

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



BANGOR

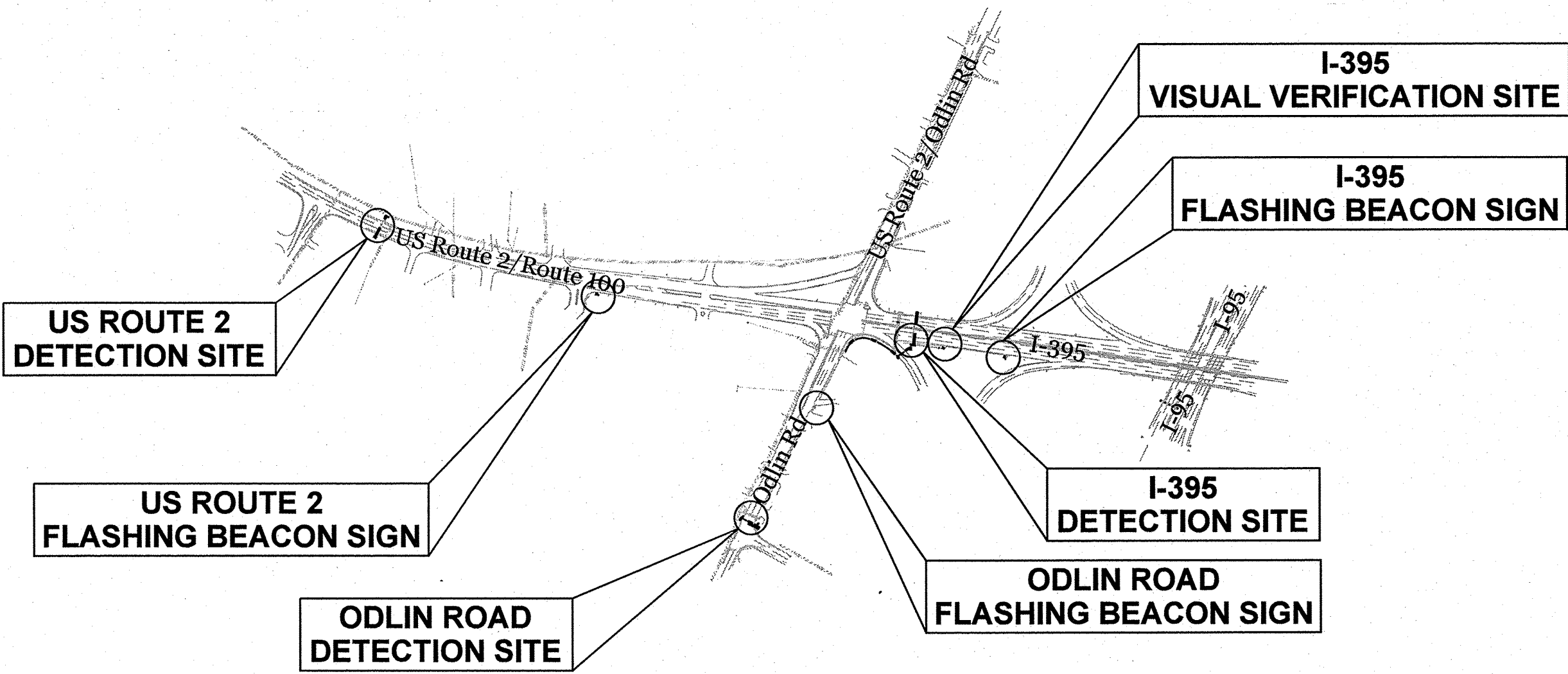
OVERHEIGHT VEHICLE DETECTION SYSTEM
FEDERAL PROJECT NO. 2612800
STATE WIN 026128.00

PLAN LEGEND

Town, County, State	Centerline-Existing	
Property Lines	Centerline-Proposed	10+00
R/W Lines-Existing	Travelway-Existing	
R/W Lines-Proposed	Travelway-Proposed	
Culvert-Existing	Railroad	
Culvert Proposed	Catch Basins	Existing Proposed
Curbing	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	Existing San. Sewer	
Tree Line	Existing San. Sewer Manhole	
Clearing Limit Line	Guardrail-Existing	
Boring	Guardrail-Proposed	
Existing Overhead Line	Guardrail-Cable, Other	
ITS Conduit	ITS	PITS
Electrical Conduit	ET	ET
Fiber Optic Cable	FO	PFO
ITS Controller Cabinet		
Wireless Communication		
CCTV		
Infrared Detector		
Pullbox	pb	PB
Meter Pedestal		
Support Posts		
Light Pole		

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PROJECT LOCATION:	I-95 and I-395 Interchange (Exit 182)
PROGRAM AREA:	Traffic
OUTLINE OF WORK:	This project will replace the legacy field equipment associated with the existing overheight (OH) detection system west of the I-95 southbound bridge over I-395 eastbound/Route 15 southbound in Bangor.

WIN 026128.00

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		APPROVED		DATE	
		COMMISSIONER: <i>[Signature]</i>		10-9-24	
CHIEF ENGINEER: <i>[Signature]</i>		10-9-2024		23	
STATE OF MAINE MARK S. LORING SUBMITTER No. 11481 PROFESSIONAL ENGINEER LICENSE NO. 11481					
PROJECT INFORMATION					
PROGRAM	TRAFFIC	SIGNATURE		P.E. NUMBER	
PROJECT MANAGER	D. LORING	11481		09/10/2024	
DESIGNER	C. MONASTERO			DATE	
CONSULTANT					
PROJECT RESIDENT					
CONTRACTOR					
PROJECT COMPLETION DATE					
BANGOR OVERHEIGHT VEHICLE DETECTION SYSTEM					
TITLE SHEET					
SHEET NUMBER		1			
		OF 7			



GENERAL NOTES:

- ALL WORK SHALL CONFORM TO THE 2020 EDITION OF THE MAINE DEPARTMENT OF TRANSPORTATION (MAINEDOT) STANDARD SPECIFICATIONS.
- CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE 2020 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.
- NO FORMAL SURVEY WAS CONDUCTED FOR THE CONSTRUCTION OF THIS PROJECT. CONDUITS AND PULL BOXES WERE NOT ASSIGNED GPS COORDINATES. DESIGN WAS BASED ON AERIAL PHOTOGRAPHY, AND FIELD INVESTIGATION CONDUCTED BY MAINEDOT AND VHB.
- ALL WORK SHALL OCCUR WITHIN THE EXISTING MAINEDOT RIGHTS-OF-WAY. ANY RIGHT-OF-WAY INFORMATION SHOWN ON THESE PLANS IS INTENDED FOR INFORMATIONAL PURPOSES ONLY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING ACTUAL ELEVATIONS AND MOUNTING HARDWARE FOR THE PROPOSED OVERHEIGHT VEHICLE DETECTION SYSTEM EQUIPMENT INSTALLATIONS.
- ALL NON-PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED AND SEEDED, UNLESS OTHERWISE DIRECTED BY THE RESIDENT. 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.

TEMPORARY TRAFFIC CONTROL:

- ALL 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 LATEST EDITION OF THE MAINEDOT STANDARD DETAILS.
- 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 MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) 2016, TEST LEVEL 3 (TL-3) IF MANUFACTURED AFTER DECEMBER 31, 2019. ALL OTHER TRAFFIC CONTROL EQUIPMENT SHALL MEET OR EXCEED NCHRP 350 TL-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.
- ANY SIGNS, EQUIPMENT, OR DEVICES FOUND TO BE DAMAGED OR UNSERVICEABLE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- ALL SHOULDER AND LANE CLOSURES SHALL REQUIRE APPROVAL OF THE RESIDENT A MINIMUM OF TWO WORKING DAYS IN ADVANCE OF THE CLOSURE.
- IF WORK IS TO BE CONDUCTED AT NIGHT, THE CONTRACTOR SHALL SUBMIT A LIGHTING PLAN FOR NIGHT WORK TO THE RESIDENT FOR APPROVAL.

EXISTING EQUIPMENT:

- MAINEDOT SHALL HAVE FIRST RIGHTS TO ALL EQUIPMENT REMOVED OR REPLACED BY THE PROJECT (CONTACT LUKE LORRIMER AT 207-485-8723). THE CONTRACTOR SHALL CAREFULLY REMOVE AND STORE ALL EQUIPMENT CLAIMED BY MAINEDOT NEAR THE EXISTING UTILITY BUILDING FOR RETRIEVAL BY MAINEDOT. ALL EQUIPMENT REMOVED THAT HAS COMPUTER CHIP TECHNOLOGY SHALL BE STORED IN AN INTERIOR HEATED ENVIRONMENT.
- THE CONTRACTOR SHALL TEST EXISTING EARTH TO GROUND RESISTANCE AT EACH HARDWARE AND CABINET LOCATION TO ENSURE A MINIMUM OF 25 OHMS IS MET. IF ANY LOCATION DOES NOT MEET THE MINIMUM GROUNDING REQUIREMENTS, THE CONTRACTOR SHALL INSTALL AND CONNECT ADDITIONAL GROUND RODS TO MEET THE 25 OHMS OR THE MANUFACTURER'S GROUNDING RECOMMENDATION, WHICHEVER IS MORE STRINGENT. GROUND RODS AND CONNECTIONS SHALL FOLLOW ALL NEC GUIDELINES AND SHALL BE INCIDENTAL TO OTHER CONTRACT ITEMS.
- THE CONTRACTOR SHALL CLEAN THE INTERIOR OF ALL EXISTING EQUIPMENT CABINETS TO REMAIN WITHIN THE PROJECT LIMITS. THE CABINET, INCLUDING ALL CABLING AND WIRING, SHALL APPEAR NEAT AND TIDY. THE CONTRACTOR SHALL REPLACE ALL ACCESSORY EQUIPMENT IN EXISTING CABINETS THAT HAS FAILED AND/OR REACHED THE END OF USEFUL LIFE INCLUDING, BUT NOT LIMITED TO, FANS, HEATERS, SURGE PROTECTORS, FILTERS AND LIGHTBULBS.
- THE CONTRACTOR SHALL LEAVE ONE COPY OF AS-BUILT PLANS, WIRING DIAGRAMS, CABINET BLOCK DIAGRAMS, AND EQUIPMENT MANUALS IN EACH EQUIPMENT CABINET.

PROPOSED EQUIPMENT

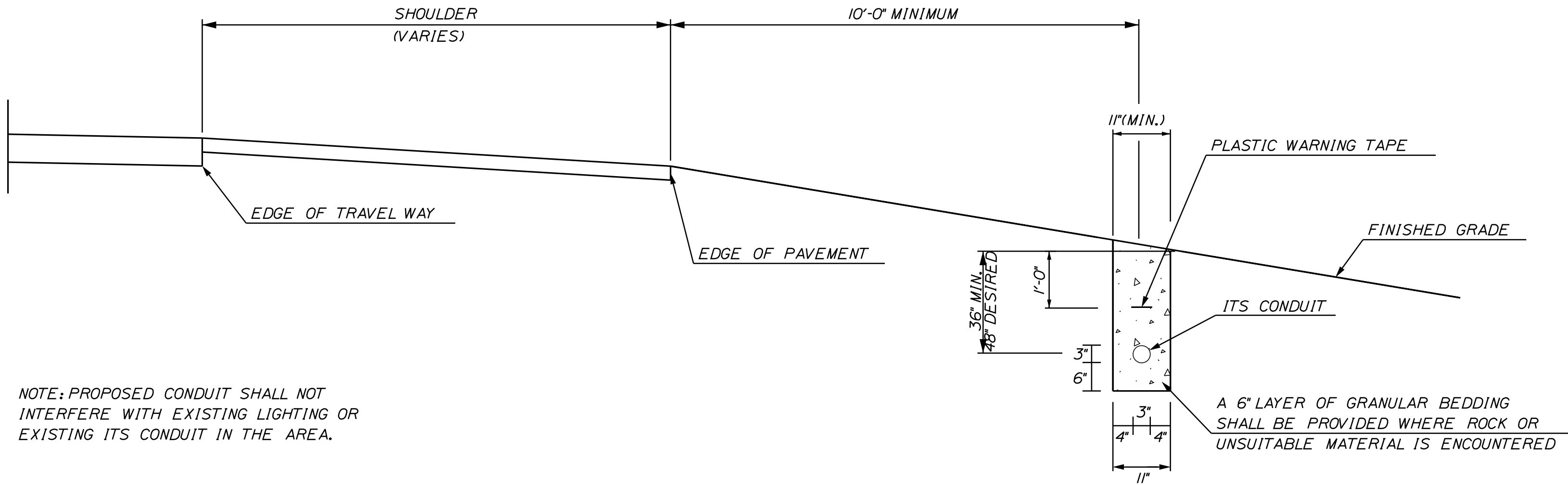
- THE CLOSED CIRCUIT TELEVISION SYSTEM (CCTV) SHALL CONSIST OF TWO TYPES OF CAMERAS. ONE CAMERA TYPE SHALL BE FIXED FOCUS TO RECORD LICENSE PLATE INFORMATION WHEN THE OVERHEIGHT DETECTION SYSTEM IS TRIGGERED. ONE CAMERA TYPE SHALL BE TO RECORD SHORT VIDEO CLIPS TO IDENTIFY VEHICLES THAT TRIGGER THE OVERHEIGHT DETECTION SYSTEM AND VISUALLY VERIFY THE CAUSE OF THE VEHICLE BEING OVERHEIGHT. THIS PROJECT REQUIRES THREE CAMERAS TOTAL.
- THE OVERHEIGHT INFRARED DETECTOR UNITS SHALL BE INSTALLED AT A HEIGHT OF 14-FEET, 0-INCHES ABOVE PAVEMENT, MEASURED AT THE EDGE OF TRAVELED WAY. THE OVERHEIGHT INFRARED DETECTOR UNITS SHALL BE FIRMLY AND SECURELY ATTACHED TO THE SUPPORTS INDICATED IN THE PLANS.
- THE CONTRACTOR SHALL WORK WITH SPECTRUM TO OBTAIN A CABLE DROP FROM UTILITY POLE 28D1/262252 ALONG ODLIN ROAD NEAR THE DUNKIN DRIVEWAY. THE CONTRACTOR SHALL INSTALL 3-INCH NON-METALLIC CONDUIT FROM THE UTILITY BUILDING AT THE I-95 SOUTHBOUND ON-RAMP. THE CONTRACTOR SHALL INSTALL A 3-INCH METALLIC RISER TO 5' ABOVE GROUND AT UTILITY POLE #4. SPECTRUM SHALL BE RESPONSIBLE FOR PULLING CABLE AND COMPLETING THE CABLE COMMUNICATIONS DROP. THE CONTRACTOR SHALL COVER ANY COSTS FROM SPECTRUM THAT ARE ASSOCIATED WITH THE COMMUNICATIONS DROP.
- THE CONTRACTOR SHALL REPLACE EXISTING FLASHING BEACONS WITH NEW FLASHING BEACONS AS SHOWN. WHERE EXISTING FLASHING BEACONS HAVE BEEN PREVIOUSLY REMOVED, THE CONTRACTOR SHALL INSTALL NEW FLASHING BEACONS.
- THE CONTRACTOR SHALL INSTALL NEW SOLAR POWER CONTROL SYSTEMS AND EQUIPMENT CABINET AS SHOWN.

GUARDRAIL PROTECTION:

- IF THE CONTRACTOR ELECTS TO REMOVE A SEGMENT OF GUARDRAIL FOR ACCESS TO THE WORK AREA, THE CONTRACTOR SHALL RESET THE GUARDRAIL AT THE END OF THE WORKDAY. ALTERNATIVELY, THE CONTRACTOR SHALL PROTECT THE TEMPORARY BLUNT END WITH A SUITABLE CRASH CUSHION. CRASH CUSHIONS INSTALLED FOR THE CONTRACTOR'S CONVENIENCE WILL NOT BE PAID FOR BUT WILL BE CONSIDERED INCIDENTAL TO THE MAINTENANCE OF TRAFFIC CONTROL DEVICES ITEM.

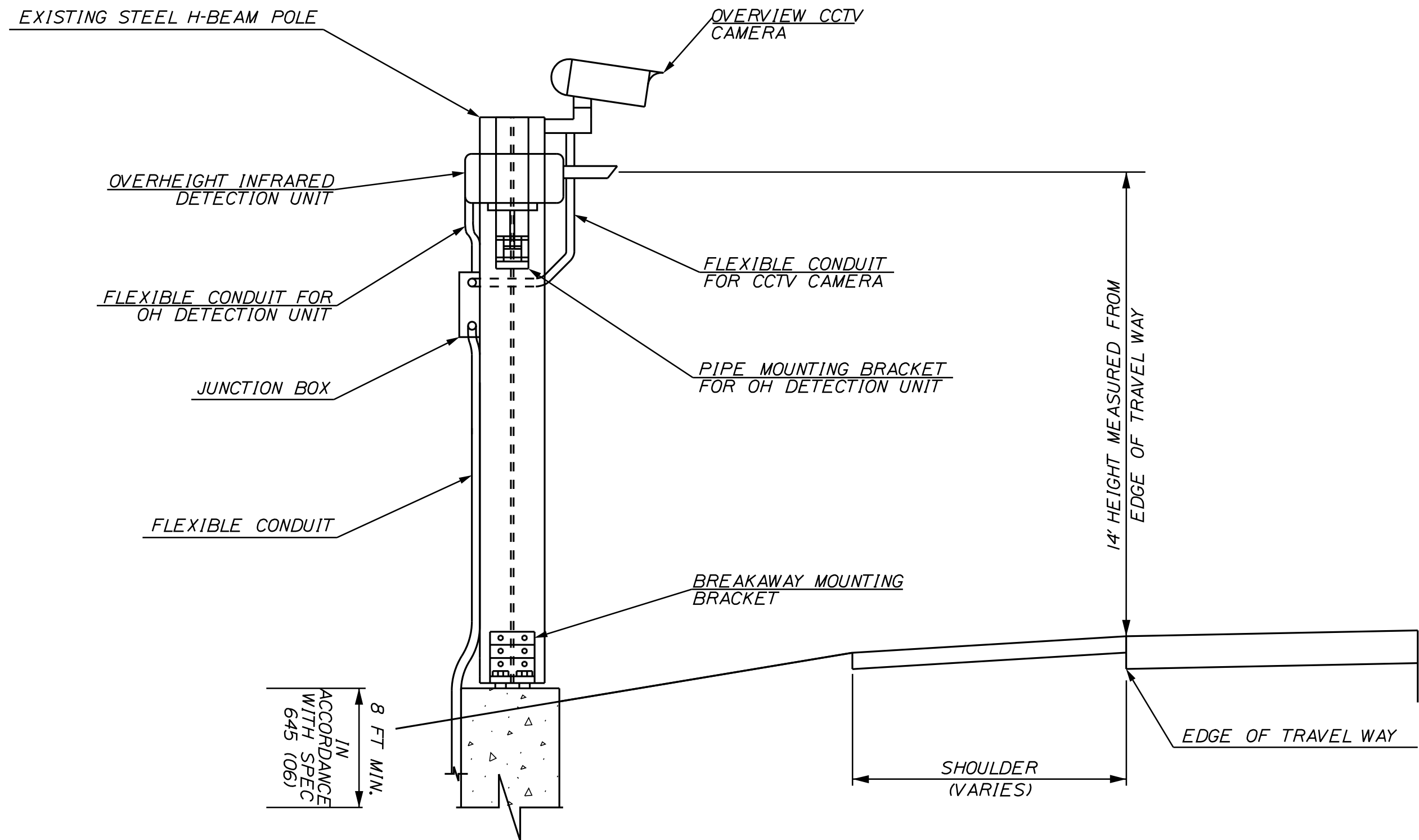


STATE OF MAINE DEPARTMENT OF TRANSPORTATION		PROJECT NO. 2612800		WIN 026128.00 ITS PLANS	
BANGOR OVERHEIGHT VEHICLE DETECTION SYSTEM		PROJ. MANAGER	D. LORING	BY	DATE
		DESIGN-DETAILED	CM	JAR	5/2024
		CHECKED-REVIEWED	CM	MOS	5/2024
		DESIGN-DETAILED			
		REVISIONS 1			
GENERAL NOTES		REVISIONS 2			
		REVISIONS 3			
		REVISIONS 4			
		FIELD CHANGES			
SHEET NUMBER		2			
		OF 7			

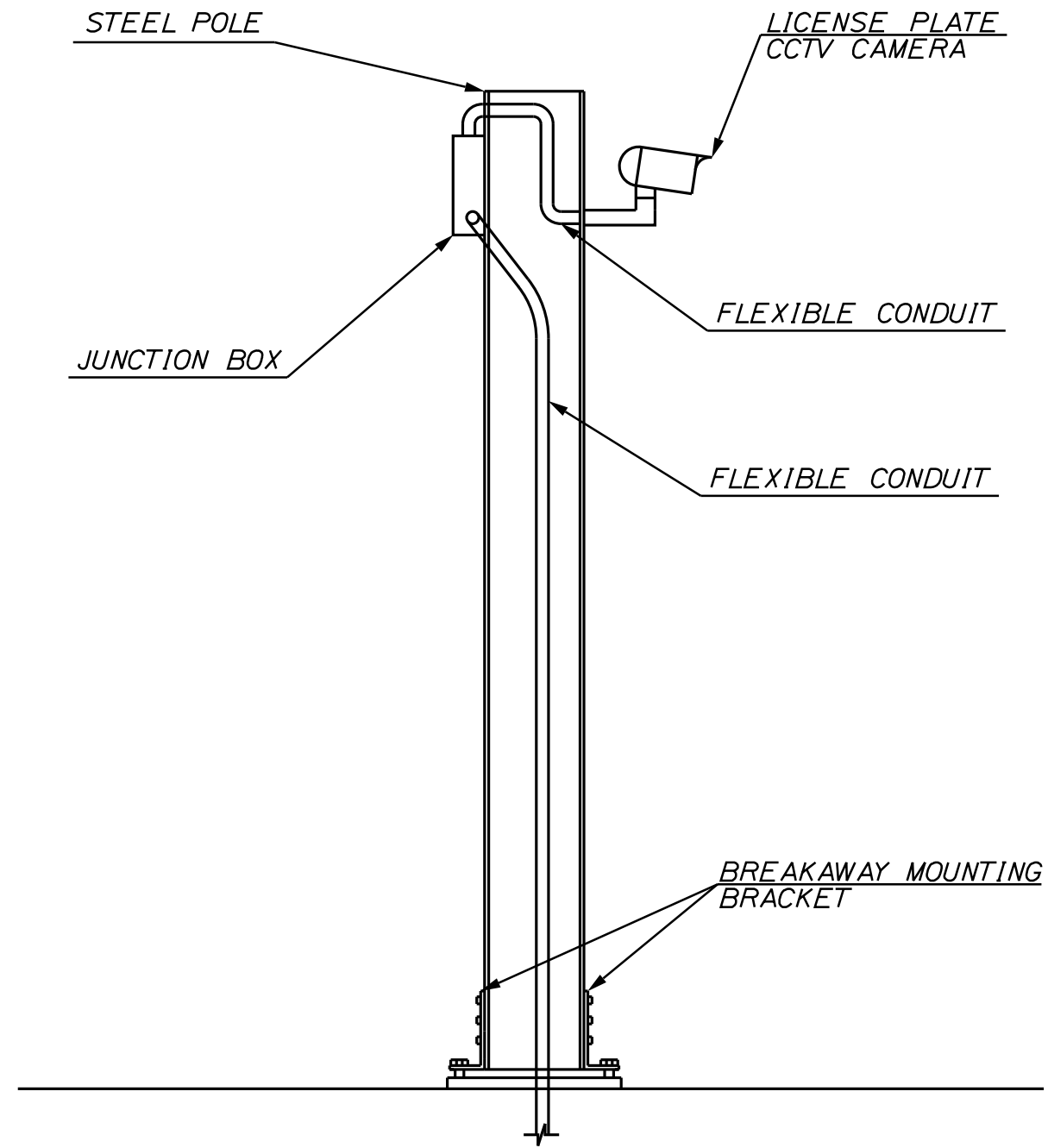


NOTE: PROPOSED CONDUIT SHALL NOT INTERFERE WITH EXISTING LIGHTING OR EXISTING ITS CONDUIT IN THE AREA.

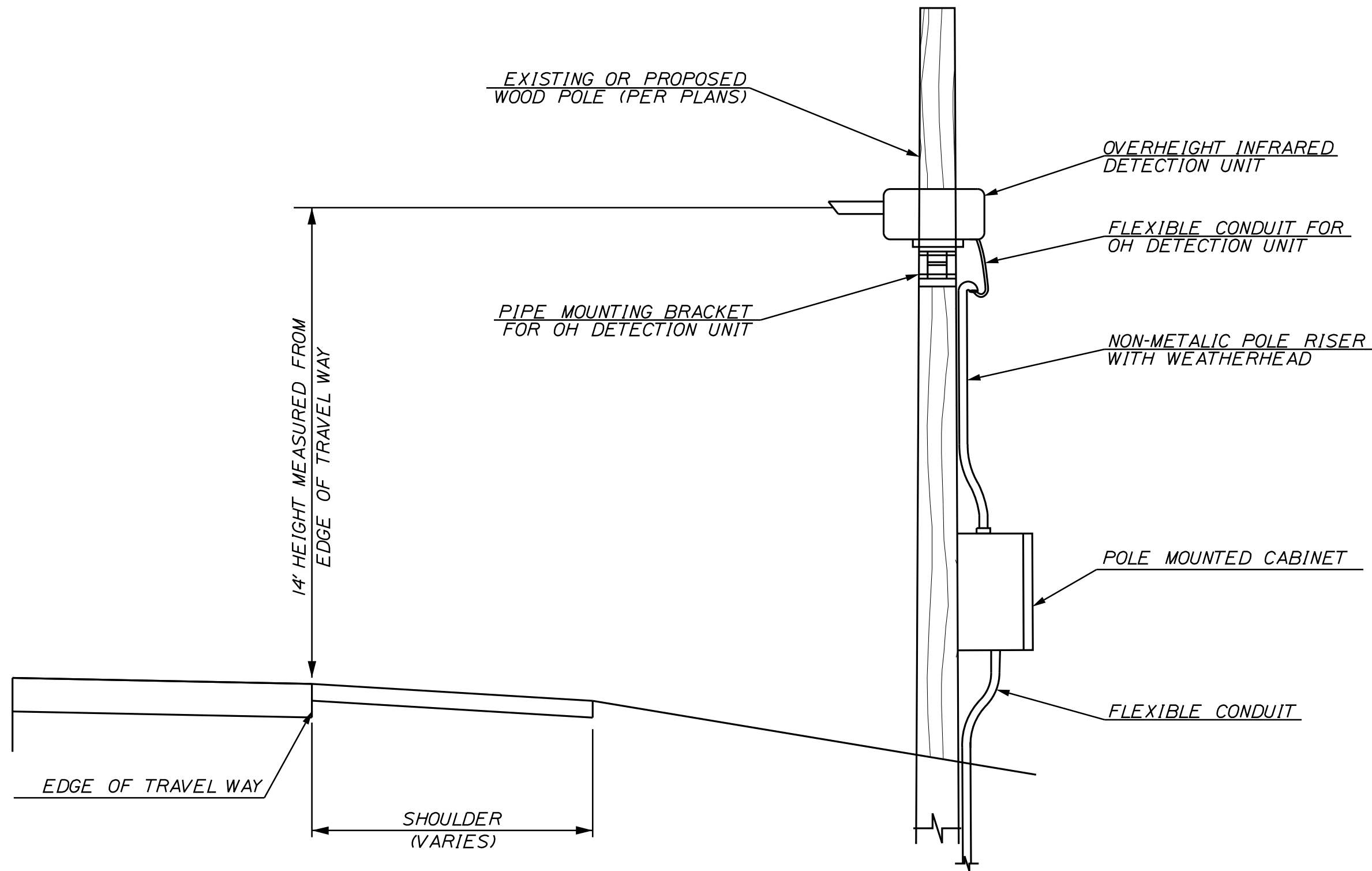
TRENCH DETAIL FOR NEW ITS CONDUIT INSTALLATION
NOT TO SCALE



OH DETECTION AND CAMERA MOUNTING DETAIL
NOT TO SCALE



LICENSE PLATE CAMERA MOUNTING DETAIL
NOT TO SCALE



OH DETECTION MOUNTING DETAIL
NOT TO SCALE

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2612800

WIN 026128.00

ITS PLANS

PROJ. MANAGER	D. LORING	BY	DATE
DESIGN-DETAILED	CM	JAR	5/2024
CHECKED-REVIEWED	CM	MDS	5/2024
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BANGOR

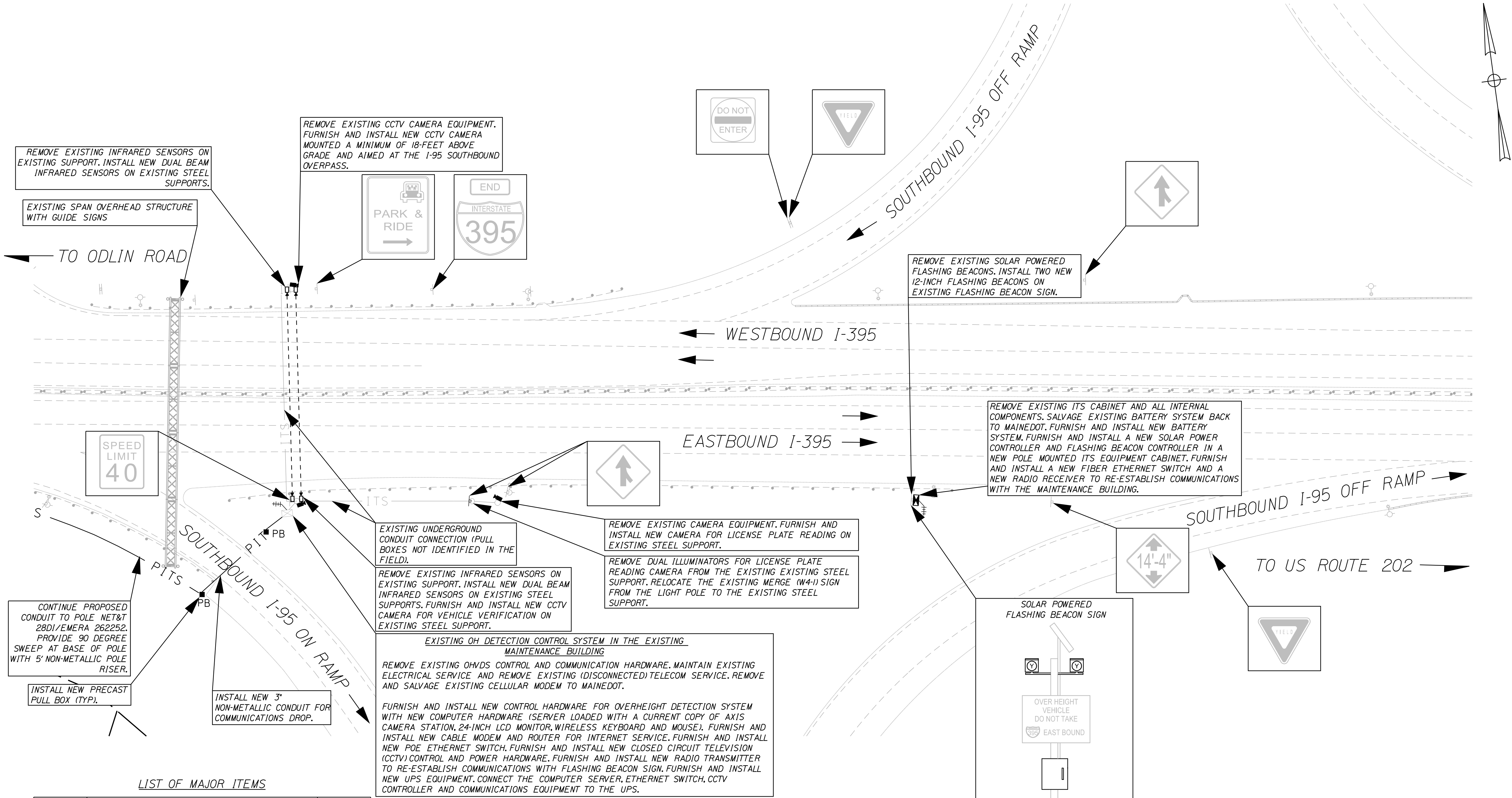
OVERHEIGHT VEHICLE DETECTION SYSTEM

DETAILS

SHEET NUMBER

3

OF 7



ITEM NO.	EQUIPMENT AND WORK ITEMS	QUANTITY
626.11	PRECAST CONCRETE JUNCTION BOX	2 EA
626.22	NON-METALLIC CONDUIT (3-INCH)	220 LF
626.251	NON-METALLIC CONDUIT (3-INCH) UNDER PAVEMENT (SCHEDULE 80 OR GREATER RATING)	45 LF
643.61	FLASHING BEACON MODIFICATION (I-395)	1 LS
643.833	OVERHEIGHT DETECTION SYSTEM (I-395)	1 LS
645.106	DEMOUNT REG, WRNG, CONF & RTE MARKER SIGN	1 EA
645.116	REINST REG, WRN, CONF, & RTE MARKER SIGN	1 EA
654.211	CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM	1 LS
654.31	ITS EQUIPMENT CABINET	1 EA
654.312	UNINTERRUPTIBLE POWER SUPPLY (UPS)	1 EA
654.313	POE ETHERNET SWITCH	1 EA
654.34	POINT TO POINT WIRELESS LINK	1 EA

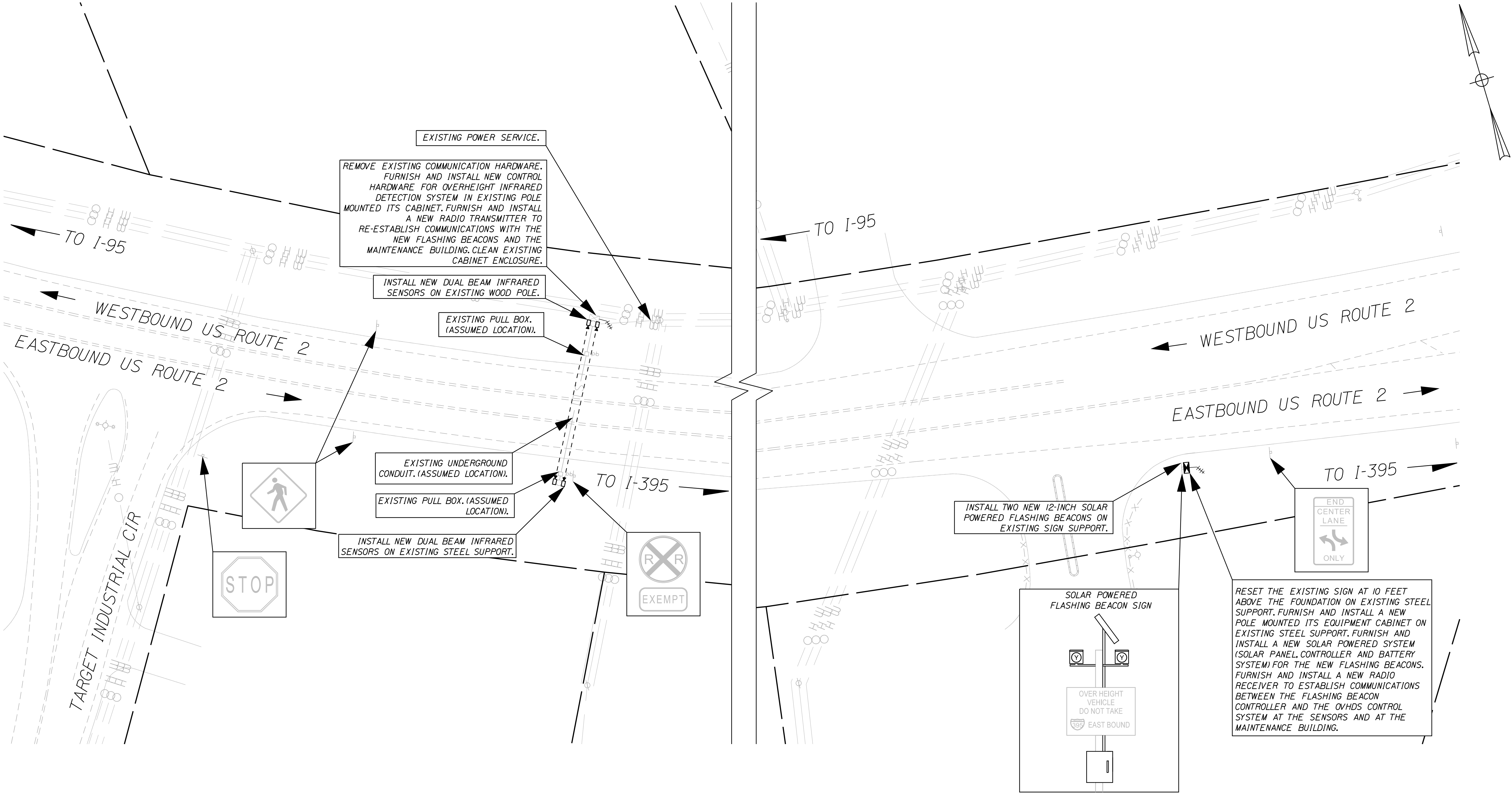
NOTES

- EXISTING POWER SOURCE FROM THE MAINTENANCE BUILDING IS FROM THE UTILITY POLE AT THE NORTHEAST CORNER OF THE DUNKIN DONUTS PARKING LOT ALONG ODLIN ROAD (NET&T 28D1/EMERA 262252).
- ROW INFORMATION APPROXIMATED FROM MAINE DOT FEDERAL AID PROJECT NO: 1M-395-8(97) DATED NOVEMBER 1992 (DOT FILE NO 10-351).



PROJ. MANAGER	D. LORING	BY	DATE
DESIGN-DETAILED	CM	JAR	5/2024
CHECKED-REVIEWED	CM	MJS	5/2024
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BANGOR
OVERHEIGHT VEHICLE DETECTION SYSTEM
I - 395
SITE PLAN

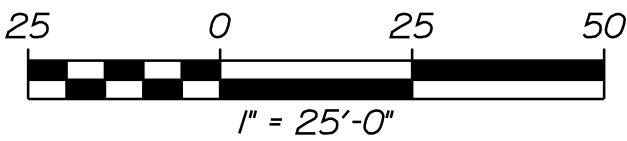


LIST OF MAJOR ITEMS		
ITEM NO.	EQUIPMENT AND WORK ITEMS	QUANTITY
643.61	FLASHING BEACON MODIFICATION (US ROUTE 2)	1LS
643.833	OVERHEIGHT DETECTION SYSTEM (US ROUTE 2)	1LS
654.31	ITS EQUIPMENT CABINET	1EA
654.34	POINT TO POINT WIRELESS LINK	1EA

NOTES

1. A 1/8" WIDE CRACK AT THE EXISTING BEACON POST WAS FOUND DURING A FIELD INSPECTION. CONTRACTOR SHALL ALERT THE RESIDENT ENGINEER IF THE EXISTING CRACK EXCEEDS 1/4" DURING CONSTRUCTION.

2. ROW INFORMATION APPROXIMATED FROM MAINE DOT FEDERAL AID PROJECT NO: D-RD-5(2) DATED JANUARY 1955 (DOT FILE NO 10-101).

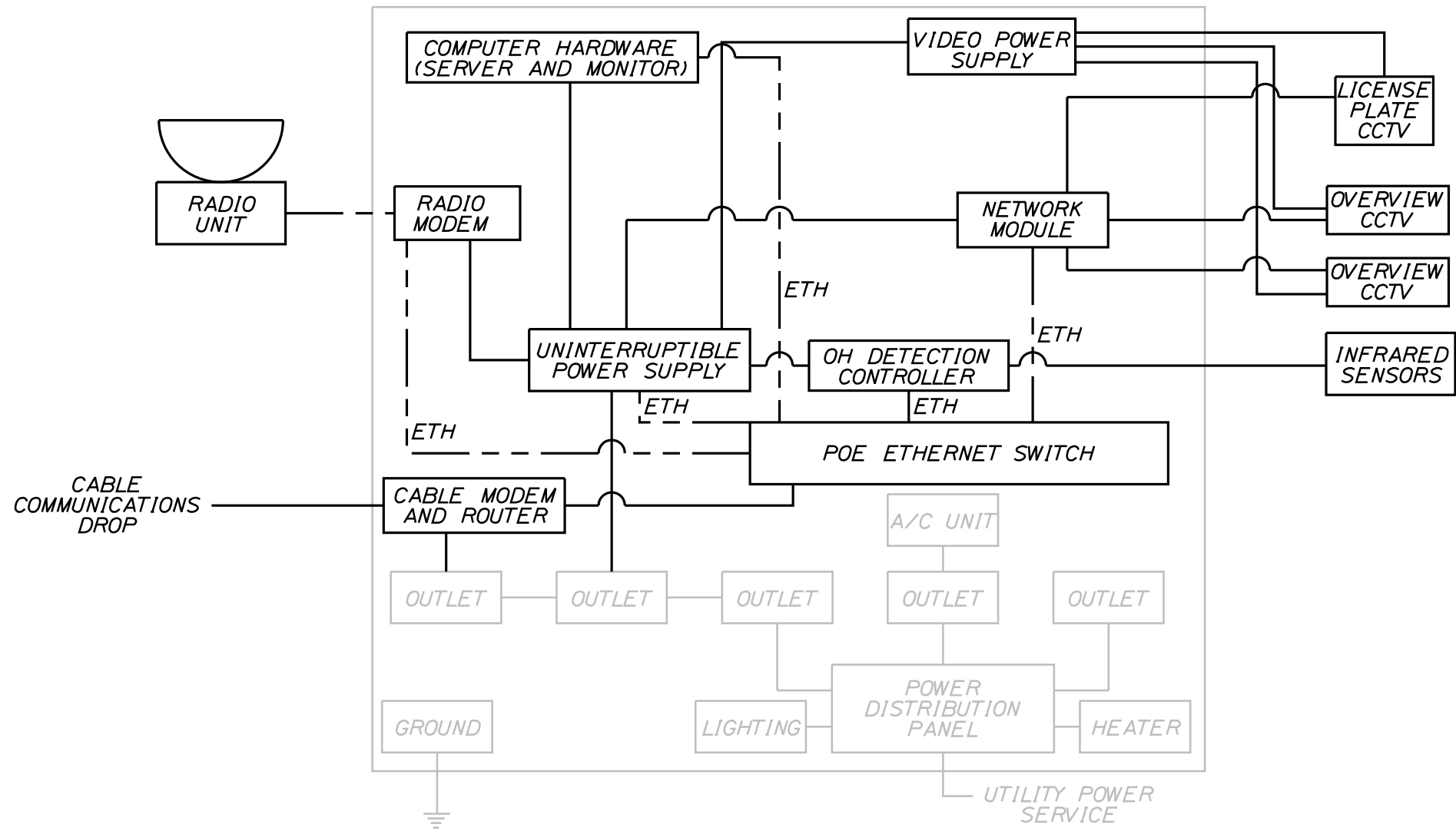


PROJ. MANAGER	D. LORING	BY	DATE
DESIGN-DETAILED	CM	JAR	5/2024
CHECKED-REVIEWED	CM	MJS	5/2024
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

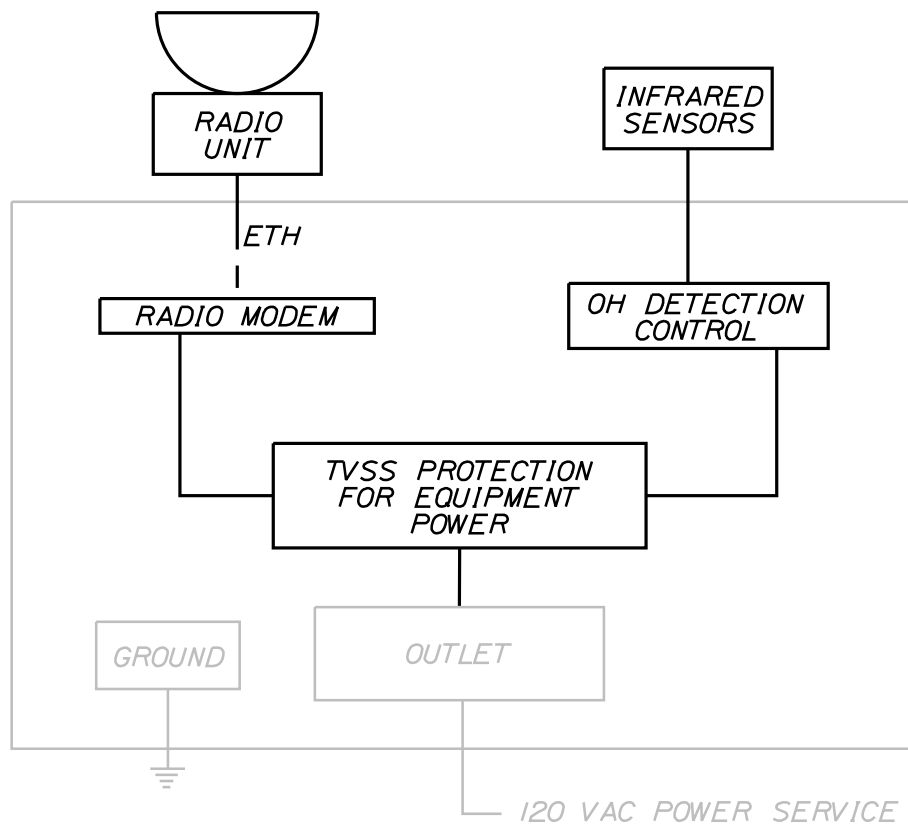


ITEM NO.	EQUIPMENT AND WORK ITEMS	QUANTITY
626.11	PRECAST CONCRETE JUNCTION BOX	2 EA
626.22	NON-METALLIC CONDUIT (3-INCH)	15 LF
626.251	NON-METALLIC CONDUIT (3-INCH) UNDER PAVEMENT	50 LF
626.43	30-INCH DIAMETER FOUNDATION	8 LF
643.61	OVERHEIGHT DETECTION SYSTEM (ODLIN ROAD)	1LS
643.833	FLASHING BEACON MODIFICATION (ODLIN ROAD)	1LS
643.972	WOOD POLE	2 EA
645.1061	RELOCATE EXISTING SIGN ASSEMBLY AND POST	1EA
654.34	POINT TO POINT WIRELESS LINK	1EA
654.511	RELOCATE ELECTRICAL SERVICE CONNECTION	1LS

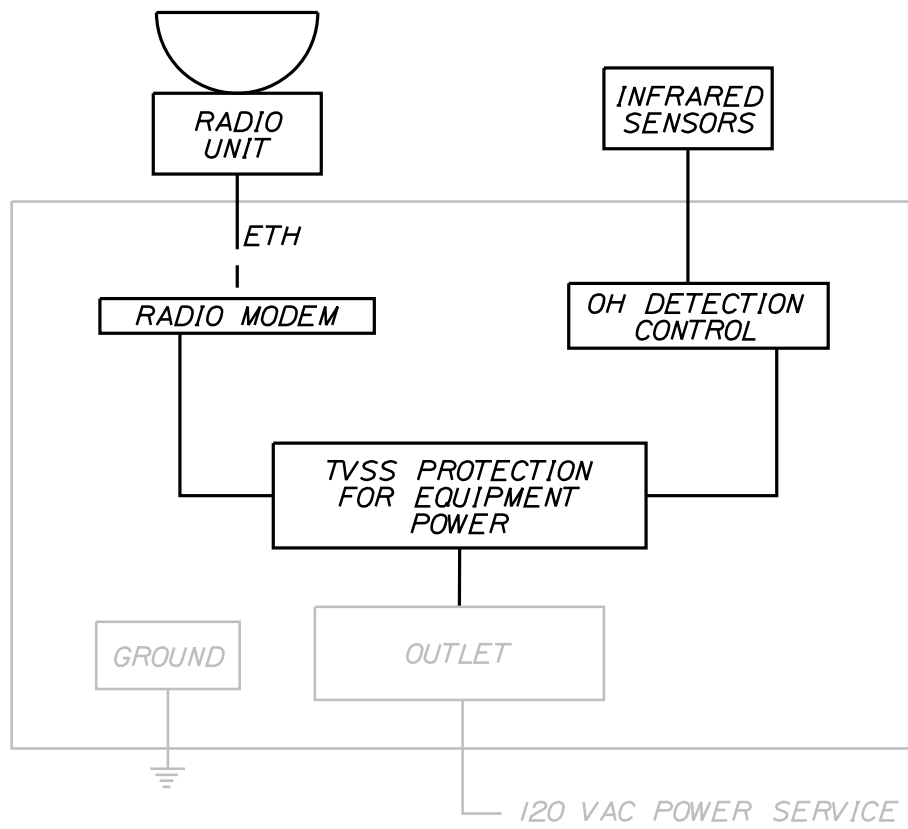
1. ROW INFORMATION APPROXIMATED FROM MAINE DOT FEDERAL AID PROJECT NO: 1M-395-8(97) DATED NOVEMBER 1992 (DOT FILE NO 10-351).



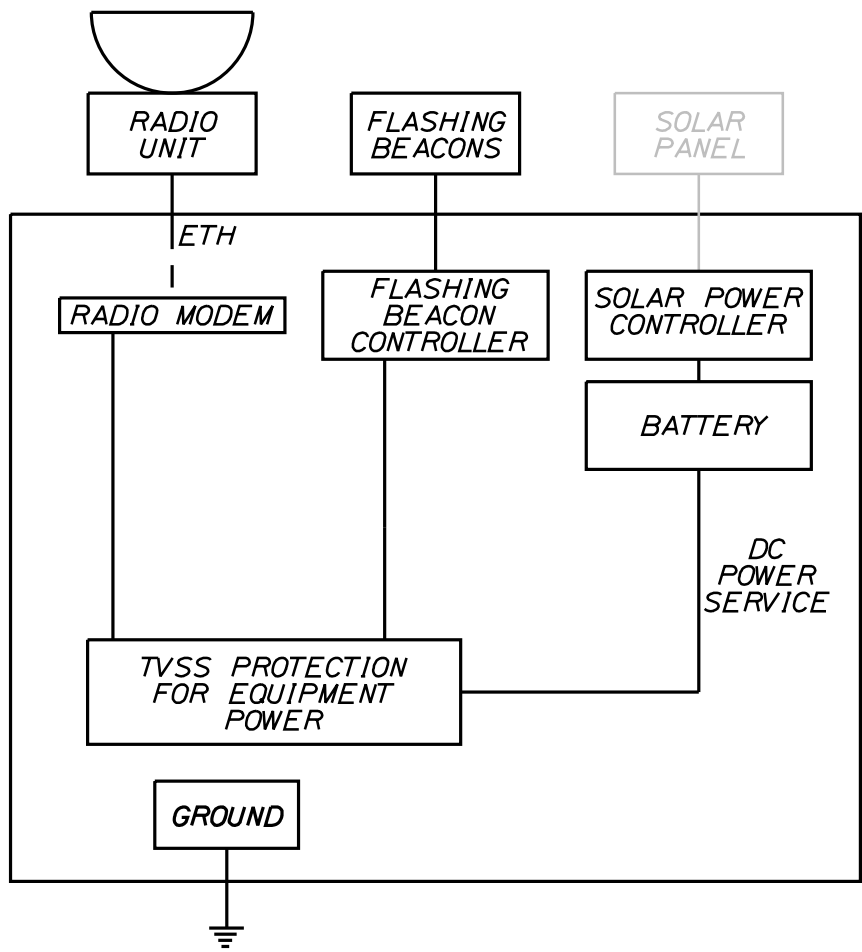
MAINTENANCE BUILDING @ I-395
NOT TO SCALE



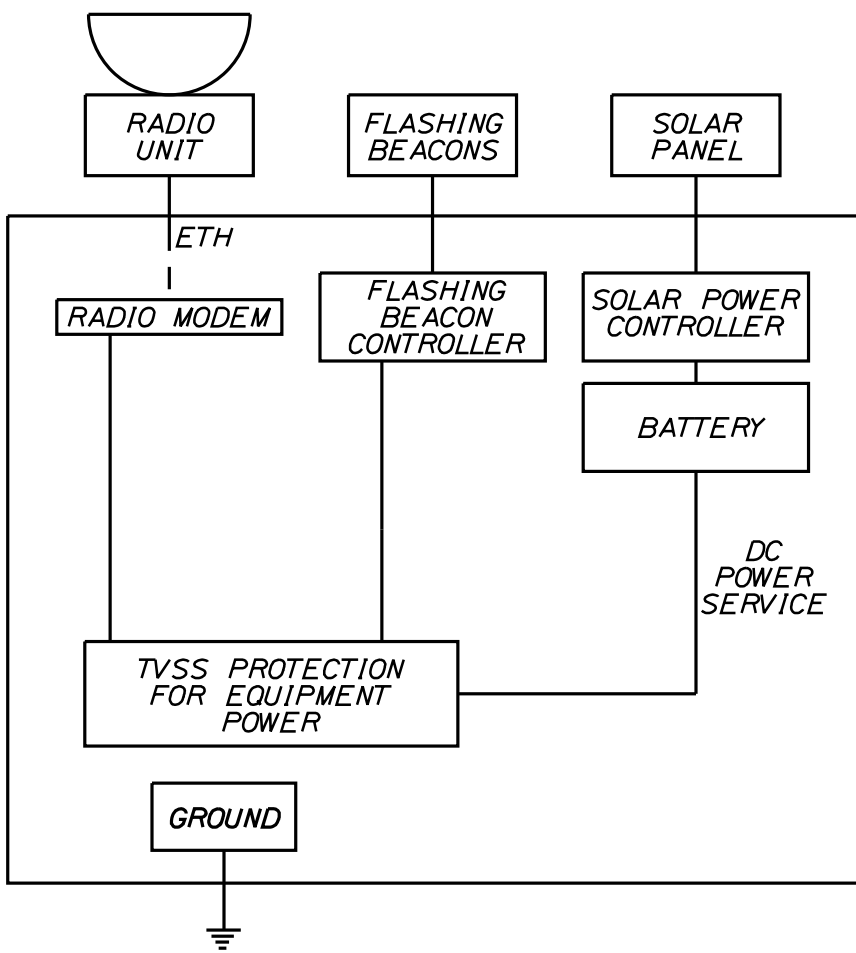
OH DETECTION CABINET @ US ROUTE 2
NOT TO SCALE



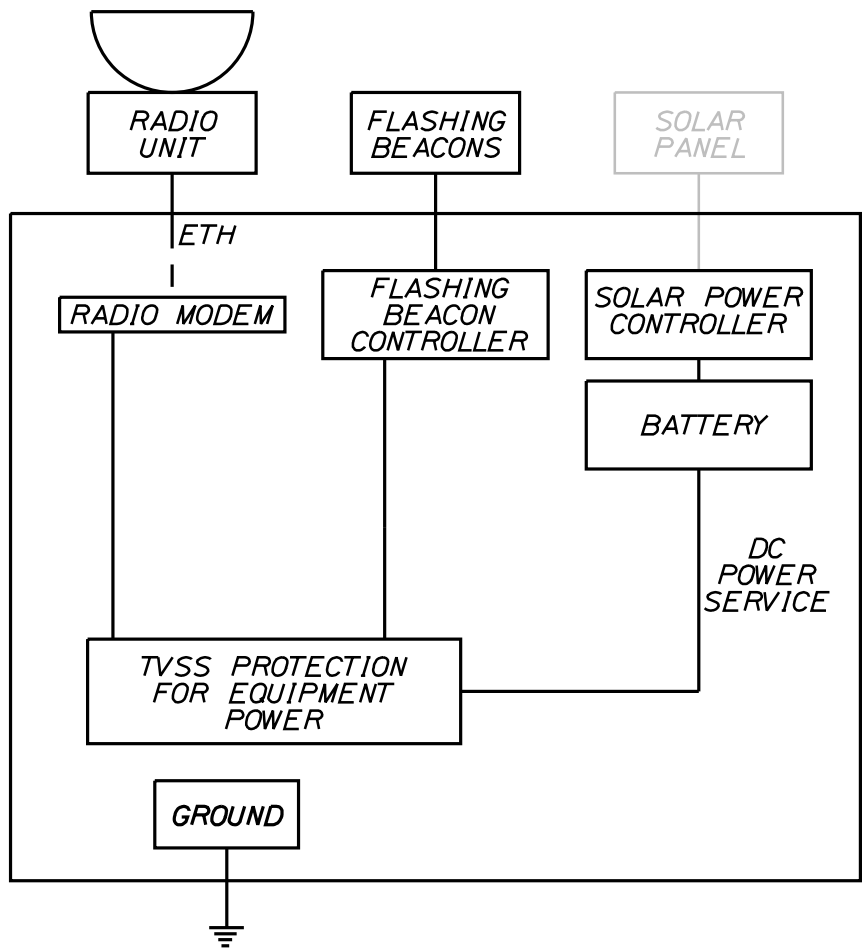
OH DETECTION CABINET @ ODLIN ROAD
NOT TO SCALE



FLASHING BEACON CABINET @ I-395
NOT TO SCALE



FLASHING BEACON CABINET @ US ROUTE 2
NOT TO SCALE



FLASHING BEACON CABINET @ ODLIN ROAD
NOT TO SCALE

ITS CABINET BLOCK DIAGRAMS



PROJ. MANAGER	D. LORING	BY	DATE
DESIGN-DETAILED	CM	JAR	5/2024
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DESIGNS-DETAILED			
DESIGNS-DETAILED			
REVISIONS 1			
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REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			