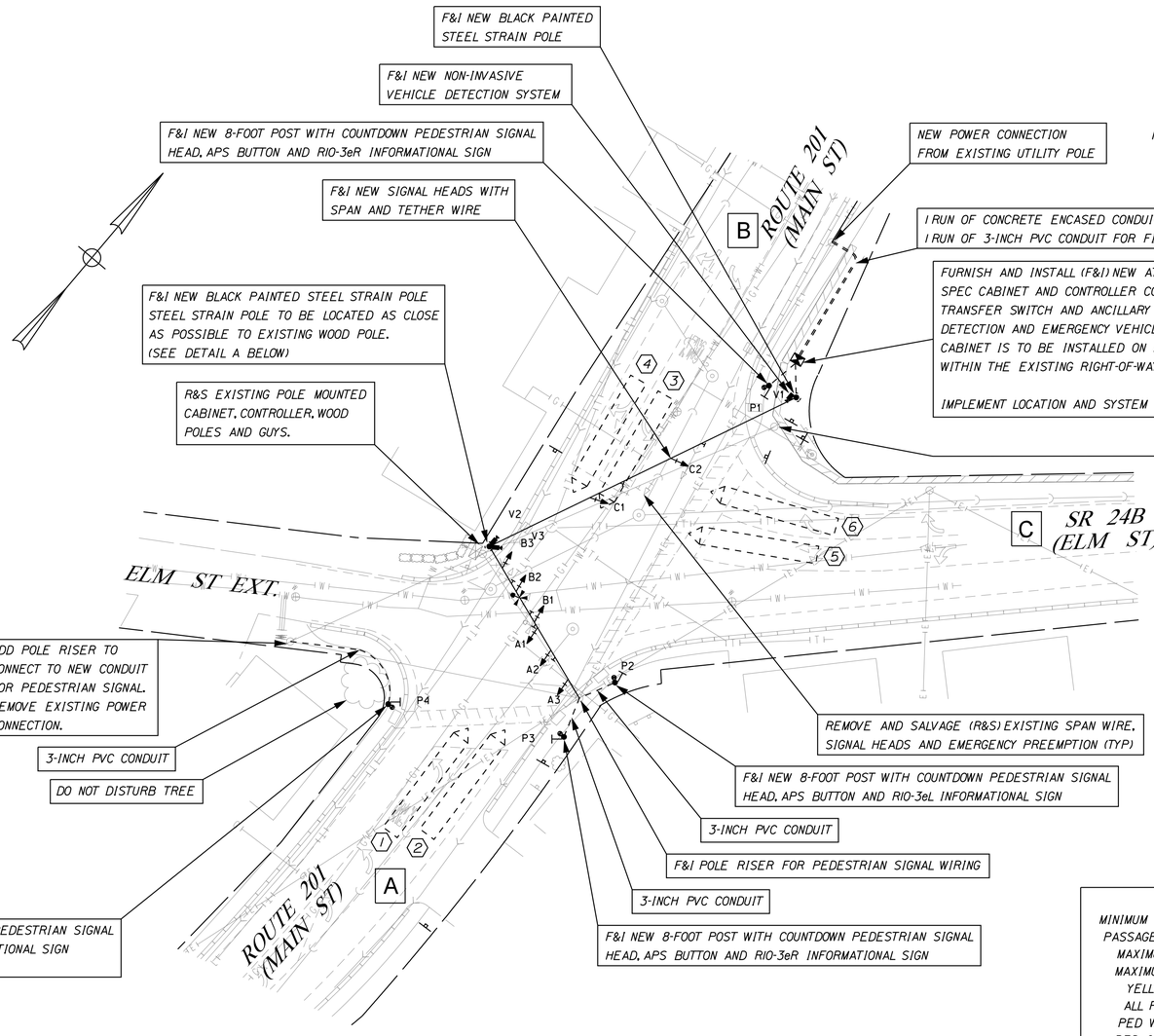
2

OF 7

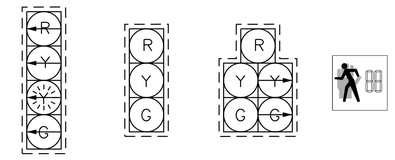
LIST OF MAJOR ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING AND CONNECTION BACK TO TOWN TRAFFIC SIGNAL MANAGEMENT SERVER	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 RETROREFLECTIVE BORDER MOUNTED ON SPAN AND TETHER WIRE	5
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH FLASHING YELLOW ARROW, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVE BORDER MOUNTED ON SPAN AND TETHER WIRE	2
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVE BORDER MOUNTED ON SPAN AND TETHER WIRE	1
FURNISH AND INSTALL ONE-WAY, 16X18 INCH LED TOP OF POST MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	4
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3E INFORMATIONAL SIGN	4
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	3
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
FURNISH AND INSTALL ENVIRONMENTALLY HARDENED FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL POST MOUNTED SIGN	3
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGN	6
RESET POST MOUNTED SIGN	2
FURNISH AND INSTALL SPAN AND TETHER WIRE	375 LF
FURNISH AND INSTALL POLE RISERS (FIBER AND POWER)	4
REMOVE AND SALVAGE EXISTING WOOD POLE AND GUYS	2
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

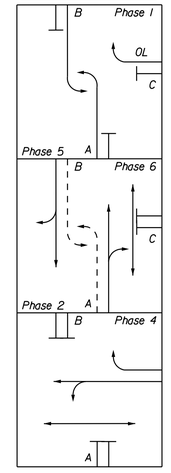


PROPOSED INDICATIONS



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

PHASE DIAGRAM

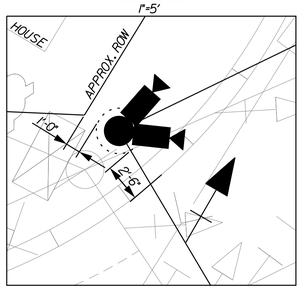


WHERE:
→ PROTECTED TRAFFIC MOVEMENT
--→ PERMISSIVE TRAFFIC MOVEMENT

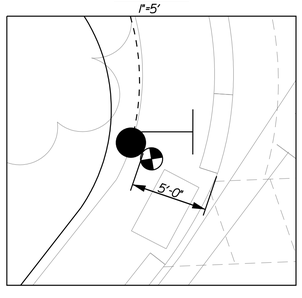
DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
①	MAIN ST NB LEFT	5	5	B	-	-
②	MAIN ST NB THRU-RIGHT	2	2	B	-	-
③	MAIN ST SB LEFT	1	1	B	-	-
④	MAIN ST SB THRU-RIGHT	6	6	B	-	-
⑤	ELM ST WB LEFT-THRU	4	4	B	-	-
⑥	ELM ST WB RIGHT	4	4	B	5	-

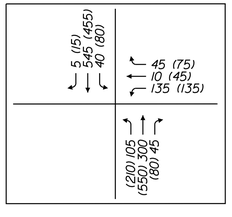
DETAIL A



DETAIL B



2019 SYSTEM DESIGN VOLUMES AM (PM)



SIGNAL TIMING

	PHASE 1	PHASE 2	PHASE 4	PHASE 5	PHASE 6
MINIMUM INITIAL	5	10	7	5	10
PASSAGE TIME	3	3	3	3	3
MAXIMUM 1	20	40	20	20	40
MAXIMUM 2	-	-	-	-	-
YELLOW	3	3	4	3	4.5
ALL RED	2	2.5	4	2	2
PED WALK	-	-	4	-	4
PED CLEAR	-	-	13	-	26
RECALL	0	S	0	0	0
DETECTOR	PR	PR	PR	PR	PR
PREEMPT PRIORITY	3	4	5	4	3
FLASH	R	Y	R	R	Y
DUAL ENTRY	OFF	ON	OFF	OFF	ON

NOTES: S = SOFT RECALL
0 = RECALL OFF
PR = PRESENCE
Y = YELLOW
R = RED
D = DARK

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP-1277(600)X DOT FILE 13-376, SHEET 60 OF 63, 03/2013 & DOT FILE 13-264, SHEET 1 OF 1, 1987

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2378300

WIN 023783.00

TRAFFIC PLANS

vhb

	B. NICHOLS	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	M.C	JAR	06/19
CHECKED-REVIEWED	CMB	CMB	06/19
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TOPSHAM
ROUTE 201(MAIN ST) AND
SR 24B (ELM ST) / ELM ST EXT.

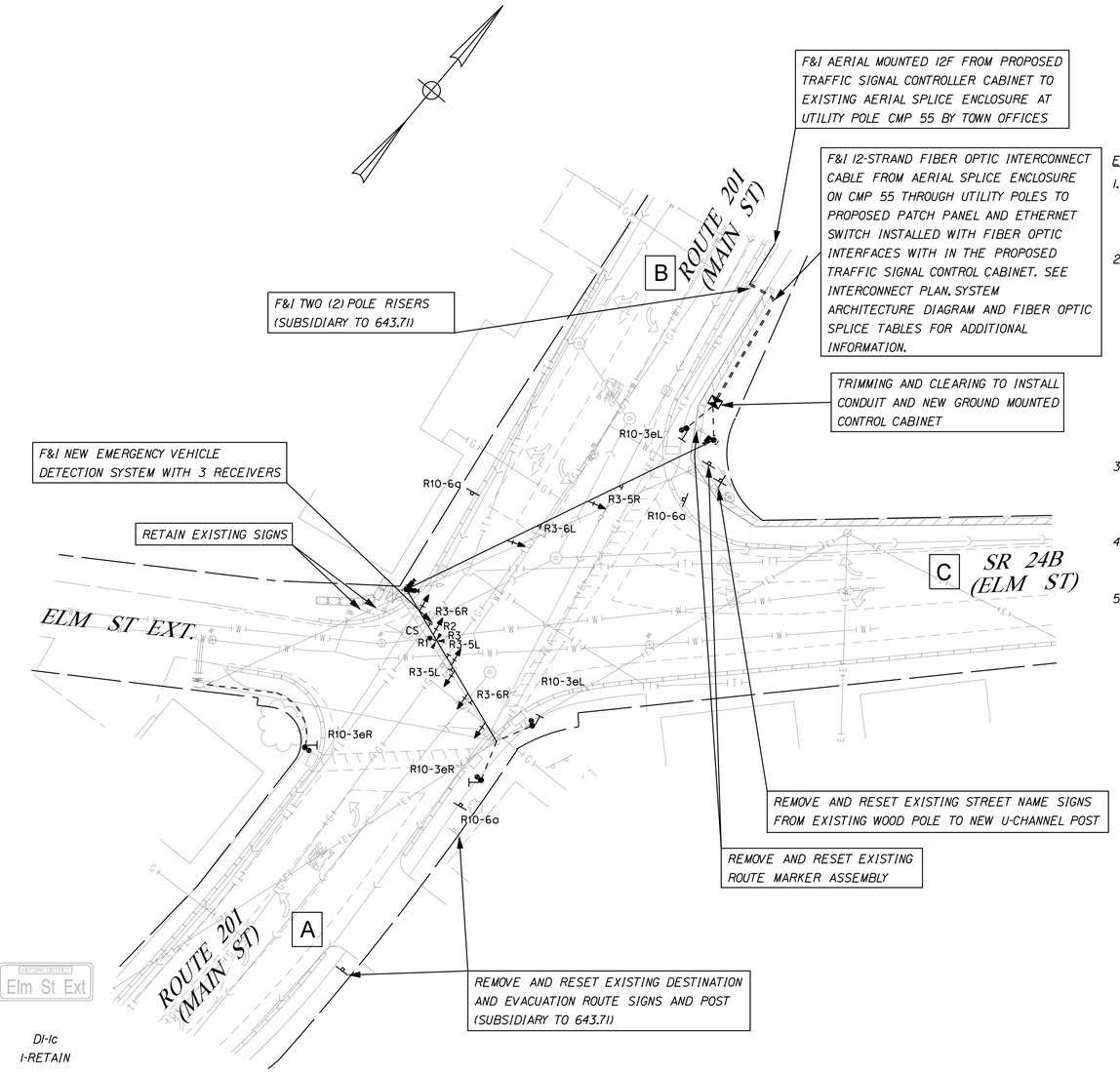
TRAFFIC SIGNAL PLAN

SHEET NUMBER
3
OF 7

LIST OF MAJOR ITEMS

EQUIPMENT AND WORK ITEMS (ITEM XXX.YYZ)	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	200 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	50 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	28 LF
FURNISH AND INSTALL 36-IN DIAMETER FOUNDATION (ITEM 626.44)	26 LF
FURNISH AND INSTALL VIDEO DETECTION SYSTEM WITH CONNECTION TO TOWN TRAFFIC MANAGEMENT SERVER FOR REMOTE MONITORING AND ADJUSTMENT (ITEM 643.83)	1 LS
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	4 EA
FURNISH AND INSTALL NEW BLACK PAINTED STEEL STRAIN POLE (ITEM 643.93)	2 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



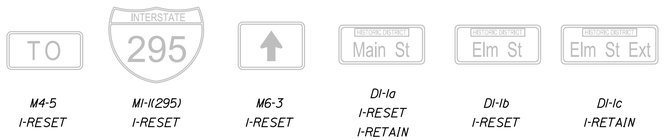
EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USED / RESERVED	
	2	NOT USED / RESERVED	
R1	3	1	ϕ1 & ϕ6
R2	4	2	ϕ2 & ϕ5
R3	5	3	ϕ4

EMERGENCY VEHICLE PRE-EMPTION NOTES:

1. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 3 = LOWEST)
2. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD THE EMERGENCY ACTIVE PHASE GREEN FOR A MINIMUM OF 10 SECONDS OR UNTIL THE PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCE (3.0 SECONDS YELLOW AND 2.0 SECONDS ALL RED) AND SERVICE SUBSEQUENT EMERGENCY ACTIVE PHASES AS NECESSARY. AT THE COMPLETION OF THE PRE-EMPTION CYCLE, THE CONTROLLER SHALL TIME THE PRE-EMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATION.
3. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
4. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION GREEN IS ON.
5. THE EXISTING ATMS SYSTEM IS TO BE CONFIGURED TO EMAIL PREEMPTION ALERTS TO TOWN STAFF (TO BE DESIGNATED DURING TRAINING) WHEN TRAFFIC SIGNAL PREEMPTION EXCEEDS A DURATION GREATER THAN ONE MINUTE.

EXISTING SIGNS



M4-5, 1-RESET | M1-1(295), 1-RESET | M6-3, 1-RESET | D1-1a, 1-RESET, 1-RETAIN | D1-1b, 1-RESET | D1-1c, 1-RETAIN

PROPOSED SIGNS

R10-6a, 24"x30", 3-PROPOSED | R3-5L, 30"x36", 2-PROPOSED | R3-6R, 30"x36", 2-PROPOSED | R3-6L, 30"x36", 1-PROPOSED | R3-5R, 30"x36", 1-PROPOSED | R10-3eL, 9"x15", 1-PROPOSED | R10-3eR, 9"x15", 3-PROPOSED

PLAN

25 0 25 50

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2378300

WIN 023783.00

TRAFFIC PLANS

vhb

	B. NICHOLS	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	06/19
CHECKED-REVIEWED	CMB	06/19
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

TOPSHAM
ROUTE 201(MAIN ST) AND
SR 24B (ELM ST) / ELM ST EXT.

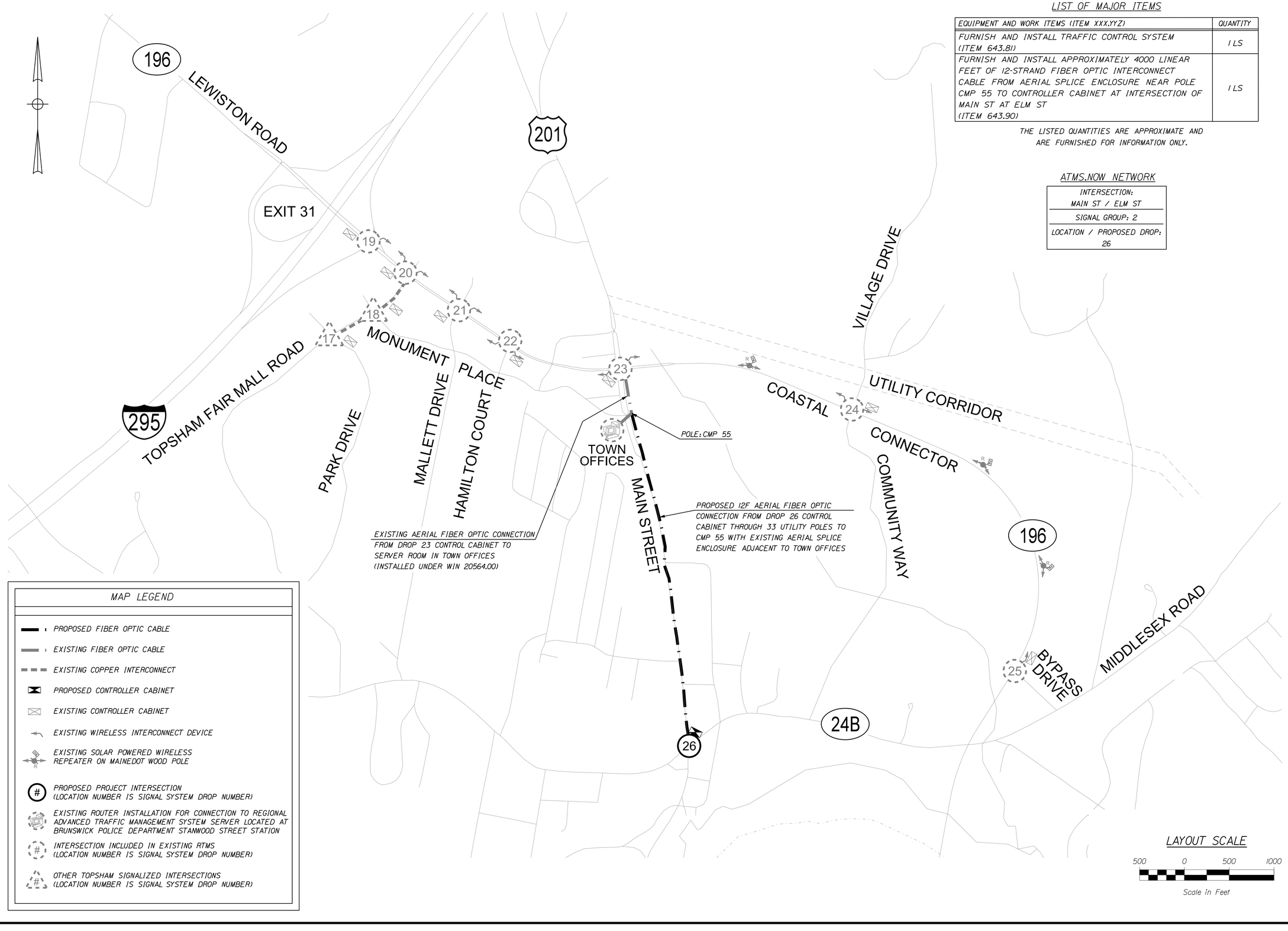
TRAFFIC SIGNAL PLAN

SHEET NUMBER

4

OF 7

Filename: 004_Signal_2.dgn Username: jorobert Division: HIGHWAY Date:1/24/2022



LIST OF MAJOR ITEMS

EQUIPMENT AND WORK ITEMS (ITEM XXX.YYZ)	QUANTITY
FURNISH AND INSTALL TRAFFIC CONTROL SYSTEM (ITEM 643.81)	1 LS
FURNISH AND INSTALL APPROXIMATELY 4000 LINEAR FEET OF 12-STRAND FIBER OPTIC INTERCONNECT CABLE FROM AERIAL SPLICE ENCLOSURE NEAR POLE CMP 55 TO CONTROLLER CABINET AT INTERSECTION OF MAIN ST AT ELM ST (ITEM 643.90)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

ATMS.NOW NETWORK

INTERSECTION: MAIN ST / ELM ST
SIGNAL GROUP: 2
LOCATION / PROPOSED DROP: 26

MAP LEGEND

- PROPOSED FIBER OPTIC CABLE
- EXISTING FIBER OPTIC CABLE
- EXISTING COPPER INTERCONNECT
- PROPOSED CONTROLLER CABINET
- EXISTING CONTROLLER CABINET
- EXISTING WIRELESS INTERCONNECT DEVICE
- EXISTING SOLAR POWERED WIRELESS REPEATER ON MAINEDOT WOOD POLE
- (#) PROPOSED PROJECT INTERSECTION (LOCATION NUMBER IS SIGNAL SYSTEM DROP NUMBER)
- EXISTING ROUTER INSTALLATION FOR CONNECTION TO REGIONAL ADVANCED TRAFFIC MANAGEMENT SYSTEM SERVER LOCATED AT BRUNSWICK POLICE DEPARTMENT STANWOOD STREET STATION
- (#) INTERSECTION INCLUDED IN EXISTING RTMS (LOCATION NUMBER IS SIGNAL SYSTEM DROP NUMBER)
- (#) OTHER TOPSHAM SIGNALIZED INTERSECTIONS (LOCATION NUMBER IS SIGNAL SYSTEM DROP NUMBER)

LAYOUT SCALE

500 0 500 1000

Scale in Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2378300

WIN 023783.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. NICHOLS	BY	DATE
DESIGN-DETAILED	MLG	JAR	06/19
CHECKED-REVIEWED	CMB	CMB	06/19
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

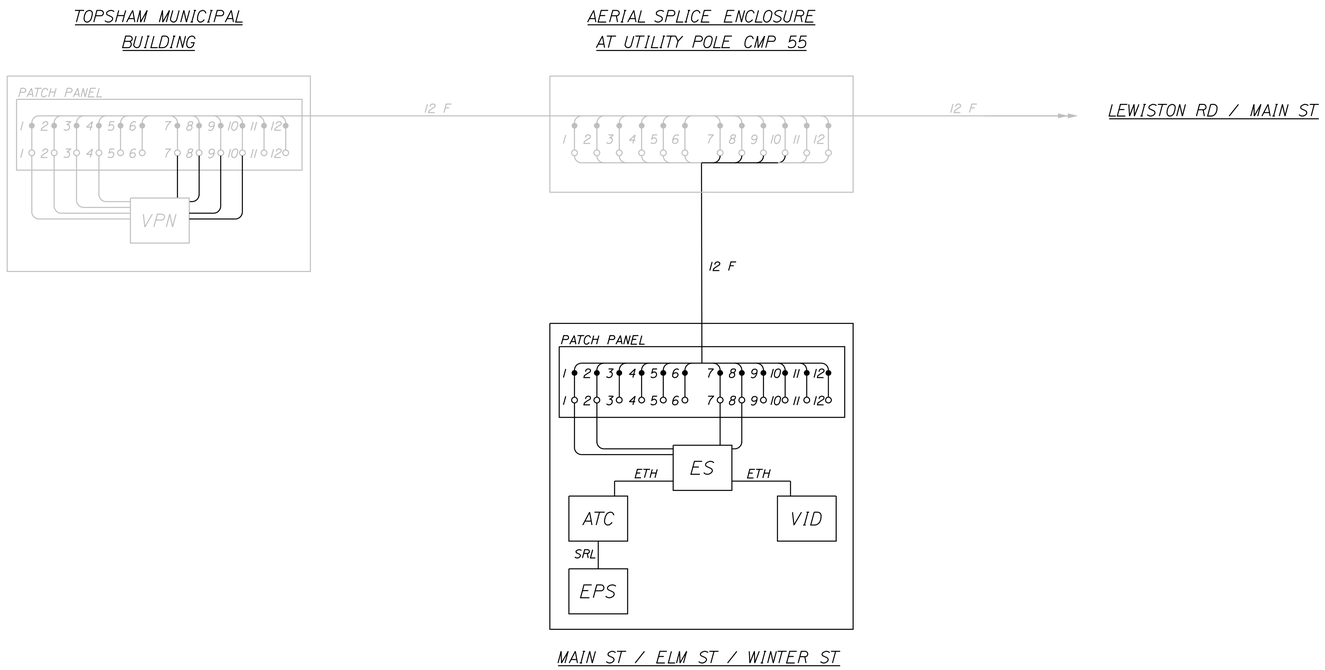
TOPSHAM
ROUTE 201(MAIN ST) AND
SR 24B (ELM ST) / ELM ST EXT.

INTERCONNECT PLAN

SHEET NUMBER

5

OF 7



PROPOSED PATCH PANEL FOR MAIN ST/ELM ST/ WINTER ST INTERSECTION SIGNAL CABINET

CABLE	STRAND	CONNECTION	CABLE	STRAND	DESCRIPTION
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	1	SPLICE	PIGTAIL	-	es, PP POSITION 1
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	2	SPLICE	PIGTAIL	-	es, PP POSITION 2
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	3	SPLICE	PIGTAIL	-	es, PP POSITION 3
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	4	SPLICE	PIGTAIL	-	es, PP POSITION 4
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	7	SPLICE	PIGTAIL	-	ES, PP POSITION 7
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	8	SPLICE	PIGTAIL	-	ES, PP POSITION 8
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	9	SPLICE	PIGTAIL	-	ES, PP POSITION 9
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	10	SPLICE	PIGTAIL	-	ES, PP POSITION 10
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
PROPOSED 12F TO AERIAL SPLICE ENCLOSURE	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

SPLICE ENCLOSURE AT UTILITY POLE CMP55

CABLE	STRAND	CONNECTION	CABLE	STRAND	DESCRIPTION
12F FROM CMP55	1	SPLICE	-	-	LEWISTON RD
12F FROM CMP55	2	SPLICE	-	-	LEWISTON RD
12F FROM CMP55	3	SPLICE	-	-	LEWISTON RD
12F FROM CMP55	4	SPLICE	-	-	LEWISTON RD
12F FROM CMP55	5	SPLICE	-	-	LEWISTON RD
12F FROM CMP55	6	SPLICE	-	-	LEWISTON RD
12F FROM CMP55	7-12	UNTERMINATED	-	-	LEWISTON RD
12F FROM CMP55	1-6	UNTERMINATED	-	-	ELM ST
12F FROM CMP55	7	SPLICE	-	-	ELM ST
12F FROM CMP55	8	SPLICE	-	-	ELM ST
12F FROM CMP55	9	SPLICE	-	-	ELM ST
12F FROM CMP55	10	SPLICE	-	-	ELM ST
12F FROM CMP55	11	SPLICE	-	-	ELM ST
12F FROM CMP55	12	SPLICE	-	-	ELM ST

PATCH PANEL FOR TOPSHAM MUNICIPAL BUILDING

CABLE	STRAND	CONNECTION	CABLE	STRAND	DESCRIPTION
12F FROM CMP55	1	SPLICE	PIGTAIL	-	vpn, PP POSITION 1
12F FROM CMP55	2	SPLICE	PIGTAIL	-	vpn, PP POSITION 2
12F FROM CMP55	3	SPLICE	PIGTAIL	-	vpn, PP POSITION 3
12F FROM CMP55	4	SPLICE	PIGTAIL	-	vpn, PP POSITION 4
12F FROM CMP55	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
12F FROM CMP55	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
12F FROM CMP55	7	SPLICE	PIGTAIL	-	VPN, PP POSITION 7
12F FROM CMP55	8	SPLICE	PIGTAIL	-	VPN, PP POSITION 8
12F FROM CMP55	9	SPLICE	PIGTAIL	-	VPN, PP POSITION 9
12F FROM CMP55	10	SPLICE	PIGTAIL	-	VPN, PP POSITION 10
12F FROM CMP55	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
12F FROM CMP55	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

LEGEND

- FIBER OPTIC PIGTAIL
- FIBER OPTIC SPLICE
- ATC - ADVANCED TRANSPORTATION CONTROLLER
- ES - FIBER ETHERNET SWITCH
- ETH - ETHERNET CABLE
- SRL - SERIAL CONNECTION
- EPS - EMERGENCY PREEMPTION SYSTEM
- VID - VIDEO DETECTION CONTROL UNIT
- EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2378300

WIN 023783.00

TRAFFIC PLANS

vhb

	B. NICHOLS	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	MLG	JAR	06/19
CHECKED-REVIEWED	CMB	CMB	06/19
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TOPSHAM
ROUTE 201(MAIN ST) AND
SR 24B (ELM ST) / ELM ST EXT.

SYSTEM NETWORK AND ARCHITECTURE

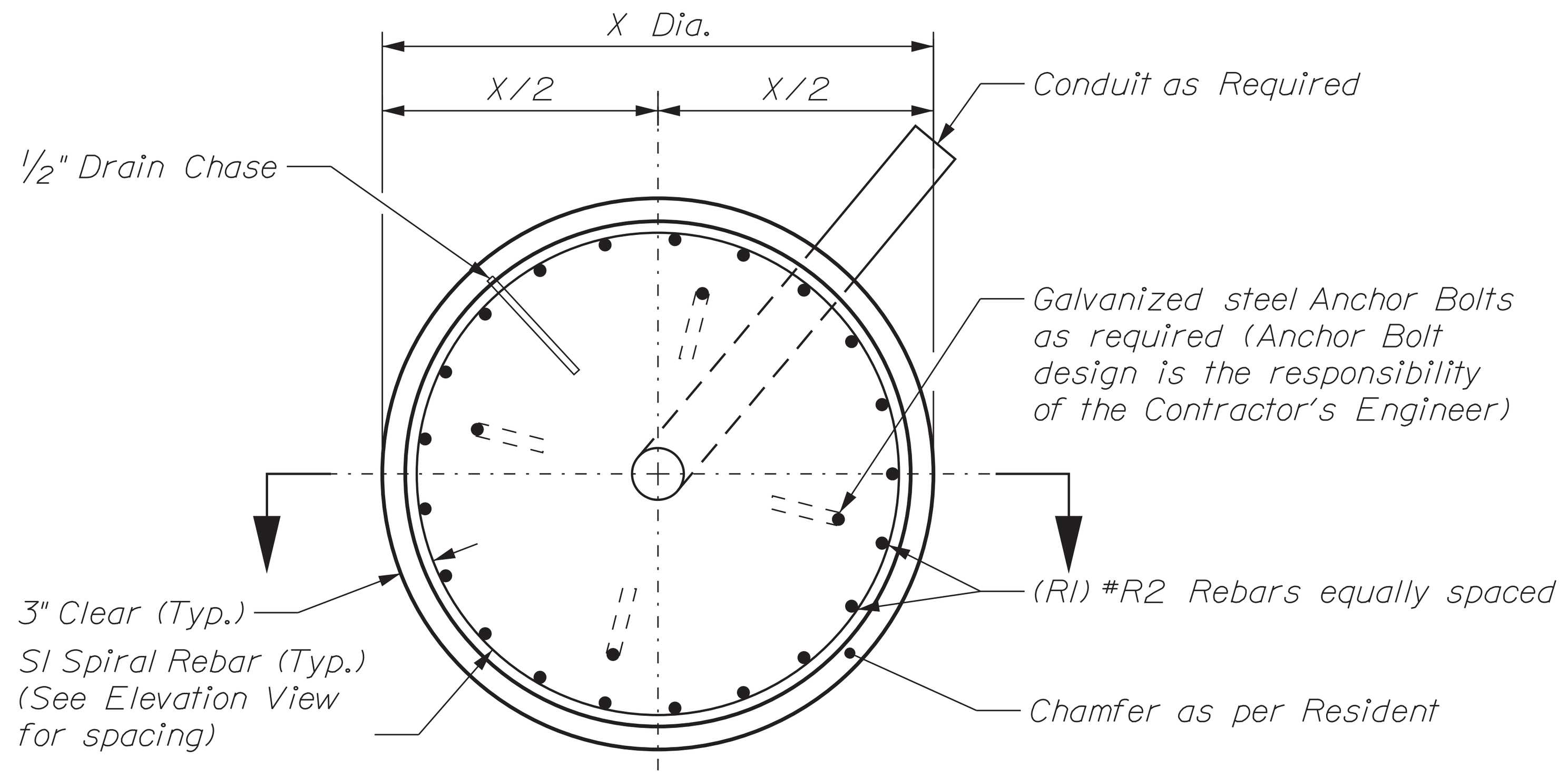
SHEET NUMBER

6

OF 7

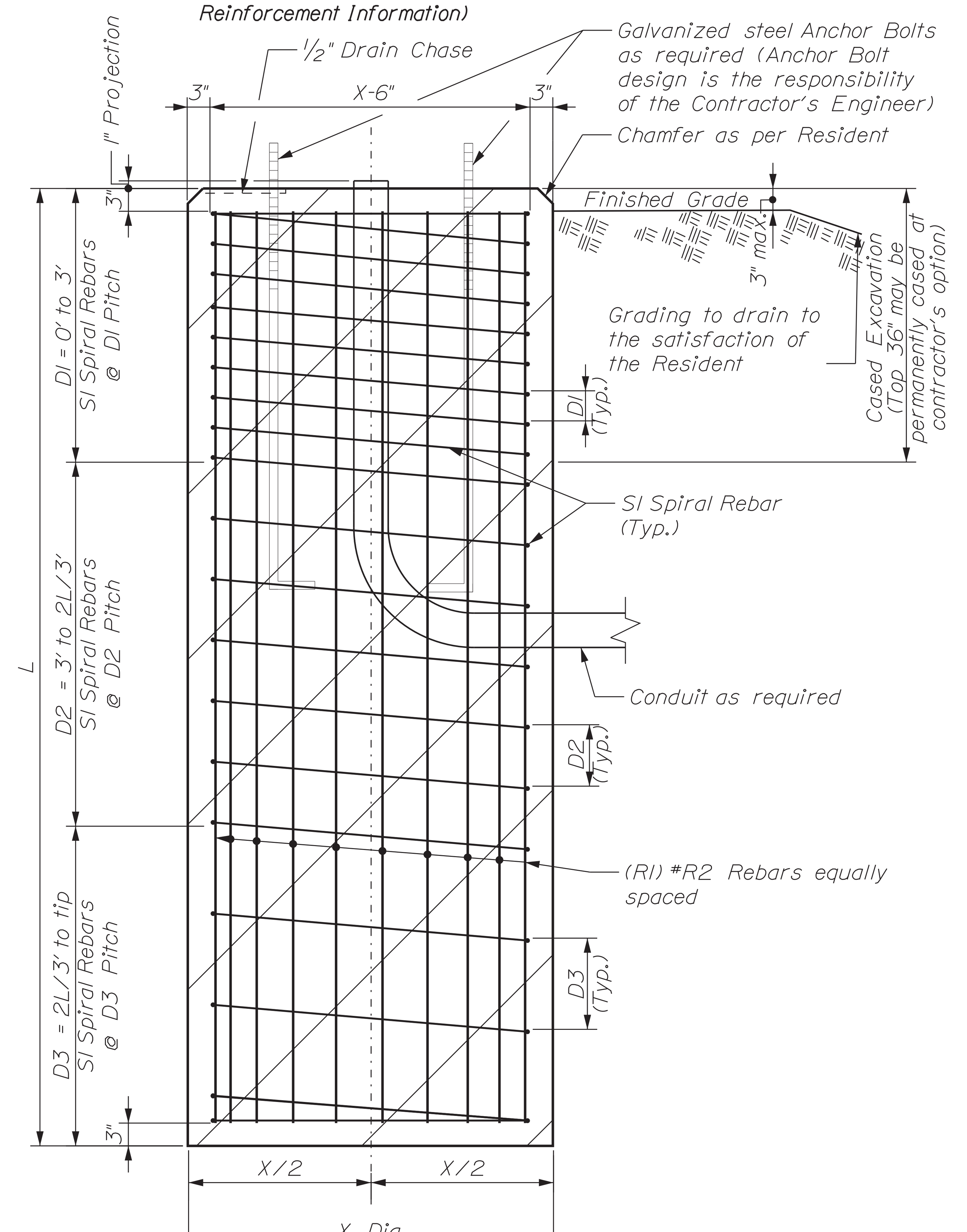
Filename: 006_SystemArch.dgn Division: HIGHWAY Username: jorobert Date:1/21/2022

Filename: ...\MSTA\007_SPF&BLP WBL1.dgn   Division: GEOTECH   Username: terry.white   Date:1/24/2022



Drilled Shaft Plan View

Not to Scale (See Table for Drilled Shaft & Reinforcement Information)



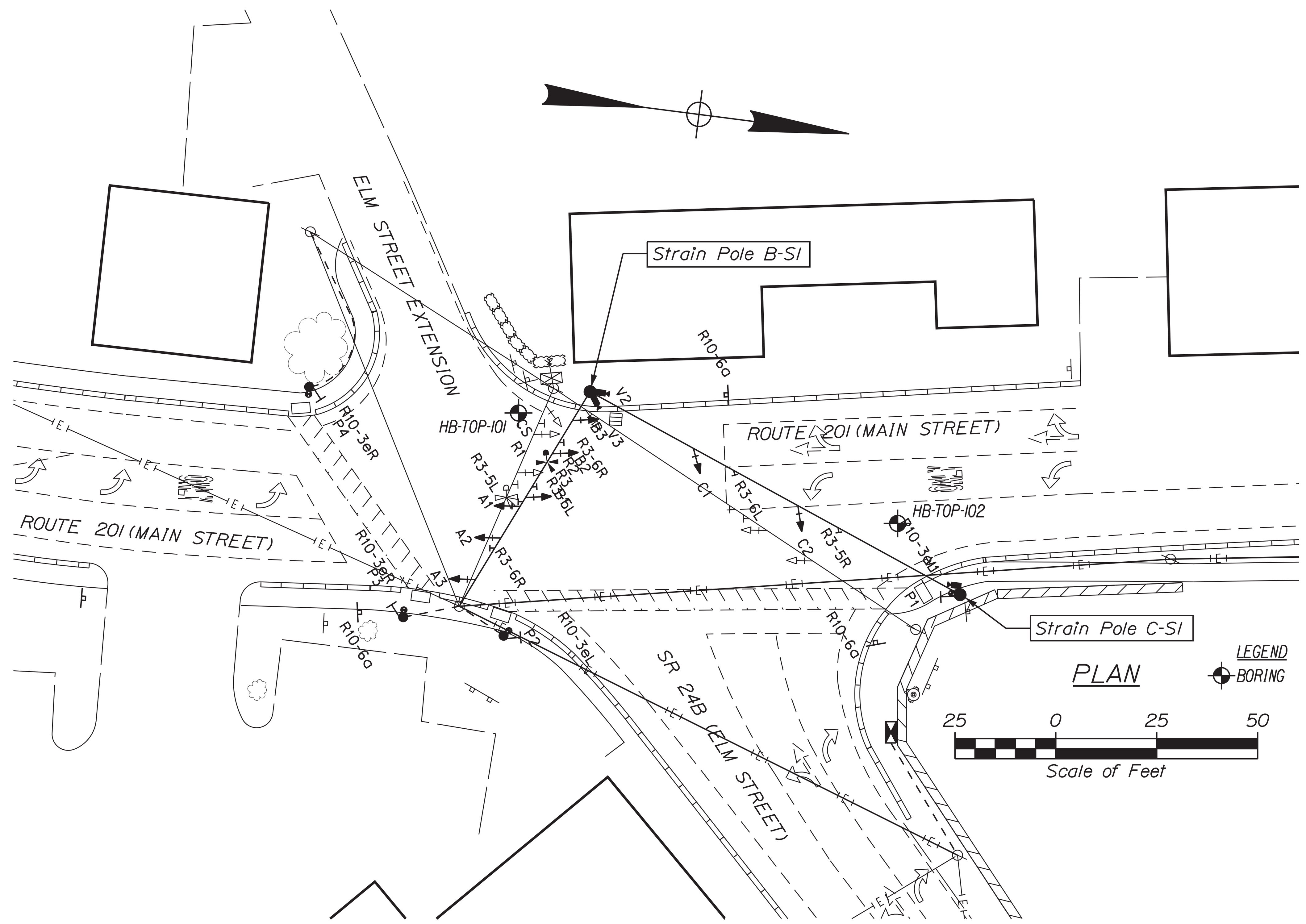
Drilled Shaft Elevation View

Not to Scale (See Table for Drilled Shaft & Reinforcement Information)

STRAIN POLES

See Table and Boring Location Plan for Boring Locations and Strain Pole Designations.

Strain Pole Designation	Strain Pole Locations	Drilled Shaft Dimensions: X Diameter (feet)	Drilled Shaft Dimensions: L Length (feet)	Reinforcing Steel: R1 Longitudinal Rebars Quantity	Reinforcing Steel: R2 Longitudinal Rebars Size	Reinforcing Steel: S1 Spiral Rebars Size	Spiral Bar Spacing: D1 (in) 0 to 3 ft	Spiral Bar Spacing: D2 (in) 3 ft to 2L/3 ft	Spiral Bar Spacing: D3 (in) 2L/3 ft to tip
B-S1	Elm Street Extension & Route 201 (Main Street)	3.0	14.5	15	#8	#5	4	8	12
C-S1	Route 201 (Main Street) & SR 24B (Elm Street)	3.0	11.5	15	#8	#5	4	8	12



NOTES:

1. All reinforcing steel is to be grade 60 and conform to MaineDOT Standard Specification requirements along with any project specific Supplementals or Special Provisions.

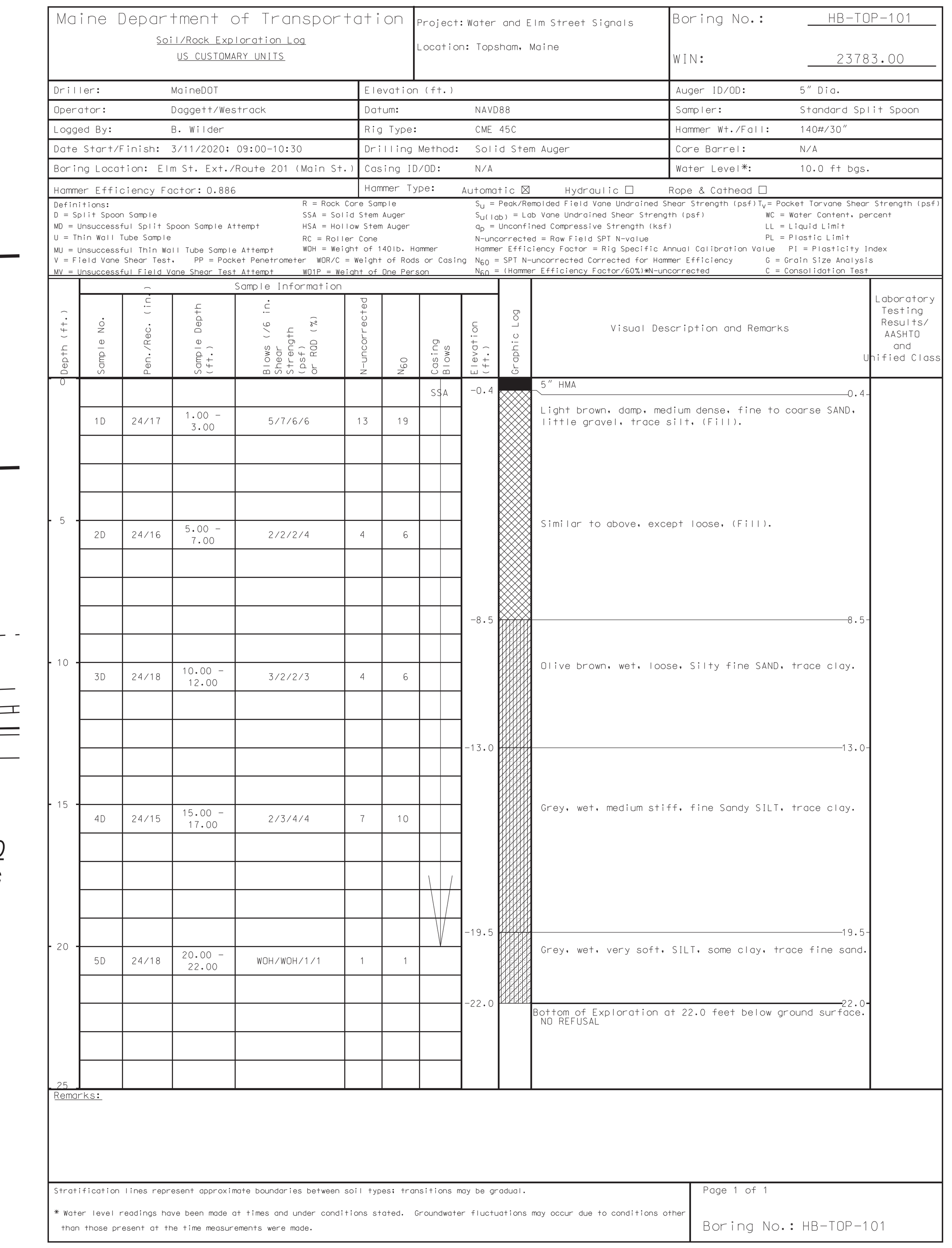
2. All rebar shall have 3" cover unless otherwise noted.

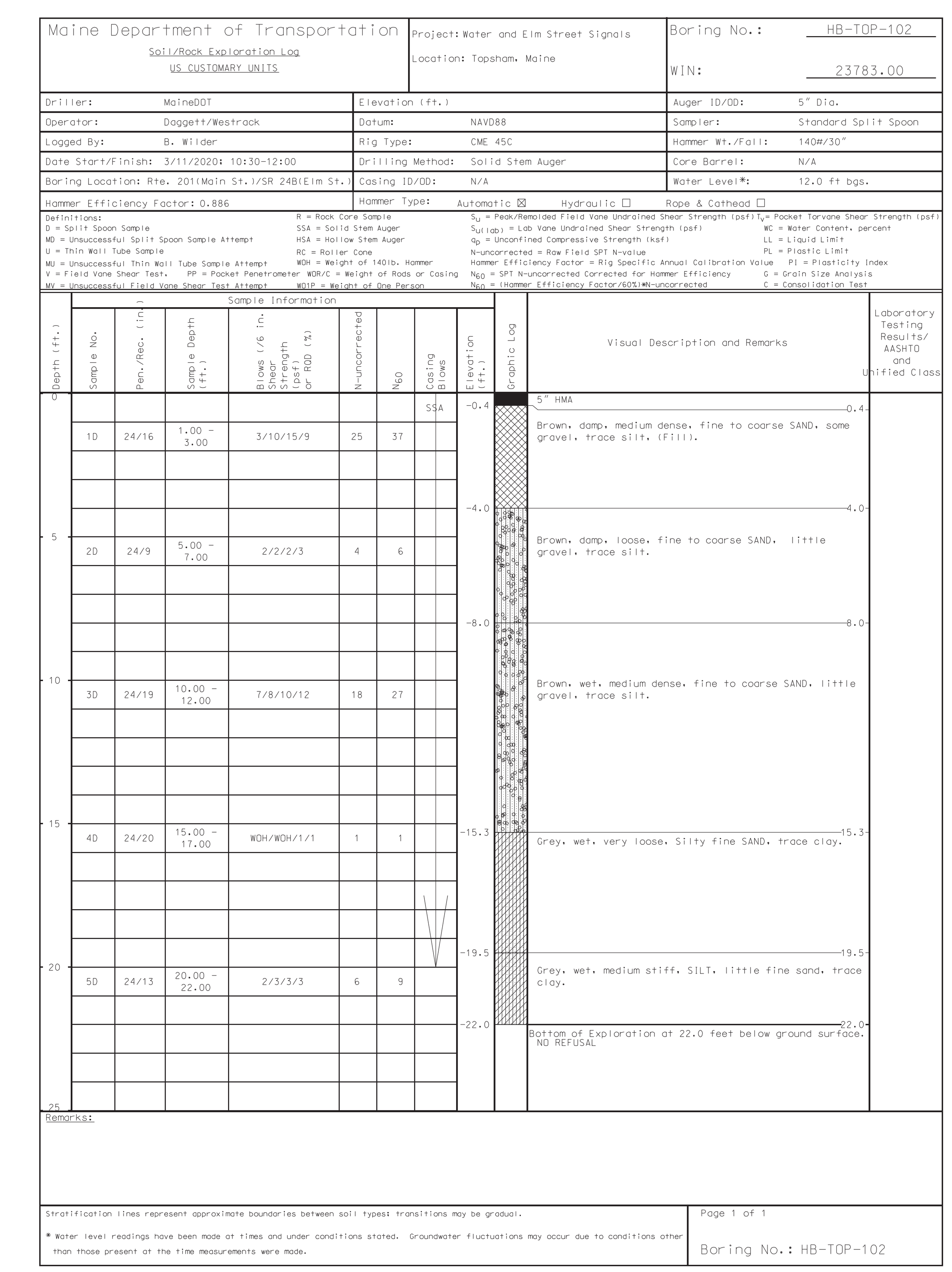
3. Should there be a discrepancy between these Details and actual observed field conditions report it to the Resident immediately.

4. Do not proceed with dependent work until any such discrepancy is resolved to the satisfaction of the Resident.

5. Concrete to be Class LP with f'c = 5,000 PSI.

6. Foundation sizes are designed based on estimated loading conditions and are subject to change based on the design of the above-ground components and the actual loading conditions at the top of each foundation submitted by the Contractor in accordance with Standard Specification Section 626.034. Any increase in foundation size based on the submitted loading conditions shall be paid for at the unit price bid by the Contractor. Any reduction in foundation size shall be to the benefit of the Department at the unit price bid by the Contractor.





STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2378300

WIN 23783.00

HIGHWAY PLANS

STATE OF MAINE — Kathleen Maguire — 7120 — LICENSED PROFESSIONAL ENGINEER

SIGNATURE 7120

P.E. NUMBER 1/24/2022

DATE

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2	K.MAGUIRE	
DESIGN3-DETAILED3	T.WHITE	JAN 2022
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

TOPSHAM
ROUTE 201 (MAIN ST.),
SR 24B (ELM ST.) & ELM ST. EXT.
STRAIN POLE FOUNDATIONS &
BORING LOCATION PLAN
WITH BORING LOGS

SHEET NUMBER

7

OF 7