

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



STATEWIDE IMPLEMENTATION OF INTELLIGENT
TRANSPORTATION SYSTEMS (ITS)
ROAD WEATHER INFORMATION STATION (RWIS)
FEDERAL NUMBER 2421300
MAINEDOT WIN NO: 024213.00

PLAN LEGEND

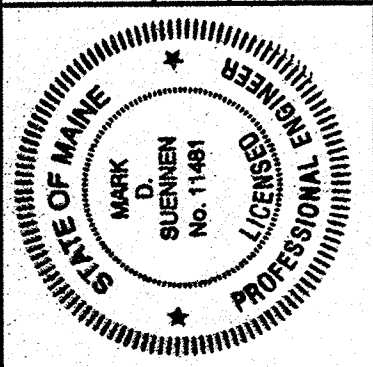
Town, County, State	Centerline-Existing	Centerline-Proposed
Property Lines	Travelway-Existing	Travelway-Proposed
R/W Lines-Existing	Railroad	Catch Basins
R/W Lines-Proposed	Manholes	Existing
Culvert-Existing	Proposed Underdrain	Proposed
Culvert Proposed	Proposed Ditch	Existing
Curbing	Existing Ditch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

Cabinet	Existing	Proposed
Meter Pedestal		
Junction Box		
Ground Mounted Type I Sign		
Electrical Conduit		
Solar Panel Array		
Road Weather Information Station (RWIS)		
Demountable Reflectorized Delineator		

INDEX OF SHEETS

Description	Sheet No.
Title Sheet	1
General Notes	2
Location Maps	3
Details	4-5
Road Weather Information Station (RWIS) Equipment Plans	6-11

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER		9-3-19
CHIEF ENGINEER		9-3-19

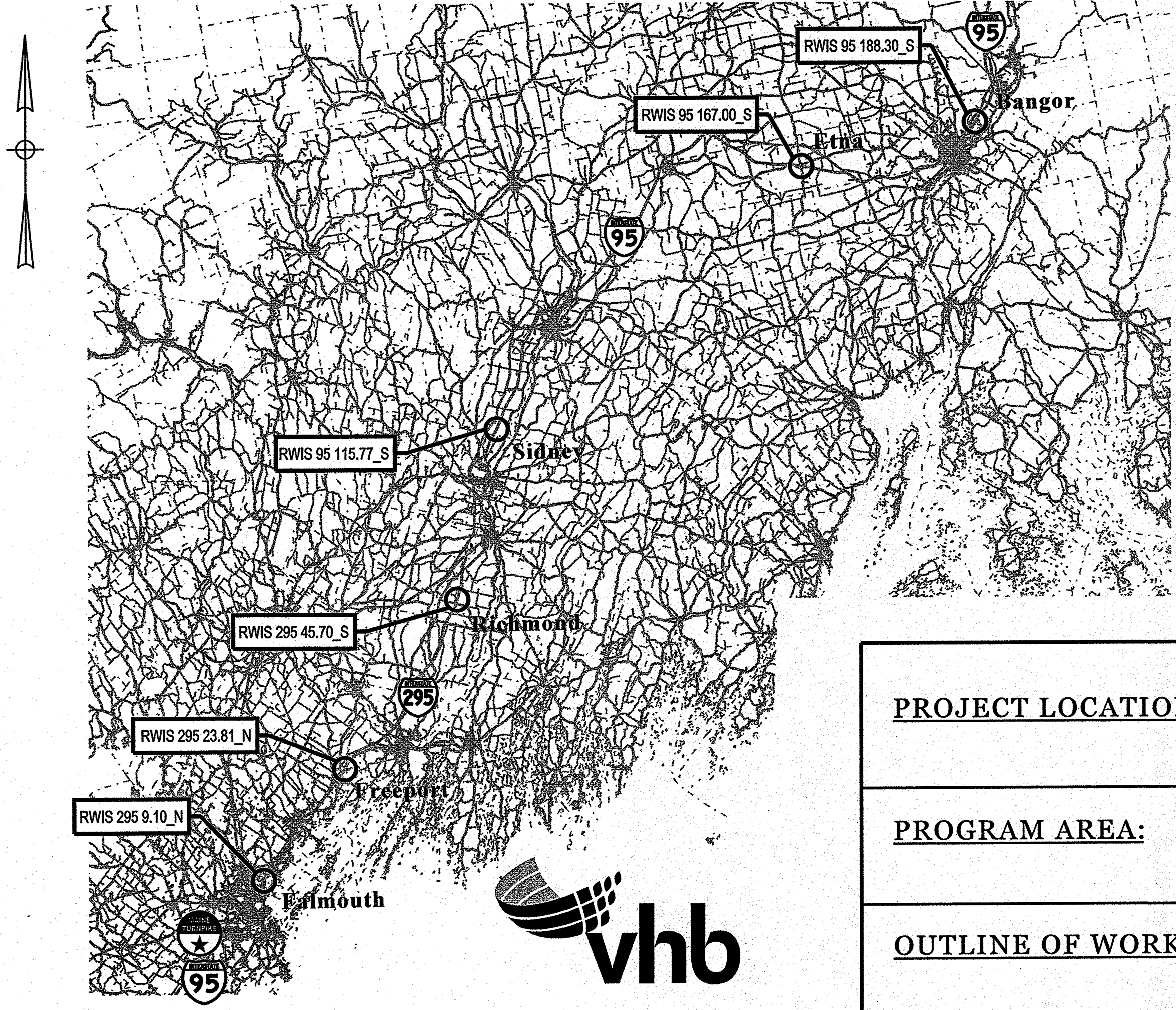


SIGNATURE	DATE
11-18-19	8-22-2019

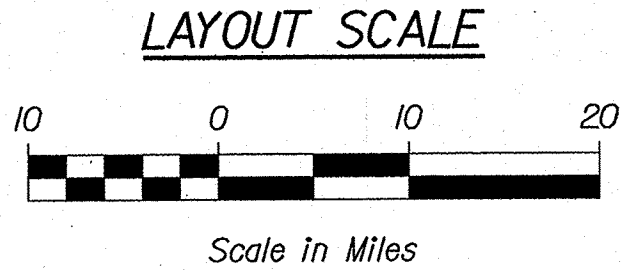
PROJECT INFORMATION	TRAFFIC
PROGRAM	S. LANDRY
PROJECT MANAGER	E. DREW
DESIGNER	VHB
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

ITS ROAD WEATHER INFORMATION STATIONS TITLE SHEET
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SHEET NUMBER
1
OF 11



PROJECT LOCATION:	Along I-95 in Bangor, Etna and Sidney. Along I-295 in Falmouth, Freeport and Richmond.
PROGRAM AREA:	Traffic
OUTLINE OF WORK:	Install New Road Weather Information Stations (RWIS) on Wood Poles Installed by Others and Communicate via Cellular Antennas



1. ALL WORK SHALL CONFORM TO THE 2014 EDITION OF THE MAINE DEPARTMENT OF TRANSPORTATION (MAINEDOT) STANDARD SPECIFICATIONS.
2. CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE 2014 EDITION OF THE MAINEDOT STANDARD DETAILS AND THE MAINEDOT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL (LATEST EDITION AND REVISIONS) UNLESS OTHERWISE INDICATED IN THESE PLANS.
3. NO SEPARATE PAYMENT FOR SUPERINTENDENT OR FOREMAN WILL BE MADE FOR THE SUPERVISION OF EQUIPMENT BEING PAID FOR UNDER THE EQUIPMENT RENTAL ITEMS.
4. NO FORMAL SURVEY WAS CONDUCTED FOR THE CONSTRUCTION OF THIS PROJECT. ALL DESIGN WAS BASED ON AERIAL PHOTOGRAPHY AND FIELD INVESTIGATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING ACTUAL ELEVATIONS FOR THE PROPOSED RWIS EQUIPMENT INSTALLATIONS.
5. THE CONTRACTOR SHALL CONTACT DIG SAFE PRIOR TO ANY EXCAVATION WORK.
6. THE CONTRACTOR SHALL INSTALL A CHEMICAL GROUND ELECTRODE SYSTEM FOR EACH INSTALLATION THAT FOLLOWS LOCAL, STATE, AND NEC GUIDELINES. THE CONTRACTOR SHALL VERIFY A READING THAT MEETS MANUFACTURERS RECOMMENDATIONS OF RESISTANCE UPON INSTALLATION. THE CHEMICAL GROUND ELECTRODE SYSTEM SHALL EITHER BE EPA APPROVED OR PLACED IN EPA APPROVED AND IEC 62561 BENCHMARK EXCEEDING GROUND ENHANCEMENT MATERIAL.

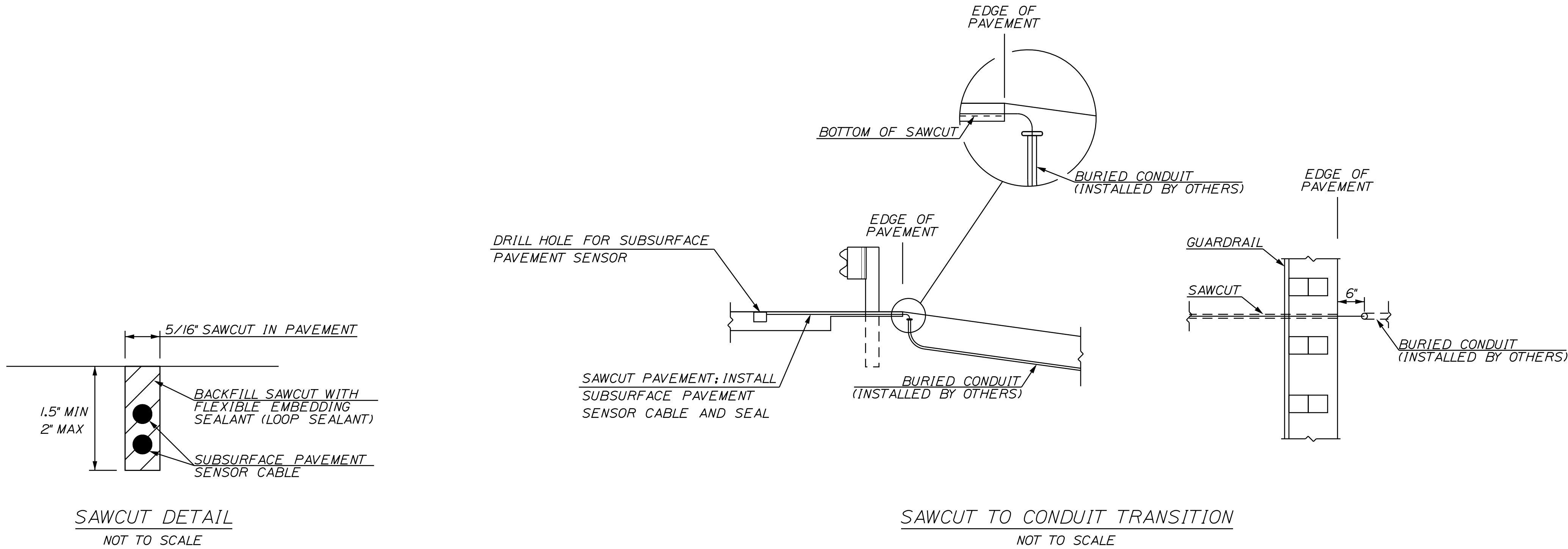
THE CLEAR ZONE, AS DEFINED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) FOR I-95 AND I-295 SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE AND LATEST ERRATA FROM TABLE 3-1 "SUGGESTED CLEAR-ZONE DISTANCES (IN FEET) FROM EDGE OF TRAVELED LANE."

1. ALL TEMPORARY TRAFFIC CONTROL EQUIPMENT, DEVICES, AND TEMPORARY TRAFFIC CONTROLS SHALL CONFORM TO THE 2009 EDITION OF THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CHAPTER 6 AND THE 2014 EDITION OF THE MAINEDOT STANDARD DETAILS.
2. ALL TEMPORARY TRAFFIC CONTROL SIGNS, SIGN SUPPORT STRUCTURES, CHANNELIZING DEVICES, FLASHING ARROW PANELS (FAP), PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AND OTHER TRAFFIC CONTROL EQUIPMENT ALONG THE ROADSIDE SHALL MEET OR EXCEED NCHRP 350 TEST LEVEL 3 (TL-3) REQUIREMENTS.
3. ALL TEMPORARY TRAFFIC CONTROL SIGNS SHALL HAVE ASTM D4956 TYPE VII, TYPE VIII, OR TYPE IX SUPER HIGH INTENSITY OR PRISMATIC FLUORESCENT RETROREFLECTIVE SHEETING AND SHALL BE MAINTAINED IN LIKE-NEW CONDITION. ALL ORANGE CONSTRUCTION SIGNS SHALL BE FLUORESCENT ORANGE WITH TYPE IX SHEETING. PLACEMENT OF CONSTRUCTION SIGNS SHALL BE ADJUSTED TO AVOID OBSTRUCTING EXISTING SIGNS AND TO ENSURE PROPER SIGHT LINES TO THE CONSTRUCTION SIGNS AS DETERMINED BY THE RESIDENT.
4. ANY SIGNS, EQUIPMENT, OR DEVICES FOUND TO BE DAMAGED OR UNSERVICEABLE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL SHOULDER AND LANE CLOSURES SHALL REQUIRE APPROVAL OF THE RESIDENT A MINIMUM OF ONE WEEK IN ADVANCE OF THE LANE CLOSURE (PROVIDED BY MAINEDOT).
6. NO LANE CLOSURES ARE ALLOWED BETWEEN 6:00 AM AND 8:00 PM.

1. THE CONTRACTOR SHALL COORDINATE REMOVAL AND SALVAGING OF EXISTING RWIS EQUIPMENT AT RWIS 1-95 MM 167.00+5 WITH THE INSTALLATION AND ACTIVATION OF THE NEW POWER SERVICE TO MINIMIZE DOWNTIME.
2. THE DEPARTMENT RESERVES THE RIGHT TO FIRST REFUSAL OF REMOVED AND SALVAGED RWIS EQUIPMENT. THE CONTRACTOR SHALL TAKE CARE WHEN REMOVING RWIS EQUIPMENT TO AVOID ADDITIONAL WEAR AND TEAR TO THE EXISTING HARDWARE. THE CONTRACTOR SHALL TRANSPORT AND DELIVER ALL SALVAGED MATERIALS, EQUIPMENT, AND HARDWARE TO THE MAINDOT REGION 2 COMPLEX (66 INDUSTRIAL DRIVE, AUGUSTA). THE CONTRACTOR SHALL COORDINATE DELIVERY OF SALVAGED MATERIALS WITH THE RESIDENT. PAYMENT SHALL BE INCIDENTAL TO ITEM 645.53 ROAD WEATHER INFORMATION STATION; RWIS 1-95 MM 167.00+5.

1. INSTALLATION OF UNDERGROUND ELECTRICAL CONDUITS SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF UTILITY POLICY 2016-2, PROTECTION OF MAINEDOT OWNED UNDERGROUND ELECTRICAL SERVICE CONNECTIONS AND THE CURRENT VERSION OF THE MAINEDOT UTILITY ACCOMMODATION RULES.

THIS PROJECT INCLUDES ONE BID OPTION WITH ONE PAY ITEM. THE CONTRACTOR SHALL PROVIDE A PRICE FOR THE BID OPTION ITEM (ITEM 645.54) BASED ON SPECIAL PROVISION 645.54 FOR ROAD WEATHER INFORMATION STATION (RWIS) SYSTEM AUTOMATION FOR CONSIDERATION BY MAINEDOT. THE TOTAL BID PRICE SHALL BE THE SUM TOTAL OF THE PRICES FOR ALL ITEMS WITHIN THE BASE PROJECT, EXCLUDING THE COST FOR THE BID OPTION ITEM. THE APPARENT SUCCESSFUL BIDDER WILL BE DETERMINED BY THE LOWEST RESPONSIVE TOTAL BID PRICE FOR ALL ITEMS WITHIN THE BASE PROJECT, EXCLUDING THE BID OPTION ITEM. AS PART OF THE POST-BID QUALIFICATION REVIEW, THE DEPARTMENT MAY EVALUATE THE BID OPTION ITEM PRICE AND, IF ACCEPTABLE TO THE DEPARTMENT, INCLUDE THE BID OPTION ITEM INTO THE FINAL CONTRACT AWARD. ALTERNATIVELY, IF THE DEPARTMENT DOES NOT APPROVE THE BID OPTION ITEM PRICE, THE FINAL CONTRACT AWARD WILL BE BASED ON ONLY THE BASE PROJECT ITEMS.

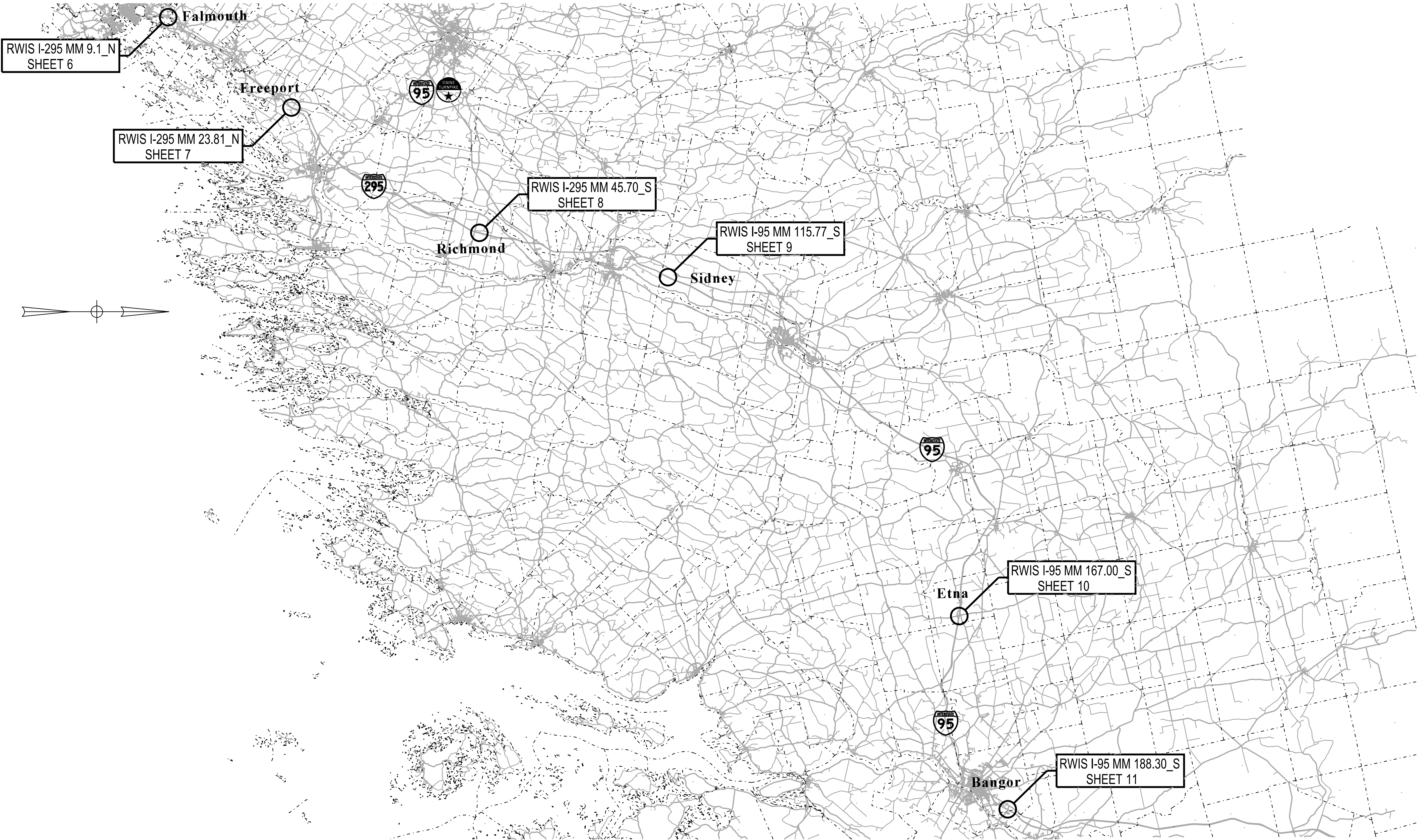


Date: 8/26/2019

Username: jrobert

Division: HIGHWAY

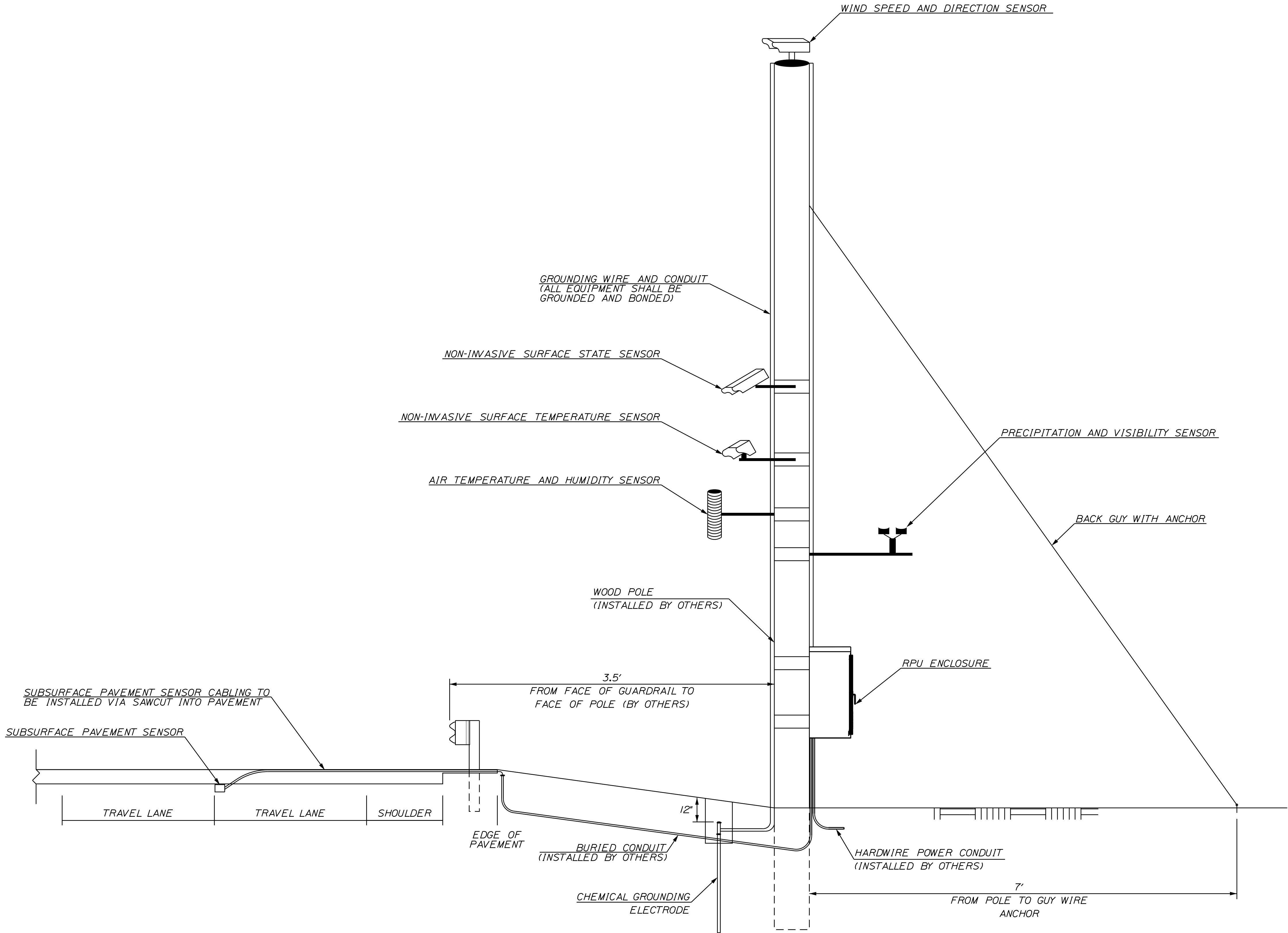
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PROJ. MANAGER	S. LANDRY	BY	DATE
DESIGN-DETAILED	E. DREW	J. ROBERT	06/19
CHECKED-REVIEWED	E. DREW	M. SIEMEN	06/19
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ITS ROAD WEATHER INFORMATION STATIONS

MAP



ROAD WEATHER INFORMATION STATION DETAIL FOR HARDWIRE POWERED LOCATIONS
NOT TO SCALE

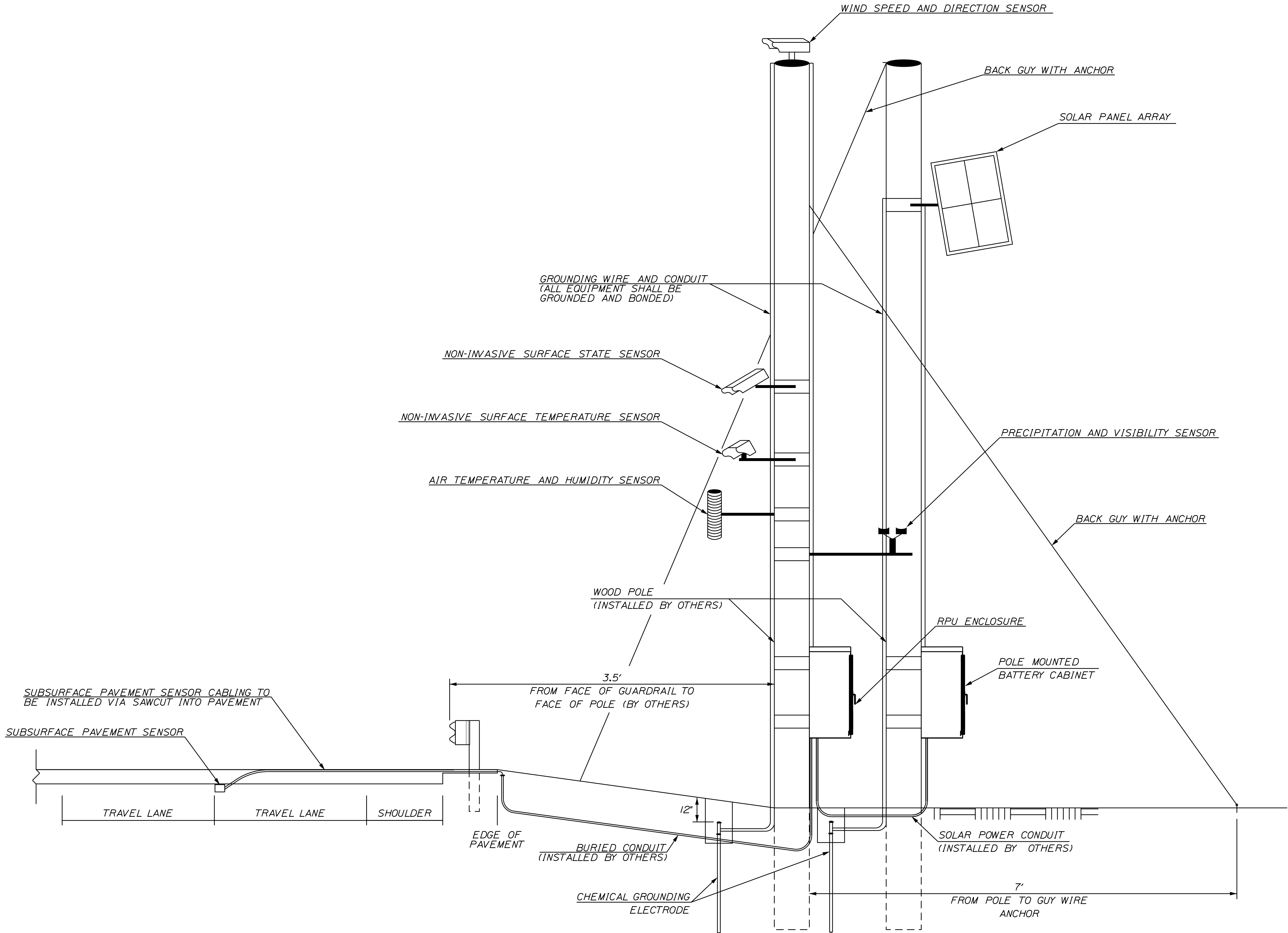
- NOTES:
1. HEIGHT OF EQUIPMENT PER MANUFACTURER'S STANDARDS AND RECOMMENDATION.
 2. BAROMETER LOCATED IN RPU ENCLOSURE.
 3. SEE GENERAL NOTES FOR SAWCUT DETAILS.



PROJ. MANAGER	S. LANDRY	BY	DATE
DESIGN-DETAILED	E. DREW	J. ROBERT	06/18
CHECKED-REVIEWED	E. DREW	M. SIEMEN	06/18
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ITS
ROAD WEATHER
INFORMATION STATIONS

DETAILS
(1 OF 2)



ROAD WEATHER INFORMATION STATION DETAIL FOR SOLAR POWERED LOCATIONS.
NOT TO SCALE

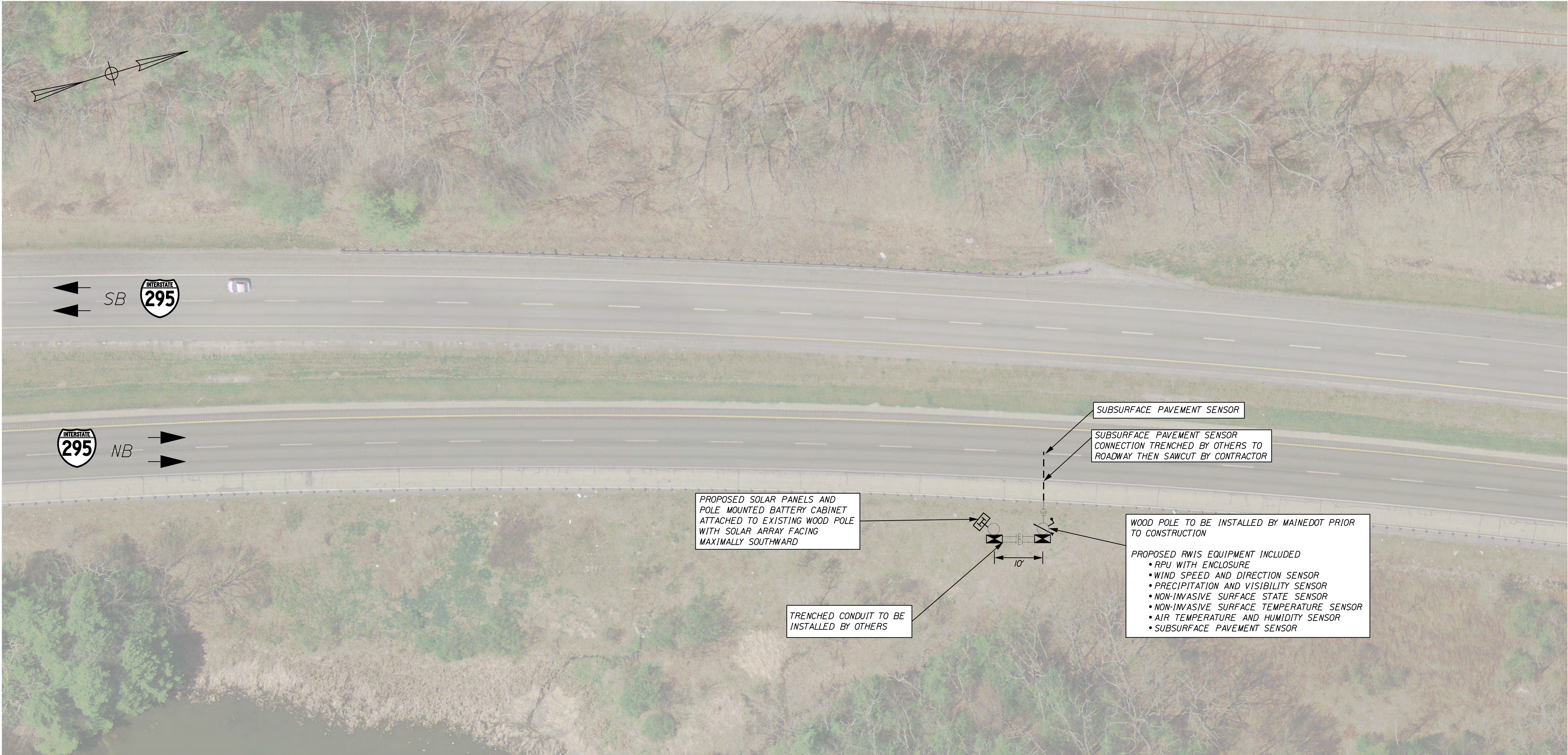
NOTES:

1. HEIGHT OF EQUIPMENT PER MANUFACTURER'S STANDARDS AND RECOMMENDATION.
2. BAROMETER LOCATED IN RPU ENCLOSURE.
3. CONTRACTOR TO ORIENT SOLAR PANEL ARRAY IN THE MOST OPTIMAL ORIENTATION FOR SOLAR EXPOSURE.
4. SEE GENERAL NOTES FOR SAWCUT DETAILS.



PROJ. MANAGER	S. LANDRY	BY	DATE
DESIGN-DETAILED	E. DREW	J. ROBERT	06/18
CHECKED-REVIEWED	E. DREW	M. SIEMEN	06/18
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ITS
ROAD WEATHER
INFORMATION STATIONS
DETAILS
(2 OF 2)



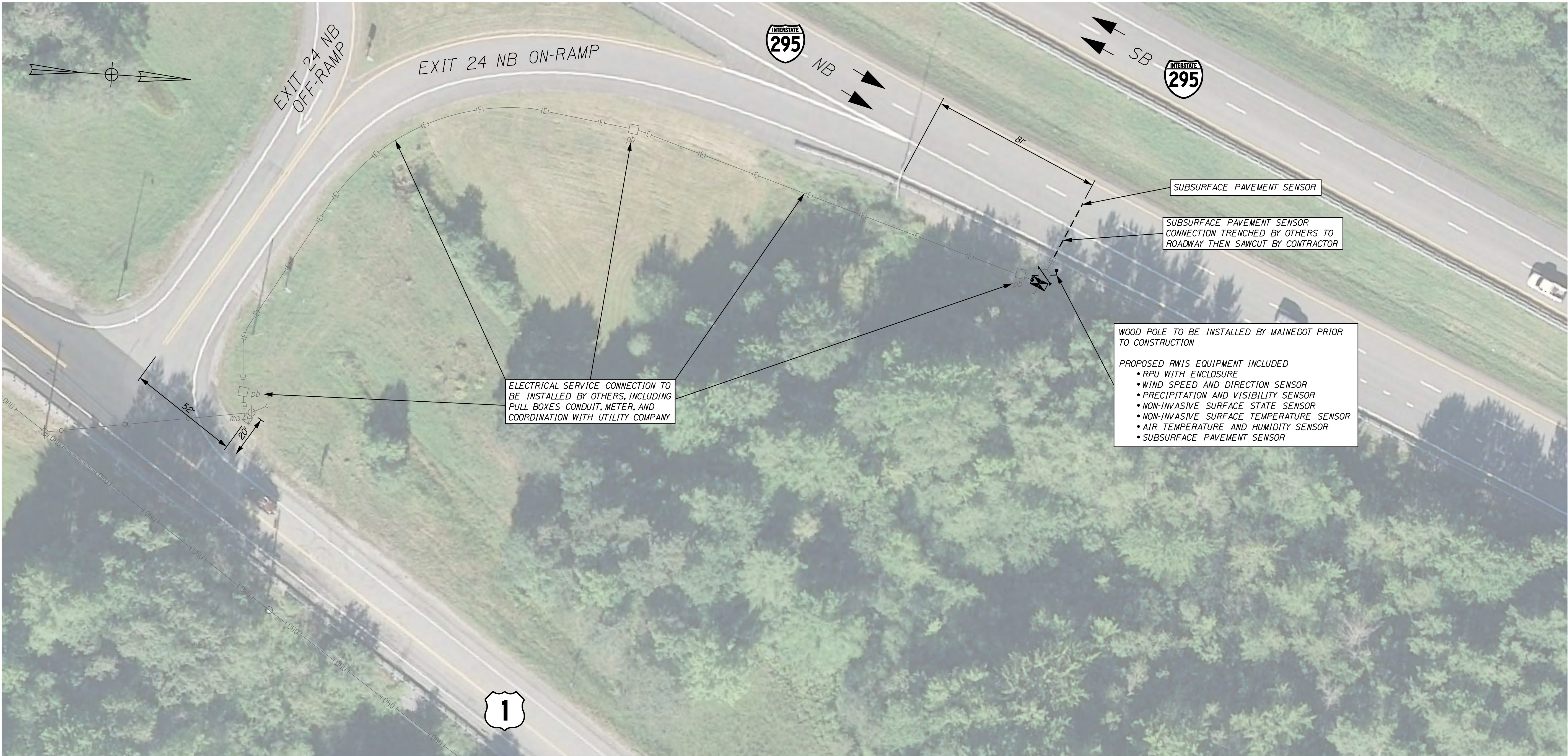
LIST OF MAJOR ITEMS

ITEM NO.	EQUIPMENT AND WORK ITEMS	QUANTITY
645.53	ROAD WEATHER INFORMATION STATION: RWIS I-295 MM 9.1_N	1 LS

- NOTES:
- ALL UNDERGROUND CONDUIT WILL BE INSTALLED BY OTHERS.
 - WOOD POLES WITH BACK GUYS WILL BE INSTALLED BY OTHERS.
 - CONTRACTOR SHALL INSTALL SUBSURFACE SENSOR AND SAWCUT PAVEMENT FOR SENSOR CABLES. CONTRACTOR SHALL LOCATE SENSOR CONDUIT AND ALIGN SAWCUT TO MEET. SEE GENERAL NOTES FOR SAWCUT TO CONDUIT TRANSITION.



PROJ. MANAGER	S. LANDRY	BY	DATE
DESIGN-DETAILED	E. DREW	J. ROBERT	06/18
CHECKED-REVIEWED	E. DREW	M. SIEMEN	06/18
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			



LIST OF MAJOR ITEMS

ITEM NO.	EQUIPMENT AND WORK ITEMS	QUANTITY
645.53	ROAD WEATHER INFORMATION STATION: RWIS I-295 MM 23.81-N	1 LS

- NOTES:
- ELECTRICAL SERVICE CONNECTION AND ALL UNDERGROUND CONDUIT WILL BE INSTALLED BY OTHERS.
 - WOOD POLES WITH BACK GUYS WILL BE INSTALLED BY OTHERS.
 - CONTRACTOR SHALL INSTALL SUBSURFACE SENSOR AND SAWCUT PAVEMENT FOR SENSOR CABLES. CONTRACTOR SHALL LOCATE SENSOR CONDUIT AND ALIGN SAWCUT TO MEET. SEE GENERAL NOTES FOR SAWCUT TO CONDUIT TRANSITION.



STATE OF MAINE	DEPARTMENT OF TRANSPORTATION
PROJECT NO. 2421300	WIN 024213.00
ITS PLANS	



PROJ. MANAGER	S. LANDRY	BY	DATE
DESIGN-DETAILED	E. DREW	J. ROBERT	06/18
CHECKED-REVIEWED	E. DREW	M. SIEMEN	06/18
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ITS ROAD WEATHER INFORMATION STATIONS RWIS I-295 MM 23.81-N (FREEPOR)	
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SHEET NUMBER	2
OF 11	



LIST OF MAJOR ITEMS

ITEM NO.	EQUIPMENT AND WORK ITEMS	QUANTITY
645.53	ROAD WEATHER INFORMATION STATION: RWIS I-295 MM 45.70-S	1 LS

NOTES:

1. ALL UNDERGROUND CONDUIT WILL BE INSTALLED BY OTHERS.
2. WOOD POLES WITH BACK GUYS WILL BE INSTALLED BY OTHERS.
3. CONTRACTOR SHALL INSTALL SUBSURFACE SENSOR AND SAWCUT PAVEMENT FOR SENSOR CABLES. CONTRACTOR SHALL LOCATE SENSOR CONDUIT AND ALIGN SAWCUT TO MEET. SEE GENERAL NOTES FOR SAWCUT TO CONDUIT TRANSITION.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2421300

WIN
024213.00
ITS PLANS

ITS
ROAD WEATHER
INFORMATION STATIONS

RWIS I-295 MM 45.70-S
(RICHMOND)

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

DATE
06/18
06/18

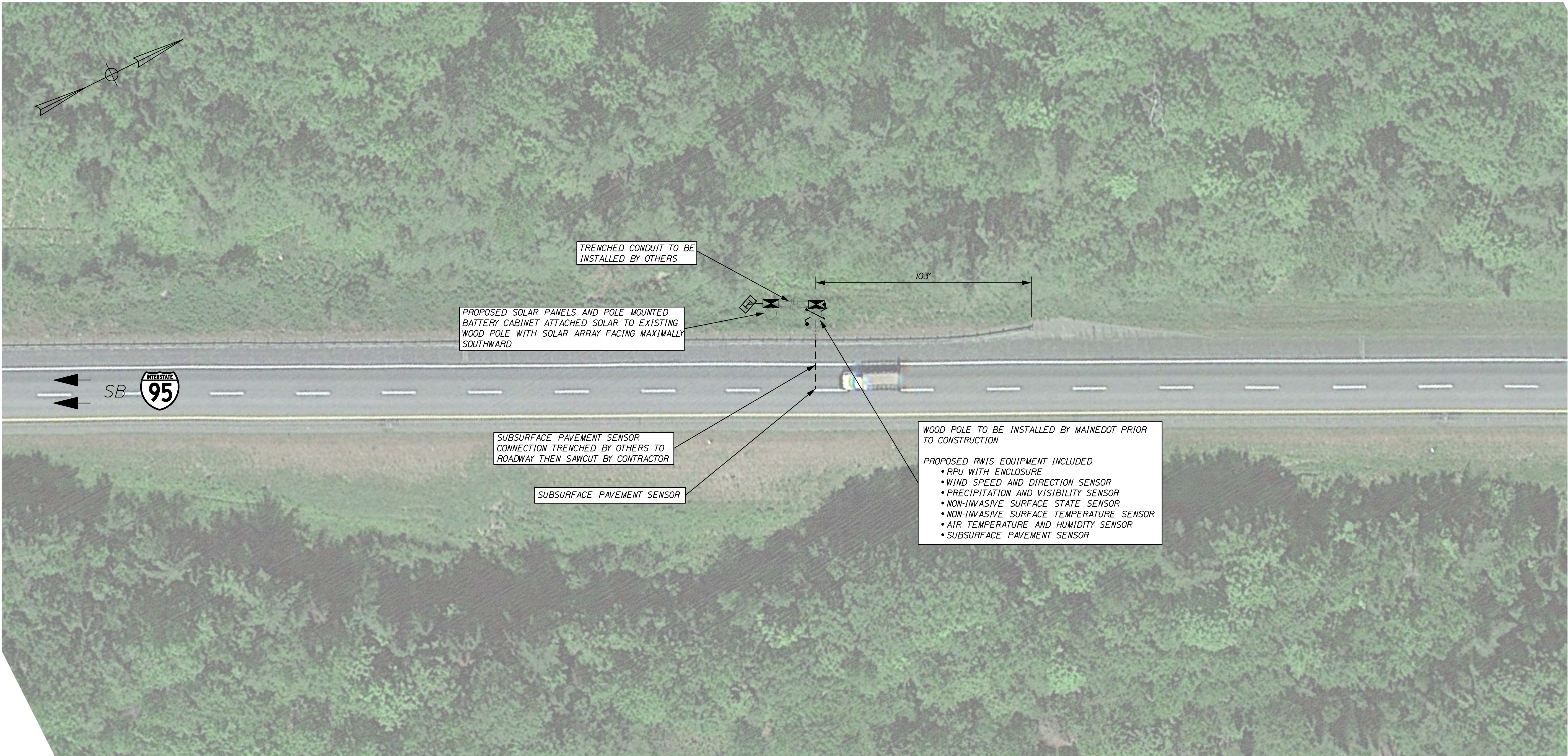
BY
J. ROBERT
M. SIEMEN

S. LANDRY
E. DREW
E. DREW

SHEET NUMBER

08

OF 11



LIST OF MAJOR ITEMS

ITEM NO.	EQUIPMENT AND WORK ITEMS	QUANTITY
645.53	ROAD WEATHER INFORMATION STATION: RWIS I-95 MM 115.77_S	1 LS

- NOTES:
- ALL UNDERGROUND CONDUIT WILL BE INSTALLED BY OTHERS.
 - WOOD POLES WITH BACK GUYS WILL BE INSTALLED BY OTHERS.
 - CONTRACTOR SHALL INSTALL SUBSURFACE SENSOR AND SAWCUT PAVEMENT FOR SENSOR CABLES. CONTRACTOR SHALL LOCATE SENSOR CONDUIT AND ALIGN SAWCUT TO MEET. SEE GENERAL NOTES FOR SAWCUT TO CONDUIT TRANSITION.

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2421300

WIN 024213.00

ITS PLANS



PROJ. MANAGER	S. LANDRY	BY	DATE
DESIGN-DETAILED	E. DREW	J. ROBERT	06/18
CHECKED-REVIEWED	E. DREW	M. SIEMEN	06/18
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ITS

ROAD WEATHER INFORMATION STATIONS

RWIS I-95 MM 115.77_S (SIDNEY)

SHEET NUMBER

9

OF 11

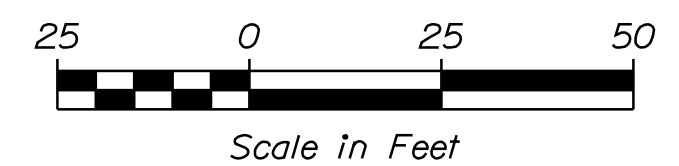


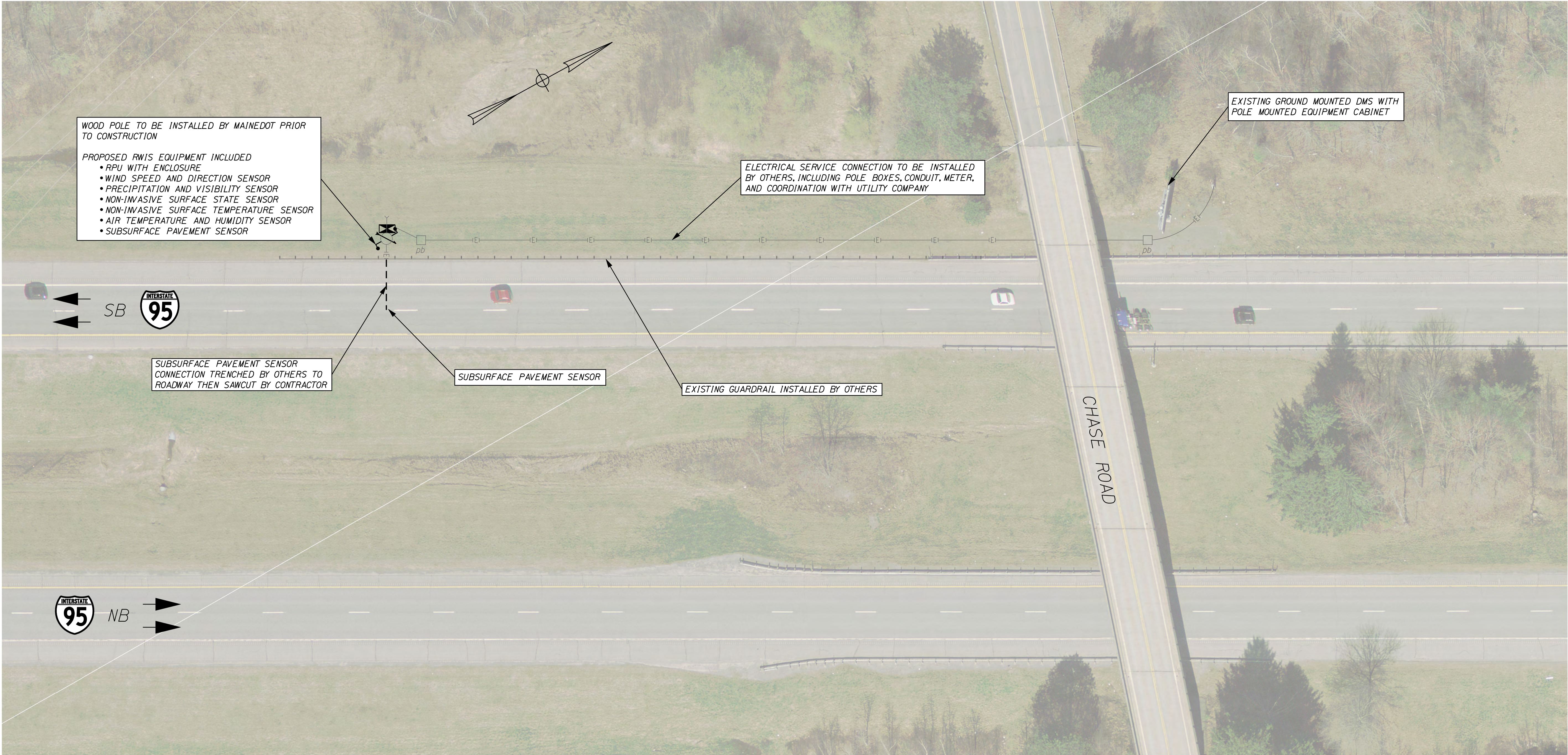
LIST OF MAJOR ITEMS

ITEM NO.	EQUIPMENT AND WORK ITEMS	QUANTITY
645.53	ROAD WEATHER INFORMATION STATION: RWIS 1-95 MM 167.00_S	1 LS

NOTES:

1. ELECTRICAL SERVICE CONNECTION AND ALL UNDERGROUND CONDUIT WILL BE INSTALLED BY OTHERS.
2. WOOD POLES WITH BACK GUYS WILL BE INSTALLED BY OTHERS.
3. CONTRACTOR SHALL INSTALL SUBSURFACE SENSOR AND SAWCUT PAVEMENT FOR SENSOR CABLES. CONTRACTOR SHALL LOCATE SENSOR CONDUIT AND ALIGN SAWCUT TO MEET. SEE GENERAL NOTES FOR SAWCUT TO CONDUIT TRANSITION.





LIST OF MAJOR ITEMS

ITEM NO.	EQUIPMENT AND WORK ITEMS	QUANTITY
645.53	ROAD WEATHER INFORMATION STATION: RWIS I-95 MM 188.30_S	1 LS

- NOTES:
- ELECTRICAL SERVICE CONNECTION AND ALL UNDERGROUND CONDUIT WILL BE INSTALLED BY OTHERS.
 - WOOD POLES WITH BACK GUYS WILL BE INSTALLED BY OTHERS.
 - CONTRACTOR SHALL INSTALL SUBSURFACE SENSOR AND SAWCUT PAVEMENT FOR SENSOR CABLES. CONTRACTOR SHALL LOCATE SENSOR CONDUIT AND ALIGN SAWCUT TO MEET. SEE GENERAL NOTES FOR SAWCUT TO CONDUIT TRANSITION.



PROJ. MANAGER	S. LANDRY	BY	DATE
DESIGN-DETAILED	E. DREW	J. ROBERT	06/18
CHECKED-REVIEWED	E. DREW	M. SIEMEN	06/18
DESIGN-DETAILED			
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REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			